# DETERMINANTS OF REPRODUCTIVE HEALTH BEHAVIOUR AMONG FEMALE WORKERS IN TERTIARY INSTITUTIONS IN SOUTHWESTERN NIGERIA

**BY**

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**A thesis in the Department of Adult Education**
**Submitted to the Faculty of Education, in partial fulfilment**
**of the requirements for the Degree of**

**DOCTOR OF PHILOSOPHY**
**of the**
**UNIVERSITY OF IBADAN, IBADAN, NIGERIA**

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**University of Ibadan**
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**SEPTEMBER, 2014**

## CERTIFICATION

I certify that this thesis was carried out by Mrs Abiola Adiat OMOKHABI (Matric. No: 81072) in the Department of Adult Education, Faculty of Education, University of Ibadan, Ibadan, Nigeria, under my supervision

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## DEDICATION

This work is dedicated to Almighty God, the Alpha and Omega, the Beginning and the End, for making it possible for me to attain this level; also my joy - Isaac, Esther and Israel, and the less privileged.

**ACKNOWLEGEMENTS**

First and foremost, I want to appreciate the Almighty God, God of all flesh, unchangeable changer, for making this a reality. What can I do without him? You are the God of orderliness, arranging everything in your own time. I am grateful to my supervisor, Prof Deborah Adetunbi Egunyomi, for finding time to read through my work providing solutions at every stage of this thesis. She is more than a supervisor. She is a mother, teacher and a mentor, who taught me all I needed in scholarship and life.

I want to also appreciate my mentor, Dr Kehinde Oluwaseun Kester, for believing in me, guiding me towards the choice of this topic for my thesis , encouraging me to keep to time as regards my work. I equally express my gratitude to him for on the issue of my Teaching and Research Assistantship. I am grateful to Dr Kester Ojokheta for his corrections and valuable recommendations. I also want to appreciate the present Head of the Department of Adult Education, University of Ibadan, Dr Omobola Adelore, she is a mother, an aunt and a sister to me. You shall always find God's favour. Amen. I will not forget all my lecturers in and outside the Department: Drs O.E. Olajide, T.A. Akanji, I.A. Abiona, A.A. Sarumi, P.B. Abu, C.O. Omoregie, B.O. Lawal, A. Ayantunji, E.M. Ajala, M.K. Akinsola, Stella Odiaka, Olabisi Oladeji, Medinat Mommoh and Felicia Aibinuomo. God bless you all. I also thank the non-academic staff - Mrs Iyabode Ogundeji, Mrs Adijat Folarin, Mrs Abiola Fadeyi, Mrs Iyabo Adegoke, Mr J. Egbu , Mr B. Joseph, Mr S. Aniala, Mr. T. Aito, Mr. E.O. Olaitan and Mr. N. Babalola, for being there always for me, providing assistance at all times. To my fathers in the department whom I owe so much for exposing me to the field of adult education, Professors M.O. Akintayo and R.A. Aderinoye, I say thank you.

I want to appreciate the Dean of Postgraduate School, Professor A.O. Olorunisola; past Sub-dean Postgraduate School (Arts and Humanities) Professor A.A. Aderinto; and the present Sub-dean, Dr I.A. Alarape; and the present Sub-dean Postgraduate School (Sciences) Dr J.O. Babalola, for granting me the privilege to be a Postgraduate School Teaching and Research Assistant. This provided the platform for my academic career. I equally thank my colleagues and friends who have been a source of moral support - Mrs Moji Ayantunji, Mrs Funke Ogidan, Mrs Folake Iyanda, Mrs Taiwo Akinyemi, Miss Funmi Ojo, Pastor I. Oke, Victor Adaja, Mrs Mercy Sanda, Mr S. Ojo, Mr A. Folourunsho, Mrs Kemi Faloye and Mrs Funmi Oladeji,

I am indebted to my husband, Suleiman U Omokhabi, for his encouragement, advice and financial, emotional and moral support. I love you and I say thank you so much. You shall live long to reap the fruits of your labour. I cannot forget my joy - Issac Oluwasemiore, Esther Oreoluwa and Israel Oreofe. I will not forget my in-laws who have been my support and strength, for their prayers - Dr Glory Atiri, Mrs Blessing Adenubi, Dr Blessing Erumi, Mrs Mercy Olowe, Mr M. Omokhabi, Mrs Joy Omololu, Mrs Peace Adebimpe, Mrs Fatima Icanbor and Miss Geminat Omokhabi. It is wonderful having you all as my family.

I thank my late father, Alhaji Olaseni Ganiyu Adisa Ogun, for laying the foundation for my education. I pray to almighty God to continue to grant him Aljanah Fidau.Amen. I am greatly indebted to my wonderful and loving mother, Mrs M.A. Ogun (JP), and my siblings; Brother Olasubomi, Brother Olanrewaju and Sister Olasumbo. I will always be grateful to you all for your prayers, love and financial assistance throughout this programme. I appreciate my brother's wife, Omolade, for her sisterly warmth and assistance during the field work. I must acknowledge my uncles: Alhaji Fatai Ogun and Alhaji Sufi Kazeem; and my aunt, Mrs Oluwatoyosi Baderinwa, for being there always. When I lost my father they made it possible for me to be able to go this far. I pray that Almighty Allah will continue to bless you all and you shall live long. Finally, I want to thank my father in the Lord, Pastor Prophet Samuel Ajayi Adegboyega; Pastor Sogo Oyewole; and members of Salvation Proclaimers Anointed Church, for the spiritual support throughout the duration of this programme.

A.A. Omokhabi

September, 2014

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## ABSTRACT

Women reproductive health behaviour (RHB) has generated a lot of interest from researchers across many disciplines because many women die due to pregnancy related complications. Hence, improving RHB of women which is a key aspect of the Millennium Development Goals requires a proper understanding of its predisposing factors. Previous studies on women's RHB had focused more on adolescents, rural and non-literate women without due consideration to women in the tertiary institutions. This study, therefore, examined the extent to which gender roles, age at marriage, educational attainment, peer influence, mass media exposure, cultural norms/religious belief and socio-economic status influenced the RHB of female workers in tertiary institutions in Southwestern Nigeria.

The survey research design was adopted. The purposive sampling technique was used to select 1,122 respondents: 540 academic and 582 non-academic female workers from five universities, four polytechnics and four colleges of education in Southwestern Nigeria. Two instruments were used: RHB Scale (r=0.81) and RHB Determinants Scale with seven sub-scales, socio-economic status (r=0.79), cultural/religious belief (r=0.83), mass media (r=0.75), gender role (r=0.79) and peer influence (r=0.71). Nine Focus Group Discussions (FGDs) and two In-depth interview (IDI) sessions were conducted with female workers from each of the 13 institutions. Four research questions were answered and eight hypotheses tested at 0.05 level of significance to determine the RHB of female workers. Data were analysed using percentages, multiple regression, Pearson product moment correlation and content analysis.

Seventy-five percent of respondents exhibited good RHB. The seven predisposing factors had joint positive significant prediction on female workers' (RHB) in tertiary institutions ($F_{(7,1114)}$ = 520.091; R = 0.875, $R^2$ =0.766, Adj.$R^2$ = 0.764) and accounted for 77.0% in the variance of the dependent measure. Their relative contributions were: gender roles (β=.404), age at marriage (β=.320), educational attainment (β=.191), peer influence (β=-.161), mass media exposure (β=-.122), cultural norms/religious belief (β=-.094)) and socio-economic status (β=-.091). Also, their significant strength of relationships with RHB were as ranked: age at marriage (r=0.740), gender role (r=0.738), educational attainment (r=0.426), religious/cultural belief (r=0.092); mass media exposure (r=0.085), social economic status (r=-0.739) and peer influence (r=-0.541). There was no significant difference in the RHB of female academic and non-academic staff in all the institutions sampled. Participants' knowledge of reproductive health information varies from: menstruation and management (11.9%), safe motherhood and childcare (9.9%), family planning and contraception (9.7%) and pregnancy and childbirth (8.9%). Family gender roles in reproductive health decision making were perceived to inhibit women's abilities to make informed reproductive health decisions.

Mass media exposure, gender roles, age at marriage, socio-economic status, peer influence, cultural norms/religious belief and educational attainment strongly predicted reproductive health behaviour of female workers in sampled tertiary institutions. However, to ensure improved reproductive health behaviour among tertiary institutions female workers, there is the need to strengthen the use of mass media complemented with women's networking groups and religious institutions aimed at promoting better reproductive health behaviour.

**Keywords:** Reproductive health behaviour, Tertiary institutions' Female workers, Reproductive health decision
**Word count:** 476

| Acronyms | List of Abbreviations |
|---|---|
| WHO | World Health Organisation |
| RB | Reproductive health |
| RBH | Reproductive health Behaviour |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children's Fund |
| ICPD | International Conference on Population and Development |
| HBM | Health Belief Model |
| BPFA | Beijing Platform For Action |
| FWCW | Fourth World Conference on Women |
| BPFA | Beijing Platform For Action |
| CDC | Centre for Disease Control |
| MDGs | Millennium Development Goals |
| NDHS | Nigeria Demographic and Health Survey |

# CHAPTER ONE
# INTRODUCTION

## 1.1 Background to the study

Reproductive health is an important issue which recently emerged as a matter of increasing concern by development experts, NGOs and government of various developing and developed countries owing to its implications for women's own health, health of their children, family members and socioeconomic development of society as well as population programmes. One of the fundamental components of development is promoting and achieving the health of women, most especially on reproductive health. The World Health Organization (WHO) (2003) sees reproductive health as a state of complete physical, mental and social well-being in all matters relating to the reproductive system and processes. The definition was internationally accepted because it recognized that reproductive health affects and is affected by the economic circumstances, education, employment opportunities, family structures, as well as political, religious and legal environment (Roudi-Fahimi & Ashford, 2008). This implies that the most important components of reproductive health include family planning, safe motherhood, safe and satisfying sex, prevention and treatment of reproductive tract infections and sexually transmitted diseases, as well as the decision-making power associated with these.

One of the significant milestones of the twentieth century in the field of population and development is the recognition of women as equal partners in development efforts in all societies of the world (Odutolu, Adedimeji, Odutolu, Baruwa & Olatidoye, 2003). Two major events of the last twentieth century, the 1985 World Women Conference in Beijing and the 1994 International Conference on Population and Development in Cairo were instrumental in this regard. It was recognised at these global conferences that issues affecting the reproductive health of women are linked to wider issues of economic and educational status, and gender equality. Gender equality and women empowerment were particularly emphasised as a catalyst for promoting and sustaining economic growth and development (United Nations Population Fund (UNFPA), 1995). By locating women within the context of global development, these conferences have encouraged women to openly discuss issues that affect their status and reproductive health. A major response to this development is a review

of programmes and strategies aimed at improving the reproductive health of women (Odutolu, Adedimeji, Odutolu, Baruwa & Olatidoye, 2003).

There was to a paradigm shift fired by a growing awareness of the negative health, social and economic consequences of unsafe sexual activity and childbearing, including unintended pregnancies, unsafe abortions, Sexually Transmitted Diseases (STDs), Acquired Immune Deficiency Syndrome (AIDS) and decreased economic power among women. Hence, women reproductive health care became the focal point of development issues in all countries, rather than a matter of disease prevention. This is so because a woman's ability to bear children is linked to the continuity of families, clans and social groups, the control of property, the relationship between women and their expression of sexuality (Hossain & Hoque, 2005).This is why the 1994 International Conference on Population and Development in Cairo endorsed the right of couple's decision of when and whether to have children as a basic human right (UNICEF, 1994). In order to exercise this basic right within the social and cultural limits, women must have access to complete reproductive health information and services so that they can make free and informed choices; and ultimately have control over family size and more use of contraceptives resulting to checking of tremendous growth of population.

Reproductive health behaviour of women as a number of dimensions, such as anatomy of reproductive organs, safe sex relations, safe motherhood, and child survival, gynaecological problems, reproductive rights, family planning adoption, STDs, HIV infection and AIDS (Pandey & Singh, 2008). The concept is centred on human needs and development and it is envisaged as the entire life cycle, from the womb to the tomb (UN, 2002). Globally and locally women are becoming leaders in both their social role and the family- related value systems, yet some traditional, cultural and religious beliefs still hinder their decision making on their reproductive health behaviour. Women's control over their reproductive behaviour is a key component of reproductive health right, as reproductive behaviour is complex and determined by numerous factors which are directly influenced by a set of social and biological factors .These factors are seen as intermediate reproductive variables because they are influenced, in turn, by various social, economic, cultural and environmental variables (International Centre for Research on Women, 2012).

Reproductive health behaviour of women of childbearing age could be seen as women's attitudes to reproductive health issues; child bearing and rearing, number of children, family size norms, knowledge of family planning methods, sexual relationships, knowledge of prevention of sexually transmitted diseases, HIV/AIDS prevention and so on (Muoghalu, 2011). This reproductive health behaviour can be applied to a wide range of sexual and reproductive health decisions on whether to use contraception/family planning methods, what contraception/ family methods to be used, and whether or when to continue or switch methods, whether to seek or to avoid pregnancy, whether to space and time one's childbearing at one's own convenience. It has health implications for the lives of women generally. For example, family planning (FP) services are necessary both to women not wanting a pregnancy and to those who desire pregnancy but want to ensure adequate spacing for promoting healthy living. Controlling the transmission of STIs not only helps to reduce long-term reproductive morbidities, such as ectopic pregnancy and infertility, but also reduces the likelihood of HIV transmission. Thus, it is an important strategy for preventing the spread of HIV/AIDS, reduces the risk of maternal mortality and morbidity, decreases unwanted pregnancies, improves child health, and enables women to pursue educational and employment goals. With modernization, childbearing has become increasingly detached from biological necessities and social pressures of earlier times (Potts, 1997; Van deKaa, 2001). This has made reproductive behaviour decisions more dependent on individual preferences and dispositions (Jokela, Alvergne, Pollet & Lumaa, 2011).

In some developed countries, researches on women reproductive health behaviour particularly among different categories of women of childbearing age are multifaceted concerning psychological, organizational and community levels of analysis (Verma, 1990, Rappaport, 2000; Pandey & Singh, 2004).Some of the factors affecting the reproductive health behaviour include age at marriage, protogenesic interval, number of children, intergenesic intervals along the maternity control (Sánchez 1991; Salvat & Crognier, 1994) among others. The relationship between these factors and the social environment of the woman, especially her income and level of education, has been extensively studied (Heck, Schoendorf, Ventura & Kiely, 1997; Peña, Liljestrand, Zelaya & Persson, 1999; Payne 2004, Acevedo, 2006). Studies on women reproductive health behaviour have noted that

women in many countries, for example in India, lack control over decisions related to their sexual and reproductive behaviour owing to gender inequality, cultural norms, limited economic and social autonomy (World Health Organization.1997; Bhattacharya, 2004 ; Aras , Irene Veigas & D'souza,2012).Women are at risk of various negative health complications including menstruation, pregnancy and childbirth, unwanted pregnancy(ies).They also suffer unsafe abortions, problems arising out of contraception, risk of contracting reproductive tract infections (RTIs) and sexually transmitted diseases (STDs), prolonged childbearing and HIV infection. This situation has the tendency of foreclosing women's socio-economic progression in life.

However, almost two decades after Beijing and the International Conference on Population and Development (ICPD), Nigerian women, like most other African women, are still not in control of their sexual and reproductive health rights. Decision-making concerning fertility controls for many of these women are seriously inhibited by socio-cultural and religious factors (Burkman, 2002). Adedokun(2000) asserts that the extent to which women have and can exercise power of decision in the timing of marriage, the number and spacing of their children and access to quality reproductive health services are some of the important indicators of the level of women empowerment in different societies.This situation in Nigeria is evidenced by the number of cases of women's human rights abuses, including their lack of right to decide on their sexual health and the continued ignorance on issues of women's reproductive health and rights both within the private and public spheres (Nwosu-Juba, Ojo, Musa & Ighorodje, 2007).

For reproductive health rights, like other human rights, to be attained, all women irrespective of their status, must understand the factors that influence their reproductive health behaviour, claim control over reproductive health and sexual rights issues, as these have a direct impact on their physical, emotional and psychological well- being, and, in the final analysis, on the entire family, society and the nation.

A woman's role and status in the family, society and participation in paid employment greatly affect the degree of control she has over her own reproductive health behaviour because the possibility to decide when and whether to conceive children is a crucial element to be able to choose the kind of life she wants to live (Ergocmen, 2011).

Women who work outside the home are presumed to have more control over household resources, increased awareness of the world outside the home and, consequently, greater control over reproductive decisions(Gage,1995;Mason,1986 cited in Woldemicael,2007).Paid employment also brings women into contact with new role models and new ideas and values that enhance a woman's self-worth and autonomy and exposes her to knowledge of women with small families and practising modern family planning (Uchudi, 2001).

In Nigeria, the participation of women in the labour force has also increased over the years now that women are engaging more in paid labour. Although women in tertiary institutions are seen as role models due to the nature of their work, not all of these women are aware of their reproductive health rights and possess adequate knowledge of reproductive health. These women earn some income and, as such, do not totally depend on their husbands' financially. But there are still cultural factors that limit their ability to take decisions even when their lives are involved. This could be attributed to culture of patriarchy ,access to services, risk misperceptions and negative social norms around sexual activity and pregnancy.

Essentially, the achievement of good reproductive behaviour among women of all categories depends largely on the interaction of several factors in any given human society. Apart from the conditions of women themselves, the factors that affect their use or non-use of family planning (contraceptives), the culture of the people, the environment where they live and the socio-economic status of women is also strongly associated with reproductive health behaviour outcomes. Therefore, the understanding the reproductive health behaviour of female workers in tertiary institutions deserves more attention owing to the nature of their work.

**1.2 Statement of the problem**

Women reproductive health behaviour has generated a lot of interest from researchers across many disciplines because many women die due to pregnancy related complications. Hence, improving reproductive health behaviour of women which is a key aspect of the Millennium Development Goals requires a proper understanding of its predisposing factors. Most studies on reproductive health behaviour have concentrated on female adolescents,

uneducated and non literate women and rural women. There is a gap in the literature on reproductive health behaviour of female workers in tertiary institutions, as studies have not targeted this category of women. This justifies, the need for this study. If the above observation is true of the uneducated and non literate women in the rural areas will this be applicable to the educated urban female workers, particularly those in the tertiary institutions? It is on the basis of this that this study examined the determinants of reproductive health behaviour of female workers in tertiary institutions in southwestern Nigeria.

### 1.3 Objectives of the study

The overall objective of the study was to determine the extent to which age at marriage, socio-economic status, educational attainment, cultural norms/religious belief, mass media exposure, gender role and peer influence influenced the reproductive health behaviour of female workers in tertiary institutions in southwestern Nigeria. The specific objectives include to:

i) determine the extent to which age at marriage influences reproductive health behaviour among female workers in tertiary institutions .

ii) examine the relationship between socio-economic status and reproductive health behaviour among female workers in tertiary institutions .

iii) assess the extent to which educational attainment affects reproductive health behaviour among female workers in tertiary institutions .

iv) establish the relationship between cultural norms/ religious beliefs and reproductive health behaviour among female workers in tertiary institutions .

v) determine the extent to which mass media exposure influences reproductive health behaviour among female workers in tertiary institutions .

vi) examine the correlation between gender role and reproductive health behaviour among female workers in tertiary institutions .

vii) examine the extent to which peer influence affects reproductive health behaviour among female workers in tertiary institutions .

viii) assess the perception of reproductive health behaviour and level of knowledge of

reproductive health information among female workers in tertiary institutions.

ix) identify the barriers to effective women reproductive health knowledge and behaviour among female workers in tertiary institutions.

### 1.4 Research questions

The research provided answers to the following questions;

1) What are the effects of the predisposing factors on reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria?
2) What is the perception of female workers in tertiary institutions in southwestern Nigeria on reproductive health behaviour in tertiary institutions in southwestern Nigeria?
3) What is the knowledge level of reproductive health information among female workers in tertiary institutions in southwestern, Nigeria?
4) What are the barriers to effective women reproductive health knowledge and behaviour among female workers in tertiary institutions in southwestern Nigeria?

### 1.5 Research Hypotheses

The following hypotheses were tested:

$H0_{1:}$ There is no significant relationship between age at marriage and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

$H0_{2:}$ There is no significant relationship between socio-economic status (income) and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

$H0_{3:}$ There is no significant relationship between educational attainment and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

$H0_{4:}$ There is no significant relationship between cultural norms/ religious beliefs and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

$H0_{5:}$ There is no significant relationship between mass-media exposure and reproductive health behaviour among female workers in tertiary institutions in southwestern,

Nigeria

$H0_6$: There is no significant relationship between gender role and reproductive health behaviour among female workers in tertiary institutions in southwestern, Nigeria

$H0_7$: There is no significant relationship between peer influence and reproductive health behaviour among female workers in tertiary institutions in southwestern, Nigeria

$H0_8$: There is no significant difference in the reproductive health behaviour of academic and non-academic female workers in tertiary institutions in southwestern Nigeria.

## 1.6 Significance of the study

This type of study would be very useful to Nigeria, as it would provide government at all levels, Non-governmental organisations as well as other organisations involved in promoting women health with information need in their bid to achieve women's reproductive health aspirations. For a country whose policy target is to increase life expectancy through the reduction of unwanted pregnancies and illegal abortion, the knowledge of reproductive health behaviour and its determinants would indeed be valuable to stakeholders and policy makers on the need to provide relevant and accurate information beginning in early years till old age for all women.

Moreover, the outcomes of this study would be helpful in raising awareness on reproductive health information that women and people can use to change their behaviour particularly towards reproductive health. The purpose of this research is to contribute to improving women's reproductive health among female workers in tertiary institutions. The findings would enable stakeholders in tertiary institutions who engage in health programmes to produce gender mainstreaming policies on reproductive health rights of female workers. This study would also add to the stock of knowledge on determinants of reproductive health behaviour among women. The results of the study would also provide a platform for further research in this area.

## 1.7 Scope of the study

The study examined the extent to which age at marriage, socio-economic status, educational attainment, cultural norms/religious belief, mass media exposure, gender role and

peer influence influenced the reproductive health behaviour of female workers in tertiary institutions in southwestern Nigeria. The study focused on the following reproductive health behaviours: decision making on family size, timing and spacing of children, number of children, use of pattern of contraceptives to prevent unwanted/unplanned pregnancies and safe sex relations. These four behaviours were focused on because they are essentially peculiar to women of childbearing age. The study was delimited only to female workers, both academic and non-academic staff that had spent at least two (2) years in the selected tertiary institutions. This is because reproductive health behaviour occurs among women of childbearing age and it would be easy to study this behaviour as they are not under probation. They have quite well adjusted to the system.

The study was restricted to thirteen (13) tertiary institutions; five federal universities, four federal polytechnics and four federal colleges of education in southwestern Nigeria. The choice of these institutions was based on the fact that they were the first generation institutions, had similar conditions of service, large proportion of women and long years of establishment, as these institutions have been in existence for over 10 years and above.

### 1.8 Operational definitions of terms

The following terms are defined the way they were used in the study to remove ambiguity and vagueness:

**Female workers:** These are female (academic and non-academic) aged between 19 and 49 years, having the capability of reproducing younger ones presently working in tertiary institutions.

**Age at marriage:** This refers to the age when female workers (academic and non academic) got marriage with this having influence on their reproductive health behaviour.

**Socio-economic Status:** This means the income level of female workers associated with reproductive health behaviour.

**Educational attainment:** This is refers to the educational attainment of female workers grouped into six broad levels :SSCE, WASSCE/GCE , Grade II/Diploma /NCE, OND/HND, university degree, second degree and Ph.D, determining their positions into different ranks and cadres associated with reproductive health behaviour.

**Cultural norms/ religious beliefs:** These are beliefs, arts, customs and other capabilities acquired by female workers as a member of the society associated with reproductive health behaviour.

**Mass media exposure:** This refers to soap operas, drama series; radio jingles and so on through the radio, television and others media providing relevant and adequate knowledge on reproductive health behaviour.

**Gender role:** is societal prescribed role of male and female in the society influencing decision making on reproductive health behaviour.

**Peer influence:** refers to female workers friends, mates or colleagues of similar age group and sex having influence on their reproductive health behaviour.

**Reproductive health behaviour:** This means activities and decisions taken by couples on family size, timing and spacing of children, number of children, and use of contraceptives to prevent unwanted/unplanned pregnancies and safe sex relations.

**Tertiary Institutions:** These are institutions of higher learning like university ,polytechnic and college of education.

# CHAPTER TWO

# LITERATURE REVIEW AND THEORETICAL FRAMEWORK

## Introduction

This chapter focuses on review of related literature and theories to which the study was anchored. The review of past studies related to this study is done under the following sub headings:



## 2.1 Literature review

### 2.1.1 Concept of reproductive health and rights

Reproductive health is one of the major priorities in global public health, and is a fundamental and inalienable part of women's health (UN, 2002). Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and to its functions and processes (UNDP/UNFPA/WHO, 2010). It is now recognized by the UN not only as an end

in itself but also a major instrument of overall socio-cultural development and the creation of a new social order (Pandey & Singh, 2008).This definition implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. It also means that, men and women have the right to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law. Besides it implies the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. This concept is of great importance because it concerns all women, particularly during their reproductive years as good reproductive health could be seen as a factor of quality of life and a component of an individual's overall health status.

However, UNFPA (2009) suggests that reproductive health must be seen as an integrated issue between couples. Thus, reproductive health emphasises on equal right of both men and women in achieving and meeting their reproductive health needs. For both women and men, reproductive health reflects the impact of health in infancy and childhood as well as in adult life, and beyond reproductive age as well as within it. Reproductive health sets the ground for human sexuality, regardless of whether it leads to reproduction.

Some of the components of good reproductive health of women include:

- Protecting oneself against HIV/AIDS and sexually transmitted diseases (STDs),
- Getting pregnant, having healthy pregnancies and healthy babies,
- Having access to safe, effective, and affordable methods of birth control,
- Spacing one's pregnancies at one's convenience as well as avoiding unwanted pregnancies

Worku and Gebresilassie (2008) list the components of reproductive health as:

- Quality family planning services
- Promoting safe motherhood: prenatal, safe delivery and post- natal care, including breast feeding;
- Prevention and management of complications of unsafe abortion;
- Safe abortion services, where not against the law;

- Treatment of reproductive tract infections, including sexually transmitted infections;
- Information and counselling on human sexuality, responsible parenthood and sexual and reproductive health;
- Active discouragement of harmful practices, such as female genital mutilation and violence related to sexuality and reproduction; and
- Functional and accessible referral.

During the International Conference on Population and Development (ICPD) held in Cairo in 1994, reproducing health (RH) was recognized as a critical part of an individual's well-being and as being central and critical to human development. The ICPD established a paradigm shift from the previous concept of maternal and child health care including family planning to a more comprehensive approach of reproductive health.

Reproductive health is defined as a 'state of complete physical mental and social well-being and not merely the absence of disease or infirmity in all matters related to the reproductive system and to its functions and processes (ICPD, 1994). The definition implies that people have the ability to reproduce, to regulate their fertility and to practise and enjoy sexual relationships Furthermore, women can safely go through pregnancy and childbirth without health hazards. The definition also provides an insight into the empowerment of women and young people in the development and implementation of programmes and services as well as the need for men to assume greater responsibility for and actively support reproductive health. It is a lifelong approach that takes into cognizance the fact that reproductive health involves both men and women health issues and not just the health of women alone. Sexual and reproductive ill health, such as complications of pregnancy and childbirth, sexually transmitted infections, including HIV/AIDS, and reproductive causalities, account for one third of the global burden of diseases of women of childbearing age and one fifth of the burden for the whole world population (WHO, 2003).

The components of reproductive health are safe motherhood (including prenatal care) , safe delivery, essential obstetric care neonatal care, post-partum care and breast feeding, prevention and management of infertility and sexual dysfunction in both men and women, and prevention and management of reproductive tract infections, especially sexually transmitted infection (STIs, including HIV infections and acquired immune deficiency

syndrome (AIDs). Others are promotion of healthy sexual maturation from pre-adolescence, responsible and safe sex throughout life, gender equality, prevention and management of complication of abortion, provision of safe abortion services where the law permits it's elimination of harmful practices (such as female genital mutilation (FGM), child marriage and domestic and sexual violence against women) as well as management of non-infection condition of the reproductive system, like genital fistula, cervical cancer, complications of FGM (ICPD, 1994). Reproductive health is impairing material to maternal health which is a state of woman's health especially in the significant reduction of maternal mortality and morbidity and its impacts on infant mortality (Ladan 2003).

**Reproductive Rights**

Reproductive right has been defined simply as the right to reproduction and reproductive health by Black's Law Dictionary (Garner, 2004).Reproductive rights are legal rights and freedoms relating to reproduction and reproductive health (Cook & Mahmoud, 1996). The World Health Organization (2001) notes that:

> *Reproductive rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. They also include the right of all to make decisions concerning reproduction free of discrimination, coercion and violence*

Reproductive rights may include some or all of the following:

- the right to legal or safe abortion,
- the right to birth control and freedom from coerced sterilization, abortion, and contraception,
- the right to access good-quality reproductive healthcare, and
- the right to education and access in order to make free and informed reproductive choices, (Amnesty International USA ,2007).

Reproductive rights may also include the right to receive education about contraception and sexually transmitted infections, and other aspects of sexuality and protection from gender-based practices such as female genital mutilation (FGM) and male

genital mutilation (MGM), ( Amnesty International USA,2007). As defined in the Beijing Platform For Action (BPFA), and the International Conference on Population and Development (ICPD) documents, reproductive rights are

> *certain human rights recognised in national and international legal and human rights documents and other consensus documents, including the basic rights of all couples and individuals to decide freely and responsibly the number and spacing of their children, and to have the information, education and means to do so; the right to attain the highest standard of sexual and reproductive health; the right to make decision concerning reproduction free of discrimination, coercion and violence* (Nwosu-Juba , Ojo, Musa & Ighorodje, 2007).

Some of these rights, according to Nwosu-Juba, Ojo, Musa and Ighorodje (2007) are:

- the right to self-protection and to be protected against sexually transmitted infections (STIs) and HIV/AIDS,
- the right to family planning education and to decide on the number and spacing of children, and
- the right to adequate, accessible and affordable health services, including information education and communication programmes to women, especially in rural areas.

They further submit that the term "Reproductive Health Rights" can be grouped into four parts under the broad concept of women's human rights, namely:

- The right to reproductive and sexual health
- The right to reproductive decision-making
- The right to equality and equity for men and women
- The right to sexual and reproductive security

Reproductive rights comprise a constellation of rights established by international human rights documents and related to people's ability to make decisions that affect their sexual and reproductive health. However two conferences in the 1990s were crucial in promoting reproductive rights. The first was the International Conference on Population and Development (ICPD) held in Cairo in 1994, which produced a 'Programme of Action', raising issues of reproductive rights and health concerning family planning, sexually transmitted diseases and adolescent reproductive health. This was followed by the Fourth

World Conference on Women (FWCW) in Beijing in 1995, which acknowledged women's right to have control over their sexuality, and articulated concepts of reproductive rights and health (Ravindram,2001).

Reproductive rights include the basic rights of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children, to have the information and means to do so, and to attain the highest possible standard of sexual and reproductive health. They also include their right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents (UNFPA, 1994).

Reproductive right includes:

- the right to life;
- the right to bodily integrity and security of the person (against sexual violence assault, compelled sterilization or abortion, denial of family planning services);
- the right to privacy (in relation to sexuality);
- the right to the benefits of scientific progress (e.g. control of reproduction);
- the right to seek, receive and impart information (informed choices);
- the right to education (to allow all development of sexual and the self);
- the right to health (occupational, environmental);
- the right to equality in marriage and divorce;
- the right to non-discrimination recognition of gender biases (Ravindram,2001)

### 2.1.2 Reproductive health behaviour

Reproductive health behaviour is seen as decision-making which is embedded in social relations and institutions that operate from the macro to the micro level (Price & Hawkins, 2007). Reproductive health behaviour issues among women in the Nigerian context relates to access to information and services for family planning, child birth, prevention and treatment of sexually transmitted infection (STI), and freedom to regulate one's fertility and sexual health. Reproductive behaviour means a positive approach to women sexuality since it is a description of somatic, emotional, intellectual and social

aspects of sexual being in ways that are positively enriching and enhancing to personality of individuals thus gearing women toward physical, mental and social well-being and not merely being free from disease (Osakinle, 2007). Olukoya (1998) notes that reproductive behaviour of women is focusing more than before on prevention of unsafe abortion, treatment of reproductive tract infections, sexually transmitted diseases and especially prevention of HIV/AIDS in individuals. Thus, reproductive behaviour of women can be understood as the result of co-evolution of the cultural, socio-economic and biological systems, which each population develops according to the environment it lives in (Bernis, 2005).

Reproductive health behaviour of women in any given society is not only affected by their physiological structure and biological make-up but also by a number of socio-economic and demographic factors. These are some of the factors which determine the status of women to a large extent and which, in turn, affect their reproductive behaviour. Price and Hawkins (2007) assert that reproductive behaviour is embedded within specific social relations and political and cultural contexts. However, they acknowledge the impact of wider factors on reproductive behaviour, such as education, access to health care, occupation, marital status, and harmful traditional practices. According to them, the dominant conceptual framework for understanding reproductive behaviour is highly individualistic derived from the fertility cost-benefit models espoused by Becker (1960) and Easterlin (1975), with the unit of decision-making being the individual or the reproductive' couple.

Previous early studies have opined that far from being an individual decision-making process, reproductive behaviour is shaped by social relations and institutions at the local level, such as kinship groups, informal social networks, local political institutions, religious and spiritual advisors and healers, which are influenced by the product of the wider social, political, economic and historical processes (Lockwood, 1995; Price, 1998). Some other studies are of the view that, in the context of extreme poverty, for example, lack of resources to meet the rising cost of children is often taken to indicate a decline in demand for children, despite evidence that, in such contexts, children are valued as a source of social, economic and political security .The outcome under such conditions may not be increased demand for modern contraceptive services, but changes in the contexts in which children are conceived

and in which they grow up. Increased poverty in many parts of the world, combined with globalization of capital, provides the context for increased entry of children into the workforce as an economic resource to their families and as a cheap source of labour, and into economy -based sexual relations (Thomas & Price, 1999; Price & Hawkins, 2001).

### 2.1.3 Reproductive health information and Perception of women on reproductive health

Reproductive health information needs are the most important component of reproductive health care as the health of women in general depends highly on their reproductive behaviour. The Millennium Development Goals (MDGs) adopted by the United Nations in 2000 have among series of social goals relating to universal primary schooling, gender equality in schooling at all levels, and various aspects of reproductive health care (including improving maternal health and combating HIV/AIDS (UN, 2000).The MDGs goals underscore the importance of women health for any country's improved future and the adoption of this idea was to ensure that the governments of all nations, particularly developing nations, reduce maternal mortality and morbidity rate as well as improve maternal health, all of which have important implications for the lives of women. Thus, reproductive health awareness covers correct information, attitude and practice in relation to dimensions of reproductive behaviour, which preserves and promotes reproductive health, conducive to human and social development (Hassan, Jayaswal & Hassan, 2001).

Information is critical to the healthy development of a woman right from infancy and childhood, to adolescence and the reproductive years, to the post-reproductive period. In fact, to a large extent, the quality of life of women depends on the quality of information at their disposal and the purpose to which it is used (Anasi & Nwalo,2012). This implies that every woman, whether young or old, educated or uneducated, rich or poor, living in rural or urban cities, working or unemployed, should be given the opportunity and the right to reproductive health information which will enable her assess the alternatives at her disposal and make an informed decision on her reproductive health behaviour.Studies have shown that the sources of information about contraceptives in Nigeria are friends or siblings, media, formal education and health-workers (Okpani & Okpani, 2000; Oye-Adeniran, Adewole, Odeyemi, Ekanem & Umoh, 2005; Abiodun & Balogun, 2009; Monjok, Smesny, Ekabua & Essien,

2010; Ankomah, Anyanti & Oladosu, 2011).

Perception of women on reproductive health behaviour centres on their knowledge of use of contraception, much of the research on contraceptive use has tended to focus on the contraceptive practices of women. This may be because women have a particular interest in controlling or limiting their own fertility or it could simply be that almost all of the available methods, apart from the condom and male sterilization, are used or taken by women. A study was conducted in three communities around Beirut, Lebanon, as part of the reproductive health component of a larger Urban Health Study to elicit definitions of the concept of reproductive health among the women in the three communities by Kaddour, Hafez and Zuray (2005). The findings indicated that women's understanding of good reproductive health included three major themes, which were expressed differently in the three communities. Their understanding included good physical and mental health, and underscored the need for activities promoting health. Their ability to reproduce and raise children, practise family planning and birth spacing, and go through pregnancy and motherhood safely were central to their reproductive duties and their social status. They saw reproductive health within the context of economic status, good marital relations and strength to cope with their lives. Their findings point to the need to situate interventions in the life course of women, their health and that of their husbands and families, the importance of reproduction not only from a health services point of view, but also as regards women's roles and responsibilities within marriage and their families, and taking account of the harsh socio-economic conditions in their communities.

Participation in workforce also determines the employment status which can strongly influence women's reproductive health (United Nations, 1987; Sunil & Pillai, 2010). Female workers in tertiary institutions participate in various academic and management activities, like research, conferences, teaching, community services, administration, in addition to the regular household responsibilities such as, childbearing. Participation in workforce provides women with income-earning opportunities, which can influence their reproductive health by empowering them to have control over reproductive decision. The educational attainment of women not only influences their reproductive performance, but it also influences their

income, and consequently other factors of reproductive health like health-seeking behaviour, health and hygiene practice and age at first marriage.

### 2.1.4 Barriers to reproductive health knowledge and behaviour

Various studies have been conducted on the barriers to reproductive health knowledge and behaviour. It has been observed in other parts of Africa and Asia that the use of contraceptives can be limited by the negative attitude of husbands towards modern contraceptives particularly husbands' disapproval of modern contraceptives (Dabral & Malik, 2004; Tuloro, Wakgari, Ahmed & Gail, 2006; Nwankwo & Ogueri, 2006; Aryeetey, Kotoh & Hindin, 2010; Burke & Ambasa- Shisanya, 2011; Mathe, Kasonia & Maliro, 2011). Studies have indicated experiencing of side effects are among the major factors for non -use of modern contraceptives, drop-out and shifting from one method to another among women (Marchant, Mushi, Nathan, Mukasa, Abdulla, Lengeler & Schellenerg, 2004; Khan, Bradley, Fishel & Mishra, 2008; Igwegbe, Ugboaja & Monago, 2009; Adeleye, Akoria, Shuaib & Ogboloh, 2010; Burke & Ambasa-Shisanya,2011). The situation is further aggravated by dominance of males in decision making in a household (Woldemicael & Beaujot, 2011). Luck, Jarju and George (2000) found that the principal barriers to increased contraceptive use in rural Gambia are psychological.

Bongaarts and Johannson (2000) noted that some users of family planning methods reported side effects including dizziness, weakness, nausea, a burning sensation ,excessive and irregular vaginal bleeding, increased menstrual blood loss, menstrual pain, and abdominal pain. Cleland, Bernstein, Ezeh ,Faunders, Glaser and Innis (2006) also found that users of contraceptives reported side effects of breakthrough bleeding, fears of rare and serious risks, particularly breast cancer, and worries about weight gain. Furthermore, Casterline, Sothar and Haque (2001) reported that an additional obstacle to contraceptive use includes perceptions that the use of a particular method might provoke divine disapproval including death of a child.

Another study carried out in Tanzania by Schuler , Rottach and Mukiri (2011) to examine the role of gender norms in decision making among young women and men on issues of family planning and contraceptive use; reported that gender factors such as men's

dominance in decision-making and cultural norms that condone a man beating his wife if she uses contraceptives secretly are barriers to use of modern contraceptives. Since a woman's perception of her husband's opinion about contraceptive use have a significant influence on her contraceptives practice, husband's attitudes acted as a serious obstacle to a woman's contraceptive use (Casterline & Sinding, 2000; Shah, Shah, Al-Rahmani, Behbehani, Radovanovic & Menon,2001 & 2004 ). This observation calls for a need for men to be educated on the relevance of contraceptives to pave way by improving uptake of modern contraceptives by interested women. This could be through involvement of males in family planning programme.

Studies have also indicated some important determinants for use of contraceptives among women. One of these is women's experience of side effects of modern contraceptives such as irregular bleeding (Marchant *et al*., 2004; Khan *et al*., 2008; Igwegbe *et al*., 2009; Adeleye *et al*., 2010; Burke & Ambasa-Shisanya, 2011). Others are fear of side effects and existence of some myths and disbeliefs towards modern contraceptives like modern contraceptives causes infertility and lead to delivery of deformed baby, that is negative attitudes towards modern contraceptives (Dabral & Malik, 2004; Oye-Adeniran, Adewole ,Augustine, Oladokun, Gbadegesin, Ekanem , Yusuf, Odeyemi, Iwere & Mahmoud 2006; Adeleye *et al*., 2010; Chipeta, Chimwaza & Kalilani-Phiri 2010; Burke & Ambasa- Shisanya, 2011; Mathe *et al*., 2011). Other studies on fear of side effects and difficulties with methods used by women on contraceptive non-use have been identified by Jones, Darroch and Henshaw, (2002), Huber, Hogue, Stein, Drews, Zieman, King and Schayes , (2006), Nettleman, Brewer and Ayoola, (2007a), Nettleman, Chung, Brewer,, Ayoola and Reed, (2007b), Frost, Darroch and Remez, (2008), Jaccard,( 2009) and Kaye, Suellentrop and Sloup (2009). Studies from Uganda and United States of America have described that side effects do influence a person's choice of contraceptive methods, contribute to poor adherence, and represent a barrier to the use of contraceptives (Gilliam, Warden, Goldstein, & Tapia, 2004; Nalwadda., Mirembe, Byamugisha & Faxelid, 2010).

In a study conducted in Nigeria by Anthony,Joseph and Emmanuel (2009),husband's disapproval (36.8%), fear of side effects (28.9%) and religious beliefs (14.8%) were the main constraints to the use of contraceptives.Onwuzurike and Ugochukwu (2001) found that 91%

of non use of family planning methods among women in a community in Enugu State of Nigeria was as a result of their husband being against it. Fear of side effects and the belief of being sterile were reported as the major reasons for not using any contraceptives in Pakistan (Sajid & Malik, 2010). Studies have shown that lack of adequate information and ignorance are key factors militating against women's reproductive behaviour particularly family planning practice in Nigeria (Moronkola, Ojediran & Amosun, 2006). The findings noted that women's decision about use, non-use or discontinuation of contraceptive methods can be affected by their perceptions of contraceptive risks and benefits, concerns about how side effects may influence their daily lives and assessment of how particular method may affect relationships with partners or other family members.

A review of DHS data from 36 countries suggested that lack of knowledge of family planning methods remains an important barrier to contraceptive use, particularly in sub-Saharan Africa. The most frequently mentioned reasons for not using contraceptives by women with unmet need were fear of side effects, health concerns, and inconvenience of use (Sedgh, Hussain, Bankole & Singh, 2007). Lack of information on modern contraceptives, especially in rural areas is one of the main reasons for the low rate of uptake as suggested by Mize and Robey (2006) and McDonald, Utomo and Rahayu, ( 2009). All these reasons for non-use of contraceptives point towards lack of knowledge and restricted acceptance of family planning. Even when awareness of family planning is high, myths, misconceptions, and misinformation can limit demand (Campbell, Sahin-Hodoglugil & Potts,2006). Knowledge of contraceptives is considered as one of the essential factors associated with effective use of these methods. Biney (2011) observed among Ghanaian women, failure of contraceptive use which in turn led to unintended pregnancies and induced abortions was lack of knowledge about contraceptives. Lack of knowledge of family planning sources and methods is often cited as a key variable in determining contraceptive use (Casterline & Sinding, 2000; Korra,2002). Similarly, Lindstrom and Hernandez (2006) found that limited knowledge of contraceptive methods among recent rural-urban migrants in Guatemala was associated with unmet need and limited choice of contraceptives. Other factors inhibiting the use of modern family planning that have been highlighted in studies are fear of side effects, objection from partners, conflict with religious beliefs, objections from family members, not

thinking about using contraceptive and unplanned early sexual debut (Otoide, Oronsaye, & Okonofua, 2001; Abiodun & Balogun, 2009; Monjok, Smesny,Ekabua & Essien, 2010).

### 2.1.5 Age at marriage and women reproductive health behaviour

Age at marriage is of particular interest because it marks the transition to adulthood in many societies; the point at which certain options in education, employment, and participation in society are foreclosed; and the beginning of regular socially acceptable time for sexual activity and childbearing (Palamuleni,2011). He stated that age at marriage is one of the most important factors in population dynamics as it affects fertility, mortality and migration. Early marriage is associated with early childbearing, as in most cases particularly in developing countries; the main purpose of marriage is to have children. Early childbearing is also related to low status of women and adverse health risks on the mother and child. As such, marriage is not only the most predominant context for childbearing but also one of the most important determinants of fertility (Lesthaeghe, Kaufmann & Meekers, 1989). Differences in age at entry into marriage, access to family planning services and their ability to utilize these services effectively and efficiently, economic status of the household (that is possession of wealth to invest on offspring), and cultural and traditional norms in which the woman lives appear to play significant roles in creating variation in the level of reproductive behaviour (Mirza, Kovacs & Kinfu, 2001; Gibson & Mace, 2002).

Delayed age at marriage or late marriage directly affects completed fertility by reducing the number of years available for childbearing. Late marriage permits women to complete their education, build labour force skills, and develop career interests that compete with childbearing within marriage. This career interests may, in turn, motivate women to limit family size and/or widen the spacing of their children ( Jensen & Thornton, 2003) .Women's age at marriage is an important factor for her fertility rate too. Many studies conducted in India, reveals that fertility rate declines with the increasing mean age at marriage (Khongsdier, 2005; Sahu, 2006; International Institute of Population Sciences, 2007). Women in underdeveloped and developing countries marry early. The mean age at marriage in these countries is less than 20 years. While in developed countries the average is

23 years (UNICEF 1991). In 2001, UNICEF report that age at marriage is an important factor in childbearing.

Among socio- demographic indices, age is very central to reproductive health issues. Thus the age at first sexual intercourse, first marriage, and first birth are very important determinants of woman's risk of getting pregnant and the number of children she would have (Adebimpe, Asekun-Olarinmoye, Bamidele & Abiodun ,2011). One of the important factors affecting family size is age at marriage as the consequences of early marriages have dominant effect on population growth. Nagi (1983) explored the effect of demographic factors on reproductive health and fertility. He argues that age at marriage has substantial effect on fertility in Muslim countries compared with non-Muslim countries, ultimately affecting the health of women. He claims that, in the Muslim countries, when the age at marriage increased the fertility level decreased. He also discusses the significance of family planning programme regarding fertility differentials. His analysis showed that countries, with strong family planning programme and political commitment in achieving desired population goal, had lower fertility than the countries having weak family planning programmes and poor political commitment. Adoptions of contraceptives were more likely to be associated more with older age and higher education at marriage (Saima, Stephenson & Rubenson,2011).

Dyson and Moore (1983) state that arranged marriages, dowries, early age at marriage, social segregation of sexes, limited spousal communication and sex preference are the determinants of high fertility affecting reproductive health of women and that all these factors are related with the status of women and role change. Age at first marriage has been recognized as a crucial determinant of fertility because it marks the beginning of exposure to the risk of childbearing in societies where pre- marital sex is uncommon and where there is little deliberate effort to control fertility (Blanc & Rutenberg, 1990). Rising age at first marriage has a lowering effect on the level of fertility ( Hinde & Mturi, 2000). On the one hand, women who marry early will have, on average, a longer period of exposure to the risk of pregnancy, often leading to higher fertility. On the other hand, societies with late age at first marriage have experienced decreased fertility rates while in traditional populations in

Asia and Africa, where age at first marriage is younger, high levels of fertility have been observed ( Week, 2007).

Generally, the age at which a woman enters to her first nuptial life is directly related to number of children she will bear, because it affects the length of time she will be at risk of becoming pregnant. Unmarried women may also have children, but majority of childbearing takes place after marriage, making age at marriage a valuable indicator of a woman's lifetime fertility (Acharya, 2010). In settings like Nepal, where marriage remains the principal route to exposure to intercourse, changes toward late marriage have an immediate effect on childbearing by reducing fertility (Axinn & Yabiku, 2001). Recent studies of marital dynamics provide evidence that an increase in age at marriage has consequences for child bearing intentions and behaviours, including greater use of contraceptives to achieve child bearing intentions (Mason & Smith, 2000; Satayavada & Adamchak, 2000; Hoelter, , Axinn, & Ghimire, 2004; Hong, 2006; Schuler,Bates, Islam & Islam, 2006; Yabiku, 2004 & 2006). Early marriage limits the opportunities for women to advance in educational attainment or to develop meaningful livelihood skills ( Makinwa-Adebusoye, 2006; Adamu et al., 2011). Studies have shown higher rates of early marriage in rural areas than in urban areas (Westoff, 2003; Garenne,2004).Religion has also been found to have a significant role in determining age at marriage, particularly for girls ( Adedokun, 1999; Pande, 2003).). Studies show differences in the mean age at marriage for various religious groups. For instance, in Nigeria, Muslims have a mean age at marriage of 21.5 years compared with Christians (non-Catholic) who have an average age at marriage of 22 years, and Catholics of 22.5 years (Adedokun 1999). Various studies conducted in Asia indicate that the mean age at marriage for girls is lowest amongst Muslims, than the Hindus and highest amongst Buddhists (Pande, 2003) .Adedokun (1999) reports the difference in age at marriage in Lagos, Nigeria, explaining that Yoruba people marry later than Igbo and other smaller ethnic group and that the duration of schooling has strong correlation with age at marriage . He reports an increase in the mean age at marriage of women from 20 years for 0–5 years of schooling to 22.6 years for 11–15 years of schooling. The relationship between education and age at marriage is well established from previous studies ( Westoff, 2003; Garenne, 2004; Choe, Thapa & Mistra

2004 ; Bates Maselko & Schuler 2007). Young women aspiring to college education are likely to delay marriage (Quisumbing & Hallman, 2003).

### 2.1.6 Socio-economic status and reproductive health behaviour of women

The relationship between socio-economic status and fertility has received much attention both from sociological and economic points of view (Ebigbola, 1997; Alo, 2005).Alo (2011) asserts that socio-economic status is the outcome of a combination of series of personal characteristics, such as income, educational level, occupation and other factors. Historically, fertility decline in other major regions of the world has been attributed to a complex combination of factors related to the process of urbanization, industrialization and socio-economic development, such precipitating, overlapping and heterogeneous factors, which include education and employment of women outside home, income and religion, among others.

Scholars have attempted to explain fertility decline by using as casual explanatory variables a number of socio-economic factors (Secombe, 1993; Takayama, 2001). Particular interest has been on changing female socio-economic role, which accelerates the decline in fertility in modernizing societies (Alo, Ogunleye & Adetula, 2008). Socio-economic indicators like household income (Kavitha & Audinarayana,1997), urban residence and women's employment in skilled work outside the home (Addai, 1998), occupational status (Nuwaha & Amooti-kaguna,1999) and household living conditions ( Magadi, Madise & Rodrigues, 2000) have also proven to be strong predictors of a woman's likelihood of utilizing reproductive health services. Studies have reported that the level of family income is one of the influencing factors on the use of contraceptives (Bagheri & Nikbakhesh ,2010; Nanda , Adak & Bharati,2011). They argued that an increase in the rate of the use of contraceptives is a factor of increase in income.

### 2.1.7 Educational attainment and women reproductive health behaviour

Women's education occupies a unique place in demographic discourse and policy because a large amount of empirical research has revealed that educated women delay marriage, use contraceptives, reduce fertility and produce many other beneficial reproductive and child health outcomes (United Nations,1991). Education has long been recognized as a crucial

factor influencing women's childbearing patterns considered in the literature as direct cause to the delay in the age at marriage (United Nations,1996).Extensive demographic literature is devoted to examining the role of female education in promoting sustained fertility decline (Cochrane, 1979 in Martin & Juarez, 1995).

In recent years, new research showing that a woman's schooling affects the reproductive and health behaviour of other women has raised the possibility that female education has greater capacity to transform the demographic landscape of a society than is currently believed (Kravdal, 2002). The impact of women's education levels on fertility, contraceptive behaviour, and contraceptive method choice has been extensively studied by various researchers. Higher education levels in women have consistently been shown to have a significant negative effect on fertility levels and a positive effect on the use of contraceptives, although the exact mechanism through which education influences such behaviours and the direction of the relationship have not been identified (Stash, 2001; Moursund & Kravdal, 2003; Al Riyami, Mustafa & Mabry 2004, Saleem & Bobak, 2005; Omariba & Rasugu, 2006). Education is also closely linked to the use of contraceptives, more educated women are more likely to use family planning ( Saleem & Bobak, 2005). More adoption of family planning is associated with educational level of women (Furuta & Salway,2006). Basu (2005) investigated the impact of differences in education and rural versus urban residences on current use of traditional methods. She found that the most highly educated and urban women in India were using traditional methods of birth control and the illiterate and rural women were opting for modern methods. Using the 1998 Mongolian Reproductive Health Survey, Gereltuya, Falkingham, and Brown (2007) found that higher levels of education in women were associated with a greater likelihood of using traditional methods than using the intrauterine device (IUD) or other modern methods. Education and economic activity are two of the main determinants of women's status ( Abassi, Mehryar, Jones & McDonald, 2002). This would have bearing on reproductive behaviour of women generally.

There are a number of reasons why demographers believe a woman's reproductive behaviour can be influenced by the education of other women. Diffusion theories emphasize the role of elite educated women in exposing other women to new ideas about fertility

control. According to the theories, elite educated women develop a heightened awareness of the opportunity costs of childbearing, learn about Western contraception and become empowered to adopt them (Johnson-Hanks, 2003). These elite women then act as sources of information, social support and social pressure that diffuse their new lifestyles and ideas to other women ( McNay, Arokiasamy & Cassen, 2003). A number of studies have found that the socio-economic characteristics of women, notably educational levels have been argued to explain differences in reproductive behaviour and contraceptive choices ( Anju, Vanneman & Kishor, 1995; Kazi & Sathar, 2001). Other study results from different countries including Ethiopia show that literacy was the most important factor in increasing contraceptive knowledge and the desire to limit or space births (Assefa & Fikrewold, 2011).

In this connection, McNay, Arokiasamy and Cassen (2003) claim that the education of some women in a community initiates social and ideational changes that undermine traditional patriarchal power and reduce men's interest in having large numbers of children as it becomes difficult for them to devolve the costs of childbearing onto their wives. Benefo, (2006) avers that a number of empirical studies support the claim that the presence of educated women in a community is associated with reduced fertility for women, regardless of their individual characteristics. Many studies suggest that net of a woman's own education and the average education of women in a community have been shown to have a negative association with individual fertility in Thailand, Malaysia, Indonesia and the Philippines ( Hirschman & Young, 2000), sub-Saharan Africa (Kravdal, 2002) and South India (Morsound & Kravdal, 2003). Studies show that educated women get at a late age than non-educated women, and have better access to contraceptives than non-educated women (Haile, 2004; Alemayehu, Haider & Habte, 2010; Bongaarts, 2010).

These studies advance arguments regarding reproductive health behaviour of women, as their results found positive associations between community level literacy among women and individual-level contraceptive use, net of an individual woman's schooling, Bangladesh (Amin, Diamond & Steele, 1996),Zimbabwe (Kravdal, 2000) and India (McNay, Arokiasamy & Cassen, 2003). Jejeebhoy (1995 & 1996) claims that a number of possible pathways have been proposed on the relations between women's autonomy and reproductive behaviour. He adds further that women with higher autonomy are more likely to be involved

in their marriage arrangements, leading to their late age at marriage, to acquire information regarding family planning methods, and to use the methods during their reproductive life, and to control their reproductive behaviour.

Often, education is associated with characteristics that might lead a woman to choosing fewer children: literacy skills, greater personal autonomy, and exposure to new values, ideas, and role models. Literacy skills - reading comprehension, in particular - appear to have a pronounced impact on family size. One study found that, among women in South Africa, strong reading comprehension skills, regardless of family income level, affected family size (Carr, 2000). The study also suggests that access to information plays an important role in decision making. A large-scale analysis of DHS survey data from 25 developing countries confirmed that better educated women are more likely to practise contraception (Martin, 1995). Women with strong comprehension skills are better equipped to access and interpret information, whether it is provided in the classroom or through the mass media. More informed women, tend to have greater demand for and be better users of health services (Jejeebhoy, 1995;Casterline, Johnson-Kuhn & Haaga, 1999).

Substantial differences in reproductive behaviour exist between socio-economic groups within countries. Fertility is usually higher in rural areas than in urban areas, higher among uneducated women than among the better-educated women, and higher in households with low rather than high incomes (Merrick,2001; Rutstein, 2002). Jejeebhoy (1995) notes that women's education influences reproductive behaviour through five types of autonomy: knowledge, decision making, physical (ability to move freely outside the home), emotional, and economic and social.

Some perspectives have highlighted the role of the school in knowledge transmission and cognitive development, while others have emphasized education as a factor of production that generates wealth. Inspired by these broad approaches, Martin and Juarez (1995) examined the following three key dimensions of education and explored their implications for fertility behaviour.

•*Education as a "source" of knowledge*. Knowledge transmission is probably the school's most explicit goal. Schooling imparts literacy skills, enables pupils to process a wide range of information, and stimulates cognitive changes that shape an individual's interaction

with the surrounding world.

•*Education as a "vehicle" of socioeconomic advancement*. Education not only enhances cognitive abilities, but it also opens up economic opportunities and social mobility. In most societies, educational credentials are the primary criteria for entry into formal employment and for sorting individuals into the hierarchy of occupations.

•*Education as a "transformer" of attitudes* The role of schooling in attitude formation goes far beyond the enhancement of conceptual reasoning and may lead to crucial transformations in aspirations and, eventually, to questioning traditional beliefs and authority structures.

These three dimensions of education have an impact on women's reproductive desires and behaviour. First, the impact of knowledge on fertility is clear in that literacy conditions access to information and is, therefore, instrumental to informed fertility choices. Furthermore, schooling increases reliance on scientific explanations to make sense of the world and provides greater awareness of alternative lifestyles.

It is illusory to think that women can gain control over their fertility without learning first about their bodies in relation to sex, reproduction and health. The knowledge schooling imparts in these areas, even if marginal in the formal curriculum, may be crucial to the successful use of contraceptives. The school experience also provides women with greater competence to interact with complex institutions, maximizing their ability to benefit from a range of services, including family planning.

The impact of socioeconomic status on fertility is another factor that explains the negative association between education and fertility. In Latin America, as in many developing societies where the gap between affluent and deprived groups is wide, access to higher education is largely determined by social origin. Thus,the observed disparity in reproductive behaviour among educational strata, may be partly a reflection of this polarized social structure (Schoemaker, 1991).

Educational attainment is linked to wealth, and hence, to the ability to "afford" more children. But, more importantly, education is associated with greater perceived costs of children. Higher standard-of-living goals and higher educational aspirations for children usually lead to the decision to have a small family so that more resources can be allocated to

each child (Birdsall & Cochrance, 1982). Also, education raises the opportunity costs of children by enhancing women's opportunities to pursue wage-earning activities, which are likely to compete with domestic and childrearing responsibilities.

There are abundant indications that the influence of education on fertility can be partly traced to the impact of attitudes on fertility. Various studies have shown that the impact of female schooling on childbearing cannot be simply reduced to socioeconomic aspects, such as family income, husband's education or husband's occupation (Rodriguez & Cleland, 1980). With the increasing recognition of reproductive behavior as normatively bounded, schooling has come to be regarded as a decisive stimulus in the shift from a traditional value scheme (where major decisions, such as the number of children, are routinely left to fate or God) to a value system where the belief in a controllable destiny also applies to childbearing. Education also imparts a sense of trust in science and technology, which is indispensable for daily use of modern contraception (Cleland & Wilson, 1987).

Likewise, education induces crucial transformations in the locus of reproductive and contraceptive decisions--the family. As some have argued, by fostering a nuclear family in which spouses share more emotional intimacy and have more egalitarian relationships, education may indirectly facilitate the use of contraceptives. Another aspect is the style of mother-child interaction: By redefining the maternal role as more time intensive, education can act as an important deterrent to high fertility (Levine, 1991).The level of education attainment in any society is an important component of social development. It is considered to be a major factor underlying social status, often also an important determinant of reproductive health behaviour on family size preferences, contraceptive knowledge and use, age at marriage, infant and child mortality and infant and child health care (Clarke-Stewart, 1992). Education may influence economic factors that discourage high reproductive behaviour, thus reducing the economic utility of children, increasing the opportunity cost of women's time and enhancing the likelihood of their employment outside home.

Several socioeconomic factors have been identified to have indirect effect on reproductive health behaviour, particularly women's education and female employment. Studies have shown that the influence of education on reproductive behaviour varies greatly among countries with different levels of schooling (Jejeebhoy, 1995; Diamond, Newby &

Varle, 1999). Women employed in the formal sector have usually been noted to have fewer children (Kirk & Pillet, 1998). It could be said that unemployment denies women the access to resources with which to prepare for marriage and child rearing immediately after leaving school. Education could be seen as a powerful force against reproductive behaviour because, in terms of economic consequences, educating children is costly as parents must provide books, supplies, appropriate clothing, and transportation in order for their children to attend school even whether tuition is free or not.

Sahauna and Krashah (1991) note that variables such as:"the level of education of the women, and current residence" are important factors in influencing wife's age upon marriage, as well as on reproductive behaviour. Female education has been seen as a key determinant of reproductive behaviour on contraceptive use particularly among women (National Population Commission & Nigeria Demographic Health Survey,2004). It is argued that educated women are more willing to engage in innovative behaviour than are less educated women, and in many Third World contexts, the use of contraceptives remains innovative (Osakinle, 2003). Better educated women are also viewed to have more knowledge of contraceptive methods or of how to acquire them than less educated women because of their literacy, greater familiarity with modern institutions, and greater likelihood of rejecting a fatalistic attitude towards life (Osakinle, Babatunde & Alade, 2013). In addition, in Pakistan, women's education also played an important
role in relation to contraceptive use, as literate women were more likely to use contraceptives than illiterate women (Khan & Khan, 2007).

Education provides people with the knowledge and skills they need to live better lives. One extra year of schooling may increase an individual's earnings by up to 10% (UNESCO, 2011). Education of women is one of the key factors driving fertility reduction. Women with higher levels of education are more likely to delay and space their pregnancies and to seek health care and support (UNESCO, 2011). Education influences women's reproduction by increasing their knowledge of fertility; socioeconomic status, and changing their attitudes towards fertility control (Castro & Juarez, 1994 quoted in Longwe , Huisman & Smits , 2012 ). Empirical evidence from both developed and developing countries unambiguously reveals that female education is associated with a decrease in fertility

(Singh,1994; Ainsworth, Beegle & Nyamete ,1996; Lam & Duryea,1999; Vavrus & Larsen,2003; Sackey, 2005) .

Studies on female education and reproductive behaviour concluded that female education leads to a decrease in fertility that is., with higher levels of education, the number of children born per woman reduces ( Schultz, 1973; 1974; 1993 & 2008; Guilkey, Angels & Mroz,1998). Schultz (2008) avers that women's education is associated with smaller desired family sizes across the world. Education should be given utmost priority because achieving good reproductive health behaviour depends heavily on the educational attainment of women on how to obtain effective birth controls methods as well as the acceptance of idea of family planning, as it appears to be a powerful force for reproductive change in any country of the world. This negative relationship between women's education is explained by a number of factors, which have been explored by both economists and sociologists. First, the longer a woman stays in school, the longer she defers giving birth to her first child. This lowers the chances of giving birth to many children. Moreover ,with more education and exposure, women acquire more information about their bodies and are more able to process that information to their advantage ( Vavrus & Larsen, 2003).

Omariba (2003) avers that some studies carried out by Kasarda, Billy and West (1986), Cochrane, (1990) and Toroitich-Ruto (2001) all showed empirical evidence that associate's higher female education with lower fertility. The literature on fertility behaviour holds that formal education heightens a person's consciousness on the real and perceived costs and utilities of children (Kirk 1996). Education equips women with knowledge to ascertain the economic and other opportunity costs associated with having a child and would therefore, be less inclined to leave the labour force to have a child. Moreover, the norms and values of Western family formation that are communicated in the workplace tend to create a desire for fewer but quality children, which leads to a greater investments on the children ( Caldwell, & Caldwell, 1992; Axinn, 1993 quoted in Omariba, 2003).

Formal education exposes women to beliefs and values that place a high premium on individual advancement, creates awareness of alternative opportunities and life pursuits, and motivates them to develop and pursue interests other than childbearing ( Westoff, 1992). This implies that educational attainment of women may likely make them to view childbearing as

limitation to their individual career prospect and development. This makes them to realize other ways of attaining status besides bearing children, which influences their desire for children to decrease

Such greater control of their lives could be reflected in the independent decision educated women take in adoption of family planning. Where they act independently in fertility matters, they will be less likely to feel that they are disobeying their husbands. Moreover, educated women are more likely to relate with their husbands on an equal level and discuss the decision to adopt family planning together (LeVine, LeVine, Richman, Uribe, Correa & Miller, 1991). In terms of socio-economic factors, the most consistently found determinant of reproductive health service utilization is a woman's level of educational attainment ( Nuwaha & Amooti-kaguna, 1999; Magadi , Madise & Rodrigues, 2000). It is thought that increased educational attainment operates through a multitude of mechanisms in order to influence service use, including increasing female decision- making power, increased awareness of health services, changing marriage patterns and creating shifts in household dynamics (Obermeyer,1993).A major pathway by which education influences women's contraceptive use is through increasing their level of knowledge (Hemmings ,Wubshet, Lemma, Antoni, & Cherinet, 2008).

### 2.1.8 Cultural Norms/Religious Belief and Women Reproductive Health Behaviour

McDermott and O"Dell (2001) refer to culture as the beliefs, values and practices of the people in a society. Similarly, Arowomole (2000) defines culture as people's beliefs, practices, attitudes and values ,while Mohd (2005) view it as consisting of people's beliefs and values. Culture could thus be seen as the practices, beliefs, attitude and values of the people within a given society. Culture is simply the totality of people's way of life. Sanderson (1988) in Daramola (2005) defines culture as the total way of life characterizing members of society including tools, knowledge and patterned ways of thinking and acting , learned and shared and are not the direct product of biological inheritance. Basically, culture has five characteristic – it is a system; diverse; shared; learned; and based on symbols. Culture according to Daramola (2005) is an entity that is made of many parts. He submits that culture includes the language, philosophy, religion, values and ideologies to be found

among the people. It also includes its science, political beliefs, moral codes, forms of arts and recreation providing the basic form of the many ceremonies and rituals of social life such as wedding, funerals, greetings, and so on . Hofstede (1997) gives operational definition of culture as the following

- Culture refers to the cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion, notions of time, roles, spatial relations, concepts of the universe, and material objects and possessions acquired by a group of people in the course of generations through individual and group striving. Culture is the systems of knowledge shared by a relatively large group of people.
- Culture is communication, communication is culture.
- Culture in its broadest sense is cultivated behaviour; that is, the totality of a person's learned, accumulated experience which is socially transmitted, or more briefly, behaviour through social learning.
- A culture is a way of life of a group of people, the behaviours, beliefs, values, and symbols that they accept, generally without thinking about them, and that are passed along by communication and imitation from one generation to the next.
- Culture is symbolic communication. Some of its symbols include a group's skills, knowledge, attitudes, values, and motives. The meanings of the symbols are learned and deliberately perpetuated in a society through its institutions.
- Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other hand, as conditioning influences upon further action.
- Culture is the sum total of the learned behaviours of a group of people that are generally considered to be the tradition of that people and are transmitted from generation to generation.
- Culture is a collective programming of the mind that distinguishes the members of

one group or category of people from another

Culture has been defined as the shared products of the society, including the ideas, norms, and material objects that describe how people handle daily tasks and make sense of their experiences (Le, 2006). Social scientists generally agree that culture is learned, shared, transmitted inter generationally, and reflected in a group's values, beliefs, norms, practices, patterns of communication, familial roles, and other social regularities. Culture is also dynamic and adaptive (Carolyn,2001).The culture of an individual has a profound effect on the perspective from which he/she deals with health and illness. Culture has influenced peoples' convictions, attitudes, types of knowledge, and values; modes of behaviour, habits and customs; language and tradition (Janelle & Mulry, 2006).

Eguavoen, Odiagbe and Obetoh (2007) quoting Hollerback (1980) notes that the way women interact with kins, neighbours, peers, and community leader, health professionals' and so on are significant extramarital influences in shaping the decision style. Fertility decisions at a given time depend to a large extent on current situations within the family. Each birth may, therefore, be influenced by a different set of motivational, cultural and family conditions .Some of these situations includes:

- No decisions that may occur when a couple does not foresee that pregnancy result from particular actions
- Misperceive their fecundity and or lack knowledge of fertility decisions.
- Passive decision which take place when particular habits or customs within the culture reinforce the childbearing behaviours acceptable for group survival.
- Active decisions which take place when the couples are aware of a number of things
- Probability of pregnancy
- Possibility of regulating fertility and the fact that costs and benefits are attached to fertility outcome (Odimegwu, Omideyi & Okemgbo , 2001)

Within the mainstream of reproductive health literature, the understanding of the role of culture in influencing behaviour has been largely informed by structural-functionalist social theory (Price & Hawkins, 2007).Within this paradigm, typified by work such as that of Freedman (1987) cited in Price and Hawkins (2007) culture is (mis)understood as a set of

prescribed norms that guide social behaviour, and attitudes are seen as synonymous with these cultural norms and expectations. Lockwood (1995) cited in Price and Hawkins (2007) highlights this in his analysis of postpartum abstinence in West Africa, which showed clearly that "…there is no hegemonic postpartum norm, and men and women of different statuses and ages draw on a variety of normative statements to evade, promote, or undermine abstinence". Most analyses of postpartum abstinence focus on taboos and social norms governing reproductive behaviour. His analysis indicates that reproductive behaviour is negotiated within competing norms and taboos, such as between gender norms of sexuality, which pressure women to resume early sexual contact following childbirth and taboos on sex during lactation.

In general, an individual's decision is shaped by the perceived attitudes and behaviours of others in the community (Rimal & Real, 2003). Community norms regarding family size and family planning, then, are likely to influence women's own attitudes, and ultimately influence their use of family planning. Studies in other settings have had mixed findings regarding the extent to which community-level norms around family planning and family size affect women's use of modern contraceptives (Stephenson, Baschieri, Clements, Hennink & Madise,2007; Kaggwa, Diop & Storey, 2008). They found that among six sub-Saharan African countries studied, in only two (Tanzania and Burkina Faso) was the community's norms positively associated with women's modern contraceptive use. In Mali, Kaggwa and colleagues (2008) found that after controlling for individual-level factors, there was no evidence that women's use of modern contraceptives was affected either by community norms about desired family size, or by attitudes toward family planning . In a study in Ethiopia, Giusti and Vignoli (2006) used the community's mean household wealth index score as a measure of the community's degree of modernization, and found it to be positively associated with women's level of contraceptive use.

There is now a substantial body of literature which refutes the structural-functionalist view that behaviour is governed by social and cultural norms (Price, 1998; Price & Thomas, 1999; Thomas & Price 1999). Some scholars have argued that culture influences men's attitudes towards family planning. For instance, cultural and religious background of an

individual can have a significant effect on men's attitudes toward family planning and reproductive health (Kaida, Kipp Hessel & Konde-Lule, 2005).

Culture persuades the members of a society to act according to a tradition that has been in existence for generations. There are some cultural beliefs that the norm of family life is related to children: children will raise the family status, are an asset to the labour force and social security, and a preference for a son is as a result of the potential for the longevity of the clan (Dewi 2009). This conceptualization of culture provides a lens through which to understand reproductive health decision-making. Moreover, Oladeji and Folaranmi (2007) submit that the concept of informed choice in family planning can be applied to a wide range of sexual and reproductive health decisions. According to the authors ,informed choice on reproductive decision making focuses on whether to seek to avoid pregnancy, whether to space and time one's childbearing, whether to use contraception, what family method to use, and whether and when to continue or switch methods. The principle of informed choice focuses on the individual yet most people's family planning decisions also reflect a range of outside influences, community norms have, to a large extent, determine individual childbearing preferences and sexual and reproductive behaviour. Social and cultural norms, gender roles, social networks, religion and local beliefs influence peoples' choices (Bosveld, 1998 quoted in Oladeji & Folaranmi,2007).

Dixon-Meuller (1999) and Greenwell (1999) assert that community and culture affect a person's attitude towards family planning, desired sex of children, preferences about family size, family pressures to have children and whether family planning accords with customs and religious beliefs. Community norms also prescribe how much autonomy individuals have in making family planning decisions. The larger the difference in reproductive intentions within a community, the more likely it is that community norms support individual choices (Bosveld & Dixon-Meuller, 1999). Household and community influences can be so powerful that they can obscure the line between individual desires and community norms. For instance, in some cultures, many women reject contraception because bearing and raising children is the path to respect and dignity in the society (International Planned Parenthood Federation, 1996; Cherkaovi, 2000; Barnett & Stein, 2001). Most women use contraception because having small families is the norm (Mkangi, 2000; Lutz,

2003).

In many countries, family planning programmes are part of national economic and social development efforts. Efforts to foster equity in decision-making and raise awareness about reproductive right of the family, community, and society also promote informed choice of family planning (Jaconson, 2000). Heise, Ellsberg and Gottemeller (1999) are of the view that, as women gain more autonomy, they are better able to claim their rights as individuals, including the right to act to protect their own reproductive health. However, Freedman (1963) observes that cultural norms, which derive from the social institutions that exist within each society have given significant influence to the couples' reproductive behaviour in less developed societies. He adds that reproduction and the level of fertility tend to be crucial matters for family and society where they belong. Therefore, they are determined by the cultural norms related to family size and other concerns, such as marriage, timing of intercourse and abortion, which exist in their society. This implies that couples' reproductive decision become highly affected by family size norm embedded in their society owing to the explicit or implicit social regards or penalties constructed by these social organizations related with the number of children they have. The decisions on the number of children that a couple should have tend to be determined by these community's family size norms. These family size norms tend to correspond with the number that maximizes the net utility to be derived from having children in a society. In regard to this, Freedman (1975) cited in Nisa (2009) propose a framework to analyse fertility from the sociological point of view. It consists of eight variables :

- The means of fertility control that fall between the social organization and social norms on the one hand and fertility on the other,
- Social norms about family size,
- Social norms about each of the intermediate variables,
- Aspects of the social organization that function to reinforce family size norms by providing social rewards and punishment according to the number of children in the familial unit,
- Other aspects of social organization that affect fertility by influencing the norms or actual values of the intermediate variables, either independent of or in

association with the effect on the norms about fertility,

- Mortality level, which determines the number of births required to produce the normative number of surviving children,
- Net migration level, which determines the number and age composition of persons available to the families and the societies as a whole,
- Other factors in the environment that affect the intermediate variables in ways inconsistent with fertility norms.

Mason (2003) states that empowerment is a property of social or cultural system rather than of individual experiences and traits. This means that shared values, norms, beliefs, traditions, and practices of a group could give some members a greater right to exercise power than other members, and could give them better access to the means to exercise power. Women's autonomy and power are strongly determined by socio- cultural system and individuals with some traits (for example, those who are males) could be more empowered than others in the communities.

Three community characteristics believed to influence fertility are controlled to prevent them from confounding estimates of female education's aggregate effects (Kravdal, 2000 & 2002; Moursund & Kravdal ,2003). Past studies showed that one of the three community characteristics is proximity to urban areas because, historically, ideas supporting low fertility diffused from urban to rural areas through migratory processes (Reed, Briere & Casterline, 1999; Shapiro & Tambashe, 2001; Kravdal, 2000 & 2002). The second is community access to transportation, for example in Bangladesh (Saha, 1994) and some parts of Africa (Hammerslough,1992; Reed et al, 1999), ideas and behaviour that support interest in regulating fertility and using contraception appear to arrive in a community through its communication linkages with the outside world. The third is community infrastructural development, as access to modern amenities, like electricity, farming machinery and health services has the potential to reduce economic and social uncertainty in a community and thereby turn the economic calculus against high fertility (Saha, 1994). Women living in rural areas tend to use fewer contraceptives and have more children than their urban counterparts (Rutstein, 2005; Conde-Agudelo, Rosas-Bermúdez, & Kafury-Goeta,2006).Reproductive health behaviour of women is greatly influenced by culture . For instance, the reproductive

behaviour of most women in Africa is being guided by the culture of silence embedded in them by traditions (Muoghalu, 2011). Owing to this form of socialization, women encounter a lot of reproductive health problems, which they suffer in silence without telling anybody (Centre for Disease Control , 2000).

Religion is one of the most important social institutions as well as the oldest socio-cultural characteristics associated with mankind and civilization created over thousands of years of known history, finding its influence in all societies, acting as a powerful system of social control with pervasive effects on various aspects of people's lives, attitudes and behaviour ( Haloi & Limbu, 2013). The importance of religion in understanding the behaviour of individuals, groups or even communities can be illustrated with Emile Durkheim's (1915:47) definition of religion as "a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden beliefs and practices which unite into one single moral; community for all those who adhere to them"

Religion can be articulated as a multidimensional concept, which includes different levels and measures (Norris & Inglehart, 2004; Southworth, 2005). These may be divided into three main aspects. The first is affiliation - the identification with a specific religion (or lack of such identification); the second dimension is religious practice, most commonly measured as frequency of attendance at religious services; while the third is belief, which can be measured by self-rated religiosity or the importance of religion in one's life (Voas, 2009). To Dewi (2009), religion can sometimes act as a barrier to join family planning, as it is in Uganda, where the Anglican Church followers express a greater acceptance of family planning than Catholics and believers of Islam do.

Studies have found that women are more religious than men and that their religiosity has a stronger impact on their behaviour than their male counterparts (Miller & Hoffman,1995; Krause,Ellison & Marcum,2002). Beit-Hallami and Argyle (1997) asserts that women are more likely to be attracted to religion because many of the traits valued in religion are considered feminine traits, such as obedience to God and the nurturing of others. Gender socialization and the roles associated with it may partially explain why women may be more prone to adhere to the sexual scripts emphasized by their religious community than men. Explanations for the effect of religion and religiosity on fertility behaviour emphasize

the central role that major religions take in shaping the family and childbirth (Lehrer, 2004). The high value that is ascribed to family and children in most religions, with its social implications, is also stressed by Norris and Inglehart (2004:23):

> *One of the most central injunctions of virtually all traditional religions is to strengthen the family, to encourage people to have children, to encourage women to stay at home and raise children and to forbid abortion, divorce, or anything that interfere with high rates of reproduction.*

However, it should be noted that some religious denominations have stronger pronatalist norms than others. These differences are expressed in the religious texts and teachings of various denominations, including instructions of reproductive behaviour and family roles (Sherkat, 2000; Adsera, 2006). The mechanism through which religion affects fertility could be better understood through the wider context of social organization, including social norms and gender role perceptions associated with the religious group (Goldscheider,1984 & 2006). Building on Goldscheider's approach to religion and fertility, McQuillan (2004) defines specific social and political settings in which religion would play an important role in shaping demographic behaviour. According to him, religious norms about family and fertility are most likely to influence behaviour when religious institutions have the means to communicate these teachings to their members and to enforce compliance, through formal organizations or informal social pressure. He acknowledges, the role of religion as a moral builder .Religion will affect reproductive behaviour when it articulates norms relevant to fertility; can communicate these values and promote compliance; forms a central component of the social identity of its followers.

Philipov and Berghammer (2007), buttressing the impact of determinants on reproductive health behaviour, submits that several religious measures influenced reproductive behaviour in 18 European countries. Belonging to a religious denomination is significant for the ideal number of children. Christianity and Islam influence the behaviour of their adherents although the adoption of contraception is a cultural process that depends on access to and acceptability of information as well as contraceptives (Agadjanian, 2005). Muslims tend to have more children than their non-Muslim counterparts (Knodel, Soottipong Gray, Sriwatcharin, & Peracca 1999; Morgan Stash, Smith & Mason, 2002; Darmalingam &

Morgan, 2004;Westoff & Frejka, 2007). In addition to their higher fertility levels, Muslims tend to desire more children and are less likely to use contraception (Morgan et al., 2002).These are due to the different values attributed to family size; the differences in the practices and customs governing sexual relationship; and the differences among religious groups in other socioeconomic variables, such as rural urban residence and educational attainment (Campbell, 1983). In addition, a qualitative study in the Afar region of Ethiopia reported that women in the rural areas have some concerns about religious sayings and the implications that these sayings have about family planning use (Tigist, Kassahun, Awoke, Jemal & Yesuf, 2012).

In addition, Westoff (1973), as cited in Campbell, (1983) notes the differences on fertility among Catholics and non-Catholics in United States were due to the differences in religious doctrines. The Catholic Church prohibits to the use of all methods of contraception except periodic continence and it teaches that the chief purpose of marriage is childbearing and raising children. Catholics are less likely to use effective methods, and tend to have three or more children compared to the non-Catholics in comparable socio-economic groups.

Religious factors may directly or indirectly influence individual's reproductive behaviour. According to Lucas and Meyer (2003), the identifying ideal number of children may enable a distinction to be captured between societies and groups which have small and large family norms. In general, younger women prefer one or two children compared to their older counterparts. Chacko (2001), carried out a study among women, in four villages in rural West Bengal, India, using primary quantitative data obtained from a survey of 600 women and qualitative data derived from ethnographic methods; Bi- and multi-variate analyses demonstrated that the factors that most influence a woman's use of contraceptives include her age, the number of living sons she has, and her religious affiliation. Religious and cultural factors have the potential to influence the acceptance and use of contraceptives by couples from different religious backgrounds in very distinct ways, within religions, different sects may interpret religious teachings on this subject in varying ways, and individual women and their partners may choose to ignore religious teachings (Srikanthan & Reid, 2008). They concluded that cultural factors are equally important in couples' decisions about family size and contraception.

Children often have an essential symbolic value and are an important source of social support (Price, 1998; Price & Thomas,1999). Ancestral religion in many societies in sub-Saharan Africa, for example, ascribes an indispensable role to children in the maintenance of the lineage, which is of central importance in the social and political organization of many such societies (Price, 1998). In China, for instance, the symbolic importance of children is translated into resistance to permanent methods of fertility control. The lineage is perpetuated by economic production and social reproduction. Consequently, the social worth of a person depends on the ability to work and to carry on the family line. Sterilization is seen as damaging the lineage, production, and reproduction and is viewed with more hostility than other methods of fertility control, including abortion (Price & Thomas, 1999).

Religious belief may influence reproductive health behaviour in different ways .This is as a result of the beliefs that procreation is sacred and any interference with it would bring down the wrath of God (Osula, 2002). Sharing the same view, Igbudu, Oshodin and Egenege (2007) observed that the desire by most individuals and couples for a large family size is as a result of the positive value which the Nigeria society attached to marriage, family life and procreation. It is a deep-seated traditional value which is supported by the dominant religious beliefs of Christianity, Islam and Traditional religions to the extent that all religions abhor barrenness.

### 2.1.9 Mass media exposure and women reproductive health behaviour

McQuail (2000) describe mass media as a means of communication that operates on a large scale, reaching and involving virtually everyone in a society to a greater or lesser degree. Media is a plural of medium, which means a channel or vehicle through which something is carried or transmitted. In other words, mass media are channels of communication in a modern society, primarily the print and the electronic media. He notes that mass media is an organized means for communicating openly and at a distance to many receivers within a short space of time.

The mass media is an integral part of people's lives and society. People live in a world influenced and shaped by the sights, sounds, opinions and values provided by the mass media. Broadcast media transmit information electronically, through television, film, radio,

movies, CDs, DVDs and some other devices, like cameras and video consoles. The, print media use a physical object as a means of sending information, such as a newspaper, magazines, brochures, newsletters, books, leaflets and pamphlets. The term also refers to the organizations which control these technologies, such as television stations or publishing companies (Potter, 2008;*Oxford Advanced Learners Dictionary*, 2010). Mass communication is a process of transmission of information, cultures, opinions, and attitudes, and so on to a relatively large, heterogeneous and anonymous audience simultaneously (Sambe, 2008).

Thompson (2010) gives five characteristics of mass communication namely:

- Comprising both technical and institutional methods of production and distribution. This is evident throughout the history of the media, from print to the Internet, each suitable for commercial utility.
- Involves the "comodification of symbolic forms," as the production of materials relies on its ability to manufacture and sell large quantities of the work. Just as radio stations rely on its time sold to advertisements, newspapers rely for the same reasons on its space.
- Separate contexts between the production and reception of information"
- Its "reach to those 'far removed' in time and space, in comparison to the producers".
- "Information distribution" - a "one to many" form of communication, whereby products are mass produced and disseminated to a great quantity of audiences.

Mass media is distinguished from local media by the notion that, whilst the former aims to reach a very large market, such as the entire population of a country, the latter broadcasts to a much smaller population and area, and generally focuses on regional news rather than global events. It includes newspaper, magazine, film, radio, television, recorded music and phonograph. Mass media is a medium that uses visual or prints distribution systems that simultaneously reach large number of people with the same message.

Weaver (1991) cited in Daramola (2000) gives five major characteristics of the mass media namely:

- The first characteristic derive from the name, mass media, which implies that media is designed for, distributed to and consumed by mass audiences. The mass audiences

are very large, either in terms of number or proportion of total population and the audience exist in large, heterogeneous societies either industrial or transitional societies.

- The second characteristic of the mass media is that they are big businesses, employing millions of people and making billions of naira as the case may be as profit.
- One other characteristic of the mass media is that they are sole disseminators of news (defined as factual, current and verifiable information about recent events). The mass media also disseminate other sorts of information –fictional stories, political advocacy, and strictly utilitarian information like recipes.
- The mass media are also characterized by speed with which they gather information and frequency with which they distribute it. Media producing organizations are continuously gathering information and are in instantaneous communication with their sources of information. The speed and rhythm of this ongoing process of gathering and distributing information, especially news, sharply differentiate mass media from other media and exert enormous influence on the character of their messages.
- The fifth characteristic of the mass media is that they are all twentieth-century phenomena. In other words, they all developed and attained maturity during roughly the same period, in response to the same circumstances and in pursuit of the same purposes.

There is substantial evidence that well-designed and implemented health communication programmes can influence norms and behaviours, fostering the enabling environment required for delivery of health services at scale (Snyder, Diop-Sidibé & Badiane , 2003; Johns Hopkins Bloomberg School of Public Health, Center for Communication Programmes (JHU CCP), 2009; Noar , Palmgreen, Chabot, Dobransky & Zimmerman, 2009; Mwakaimbo , Speizer , Schurmann , Morgan & Fikree ,2011; Storey , Lee, Blake, Lee, Lee & Depasquale,2011; Westoff, Koffman & Moreau,2011). As documented in a comprehensive survey by Hornik and Mcanany (2008), several empirical studies have emerged that established a significant correlation between mass media and contraceptive use.

In another similar meta-analysis of 52 studies, it demonstrated positive behavioural impact in 15 family planning campaigns (Snyder et al., 2003). They concluded that in these 15 campaigns, an average of 31% of respondents reported modern contraceptive use before the intervention, compared with 37% after the intervention. Another study in Nepal assessed indirect exposure to a mass-media campaign through interpersonal communication (defined as having talked to someone about a specific family planning mass-media campaign) as well as direct exposure to the campaign. They found that direct or indirect exposure to health communication programmes contributes to increased family planning use, in some cases by more than 150% (Boulay , Storey & Sood , 2002). The authors concluded that indirect exposure may have served as a source of social support for contraceptive use . Integrated, multi-channel programmes typically produce greater impact than those that employ a single channel (Noar et al., 2009; JHU CCP, 2009).

Mass media programming typically produces a dose-response effect, in which higher exposure to messaging results in increased positive behavioural change (Van Rossem & Meekers, 2007). Mass media campaign particularly on health promotion can strengthen family planning as a social norm among partners, family, and peers by promoting discussion about the benefits of family planning, birth spacing, smaller family size, and people's right to make choices in life. Also mass media programmes can help to dispel myths about contraceptive methods, correct misconceptions related to their use and side effects, and increase client participation in contraceptive counseling (Kim , Bazant &, Storey, 2006 &2007). Health communication can create informed demand for family planning by increasing knowledge and awareness of suitable methods, their availability, and how to access them (Mwaikambo et al., 2011).

The impact of television exposure on contraceptive use has been established in many developing countries, access to television may be an important source of information for encouraging the use of modern contraceptives, even when the programming content is for entertainment rather than education (Westoff & Koffman 2011). In Brazil, for example, Chong, Duryea and La Ferrara (2007) found that role models of liberated women and family planning in soap operas induce behavioural adaption in reproductive behaviour in regions in which the television channels are expanded. Radio and television soap operas in, Brazil,

Ethopia, India, Kenya Mexico, Niger, Nigeria, Rwanda, St Lucia and Tanzania have been documented by independent researchers in their massive effects on audience attitudes and behaviour with regard to HIV/AIDS avoidance and use of family planning (Westoff & Bankole ,1997; Singhal & Rogers, 1999; Rogers, Vaughan, Swalehe, Rao, Svenkerud, & Sood, 1999; Vaughan, Rogers, Singhal & Swalehe ,2000; Vaughan, Regis & Catherine, 2000; Singhal, Cody, Rogers & Sabido, 2003). Mass media interventions have been successful in changing and nurturing both public health activities and social and cultural norms (Stuart, 2009). Family planning and reproductive health are two areas which have been widely used in mass media messaging for some time, particularly in the developing world. A handful of examples of successful interventions include the promotion of vasectomies in Brazil, Africa and Guatemala (Kincaid & Merritt et al 1996; Dunmoye, Moodley & Popis, 2001; Penteado, Cabral, Diaz, Diaz, Ghiron & Simmons ,2001), encouraging HIV prevention and testing (Anon 2006; Rahman & Rahman 2007; Chandra, Jamaluddin, Masih, Faiyaz, Agarwal, & Kumar, 2008; Marum, Morgan, Hightower, Ngare & Taegtmeyer,2008;Muula 2008) and the broader prevention of Sexual Transmitted Infections STIs (Kim & Marangwanda,1997; Jato, Simbakalia, Tarasevich, Awasum, Kihinga & Ngirwamungu, 1999; Babalola & Vonrasek, 2005; Bertrand & Anhang, 2006). Aga and Van Rossem's (2002) survey of the reactions of 2,712 sexually experienced men and women in Tanzania, who collected in an exit survey at outlets that sell the female condom, found that:

> *About 6% of respondents had been exposed to peer education and 6% had been given an explanation by a provider on the use of the female condom. In contrast, about 38% of respondents had been exposed to the mass media campaign promoting the female condom. Their study concluded that mass media exposure significantly increased the likelihood that a man or a woman would discuss use of the female condom with a partner. In turn, discussion of the female condom with a partner strongly influenced the intention to use the female condom in the future.*

Stuart (2009) asserts that closely linked to the prevention of STIs via contraceptive use, is the promotion of family planning. In Nigeria, for example, a campaign using music videos produced by popular national artists promoting family planning implanted in 1989-90 was found, after cross-sectional analysis, to have had a significant effect on contraceptive use and intention as well as lowering desired family size (Bankole, 1994; Bankole, Rodriguez &

Westoff,1996).The presentation of family planning themed skits in the country between 1985-88 was followed by '(a near five-fold increase in) the number of new clinic clients per quarter in Ilorin.; in Enugu, the number of new clients per month more than doubled and in Ibadan, the number of new clients increased 3-fold' (Piotrow, Rimon, Winnard, Kincaid, Huntington & Convisser, 1990). Mass media campaigns promoting family planning have proved successful in places as far as Zimbabwe (Adamchak & Mbizvo, 1991), Ghana (Hindin, Kincaid, Kumah, Morgan, Kim & Ofori, 1994), Bangladesh ( Kabir & Amirul Islam, 2000; Mazharul Islam & Saidul Hasan ,2000), Nepal (Boulay, Storey & Sood,2002; Barber & Axinn, 2004), Uganda (Gupta, Katende & Bessinger, 2003), India ( Kulkarni, 2003). In Nepal, for example, research found that exposure to mass media is related to preferences for smaller families, weaker son preference, and tolerance of contraceptive use (Barber & Axinn, 2004). The British soap operas offer the chance to portray healthy behaviour as normal and so help change attitude and shape behaviour norms among viewing public (Verma, Adams & White, 2007). Media images and messages may also influence fertility by increasing consumption aspirations, which may in turn decrease preferences for a large family( Hornik & McAnany,2001).The role of the mass-media in changing both patterns of contraceptive use and notions of ideal family size could be another reason for low fertility among those exposed to mass media (Kulkarni, 2003).

There is evidence that family planning messages through media play an important role in increasing the knowledge of family planning methods, increased knowledge for acceptance and use, especially in those areas where the literacy level is low (Fikree, Khan, Kadir, Sajan & Rahbar, 2001; Saluja, Sharma, Choudhary, Gaur& Pandey, 2011). Several recent empirical studies have shown that mass media campaigns may lead to behavioural changes and in this way reduce fertility (Islam & Kabir, 2000; Agha & Van Rossem, 2002; Das Gupta, Zhenghua , Bohua, Zhenming, Chung & Hwa-Ok, 2003; Cheng 2011; Rabbi, 2012). Mass media exposure in Bangladesh was found to have a significant difference in fertility, even after controlling for the effects of contraception and socio-economic status (Rabbi, 2012). Cheng (2011) established that in Taiwan mass media and social networks played important roles in disseminating contraceptive knowledge and women transformed this knowledge into behaviour - that is, contraceptive knowledge reduced fertility. Another

study in Pakistan showed that people who had exposure to condom advertisements on radio or television experienced increase in the following areas: perceived availability of contraceptives, discussion of family planning, approval of family planning, and procurement of contraceptives (Agha & Meekers, 2010).

Kwankye and Augustt (2011) affirm that that, notwithstanding the inconsistent observed impact of the media on behaviour changes, one thing that is clear is that the media informs as well as educates. If the right information is provided, it is likely that persons who have access to a particular type of media would have a faster change in behaviour. In the opinion of the authors, persons who are regularly exposed to the media are more likely than their counterparts with little or no exposure to have higher knowledge about reproductive health matters and consequently, their behaviour would be less prone to risks. This is premised on the conception that the media provides the right information, which could affect the behaviour change process. Mass media can have similar influences, through the transmission of programmes and information promoting the values of the industrialized and urbanized world (Reed, Briere & Casterline ,1999) . Television programmes and the values they encompass are transmitted directly into the home. Television, unlike education, has the potential of directly affecting every member of the household, even those with little or no schooling. Also unlike education, television viewing does not involve the expenditure of substantial sums of money. Besides from the initial expense of purchasing a television set, there is little cost involved in watching television.

Similarly, the role of the mass media is said to change both patterns of contraceptive use. The notions of ideal family size has been investigated empirically in Africa (Piotrow, Kincaid, Hindin, Lettenmaier, Kuseka Silberman, Zinanga, Chikara, Adamchak, Mbizvo, Lynn, Kumah & Kim, 1992; Kojima, 1993; Bankole, 1994; Westoff & Rodrígues, 1995) and Latin America ( Bertrand, Roberto , Cisneros, Mascarin & Morris,1982, Korzenny, Armstrong & Galvan,1983, Valente & Saba, 1998), where government and private agencies have promoted family planning services through radio, television, and the print media. Westoff (1994), using cross-sectional data from three continents explored the role of the media (radio and television) in affecting contraceptive practice and desired family size, without focusing on specific media content or overt family planning messages. He found that

listening to the radio and watching television regardless of content is consistently associated with a higher incidence of contraceptive use and greater desires for smaller family sizes.

Dunn (2001) asserts that in Brazil, where the electronic media historically have not been used to promote family planning, researchers have focused on television exposure and its potential link to fertility decline. On a regional level, the spread of television in Brazil has been shown to correspond to declines in fertility levels in both the Northeast and the Southeast (Potter, Assunção, Cavenaghi & Caetano, 1998). At the individual level, lower fertility levels have been associated with exposure to television in various sites throughout Brazil (Kottak, 1990b). In a culture more attuned to oral than written communication, television plays a central role in the daily lives of those with access to it. Brazil's largest and most successful network, Rede Globo (Globe Network) is the most regularly watched commercial television network in the world. A decade ago it routinely attracted 60-80 million viewers with its own nightly news and telenovela productions. The supremacy of the network is due in large part to the high quality novelas that Globo produces on a continual basis. Globo's novelas not only have become the most popular programmes on Brazilian evening television, but are also exported to foreign markets as well. These novelas, which capture 60-95% of the audience share throughout Brazil, are written, filmed, and produced in Brazil, and focus on such typical Brazilian themes as family relationships, the urban lifestyle, social status, and upward mobility, giving them an appeal among Brazilian audiences unparalleled by other programming (Kottak 1990 a & b; Faria & Potter, 1994).

Corroborating the importance of mass media in reproductive behaviour, BEMFAM (1992 &1997) state that television viewing is an important part of the cultural context of Brazilian daily life. Listening to the radio is an activity that is also engaged in by high percentages of the population, particularly in rural areas where household ownership of television sets is limited. In the Northeast, radio listening is more prevalent than television viewing, with 70% of the women aged 15-49 watching television at least once a week and 79% of these same women listening to the radio at least once a week. Although in the Northeast the urban/rural differential for television viewing is particularly high, this differential is markedly less for radio listening. In Brazil's Northeast, 86% of urban women of reproductive age watch TV at least once a week, and 41% do so in rural areas. By contrast,

82% of urban women and 74% of rural women listen to the radio at least weekly (BEMFAM, 1997). These data suggest that, in Brazil's Northeast, radio, because it is more accessible to rural women than is television, may be an important source of information and contact with the larger society.

Investigating the use of the mass media on reproductive behaviour, BEMFAM (1997) reported that television viewing, and radio listening in Brazil increase with increased educational levels. The study showed that, in the Northeast, the percentage of women with no formal schooling who listened to the radio at least once a week was 62%, while 80% of women with 1-3 years of schooling and 86% of those with 5-8 years of education listened to the radio at least once a week. Of the women with 9 or more years of schooling 86% also listened to the radio on a weekly basis. Because of its accessibility and acceptance by individuals at all educational levels, the role of radio, like the role of television, in influencing reproductive behaviour should not be overlooked.

Stuart (2009) notes that some soap operas are designed explicitly as a vehicle for the conveyance of a family planning message. The most famous examples of these soaps, can be found in Mexico. The first telenovela to promote family planning was a nine-month series entitled *Acompañame* (tr.'*Accompany Me'*) which was showed prime time, weekdays during 1977-78.

The broad plotline is reproduced below:

> *Once upon a time Amanda, Raquel, and Esperanza were three happy-going young women growing up in Tacubaya. However, the three sisters' lives have become very different since marrying and forming their own families. Amanda is a middle class professional. She's had three children, all planned, and has raised them in a harmonious atmosphere. However, her happy family will soon be shattered when she learns her husband has terminal cancer. Raquel is a spoiled rich woman who only has one son. She's refused to give her husband more children in fear that they will destroy her body. Her only child grows unloved and neglected. Esperanza originally a promising young man, but because she did not believe in contraceptives her family grew too large for comfort. Because her husband's salary is not enough to support them, Esperanza and her children, several of whom are psychotic and potential criminals, must move into a rundown shack where they cohabit in squalor and constant bickering* (Series-Now 2009).

As a result of the series, a report commissioned by the Mexican Institute for Communication Research found that

> *a) Phone calls to Mexico's national family planning office requesting family planning information increased from zero to an average of 500 a month. Many people calling mentioned that they were encouraged to do so by the television soap opera.*
> *b) More than 2,000 women registered as voluntary workers in the National Programme of Family Planning. This was an idea suggested in the television soap opera.*
> *c) Contraceptive sales increased 23 percent in one year, compared to as even percent increase the preceding year.*
> *d) More than 560,000 women enrolled in family planning clinics, an increase of 33 percent (compared to a one percent decrease the previous year)* (PMC, 2009)

Television programmes on reproductive behaviour particularly on soap operas with an explicit family planning message can be found elsewhere. For example ApwePlezi, a radio soap opera in St. Lucia, has, influenced listeners to increase their awareness of contraceptives, improve important attitudes about fidelity and family relations, and adopt family planning techniques' (Vaughan, Regis & St Catherine, 2000). Similarly in Tanzania, radio soap opera entitled Twende na Wakati (tr. 'Let's Go with the Times') was deemed to have had 'strong behavioural effects on family planning adoption; it increased listeners' self-efficacy regarding family planning adoption and influenced listeners to talk with their spouses and peers about contraception' (Rogers, Vaughan, Swalehe, Rao, Svenkerud & Sood. 1999; Vaughan & Rogers ,2000) In India, the first 'social soap opera' Hum Log (tr. 'People Like Us') which began broadcasting in 1984, averaged an audience of 50 million people (CIN, 2009). Set amongst lower middle-class joint family, the serial had promoted equal status for women, family harmony, and smaller family size norms. Epilogues which related the content of the programme to viewer's daily lives were used at the end of each programme. The epilogues were delivered by a famous Hindi actor, Ashok Kumar, and ended with an address to which letters regarding the programme could be directed (CIN, 2009). Millions of women watch Indonesian soap operas (*sinetrons*) and Brazilian *telenovelas* every day, as soon as their households have access to television (Widodo 2002; Nilan 2003; AGB Nielsen Media Research ,2007).Exposure to these programmes sensitize

viewers to issues ranging from family size to gender equality and the empowerment of women, introducing values that may be positively associated with modern contraceptives.

Lindroos and Luukkainen (2004) aver that Nigeria is a country where modern family planning usage is one of the lowest in the world. This may be due to lack of useful information to those who really need the information as a majority of the Nigerian populace live in the rural areas where there is poor access to modern means of communication including the mass media. Oladeji (2008) observes that communication and decision-making play a vital role in ensuring informed choice of family planning and reproductive health behaviour. Effective communication/decision making allows people to seek what is best for their own health and to exercise their right to good quality health care (Rimal, Ratzan, Arntson & Freitmuth, 2002).

Summarizing the benefits of family planning programmes to the society, Odaman (2005) submit that awareness of such benefits can significantly enhance the use of contraceptives, which, in turn, will reduce population growth and, over time have positive effects on national development. He enumerates some of the family planning methods to include the use of safe period, calendar or rhythm, oral pills, condoms, injectable, intrauterine devices (IUDs), Norplant and sterilization. As regards these modern methods, Ugoji (2008) observes that family planning programmes strive to prevent unwanted pregnancies, help achieve birth spacing and help couples limit family size so as to reduce maternal/infant mortality.

Osakue(2010) notes that radio and television have been quite effective in creating family planning awareness in urban Nigeria. This is because the urban dwellers have greater access to the mass media. According to a survey of predominantly urban areas, about 90% of all urban households have radio set and about 60% own television set in Nigeria (Information, Education and Communication, July 1996) and the likelihood that people living in urban areas would readily have access to family planning information as purveyed through radio and television media is high. But to make this level of family planning awareness effective among the generality of Nigerians, the mass media should have a hold in the rural areas where a larger number of the people live. The spread of television and radio, as well as the rise of an independent press, and increasing literacy rates in many countries

offer new opportunities for family planners and other health care organizations to inform the public and reach opinion leaders (Poitrow, Treiman, Rimon, Yum & Lozare, 1994).

While examining the knowledge and practice of family planning methods among the currently adolescent women (CMAW) in India, Narsary (2009) observes that exposure to the mass media and husband-wife communication play a significant role in family planning matters. Obaid (2006) and Abd El-Aziz (2006) recognize the importance of the radio and television media as effective instruments in family planning education in Jordan and Egypt respectively. Similarly, in a research conducted with the aim of assessing the knowledge, understanding and attitude of couples towards family planning across two ecological settings of Jammu District in India, it was found that television and magazines were the major accessible sources of information on family planning to couples (Dhingra, Manhus, Kohli & Mushtaq, 2010).

Evidence from recent studies on the interrelation between the mass media and reproductive health behaviour have convincingly showed that radio and television play a major role in informing audiences and shaping life aspirations and personal value, especially among women of childbearing age, as the two types of media helped in providing reproductive health education on issues of family planning, contraceptive usage, HIV/AIDS and other Sexual Transmitted Diseases (STDs) knowledge (Sedgh, Bankole, Okonofua, Immarhiagbe, Hussain & Wulf, 2009) . Therefore, women access to source of information, particularly on reproductive health has been found to be positively related to their reproductive health behaviour, as reproductive health information and sharing of such information lead to acquisition of knowledge on reproductive health through the mass media, either print (newspaper) or electronic media (television, the internet). Women who have adequate knowledge of family planning source are substantially more likely to be using family planning than women who do not know a source (Ebigbola & Ogunjuyigbe, 1998). Promoting women reproductive behaviour, particularly on family planning on radio or television, can be an important means of raising awareness, improving knowledge and stimulating use of modern contraceptive methods (Olaleye & Bankole, 1994; Parr, 2002), as current contraceptive prevalence rate in Nigeria stands at 8%. Results from the Integrated Baseline Health Survey (IBHS) indicated that contraceptive prevalence rate is still low in

Nigeria and it varies by demographic and socio-economic characteristics (NPC & ORC Macro, 2004). In Nepal, a population-based survey found that exposure to a radio drama serial about family planning led to a greater likelihood of having discussed family planning with a spouse among those who had not discussed contraception prior to the campaign ( Sharan & Valente,2002).

The media, particularly radio and television, have important roles to play in influencing women reproductive health behaviour, as they have the advantage of wider coverage on public health campaigns, which provide the foundation for possible behaviour change. Radio and television are important channels for educating women through soap operas, drama series and jingles which are powerful catalysts for behavioural changes playing a central role in creating awareness and understanding of reproductive health. The mass media can be a powerful instrument not only for creating awareness about new technology, but also for stimulating people's desires for information and facilitating their efforts to apply the information to their everyday behaviour (Piotrow, Rimon, Winnard, Kincaid, Huntington & Convisser,1990).

Oladeji (2008) notes that communication plays a vital role in ensuring that informed choice of reproductive health behaviour are made, as it allows people to seek which is best for their own health and to exercise their right to select the quality of health care that they consider appropriate. It has been argued that the mass media, especially radio and television, has been quite effective in creating awareness on issues of women reproductive behaviour. Williams (2011) asserts that there is strong evidence that the mass media, particularly educational and entertainment broadcast media have played a significant role in a number of countries in bringing about changes in reproductive behaviour and in promoting the adoption of other health measures. Examples are radio and television soap in Brazil (Westoff & Bankole, 1997 ), India (Singhal & Rogers, 1999), Tanzania (Rogers, Vaughan, Swalehe, Rao, Svenkerud, & Sood, 1999), Niger and St Lucia (Vaughan, Regis & St. Catherine, 2000) and Ethiopia (Singhal, Cody, Rogers & Sabido, 2003).

Osakue (2011), states that, in Nigeria and elsewhere, governmental agencies (GAs) as well as non-governmental organizations (NGOs) have deployed a number of means to communicate family planning information to the populace. The GAs and NGOs, like the

Federal Ministry of Health (FMH), the Action Health (AH), Women Health and Action Research Centre (WHARC), Society for Family Health (SFH), Women Advocates Research and Documentation Centre (WARDC), Planned Parenthood Federation of Nigeria (PPFN) and many others, have one time or the other used the broadcast media to get across family planning information and services to the generality of the people. He cites examples of the mass media programmes as family planning and advancement programmes, such as "Flavours" (radio), "One Thing at a Time" (radio), "African in Progress" (radio), "Story Story" (radio), "Wetin Dey" (television) and "The Widow" (television) which are currently on air in most parts of Nigeria.

### 2.1.10 Gender role (male involvement) and women reproductive health behaviour

The meaning of gender could be confusing if one does not fully understand its complex sense. People often take gender to mean sex but it is not the same thing. Gender simply means the role, behaviour and activity that society considers appropriate for two categories of people. One is either a masculine or feminine because of the behaviour, role and activity that society has considered appropriate to one. Gender conditions in different societies affect the socio-economic opportunities open to women and the latter, in turn, are closely related to reproductive behaviour (Kritz, Makinwa-Adebusoye & Douglas, 2000). Research evidence proved that women have little control over when to avoid getting pregnant (Adewuyi & Eniola, 1999). Fertility, particularly in developing countries, would have been lower if women were in the position to decide when to get pregnant and how many children to have. Fertility among Nigerian women is high because husbands desire many children. Evidence supports the notion that men take major decisions in homes, especially in the areas of pregnancy and pregnancy-outcomes. For example, Nigerian women have no control over sexuality and fertility (Raimi & Adesina, 1999). In Nepal, husband's approval of family planning has been shown to be a pivotal determinant of women's contraceptive use (Kamal & Lim, 2010).

According to Tuloro, Deressa , Ali and Davey (2006) men desire more children due to the fact that they socially and economically gain from having a large number of children .

Other studies indicates that men mainly wish to reproduce because they want their children to carry on their family name and support them in their old age (Oyediran, Ishola & Feyısetan,2002; Odu , Jadunola & Parakoyi ,2005). Literature suggests that husband's influence and exercise power in childbearing decisions in a major way in Africa (Feyisetan,2000; Oyediran, Isiugo-Abanihe & Bankole,2006; DeRose,2007).Furthermore, when spouses do not share similar preferences, husbands tend to want more children (Short & Kiros 2002).

Others have argued that gender is just one of many factors that influence and affect women reproductive health behaviour (Hull, 2000; Hollerbach, 2001). However, the status of individual and the power they wield in any society is culturally determined, with significant influence of gender imbalances with consequences on fertility and empowerment of women in a given society. (Eguavoen, Odiagbe & Obetoh, 2007). Gender relationship plays a vital role in the power people wield and determines the opportunities and privileges reflected from the power to and power over between men and women. In most societies, women usually have less power over compared to men. Individuals with power over are said to assert their wishes and goals including decision regarding number of children to be raised by couples (Riley, 1997). A review article provides extensive ethnographic illustrations of influences of men on the reproductive health of women, in the areas of contraception, sexually transmitted infections, pregnancy and childbirth, infertility, and foetal harm (Dudegeona & Inhorn, 2004).

Dewi (2009) observes that, in many developing countries, the decision to use or not to use contraceptives, and the choice of a particular contraceptive method, very often depend on the approval of the husband. Men should also be involved in encouraging their wives to utilize the available reproductive health care facilities (Sharma, 2003). In other word, the importance of realising men's role in reproductive health decisions must be considered by the policy makers of family planning programmes by building awareness among men about the importance of their involvement in the process of contraceptive use by their wives or by themselves. In a patriarchal society, which still prevails in most countries, husbands make the most of the important decisions for their families. It is necessary to have effective communication between husband and wife in order to ensure equal roles in matters of

reproductive health. Such communication can also bring many advantages for the growth of men's consideration to participate in family planning (Population Council, 1998).

Research carried out in Nigeria revealed significant improvements in changing the focus of family planning to men. It showed that men are documented as having knowledge about contraceptive methods and using them, as they use contraceptives to avoid and delay pregnancies of their wives (Oyediran,2002). Men's involvement consists of accommodating their behaviour so as to share the responsibility in addressing the reproductive health needs with their wives, including female contraceptive use (Population Council, 1998). Awareness of participating in family planning programme has been growing among men. UNFPA (1995), cited in Khan and Patel (1997), has compiled a list of the importance of men's involvement in family planning. In this list, men's roles contain more complex benefits that can be achieved by maximising men's role in family planning. The motivations for developing men's participation in family planning are

- Preventing the spread of the HIV/AIDS epidemic by promoting condoms as dual protection (for contraceptive and HIV / AIDS protections)
- Men's attitudes toward family planning have shown positive improvement more than family planning policy makers had previously thought
- There are benefits to be had from men's supportive attitudes for the use of female contraception
- The low cost in men's improvement programme can be achieved by focusing on men's programme for male contraceptive methods
- Eliminating the cases of domestic violence and sexual abuse to the extent of reproductive rights by husband.
- Using the ICPD results as a step in the right direction to improve men's participation in family planning.

Men's participation involves the components of men's role in reproductive health, which comprises sexual behaviour; sexually transmitted diseases (STDs) and HIV/AIDS services; family planning; abortion-related services; pregnancy; childbirth and postpartum care; breastfeeding, maternal, and infant nutrition; and infertility services (Hardee & Yount 1995; Diczfalusy,1995; Puri & McLellan 1996 cited in Becker, 1996).

Earlier studies have categorized the various roles that men can play in the success of a family planning programme. Firstly, men are involved as managers and decision makers in family planning in their family's life (Helzner, 1996). Secondly, men are involved as clients and motivators to increase contraceptive prevalence. Men's active participation in family planning could raise the use of male contraceptive methods (condom and vasectomy) or male-dependent traditional methods (withdrawal and abstinence). Men also could support their wives in using female contraceptive methods (IUD, pill, implant, and injections). Thirdly, men are involved as agents of change for gender equality. Helzner (1996) quoted in Dewi (2009) argues that it is better to involve the husband and wife as equal partners than just encourage men to participate in family planning. Lastly, men are involved in fatherhood and their commitment to their children. Greene and Biddlecom (2000) claim that man must actively participate in raising their children. Men's involvement in their children's development include: spending time with their children; spending time being involved in child rearing; sharing domestic responsibilities with their wives; and financially supporting the needs of their children.

A debate has arisen on whether most husbands and wives have or do not have agreement on reproductive matters and about the influence of authority structures within households in determining reproductive behaviour (Bankole & Singh 1998; Mason & Smith, 2000; Kritz & Makinwa-Adebusoye, 2001). Mason and Smith (2000) have focused mainly on one measure of reproductive preferences: the will for no more children. Kritz and Makinwa-Adebusoye (2001) also found relatively low disagreement between husbands and wives on that issue. They found twice as much disagreement on family planning approval and contraceptive use. Their findings proved that women's authority is mainly important in shaping how couples resolve their disagreement but becomes weakened at the ethnic group level. This is consistent with Mason and Smith (2000) argument that authority structures are largely attributes of socio-cultural aggregates, such as ethnic groups.

In many societies, particularly those in Africa, there is considerable heterogeneity within countries and the literature shows that there are large differences between husbands and wives in reproductive outcomes (Becker, 1996 & 1999; Dodoo & Nii-Amoo 1998; Bankole & Singh, 1998; Andro & Hertrich, 2001). However, Mason (2000) notes that the

gender stratified social contexts, such as a patriarchal society and society based on a lineage oriented kinship system, might have affected couple's reproductive behaviour. He defines patriarchy as a set of social institutions that deny women the opportunity to be self-supporting, thereby making them dependent on male relatives for their survival, and favours men in the intra-familial allocation of resources and power. In this context, husband tends to have a relatively strong voice in decisions. Thus, it may affect the reproductive behaviour since women's opinion is influenced strongly by their husband's opinion or because wives who hold independent opinions may be afraid to voice them (Mason, 2000). A case study regarding gender norms and decision-making in Tanzania reports a similar situation in which almost all men and women discussed family planning, but a gender inequality was still present in the execution of decisions with family planning; the final decision maker being male (Schuler, Rottach, & Mukiri, 2011). Moreover, men are in many cases found to be more pronatalistic than women, which is considered an obstacle to contraceptive use (Greene, 2000)

In many countries, traditional male and female gender roles deter couples from discussing sexual matters, condone risky sexual behaviour and ultimately contribute to poor reproductive health among both men and women (Moser, 2001). Although ICPP Programme of Action (UNFPA, 1994) and the Being Platform for Action (United Nations, 1995) articulated the basic right of all couples and individuals to decide freely and responsibly the number, spacing, and timing of delivery of their children. Many studies have also identified the role played by men in making decisions pertaining to reproductive health issues of women, (Mbivzo & Adamchak, 1991; Ezeh, 1992, 1993a & 1993b; Isiugo-Abanihe, 1994; Bongaarts & Blake, 1995; Dodoo 1995a; 1995b & 1998; Rutenberg & Watkins, 1997; Roudi & Ashford,1996; Green & Biddlecom, 1997; Biddlecom & Fapohunda, 1997; Ngom, 1997; Bankole & Singh, 1998). Some other studies have argued that decisions regarding childbearing in most African settings are mostly made by men (Demographic Unit, 1987; Caldwell & Caldwell 1987; 1988; & 1990; Omondi-Odhiambo, 1989; 1997).

In virtually all societies, men have more power than women have (Berer,1996; Evaluation Project, 1997; Riley, 1997; Helzner, 2000; Moser, 2001). Men have powerful influence on reproductive decision-making and behaviour (Mccauley, Robey, Blanc, &

Geller, 1994; Blanc, Wolff, Gage, Ezeh, Neema, & Ssekamatte-Ssebuliba, 1996;US Agency for International Development, 1997). For example in some developing countries like in Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan, Ghana, Turkey and Zaire husband dominate reproductive decision making, whether regarding contraceptive use, family size, birth spacing or extra marital sexual partners (Storey, Hkhamov & Saksvig, 1997; Fort ,1999; Kulu, 2000; Magnani, Bertrand, Makani & Mcdonald, 2000).

In Nigeria, however, men in traditional setting dominate the reproductive health behaviour of women because they have been recognized to make family decisions on family size, condom usage, child spacing and contraceptive use among women. Men play powerful roles in reproductive decision making without considering their partners' wishes or the health consequences for themselves or their partners, although, such actions can be unhealthy and even dangerous (Oladeji, 2008). Some scholars claim that men are often called (gatekeeper) because of the many powerful roles they play in society as husbands, fathers, uncles, religious leaders, policy-makers and local and national leaders (Danforth & Jezowski,1994;Green,Cohen & Belhadj,1995;Greene & Biddlecom, 1997). In contrast, some other scholars have argued that couples who talk to each other about family planning and reproductive health reach healthier decisions and these couples are more likely to use contraceptives and use them wisely and effectively (De-Sil-va 2000; Beckman, 2002). In a study from Tanzania, Schuler et.al (2011) reported that men forced their wives to use contraceptives. This may occur when the idea of family planning is becoming increasingly accepted.

Surveys show that many husbands and wives do not know each other's views about family planning and reproductive health behaviour (Robey, Rustein, Morris & Blackburn, 1992; Ezeh, Seroussi & Raggers,1996; Ngallaba, Kapiga, Ruyobya & Boerma,1999). When men and women do not know their partners' fertility desires, family planning attitudes or contraceptive preferences, the consequences can include unintended pregnancies and unsafe abortions (Hudson, 2000; Hollerbach, 2000; Biddlecom, Casterline & Perez, 2001).

### 2.1.11 Peer influence and women reproductive health behaviour

A peer is a person who is of equal standing with another; one belonging to the same

societal group, especially based on age, grade or status (Population Council, 2003). According to Reproductive Health Outlook (2005), peer pressure is defined as emotional or mental force from people belonging to the same social group (such as same age, grade, or status) to act or behave in a manner similar to themselves'. Peer pressure has a great influence on women behaviour and reflects young people's desire to fit in and be accepted by others.

A peer group is a primary group of people, typically informal, who share similar or equal status and who are usually of roughly the same age, tend to travel around and interact within the social aggregate. Members of a particular peer group often have similar interests and backgrounds, bonded by the premise of sameness (Wolf, 2008). A peer group consists of a group of people, usually of similar age, background, and social status, with whom a person associates and who are likely to influence the person's beliefs and behaviour. It is a group of people who share certain social characteristics, such as age, class, occupation, or education, and interact on a level of equality. An individual may be a member of several peer groups, including friends, schoolmates, and coworkers (American Heritage New Dictionary of Cultural Literacy, 2005).

Newson, Postmes, Lea and Webley (2005) argue that, although the amount of practical support available from a kinship network may be one of the factors that influence reproductive decisions at the individual level, if viewed at the population level, kin altruism may have a more important effect. Individuals operating in a social network provide each other with a vast amount of social information. Research in social psychology has shown that the exchange of social information that occurs within a group creates and maintains the social norms or culture of the group (Postmes, Haslam & Swaab, 2005). Women who belong to social groups through discussions between group members develop a canon of values and beliefs that provide explanations for many of the decisions, including reproductive decisions that are made by group members. For instance, the belief that each child needs his or her own bedroom will motivate a couple who can only afford a three-bedroom home to avoid having a third child.

Social network is crucial to informed choice for some people. Most people seek the approval of others and modify their own behaviour to please others or to meet others'

expectations (Stash 2000; Valente, Watkins, Jato, Vander & Tsitsol, 2000). Individual health behaviour is influenced by how a person thinks that others view his/her behaviour (Warriner & Watkins, 2000). In Nigeria and other West African countries, some women said that, it was difficult for them to use family planning because their relatives or friends were not using it. These women were reluctant to be the first in their social group to use family planning (Stash, 2000).

Valente, et al. (2000) and Rogers and Kincaid (2004) state that people choose contraceptive methods that are commonly used in their community because they know that it is socially acceptable to do so, and they tend to know more about these methods. Many women use the same family planning method that others in their social networks use (Casterline ,Zebal & Haque 2001;Godley, 2001 ;Berhman , Kohler & Watkins, 2002; Barber, Pearce, Chaudhury & Gurung2002; Madhavan , Adams & Simon,2003). These studies show that a woman is more likely to adopt the reproductive behaviour of women in her social network. However, a study carried out by Entwisle, Rindfuss, Guilkey, Chamrathrithirong, Curran and Sawangdee (1999) in urban Nigeria found that the more widely used a method was, the more attractive it became to others in the cities and villages. Even when people are aware of the side effects or failures experienced by other users of a method, sometimes they still prefer it because it is familiar. In some communities, the entire communities may encourage one type of contraceptive based on the choices of early contraceptive users, rather than individual needs (Potter, 1999).

Some studies have shown that, while social networks exert a strong influence on more people's reproductive attitudes and behaviour, family planning programmes themselves influence social norms through the diffusion of new ideas about contraceptives (Cleland & Mauldin, 2001). Some review of studies over the last two decades, particularly a research carried out in 1996, found that programmes have helped convert people's interest in having fewer children into a definite demand for contraception. They have done so largely by making contraceptive use more accessible, common and acceptable in many communities (Freedman, 1997).

Family planning programmes are often the deciding factor for people who want to avoid pregnancy but who feel uncertain about using family planning (Jainn,1999; Magnani,

Hotchkiss, Florence & Shafer, 1999). This assertion is in line with the view of Retherford and Palmore (1999) that the role of social networks in the diffusion of new ideas about family planning has been recognized for several decades. As more and more people decide to use family planning, it has become increasingly acceptable for others to choose to do so as well (Cleland & Wilson, 2004). This is supported by the view of some scholars that everybody belongs to informal social networks that influence their behaviour to some degree (Roger,1999; Montgometry & Chung,2000; Panel on Population Projections, Committee on Population and National Research Council, 2000). These scholars cited examples of social networks to include the extended family, friends, neighbours, political groups, church group, youth groups, and other formal and informal associations. In a study on Latinos in the United States Gilliam et al. (2004) reported that people tend to rely on "informal sources", for example family and friends,for contraceptive information. Rutenberg and Watkins (2002) affirm that, during the course of the day, women often speak to other women about family planning and experience with contraceptive use. For many women, informal communication is a primary source of family planning information. In West Africa, where fertility has been high and practice of modern contraception rare in such settings, information that individuals acquire through social interaction may have a critical bearing on their reproductive decision-making. The connections among individuals' social networks become the pathways along which innovative demographic attitudes and behaviour can diffuse. The underlying assumption of peer group influence is two fold. First, it is generally assumed that people belonging to the same age group tend to confide in one another. Secondly, this is one very significant way in which women learn and communicate; they learn from one another. In doing so, they provide an opportunity for women of childbearing age to learn about reproductive health behaviour from each other.

### 2.1.12 Empirical studies

Many studies conducted in India, reveals that fertility rate declines with the increasing mean age at marriage (Khongsdier, 2005; Sahu, 2006; International Institute of Population Sciences, 2007). Hussain (2003) findings indicated that religion is a less influential factor than male dominance and cultural norms, as women are treated as objects in

families and communities, as well as in policies and programmes. The entire reproductive process, from pregnancy to childbirth, is a complex phenomenon that is socially and culturally determined, and women are excluded from decision making on issues concerning their own lives and bodies. Odutolu, Adedimeji, Odutolu, Baruwa and Olatidoye (2003) stress the importance of the relationship between female education and access to economic resources as a mean of furthering empowerment of women, especially in terms of their reproductive health behaviour. Alo (2011) in a study conducted in two rural communities of south-west Nigeria, found that women's age and proportion of dead among children ever born were the most important determinants of fertility. Women's educational attainment, employment status, and discussion of family planning with one's partner have also been correlated with women's use of contraceptives (Kimuna & Adamchak, 2001).

Chintsanya (2013) found that modern contraceptive use remain higher among women with more education, in wealthier households, and with more access to media. The effect of social factors in terms of woman's education on reproductive behaviour in Morocco was examined by Courbage (1999). He found that each year of female education had a greater impact on the rate of contraceptive use which rose dramatically with increasing education. However, some scholars, like Zafar, Ford and Ankomah, (1995) note the significance of cultural factors in influencing fertility and contraceptive behaviour. They emphasize the importance of social forces, such as education of both spouses, age at marriage, family size, sex preference, beliefs and values regarding family life in predicting fertility and contraceptive behaviour in Pakistan.

Muoghalu (2005) has established that professional women got and had their first babies slightly later than their illiterate sisters, patronize good hospitals for antenatal care and delivery of their babies and use mainly orthodox family planning methods. It was equally found by the researcher that men play a major role in the reproductive health behaviour of professional women. Bankole, Rodríguez and Westoff (1996) examined the effects of exposure to the mass media messages promoting family planning on the reproductive behaviour of women in Nigeria using cross-sectional data. The cross-sectional analysis suggested that: (1) contraceptive use and intention are positively associated with exposure to mass media messages, and (2) women who are exposed to media messages are more likely to

desire fewer children than those who are not exposed to such messages. Similarly, analysis of the longitudinal data showed that exposure to the mass media messages is a significant predictor of contraceptive use. Thus, exposure to mass media messages about family planning may be a powerful tool for influencing reproductive behaviour in Nigeria.

There is evidence from a number of studies that individuals' exposure to mass media messages promoting family planning influences contraceptive behaviour (Piotrow, Rimon, Winnard, Kincaid, Huntington & Convisser, 1990; Bankole et al, 1996; Westoff & Bankole, 1997; Kincaid, 2000). For example, in Nigeria, use of modern contraception, intent to use, and desire for fewer children were found to be associated with exposure to media messages on family planning (Bankole et al., 1996). A similar study in Tanzania found that women exposed to a mix of media promoting family planning were more likely to use family planning (Jato, Simbakalia, Tarasevich, Awasum, Kihinga & Ngirwamungu, 1999). Several empirical studies have confirmed that mass media campaigns have effects at different stages on the process to behaviour change. According to a study in Nepal, exposure to the mass media had an indirect effect on contraceptive use through increases in interpersonal communication, as well as positive changes in attitudes and perceived social norms regarding family planning (Storey, Boulay, Karki, Heckert & Karmacharya, 1999).

Similarly, women exposed to a mass media campaign in Tanzania were found to have more positive attitudes towards family planning and to discuss family planning with their spouses (Jato et al., 1999). In Mali, exposure to a campaign was linked to more favourable attitudes towards family planning and a decline in the proportion of men and women who believed that Islam opposed family planning (Kane, Gueye, Speizer, Pacque-Margolis & Baron, 1998). It has been suggested that exposure to messages broadcast through a variety of channels is the most effective way to change knowledge, attitudes, and behaviour. Behaviour change communication (BCC) campaigns often include a combination of radio spots or advertisements, radio dramas; television advertisements; videos; print materials, like newsletters and leaflets; posters; clinic-based counseling; and community activities like festivals, theatre, or group meetings (Kincaid, Rimon, Piotrow & Coleman, 1992; Piotrow , Kincaid, Rimon, & Rinehart, 1997).

Westoff and Bankole (1997) and other researchers carried out some studies; in

Burkina Faso,Ghana, Kenya, Morocco, Madagascar, Namibia and Zambia. They looked at the impact of mass media had on people's reproductive health choices. Their analysis revealed that exposure to the mass media has considerable influence on reproductive behaviour, even without radical economic and social changes. The general conclusion of their reports is that there is a persistent and frequently strong association between exposure to the mass media and reproductive behaviour in Africa in the expected direction: greater knowledge and use of contraception, intention to use contraception in the future, preferences for fewer children and intention to stop child bearing. In 2000,Population Reference Bureau, found that biological, cultural and socioeconomic conditions together determine the ability to conceive a child, as well as number of children a woman wish to have .

In addition, there is evidence that media exposure is also associated with later age at marriage. These conclusions are generalizable to women and men, both and single. Radio exposure shows the most consistent associations with [positive] reproductive behaviour. The reproductive measures most consistently related to media exposure for women are knowledge of methods, current use, intention to use, and age at marriage. A similar pattern prevails for men, with use of contraception being the most consistently associated with radio in general and with radio family planning messages.

Shrestha (2000) found, in a study in Nepal, that spousal communication on family planning, spousal communication on family size preference, child loss, place of residence and women's involvement in income-earning activities are the significant predictors of contraceptives use in the study area. Kim, Kols and Mucheka (1998) assert that a person's social environment usually has more influence on family planning decisions than do the attributes of specific contraceptives. In Kenya, for example, when new clients were asked to give a single reason for their choice of a specific family planning method, most of them cited the attitudes of their spouses or their peers, or their religion or value.

Studies have showed that socio-economic characteristics of women, notably educational levels, have been argued to explain differences in reproductive behaviour and contraceptive choices (Anju, Vanneman & Kishor, 1995; Kazi & Sathar, 2001). Some other researchers claim that individuals/groups have a bearing on reproductive behaviour, particularly contraceptive behaviour (Rutenberg & Watkins, 1997; Arends-Kuenning Bazle

& e-Khuda,1999; Casterline, Montgomery, Green, Hewett, Agyeman, Adih & Aglobitse, 2000; Godley, 2001; Barber ,Pearce , Chaudhury & Gurung, 2002; Berhman, Kohler & Watkins, 2002; Madhavan, Alayne Adams & Dominique, 2003). Sather (1988) investigated the role of women status on determinant of fertility. She found that, those Pakistani women who had been enjoying good status had lower fertility compared to the women who belonged to the poor socio-economic status. Giusti and Vignoli in 2006 found that living in a community with higher levels of socioeconomic development, better access to education, expanded employment opportunity, and more exposure to modern ideas could affect women's ideal family size and attitudes toward using family planning.

Sarwat, et al (2003) claim that occupation of the respondents in their study played a pivotal role in fertility regulation and reproductive health behaviour of women in households. Changes in the economic status of women in households led to changes in their reproductive behaviour. Their findings further showed that low socio-economic conditions like unemployment of women, increase the burden of expenditure. Low-income households had more members and more young children, with high dependency ratio, which reflected high fertility rate. As a result the majority of them were in poor conditions. Kabir, Moslehuddin and Howlader (1988) aver that fertility depended upon socio-economic factors that affected women's choice of contraceptives in rural Bangladesh. The regression analysis showed that husband-wife socio-economic status, and communication on family affairs, contacts with family planning workers and female education were associated with the family size and adoption of contraceptive methods and family planning programmes.

Educated and employed mothers are usually favourable to small family norm. In a study carried out by Beguy( 2009) it proved that higher educated mothers are conscious about small family norm because it is harder to maintain and take good care of a large family in question of health related topics. Moreover educated mothers are conscious about demerits of increased population, too. Similarly, employed mother always seek for less number of children, as it become harder for them to take good care of them after maintaining the job. Better educated women were more likely to use contraceptives (Bbaale & Mpuga 2011). Studies conducted in other countries also indicate that women's education had a strong positive effect on their current use of contraception ( Arokiasamy,2002; Iyer, 2002; Khan &

Khan, 2007). Husband's education also has a positive effect; it is less important than the wife's education (Weinberger, 2001). Adhikari's (2010) study found that literate women tended to have fewer children than illiterate women ($p < 0.001$). A woman's religion was an important factor in her fertility. For example, Muslim women were likely to have more children ($\beta = 0.066$, for all women; $\beta = 0.146$, for women aged 40-49) than Hindu women. On the other hand, Buddhist and Christian women were likely to have fewer children than Hindu women. Mass media exposure (radio/TV) had an important effect on reproductive behaviour. There are some studies indicating that there is no statistical association between the practice of family planning and religion (Abraham , Adamu & Deresse, 2010 ;Nanda , Adak & Bharati, 2011) and a mixed influence of religion on women's contraceptive practices (Ohlendorf & Fehring , 2007).Khan and Manan (2010) found that socioeconomic and cultural values and belief system play a pivotal role in explaining women reproductive health behaviour and income affects the social behaviour of the social system. Tuloro, Deressa, Ali and Davey (2006) finding, show that men desire more children due to the fact that they socially and economically gain from having a large number of children. Other studies indicated that men mainly wish to reproduce because they want their children to carry on the family name and support them in their old age (Oyediran, Ishola & Feyısetan 2002; Odu , Jadunola & Parakoyi ,2005). Studies in Sudan, an Islamic country in the developing world, reported that very few women's use of contraceptive methods was against religion or cultural beliefs (Ibnouf ,Van den Borne & Maars,2007). Other factors include urban-rural residence, woman's work status, woman's status relative to men, religion, culture and taboos, economic status of the household, exposure to mass media, and community development (Das, Mishra & Saha, 2001).

## 2.2 Theoretical framework

Theory refers to a set of simplified assumptions or concepts that are organized to explain outcomes. In research, theories are often used to determine or predict any behaviour, because of their importance. They can make studies more systematic, replicable and can create a helpful framework for the empirical data. There are several theories on reproductive health behaviour. For this study, two major theories are reviewed. They are in many ways,

related to one another, showing understanding of health behaviour which is based on the assumption that people are rational in decision making as regards a given behaviour. They form a basis from which interventions aimed at increasing health behaviour can be developed.They are

- Economic Theory of Reproductive Behaviour/ New Household Economic Theory
- Health Belief Model

### 2.2.1 Economic theory of reproductive behaviour/ new household economic theory

This economic theory is one of the dominant explanatory paradigms in fertility. It originated from the work of Leibenstein and Becker in the late 1950s and early 1960s. The basic argument of the theory is that reproductive behaviour is a result of conscious decision and deliberate purposeful action (Robinson, 1997). Leibenstein (1957) asserts that families balance utilities against disutilities ascribed to an nth child to determine whether a family wanted an nth child. This theory suggests that individuals formulate a lifetime plan regarding decisions on employment and reproductive behaviour, which may be crucial for women's status in a society. Such plans affect the level of schooling that individuals strive to attain, the timing of their labour market activity as well as the timing and spacing of childbearing (Hill & Stafford, 1985). Becker (1960) has stimulated most of the research on household fertility decisions by developing an economic theory of the family. In his seminal work, he suggests that children can be viewed as durable goods, yielding primary psychic income to parents, in the neoclassical economic framework. As Becker (1991) asserts, "the growth in the earning power of women during the last hundred years in developed countries is a major cause of both the large increase in labour force participation of women and the large decline in fertility. Economic theory maintains that individuals seek to maximize their well-being and that fertility decisions are part of this optimization since individuals derive utility not only from consumption of goods and leisure but also from having children (Becker, 1991). On the other hand, the number of children ("quantity") a couple has is limited by fertility costs and their preferred level of care and expenditures per child ("quality"). The fertility costs include forgone earnings during the period the parent has reduced hours of employment in order to take care of the child, and non-accumulation as well as depreciation of human capital such as

forgone schooling and on-the-job training, plus deterioration of skills. The overall fertility cost varies across individuals according to market wages and amount of human capital accumulated. The loss both in earnings and human capital
has been suggested to be greater for those highly educated. Thus, women with high education would be expected to have higher fertility costs and therefore lower fertility than less-educated women, ceteris paribus.

Household fertility decisions are determined by female wage and family income, which are supposed to measure the time cost of raising children and earnings potential (Becker, 1960; Becker & Lewis, 1973). Several empirical analyses support the Becker-Lewis hypothesis (Leibowitz, 1974; Heckman & Walker, 1990; Caudill & Mixon, 1995; Wang & Famoye, 1997). Economic theory maintains that individuals seek to maximize their well-being and that fertility decisions are part of this optimization since individuals derive utility not only from consumption of goods and leisure but also from having children (Becker, 1991). The number of children (quantity) a couple has is limited by fertility costs and their preferred level of care and expenditures per child quality. The fertility costs include forgone earnings during the period the parents have reduced hours of employment in order to take care of the child, and non-accumulation as well as depreciation of human capital, such as forgone schooling and on-the-job training, plus deterioration of skills. The overall fertility cost varies across individuals according to market wages and amount of human capital accumulated. The loss both in earnings and human capital has been suggested to be greater for those highly educated. Thus, women with high education would be expected to have higher fertility costs and, therefore, lower fertility than less-educated women (Oláh, 1997).

Easterlin (1975) introduced the supply-demand economic framework for reproductive behaviour analysis explaining reproductive health behaviour in terms of three proximate determinants. These are

- the supply of children, that is, the number of children the parents would bear in the absence of deliberate fertility limitation;
- the demand for children, that is, the number of children parents would like to have; and
- the costs of fertility regulation, that is, the psychic, social and monetary costs.

According to him, the demand for children depends on the choices made by individuals between income, prices and tastes. Variations in income, price and taste will cause differences in demand among households at a given time or for a given household over time. In 1978, he added a sociological dimension to the micro-economic model of fertility decision making, which includes the supply of children (actual fertility), the demand for children (desired number of living children) and the costs of fertility regulation (including social, psychological and economic costs). That is, couples form a balance between the potential supply of children and demand for children.

This theory assumes that, as income raises, consumption of goods and services increases. Thus, assume children are consumer durables. An increase in income is likely to increase fertility (Blake, 1968). That is, a rise in average income is said to increase an individual's aspirations for social advancement, his/her desire for their goods increases, which then competes with the number of children for family resources and eventually reduces the number of children people want. In this situation, according to Becker (1965), individual couples try to balance between quantity and quality of the children they want. This theory is relevant to the study as it states that female workers are able to decide on the size of the family that is the number of children they would like to have by spacing and timing them which is a factor of their income. In other words, female workers are rational; they have preference and act in such a way as to reach their preference with minimum effort.

### 2.2.2 Health Belief Model

The Health Belief Model (HBM) is one of the oldest social cognition models. It is a cognitive interpersonal framework that views humans as rational being who use a multidimensional approach to decision making regarding whether to perform a health behaviour. Among the various theoretical orientations related to health behaviour, the HBM is one of the most frequently-used models. As early as in the 1950s, the HBM was originally developed by a group of social psychologists. Rosenstock and Kegels who tested it in a study as a systematic method to explain the failure of the people to obtain a chest x-ray for the early detection of tuberculosis (TB) (Hochbaum, 1958). The HBM aims to predict whether individuals choose to engage in a healthy action in order to prevent the chances of diseases or

the health threats. Since then, in addition to the prediction of preventive behaviour, the model has been extended to apply to sick role behaviours, health-risk behaviour, and health services use (Sheeran & Abraham, 1995). In response to diverse health settings and populations, the model has been revised, expanded, and broken down into different group of components in studies and it still effectively emphasize the relationship between health beliefs and health-related behaviour (Becker,1974;Janz & Becker,1984).It is a psychological model that attempts to explain and predict health behaviour. This is done by focusing on the attitudes and beliefs of individuals.

***Core Assumptions and Statements***

The HBM is based on the understanding that a female worker will take a health-related action (that is, use condoms/ contraceptives) if she:

- feels that a negative health condition (that is, unwanted pregnancy/abortion) can be avoided,
- has a positive expectation that by taking a recommended action, she will avoid a negative health condition (i.e., using condoms will be effective at preventing unwanted pregnancy/abortion), and
- believes that she can successfully take a recommended health action (i.e., she can use condoms/ contraceptives comfortably and with confidence)(Glanz, Rimer & Lewis, 2002)

According to Sheeran and Abraham (1995), cited in Hausmann-Muela, Ribera and Nyamongo, (2003), action in the HRM is guided by

- belief about the impact of illness and its consequences (threat perception);
- health motivation, i.e readiness to be concerned about health matters;
- belief about the consequences of health practices (Behavioural Evaluation);
- cues to action, which include internal and external factors; and
- conditions such as socio-demographic and psychological characteristics of the affected person.

According to HBM, there are two main types of beliefs that influence people to take appropriate preventive action. These include beliefs related to readiness to take action and beliefs related to modifying factors that facilitate or inhibit action (Uddin, Islam & Romke 2010). The variables that are used to measure readiness to take action are *perceived susceptibility* to the illness or any health threats and the *perceived severity* of the illness. *Perceived benefits* (i.e. the perceived advantages of taking action) and *perceived barriers* (i.e. the perceived costs or constraints of the specific action) are the main modifying variables (Rosenstock, 1990; Norman & Brain, 2005). When individuals are faced with a potential threat to their health they consider their susceptibility to, and the severity of, the health threat

Rosenstock notes in describing this model, "the combined levels of susceptibility and severity provided the energy or force to act and the perception of benefits (less barriers) provided a preferred path of action" (Rosenstock, 1966). For instance, when applied to reproductive health behaviour, the HBM suggests that simply having knowledge and awareness about contraceptive usage will not necessarily result in increased visits to a hospital for its adoption. Instead, the model specifies four related elements that must be present for knowledge about contraceptive usage to be translated into preventive action. First, an individual must perceive that she is susceptible to a health problem and second, that person must also perceive that the disease is a serious condition. Third, she must believe that there are benefits in taking preventive action. Finally, the individual must also perceive that any potential barriers to taking preventive actions are outweighed by potential benefits (Onta, 1998; Matsuda, 2002; Norman & Brain, 2005). More recently, the concept of "self-efficacy" has been added to some versions of the HBM (Bandura, 1992). In this respect, Rosenstock suggests that self-efficacy was not explicitly incorporated into early versions of the HBM because the original focus was on circumscribed preventive actions, such as receiving an immunization or accepting a screening test. He proposes that self-efficacy is more useful in understanding behaviours, such as those related to chronic illness/diseases, which occur over a period of time and require lifelong changes in behaviours. In several studies it has been found that socio-demographic variables are related to the various health behaviours and components of HBM (Matsuda, 2002; Ahmed, 2005; Ratanasuwan et. al., 2005; Norman & Brain, 2005).

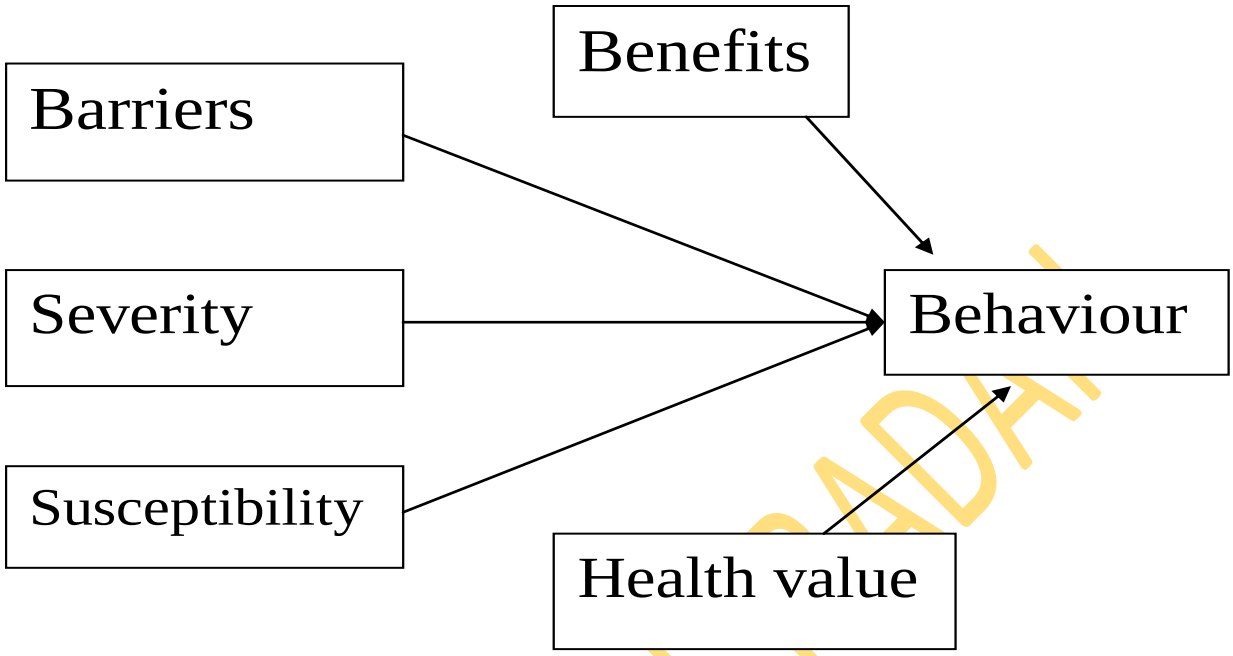
The Health Belief Model identifies four aspects of this assessment: perceived susceptibility to ill health (risk perception), perceived severity of ill health, perceived benefits of behaviour change, and perceived barriers to taking action. HBM is a good model for addressing problem behaviour that evokes health concerns. For this study, which emphasises on the process of seeking reproductive health behaviour the Health Belief Model (HBM) and the 'Four As' was used to explain reproductive health behaviour.

In its original formulation, the HBM hypothesized that health-related actions depend upon the simultaneous occurrence of three classes of components:

- the existence of sufficient motivation to make health salient;
- the belief of a perceived threat to health;
- the belief that following a particular health recommendation would be beneficial in reducing the perceived threat (Rosenstock, 1966; Rosenstock, 1974; Becker, 1974; Rosenstock et al., 1988).

The relationship between these components and behaviour is held to be mediated by demographic, structural and enabling factors. These hypotheses in the Health Belief Model are operationalized by four explanatory factors (presented in parentheses is an illustration of factors related to the success of safer sex practices to prevent abortion, unwanted pregnancies, HIV/AIDS, STIs, and death. Specifically, for developing a new behaviour or changing an existing behaviour of an individual the health belief model suggests that the following unique and subjective beliefs of the person (Rosenstock,1974 ;Janz & Becker,1984) would be involved in the decision-making process.

**Figure 2 .1 Health Belief Model**




Source: *Sheeran P and Abraham C. 1996: Health Belief Model in M. Conner and P Norman (eds). Predicting Health Behaviour. Buckinham Open University Press*

*Perceived susceptibility* refers to the probability that an individual assigns to personal vulnerability in developing the condition. The concept of perceived susceptibility has been found to be predictive of a number of health-protective behaviour. In response to health threat, a female worker would have her own perception of the likelihood of contracting this adverse condition. Rosenstock (1974) notes that the acceptance of susceptibility to a risk condition is wildly varied among people. Sheeran and Abraham (1995) claim that threat perception plays an important role to trigger an individual's motivation to engage in a health behaviour to avoid the adverse condition. Threat perception consists of both the beliefs of susceptibility and severity, the individual at higher level of susceptibility would experience a sense of fear and have high possibility to adopt a protective action. From an HBM perspective, the likelihood that female workers of childbearing age will engage in precautionary behaviour to prevent abortion or unwanted pregnancies depends on how much they believe they are vulnerable to or at risk for reproductive health problems. In general, it

has been found that people tend to underestimate their own susceptibility to reproductive behaviour.

*Perceived severity*: severity belief is one of threat perceptions regarding an individual's subjective feelings concerning the seriousness of contracting a health problem (Rosenstock, 1974). The degree of seriousness of the consequence may be determined by the emotional arousal from the appraisal of the health problem and its consequence. This personal cognitive appraisal might include medical complications and the effects of the health problem on the individual's family life, financial burdens and social relations (Rosenstock, 1974). An individual would likely follow a particular preventive action to avoid the negative consequence when he/she believes the level of severity of the health problem is high. It also refers to how serious the individual believes the consequences of developing the condition are. Female workers who are women of childbearing age are more likely to take action to prevent abortion and unwanted pregnancies if they believe that possible negative physical, psychological and/or social effects resulting from developing the disease pose serious consequences (for example, altered social relationships, reduced independence, pain, suffering, disability, or even death.

*Perceived benefits*: These refer to the patient's belief that a given treatment will cure the illness or help to prevent it. Conner and Norman (1994) assert that two sets of factors influence the individual's presentations of health behaviour: threat perceptions and behavioral evaluation. Perception of benefits, an aspect of behavioural evaluation, is a personal belief referring to the sense of effectiveness on taking a particular behaviour to prevent a health threat (Strecher & Rosenstock, 1996). Therefore, the preventive action may not be executed unless female workers of childbearing age perceive great benefits for taking the action

*Perceived barriers*: These are the other component of behavioral evaluation. Even though a given action will be beneficial for avoiding a health problem, the individual may perceive difficulties in performing the behaviour. The negative aspects for carrying out the health behaviour are viewed as barriers. Barriers relate to the essences of a health behaviour that may be inconvenient, time consuming, expensive, unpleasant, painful, or upsetting (Rosenstock, 1974).These barriers may interfere with the motivation to perform the health

behaviour

*Perceived Costs*: These refer to the barriers or losses that interfere with health behaviour change. The combination of perceived effectiveness and perceived costs constitute the notion of outcome expectation, which refers to the complexity, duration, and accessibility of the treatment.

*Motivation*: It includes the desire to comply with a treatment and the belief that people should do that. Motivation to take action to change behaviour requires the belief that the precautionary behaviour effectively prevents the condition.

*Modifying factors*: These include personality variables, patient satisfaction, and socio-demographic factors.

*Cues to action:* Events experienced by the individual during the period of decision-making, either internal or external, which encourage him/her to perform the health behaviour, are cues to action. These so-called cues to action serves as trigger mechanisms to activate behaviour and may include physical symptoms, mass media communications, interpersonal interactions, advice from others, health education campaigns, and reminder postcard from physicians (Rosenstock, 1974; Janz & Becker, 1984).

The Health Belief Model posits that the greatest likelihood that female workers of childbearing age will perform health behaviour to avoid a health problem is under some conditions. First, female workers of childbearing age need to believe they are personally susceptible to the health problem. Second, they need to perceive the threat of severity of the health problem. Third, they must believe that the benefits of performing the behaviour outweigh the barriers. Finally, internal and/or external cues must trigger the health behaviour. Accordingly, the high degree of perceived susceptibility, severity, and benefit will strengthen the possibility of the individual to perform the health behaviour, while a stronger degree of perceived barriers lessens the possibility that health behaviour would occur. In addition, threat perception, the combination of perceived susceptibility and severity (susceptibility x severity = threat perception) will provoke the desirability to perform the health behaviour (Rosenstock, 1974); and the comparison between perceived benefits and barriers (benefits – barriers = behavioural evaluation) will provide the behavioural evaluation of evaluation on the means to action (Conner & Norman, 1994).

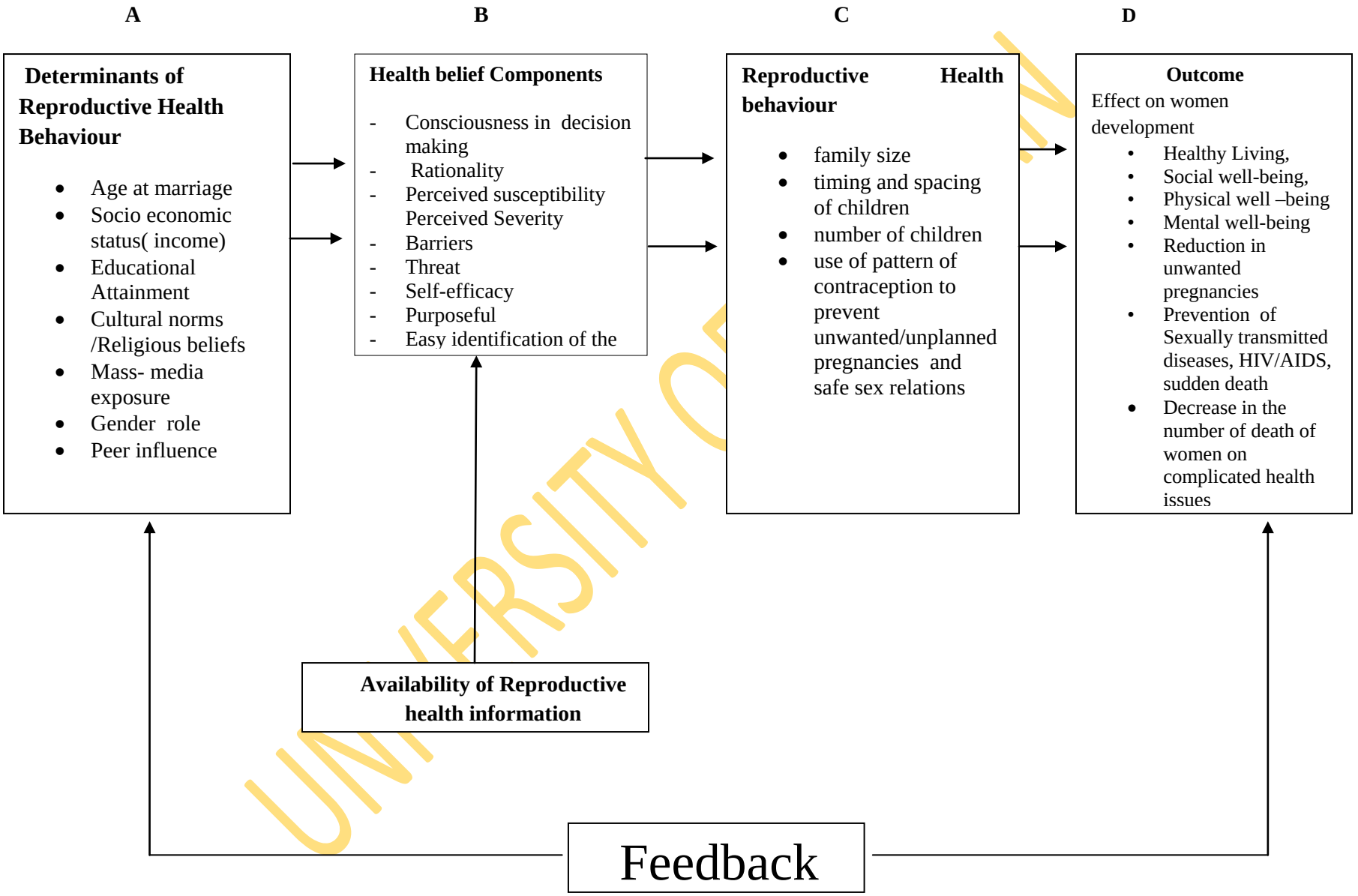
Some scholars have criticized the Health Belief Model. They ask questions on issues such as rationality of health behaviour; emphasis of HBM on the individual, (HBM ignores social and economic factors); and the absence of a role for emotional factors, such as fear and denial. Alternative factors may predict health behaviour, such as outcome expectancy (whether the person feels they will be healthier as a result of their behaviour) and self-efficacy (the person's belief in their ability to carry out preventative behaviour) (Seydel, Taal & Weigman, 1990; Schwarzer 1992). Although it has criticisms, the Health Belief Model can also help identify leverage points for change. Female workers of childbearing age may not think they are capable of reducing unwanted pregnancies, prevent abortion, HIV/AIDS, have safer sex, but they can be given specific information on proven ways through health promotion messages—through the mass media, peer education, and other interventions which act as cues to action, translating that readiness into overt behaviour

**2.3 Developing a reproductive health behaviour framework for female workers**

This researcher attempt to develop a framework for better understanding of the reproductive health behaviour of female workers following the two theories considered relevant for the study, namely; Economic Theory of Reproductive Behaviour/ New Household Economic Theory and Health Belief model. Each theory discussed above highlights the important influence of socioeconomic status, consciousness, perceived benefit outweighing perceived costs of having a child to the rationality behind reproductive health behaviour. These two theories served as the theoretical framework for this study by providing a mechanism for identifying factors that would help to predict positive behavioural intentions towards reproductive health among female workers, as these theories offer a constructive and plausible way to identify intentions related to reproductive health behaviour among female workers. This model highlights the potentially understanding of function of consciousness in decision making, rationality, perceived susceptibility, perceived severity, threat, self-efficacy, purposeful and easy identification of the barriers as the determinants of intention to perform behaviour. This framework also considers some of the variables, such as, age at marriage, socio-economic status, educational aattainment, cultural norms /religious belief, mass media exposure, gender role and peer group influence that may influence the reproductive health

behaviour of female workers. Specific behaviours toward reproductive health among female workers can in part be predicted from knowledge of their reproductive health and rights. Behavioural intentions are viewed as immediate determinants of actual behaviours, and because most behaviour is voluntary, the female individual is believed to actually perform those behaviours she intends to perform, although many factors can influence the strength of the relationship between a measure of intention and behaviour (Fishbein & Ajzen, 1975). From this framework, it could be seen that availability of reproductive health information through various sources like leaflets, mass media messages, the internet, talks or lectures will expose female workers to adequate knowledge on reproductive health behaviour. This will enable them to make decisions through consciousness and rationality in making such decisions by weighing the consequences of getting unwanted pregnancies or abortion or any health problem. Doing this will also promote good reproductive health behaviour and positive outcome. Examples are healthy living, social well-being, physical well-being, and mental well-being, reduction in unwanted pregnancies, and prevention of sexually transmitted diseases, HIV/AIDS and sudden death as well as decrease in the number of death of women on complicated health issues. But if reproductive information is not available their reproductive health behaviour will be affected, as the outcome will be negative.

## 2.2 Reproductive Health Behaviour Model for Female Workers








Source: Researcher (2012)

## 2.4 Appraisal of the Literature Reviewed

The literature review examined various determinants influencing reproductive health behaviour of women in Nigeria. Studies have found that age at marriage, mass media, socio-economic status, cultural norms/religious belief, educational background, gender roles and peer influence determined women reproductive health behaviour. These determinants were examined within the context of reproductive health behaviour to understand how each of these determinants affect or promote reproductive health.

In the works reviewed, reproductive health is seen as a state of complete physical, mental and social well-being not merely the absence of disease or infirmity. It is also seen as the right of both couples and, most importantly, women to be informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice and the right of access to appropriate health care services. The rights of reproductive health is considered as the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children, to have the information and means to do so and to attain the highest possible standard of sexual and reproductive health. However, not every woman has the ability to exercise her reproductive health, which could hinder her maximum level, her career advancement and development in life. Studies on reproductive health behaviour revealed a wide range of women usage of contraceptives, ranging from traditional to the modern and that most of the women do not get the fulfilment of their basic reproductive rights or equal power, as they must seek for their husbands' approval for its usage.

The literature reviewed revealed how these determinants (age at marriage, mass media, socio-economic status, cultural norms/religious belief, educational background, gender roles and peer influence) affect women of varying age, class, religious background, cultural belief, educational attainment and socio-economic status practise their reproductive health behaviour differently in various developing and developed countries. Research showed that, in virtually all societies, men have more power than women (Berer,1996; Evaluation Project, 1997; Riley, 1997; Helzner, 2000; Moser, 2001).

The literature on gender role was also reviewed. It was established that men have powerful influence on reproductive decision-making and behaviour (Mccauley, Robey,

Blanc, & Geller, 1994; Blanc, Wolff, Gage, Ezeh, Neema, & Ssekamatte-Ssebuliba, 1996;US Agency for International Development, 1997). The traditional, cultural and religious beliefs that women are inferior and subordinate to men tend to influence decision making on reproductive health. The major barriers towards reproductive health knowledge and behaviour are in difficulty owing to the negative attitude of husbands towards modern contraceptives, particularly husbands' disapproval, cultural factors/norms and religious beliefs.

Literature revealed that all determinants influenced reproductive health behaviour among uneducated, educated, married or unmarried women showing that these determinants are particular to women of bearing age. Literature further revealed that the culture of patriarchy still exist making male to dominate reproductive health behaviour of their wives. All these studies focuses on different categories of women but none of these previous studies have used female workers in tertiary institutions.

# CHAPTER THREE

# METHODOLOGY

In this chapter, the methodological aspects of the study are described in terms of research design, population, sample and sampling technique, instrumentation, validity and reliability of the study and method of data analysis.

## 3.1 Research design

The research design adopted for the study was the descriptive survey research design of the ex-post-facto. This design was adopted because it helps to describe and interpret the conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evidence or trends that are developing. This type of design is usually adopted where the researcher does not aim at manipulating the variables of the study since the variables have already occurred

## 3.2 Population

The population for this study consisted of female workers (academic and non-academic) staff that had spent at least two years in the tertiary institutions in Southwestern, Nigeria.

**Inclusion criteria:**

The inclusion criteria for the study were

1) They must be female workers that have spent at least two years in tertiary institutions
2) They must be female workers working in tertiary institutions
3) They must be female workers above the legal age, 19 years and above and within the reproductive age

## 3.3 Sample and sampling technique

The multi-stage sampling procedure was adopted for the study

**First stage**

In the first stage, the purposive sampling technique was adopted to pick thirteen tertiary institutions (five federal universities, four federal polytechnics and four colleges of education).

**Second Stage**

In the second stage the stratified sampling technique was used to divide the tertiary institutions into faculties, registry, admissions and postgraduate schools, for the universities; schools, registry and admissions, for the polytechnics, and the colleges of education.

**Third stage**

The simple random sampling technique was used to select 1300 respondents from various faculties and schools for academic staff and registry, admissions, postgraduate schools, schools and faculty, for non-academic staff.

**Table 3.1 The Tertiary Institutions Selected for the study, Population and Sample**

| | | **Female academic staff** | **Female non academic staff** | **Sample** |
|---|---|---|---|---|
| | **University** | | | |
| 1 | University of Ibadan, Ibadan | 383 | 1108 | 100 |
| 2. | University of Lagos,Lagos | 289 | 986 | 100 |
| 3. | Obafemi Awolowo University,Ife | 367 | 1034 | 100 |
| 4. | Federal University of Technology Akure | 211 | 986 | 100 |
| 5. | Federal University of Agriculture Abeokuta | 143 | 966 | 100 |
| | **Polytechnic** | | | 100 |
| 6. | Yaba College of Technology, Lagos state | 139 | 131 | 100 |
| 7. | Federal Polytechnic,Ede, Osun State | 117 | 122 | 100 |
| 8. | Federal Polytechnic, Ilaro Ogun State | 128 | 143 | 100 |
| 9 | Federal Polytechnic, Ado Ekiti, Ekiti state | 106 | 152 | 100 |

| | | | | |
|---|---|---|---|---|
| | **College of Education** | | | 100 |
| 10 | Federal College of Education (Sp) Oyo, | 121 | 372 | 100 |
| 11 | Federal College of Education Akoka, Lagos | 101 | 333 | 100 |
| 12 | Federal College of Education Osiele, Abeokuta | 110 | 205 | 100 |
| 13 | Adeyemi College of Education , Ondo | 117 | 234 | 100 |
| | Total | 2,434 | 6,878 | 1,300 |

Source: Records and Establishment of Tertiary Institutions (2013)

### 3.4 Instrumentation

The instruments for data collection were developed and self structured by the researcher. It is tagged 'Reproductive Health Behaviour Scale and "Reproductive Health Behaviour Determinants Scale'. Section A of the instruments focused on the respondents' biodata such as age, religion, income per month, educational attainment, age at marriage and so on. The validity and reliability of each of the questionnaire were determined separately. The instruments were complemented with the use of the qualitative methods- In-depth Interview (IDI) and Focus group Discussion (FGD) - which helped to strengthen the research findings.

**Reproductive Health Behaviour Scale**

This instrument was developed by the researcher to collect information on reproductive health behaviour of women; on family size, timing and spacing of children, number of children and use of contraceptives to prevent unwanted/unplanned pregnancies and safe sex relations. It was made up of a section of 18 items drawn on closed ended questions respectively.

The validity of the instrument was ascertained through face and content validity by experts in the fields of Community Development and Social Welfare and Nursing in the University of Ibadan, Ibadan. The corrections, criticisms and opinions of these experts were carefully studied and incorporated into the final draft copy before subjecting it to pilot study. The reliability of the instrument was determined through test, re-test method within an

interval of two weeks among 20 respondents in a state university that was not part of the study. The result of Cronbach Coefficient of alpha value of 0.81 was obtained, indicating high accuracy of the instrument

**Reproductive health behaviour determinants scale**

This instrument was also developed by the researcher. It had seven sub-scales

i) Age at Marriage and Women Reproductive Health Behaviour Scale
ii) Socio -Economic status and Women Health Reproductive Behaviour
iii) Educational Attainment and Women Reproductive Health Behaviour Scale
iv) Cultural / Religious Beliefs and Women Reproductive Health Behaviour Scale
v) Mass- media exposure and Women Reproductive Health Behaviour Scale
vi) Gender -Role and Women Reproductive Health behaviour Scale
vii) Peer Influence and Women Reproductive Health Behaviour Scale

**Age at Marriage and Women Reproductive Health Behaviour Scale**

This scale found in section C, was developed by the researcher to collect information on the influence of age at marriage of female academic and non-academic staff on reproductive health behaviour. It had one section of 6 items drawn on a modified four-point rating scale. Responses for all questions ranged from strongly agree (SA), agree (A), disagree (D) to strongly disagree (SD)

The validity of the instrument was ascertained through face and content validity of experts in the fields of Community Development / Social Welfare and Nursing, in the University of Ibadan. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university that were not part of the study. The alpha coefficient for the scale was 0.79.

**Socio -economic Status and Women Health Reproductive Behaviour**

This scale, in Section D, was developed by the researcher to collect information on the influence of socioeconomic status on reproductive health behaviour. It was made up of one section of 11 items drawn on a modified four-point rating scale of Strongly agree (SA),

Agree (A), Disagree (D) and Strongly disagree (SD).

The validity of the instrument was ascertained through face and content validity of the experts in the fields of Community Development / Social Welfare and Nursing in the University of Ibadan. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university who were not part of the study. The result of Cronbach Coefficient of alpha value showed 0.79.

**Educational attainment and women reproductive health behaviour scale**

This scale in section E, was developed by the researcher to collect information on the influence of educational attainment of female academic and non-academic on reproductive health behaviour. It was made up of one section of 7 items drawn on a modified four-point rating scale. Responses varied from Strongly agree (SA), agree (A), and disagree (D) to strongly disagree (SD)

The validity of the instrument was ascertained through face and content validity of experts in the fields of Community Development / Social Welfare and Nursing in the University of Ibadan, Ibadan. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university that were not be part of the study. The result of Cronbach Coefficient of alpha value showed 0.75.

**Cultural /religious beliefs and women reproductive health behaviour scale**

This scale in Section F, was also developed to collect information on the influence of cultural background/religious belief on reproductive health behaviour. It was made up of one section. The scale consisted of 17 items on a modified four-point rating scale of Strongly agree (SA), Agree (A), Disagree (D) and Strongly disagree (SD)

The corrections, opinions and modification of experts served as the method of achieving the face and content validity of the instrument. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university that were not part of the study. The result of Cronbach Coefficient of alpha value showed 0.83

**Mass- media exposure and women reproductive health behaviour scale**

This instrument in Section G, focused on mass media exposure on reproductive health behaviour. It consisted of 14 items of positive statements measuring mass media exposure on reproductive health behaviour, mass media exposure on the knowledge of contraceptive use and ovulatory cycle. It contained a modified four-points Likert scale of Strongly Agree (SA), Agree(A), Disagree (D), and Strongly Disagree (SD) which carried the weights of 4,3,2,1, respectively.

The face and content validity of experts in the fields of Community Development/ Social Welfare and Nursing in the University of Ibadan, Ibadan helped in reworking this scale. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university who were not part of the study. The result of Cronbach Coefficient of alpha value showed 0.75.

**Gender- role and women reproductive health behaviour scale**

This instrument found in section H, was developed by the researcher, made up of one section of 9 items that explored information on the influence of gender roles on reproductive health behaviour. The questionnaire used a four-point scale ranging from Strongly agree (SA ) to Strongly disagree (SD) with highest scores ranging from 4 to the least 1.

The validity of the instrument was ascertained through face and content validity of experts in the fields of Community Development/ Social Welfare and Nursing in the University of Ibadan, and Ibadan. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university that were not part of the study; the result of Cronbach Coefficient of alpha value showed 0.79

**Peer influence and women reproductive health behaviour scale**

This scale, in section I, was developed by the researcher to collect information on the influence of female academic and non-academic peers on reproductive health behaviour. It was made up of one section of 10 items drawn on a modified four-point rating scale of

strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD).

The validity was obtained through examination by some experts to establish the content validity of the instrument. The experts consisted of scholars in the fields of Community Development and Social Welfare and Nursing in University of Ibadan, Ibadan. They included the researcher's supervisor and other members from the university. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university who were not part of the study. The result of Cronbach Coefficient of alpha value showed 0.71.

**Barriers to effective reproductive knowledge and behaviour scale**

This scale, in section J, was developed by the researcher to collect information on barriers to effective reproductive knowledge and behaviour. It was made up of one section of 8 items drawn on a modified four-point rating scale of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD). The validity was obtained through examination by some experts to establish the content validity of the instrument. The experts consisted of scholars in the fields of Community Development / Social Welfare and Nursing in the University of Ibadan, Ibadan. They included the researcher's supervisor and other members from the university. The reliability of the instrument was determined through the test, re-test method within an interval of two weeks among 20 respondents in a state university that were not part of the study. The result of Cronbach Coefficient of alpha value showed 0.69.

**b) Qualitative Instrument**

The study also utilized qualitative method of the In-Depth Interviews (IDIs) and Focus Group Discussion (FGD), to elicit information from respondents in the thirteen tertiary institutions used for the study.

**3.4.1 In-depth interviews (IDIs)**

A total of twenty-six ( 26) respondents as shown in the table below, participated in the IDI.

The IDI was made up of seven questions and was conducted in the various tertiary

institutions after the questionnaire had been administered. The interview date was scheduled about ten days in advance. Before starting each IDI session, the study was explained to the participants. After confirming the willingness of the particpant to take part, the IDI process started. Selection of the location for the IDI was based on privacy, quietness, and adequate lighting. Each session lasted between 45 and 120 minutes. All discussions were tape-recorded; the researcher also took notes. The in-depth interview also enabled the researcher to get the varied views. This helped the researcher to find out their real-life experiences as regards their reproductive health behaviour.

**Table 3.2: Schedule of IDI Sessions Conducted for the Study**

| **Tertiary institutions** | **Number of Participants** | **No of sessions** | **Date conducted** |
|---|---|---|---|
| University of Ibadan, Ibadan | 2 (1 academic and 1 Non-academic) | 2 | December 11, 2012 |
| University of Lagos, Lagos | 2 (1 academic and 1 Non-academic) | 2 | January 16,2013 |
| Obafemi Awolowo University Ile Ife | 2 (1 academic and 1 Non-academic) | 2 | February 27,2013 |
| Federal University of Technology Akure | 2 (1 academic and 1 Non-academic) | 2 | March 13,2013 |
| Federal University of Agriculture Abeokuta | 2 (1 academic and 1 Non-academic) | 2 | February 11,2013 |
| Yaba College of Technology, Lagos | 2 ( 1 academic and 1 Non-academic) | 2 | June 6,2013 |
| Federal Polytechnic, Ede, Osun State | 2 ( 1 academic and 1 Non-academic) | 2 | July 23,2013 |
| Federal Polytechnic, Ilaro Ogun State | 2 ( 1 academic and 1 Non-academic) | 2 | August,14,2013 |
| Federal Polytechnic, Ado | 2 ( 1 academic and 1 Non- | 2 | September 11,2013 |

| | | | |
|---|---|---|---|
| Ekiti, Ekiti State | academic) | | |
| Federal College of Education (Sp) Oyo, | 2 ( 1 academic and 1 Non-academic) | 2 | December18,2012 |
| Federal College of Education Akoka, Lagos | 2 ( 1 academic and 1 Non-academic) | 2 | January 17,2013 |
| Federal College of Education Osiele Abeokuta, Ogun State | 2 ( 1 academic and 1 Non-academic) | 2 | February12,2013 |
| Adeyemi College of Education Ondo State | 2 ( 1 academic and 1 Non-academic) | 2 | March,19 2013 |

### 3.4.2 Focus group discussion

The sets of questionnaire were complemented with Focus Group Discussion (FGD). Female workers aged between 19 and 49 years participated in the study. Three sessions were attended by female academic and non –academic staff of the selected tertiary institutions. Each session was made up of between 6-8 female workers.

**Table 3.3: Schedule of FGD Sessions Conducted for the Study**

| **Tertiary institutions** | **Number of Participants** | **No of sessions** | **Category** |
|---|---|---|---|
| University | Eight | 3 | Female academic and non academic staff |
| Polytechnic | Eight | 3 | Female academic and non academic staff |
| College of Education | Eight | 3 | Female academic and non academic staff |

**IDI and FGD sub-themes**

The following issues were covered:

1. Perception on reproductive health behaviour and sources of information on reproductive health
2. Views on age at marriage, income and cultural norms and practices affecting reproductive health behaviour
3. Opinions on religious belief, educational attainment and peer influence on reproductive

health behaviour

4. Mass media messages influencing reproductive health behaviour; types of the mass media
5. Reproductive health behaviour
6. Knowledge on reproductive health
7. Barriers to reproductive health behaviour and knowledge

**3.5 Procedure for Data Collection**

Before conducting the field work a letter of introduction was collected from the Department of Adult Education, University of Ibadan, and Ibadan. Thereafter, the researcher went to the tertiary institutions with the letter first before administration of the instrument. Copies of the questionnaire were personally administered by the researcher. However, the researcher also employed the services of some trained research assistants to help in the distribution and administration of the questionnaire. These research assistants were both undergraduates and postgraduates of the institutions selected. A total of 1300 copies of the questionnaire were distributed at the various tertiary institutions. After some months, 1209 copies were retrieved out of which 1122 were properly filled, valid and used for data analysis.

**3.6 Method of data analysis**

The data collected in this study was analyzed using descriptive statistics of frequency counts and simple percentages for the demographic data. RQ 1 was analysed using multiple regression (MRT) at 0.05 level of significance RQs 2,3 and 4 were analysed using frequency counts and percentages. Hypotheses 1-7 were analysed using Pearson Product Moment Correlation Coefficient, while Hypothsis 8 was analysed using t-test analysis at 0.05 level of significance. Content analysis was used for the (IDI) and (FGD).

## CHAPTER FOUR

## FINDINGS AND DISCUSSION

In this chapter, the analysis of data collected from the field is presented in graphs and tables followed by detailed explanation. These helped the researcher to arrive at logical conclusions on each of the research questions raised and the hypotheses tested in the study. The section contains two parts. The first section, which is section A, focuses on the demographic characteristics of the respondents, which include present age, religion, income per month, highest educational attainment, age at marriage, shown in graphs and pie charts. Section B focuses on the four research questions and eight hypotheses raised and tested at 0.5 level of significance. For each of the two parts in this section, interpretation and detailed discussions are given.

### Section A: Demographic Characteristics of Female Workers in Tertiary Institutions in Southwestern, Nigeria

This section deals with the demographic characteristics of the respondents. There are six types of demographic information presented in graphs with detailed explanation

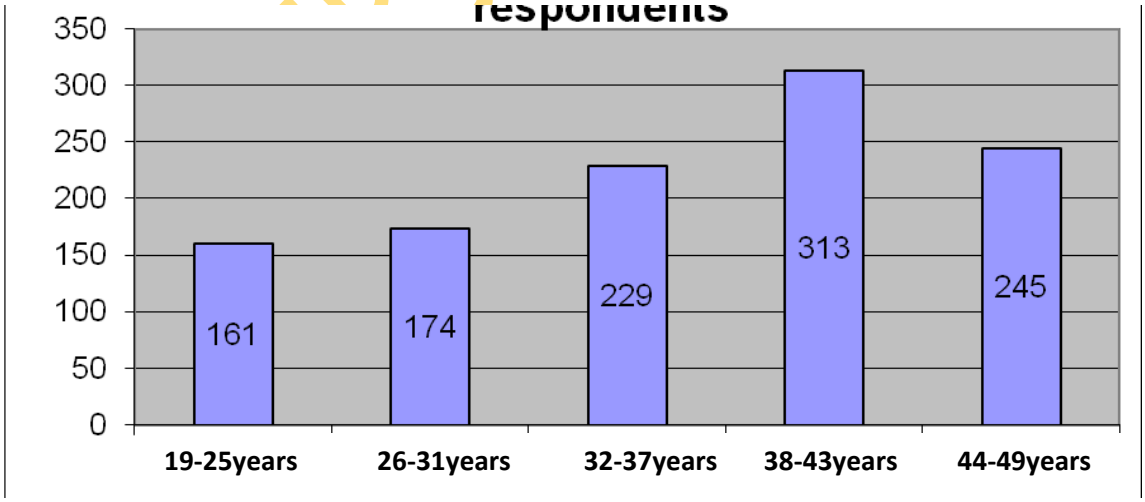



**Fig. 4.1 Bar Chart showing the Age of the Respondents**

*Source: Fieldwork (2013)*

Figure 4.1 above showed that 27.9% of the respondents were in age group 38-43 years, 21.8% of them were aged between 44-49 years; 20.4% of the respondents were in the age bracket 32-37 years; 15.5% were aged between 26-31 years; while only 14.3% of the respondents were in age group 19-25 years. This implies that the present age of female workers falls within the reproductive age group which, according to WHO (2000), has implications for their reproductive health behaviour. This shows that female workers are in their active reproductive years and, as such, their reproductive health behaviour is very important both for their well-being and that of their family.

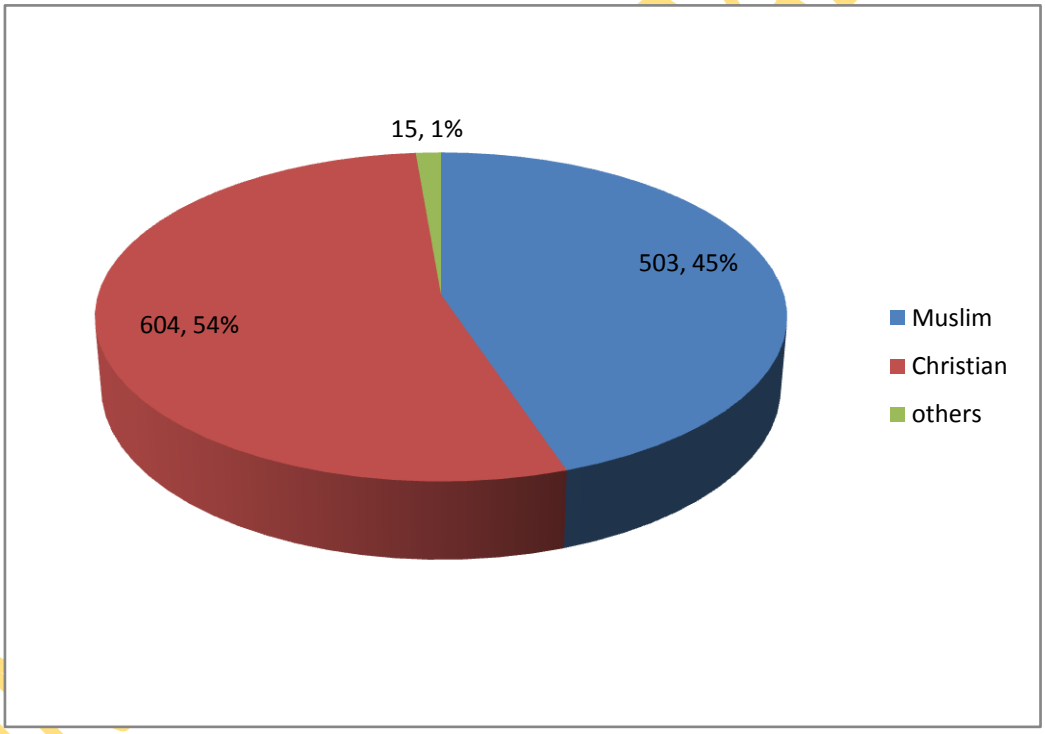



**Fig. 4.2. Distribution of the respondents by Religion**

*Source: Fieldwork (2013)*

Fig. 4.2 shows the religious affiliation of the respondents. A total 604 of the respondents were Christians, accounting for 54% of the population; 503 of the respondents were Muslims, accounting for 45%; while 15 of the respondents had other religion

accounting for 1% of the population. To some extent, variations in religious affiliation in a study population could affect difference towards reproductive health behaviour. The cumulative percentage of Christians and Muslims respondents was 99.0%. The findings showed that female workers belonged to different religious groups. Different religious groups differ in their views of society. Hence, religious affiliation is a relevant factor in understanding individual decisions affecting reproductive health behaviour. This could explain how religious teachings of the religious groups that female workers belong to may affect their decisions as regards childbearing and rearing, spacing and timing of children, as well as by the patterns of other members' reproductive health behaviour.Rasheed (2010) notes that the Qur'an actually states the limitation of children, which is having not more than four children with a stated age of marriage; it also states that the father should take proper care of the children. The Holy Bible also confirms that family planning is very crucial in a couple's life so as to adjust favourably to the economic demands of life (Schonfield, Alrich & Gold, 2008). Religion plays a major role in deciding the reproductive behaviour of women and their attitude towards contraceptives useage .

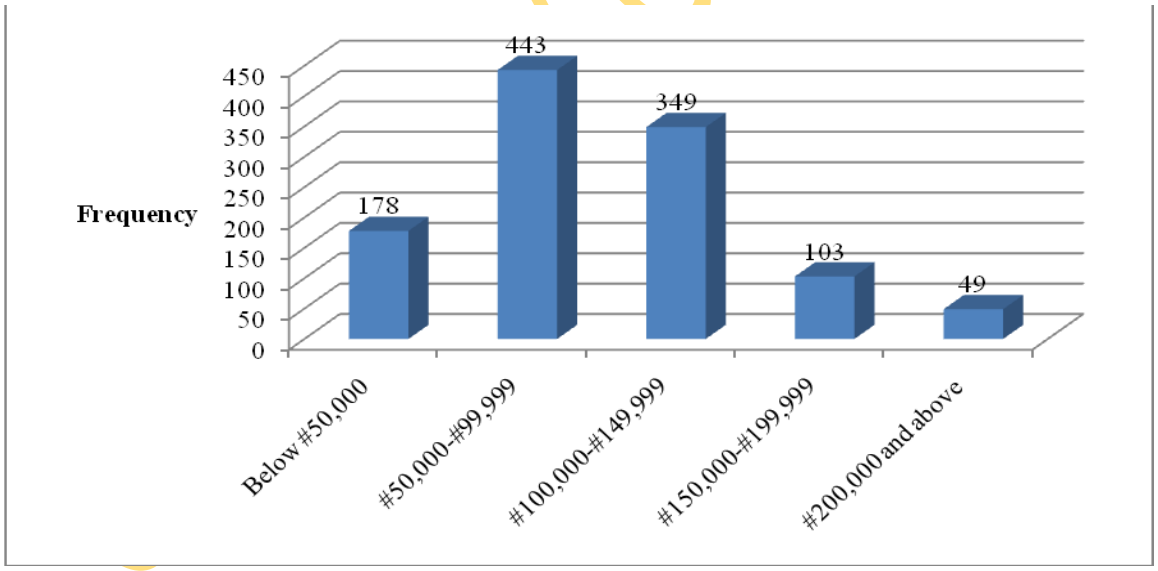



**Fig. 4.3 Bar Chart Showing the Distribution of the Respondents by Income Earned Per Month**

*Source: Fieldwork (2013)*

Questions were asked on the income of the respondents sampled. An overwhelming proportion of the sample 443(39.5%) earned N50,000 - N99,999; 178 (15.9%) earned below N50,000, 349 (31.1%) earned N100,000 - N149,999; 103(9.2%) earned N150,000 - N199,999 while only 49(4.4%) earned N200,000 and more, respectively. Studies from other regions such as Africa also corroborate this finding that more empowered women that is women earning income have better fertility outcomes (Upadhay & Karasak, 2010). Income levels are proportionate in favour of female workers because they are working in the formal sector of the economy. Their employment in tertiary institutions is based on meeting certain educational requirements. This gives them the opportunity to earn good money and make better choices which have a lot of implications for their lives, their reproductive health behaviour and the lives of their children born and yet unborn. This shows that income of female workers could raise their level of social status which assists in helping them to exercise their reproductive health rights. Income and occupation are important considerations in reproductive health behaviour of female workers. Income constitutes a determining factor in the reproductive health behaviour of the respondents.

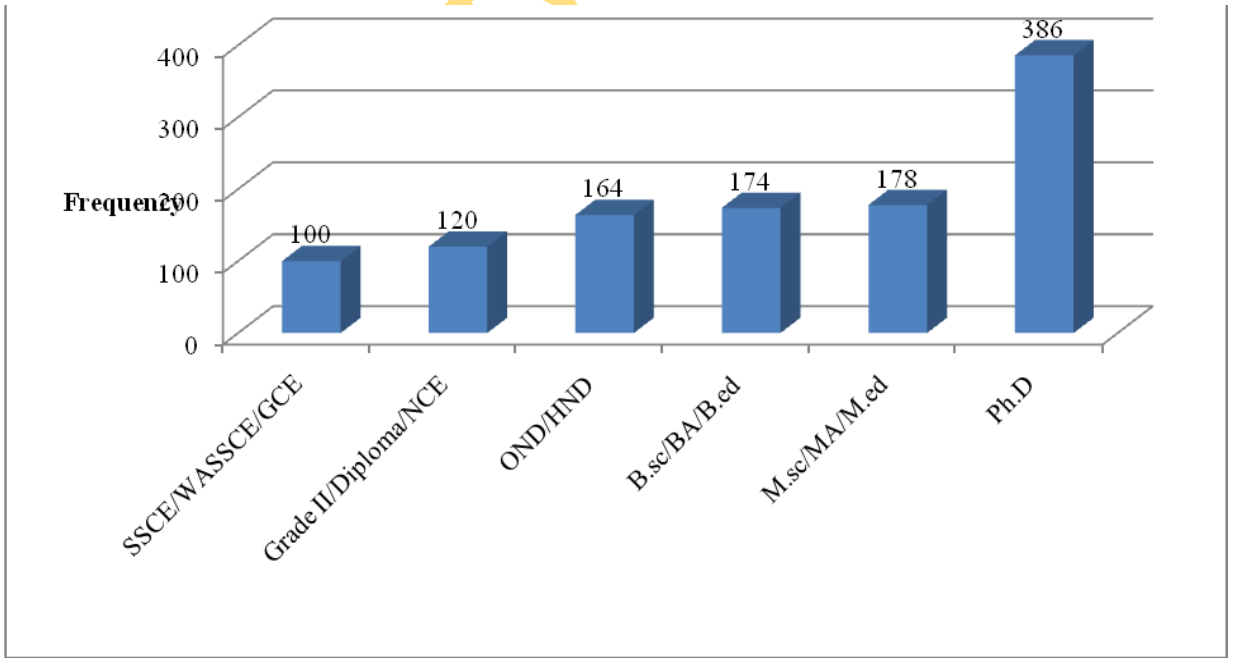



**Fig. 4.4 Bar Chart Showing the Distribution of the Respondents by Highest Educational Attainment**

*Source: Fieldwork (2013)*

Educational attainment of the respondents is shown in fig. 4.4. Educational qualifications were categorised into six broad levels. Among all the respondents 8.9% respondents had SSCE,WASSCE/GCE; 10.7% completed Grade II/Diploma/NCE; only 14.6% had OND/HND; 15.5 % attained university degree; 15.9% completed second degree and 34.4% had Ph.D.

The educational level of female workers has significant impact on their empowerment and access to information. This could mean that education affects their reproductive health behaviour. Theoretically, it is argued that education reduces fertility as it changes the outlook of women on the number of children to be born (Cochran & Farid, 1990). First of all, educated women try to trade off quality against quantity of children. They often aspire to have small number of children that acquire training and skills in the modern labour market. The desire to invest more on each of the children motivates them to minimize the number of children to be born in their lifetime. Illiterate women, on the other hand, wish to have as many children as they could as they think some of the children would be successful by chance and would support them later on. In general female workers are educated and it is logical to say that female workers educational level could have given them courage of taking independent decisions on their reproductive health behaviour such as using birth control methods after achieving an acceptable fertility level and family size. According to NDHS (2008), women's levels of education vary by residence. Women in rural areas are far less likely to be educated than their urban counterparts. The finding of this study indicated that the respondents were educated because they resided in urban areas.

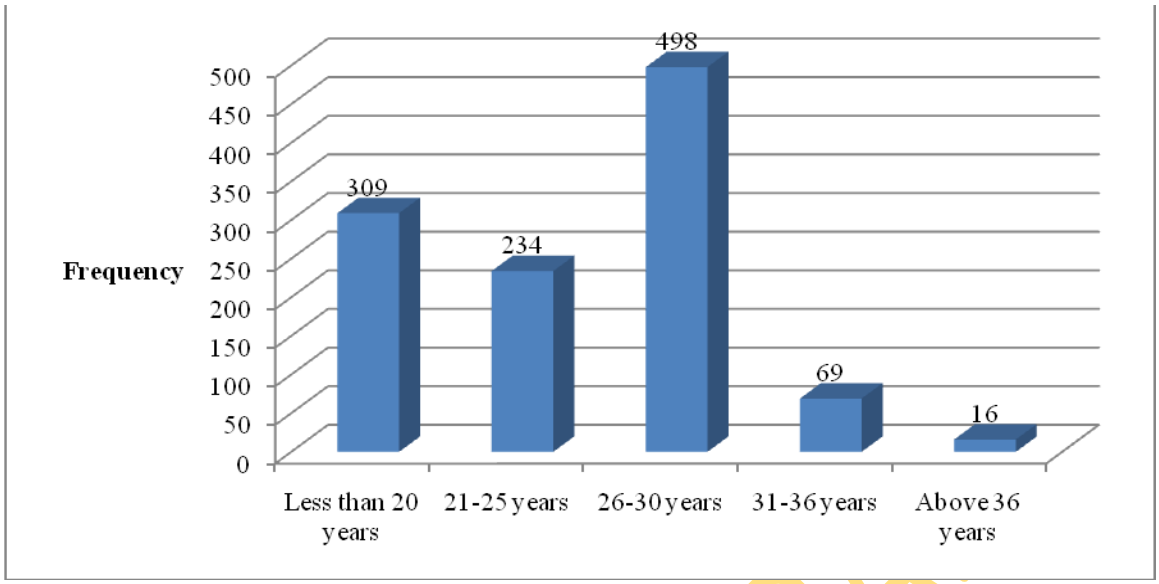



**Fig. 4.5 Bar Chart Showing the Distribution of the Respondents by Age at Marriage**

*Source: Fieldwork (2013)*

Respondents' distribution by age at marriage is presented in fig. 4.5 above. It is shown that 309 (27.2%) of them got at about 20 years of age; 234(20.9%) got at 21-25 years; 498(44.4%) got at 26-30 years, 69(6.1%) got at 31-36 years; while 16(1.4%) got at above 36 years. Their mean age at marriage was 26.2 years, which made it possible for them to undergo educational programmes that qualify them for their job positions in tertiary institutions. It could be observed that most of the female workers got at the normal age, most women get in Nigeria. This could have had an impact on their reproductive health behaviour. It shows that most of the respondents started childbearing and rearing at a young age

**Section B**

In this section**,** each of the research questions raised and the hypotheses tested are presented in tabular form followed by detailed interpretation and discussion of findings.

**Research Question 1**

What are the joint and relative effects of the predisposing factors on reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria?

**Predisposing Factors on Reproductive Health Behaviour among Female Workers in Tertiary Institutions in Southwestern Nigeria**

The extent to which the seven independent variables predicted the dependent variable was analysed using multiple regression analysis. The results are presented in Tables 4.1 a and b followed by detailed explanation

**Table 4.1a Joint Effect of the Predisposing Factors on Reproductive Health Behaviour among Female Workers**

| **Model** | **Sum of Squares** | **DF** | **Mean Square** | **F** | **Sig.** |
|---|---|---|---|---|---|
| Regression | 205363.69 | 7 | 29337.669 | 520.09 | .000 |
| Residual | 62839.270 | 1114 | 56.409 | 1 | |
| Total | 268202.96 | 1121 | | | |

F(7,1114) = 520.091; R = .875, $R^2$ = .766, Adj.$R^2$ = .764; P< .05).

*Source: Fieldwork (2013)*

**4.1b Relative Effect of Each of the Predisposing Factors on Reproductive Health Behaviour among Female Workers**

| Model | Unstandardized Coefficient | | Standardized Coefficient | T | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | | | |
| (Constant) | 13.375 | 1.204 | | 11.109 | .000 |
| Gender-role | 1.199 | .099 | .404 | 12.088 | .000 |
| Age at Marriage | .753 | .093 | .320 | 8.129 | .000 |
| Educational Attainment | .463 | .037 | .191 | 12.408 | .000 |
| Peer Influence | -.165 | .034 | -.161 | -4.820 | .000 |
| Mass- media exposure | -.419 | .086 | -.122 | -4.852 | .000 |
| Cultural /Religious Belief | -.282 | .080 | -.094 | -3.529 | .000 |
| Socio-economic status | -.225 | .057 | -.091 | -3.923 | .000 |

*Source: Fieldwork (2013)*

The result above shows the relative contribution of each of the independent variables on the dependent variable: mass-media exposure (β = -.122, P <.05), gender role(β = .404, P <.05), age at marriage(β = .320, P <.05), socio-economic status (β = -.091, P <.05), peer influence(β = -.161, P <.05), cultural norms/religious belief (β = -.094, P <.05) and educational attainment (β = .191, P <.05). The results above showed that all the independent variables, viz, mass media exposure, gender role, age at marriage, socio-economic status, peer influence, cultural norms/religious belief and educational attainment, were all significant. The extent to which each of the independent variables contributed to the prediction is shown by the T-ratio values associated with the different variables shown in Table 4.1b above. Tables 4.1a and b reveal that the joint effect of the independent variables and the relative contribution of each of the independent variables are significant. This showed that a combination of the seven independent variables (mass media exposure, gender role, cultural norms/religious belief, socio-economic status, peer influence, educational attainment and age at marriage) were significant in predicting reproductive health behaviour

among female workers in tertiary institutions in southwestern, Nigeria. The result yielded a co-efficient of multiple regressions (R) of 0.764, accounting for about 77.0% of the variance in reproductive health behaviour.

The table also shows that, the analysis of variance for the multiple regression data produced an F- ratio of 520.091(significant at 0.05 level) indicating that R2 value was not due to chance. It is shown in the table above that the joint effect of the determinants of reproductive health behaviour among female workers in tertiary institutions in southwestern, Nigeria was significant**.** The values of the standardized regression weights (β) associated with the variables indicated that gender role β = .404, P <.05) was the greatest contributor to the prediction, followed by age at marriage(β = .320, P <.05), educational attainment (β = .191, P <.05), peer influence(β = -.161, P <.05), mass media exposure (β = -.122, P <.05), socioeconomic status(β = -.091, P <.05), cultural /religious beliefs(β = -.094, P <.05). This means that the combination of the variables is capable of predicting reproductive health behaviour among female workers in tertiary institutions. Some studies have established significant relationship between each of the determinants and reproductive health behaviour of women in various countries and amongst different categories of women. However, no study has investigated the seven variables altogether on reproductive health behaviour. Some have at one time picked the variables independently or two or three of the variables at the same time.

According to this finding, gender role played a very important role in determining reproductive health behaviour of female workers, with the highest relative contribution of 0.404. Previous studies confirmed the role of males (husbands) in determining reproductive health behaviour of women. Among such studies are Kulu (2000), Ezeh (2000), Isiugo-Abanihe (2000) and Magnani, Bertrand, Makani & Mcdonald, (2000). Hussain (2003) also opined that religion is a less influential factor than male dominance and cultural norms, as women continue as always to be treated as objects in families and communities, and in policies and programmes. The entire reproductive process, from pregnancy to childbirth is a complex phenomenon that is socially and culturally determined, and women are excluded from decision making on issues concerning their own lives and bodies.This could be why most of the female workers could not solely make decisions as regards their reproductive

health behaviour. They are  to their spouses and their spouses may have more power in decisions making regarding reproductive health owing to the gender inequality.

The findings of this study showed that age at marriage is closely related to reproductive health behaviour of women, particularly on family size, spacing of children, timing and adoption of contraceptives to prevent unwanted pregnancies, duration of marriage life and the stability of marriage. Many studies conducted in India, reveals that fertility rate declines with the increasing mean age at marriage (Khongsdier,2005;Sahu,2006; International Institute of Population Sciences, 2007). It was observed that 48.1% of the respondents had  before 25 years of age. This could have encouraged such female workers to regulate their reproductive health behaviour by delaying or spacing births or limiting the number of children.

Educational attainment also significantly predicted reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria involved in the study. The result above is in agreement with the findings of Odutolu, Adedimeji, Odutolu, Baruwa and Olatidoye (2003) who highlight the importance of the relationship between female education and access to economic resources as a means of furthering empowerment of women, especially in terms of their reproductive health behaviour. This could be attributed to the fact that educational attainment is one of the most important socio-economic characteristics. A proverb say "Education is the backbone of a nation". The educational attainment of the respondents coupled with their work environment would have exposed them to information on reproductive health behaviour. The respondents were literate, although with different levels of educational attainment. Muoghalu (2005) asserts that professional women get  and had their first babies slightly later than their illiterate sisters, patronize good hospitals for antenatal care and delivery of their babies and use mainly orthodox family planning methods. Empirical studies carried out found that socioeconomic characteristics of women, notably educational level, explain the differences in reproductive behaviour and contraceptive choices (Anju,Vanneman & Kishor,1995; Kazi & Sathar,2001). However, Adhikari1 (2010) found that literate women tend to have fewer children than illiterate women. About 79.0% of the total respondents sampled had three children.

Peer influence had significantly predicted reproductive health behaviour among the

respondents. This finding is in line with Kim, Kols and Mucheka (1998) who assert that a person's social environment usually has more influence on family planning decisions than do the attributes of specific contraceptives. In Kenya, for example, when new clients were asked to give a single reason for their choice of a specific family planning method, most of them cited the attitudes of their spouses or their peers, or their religion or values. Other studies have examined the influence of individuals or groups on reproductive behaviour. It was reported that individuals/groups have a bearing on reproductive behaviour, particularly contraceptive behaviour (Casterline et al. 2000; Godley 2001; Berhman et al. 2002; Barber et al. 2002; Madhavan et al. 2003).

Mass media exposure contributed to reproductive health behaviour of the female workers. This is consistent with the findings of Bankole, Rodrígueza and Westoff (1996) who examined the effects of exposure to mass media messages promoting family planning on the reproductive behaviour of women in Nigeria using cross-sectional data. The cross-sectional analysis suggests that: (1) contraceptive use and intention are positively associated with exposure to mass media messages, and (2) women who are exposed to media messages are more likely to desire fewer children than those who are not exposed to such messages. Similarly, analysis of the longitudinal data shows that exposure to mass media messages is a significant predictor of contraceptive use. Thus, exposure to mass media messages about family planning may be a powerful tool for influencing reproductive behaviour in Nigeria. Westoff and Bankole (1997) and other researchers carried out some studies in Burkina Faso; Ghana, Kenya, Morocco, Madagascar, Namibia and Zambia. They looked at the impact of mass media had on people's reproductive health choices. Their result strongly suggests that exposure to mass media has considerable influence on reproductive behaviour, even without radical economic and social changes. The general conclusion of their report is that there is a persistent and frequently strong association between exposure to the mass media and reproductive behaviour in Africa in the expected direction: greater knowledge and use of contraception, intention to use contraception in the future, preferences for fewer children and intention to stop child bearing. A Tanzanian study examined the effect of a national mass-media campaign that included family planning radio dramas, and found a positive association between recall of a family planning message and use of a modern contraceptive method(

Chen &. Guilkey, 2003). The authors concluded that radio spots were the best way to disseminate family planning messages in this setting

In addition, there is evidence that media exposure is also associated with marriage. Mass media plays important roles in achieving good reproductive health behaviour by conveying information, stimulating thought and discussion, informing and developing ideational behaviour.

The result of the present study confirms that cultural norms /religious beliefs positively determines reproductive health behaviour of female workers. This corroborates Adsera (2006a), Brose (2006), Heineck (2006) and Régnier-Loilier and Prioux (2008) who claim that there is a link between religiosity and fertility in Spain, West Germany, Austria and France respectively. Being religious tend to determine how a female workers determine her own ideal family size and the plan to have more children or to stop. Philipov and Berghammer (2007) reported a correlation between measures of religiosity and fertility behaviour in virtually all the 18 countries studied. So do Frejka and Westoff (2008), who show that the risk of having two or more children is associated with different measures of religiosity in different regions of Europe. Stephenson, Baschieri, Clements, Hennink and Madise (2007) and Kaggwa, Diop and Storey(2008) found that among six sub-Saharan African countries studied, in only two (Tanzania and Burkina Faso), community's norms positively associated with women's modern contraceptive use. The reported positive relationship between cultural/religious belief and reproductive health behaviour, according to the findings, might be due to the fact that cultural values are important in shaping attitudes and behaviour of women. It is also assumed that female workers are more religious generally. This has a considerable impact on timing, spacing and adoption of contraceptive use, as their religious beliefs play an important role in determining their reproductive health behaviour.

The result obtained in this study clearly established that socioeconomic status was a significant contributor to the prediction of reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria. Similar observations have been made by Sarwat et al, (2003) who revealed that occupation of the respondent plays a pivotal role in fertility regulation and reproductive health behaviour of women in households. Changes in the economic status of women in households lead to changes in reproductive health

behaviour. Their findings further showed that low socioeconomic conditions, like unemployment of women, increase the burden of expenditure. Low income households have more members and more young children, with high dependency ratio, which reflects high fertility rate. As a result, the majority of them live in poor conditions. Female workers live in better household with high income, live in good conditions which could have influenced their reproductive health behaviour.

**Hypotheses Testing**

This section explores the relationship between each of the seven determinants (age at marriage, socio-economic status (income), educational attainment, cultural norms / religious beliefs, mass-media exposure, gender role and peer influence) and reproductive health behaviour in the study area.

$H0_1$ :There is no significant relationship between age at marriage and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

**Age at marriage and reproductive health behaviour**

To determine the relationship between age at marriage and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria as raised by $H0_1$, Pearson Product Moment Correlation analysis was used. The result is presented in Table 4.2

**Table 4.2 Pearson Product Moment Correlation Coefficient on Relationship Between Age at Marriage and Reproductive Health Behaviour**

| **Variables** | **Mean** | **Std. Dev.** | **N** | **R** | **P** | **Remark** |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | .740** | .000 | Sig. |
| Age at marriage | 15.7380 | 6.5789 | | | | |

** Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the above table that there was significant relationship between reproductive health behaviour and age at marriage among female workers in tertiary institutions in southwestern, Nigeria ($r = .740^{**}$, $N= 1122$, $P < .05$). The findings of the study indicated that age at marriage and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria were significantly related. Hence the null hypothesis was rejected, while the positive/alternative upheld. The findings revealed that age at marriage influences reproductive health behaviour. Age at marriage could affect

female workers' reproductive health behaviour by spacing their children for good healthy living. Age at marriage helps them to practice safe sex relations and the number of children they have or will have.

The findings of the study showed high frequency levels of early marriage among the respondents, which is 70.0%; 27.2 % of the female workers surveyed got at 20years; 20.9% between 21 and 25years old; and 44.4% between 26 and 30 years. However, early marriage in general is more frequent among female workers in tertiary institutions. This findings support the position of UNICEF, (2001), that age at marriage is an important factor in childbearing.

In southwestern Nigeria, most families give out their children at an early age owing to the belief that the early marriage of a woman increases her chances of conceiving early before she reaches menopause and makes chances of child survival higher. This could mean that early marriage may be related to early childbearing of women. Age at marriage makes couples to cohabit and have regular sexual intercourse to produce children. This is socially approved by all communities in the world. Most of the respondents (70.0%) had early marriage and had between 2 and 3 children. Women who have early marriage are less likely than others to delay children and use one method of family planning to avoid unintended pregnancies. Age at first marriage has been recognized as a crucial determinant of fertility because it marks the beginning of exposure to the risk of childbearing in societies where pre-marital sex is uncommon and where there is little deliberate effort to control fertility (Blanc & Rutenberg, 1990).

A female worker used in the IDI asserted that most women in their early 40s now got at early age. In fact, she said:

> *It is appropriate for a woman to get after the age of 20 years, because, by that time, she has both mental and physical maturity. I got at the age of 22 years, had my children one after the other within a period of 8 years, and now I'm enjoying good health by taking good care of them (*Non -academic female worker*)*

A female academic respondent during the in-depth interview submitted that:

> *It is better a woman gets in her early twenties. She would be able to plan her future well. I at the age of 28 years, my children are now grown up. They can take care of themselves. My husband has been*

*understanding, encouraging me to strive ahead in my career now that it's only the two of us at home* ( Academic staff *)*

She concluded that:

> *Though, women are responsible for bearing the burden of pregnancy, childcare and the domestic side of things. My age at marriage has really helped me in managing my home as I have given birth to the total number of children I want already.*

Several participants in the FGD in colleges of education revealed that they already had between 2 and 3 children. One of them stated that:

> *Age at marriage is important. So you mean that getting early will affect child bearing? To me, it could be good and not good. Good in the sense that early marriage helps women to end childbearing early, as it promotes good health. Early marriage may also expose women to various reproductive health problems. Late marriage, on the other hand, affects fertility, as year for childbearing may be too small for such woman leading to complication during childbirth.*

The above information supports the assertion that age at marriage is important in understanding reproductive health behaviour of women. This may be as a result of female workers preferring to have babies early in life. Although the number of children born per woman may indicate the pattern and pace of change in reproductive health behaviour, such changes has social development implications for the woman and her family. This is supported by the view of Hinde and Mturi (2000), that the rising age at first marriage has a lowering effect on the level of fertility. Generally, the age at which a woman enters to her first nuptial life is directly related to number of children she will bear, because it affects the length of time she will be at risk of becoming pregnant. Although un women may also have children, but the vast majority of childbearing takes place after marriage, making age at marriage a valuable indicator of a woman's lifetime fertility (Acharya, 2010). However, some research findings, for example those of Balk (1994) and Niruala and Morgan ( 1995), are not consistent with this present study, as they found no association between women's age at marriage and their decision-making power as regards their reproductive behaviour

An IDI respondent supported the view of the above researchers;

> *Early marriage is God's will. Most women would love to get early enough to enable them have the children on time. In my case, I got early had delay for several years before I could have my children (*Academic staff).

The IDI complemented the main instruments used for the study, helping to gather relevant information on the age at which female Muslim and Christian workers got and its implication for their reproductive health behaviour. A female Muslim worker had this to say;

> *I'm a Muslim and my religion teaches one to worship only the Allah Almighty and believe upon him and his attributes. That is the reason Muslims believe in early marriage, I got early at the age of 25.*

A Christian female worker noted that

> *Being a Christian does not have anything to do with whether one marries at any age. The most important thing is marrying according to will of God, whether at 20 or 30 years of age, it does not matter. I got at the age of 29 years and it determined the number of children I had. I have stopped childbearing*

Nagi (1983) explored the effect of demographic factors on reproductive health and fertility. He claimed that age at marriage has substantial effect on fertility in Muslim countries as compared with non-Muslim countries, ultimately affecting the health of women. In the Muslim countries, when the age at marriage, increases the fertility level decreases.

$H0_{2:}$ There is no significant relationship between socio-economic status (income) and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

**Socio-economic status (income) and reproductive health behaviour**

To determine the relationship between socioeconomic status (income) and reproductive health behaviour among the female workers in tertiary institutions in southwestern Nigeria

as raised by $H0_2$, Pearson Product Moment Correlation analysis was used. The result is presented in Table 4.3.

**Table 4.3 Pearson Product Moment Correlation Coefficient on Relationship between Socio-economic Status ( income) and Reproductive Health Behaviour**

| Variables | Mean | Std. Dev. | N | R | P | Remark |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | -.739* | .000 | Sig. |
| Socio-economic Status | 27.8886 | 15.0805 | | | | |

* Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the above table that there was significant relationship between reproductive health behaviour and socio-economic status among female workers in tertiary institutions in southwestern Nigeria (r = -.739*, N= 1122, P < .05). The null hypothesis was, therefore, rejected. The result in table above shows that socio-economic status (income) significantly influences reproductive behaviour of female workers. The socio-economic status, which refers to income level, shows the female workers' earnings. It is an economic indicator, as the respondents had various level of income. It reflected that the respondents had a source of income generation.

Occupation is, perhaps, one of the most important social economic characteristics, having a job enables female workers who are women to make decisions regarding their family size, timing and spacing of children in order to provide better health care, education and proper care for their children.This finding is similar to Yohannes (2013) claim of women's employment for cash income having a strong association with their reproductive health-seeking behaviour. Women who are employed for earnings may be exposed to information, knowledge and new attitudes about modern health care at their workplaces or through the media. Female workers are not housewives that would be dependent totally on their husbands. They are working, earning a source of livelihood, though occupying different posts within the tertiary institutions. Income is an important indicator of one's social standing. Income affects the social behaviour of the social system, particularly the use of contraception (Bogue, 1983). Employment has some "transformational effects" on women,

like providing direct access and control over financial resources, enabling them to function in the non-domestic sphere and, in this way having access to the world outside the home, and having autonomy and control inside the home (Kishor, 1995). Female workers' socioeconomic status is an important indicator of social standing. An IDI respondents in a University said;

> *I had decided on the number of children I wanted in life even before I got . Though I have been working for several years, I have few children, as children are expensive to take care, I want to give them the best and take proper care of them, ,that is reason I gave birth to the number I can cater for based on my income (* Non-Academic staff*).*

Another participant provided insight on the influence of socio-economic status on reproductive health behaviour thus;

> *My income coupled with that of my husband has helped determine the number I want. I am using contraceptives to prevent unnecessary pregnancy, I have the desired number of children as our family of five is complete (*Academic staff*)*

In the FGD conducted on the influence of socio-economic status on reproductive health behaviour particularly on contraceptives usage. Few women believe that the usage of contraceptive depends on the economic status of the family. The comment below reveals this:

> *I also want to take care of the housework, but I have to consider the reality that if both of our salary can't cover the daily expenditure of the family, we must stick to limiting our family size(*FGD/ University/College of Education )

This result is consistent with State of South Africa Population Report (2000) and Owuamanam and Alowolodu (2010) findings stating that there is significant positive relationship between family size and income. A change in income may have a variety of effects on parents' demand on children.The findings are in consonance with previous findings that indicated a positive relationship existing between working women ( paid and not paid work outside the home) and their health-seeking behaviour (Elo 1992; Basu 1992; Abdalla 1993; Swenson, Thang, Nham, & Tieu 1993; Govindasamy 1994; Khan, Soomro, & Soomro 1994; Barlow & Diop 1995; Ahmed & Mosley 1997; Regmi & Manandhar

1997). This positive relationship empowers women with greater decision-making power regarding matters concerning themselves and their children. In every society, the woman provides critical economic support to her own family's continued survival, whether such woman is in a self-paid job or is earning certain income in the informal or formal labour market. Therefore, female workers' participation in paid jobs is considered as one of the significant indicators of their socio-economic status, which influences their reproductive health behaviour. This is because their income level makes them to be on the economically productive side, as this has some positive effects upon their lives, particularly their reproductive health. Earning their own money may make them to be exposed to broader knowledge of the outside world which gives them a certain kind of liberty as well as improves their self-image.

Khan, and Manan (2010) assert that income from job is considered as personal income. Such income increases women's financial authority, which is the most important element of women autonomy after education and it enhances women's assertive power and raises their social status through financial independence. Paid job outside home also increases women mobility. They learn from the experiences of fellow workers, seniors and all others with whom they interact during the discussion of various responsibilities. Frequent interactions outside home broaden women knowledge, contributing towards confidence-building measures. Income increases women's autonomy, which ultimately yields positive bearing on their decision-making authority, increases mobility; enhances social status and financial independence; and improves decision-making by improving women's control on their fertility. This motivates them to bear lesser burden of childbearing and child rearing. Studies abroad also report that the level of family income is one of the influencing factors on the use of contraceptives (Bagheri & Nikbakhesh ,2010; Nanda , Adak & Bharati,2011). These studies reported that an increase in the rate of the use of contraceptives is a factor of increase in income .

The foregoing submission shows that any woman would prefer to adopt preventive measures to avoid unplanned and unintended pregnancy and birth after she has had the desired number of children. A woman's autonomy through labour participation enhances her knowledge and adoption of family planning services by building consistence to cultural

pressures and empowering her to exercise better control on fertility (Ahmed, 2002 in Khan & Manan ,2010 ). Such financial empowerment improves her access to the use of health and family planning services.

$H0_{3:}$ There is no significant relationship between educational attainment and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

**Educational attainment and reproductive health behaviour**

To determine the relationship between educational attainment and reproductive health behaviour among female workers in the tertiary institutions in southwestern Nigeria as raised by $H0_{3.}$Pearson Product Moment Correlation analysis was used. The result is presented in Table 4.4

**Table 4.4 Pearson Moment Correlation on Relationship between Educational Attainment and Reproductive Health Behaviour**

| **Variables** | **Mean** | **Std. Dev.** | **N** | **R** | **P** | **Remark** |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | .426* | .007 | Sig. |
| Educational attainment | 08.9376 | 06.3968 | | | | |

* Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the above table that there was significant relationship between reproductive health behaviour and educational attainment among female workers in the tertiary institutions in southwestern, Nigeria ($r = .426^*$, N= 1122, $P < .05$). The null hypothesis was, therefore, rejected. The coefficient of correlation and the significance level amply demonstrates that educational attainment is extremely important to reproductive health behaviour. The higher the level of education attainment, the better the reproductive health behaviour of female workers. This finding is in accordance with results from several previous studies conducted in other parts of Africa and Asian countries (Oye-Adeniran, Adewole,

Augustine, Oladokun, Gbadegesin, Ekanem, Yusuf, Odeyemi, Iwere & Mahmoud, 2006 ;Nwankwo & Ogueri, 2006; Bhandari, Premarajan, Jha, Yadav, Paudel & Nagesh, 2006.; Khan, Bradley, Fishel & Mishra,2008; Adanu, Seffah, Hill, Darko, Duda & Anarfi, 2009; Mturi & Joshua, 2011). Some of these authors argue that education provides new outlook and freedom from traditions and that highly educated women have more decision-making power within marriage, including decisions about reproductive health. Education attainment of female workers not only enhance their capacities and capabilities to a large extent it also influences their life style, occupation and adjustment pattern. Female workers behaviour pattern and thinking is different from illiterate or semi-educated women. Likewise they are assumed to be well-off when compared to the semi educated or illiterate women in all respects especially in the area of general awareness and health related matters. Their education attainment may be associated with later entry into marriage, preferences for smaller families, spacing, and planning the second childbirth, increased awareness, acceptability and use of contraception.

Education can have an empowering effect on women, broadening their horizons, choices and opportunities and enabling them to take personal responsibility for their health and that of their children (Paul & Rumsey, 2002). Good educational attainment for the female workers makes them knowledgeable. Hence, they are more likely to possess good ability to understand message in health promotion materials (such as posters and brochures), including those involving family planning (Mgabo, Mugane & Lwelamira 2010). Education is an important predictor of the reproductive health behaviour. This analysis pertains to information collected from women aged 19-49, who had given birth to at least a child. Nevertheless, education may operate through other variables like information and access to reproductive health behaviour. It is important to stress here that the educational attainment analyzed in this study is interrelated with reproductive health behaviour of female workers. For instance, education will determine one's occupational status, which also influences one's income and marriage type. Educational attainment of female workers appears to be an important determinant of reproductive health behaviour, perhaps, because more educated women are more likely to appreciate the advantages of having fewer and better educated children.

Kirk and Pillet (1998) submit that women employed in the formal sector have usually been noted to have fewer children, being unemployed denies women the access to resources with which to prepare for marriage and child rearing immediately after leaving school. Education could be seen as a powerful force against reproductive behaviour because, in terms of economic consequences, educating children is costly, as parents must provide books, supplies, appropriate clothing, and frequent transportation in order for their children to attend school. The educational attainment of female workers exposes them to issues concerning their reproductive health behaviour which makes them to be aware of various methods of contraception that would help limit their family size, space and time their children and practise safe sex relations.

Educational attainment enables women generally to be well informed on matters relating to reproductive health behaviour. Also the level of educational attainment of female workers could be seen as one of the most important determinants of reproductive health behaviour observed in this study. The sampled workers had varying levels of educational attainment. Without educational attainment, it may be difficult for these women to understand what good reproductive health behaviour means. This could also affect rationality in decision making.

The last decades of the twentieth century witnessed a tremendous increase in the educational levels of women, their economic independence, decision-making abilities and political power. These processes collectively constitute women's empowerment, which is the single most powerful factor driving the profound changes in family formation, living arrangements and childbearing that occurred in industrialized countries since the 1970s (McDonald, 1994; 2000a; 2000b). Rising female education and the resulting improved employment opportunities for women make them less dependent on traditional single earner households and lead to increased opportunity costs of childbearing. Thus, when the birth of the first child is delayed, women are able to increase their potential income from gainful employment through education and the accumulation of on-the-job skills and experience, which, in turn, increases the opportunity cost of having a child (McDonald, 2001).Education not only improves female workers ability to practise good reproductive health behaviour, but it can also empower them with more power in decision-making authority in their household.

All over the world, education is seen as a tool to solving problems, most especially health problems.

Schultz (2008) supports the result of this study, that women's education is associated with smaller desired family sizes across the world. Therefore education should be given priority, because achieving good reproductive health behaviour depends heavily on the educational attainment of women on how to obtain effective birth control methods as well as the acceptance of family planning. This appears to be a powerful force for reproductive change in any country of the world. This finding confirms the relevance of education to reproductive health behaviour, as educated women are more likely to afford family planning methods for child spacing. Their being educated determines the number of children they want. Educated women are exposed to knowledge of preventing unwanted pregnancies.

Table 4.4 is in support of previous studies that found that socioeconomic characteristics of women, notably educational levels, explain differences in reproductive behaviour and contraceptive choices (Anju, Vanneman & Kishor, 1995; Kazi & Sathar, 2001). The effectiveness of this view is supported by several previous studies on female education and reproductive behaviour which claim that female education leads to a decrease in fertility, that is with higher levels of education, the number of children born per woman reduces (Schultz,1973; 1974; 1993 & 2008;Vavrus & Larsen; Sackey 2005). This result is consistent with Population Reference Bureau (2000) and Owuamanam and Alowolodu (2010**)** findings,which state that formal education has been a major determinant of family size.

The foregoing corroborates the importance of education attainment on reproductive health behaviour as regards family size. One of the participants of IDI revealed that:

> My *educational attainment has somehow influenced my reproductive health behaviour. It has made me to understand want I want in my marriage, particularly the number of children I want, how to go about it and how to take care of my children (*Non-academic female worker *)*

Another respondent in the IDI conducted submitted that:

> *I quite agree that education is really important in life of any woman. For me it has helped me a lot by making me to have correct and right information particularly on matters relating to my reproductive health. Also, i believe that my educational background strongly influence the number of children I have had just two boys and one girl. They are*

*presently in secondary school and I'm giving them the best education and care (*Academic female worker*)*

A female worker expressed her views thus:

> *I'm of the opinion that educational background of a mother is important not only that it is good for the woman's health, it makes her to understand her health particularly as it related to childbearing, the number of children she wants and the means to prevent an unwanted child rather than going for abortion, which is risky.*

Similarly, another female participant summed up the discussants view on educational attainment and remarked that:

> *Education influences reproductive health behaviour, being educated may make a woman to delay her marriage, increases her knowledge and exposes women to beliefs and values on childbearing and rearing .When women are educated, they are likely to have the ability to relate better with their husbands on decision to adopt contraception and it may affect the number of children they want*

Better educated women were more likely to use contraceptives (Bbaale & Mpuga 2011). Studies conducted in other countries also indicate that women's education had a strong positive effect on their current use of contraception (Arokiasamy,2002; Iyer, 2002; Khan & Khan, 2007). Education is considered essential in improving women's status since it provides real and lasting improvements in women's lives. Generally, more educated women have better health, living conditions and life opportunities than their less educated counterparts. Education, by providing the possibility of gainful employment, puts women in a relatively better position, economically and socially. Education, besides making women more open to new and modern ideas, it also gives the possibility of establishing an egalitarian status within the marital relationship. Moreover, educated women are expected to control their fertility more safely and effectively (Ergöçmen, 2011). Education is the most consistently reported determinant of reproductive health services utilization. For instance, a Mexican study found an independent association between lack of any schooling and the use of contraceptives among women (Nazar-Beuteelspacher, Monalisa-Rosales, Salvatierai-Zaba, Zapata-Matrtelo & Halperin, 1999). Similarly a study conducted in Pakistan by Hamid and Stephenson (2006) notes that women who have been to school are more likely to use modem

contraceptive methods. In a population based Turkish survey, women with second-level primary school and higher education were found to be better informed than women with little or no education (Unalan, Koc & Tezcan, 2003).

Different respondents in the FGD expressed concern about educational attainment as a factor affecting reproductive health behaviour of women in a positive way:

> *When a woman is not educated, it becomes difficult for her to go back to school or to find a job. But she has to do something with her life. Being educated may guarantee women to have a good job and to be in a high position in life. This will surely affect how she wants to live her life by having few children that she would want to take good care of. (*FGD /Polytechnic)

One of the FGD discussants stated that:

> *Educated mothers were likely to be gainfully employed and have enough money to purchase contraceptives (*FGD /College of Education)

The FGD participants noted that educational attainment increases knowledge of reproductive health, as it removes fear associated with thier use of contraceptives. They believed that educational attainment of couples have effect on the use of contraceptives.

Espejo, Tsunechiro, Osis, Duarte, Bahamondese and De Sousa( 2003) assert that higher educational level and better socio-economical status have been shown to be associated with better knowledge about contraception in a study from Brazil. This could be due to the fact that educational attainment makes women to able to articulate their reproductive health desires. Female workers who are women, however, still try to reconcile their family roles with outside roles which are their job responsibilities. But how easy or otherwise in performing these roles may have a substantial effect on reproductive health behaviour. McDonald (2000) observes that if women have increasing opportunities in education and employment but find these opportunities severely limited by parenthood, then fertility levels may drop substantially.

$H0_{4:}$ There is no significant relationship between cultural norms/ religious beliefs and reproductive health behaviour among female workers in tertiary institutions in southwestern

Nigeria.

**Cultural Norms/ Religious Beliefs and Reproductive Health Behaviour**

To determine the relationship between cultural norms / religious beliefs and reproductive health behaviour among female workers in the tertiary institutions in southwestern Nigeria as raised by $H0_4$.Pearson Product Moment Correlation analysis was employed. The result is presented in Table 4.5.

**Table 4.5 Pearson Product Moment Correlation Coefficient on Relationship between Cultural Norms/ Religious Beliefs and Reproductive Health Behaviour**

| **Variables** | **Mean** | **Std. Dev.** | **N** | **R** | **P** | **Remark** |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | .092* | .000 | Sig. |
| Cultural norms/ Religious beliefs | 21.9893 | 5.1787 | | | | |

** Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the table above that there was significant relationship between reproductive health behaviour and cultural norms/ religious beliefs among female workers in the tertiary institutions in southwestern Nigeria ($r = .092^*$, $N= 1122$, $P < .05$). Therefore, the null hypothesis is rejected. The result in table also shows that cultural norms/ religious beliefs determine the number of children the women had. From the findings, one could say that religion prescribes a code of life, a system of beliefs, attitudes and practices which individuals share in groups. This orientation towards life and death is supposed to affect one's reproductive health behaviour. Moreover, religion refers to a system of attitudes, beliefs and practices which individuals share in-group. In Nigeria there are various religious groups. Belonging to a religious affiliation is a relevant factor in understanding individual decisions affecting reproductive health behaviour.

Religion is, perhaps, one of the social attributes of relative importance in Nigeria as there are various faiths like Islam, Christianity and African traditional belief system. The

respondents in this study, belonged to different religious groups. Religion is one of the most important social institutions as well as the oldest socio-cultural characteristics associated with mankind and civilization created over thousands of years of known history, finding its influence in all societies, acting as a powerful system of social control with pervasive effects on various aspects of people's lives, attitudes and behaviour (Haloi & Limbu 2013). Religion can be conceptualized within sociocognitive models of health behaviour because religious beliefs and practices often influence cost/benefit analyses, value perception, perceived behavioural control, and social influence. There is a growing body of literature that has found religious involvement to have a salutary effect on health behaviour and outcomes (Chatters, 2000).

Among the Muslim participants, there were some who claimed that Islam addresses the use of contraceptives, and reported that they were living in agreement with what is written in religious texts on the topic. One of the IDI participants said:

> *Islam does not prohibit contraceptive use. It prohibits abortion. Islam does not encourage women to go for abortion in case she got pregnant unexpectedly, as a practising Muslim I practise the traditional method of avoiding unwanted pregnancy I'm blessed with children, both girls and boys. (*Non-academic staff)

A participant in the IDI supported this idea, and argued that Islam supported contraceptives based on the idea that it was necessary, to prevent poverty:

> *It's obvious that Allah will punish one for aborting any child because children are the gift of Almighty Allah and the work of Him alone. If a person doesn't have enough wealth then she should not have many children. The children may suffer from poverty after they come to this world. Sharia supports the idea of limiting the number of children*. (Academic staff)

The FGD provided opportunity to address the issue of religion on reproductive health behaviour. In one of the session, it was noted that:

> *Islam is a religion that believes that, no matter the status of the women she must be submissive and believe in procreation. It now depends on the husband whether he wants many children or not and the wife must obey.*

There are some studies indicating that there is no statistical association between the practice of family planning and religion (Abraham , Adamu & Deresse, 2010 ;Nanda , Adak & Bharati, 2011) and a mixed influence of religion on women's contraceptive practices (Ohlendorf & Fehring,2007).Sarkar (2008), who studied reproductive biology, found that that the use of contraceptives is approved by some Muslims because the Islamic faith stresses that children have a right to education and future security. This entails that the number of children in a family may have to be limited, and birth controlled. This is similar to some of the views among the IDI participants in this study. However, a KII female Christian participant argued that:

> *To me, the Bible says multiply and replenish the world, that is bring children to the world, and it also says parents should take proper care of them as parents will give account of them when they go to heaven. What the Holy Book is saying is that I should give birth to the number I can take care of. My church has given counselling not to abort any unwanted child, Matrons in my group have encouraged women to plan the number of children they want by going for family planning and I am using one method presently which is better than committing a big sin against God* (Academic staff)

One of the participants argued that religion positively influences reproductive health behaviour through the use of contraceptives:

> *My religion (Orthdox Church) encourages contraceptives use because religion doesn't want us and our children to suffer. So the religion doesn't prohibit its use rather it prohibits sin against God through abortion.* (Non –academic staff)

Similarly, another female worker in the FGD remarked that:

> *Christian faith advocates one man one wife as written in the Holy Bibble; which some families have imbibed therefore such family's family size tends to be smaller because there is no competition among wives as to who would produce the greater number of children.*(FGD/University)

The participants all saw children as an essential issue for the people, as they believed that children are gifts from God and that the woman must receive all God gives them. Abortion was seen as a sin against God. The experience of the female workers that

participated in the IDI and FGD showed how religious beliefs influenced their reproductive health behaviour. Religious texts were interpreted differently. This could affect their attitude towards their reproductive health behaviour in different ways. Previous research has extensively highlighted the relevance of religious affiliation and reproductive health behaviour. A cross-sectional study conducted in Shantibagh and Vaidyanath Nagar community in Kotekar Panchayat at Mangalore among rural women in India by Aras, Veigas and D'souza ( 2012) shows that there is correlation between religion and reproductive health behaviour.

Reproductive health behaviour is greatly influenced by culture. The reproductive behaviour of most women in Africa is guided by the culture of silence embedded in them (Muoghalu, 2011). On the cultural aspect of reproductive health behaviour one of the female workers remarked thus:

> *I will say cultural beliefs to some extent, influence the decisions women make as regards the number of children they want, contraceptive usage and spacing, I'm a Yoruba woman. The cultural believe is that children are the heritage of future and extended family believes that a woman must give birth to many children that at old age this children, will be source of wealth for the family. (*Non-academic female worker*)*

Another participant expressed her view thus:

> *In this modern age things are changing a bit, most educated couples now give birth to few children let say between 2 and 3 and its more common among women living in urban centres now. I live in Lagos hardly will you see couples having 4 or 5 children these days, the culture is changing gradually unlike in those days that our parents have 7 and more . My parents had 6 of us but I have only 3 children.* (Academic female worker).

Also a contributor in the FGD stated that;

> *In almost all cultures, particularly among yorubas, women respect their husband and obey them even if you are a professor, doctor or president you must submit to your husband. Women don't just do anything regarding their reproductive health; culture does not permit it.*

The IDI and FGD support the opinions of Srikanthan and Reid (2008) that the perception and the behaviour related to reproductive health are strongly determined by

prevailing cultural and religious values. The female workers in tertiary institutions work in urban areas. Their reproductive behaviour could be affected by culture and religious belief. This agrees with the findings of Reed, Briere and Casterline (1999); Shapiro and Tambashe (2001) and Kravdal (2000& 2002) that one of the three community characteristics is proximity to urban areas because, historically, ideas supporting low fertility diffused from urban to rural areas through migratory processes.

Moreover, female workers are usually residing in urban areas making them to have access to transportation, information and health-care facilities, which may affect their reproductive health behaviour. Saha (1994) agree that access to community infrastructural development, modern amenities, like electricity; farming machinery; and health services have the potential to reduce economic and social uncertainty in a community and thereby turn the economic calculus against high fertility.

$H0_{5:}$ There is no significant relationship between mass-media exposure and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

**Mass -Media Exposure and Reproductive Health Behaviour**

To determine the relationship between mass-media exposure and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria as raised by $H0_5$ Pearson Product Moment Correlation analysis was used. The result is presented in Table 4.6.

**Table 4.6 Product Moment Correlation Coefficient on Relationship between Mass - Media Exposure and Reproductive Health Behaviour**

| Variables | Mean | Std. Dev. | N | R | P | Remark |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | .085* | .000 | Sig. |
| Mass- media exposure | 17.7112 | 04.5034 | | | | |

** Sig. at .05 level

*Source: Fieldwork 2013*

The table above shows that there was significant relationship between reproductive health behaviour and mass-media among female workers in the tertiary institutions in

Southwestern, Nigeria (r = .085*, N= 1122, P < .05). The null hypothesis was, therefore, rejected. The findings in this study reveals that there is significant relationship between mass-media exposure and reproductive health behaviour among the female workers in the tertiary institutions in southwestern, Nigeria. In Nigeria, radio has been established to have a broad range of users across the country among the citizen of Nigeria irrespective of their socio-economic status, people are believed to be listening to radio either everyday or most days (Society for Family Health, (SFH) 2003). The SFH reported that 65% of adult population in Nigeria listens to radio at least once every day. The SFH further suggested that the use of radio for HIV/AIDS education and family planning can reach both the literate and the illiterate.

This finding is supported by Witte, Girma and Girgre (2001) and Lee (2004) who argue that the use of radio for health promotion and campaign on family planning and HIV prevention in Ethiopia revealed that almost 64% of the respondents reported daily listening to radio in that country. Similarly, Ubah and Sani (2009) in a work on Benue State, Nigeria, discovered that 66% of the respondents reported to have listened to radio, at least once every day.

The empirical findings of previous researchers also support the hypothesis stated above, Adhikari (2010) found that in Nepal, mass-media exposure (radio/TV) has an important effect on reproductive behaviour. It could be because radio and television programmes and the values they disseminate are transmitted directly into the home. They have the potential to directly affect every member of the household. Even those with little or no schooling (Reed, Rona & Casterline, 1999)). Media images and messages may also influence fertility by increasing consumption aspirations, which may in turn decrease preferences for a large family (Hornik & McAnany,2001).The role of the mass-media in changing both patterns of contraceptive use and notions of ideal family size could be another reason for low fertility among those exposed to mass media (Kulkarni, 2003).The IDI conducted agreed that the mass-media has been a source of information for them particularly on their reproductive health behaviour. A female non academic staff has this to say:

> *I listen to radio programmes on family planning almost twice in a week. It has been very educative and entertaining which has helped me a lot on ovulation*

*period, the types of family planning methods that one can use in case one wants to space or time one's children and even prevent unwanted pregnancy. I don't have much time to read newspapers or go on the internet I listen a lot to radio programmes*

Another participant stated thus:

*I have four children. It was while listening to radio programme that I learnt a lot on contraceptive and its importance in the life of a mother. The message on the radio affected me very much positively, including the value of small families.*

Another IDI participant summarized thus:

*I watch the cable network a lot, particularly the ones on health it called the Doctors. It is very educative and entertaining discussing on women health generally, on contraception, menstruation, pregnancy, ways of preventing illness and diseases it has helped me a lot.*

A female academic staff noted thus:

*I listen to reproductive health programmes by Society for Family Health. It is a very good programme meant for all women to adopt family planning by visiting the nearest clinic in order to space one's children and the benefits for both the women and family*

Female workers believed that the mass-media, particularly radio and television have been entertaining and educating exposing women to knowledge and dangers of not practising good reproductive health behaviour. The mass-media, for a very long time, has been identified as a very powerful source of communication.

Mass media messages through television or radio have the potential influence on the promotion of the use of family planning. One participant in the FGD avered that:

*I watch television everyday when I am at home when there is electricity and when not I put on the generator to watch programme on clinic matters.*

Another woman in FGD expressed a similar view:

*I listen to radio and watch television on family planning*

*programmme.*

Only few of the participants in the FGD claimed to read magazines or use the Internet occasionally. They argued that they did not have sufficient time to read newspapers. Also, every participant had heard about family planning methods in the media. All of them claimed that exposure through mass media positively influenced their adoption of contraceptives.

Osakue (2010) assets that radio and television have been quite effective in creating family planning awareness in urban Nigeria. This is because the urban dwellers have greater access to the mass media. According to a survey of predominantly urban areas, about 90% of all urban households have radio sets and about 60% own television sets in Nigeria (Information, Education and Communication, 1996) .The likelihood that people living in urban areas would readily have access to family planning information through radio and television is high.

Evidence from studies on the interrelation between the mass media and reproductive health has convincingly showed that radio and television play a major role in informing and shaping life aspirations and personal value, especially among women of childbearing age .The two types of media help in providing reproductive health education on issues of family planning, contraceptive usage, HIV/AIDS and other Sexually Transmitted Diseases (STDs) behaviour (Sedgh, Bankole, Okonofua, Immarhiagbe, Hussain & Wulf, 2009). The media, particularly the radio and television have important roles to play in influencing women reproductive health behaviour .They have the advantage of wider coverage. Public health campaigns are aimed at informing and educating people, most especially women. This provides the foundation for possible behaviour change. The radio and television are important channels for educating women through soaps operas, drama series and jingles, which are powerful catalysts for behavioural changes.

Oladeji (2008) observes that communication plays a vital role in ensuring that informed choices of reproductive health behaviour are made. This allows people to seek which approach is best for their own health and to exercise their right to select the quality of health care that they consider appropriate. It has been argued that the mass media, especially radio and television, has been quite effective in creating awareness on issues of women reproductive behaviour. Williams (2007) avers that there is strong evidence that the mass

media, particularly educational and entertainment broadcast media, have played a significant role in a number of countries in bringing about changes in reproductive behaviour and in promoting the adoption of other health measures. Examples are radio and television soaps in Brazil (Westoff & Bankole,1997), Ethiopia(Singhal, Cody, Rogers & Sabido, 2003), India (Singhal & Rogers, 1999), Niger and St Lucia (Vaughan, Regis & St. Catherine, 2000) and Tanzania (Rogers,Vaughan, Swalehe, Rao, Svenkerud & Sood,1999). Exposure to the mass media has substantial effects on female workers' attitudes towards their reproductive health behaviour in the study area because they are residents in urban areas. Some advantages that urban women have over their rural counterparts are higher levels of knowledge, access to services, education and health promotion programmess that use the urban focused mass media, thus leaving out their rural counterparts who may be largely influenced by traditional practices (Audu & Ekele 2002; Adetoro, Taiwo, Martin & Ann, 2007). When a woman is exposed to the outside world through communication and discussion, she becomes aware of various novel health services and developments, and their benefits (Mohammed, 2001). Thus, the workplace of these workers could be an appropriate setting for addressing sensitive reproductive health issues, since it is a place where they spend a considerable amount of time interacting with other members and their colleagues.

$H0_6$ :There is no significant relationship between gender-role and reproductive health behaviour among female workers in tertiary institutions in South western, Nigeria.

**Gender- Role and Reproductive Health Behaviour**

To determine the relationship between gender role and reproductive health behaviour among the female workers in tertiary institutions in southwestern Nigeria as raised by $H0_6$ Pearson Product Moment Correlation analysis was used. Table 4.7 below captures the results.

**Table 4.7 Product Moment Correlation Coefficient showing the Relationship Between Gender- Role and Reproductive Health Behaviour**

| Variables | Mean | Std. Dev. | N | R | P | Remark |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | .738* | .000 | Sig. |
| Gender role | 13.1007 | 05.2174 | | | | |

** Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the above table that there was significant relationship between reproductive health behaviour and gender-role among female workers in tertiary institutions in southwestern, Nigeria ($r = .738^*$, N= 1122, $P < .05$). Therefore, the null hypothesis was rejected. This means that gender role is significant in determining reproductive health behaviour of female workers in southwestern Nigeria. Gender role has a powerful influence on reproductive decision- making and behaviour.

This result is in consonance with the works of Hull (2000) and Hollerbach (2001), who claim that gender is just one of many factors that influence and affect women reproductive health behaviour. It shows that gender role significantly influences the determination of reproductive health behaviour of female workers in southwestern Nigeria. The implication is that gender roles explain the societal roles ascribed to each gender, particularly husbands, exert on their wives' reproductive health behaviour in terms of decision making as regards number of children, when to have them and when not, family size, adoption of contraceptives as well as practising safe sex. In virtually all societies, men have more power than women have (Berer 1996; Evaluation Project, 1997; Riley, 1997; Helzner, 2000; Moser, 2001). The situation is aggravated by the dominance of males in decision making in a household (Woldemicael & Beaujot, 2011). Raimi and Adesina (1999) claim that evidence supports the notion that men take major decisions in homes, especially in the areas of pregnancy and pregnancy outcomes; and that Nigerian women have no control over sexuality and fertility.

This finding was corroborated during IDI. A female non -academic worker asserted that:

> *My husband is the decision maker in the family. He loves children so much we have three children already. If not for my health problems, he wanted us to have six I'm just lucky that I have both sexes as my children I don't know what would have happened (*Non academic staff*)*

Another IDI respondent noted that:

> *I love children a lot and wanted to have four but my husband insisted only on having two. We stopped at two (*Non-academic staff*)*

According to Tuloro, Deressa , Ali and Davey (2006) men desire more children due to the fact that they socially and economically gain from having a large number of children . Other studies indicates that men mainly wish to reproduce because they want their children to carry on their family name and support them in their old age (Oyediran, Ishola & Feyısetan,2002; Odu , Jadunola & Parakoyi ,2005). Literature suggests that husband's influence and exercise power in childbearing decisions in a major way in Africa (Feyisetan,2000; Oyediran, Isiugo-Abanihe & Bankole,2006; DeRose,2007).Furthermore, when spouses do not share similar preferences, husbands tend to want more children (Short & Kiros 2002). The result of the FGD conducted was consistent with statistical findings. It provided insight to the contribution of gender role on reproductive health behaviour. Decision making has particular importance with regards to reproductive health issues as it implies important decisions that could have favourable or unfavourable consequences on the life and wellbeing of women ( World Bank, 2011). A female participant in the FGD conducted at university stated that:

> *It is the duty of the wife to keep her husband happy. He has right over me and he may not necessary seek my opinion on every matter. Their reproductive motivation affects their wives' reproductive health behaviour but on children that we have had he made the decision.*

In an FGD conducted among female workers with three children , one participant said:

> *I am married with three children and I have been working for several years now. My husband wants only three children. These children are seen as belonging to husband since they also contribute to family upkeep. They believe they should decide on the number of children to be produced*

> *and my own husband said if I should get pregnant again I will cater for the child by myself. I had no choice but to adopt family planning. Not all women get support from their husbands (*FGD/University )

This is what another participant said:

> *In Nigeria, most males marry at a later age compared with the females, making the husband to be usually older than their wives, thereby making them to dominate all issues even on the use of contraceptives (*FGD/Polytechnic)

More female non-academic staff compared to academic staff said that

*Husbands were the decision makers,*

In contrast, more female academic staff compared to female non-academic staff indicated that *both spouses were the decision maker.*

The qualitative study showed clear gender–based view with regards to the reproductive health decision making in the hand of their husbands. Furthermore, about half of the women respondents noted that they could not solely make the decision on reproductive health issues. Several of the women interviewed in the FGD relied on their husbands' decision-making and demonstrated a high level of confidence in their husbands. The FDG results confirm that gender role dominate in reproductive health decision-making of spouses. The findings above especially those of the IDI and FGD, are in agreement with some research findings which argue that men have powerful influence on reproductive decision-making and behaviour (Mccauley, Robey, Blanc, & Geller, 1994 ;Blanc, Wolff, Gage, Ezeh, Neema, & Sekamatte-Ssebuliba, 1996; US Agency for International Development, 1997). Likewise, in some developing countries, like in Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan, Ghana, Turkey and Zaire, husbands dominate reproductive decision-making, including contraceptive use, family size, birth spacing or extra-marital sexual partners (Kulu, 2000; Magnani, Bertrand, Makani & Mcdonald, 2000).

Nigerian men are not different. They are seen as the decision-maker in families in this study. They make decisions relating to having or not having a child, spacing and timing of children, adoption of contraceptives to prevent unwanted pregnancies and safe sex relations. In such settings, the role of healthy husband-wife communication inducing reproductive health behaviour becomes unavoidable. Dewi (2009) observes that, in many

developing countries, the decision to use or not to use contraceptives and the choice of a particular contraceptive method very often depend on the approval of the husband. Sharma (2003) notes that family planning programmes must involve men (as well as women) to satisfy a couple's sexual and reproductive needs. Men should also be involved in encouraging their wives to utilize the available reproductive health care facilities for promoting better and good health of their wives.

The question of men role in reproductive decisions is addressed by Oladeji (2008) who claims that men play powerful roles in decision making without considering their partners' wishes or the health consequences for themselves or their partners. However, their actions can have unhealthy and even dangerous consequences. In contrast, Beckman (2002), De-Silva (2000), argue that couples who talk to each other about family planning and reproductive health reach healthier decisions and these couples are more likely to use contraceptive and use it wisely and effectively. Some past surveys have shown that many husbands and wives do not know each others' views about family planning and reproductive health behaviour (Robey et al.,1992; Ezeh et al.,1996; Ngallaba et al., 1999).When men and women do not know their partners' fertility desires, family planning attitudes or contraceptive preferences, the consequences can include unintended pregnancies and unsafe abortions (Hudson, 2000; Hollerbach, 2000; Biddlecom et al. 2001). Mahmood and Ringheim (1997) notes that husband's desire for children is more important in deciding the likelihood of contraceptive use, and altering the reproductive health behaviour of the couple. A woman's decision-making power in the family is assumed to be reflective of her position in the household. In patriarchal societies, it is usually the male who decides on important family matters. The likelihood of making joint decisions is mostly associated with some features of women, such as her high education, her working for wage, living in urban areas, and so on (Nawar, Lloyd & Ibrahim, 1995).

The academic female workers had a contrary view as regards their husbands' role in decision making on their reproductive health behaviour. A respondent said:

> *Both of us are academia. It's a nuclear family .We made joint decisions on the number of children we have had , the timing and spacing .He was even the one that encouraged me to go for child spacing.*

Another participant noted that:

> *Things are changing a bit these days. Well to me, my husband and I make decisions together on every issue even on my reproductive health. Children are important in every home .On the health of women both couple must plan together so as to avoid any unfortunate incidence. My two births were through caesarian section. My husband discourages having more children. He said my life and health are important in taking care of his children*

The IDI indicated that women in academia tend to jointly make decisions with their spouses on reproductive health. This could mean that men's control over reproductive health behaviour may be becoming weakened, particularly among female academics. This is because, social, economic and educational opportunities for such women have increased and the traditional gender dominating roles are starting to change. As such, decision-making power is being redistributed between them. De-Silva (2000) reported that where women's levels of education and literacy were high, more than half of the wives and about two-thirds of the husbands said that decisions about family planning were made jointly. Ogawa and Hodge (1999) argue that culture have been changing away from decision-making primarily by husbands and parents towards decisions made jointly by couples.

Religion could also have influence on gender norms on reproductive health behaviour. A Muslim female participant in the IDI said that

> *Islam says good wives should follow their husbands' opinion and decision. My husband is the leader of the family. He decides on everything. He has chosen to have many children and he thinks that he can meet their needs because of his socio-economic background. I do not have any chance to refuse it as I continue to give birth to babies till he said it's enough , I just have four*( Non- academic staff)

A Christian female participant noted that:

> *Bible says the husband is the head of the house as Christ is the head of the church and one must obey and respect one's husband. My husband imposed contraceptive use on me because* he *preferred to have less number of children than I wanted as his wife. I wanted four children because I'm the only child of my parents , I could not refuse him because woman had less power than men to make decisions in general as I want to keep my home* (Academic staff)

One may say that religious norms support an unbalanced gender relationship, particularly on decision making on reproductive health behaviour. The IDI showed common gender-imbalanced relationship among female workers and their spouses on their reproductive health behaviour. Heaton (2011) studied the influence of religion on fertility among different religions. He claims that religion is linked with other social characteristics and proximate determinants, such as level of education, type of residence, marriage age, contraceptive use and divorce

$H0_{7:}$ There is no significant relationship between peer influence and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria.

**Peer Influence and Reproductive Health Behaviour**

To determine the relationship between peer influence and reproductive health behaviour among female workers in tertiary institutions in southwestern Nigeria as raised by $H0_7$ .Pearson Product Moment Correlation analysis was used. The result is presented in Table 4.8.

**Table 4.8 Pearson Product Moment Correlation on Relationship between Peer Influence and Reproductive Health Behaviour**

| Variables | Mean | Std. Dev. | N | R | P | Remark |
|---|---|---|---|---|---|---|
| Reproductive Health Behaviour | 23.5820 | 15.4678 | 1122 | -.541* | .000 | Sig. |
| Peer Influence | 14.6239 | 06.2540 | | | | |

** Sig. at .05 level

*Source: Fieldwork (2013)*

It is shown in the above table that there was significant relationship between reproductive health behaviour and peer influence among female workers in tertiary institutions in southwestern Nigeria (r = -.541*, N= 1122, P < .05). Therefore, the null hypothesis was rejected. Casterline, Zebal and Haque (2001), Godley (2001), Berhman, Kohler and Watkins, (2002), Barber, Pearce, Chaudhury and Gurung (2002), Madhavan,

Adams and Simon, (2003) all examined the influence of individual or groups on reproductive health behaviour. They claim that it gives bearing on reproductive behaviour, particularly contraceptive behaviour. In the IDI conducted among female workers, one of them expressed her views on the influence of peer group on reproductive health behaviour. She stressed that:

> *When you are with your friends especially your mate there is nothing you cannot tell one another*. M*y friends have been supportive to me a lot. They encourage me to go for family planning as I got pregnant while breastfeeding my baby (*Non-academic staff)

A female academic staff described how peer group influenced her reproductive health behaviour. She said:

> *I feel more comfortable talking to my friend. She is a lecturer in Public Health, she gives me information regarding family planning methods and encourages me to adopt the best that would not give me side effects. She has three kids so also do I.*

Another female academic participant in the IDI explained how peer influence motivated her to adopt contraceptives use:

> *I have seen women who use contraceptives to limit the number of children, in order to improve their lives. So we learn from each other and it motivates us to use contraceptives. If a family has too many children, it is impossible to improve the life and to meet all the needs of many children.*

Responses also showed show that female workers' decisions about reproductive health behaviour may be influenced by their relationship within her peers whether within the work environment or outside. Peers also have a notable influence on contraceptive use among the female workers in the IDI conducted: If a woman perceives that most of the others in her community/group are using modern methods, she is more likely to use them as well. Peer influence is, one of the determinants women should place great concern on, as they freely discuss issues of reproduction with other women of the similar age group and age.

This finding is supported by Manski's (2004) study which revealed that when women are uncertain of the merits of modern contraception, they decide about the method to use on the basis of discussions with network members. Studies from countries such as Kenya, Thailand, Cameroon and the Philippines demonstrate that a woman's contraceptive use is positively related to perceived encouragement by social network members and negatively

associated with perceived disapproval (Casterline, Perez & Biddlecom,1997, Valente et al, 1997; Godley 2001). This finding supports those of other studies which confirmed that, during the day, women often speak to other woman about family planning and experience with contraceptive use and that, for many women, informal communication is the primary source of family planning information (Rutenberg & Wakins, 2002).

Female workers may belong to one group or the other, as a peer group consists of group of people usually of similar age, background and social standing with whom a person associates. A peer group is likely to influence a person's beliefs and behaviours. These findings buttresses observations of various scholars that everybody belongs to informal social networks that influence behaviour to some degree. Examples of social networks are extended family, friends, neighbours and formal and informal associations (Roger, 1999; Panel on Population Projection Committee on Population and National Research Council,2000; Montogometry & Chung ,2000)

$H0_{:}$ There is a significant difference in the reproductive health behaviour of academic and non-academic female workers in tertiary institutions in southwestern Nigeria

$H0_{8:}$ There is no significant difference in the reproductive health behaviour of academic and non-academic female workers in tertiary institutions in southwestern Nigeria.

**Difference between the Reproductive Health Behaviour of Academic and Non-Academic Female Workers in Tertiary Institutions**

To determine the difference between the reproductive health behaviour of academic and non-academic female workers in tertiary institutions in southwestern Nigeria as raised by $H0_{8.}$T Test analysis was used. Table 4.9 captures the result.

**Table 4.9 T Test Table Showing the Difference in the Reproductive Health Behaviour of Academic and Non-Academic Female Workers in Tertiary Institutions**

| Groups | N | Mean | Std. Dev. | Crit-t | Cal-t. | DF | P |
|---|---|---|---|---|---|---|---|
| Non-Academic Staff | 582 | 23.1818 | 15.3627 | 1.96 | 1.079 | 1120 | .281 |
| Academic Staff | 540 | 24.2023 | 15.6265 | | | | |

*Source: Fieldwork (2013)*

The above table shows that there was no significant difference in the reproductive health behaviour of academic and non-academic members of staff of the tertiary institutions in southwestern Nigeria (Crit-t = 1.96, Cal.t = 1.079, df = 1120, P > .05 level of significance). The null hypothesis was therefore accepted. This implies that the reproductive health behaviour of the non-academic staff is similar to that of the academic staff. The two categories of women are female workers working in tertiary institutions though occupying various positions and ranks within their workplace. There seems to be no difference in the reproductive health behaviour of the two categories of female workers in the tertiary institutions. This is because they are both , educated, belong to the same sex and are working within tertiary institutions, which could have prompted them to have almost the same type of reproductive health behaviour.

As indicated in the result of the study, the number of children born by 75.0% of the respondents (both groups) fell between 2 and 3. This finding supports a study by Becker, Fonseca-Becker and Schenck-Yglesias (2006), who claims that women in paid employment are significantly more likely to report participating in the final decision-making on their health behaviour compared to those women who are not in paid employment. The two categories of female workers are involved in paid employment, which appears to empower them to develop thinking towards participation in decision-making pertaining to their reproductive health behaviour**.** The reproductive health behaviour of female workers is the same. This could be attributed to the fact that academic and non-academics female workers hold the same view concerning the issue of reproductive health irrespective of their cadres, duties, work responsibilities and locations.

On the difference in the reproductive health behaviour of academic and non-academic members of staff of tertiary institutions in southwestern Nigeria. The IDI responses revealed some facts on number of children. On respondent said:

> *A Yoruba proverb says one must not count one's number of children I'm blessed with two boys and one girl (*Non academic staff)

Another respondent asserted that:

> *I have three children all are boys and I thank God (*Academic staff)

On family size by academic and non-academic female workers, one respondent said:

> *We are a family of five, monogamous family made up of father, mother and three children (*Non academic staff)

Another respondent claimed that:

> *My family is just four, my husband, I and the two children (Academic* staff)

Some respondents commented on timing and spacing of children. One of them said:

> *For each of my children I space them well. Let me say they have about a year and nine months between each of them. It really helped me and the children a lot health wise* (Non-academic staff)

A respondent noted that:

> *My children are two years and two months apart. The timing is significant because it helps to promote health. In fact, if children are closely spaced, there will be problems .It makes women to become weak and the children will fall sick frequently because they was no sufficient space to allow the mother's body to carry the pregnancy well. (*Academic staff)

A young female worker, during an IDI, authoritatively mentioned this on the use of contraceptives to prevent unwanted pregnancy and safe sex relations:

> *I had a caesarean delivery and doctor told me not to have another child for three years. I think it's because of some complication that developed from the operation. I had to use contraceptives to prevent unwanted pregnancy, that is another child immediately. It was dangerous for my health. It assisted in safe sex relations with my husband before I had my second birth.* (Non-academic staff)

One female worker averred that:

*I have sufficient information on the use of contraceptives to avoid unwanted pregnancy.I listen to radio; watch the television programmes on family planning methods and even at times go on the Internet on information on contraceptives (*Academic staff).

**Research Question 2**

What is the perception of female workers in tertiary institutions in southwestern Nigeria on reproductive health behaviour?

**Perception on Reproductive Health Behaviour**

For the perception of female workers in tertiary institutions in southwestern Nigeria on reproductive health behaviour, frequency distribution was used to ascertain their perception. The result is presented in Table 4.10

**Table 4.10 Distribution of Respondents Perception on Reproductive Health Behaviour**

| S/N | Statement | Labels | Frequency | Percentages |
|---|---|---|---|---|
| 1 | Have you ever used a Family planning method? | Yes<br>No | 798<br>324 | 71.1<br>28.9 |
| 2 | Since last baby, have you used a family planning method? | Yes<br>No | 742<br>380 | 66.1<br>33.9 |
| 3 | Which method are you using currently to avoid unwanted pregnancy? | Oral contraceptive<br>Injectable<br>Implant<br>IUD<br>Condom<br>Female condom<br>Foam/jelly<br>Withdrawal | 253<br>179<br>75<br>6<br>240<br>45<br>73<br>127 | 22.5<br>16.0<br>6.7<br>0.5<br>21.4<br>4.0<br>6.5<br>11.3 |

| | | | | |
|---|---|---|---|---|
| | | Abstinence | 82 | 7.3 |
| | | Traditional | 42 | 3.7 |
| 4 | Which method are you using currently since your last child ? | Oral contraceptive | 243 | 21.7 |
| | | Injectable | 171 | 15.2 |
| | | Implant | 60 | 5.3 |
| | | IUD | 17 | 1.5 |
| | | Condom | 53 | 4.7 |
| | | Female condom | 91 | 8.1 |
| | | Foam/jelly | 10 | .9 |
| | | Withdrawal | 116 | 10.4 |
| | | Abstinence | 217 | 19.3 |
| | | Traditional | 44 | 3.9 |
| 5 | Which method are you using currently after your recent baby? | Oral contraceptive | 255 | 22.7 |
| | | Injectable | 169 | 15.1 |
| | | Implant | 57 | 5.1 |
| | | IUD | 13 | 1.2 |
| | | Condom | 217 | 19.3 |
| | | Female condom | 94 | 8.4 |
| | | Foam/jelly | 44 | 3.9 |
| | | Withdrawal | 108 | 9.6 |
| | | Abstinence | 114 | 10.2 |
| | | Traditional | 51 | 4.5 |
| 6 | Why did you stop contraception? | Became pregnant while using | 445 | 39.7 |
| | | Wanted a child | 277 | 24.7 |
| | | Side effects/health concerns | 215 | 19.2 |
| | | Partner disapproved | 87 | 7.8 |
| | | Family disapproved | 71 | 6.3 |
| | | Hard to get | 9 | .8 |
| | | Cannot afford it | 18 | 1.6 |

| | | | | |
|---|---|---|---|---|
| 7 | How often do you talk with your spouse about contraception? | Never<br>Once<br>A few times<br>Many times | 191<br>256<br>335<br>340 | 17.0<br>22.8<br>29.9<br>30.3 |
| 8 | Who only makes the decision about contraception in your family? | Respondent<br>Partner<br>Joint decision<br>I don't use family planning | 342<br>143<br>501<br>136 | 30.5<br>12.7<br>44.7<br>12.1 |
| 9 | I make decisions as regards my family size. | Yes<br>No | 365<br>757 | 32.5<br>67.5 |
| 10 | I make use of contraceptives to prevent unwanted pregnancies. | Yes<br>No | 818<br>304 | 72.9<br>27.1 |
| 11 | I make decisions as regards the number of children we want in my family. | Yes<br>No | 329<br>793 | 29.3<br>70.7 |
| 12 | I make use of contraceptives to enable me space my children. | Yes<br>No | 703<br>371 | 62.7<br>33.1 |
| 13 | My reproductive health behaviour is good | Yes<br>No | 841<br>281 | 75.0<br>25.0 |

*Source: Fieldwork (2013)*

This study was also interested in ascertaining the perception of female workers of reproductive age in the study population on reproductive health behaviour.When the respondents were asked if they had used family planning, an overwhelming majority (71.1%) of indicated yes and a significant proportion 66.1% of them since their last baby had used a family planning method. The most currently used methods by the respondents to avoid unwanted pregnancy were oral contraceptive, condom, injectable, withdrawal, abstinence, implant, foam/jelly, female condom, traditional and IUD, indicated by 22.5%, 21.4%, 16.0%,

11.3%, 7.3%, 6.7%, 6.5%, 4.0% , 3.7% and 0.5% respondents, respectively. It could be seen that contraceptives, which is the oral pills are the most widely used method by the respondents. It is could be the cheapest, easiest to use, and perhaps most advertised form of contraceptives for women generally.

In this study, about 445 (39.7%) of the sampled respondents indicated that they stopped contraception because they became pregnant while using, 277(24.7%) because they wanted a child, 215(19.2%) because of side effects/health concerns, 87(7.8%) because partners disapproved, 71(6.3%) because family disapproved, 9(0.8%) because it was hard to get and 18(1.6%) because they could not afford it. The respondents were asked how often they talked with their spouses on contraceptives. A total of 340 (30.3%) indicated many times, 335(29.9%) indicated a few times; 256(22.8%) indicated once a while; 191(17.0%) said they had never.

Regarding who make the decision about contraception in their family, 143(12.7%) indicated their partner, 342(30.5%) indicated themselves, 501(44.7%) indicated joint decision, while 136(12.1%) indicated that they do not use family planning. Only 30.5 % respondents said they made decision on family size by themselves. This could be because their husbands did not approve the use; this result prompted them to use contraceptives to prevent unwanted pregnancies. Only 72.9% of the respondents said they made use of contraceptives to prevent unwanted pregnancies; 27.1 % said they did not while 62.7% said that they used contraceptives to enable them space their children. A total of 75.0% of the female workers exhibited good reproductive health behaviour. The foregoing analysis was corroborated by some researchers.Acquiring knowledge about fertility control is an important step towards gaining access to and then using a suitable contraceptive method in a timely and effective manner (NDHS, 2003). Women's understanding of good reproductive health include three major themes, which are expressed differently in the three communities (Kaddour, Hafez & Zuray, 2005).Their understanding included good physical and mental health. They underscore the need for activities promoting health. Their ability to reproduce and raise children, practise family planning and birth spacing, and go through pregnancy and motherhood safely are central to women’s reproductive duties and their social status. They view reproductive health within the context of economic status, good marital relations and

strength to cope with life. Their findings point to the need to situate interventions in the life course of women, their health and that of their husbands and families; the importance of reproduction not only from a health services point of view, but also as regards women's roles and responsibilities within marriage and their families; and taking account of the harsh socioeconomic conditions in their communities.

The views of the IDI participants corroborated these claims. A female non-academic worker aged 42 years stated that:

> *I think reproductive health behaviour is everything concerning a woman starting from when one becomes a woman knowing what to do during menstruation. As one gets it reflects on how to go about pregnancy, number of children one wants in the family. I have not reached menopause yet but I still use contraceptives to prevent unwanted pregnancies.*

Women still have different perceptions of what reproductive health behaviour is, as a female worker pointed out:

> *From my experience, my reproductive health behaviour refers to what to do when one becomes pregnant, understanding related complications during pregnancy what to do and not to do, when to avoid unintended pregnancy and how to go about it.*

Another respondent said:

> *My experiences during my child bearing years have really changed my perception of what reproductive health behaviour is all about, To me it means the process of how a woman becomes a mother by considering the number of children she would like to have either making the decisions by herself or jointly with her husband. My husband didn't specify the number of children he wanted. He said whatever God gives. With childbearing, I found it really easy now I have adopted the best family planning method suitable for my age .*

A female academic staff from a university stated that:

> *Reproductive health behaviour for any woman, particularly the ones includes her ability to space, delay or limit children, as well as her experience with infertility, child loss or planned or unplanned childlessness.*

Another female academic staff from a polytechnic asserted that:

> *I got pregnant while breastfeeding my fist child due to my inexperience on reproductive health. Immediately I sought the help of doctor for child spacing as I did not find it easy at all taking care of the two children when their age difference was not much. I would say reproductive health behaviour is concerned with knowledge and adoption of contraceptives which I have adopted and it has helped with the birth of my third and last baby.*

Also a female academic staff from a college of education stated that:

> *My own reproductive health behaviour simply means spacing between births and between pregnancies through the use of contraceptives by deciding on the number of children one wants as a family. I frequently talk/discuss with my husband on modern contraceptives.*

All women in the FGD expressed well understanding on reproductive health behaviour, noting that contraceptives are very beneficial for women and child health.

All of them agreed that:

> *Contraceptives are good. It allows couples to adequately raise their children and fully enjoy sex with each other*

Staff of tertiary institutions work and live in urban areas. This could have exposed them to the use of contraceptives. Altogether 71.1% of them were users of contraceptives. This agrees with other studies which noted that the use of family planning is more practiced in urban areas (Bongaarts&Johansson,2000;Adamu,Hamisu&Nalini,2003:Ujah,Aisien,Mutihir,Vanderjagt, Glew & Uguru,2004).

**Research Question 3**

What is the knowledge level of reproductive health information among female workers in tertiary institutions in southwestern Nigeria?

**Knowledge level of reproductive health information**

To ascertain their knowledge level which is anchored to research question 3 of the study, a bar chart was used

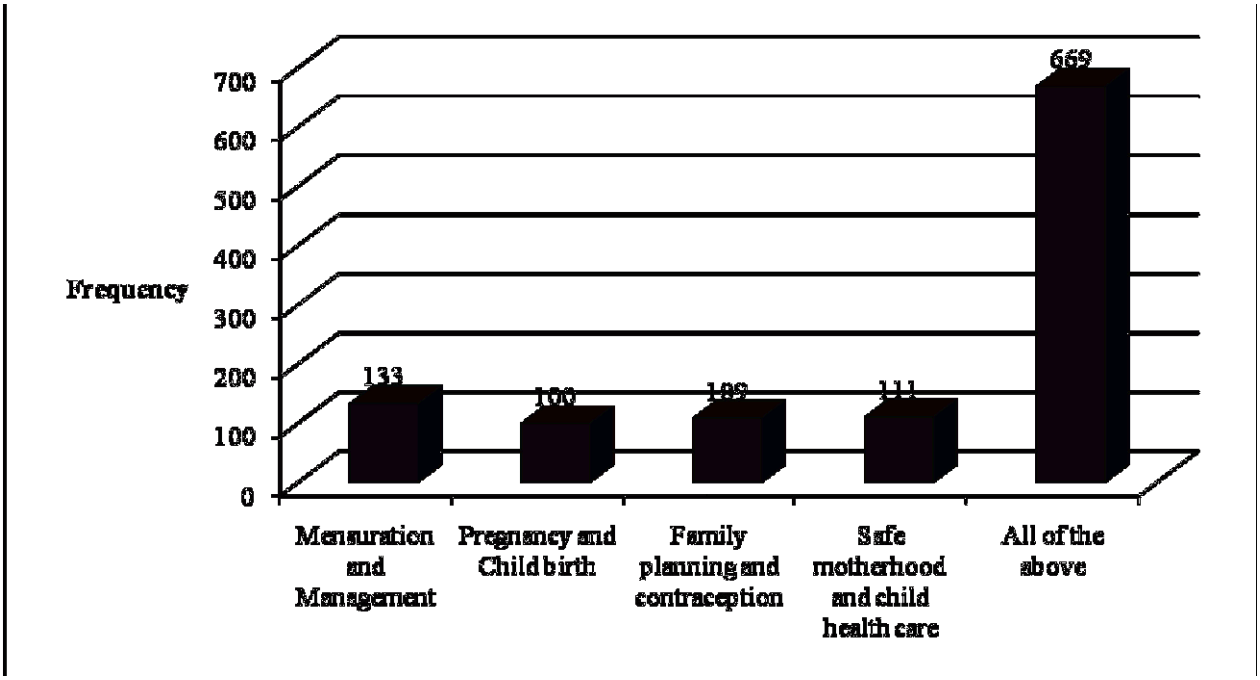



**Fig 4.6 Bar chart showing the knowledge level of reproductive health information**

*Source: Fieldwork( 2013)*

Figure 4.6 above shows the knowledge level of reproductive health information and its sources among the respondents. The graph its shows that 11.9% of the respondents agreed with the statement that reproductive health information is information on menstruation and its management; 8.9 % agreed with the statement that reproductive health information is information on pregnancy and child birth; 9.7 % believed it to be information on family planning / contraception and appropriate choice; 9.9% viewed it as safe motherhood and child health care. A large portion (59.6%) agreed that its information on menstruation and its management, pregnancy and child birth ,family planning / contraception and appropriate choice and safe motherhood and child health care.

The findings were generally in agreement with Myer ,Morroni, and Rebe (2007), who found that knowledge of contraception was higher among women of high socio-economic status. This shows that female workers' socio-economic background could have assisted them in having sufficient knowledge on what reproductive health information means

.Though, knowledge of reproductive health information could be seen as the first stage to achieving good reproductive health behaviour. This finding is in consonance with Langer Farnot, Garaa, Barros, Victoria, Belizen and Villar (1996), and Bello, Hassen, Shehu and Andu (1997), who reported that their respondents exhibited high knowledge of components of safe motherhood initiative. This finding is further corroborated by Awosika (2001), who reported adequate practice of prenatal care among among women. The result implies that female workers of childbearing age exhibited sufficient knowledge on meaning of reproductive health information.

Some respondents also indicated their knowledge level of reproductive health information. One of them averred that :

> *I came to know about menstruation at the age of 12 when I entered into reproductive cycle, I gained the knowledge mostly from my mother and even my friends as at that time, mass media have not provided much knowledge. My mother taught me what to do that is the don'ts and dos during menstruation , now I'm educating my daughter on it as I have gained more knowledge through different sources* (Non-academic worker)

Another respondent said:

> *Reproductive health information covers awareness about different methods of family planning, benefits as well as the adverse effects associated with it , interestingly it's not only on that. It is also on knowledge of danger signs during pregnancy, delivery, postpartum period and in newborns. I can categorically say that it's knowledge on the reproductive life of women generally till even menopause* (Non-academic worker)

> *Reproductive health information concerns all aspect of reproductive system of a woman, starting from when she becomes a woman, the signs and dangers associated to high–risk pregnancy, childbirth as well as morbidities related to childbirth (*Academic worker)

> *Information on contraception is made available. They are of different types, ranging from natural family planning methods (LAM and cycle beads), barrier methods (condoms), hormonal methods (oral contraceptives),implantable devices (IUDs), injection, implants, surgical and non–surgical, when a woman visits the clinic for child spacing it is made available. The mass media just simply encourage women to go for child spacing but it does not specify which of these methods are readily available (*Academic staff)

A female worker in the FGD summed up her view thus :

> *Older women who had completed the number of children they desired to have may have adequate knowledge of reproductive health which could be a driving force for their adoption of contraceptives*

The FGD stressed that knowledge on reproductive health particularly on contraceptives use at times guarantee the level of practise of its usage particularly among the educated women

Regarding the source of their knowledge, the female workers said the gained knowledge of reproductive health information mostly from the mass media (26.5% ), peers (18.7%) , doctors ( 17.8% ),nurses (13.4% ) and the literature (5.9% )) .Other sources, like health workers in health centres in institutions, spouse, relatives, brochures on reproductive health made a minimal contribution. The findings agree with Tuladhar and Marahatta (2008) ,who found that the main source of knowledge of contraceptives was mass media as reported by more than half (55.5%) of the respondents in their study. Some other studies also have viewed the print and electronic media to be the common source of public awareness on reproductive behaviour as indicated by 57.7% of the respondents (Takkar, Goel ,Saha & Dua,2005) and 50.0% of the respondents ( Renjhen , Gupta & Barua , 2008) .

Sources of knowledge on reproductive health behaviour was mentioned by some IDI participants by providing valuable information on this :

> *My source of information is through mass media particularly radio followed by health specialist also I buy books and read a lot on pregnancy : antenatal care, medical problems in pregnancy and forced labour* (Academic staff)

A participant added this*:*

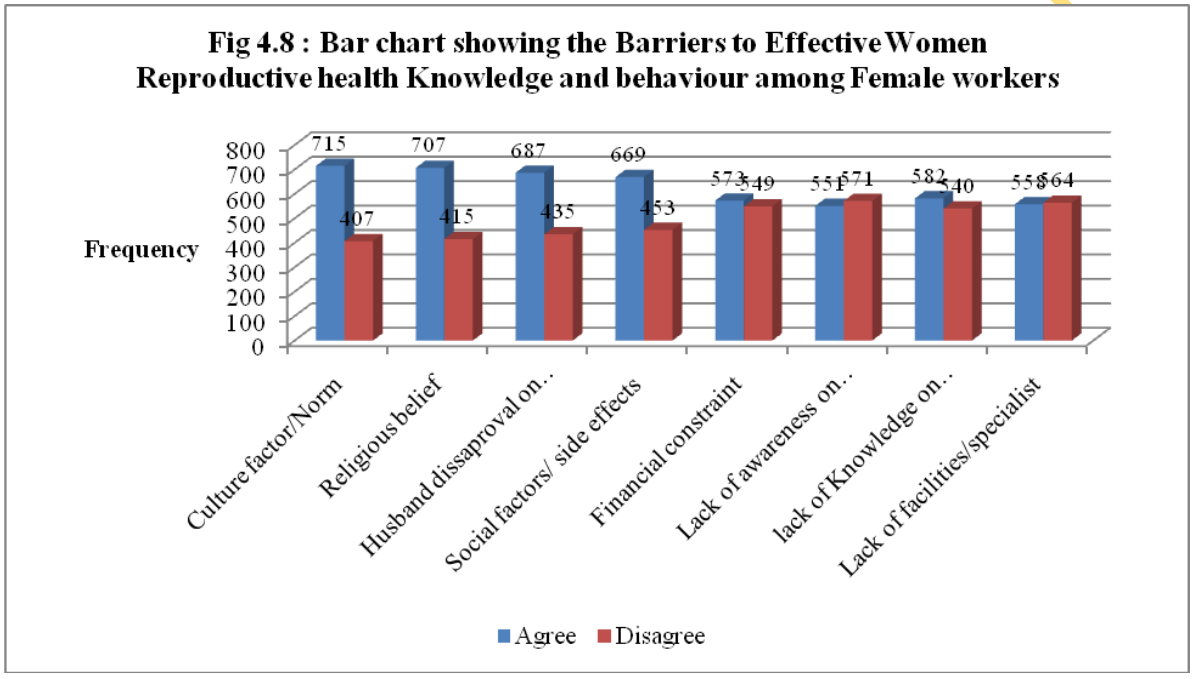
> *I would say my source of reproductive health information is through the health specialist particularly doctors because I consult well with doctors on my health and seek advice from them though I listen to radio jingles on reproductive health education for both couples on the importance of family planning (* Non-academic worker)

**Research Question 4**

What are the barriers to effective women reproductive health knowledge and behaviour among female workers in tertiary institutions?

**Barriers to Effective Women Reproductive Health Knowledge and Behaviour**

To know the barriers to effective women reproductive health knowledge and behaviour, a bar chart was used to ascertain the major barriers




**4.7 Bar Chart showing Barriers to Effective Women Reproductive Health Knowledge and Behaviour among Female Workers**

*Source: Fieldwork (2013)*

The respondents' view are captured in the Fig 4.7. The chart shows that cultural factor/norms (mean=2.76) ranked highest by the mean score rating, was followed by religious beliefs (mean=2.71), husband's disapproval (mean=2.67), social factor/side effects of using contraceptives (mean=2.57), financial constraint (mean=2.45), lack of awareness on reproductive health (mean=2.37), lack of knowledge on reproductive health right (mean=2.35) and lack of facilities/specialists on reproductive health in the institutions (mean=2.33).

This finding is in line with Schuler, Rottach and Mukiri (2011) who note that gender factors, such as men's dominance in decision-making and cultural norms that condone a man beating his wife if she uses contraceptives secretly are barriers to the use of modern contraceptives. A study in Yemen identified religious beliefs as a reason for non- use of modem contraceptive method (Ba-Hubaish, 1999). Women's perception that their husbands oppose family planning has also been found to be a dominant factor discouraging contraceptive practice in a wide variety of settings (Casterline & Sinding, 2000; Shah, Shah, Al-Rahmani, Behbehani, Radovanovic & Menon, 2001 & 2004). Husband disapproval of modern contraceptives as a barrier to modern contraceptive use by women has been reported elsewhere in Africa as well as in Asian countries (Dabral & Malik, 2004; Tuloro, Wakgari, Ahmed & Gail,2006; Nwankwo & Ogueri, 2006; Aryeetey, Kotoh & Hindin, 2010; Burke & Ambasa- Shisanya, 2011; Mathe ,Kasonia & Maliro, 2011).A study conducted in Nigeria by Igwegbe, Ugboaja and Monago, (2009) Husband's disapproval (36.8%), fear of side effects (28.9%) and religious beliefs (14.8%) were the main constraints to the use of contraceptives.Onwuzurike and Ugochukwu (2001) found that 91% of non-use of family planning methods among women in a community in Enugu State of Nigeria was as a result of their husbands being against it.

Studies have indicated experiencing of side effects are among the major factors for non use of modern contraceptive, drop-out and shifting from one method to another among women (Marchant,Mushi, Nathan, Mukasa, Abdulla, Lengeler & Schellenerg, 2004; Khan, Bradley,Fishel & Mishra,2008; Igwegbe, Ugboaja & Monago, 2009). The result of the this study is aligned with the results of some international studies like that of Singh, Elena, Florence and Carles (2005) who explored the important barriers that prevent women from practising reproductive health method. The important constraints were fear of side effects, cost, inconvenience and the fear that use or even discussions of reproductive health may cause unfaithfulness or lack of commitment to marriage. Lack of knowledge of modern contraceptive methods and their mechanism of action have been cited as major reasons for the women's non- use of contraception (Khan, Humayun, Saba, Anwar, Ahmad, Babar & Gul, 2007; Sajid & Malik, 2010; Wu, 2010). In poor countries, young people's economic

constraints affect their ability to buy contraceptives or seek sexual and reproductive services (Chapagain, 2006; Sundby, 2006).

One IDI participants had the following to say:

> *There are many barriers to women reproductive health behaviour .One of such is that husbands sometimes act as barrier to women's or wives' use of modern contraceptives, at times they may want their wives to give birth all the time and to have many children (* Non academic staff).

Males are at least partly responsible for ineffective women reproductive health knowledge and behaviour, as seen below:

> *Women do not typically have power over their husbands to freely decide on reproductive health behaviour, sometimes husbands oppose their wives use of contraceptive because they think their wives do not want to give birth having the notion that she has an intention to go for another man if the wife does not agree it may lead to marital crisis. (*Non-academic staff)

An IDI participant argued that:

> *Women may not want to use contraceptive because of the pain they experience by the side effect of it. I fear the side effects of the use of methods of family planning as a friend of mine experienced irregularities in her menstrual cycles and sometimes excessive bleeding. Some women even say it may cause infertility and one may find it difficult to get pregnant easily again. This discouraged me. I use the withdraw method and sometimes calculate my safe periods because I'm still young .I've just had two children and I want to have another baby* (Academic staff).

Another IDI participant added;

> *Most women would like the modern family planning methods as they are good but there are still some hindrances which may affect their use (*Academic staff)

The findings of this study corroborate those studies carried out in India indicating that reproductive health behaviours of women are greatly influenced by social and cultural barriers (Sankaranarayanan , Rajkumar , Arrossi , Theresa , Esmy & Mahe, 2003; McCaffery, Forrest, Waller, Desai, Szarewski & Wardle, 2003; Basu, Sarkar, Mukherjee, Ghoshal, Mittal & Biswas, 2006). The finding is in consonance with a study carried out in 6 African countries- Kenya, Malawi, Tanzania, Burkina Faso, Ghana, and Ivory Coast by Rob,

Angela, Steve, Monique and Nyovani( 2007) that aspects of a community's socio-cultural and economic environment appear to influence a woman's use of modern contraceptive methods. This could be that culture is permeated with norms and values that place high value on childbearing and higher number of births for women in the society as well as traditional views placing importance on male preferences in family, particularly in Nigeria, religious doctrines also have values that discriminate and do not encourage open discussion of sexual health and reproductive health of women. The disapproval by husband is not also encouraging women to exercise their reproductive health rights; World Health Organization (2001) says that;

> *Reproductive rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. They also include the right of all to make decisions concerning reproduction free of discrimination, coercion and violence.*

Cultural beliefs about reproductive health were expressed by the IDI participants as a barrier to effective women reproductive health knowledge and behaviour.One of them noted that:

> *Community or culture may at times negatively reject a woman for failing to produce as many children as expected .In the traditional society the grandparents want their son's wife to give birth to many children as possible and this may discourage woman using contraceptives* (Non-academic staff).

Another participant argued that:

> *Cultural taboos do not encourage open discussion on reproductive health. In some cultures particularly the rural areas and among some traditions, women are not allowed to take contraceptives by their husband's or husband's family because such women are believed to be promiscuous or wanting to start having extra-marital affairs* ( Academic staff).

The IDI support the submission of Speizer, Lisa and Marion (2005) that husbands have fear that if they approved of reproductive health methods and allowed their wife to use it, they will lose their role as head of the family, their wife might be unfaithful.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATION

## 5.1 Summary

This study was carried out among female workers in tertiary institutions in southwestern Nigeria with a view to understanding the determinants predicting their reproductive health behaviour. Most often these people are often seen as role models in the society, yet research has not proven which of these determinants should be given topmost priority as regards their reproductive health behaviour. This study provided better insights to proper understanding of these determinants on their reproductive health behaviour. The study comprised five chapters , each chapter focusing on different subheadings .The first chapter started with background to the study, the gap the study wants to fill which is the statement of the problem, objectives of the study, research questions, significance of significance, scope of the study and operational definitions of terms.

The second chapter of the study focused on literature review and theoretical framework. The review focused on the various determinants of reproductive health behaviour, which assisted the researcher to fully understand the various concepts that were utilized in the study. It also provided a detailed overview of these theories; economic theory of reproductive behaviour/ new household economic theory and Health belief model. They form the theoretical basis for the study. A theoretical framework was also developed for understanding the potential influence of some factors on female workers decision making on their reproductive health behaviour. The eight research hypotheses raised in the study ended this chapter.

Chapter three of the study dealt with research methodology. It included research design, the study population, sample and sampling techniques, research instruments (quantitative and qualitative), validity and reliability of the instruments, procedure for data collection as well as method of data analysis.

The fourth chapter of the study provided the result of the findings and discussions on them. The data collected through the questionnaire were analyzed and presented in tables through the use of simple percentages and frequency counts for the respondents biodata. Pearson Product Moment Correlation Coefficient, ANOVA, multiple regression analysis

(MRT), and T-test were used for the research questions and hypotheses. The study established the following major findings

- The seven predisposing factors, viz, mass media exposure, gender roles, age at marriage, socio-economic status, peer influence, cultural norms/religious belief and educational attainment, were all significant. Mass- media exposure(β= -.122, P <.05),gender role(β = .404, P <.05),age at marriage(β = .320, P <.05), socio-economic status(β = -.091, P <.05), peer influence(β = -.161, P <.05), cultural norms/Religious Belief(β= -.094,P <.05) and educational attainment (β= .191,P<.05) contributed to the reproductive health behaviour of female workers in the tertiary institutions in southwestern Nigeria, with gender roles having the highest value.
- There was significant relationship between reproductive health behaviour and age at marriage among the female workers in the tertiary institutions in southwestern, Nigeria (r = .740**, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and socio-economic status among the female workers in the tertiary institutions in southwestern Nigeria (r = -.739*, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and educational attainment among the female workers in the tertiary institutions in southwestern Nigeria (r = .426*, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and cultural norms/ religious beliefs among the female workers in the tertiary institutions in southwestern Nigeria (r = .092*, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and mass media among the female workers in the tertiary institutions in southwestern Nigeria (r = .085*, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and gender role among the female workers in the tertiary institutions in southwestern Nigeria (r = .738*, N= 1122, P < .05).
- There was significant relationship between reproductive health behaviour and peer influence among the female workers in the tertiary institutions in southwestern

Nigeria (r = -.541*, N= 1122, P < .05).

- There was no significant difference in the reproductive health behaviour of the non-academic and academic members of staff of the tertiary institutions in southwestern, Nigeria (Crit-t = 1.96, Cal.t = 1.079, df = 1120, P > .05 level of significance).
- The barriers to effective women reproductive health knowledge and behaviour among the female workers in the tertiary institutions were cultural factor/norms(mean=2.76) which ranked highest by the mean score rating and was followed by religious beliefs (mean=2.71),husband's disapproval (mean=2.67),social factor/side effects of using contraceptives (mean=2.57), financial constraint (mean=2.45),lack of awareness on reproductive health (mean=2.37),lack of knowledge on reproductive health right (mean=2.35) and lack of facilities /specialists on reproductive health in the institutions (mean=2.33).

Finally, the fifth chapter of the study provides the summary, conclusion, recommendations. It also addressed the limitations and suggestions for further research.

**5.2 Conclusion**

The results from the questionnaire, IDI and FGD provided rich insights and in-depth data in both quantitative and qualitative forms on the determinants that should be considered towards reproductive health behaviour of female workers.The study showed that:

i) mass-media exposure through the radio and television positively determined the reproductive health behaviour of female workers in tertiary institutions in southwestern ,Nigeria

ii) socio-economic status notably income level, was an important determinant of reproductive health behaviour of female workers

iii) educational attainment was of relative importance when considering reproductive health behaviour of female workers

iv) peer influence was considered as a determinant of reproductive health behaviour of female workers

v) age at marriage was a significant determinant in achieving good and positive reproductive health behaviour of female workers .

vi) The role of gender, that is men's involvement on reproductive health behaviour of female workers, was most significant. This means that men's role in the reproductive health behaviour of female workers should be taken seriously because men's views and actions have a lot of implications for the survival of women and their children.

vii) Cultural norms/religious beliefs determined and were related to the reproductive health behaviour of the female workers

viii) The reproductive health behaviour of the two categories of female workers was not different in terms of decision making as regards their family size, number of children, timing and spacing of children and the use of pattern of contraceptives to prevent unwanted/unplanned pregnancies and safe sex relations

ix) The barriers to effective women reproductive health knowledge and behaviour among female workers in tertiary institutions were many, although only three of them had the highest scores. These were cultural factor/norms, religious beliefs and husband's disapproval.

**5.3 Recommendations**

It was understood from this present study that there was some evidence regarding the impact of the determinants on reproductive health behaviour of female workers.

- However, to ensure improved reproductive health behaviour among female workers in tertiary institutions, there is the need to strengthen the use of the mass media, complemented with women's networking groups and religious institutions aimed at promoting better reproductive health behaviour.
- In addition, government should encourage and motivate women having two or more children to adopt family planning through mass media messages.
- Government as well as NGOs and international organizations should take many policies and programmes to improve reproductive health issues.
- It is necessary to encourage inter-spousal communication, particularly initiatives by women. Women must be exposed to their rights (especially women's rights in every sphere of life) with the help of print and electronic media, special lectures, especially in educational institutions at all levels.

- Women's participation in decision making process should also be encouraged For this purpose, government must create awareness on the importance of participation of family members particularly the women in decision- making processes through the media and special lectures in educational institutions at all levels.
- Gender mainstreaming should form a core component of tertiary institution's management. The health systems in the institutions should develop a rights- based rather than a need based approach to reproductive health.
- Information and education messages regarding reproductive health needs of women should reach the husbands, and the families, as they are the main decision makers.
- As educated women fare better in their reproductive health, there is the need to advocate compulsory education for girls. Making education free and compulsory to the girls will enable the future generation to get education and support at homes, and will enable them to demand quality reproductive health care, and to exercise their reproductive rights.

**5.4 Contributions to Knowledge**

The major purpose of any research is to contribute to as well as improve existing knowledge. This study has contributed to knowledge in different ways. Although previous studies have established that these determinants predict reproductive health behaviour, the findings of this study have also shown that all these variables determined reproductive health behaviour, with varying degrees of impact.

The findings support the empirical evidence on record that gender role play a more decisive role in determining the reproductive health behaviour of female workers. This shows that gender role is an important variable in determining reproductive health behaviour, of the female academic and non academic staff in the tertiary institutions. Regardless of female workers occupational status, religious belief, educational background and working environment the culture of patriarchy and egalitarianism actually exhausts the difference in attitude that exists in family system thus influencing women inability to make decisions, therefore the root cause should be addressed so as to pave way for women ability to make decision concerning their health related to the patriarchy.

- Age at marriage and educational attainment are the strongest determinants capable of determining the reproductive health behaviour of female workers in tertiary institutions.
- This study has specifically underscored the importance of peer influence and mass media expose as determinants in achieving good and positive reproductive health behaviour
- Culture/religious belief and socio-economic status also contribute towards reproductive health behaviour of female workers in tertiary institutions.
- The reproductive health behaviour of the two categories of female workers is the same irrespective of their positions and cadres.

Finally, the study has produced a new and relevant model, considered important in reproductive health behaviour of female workers in tertiary institutions' in Nigeria.

**5.5 Limitations to the study**

In this study, there were some limitations. Some respondents hesitated to discuss the issues of reproductive health behaviour owing to shyness, particularly before conducting the in-depth interview despite the fact that the researcher was also female. Some of them did not understand the importance of conducting a study particularly for women; they wondered whether government wanted to implement the kind of policy adopted by the Chinese government one child per family. Hence, some showed a deprecating attitude towards filling some parts on the questionnaire by skipping out some questions, particularly on number of children.

**5.6 Suggestions for further studies**

From the results of this study, it is evident that related further researches are necessary. Some areas are suggested below:

i. As the current research is restricted only to female workers in tertiary institutions, future studies could focus on determinants of health behaviour among secondary schools teachers in southwestern Nigeria.
ii. Future research could consider including other determinants of reproductive health

behaviour among physically challenged women in southwestern Nigeria.

iii. A longitudinal study can also be carried out on the determinants of reproductive health behaviour among pregnant women in southwestern Nigeria.

iv. A study of factors influencing reproductive health behaviour among HIV/AIDS women in southwestern Nigeria is also a viable area.

v. Socio-cultural factors influencing the reproductive health behaviour of refugees' women in southwestern Nigeria can also be explored.

vi. The determinants of health behaviour among women in Nigerian armed forces in southwestern Nigeria could also be investigated.

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**APPENDIX I**

**DEPARTMENT OF ADULT EDUCATION**

**FACULTY OF EDUCATION**

**UNIVERSITY OF IBADAN**

**DETERMINANTS OF REPRODUCTIVE HEALTH BEHAVIOUR AMONG FEMALE WORKERS SCALE**

**Dear Respondents,**

This questionnaire sets out to investigate the determinants of reproductive health behaviour among female workers in tertiary institutions in southwestern, Nigeria. This is a purely research work designed to collect data for policy implications as regards women reproductive behaviour. Please kindly fill it. Candid response and information supplied with be treated with confidentiality.

Thank you for filling the questionnaire.

**Omokhabi Abiola Adiat**

**SECTION A: BIO DATA OF THE RESPONDENTS**

**Instruction please read carefully and tick (√ ) where applicable**

1) Age at present

a) 19-25 ( )

b) 26-31 ( )

c) 32-37 ( )

d) 38-43 ( )

e) 44-49 ( )

2 Religion

a) Islam ( )

b) Christianity ( )

c) Traditional African Belief ( )

d) Others…… (Specify)

3 Income per month

a) Below 50,000 ( )

b) 50,000-99,999 ( )

c) 100,000-149,999 ( )

d) 150,000-199,999 ( )

e) 200,00 and above ( )

4 ) Highest Educational Qualification……

5 ) Rank…….

6 Academic ( ) Non- academic ( )

7 Age at marriage……..

8)Type of marriage a) early marriage ( ) late marriage ( )

9) Duration of marriage

a) 1-5 years ( )

b) 6-10 Years ( )

c) 11 years and above ( )

10 Name of Institution……

11) Age at first birth……

12) Number of children ever born…….

13) Current Residence----------

14 )Reproductive health information means knowledge on

a) Menstruation and its management ( )

b) Pregnancy and child birth ( )

c) Family planning and contraception and appropriate choice ( )

d) Safe motherhood and child health care ( )

e) All of the above ( )

What are your sources of reproductive health information?

a) My peers ( )

b) Health workers in Health centres in institutions ( )

c) Received brochures on reproductive health at visit to health facility at institution ( )

d) Doctors talked about reproductive health ( )

e) Nurses talked about reproductive health ( )

f) Frequent discussing on reproductive health with spouse ( )

g) Internet ( )

h) Radio ( )

i) Television ( )

j) Relatives ( )

k) Literatures ( )

l) Attended talk on reproductive health at last visit to health facility ( )

15) How is your health in general?

a) Very good ( )

b) Just normal ( )

c) Poor ( )

d) Very poor ( )

**a) Section B**

Please use the following keys to tick ( X ) your response to the following questions

**Key**

SA Strongly Agree

A Agree

D Disagree

SD Strongly disagree

| **REPRODUCTIVE HEALTH BEHAVIOUR SCALE** |
|---|
| 1) Have you ever used a family planning method? Yes……1<br>No……2 |
| 2) Since last baby, have you used a family planning method ? Yes……1<br>No……..2 |
| 3)Which method are you using currently to avoid unwanted pregnancy? Choose one<br>Oral contraceptive pill……..1<br>Injectable……..2<br>Implant……..3<br>IUD……4<br>Condom……5<br>Female condom……6<br>Foam/ jelly……7<br>Withdrawal……8<br>Abstinence……..9 |

| |
|---|
| Traditional……..10 |
| 4) Which method are you using currently since your last child? Choose one<br>Oral contraceptive pill……..1<br>Injectable……..2<br>Implant……..3<br>IUD……4<br>Condom…….5<br>Female condom…….6<br>Foam/ jelly…….7<br>Withdrawal…….8<br>Abstinence……..9<br>Traditional……..10 |
| 5) Which method are you using currently after your recent baby? Choose one<br>Oral contraceptive pill……..1<br>Injectable……..2<br>Implant……..3<br>IUD……4<br>Condom…….5<br>Female condom…….6<br>Foam/ jelly…….7<br>Withdrawal…….8<br>Abstinence……..9<br>Traditional……..10 |
| 6) Why did you stop using contraception?<br>a: Became pregnant while using……..<br>b: Wanted a child…….<br>c: Side effects/health concerns……<br>d: Partner disapproved……<br>e: Family disapproved…….....<br>f: Hard to get…….....<br>g: Cannot afford it……. |
| 7) How often do have you talked with your spouse about contraception?<br>Never……..1<br>Once……...2<br>A few times……3<br>Many times……4 |
| 8) Who only makes the decisions about contraception in your family?<br>Respondent……1<br>Partner……2<br>Joint decision……..3<br>I don't use family planning……4 |
| 9) I make decisions as regards my family size?<br>Yes……..1 |

| |
|---|
| No……2 |
| 10) I make use of contraceptives to prevent unwanted pregnancies<br>Yes……..1<br>No……2 |
| 11) I make decisions as regards the number of children we want in my family?<br>Yes……..1<br>No……2 |
| 12) Is it acceptable for a couple to use a condom?<br>Acceptable……1<br>Unacceptable……2 |
| 13 ) I make decision as regards my family size?<br>Yes……1<br>No……2 |
| 14) I make use of contraceptives to enable me space my children ?<br>Yes……1<br>No ……2 |
| 15) During breastfeeding of my baby I use contraceptives to avoid getting pregnant immediately?<br>Yes……1<br>No……..2 |
| 16) Family planning methods allows me to safe sexual relations with my spouse<br>Yes……1<br>No……..2 |
| 17) I make use of contraceptives to enable me time the conception of my children<br>Yes……1<br>No……..2 |
| 18) My reproductive health behaviour is good<br>Yes……1<br>No……..2 |

**REPRODUCTIVE HEALTH BEHAVIOUR DETERMINANTS SCALE**
**SECTION C AGE AT MARRIAGE SCALE**

| **Statements** | **SA** | **A** | **D** | **SD** |
|---|---|---|---|---|
| 19) Age at marriage influence my reproductive health behaviour on timing of my children | | | | |
| 20) My age at marriage has made me to space my children for good healthy living | | | | |
| 21) My age at marriage has made me to determine my family size | | | | |
| 22) My age at marriage has made me determine the number of children I have or will have | | | | |
| 23) My age at marriage has influenced my use of pattern of contraceptives | | | | |
| 24) My age at marriage aids me in practising safe sex relations | | | | |

**SECTION D SOCIO- ECONOMIC STATUS SCALE**

| **Statements** | **SA** | **A** | **D** | **SD** |
|---|---|---|---|---|
| 25) Women with higher income level are able to practice good and safe sexual reproductive health. | | | | |

| | | | | |
|---|---|---|---|---|
| 26) My level of income has strong influence on my ability to afford current family planning methods. | | | | |
| 27) Women socio-economic status affords them the opportunity to engage in family planning methods for preventing unwanted pregnancies. | | | | |
| 28) My income determines my reproductive behaviour, particularly on timing and spacing of children. | | | | |
| 29) My socio-economic status influence my practicing safe sex relation | | | | |
| 30)My income affords me the opportunity of having access to correct information on reproductive health. | | | | |
| 31)My income affords me the opportunity of having access to correct information on reproductive rights. | | | | |
| 32) Older women are the most users of family planning methods. | | | | |
| 33)Young women do frequent make use of family planning methods to prevent HIV/AIDS infection. | | | | |
| 34) My family income has made me plan for the number of children I want. | | | | |
| 35) My living arrangement determines my family size. | | | | |
| **SECTION E EDUCATIONAL ATTAINMENT SCALE** | | | | |
| 36) Educated women are more likely to be rich and can afford family planning methods of their choice for child spacing. | | | | |
| 37) My educational attainment exposes me to new ideas on timing of my children. | | | | |
| 38)Educated women are more likely to afford modern contraceptives | | | | |
| 39) My educational attainment makes me reject the fatalistic attitude of large family size | | | | |
| 40)Being educated determines the number of children I want | | | | |
| 41) Educated women in my place of work expose me to knowledge of preventing unintended pregnancy | | | | |
| 42 ) As a member of privilege society, I have few children. | | | | |
| **SECTION F CULTURAL NORMS/ RELIGIOUS BELIEFS SCALE** | | | | |
| **Statements** | **SA** | **A** | **D** | **SD** |
| 43) Culture/religious beliefs do not permit women to determine her reproductive behaviour. | | | | |
| 44) My family size is determined by the norms/ religious belief of the community. | | | | |
| 45) Community does not accept women of childbearing age to terminate pregnancy. | | | | |
| 46) Many women do not seek reproductive health information because culturally speaking it is cultural norms of the society that decides | | | | |
| 47) Family planning and contraceptives use accords with my culture/religious beliefs | | | | |
| 48) My culture forbids the use of family planning methods as it is seen as an abomination | | | | |
| 49) My culture/ religious beliefs determines preference about family size | | | | |
| 50)Culture/ religious beliefs reject contraception because childbearing is path to | | | | |

| | | | | |
|---|---|---|---|---|
| respect and dignity | | | | |
| 51) My native customs and shared beliefs and practices influence how I think which in turn affects my attitude towards sexual relationship with my spouse | | | | |
| 52) Shared beliefs and practice of my cultural group make me to practise childbearing practices laid down by them | | | | |
| 53) The customs and traditions of my people influence the way I think and act on my reproductive behaviour | | | | |
| 54) My culture/ religious beliefs determine the timing and spacing of children. | | | | |
| 55) My culture/ religious beliefs influence the number of children I will have /had. | | | | |
| 56) My culture/ religious beliefs determine how to practise safe sex relationship . | | | | |
| 57) I am aware of my reproductive right through my cultural norms and values . | | | | |
| 58) My religion does not forbids the use of contraceptives for child spacing. | | | | |

| **SECTION G MASS MEDIA EXPOSURE SCALE** | | | | |
|---|---|---|---|---|
| 59)Exposure to mass media Listen/watch/read/browse | **Radio** | **Television** | **newspaper** | **Internet** |
| Every day | | | | |
| Twice in a week | | | | |
| Once in a week | | | | |
| 60) Knowledge of Contraceptive use through mass media Usage | **Radio** | **Television** | **Newspaper** | **Internet** |
| Never used<br>Used traditional<br>Used at least one traditional method<br>Used modern method<br>Used at least one modern method<br>Current use | | | | |
| 61) Media exposure to ovulatory cycle | **SA** | **A** | **D** | **SD** |
| Radio | | | | |
| Television | | | | |
| Newspaper | | | | |
| Internet | | | | |
| Statements | **SA** | **A** | **D** | **SD** |
| 62) Media messages give me reproductive health information on family planning adoption | | | | |
| 63 ) I can handle some health problems through my exposure to mass media | | | | |
| 64) My exposure to the mass media has increased my reproductive health knowledge on safe sex relationship | | | | |
| 65) I experience increase knowledge of the ideal number of children through mass media messages | | | | |
| 66) Mass media messages gives me information on how to space my children | | | | |

| | | | | |
|---|---|---|---|---|
| 67) Family planning methods as described /portrayed through mass media have been effective on my reproductive health | | | | |
| 68) The mass media have helped in adoption of current family planning strategies to prevent unwanted pregnancies | | | | |
| 69) Mass media messages have made me to be aware of how to time the birth of my children | | | | |
| 70) Mass media messages have helped me in regulating my family size | | | | |
| 71) The mass media has increased my knowledge of timing of my children | | | | |

| **SECTION H GENDER -ROLE SCALE** | | | | |
|---|---|---|---|---|
| **Statements** | **SA** | **A** | **D** | **SD** |
| 72)My spouse decides on our family size. | | | | |
| 73) My spouse has knowledge about my last menstrual period. | | | | |
| 74) Decision for using contraceptive methods is by my spouse. | | | | |
| 75) My spouse decides when to use family planning methods. | | | | |
| 76) My spouse decides when to have baby(ies). | | | | |
| 77) My spouse objects to the use of contraception as he believes that the use of contraception is an act of defiance against God. | | | | |
| 78) My spouse decides the number of children we want. | | | | |
| 79) My spouse decides how we practise safe sex relation. | | | | |
| 80) My spouse decides on the timing and spacing of our children. | | | | |

| **SECTION I PEER INFLUENCE SCALE** | | | | |
|---|---|---|---|---|
| **Statements** | **SA** | **A** | **D** | **SD** |
| 81) My peer group encourages my decision choice on contraceptive use. | | | | |
| 82) My colleagues believe that use of condom is the best for prevention of contracting any health infection. | | | | |
| 83) My colleagues motivate me to use preventive measures on child spacing | | | | |
| 84)Interaction with my colleagues has helped in prevention of unwanted pregnancies through their exposure to various type of contraceptive | | | | |
| 85)Interaction with my peers has helped me achieve good safe sex relation | | | | |
| 86) My peers have made me believe that timing and child spacing is good for my health | | | | |
| 87) Interaction with my peers have helped me to determine the number of children to have | | | | |
| 88) I use the same family planning method because my peers are familiar with it and they use it to determine their family size | | | | |
| 89) I use the same family planning method because it is mostly | | | | |

| | | | | |
|---|---|---|---|---|
| used by women of my age group | | | | |
| 90) My peer group or colleagues give me correct information on reproductive health and reproductive health rights. | | | | |
| **SECTION J BARRIERS TO EFFECTIVE REPRODUCTIVE KNOWLEDGE AND BEHAVIOUR SCALE** | | | | |
| **Statements** | **SA** | **A** | **D** | **SD** |
| Cultural factor/norms | | | | |
| Religious belief | | | | |
| Financial constraints on part of women | | | | |
| Social factor/side effects | | | | |
| Lack of awareness on reproductive health | | | | |
| Lack of knowledge on reproductive health right | | | | |
| Husband's disapproval on use of contraceptives | | | | |
| Lack of facilities/ specialists on reproductive health | | | | |

**APPENDIX II**
**UNIVERSITY OF IBADAN, IBADAN**
**DEPARTMENT OF ADULT EDUCATION**

**KEY INFORMAT INTERVIEW GUIDE**

Warm up and explanation
A. Introduction
Welcome participants
Describe what IDI is- a method in which the researcher asks open-ended questions orally and record the respondents answer.

B. Purpose

We will be discussing reproductive health behaviour

I am interested in your comments both positive and negative ones are welcome. Please, feel free to express your view. I will like to have many points of view. All comments are confidential and for research purposes only. I will also want you to speak clearly so that tape recorder can pick your voice appropriately.

C. Self instruction
Ask each participant; tell us your name and something about yourself

**Section I – Institution Identification**
1. Name of Institution……..
2. Position/Rank…… .
3. Present Age……..
4. Religion……
5. Number of Children…….

**Section II: Guiding Questions**
1) How is your reproductive health behaviour?
   Probe for:
   - ❖ good
   - ❖ bad

2) What is your view of reproductive health behaviour?

3) How do you practise your reproductive health behaviour on the use of contraceptives
Probe for:

- ❖ The use of contraceptives available for use

- ❖ The use of traditional contraceptives available for use
- ❖ The use of modern contraceptives available for use

4) Who makes the decision on the reproductive health behaviour particularly on the number of children, spacing, timing and family size?

Probe for:
- ❖ Who makes decision
- ❖ The extent of freedom to talk about reproductive health in the homes by the couple

4) How are women informed and educated about their reproductive health?
   Probe for:
   Source of information

5) What is the demand rate of contraceptives use among women?
   Probe for:
6) Categories of women who obtain contraceptives when needed?

7) How do women get their sources as regards reproductive health behaviour?
   Probe for
   Their sources

8) Which of these variables determines their reproductive health?
   Probe for:
   Order of priority

9 Barriers to reproductive health behaviour and information
   Psychological barriers (fears, anxiety, uncertainty)
   Social/ Cultural barriers
   Religious barriers
   Personal barriers
   Other barriers

Probes:
- ❖ What prevents women from utilizing family planning methods?
- ❖ If she has expressed the benefits of utilizing, but does not use, why not?
- ❖ Are certain methods more accessible to women? What category of women?
- ❖ What fears do you have regarding family planning methods?

Conclusion

Summary of the key points of the discussion

**Thank you**

**APPENDIX III**
**UNIVERSITY OF IBADAN, IBADAN**
**DEPARTMENT OF ADULT EDUCATION**

**FOCUS GROUP DISCUSSION GUIDE FOR FEMALE ACADEMIC AND NON-ACADEMIC STAFF**

Warm up and explanation

A. Introduction

Welcome participants

Describe what the FGD is. It is a group discussion forum that allows you to discuss among yourselves the topic rather than talking to us.

B. Purpose

We will be discussing reproductive health behaviour

I am interested in your comments, both positive and negative one are welcomed; please feel free to disagree with one another. I will like to have many points of view. All comments are confidential and for research purposes only. I will also want you to speak one at a time so that tape recorder can pick your voices appropriately.

C. Self- instruction

Ask each participant; tell us your name and something about yourself

**Section I – Institution Identification**

1. Name of Institution……..
2. Position/Rank…… .
3. Present Age……..
4. Religion……
5. Number of Children…….

**Section II - Guiding Questions**

1) How do you view the influence of educational attainment on your reproductive health behaviour?

……
……
……
……

2) Do you think women have adequate access to reproductive health information? If not, what aspect is lacking

……
……
……
……

3) What are the cultural belief/religious beliefs and practices concerning reproductive health behaviour of women?

……
……
……
……

4) What is your comment on the influence of gender role on reproductive health behaviour of women?

……
……
……
……

What is the influence of the mass media exposure on reproductive health behaviour of women?

……
……
……
……

5) Is there any linkage between socio-economic status (income) and reproductive health behaviour of women?

……
……
……
……

Mention how age at marriage affects reproductive health behaviour of women. What was your age when you got married? What age did you give birth to your first baby?

……
……
……

6) What are the major barriers with respect to reproductive health behaviour and knowledge?

……
……
……

7) Any other recommendation you have for the achieving reproductive health behaviour of women?

……
……
……

Conclusion

Summary of the key points of the discussion

**Thanks for your time**

**APPENDIX IV**

**CHECK LIST**

| NO | | YES |
|---|---|---|
| 1. | Are you over 19 years of age? and within the reproductive age? | |
| 2. | Do you have child/children? | |
| 3. | Are you working in tertiary institution? | |
| 4. | Have you spent two years on your job? | |
| 5. | Are you currently using contraceptives? | |
| 6. | Which of the contraceptives do you use? | |
| 7. | Do you have side effects often while using contraceptives? | |

If a respondent answers NO, she will not be involved in IDI and FGD

If a respondent answers YES, she will be involved in IDI and FGD