



**FACULTY OF SOCIAL SCIENCES**

**DEPARTMENT OF POPULATION STUDIES**

**The Socio-Demographic and Intermediate Factors Influencing Non-Marital  
Childbearing among Women Aged 15-49 years in Uganda**

By

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Sciences (Population Studies)**

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**Declaration**

I **Towongo Moses Festo** hereby declare that this research project is my original work. This piece of work is submitted to the faculty of Social Sciences, University of Botswana in partial fulfillment of degree of Master of Arts in the field of Population Studies. Therefore, this work is not submitted to the examination board of any other University except the undersigned University. Any piece of work borrowed has been fully acknowledged by the author. No piece of this work can be reproduced without the consent of the author or permission from the authority of University of Botswana.

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## **Dedication**

First and foremost, I would like to dedicate this project to almighty God for his mercy upon me.

I would also like to dedicate this project to the following people who inspired me right from childhood to remain committed in school despite hardships that I faced in my academic struggle:

My late beloved paternal grandmother Mikala Dede, who encouraged me by her inspiring words “I wish I could become young again, I want to go back to school”. I wish she could have lived to see her dream come true. Where ever she is I hope she is the happiest person to see me fulfilling her dreams.

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## TABLE OF THE CONTENT

Declaration .....	i
Dedication .....	ii
Acknowledgements .....	iii
List of Table .....	ix
List of Figure .....	x
Acronyms .....	xi
Abstract .....	xiv
CHAPTER ONE .....	1
1.0 INTRODUCTION .....	1
1.1 Background information .....	2
1.2 Historical perspective of non-marital childbearing in Uganda .....	3
1.3 Statement of the problem .....	7
1.4 Significance of the study .....	8
1.5 Research objectives .....	8
1.6 Specific Objectives .....	9
1.8 Definition of Terms .....	11
CHAPTER TWO .....	12
LITERATURE REVIEW .....	12
2.0 Introduction .....	12
2.1 Concept of non-marital childbearing .....	12

2.2 Social Factors and their Influence on nonmarital childbearing.....	16
2.2.1 Education and non-marital childbearing .....	17
2.2.2 Women’s occupational status and non-marital childbearing .....	21
2.2.3 Women’s Income and Non-marital Childbearing .....	22
2.2.4 Women’s place of residence status and Non-marital childbearing .....	23
2.2.5 Race/Ethnicity and Non-marital Childbearing .....	25
2.2.6 Religion and Non-marital childbearing.....	28
2.3 Demographic factors and non-marital childbearing.....	30
2.3.1 Age at sex debut and Non-marital Childbearing.....	30
2.3.2 Age at first birth and Non-marital Childbearing .....	32
2.4 The contribution of intermediate determinants on non-marital childbearing among women in Uganda .....	34
2.4.1 Marital status and Non-marital Childbearing.....	34
2.4.2 Contraceptive use and non-marital Childbearing.....	37
2.4.3 Levels of abortion and childbearing.....	39
2.4.4 Breastfeeding and non-marital childbearing .....	42
2.5 Theoretical framework .....	45
2.5.2 Second Demographic Transition Theory .....	46
2.5.3 The theory of Out-of-Wedlock childbearing.....	47
2.6 Conceptual framework .....	48
CHAPTER THREE .....	50
METHODOLOGY .....	50

3.0 Introduction .....	50
3.1 Source of data.....	50
2.2 Description of variables and their measurements .....	51
3.3 Analytical Techniques and Specifications of the Model.....	53
3.4 Application of Bongaarts model to estimate the contribution of non-marital fertility.....	54
Bivariate Cross Tabulations .....	57
CHAPTER FOUR.....	60
4.0 DATA ANALYSIS AND INTERPRETATION .....	60
4.1 Introduction .....	60
4.2 Fertility inhibiting effects of intermediate determinants on Non-marital Childbearing .....	63
4.3 Socio-demographic factors influencing women’s life time fertility (children ever born) ..	75
4.4 Socio-demographic and proximate factors influence on non-marital childbearing .....	76
4.4 Socio-demographic and intermediate factor’s influencing the current fertility among single and cohabiting women. ....	80
CHAPTER FIVE .....	84
5.0 DISCUSSIONS, IMPLICATION, CONCLUSION, GENERAL LIMITATIONS AND RECOMMENDATIONS .....	84
5.1 Introduction .....	84
5.2 Objective of the present research .....	84
5.3 Current Age and non-marital childbearing.....	85
5.5 Place of residence and non-marital childbearing .....	87
5.6 Level of education and non-marital childbearing .....	88



5.7 Occupation and non-marital childbearing .....	89
5.8 Wealth index and non-marital childbearing .....	90
5.9 Ethnicity and non-marital childbearing.....	91
5.10 Religion and non-marital childbearing.....	92
5.11 Age at sex debut and non-marital childbearing.....	93
5.12 Contraceptive and non-marital childbearing .....	94
5.13 Abortion and non-marital childbearing .....	95
5.14 Breastfeeding and non-marital childbearing .....	96
5.15 Consideration of the findings in the light of the theoretical framework .....	97
5.15.1 Social disorganization theory .....	97
5.15.2 Second Demographic Transition Theory .....	99
5.15.3 The theory of Out-of –wedlock childbearing .....	100
5.16. IMPLICATIONS OF THE FINDINGS .....	101
5.16.1 Implications to theory .....	101
5.16.2 Implication to policy .....	106
5.16.3 Implications for research .....	107
5.17 CONCLUSIONS.....	108
5.18 GENERAL LIMITATIONS TO THE STUDY .....	109
5.19 RECOMMENDATIONS .....	111
5.19.1 Areas of future research .....	111
References.....	113

## List of Table

Table 1: Background characteristics of the non-married women .....	61
Table 2: Shows the intermediate determinants of fertility and non-marital births, among women in Uganda .....	62
Table 3: Estimates for reproductive measures used in this study form UDHS 2011 .....	65
Table 4: Shows the indices of intermediate determinants of fertility based on the marital status of women in Uganda .....	66
Table 5: <i>presents the percentage distribution of respondent background characteristics by whether they experienced births in the last 12 month, Uganda 2011.</i> .....	68
Table 6: Correlation Matrix for checking Multicollinearity among the predictor variables used in the model.....	72
Table 7: Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth by socio-demographic and intermediate variable among women in Uganda .....	74
Table 8: Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth in the past 12 months by socio-demographic and intermediate variable among women in Uganda .....	79

## **List of Figure**

Figure1: *Conceptual Framework shows how the Socio-demographic factors operate remotely through intermediate factors to influence nonmarital childbearing among women in Uganda. . 49*

## **Acronyms**

AIDS:	Acquired Immune Deficiency Syndrome
APHRC:	African population and Health Research Center
CDHS:	Cameroon Demographic and health Surveys
CSAE:	Central Statistics Agency [Ethiopia]
DRC:	Democratic republic of Congo
ECLS:	Early Childhood Longitudinal Study
FFCWS:	Fragile Families and Child Wellbeing Study
GDHS:	Ghana Demographic and Health Survey
GSSGHS:	Ghana Statistic Services, Ghana Health Services
GDP:	Gross Domestic Product
HIV:	Human Immune Virus
ICF:	Inner City Funds International
ICPD:	International Conference on Population and Development
IMF:	International Monetary Fund
IPSPC:	Penal Study of Parents and Children
IUD:	Intra-Uterine Device
KCBS:	Kenya Central Bureau of Statistics

MDG:	Millennium Development Goal
MoGLSD:	Ministry of Gender, Labor and Social Development
MoHPAEA:	Ministry of Health and Population [Egypt] El-zanaty and Associate
MoHSDL:	Ministry of Health and Social Welfare Lesotho
MUST:	Mbarara University of Science and Technology
NCPD:	National Council of Population and Development
NDHS:	Nigeria Demographic and health surveys
NFFS:	National Family and Fertility Surveys
NLSAH:	National Longitudinal Study of Adolescent Health
NLSY:	National Longitudinal Study of Youth
NSFG:	National Survey of Family Growth
NSFH:	National Survey of Family and Household
PISD:	Penal Study of Income Dynamics
SPSS:	Statistical Package for Social Sciences
STI:	Sexual Transmitted Infections
TFR:	Total Fertility Rate
TTA:	Transitional-To-Adulthood
UAIS:	Uganda AIDS Indicator Survey

UBOS: Uganda Bureau of Statistics

UDHS: Uganda Demographic and Health Survey

UNHCR: United Nations High Commission for Refugees

UNHS: Uganda National Household Survey

UNPSTSD: Uganda Population Policy for Social Transformation and Sustainable  
Development

SDA: Seventh Day Adventist

U.S: United States

ZIMSTAT: Zimbabwe National Statistics Agency

## **Abstract**

**Background:** Over the years, Uganda has experienced high levels of fertility which has hampered economic and social development. Among many reasons attributed to the high levels of fertility was the digression from tradition of bearing children under wedlock to non-marital childbearing. It is based on this foregoing that the study sought to establish the effects of intermediate, socio-demographic and intermediate factors that influence nonmarital childbearing among unmarried women.

**Methods:** The study used data from the 2011 Uganda Demographic and Health Surveys. Out of the 8674 women who responded to the questionnaire, only 4889 women aged 15 to 49 years were eligible for this study. The data was analyzed using Statistical Package for Social Sciences (SPSS), Excel spread sheet, Bongaarts model, bivariate tables with chi-square and binary logistic regression.

**Results:** Results from Bongaarts model show that indeed non-marital childbearing do contribute to overall level of fertility among women in Uganda. It further shows that 18 percent of never married women aged 15-49 years reported to have given birth. The chi-square tests for association show that intermediate variables (proportion single or cohabiting and breastfeeding), socio-demographic variables (Age at interview, level of education, place of residence, occupation, wealth index and ethnicity) were associated with non-marital childbearing.

The odds of having non-marital birth were higher for women aged below 20 years (Odd Ratio (OR), 2.1) and lower among single women (0.5). The odds of non-marital birth were also higher among Bantu ethnic group (OR, 1.4). The odds of having non-marital birth are higher among women who did not use modern contraceptive (OR, 1.8). Also the odds of having non-marital birth among women who had aborted was (OR, 1.4) and odds of not breastfeeding among

women who had birth in the past 12 months reduced by (OR, 0.02). Non-marital childbearing is assumed to be influenced by socio-demographic and intermediate variables.

**Conclusion:** The study concludes that changes in intermediate, socio-demographic factors appear to affect non-marital childbearing. This can only point to the changing values and deviation from family formation norms. Therefore, it is recommended that the government of Uganda should target to improve educational level of women beyond secondary school. There is also need for dialogue with different ethnic groups so as to reach consensus of discouraging bad traditional practices of premarital sex and childbearing among women in Uganda. Besides, much effort is required in provision of information, education, and communication among women so as to encourage contraceptive use and reduce abortion. Finally, there is need for the government to reconsider the revision of Domestic Relation Bill (DRB) of 2003 so as to formalize the cohabiting women unions.

Key terms: **Nonmarital childbearing never married women, and Uganda**



## CHAPTER ONE

### 1.0 INTRODUCTION

Globally, there is a general consensus that the proportion of unmarried women who are sexually active has increased. Not only do they engaged in sexual activity, but also they continue to give unplanned birth (Holland, 2015; Bruce, 1995). In developed economies like that of the United States (U.S), non-marital childbearing cases were long recorded as early as 1920's and their numbers have substantially increased as well as their levels of fertility (Wu and Musick, 2008), while in Europe the state of non-marital fertility was said to have increased in substantial numbers across the region in the period of 50 years (Klüsener, Perelli-Harris, and Gassen, 2013). However, in Asia cohabitation and childbearing out of wedlock is highly discouraged, except in Singapore where it is relatively condoned in South Korea and Japan (Jones, 2012).

In Sub Saharan Africa, marriage has been described as a primary source of exposure to the risk of pregnancy, therefore, the kinship-based family structure played a vital role in enforcing these values (Bigombe and Khadiagala, 2003; Shapiro and Gebreselassie, 2014). Over the years, this has kept the Total Fertility Rate above 5.4 per woman, making it one of the highest among the regions in the world (Westoff et al., 2013). However, due to improved socio-economic opportunities for women in the field of education, health care, and employment, these have changed women's gender roles. Nevertheless, this has had negative impact on the kinship-based family structure. The transformations in women status have also resulted to the emergence of single-parenthood and non-marital births among the urban dwellers due to rural to urban migration in search for job opportunities. Still in the rural areas, this leads to shortage of men population resulting to single-parenthood as well (Bigombe and Khadiagala, 2003). Decades in

research on marriage and childbearing patterns in Sub-Saharan Africa have shown that the process has undergone some forms of transformation (Ocholla-Ayayo, 2000). Many societies and institutions are slowly adapting to the culture of bearing children out of wedlock (Scott and Eric, 2000 cited in Palamuleni and Adebowale, 2014). In order to cope with the changing phase of family structure, many single-parents with low income take their children to be looked after by their grandparent, while those who had enough income hire maids to look after their children so as to allow them to enterprise (Bigombe and Khadiagala, 2003). International research such as the World Family Map (2014) estimated the proportion of births to unmarried mothers in sub-Saharan Africa to 19 percent in Congo (DRC), 30 percent in Ghana, 54 percent in Uganda, Kenya 24 percent, Tanzania 29 percent, 63 percent in South Africa and Nigeria accounted for the lowest proportion 6 percent. The following paragraphs will discuss the background, the historic perspective of nonmarital childbearing in Uganda as a country of interest in which the study is conducted.

### **1.1 Background information**

Uganda is a democratic republic in East Africa. It lies across the equator and is a land-locked country. The republic is bordered to the east by Kenya, Tanzania to the south and Rwanda to the south east and Democratic Republic of Congo to the west and South Sudan to the North. The country covers an area around 241039 Km<sup>2</sup> and it is densely populated with 174 people per square kilometer. Regarding its population, according to Uganda Bureau of Statistics (2014) the provisional census results estimated the country's population at 34,856,813 people and its growth rate was projected at 3.03 percent per year. Administratively, it is divided into 112 districts with 85 percent of its population residing in the rural areas (UBOS and ICF International, 2012; UBOS, 2014).

Economically, agriculture forms the backbone of Uganda's economy. The country is self-sufficient with regard to food, though the food is not evenly distributed country wide. The main cash crop for the country is coffee which is its main foreign exchange earner. The Gross Domestic Product (GDP) growth of the country was estimated to be ranging from 5.6 and 7.1 percent between 2006 and 2011 (UBOS and ICF International, 2012).

Culturally, Uganda is a heterogamous nation with 19 major ethnics groups and these are grouped into four main categories: The Bantu (Baganda, Banyakole, Basoga, Bakiga, Banyarwanda, Bagishu, Batoro, Bunyoro, Bagwere and Bakonjo); the Nilotic (Langi, Alur, Acholi and Japadhola); the Nilo-Hamites (Karamajong and Iteso); and the Sudanic (Lugbara and Kakwa) (Otiso, 2006). These groups of people were said to have settled mutually exclusive in the country. The Bantu groups are found mainly in the southern part of the country, the Nilotic groups in the north central part, Nilo-Hamites in the north east part and lastly the Sudanic live in the northwest part of the country. The heterogeneity among the ethnic groups among Ugandans present diverse cultural practices in social institution like marriage, childbearing, and economic way of life as well (Otiso, 2006).

## **1.2 Historical perspective of non-marital childbearing in Uganda**

Historically, childbearing in Uganda occurred in prearranged and comparatively steady marriage. Marriages in Uganda are customary, religious or civil; other consensual forms of union were not recognized. Consequently, these were considered as main source of contact for women to become pregnant (Kaijuka, Kaija, Cross, and Loaiza, 1989).

According to Otiso (2006), marriage customs and childbearing in Uganda have varied across different ethnic groups. For example among the Bakiga and Banyarwanda/Bafumbira virginity was highly valued and if any premarital sex and or pregnancy occurred, the girl would be

subjected to death penalty. This served as prevention to non-marital childbearing and it ensured that childbearing took place mainly in relatively stable marital unions. However, in pastoral communities like Karimojong, premarital sex was permitted with stringent precaution that pregnancy is avoided. If it occurred the offenders were forced to marry and 30 cows were to be paid as a fine. With modernization children born to non-marital unions in these communities were slowly being accepted by the society and over time, such penalties are slowly being relaxed (Otiso, 2006).

Studies on change and marriage practices reveal that on the verge of modernization through formal education, migration and urbanization, their cultures have remained unchanged except for some societies like the Bafumbira, for example abstinence before marriage and early marriages remained relevant among them (Ruguma, 2015). However, Otiso (2006) affirmed that marriage in Uganda has undergone some form of transformation due to socio-economic and cultural change. In addition the study postulated that rapid urbanization process which was accompanied by changing gender roles and population growth, as well as increase in dispersion among different people, which in return brought cultural mix that made most ethnic cultures to lose ground on their marriage taboos.

Furthermore, Otiso (2006) also argued that modernization has contributed to cohabitation which, though considered as social breakdown, has become a common practice in urban areas among the poor who cannot afford to pay bride price, thus increasing the rate of sexual activity outside marriage. According to UBOS and ICF International (2012), women aged 25-49 years had their first sexual intercourse before the age of 15 years. Meanwhile over 64 percent of the women in Uganda had their first sexual intercourse before the age of 18 years, and at the age of 25 years 90 percent of the women would have had their first sexual intercourse. The median age

at sexual intercourse in Uganda was estimated at 16.8 years which was way below the legal age of consent (18 year). On the other hand, what remained unanswered was the proportion of the sexual intercourse out of marriage among women of reproductive ages in Uganda.

Despite increasing cases of sexual intercourse, contraceptive use in Uganda remained very low among women of reproductive age. According to Uganda Demographic and Health Surveys (UDHS) 2011, contraceptive use of any method among women of childbearing age was estimated at 24 percent while modern contraceptive use of any method was put at 21 percent. Yet, after disaggregation of modern contraceptives into marital status, only 30 percent of the married women used any method of contraceptives to prevent pregnancy while 26 percent of them used any modern contraceptive. In addition, the unmarried sexually active women who used any method of contraceptive to abate pregnancy accounted to 52 percent. Of these women who used any method of contraception, only 44.3 percent of them used any modern method (UBOS and ICF International, 2012).

Although modern contraceptive use seems to be high (44.3%) among sexual active unmarried women in Uganda, the proportion of teens who gave live birth were projected at 28.3 and 49 percent among ages of 18 and 19 years respectively. While on the other hand, the percentage of unmet need for contraceptives among women aged 15-19 and 45-49 years was 31.3 and 24 percent respectively (UBOS and ICF International, 2012).

Worse still, in Uganda the proportion of married women continue to fluctuate over time. For instance, in 1988/89 the proportion of married were 52 percent while those cohabiting were 14 percent, meanwhile in 1995 the married were 64 percent and the proportion cohabiting was 9.1 percent. Furthermore, in 2000-01 women who reported to be currently married were 45.1 and

those who were cohabiting were apportioned to 22.3 percent. In addition, in 2006 the proportion married were 49 percent and it declined to 36 percent in 2011, at the same time the proportions of those who are cohabiting have increased from 14 percent to 27 percent (UBOS and ICF International, 2012).

The increase in proportion cohabiting add to the number of women who are never in union, therefore weakening the marriage institution in the country. Ideally, the decline in proportion married could help in reducing the general fertility levels in the country. However, according to UDHS 2011 Report shows that fertility remained the major determinant of population growth in Uganda and its decline was too slow. Over the three consecutive UDHS surveys the TFR was high as 6.9 in 2000-01, 6.7 in 2006 and 6.2 in 2011 respectively (UBOS and ICF international, 2012).

Furthermore, Uganda has several national laws and policies that shape population growth and development such as: the national population policy for sustainable development, national youth policy, sexual reproductive health minimum package, a minimum age of sexual consent policy and universal primary education policy, to name a few. All these were meant to curb population growth and promote socioeconomic development among the people, but high fertility still remained problematic in the country (Neema et al., 2006). It is upon this background that this study seeks to establish factors that encourage non-marital childbearing among women aged 15-49 years in Uganda and specifically find out the characteristics of the unmarried women of childbearing age in Uganda. The study examined the association between socioeconomic variables and fertility outcomes of unmarried women of childbearing ages. Lastly, the study determined the reproductive behaviors of the unmarried women of childbearing ages in Uganda

and also examines the determinants of non-marital childbearing among women of childbearing ages in Uganda.

### **1.3 Statement of the problem**

High fertility level has been the major bane of Uganda economy and this has continued to hamper the country's economic and social development (Klasen and Lawson, 2007; UNPSTSD, 2008). Part of the problem related to high level of fertility in Uganda is the custom of childbearing out of wedlock (Rutaremwya, 2013). In Uganda, the proportions of cohabiting women have increased over time and they have added to the proportion of women never in union raising the proportion of unmarried women to 51.3 percent (UDHS and ICF International, 2012).

According to international research by World Family Map (2014), in 2011 the proportion of non-marital births in Uganda amounted to 54 percent while the 2011 UDHS reports indicated the cases of pregnancy among women aged 15-19 to be at 24 percent (UBOS and ICF International, 2012). Therefore, this poses a major health and social concern for women aged below 18 due to its physiological risks and negative socio-economic status on the mothers in general (UBOS and ICF International, 2012).

While it was established that Uganda has made giant strides in Sexual and Reproductive Health (SRH) intervention programmes that accorded women prevention methods to avert births, little progress was recorded in the following areas; averting conception, and the use of modern contraceptive among women. This led to the high level of unmet need for contraceptives among the unmarried (43%) compared to the married women (33%) (UBOS and ICF International, 2012).

Despite government efforts to subsidize the cost of modern contraceptives, fertility level in Uganda remained high and declining in at a slow pace (Bankole and Malarcher, 2010). Therefore, this study addressed the gaps identified in literature on non-marital childbearing in Uganda by analyzing the reproductive behaviors and factors that drive fertility among the unmarried women in the country and also establish factors that encourage non-marital childbearing among unmarried women aged 15-49 years in Uganda.

#### **1.4 Significance of the study**

It is seemingly clear that non-marital childbearing is less understood in Uganda. As a consequence the policy direction is questioned. This is due to the fact that policies tend to be directed towards the agenda of the developed countries, as represented by the World Bank, World Health Organization (WHO) and International Conference on Population and Development (ICPD) and Millennium Development Goals (MDGs). Therefore, this study has contributed to policy formulation and implementation by unearthing the factors that predispose the unmarried women to continue bearing children in Uganda. The study also contributed to research and theory on non-marital childbearing, its causes and effects in sub Saharan Africa. Lastly, the study created awareness on non-marital childbearing and enhance knowledge base for future research on non-marital childbearing behavior in Uganda.

#### **1.5 Research objectives**

##### **Main Objective**

To establish the socio-demographic and intermediate factors that influence non-marital fertility among women aged 15-49 years in Uganda.



## **1.6 Specific Objectives**

- To ascertain the background characteristics of unmarried women of childbearing age in Uganda.
- To establish the fertility inhibiting variables on nonmarital fertility among women in Uganda.
- To examine the contribution of fertility inhibiting variables on non-marital fertility among women in Uganda.
- To assess the association between socio-demographic and intermediate variable on non-marital fertility.
- To determine the effect of socio-demographic and intermediate variable on unmarried women life time fertility.
- To determine the effects of socio-demographic and intermediate variable on unmarried women's current fertility.

## **1.7 Research hypothesis**

- Single and cohabiting women who are aged above 20 years old are less likely to have given birth compared to those aged below 20 years.
- Single and cohabiting women with higher level of education are less likely to have given birth compared to those with primary or no education.
- Single and cohabiting women who are working are less likely to have given birth compared to those who are not working.

- Single and cohabiting women from rich wealth index bracket are less likely to have given birth compared to those who belong to poor wealth index bracket.
- Single and cohabiting Unmarried women living in urban areas are less likely to have given birth compared to unmarried woman who live in rural areas.
- Single and cohabiting women from Bantu ethnic background are less likely to have given birth compared to other ethnic groups.
- Single and cohabiting Christian women are less likely to have given birth compared to Muslim women.
- Single and cohabiting women who started sexual intercourse at age above 20 years are less likely to have given birth compared to the one who started sexual intercourse at age below 20 years.
- Single and cohabiting women who use modern contraceptive are less likely to have given birth compared to those who used did not use any method of contraceptive.
- Single and cohabiting women who ever had induced abortion are less likely to given birth compared to those who did not.
- Single and cohabiting women who gave birth in the past 12 months were more likely to breastfeeding are less likely to give birth compared to the one who are not breastfeeding.

## 1.8 Definition of Terms

**Cohabitation:** refers to a women who are not legally or culturally married, but they live with the man in house as if they are legally or cultural married.

**Demographic factors:** This refers to the age at sex debut and age and the birth order.

**Factors:** can be defined as influences that contribute to an outcome of for these case non-marital childbearing.

**Influence:** refers to the ability of variables to affect the outcome of nonmarital childbearing.

**Intermediate variables:** factors that directly affect an outcome of nonmarital childbearing.

**Nonmarital childbearing:** in this study can defined as births that occur to women not in union and those cohabiting (Moore, 1995).

**Single women:** These are women who are neither ever married nor cohabiting.

**Social factors:** These are things that affect lifestyle, such as current age, religion, wealth index to name a few.

**Socio-demographic factors:** This refers to factors that indirectly affect nonmarital childbearing, but they operate through the direct factors that influence nonmarital childbearing.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

Factors that influence non-marital childbearing among women have long been studied from multidisciplinary perspectives. For example (Bumpass and Lu, 2000; Kohler and Rodgers, 2003; Masua et al., 2012; Perelli-Harris and Gerber, 2011 and Solomon-Fears, 2008) approached in sociological and economic dimension. However, this study built on these by discussing the overview of non-marital childbearing, its concept, socio-demographic and intermediate factors that influence non-marital fertility outcome and these factors are reviewed in line with such study as (Lesthaeghe, 2010). This chapter also discusses the theoretical and conceptual framework that supported this study.

#### 2.1 *Concept of non-marital childbearing*

Non-marital childbearing is a global phenomenon and it has gradually increased over time. This increase is both in relative terms and real terms, in developed economies like that of the United States, and in developing countries like some parts of Eastern Europe such as Russia. However, the definition of non-marital childbearing has become a subject of controversy in the field of demography, as a result, many demographers concentrated on women's marital status at the time she conceived, while others argued in the line of male commitment to marrying the partner (Kohler and Rodgers, 2003). According to Solomon-Fears (2008) non-marital childbearing was defined as births that occur before marriage. These can be first birth, second birth or even high-order births. That is to say non-marital births can occur to either a married woman preceding her marriage, it can also occur to a unmarried women, as well as those who have been married

before (separated, divorced and widowed). Kohler and Rodgers (2003) further argued that non-marital births can be grouped into categories to describe the births. For instance the pregnancy that occurs to a woman while living with the partner before marriage and eventually married her. In addition other births that also occur to women who were not willing to marry the partners and also those births that occur to women who were ever married. Therefore, all these non-marital birth status presents different socio-economic conditions related to unmarried woman. Thus, in the current study, non-marital childbearing can be defined as births that occur to women who were not in union and also those who were cohabiting during their child birth (Jones et al., 1985). Childbearing through formal unions has changed mainly due to non-formal unions (Bumpass and Lu, 2000 ; Perelli-Harris and Gerber, 2011). Despite being stigmatized, Ragan (2012) found out that in Sweden, a woman who engaged in sexual activity outside marriage was referred to as a “*hora*” meaning immoral woman and in case she happened to conceive and give birth, such a child was referred to as a “*horunge*” meaning bastard (Ragan, 2012).

Furthermore, Ragan (2012) asserted that women who had babies outside wedlock often encountered:

*...legal sanctions, women also faced social and financial penalties levied by the church. "Churching" required unmarried mothers to confess their transgressions in conjunction with ceremonies designed to publicly humiliate them before their children could be baptized. Confession as penance for unlawful intercourse was abolished in 1855 but continued to be practiced into the 20th century in some parts of Sweden.... ( p. 6).*

Thus, non-marital childbearing among the Swedish communities was not tolerated. It attracted punitive measures in legal and religious institutions. However, over time in Sweden, non-marital

childbearing has undergone serious transformation. The responsibility of having non-marital birth in the country now rest in the hands of individuals rather than institutional involvement such as the state and other stakeholders like the church and the community at large (Hoem, 1997). In Great Britain for example, childbearing took place in relative peaceful marriage and such practice used to be a common norm. However, studies dated back to 19<sup>th</sup> centuries in the parish register shows that children born out of wedlock were accorded legitimate right as compared to the Swedish historically (Lastlett, Oosterveen and Smith, 1980 cited in Kiernan, 2003).

Following modernization the proportion of the unmarried women has shown a substantial increase. During the General Housing Survey in Britain, it was established that the proportions of married women have decreased from nearly three quarter (74%) in 1979 census to just over half (51%) in the year 2000/1 survey. In addition, the proportion of singles also increased from 18 per cent to 35 per cent leading to an increase in the proportion of non-marital births from 11 to 40 percent (Great Britain Office of National Statistics, 2001). While these seem to be the case in Great Britain, the story in Germany is quite different. Scholars have argued that due to cultural variation between East and West Germany, non-marital childbearing cultures have diffused from East to West following their unification. Besides, the proportion of non-marital births increased within the two countries as well, with the East recording an increase of 35 percent in 1989 to 50 percent in 1999 while at the same time the West also did record an increment of 10 to 18 percent (Konietzka and Kreyenfeld, 2002). From the foregoing discussion, it is evident that non-marital childbearing seems to have occurred across communities in Europe. In Asia, cohabitation and childbearing out of wedlock is highly discouraged, except in Singapore. It is relatively condoned in South Korea and Japan (Jones, 2012).

Traditionally in diverse African cultures, childbearing out of wedlock is totally unacceptable and women who had children were highly stigmatized by most communities (Johnson-Hanks, 2005). In Malawi, especially among the Chewa tribe, a child born out of wedlock was referred to as “Mphaka” meaning ‘child without father’, or ‘child of the bush’ and in Nigeria, among the Yoruba community a child who belongs to a man who is not his real biological father is referred to as “Omoale” meaning bastard (Palamuleni and Adebawale, 2014). While in Southern Africa, in Lesotho, local derogatory names are also given to children born out of marriage. Their mothers were referred as “*spoilt*” or “*destroyed*” meanwhile their sons were referred to as “*morwamang*” meaning the father is unknown, while for a girl is referred “*makhokolotso*” meaning refuse (Mturi and Moerane, 2001).

Contrary to the popular belief that marriage occurs early and is universal in Sub-Saharan Africa, the modern experience of Botswana seems to diverge from these traditional principles, with many women remaining Single or cohabiting and those who chose to marry get married at a later stage in life (Letamo, 1996). Although these seems the case, it must be noted that prior to modernization, in traditionally Tswana culture, premarital sex and childbearing out of wedlock was frowned at by most communities and penalties were levied against women who fall pregnant before getting married as attested by (Schapera, 1940 cited in Letamo, 1993). Of recent, studies on premarital childbearing in Thamaga Village in Botswana revealed that, premarital childbearing though not customarily accepted, the unmarried men and women share common view regarding having a child outside wedlock. Some of them believed that having a premarital child strengthens relationships while on the other hand premarital birth was tolerated at age above 25 years, where a woman is believed to have long waited for marriage.

In addition, in Tswana society unmarried women above their age are also subjected to derogatory names, and childlessness compound the problems (Pitso and Carmichael, 2003). Likewise in Kenya, non-marital childbearing varied from one community to the other. Traditionally most societies in the country do not support such act except some pastoral community like the Turkana, where premarital childbearing is culturally tolerated and is seen as a path way to family formation (Shell-Duncan and Wimmer, 1999). In Kenya, like any other country in the region, childbearing out of wedlock has undergone some transformation. Policy makers have become aware of its effects on the overall contribution in general fertility level (Masua et al, 2012).

Additionally, Jones et al (1985) argued that births that occur to unwed mothers have long been a source of continuous concern to policymakers, moral leaders and legal practitioners, due to increased proportions of mothers raising their children in the absence of the fathers at their homes. On the one hand, Ron Lesthaeghe (2010) stated that the reduction in celibacy and early childbearing among unmarried women signals a departure from demographers like Malthus where abstinence and late marriage were encouraged as a means of restraining population growth. On the other hand, Bongaarts, Frank, and Lesthaeghe (1984) argued that what need to be understood is the detailed account of socio-economic, cultural, biological, environmental and proximate factors that determine fertility. This is in contrast to the assumption that the population growth rates have adverse effect on the overall economic output thereby stifling the socioeconomic development.

## **2.2 Social Factors and their Influence on nonmarital childbearing**

The role of socioeconomic and cultural development in influencing non-marital childbearing has been studied across the globe. Studies have emphasized on the association between socio-



economic and cultural factors in influencing the level of non-marital childbearing among women. For example, this study discusses related empirical studies in literature and such sub-areas of the subject matter which include level of education, occupation, income levels (Wealth index), place of residence, religion, and ethnicity on non-marital childbearing. The subtitles that follow articulate each of the sub-variables stated above. The discussions begin with education and non-marital childbearing.

### ***2.2.1 Education and non-marital childbearing***

Substantial literature around the globe hold that formal education is a pillar to fertility change. education has the power to transform women's bahavior, values and attitudes from traditional to modern. For example highly educated women are empowered with knowledge and information that help them bargain the number of children they want to have as well as the information on how to effectively use modern contraceptives and to abort unwanted pregnancies compared to their counterparts (Uchudi, 2001). In studies conducted by Rindfuss, Morgan, and Offutt (1996) on education and the changing age pattern of fertility (1963-1989) in the United States, it was found that educated women with college degrees were associated with marriage postponement as well as childbearing compared to the less educated.

Similarly, McLanahan (2004) studied the diverging densities and how children were faring under the second demographic transition in the US using document analysis from both the US and other Western countries. The study found that single motherhood in the US was common among the least educated women. It was also found that in other western countries most educated women were not choosing single motherhood because of their desire to share parental responsibility with their male partners. However, the study was faulted because the methodology

which was used is highly subjective to bias by the data user (Bowen, 2009). Not with standing McLanahan's (2004) study relates to the current in terms of the relationship between education and motherhood.

Furthermore, Darroch, Singh, and Frost (2001) did similar Studies on the difference in teenage pregnancy rates among women aged 15-19 years old in five developed countries, namely the United States, Great Britain, Canada, France and Sweden. The research was intended to establish the role of sexual activity and contraceptive use, among them. The study used vital statistics obtained from unpublished government data and other surveys based on the proportion distribution of age, and the occurrence of pregnancies was calculated. They found out that, premarital childbearing was more common among the Swedish (45%) women compared to the US (22%), Great Britain (15%), Canada (11%), and France (6%). In addition, uneducated adolescent women were more likely to initiate early sexual activity and childbearing compared to well-educated adolescent women. However, the study ignored the role of proximate and other underlying factors that influence fertility. Therefore, key policy issues might be difficult to be addressed due to inadequate information.

In another study in the US, Lichter, Anderson, and Hayward (1995) studied marriage market and marital choice using data from National Longitudinal Survey of Youth (NLSY) (1979-1986) and merged decennial data from U.S. Census from young women aged 14-21years. The study comprised of 1,711 first marriages over the period. The study found that highly educated women were more associated with high levels of marriage. In addition, such women also chose to stay single instead of marrying men with less education compared to their counterpart. The study was faulted because it ignored the cultural factors such as the women's religion and racial influence

on marital partner choice. This could add value to their study. Despite such fault, the current study still insists that Lichter et al. (1995) is worthy of note.

In sub-Saharan Africa the prevalence of premarital childbearing seems to be common. Palamuleni and Adebawale (2014) Studied the patterns of premarital childbearing among unmarried female youth aged 15-24, using Demographic and Health Survey (DHS) data. The study used DHS data from Nigeria (2008), Senegal (2010), Rwanda (2010), Malawi (2010) Congo DR (2007), and Namibia (2006/2007) and found that premarital childbearing was highest in Namibia (25.5%) and lowest in Nigeria (4.8%). Additionally, the study also found that premarital childbearing was more common among women with none formal education compared to those with formal education. Namibia was also found to be leading (54.4%), Rwanda (16.5%) and Congo DR (7.9%) respectively. In Nigeria and Congo DR, residing in an urban center reduces one's chances of premarital childbearing compared to other countries in the region. The study also established that premarital childbearing was a common problem in sub-Saharan Africa and Namibia remained the most affected. On the other hand, the dataset used for both Rwanda and Senegal lacked questions on contraceptive use and the age groups 25-49 years were left out. These are crucial ages for childbearing. Finally, the variables were not subjected to multicollinearity diagnosis before the application of logistic regression (Mela and Kopalle, 2002).

Another study was carried out by, Ikamari (2005) on the effect of education on timing of the first marriage in Kenya, using data from Kenya Demographic and Health Survey (1998), covering a sample size of 7881 of women aged 15-49 years. With marital status being constant, the study found that education was statistically associated with women's age at marriage and has positive effect on marriage postponement. This means that education was stronger among the

younger generation of women and it impacted on their marital status. Additionally, the study found other variables such as premarital childbearing, region of residence, religion, and year of birth to be statistically significant to the effect of education and timing of first marriage in Kenya. On the contrary, the study left out the socio-economic status of a woman such as wealth index and employment status and intermediate determinants of fertility like contraceptive use, abortion and breast feeding.

Musua, Kisovi and Tonui (2012) did a study on the demographic, socio-economic and cultural factors influencing non-marital fertility in Makueni district in Kenya among women of a reproductive age. On the one hand, their study used both primary and secondary data collected using individual questionnaire and interview guide administered to 120 respondents and the secondary data they obtained from Kenya Central Bureau of Statistics (KCBOS) and National Council of Population and Development (NCPD). They found an association between demographic, socio-economic and cultural factors influencing non-marital fertility. More to the point, the study also established that family background such as education and occupation effect is stronger on first birth than the second. On the other hand, the study used non probabilistic method like snowball to obtain its sample size, hence the sample size was too small to be generalized to the entire Kenyan population rather it represents the situation in Makueni district in Kenya only.

In Uganda, Rutaremwa (2013), studied the factors associated with adolescent pregnancy and fertility in Uganda, using data from 2011 Demographic and Health Survey (DHS) data. The study selected 2026 female adolescents aged 15-19 years. The findings from this study show that education level is a poor predictor of having been pregnant. In addition, the good predictors associated with adolescent pregnancy and fertility in Uganda were marital status, age category,

wealth, that is index those who fall in the richer and richest brackets and region of residences (Central and East Central) and place of residence (rural). The study excluded other socioeconomic and cultural characteristics of women (occupation or employment status and their ethnicity). In addition, the study also ignored the role of intermediate variables like contraceptive use, induced abortion, breastfeeding which has direct influence on fertility outcome. Lastly, the variables under study were not subjected to multicollinearity diagnosis. In the subtitle that follows, the relationship between women's occupation and non-marital childbearing is discussed as articulated in most empirical studies.

### ***2.2.2 Women's occupational status and non-marital childbearing***

Kreyenfeld, (2010) did a study on uncertainties in female employment careers and postponement of parenthood in Germany. The author used longitudinal data from German socio-economic panel. The data contained information on job uncertainty and fertility for the years 1984-2006. The study was analyzed using objective and subjective measures of uncertainty such as unemployment, and whether women were worried about their economic situation and job security as well. The result shows to a lesser extent that the uncertainty of job among women may lead to delay in motherhood. However, the relationship between economic uncertainty and first birth varied according to the level of education. Women with higher education were associated with motherhood delay in terms of lack of job security compared to their counterparts. A woman's occupation is directly translated to family income as well as autonomy. On the contrary, this study has not been done in Uganda.

### ***2.2.3 Women's Income and Non-marital Childbearing***

Ratcliffe and McKernan (2010) studied childhood poverty persistence, the facts and the consequences in the United States using data from longitudinal surveys from 1968-2005 waves of Panel Study of Income Dynamics (PSID). The study comprise of respondents born between 1967 and 1974 as well as those born from 1985 and 1992 aged 18 and 30 years in 1997 and 2004 respectively. The total sample size for the study was 1,795 made up of Whites, Blacks and other ethnic groups. Information was collected on individual and families background with regards to their income, family size, employment, level of education, marriage, childbearing, age, race and gender. The results of the study shows that people who were poor at birth were more likely to be poor at old age, and also they are more likely to be high school dropouts and also they were more likely to experience non-marital fertility compared to their counterparts. In addition, the study also found that poverty is highly associated with an individual racial group. For instance blacks were 2.7 times more likely to ever experience poverty than the whites and they are also 7 times more likely to be persistently poor in adulthood compared to the whites. However, the variables under study were not subjected to multicollinearity diagnosis.

Similarly, Hoffman and Foster (1997) studied the economic correlates of non-marital childbearing among adult women in the United States. The authors used data from Panel Study of Income Dynamics (1985-1990) which was a national representative of 7000 households. They compared the income dynamics between the non-marital childbearing adolescent and the adult women. The study found that the socio-economic statuses of women who have had their first birth as teenagers and those who had non-marital birth as adult had similar income disparities. The study also further established that women who had births as teenagers and also post teenage non-marital births are relatively poor as compared to those teenage women who had given birth

to one child. The short-coming of the study was that, they used univariate analysis, which can only provide percentages distribution of income among teen women. The study could have used regression method to determine factors that can be targeted by a policy.

In another related study, Garfinkel et al., (2003) also did a study on stricter role of child support enforcement and the reduction on welfare benefit on non-marital childbearing in the United States, using data for non-marital childbearing obtained from Report of Final Natality Statistics (ROFNS) and the sample size comprised of 867 observations from 50 states. The study found that strict child support enforcement had negative coefficients and significance. In addition, education and residing in central city were not significant while States with poor employment opportunities were found to have higher rates of non-marital fertility, and also States with higher black and Hispanic race recorded the highest proportion of non-marital births. Finally the effect of welfare was found not statistically significant in influencing non-marital childbearing. The study was very comprehensive and it helped in identifying the variables that needed to be influenced by a policy, however, the study was faulted by the sample size used. Therefore, the study could never be generalized to the 50 states in the US. The foregoing section has addressed the variables of income in relation to non-marital childbearing. In order for this discussion to be properly articulated, other variables need to be addressed. The next section investigates women's place of residence status and non-marital childbearing.

#### ***2.2.4 Women's place of residence status and Non-marital childbearing***

Baranowska-Rataj (2014), used data from polish birth registers of 1985-2009 prepared by Central Statistical Office, which contains information on mothers' characteristics such as data on place of birth, place of residence as well as her date of marriage. The author decomposed the

percentage out of wedlock births by establishing two sources of growth of non-marital births between urban and rural areas. The study found that both in urban and rural areas the proportion of non-marital childbearing among women increased due to their failure to legalize marriage. However, the study was limited due to insufficient data on socioeconomic and cultural characteristics of on the polish women.

Furthermore, Albrecht and Albrecht (2004) studied family transformation among the US society from different types of residence namely: non-metropolitan and metropolitan residents with regards to non-marital conception and conception outcomes, using data from 1995 national survey of family growth. The results show that non-metropolitan women are more likely to be married at the time of conception compared their counterparts. The results further show that non-metropolitan resident women were also more likely to have pregnancy results in a live birth compared to their counterparts. The study was also faulted by ignoring other socioeconomic factors that influence fertility in general.

In a similar study, McCulloch (2001) investigated the concentration of deprived households and teenage non-marital childbearing in United Kingdom, using data from census records (1991). The study sampled teenagers aged 16-19 years old who live with one unmarried parent. The residual analysis revealed higher percentages of teenage pregnancy in urban areas, even after controlling for other factors. Therefore, it was concluded that despite the high level of area significance other factors such as individual characteristics do play an equal role in determining teenage non-marital childbearing. The study was limited due to lack of inclusiveness of intermediate determinants of fertility.



In Lesotho, Makatjane (2002) studied premarital sex and childbearing using data from 1991/92 Lesotho Demographic and Health Survey (LDHS), the author selected a sample size of 1978 women aged 15-49 years old. The results show that the odds of having premarital sex and a child increases with women's place of residence with other factors such as age of the woman and religion as well. Therefore, urbanization was found to be undermining cultures that prohibit premarital sex and childbearing among the Basotho. However, the study was faulted because it ignored age at first sex which is a key determinant for the state of premarital childbearing as well as other intermediate variable and the variables were also not subjected to multicollinearity diagnosis. Irrespective of that, this Lesotho-based study contributes part of empirical evidence that can be referenced in this subject matter. Further investigation into these variables may be outside the people of the current study. Nevertheless, there are evidences that variables such as race and ethnicity are related to childbearing. The next section built on empirical evidences that are found in the literature in relation to race/ethnicity and nonmarital childbearing.

### ***2.2.5 Race/Ethnicity and Non-marital Childbearing***

According Bhopal (2004) ethnicity is a group of people who are perceived to belong to certain shared characteristics such as cultural traditions and language, including geographical and ancestral origin. It is a subject of interest for both researchers and policy makers due to cultural dynamics and level of socio-economic development across different ethnic groups in the country. Manning and Landale (1996) did a research on racial and ethnic differences on cohabitation and premarital childbearing in the United States, using merged data from National Survey of Families and Households and the New York Fertility, Employment and Migration Survey (1987-88). They found that non-marital childbearing has varied among different ethnic groups. Also, cohabitation and pregnancy among the US community was found to be accelerating the

transition to marriage among the white women than the black Americans. In addition, non-marital childbearing among the black women was found to be less likely to influence union compared to the white women. Lastly, non-marital childbearing among the Puerto Ricans was found to be a common norm of bearing children. On the other hand the study ignored other dimensions of socio-economic, cultural and demographic factors that influence cohabitation among different ethnic groups in the US.

Furthermore, Wildsmith and Raley (2006) studied race-ethnic differences on non-marital childbearing among women of Mexican American origin, White and Black women. The study used information obtained from the National Survey of Family Growth (NSFG) for 1995. In the study, it was found that the risk of non-marital childbearing was significantly related to women's ethnicity. For instance, the risk of having non-marital child birth was found to be higher among the Black and the Mexican American women than the White women. Despite the similar socio-economic background characteristics between Black and Mexican women the risk behavior of non-marital childbearing was higher among Mexican American women compared to the Black women. However, the study was faulted for ignoring other cultural dimension such as religious beliefs and intermediate factors that influence fertility among racial-ethnic groups in the United States.

A similar study was also conducted by, Garenne and Zwang (2006) in Namibia on premarital fertility, its trends, factors and consequences using Demographic and Health Surveys (1992 and 2000) and the sample size was 5421 and 6755 women aged 15-49 years. In the study it was found that factors that influence premarital childbearing among women in Namibia were not the levels of socio-economic development among the ethnic groups. In addition, the study further found that the Herero and Nama/Damara were long exposed to modernization following the era

of colonization compared to other ethnic groups. On the contrary, acculturation was found to be influencing non-marital childbearing among women in Namibia than the levels socio-economic development among the ethnic groups. Meanwhile, other ethnic groups like the Ovambo and Lozi had moderate level of premarital childbearing compared to traditional Kavongo and San who were considered to be primitive. Yet, the role of proximate factors in influencing fertility among different ethnic groups in Namibia was down played in the study.

In Ghana, Addai (1999b) studied the relationship between ethnicity and sexual behavior among women of reproductive ages in Ghana using data from Ghana Demographic and Health Survey (1993). The main objective was to determine the relationship between ethnicity and sexual behavior among women aged 15-49 years old. In the study, it was found that, all the ethnic groups in Ghana were sexually experienced prior the age of 17 and also at the same time they were engaged in premarital sexual activities. Additionally the study also established that the kinship system had an influence towards a woman having sex before the age 17 and premarital sex was also positively associated with education and age at marriage. Finally, positive association was found between women's ethnicity and sexual behavior among the Ghanaian women. However, the study also ignored some of underlying factor such as the women's employment status, wealth index, media and the role of proximate factors like use of modern contraceptives and induced abortion to limit pregnancies.

Similarly, Kollahlon (2003) studied the relationship between women's ethnicity and fertility in Nigeria using 1990 Nigeria Demographic and Health Surveys (NDHS), covering sample of 8781 women aged 15-49. Keeping women's ethnicity constant, the study found the net fertility of Hausa-Fulani women to be lower than that of other ethnic groups in Nigeria. Furthermore, the findings also show no significant difference on net fertility levels of Ibo, Yoruba and other

women as well. Therefore, ethnicity remains a critical dynamic in determining fertility in Nigeria. However in the study, the role of intermediate variables was also down played.

Furthermore, Shell-Duncan and Wimmer (1999), also studied premarital childbearing in Northwest Kenya, challenging the concept of illegitimacy using the Turkana nomadic pastoralist as their study population. They centered their study on Ngisonyoka one of the territorial subsection in Turkana made up of 10,000 population and the sample size comprised of 343 women who have given birth. The study lasted for 18 months (1999-1991) where the respondents were selected randomly and women aged 15 years and above were selected. The data was collected using Questionnaire and observation method. It was found that premarital childbearing among the Turkana is a common practice and highly tolerated with over 30 percent of women having their first birth before marriage. Also marriage among the Turkana is not a prerequisite for childbearing, but means of claiming ownership of the child. Finally, the study concluded that premarital childbearing was a cultural practice among the Turkana. Be that as it may, none of the studies highlighted above linked religion to childbearing. However, religious beliefs play an intergral role to childbearing. It would be interesting to interrogate studies that articulate this variable. The subsection that follows discusses the relationship between religion and childbearing

#### ***2.2.6 Religion and Non-marital childbearing***

Hayford and Morgan (2008), studied the role of religiosity in influencing fertility intentions in the United States, using data from 1,354 women aged 20-24 years old who were interviewed in 2002 National Survey of Family Growth. Religion was held constant against women's socio-demographic characteristics. The study found that women who believed that religion is very important in their daily life were associated with high level of fertility compared to those who

reported that religion was somewhat important in their lives. In addition, women who believed that religion is not important in their lives had lower fertility. The authors further established that high levels of religiosity are associated with unintended fertility. The study was faulted by ignoring the socio-economic variables like place of residence, wealth index, employment status that play indirect role in influencing fertility as well as the proximate determinants like contraceptive use and induced abortion.

Furthermore, religion also plays an important role in regulating sexual initiations. Meekers (1994) studied sexual initiation and premarital childbearing in Sub-Saharan Africa using data from Demographic and Health Surveys (DHS) from Burundi, Ghana, Kenya, Liberia, Mali and Zimbabwe (1986-1989). Keeping age at sexual intercourse constant, he found that the role of religion in influencing premarital sexual intercourse varied between countries. For instance in Ghana and Liberia, unmarried Muslim women were less likely to have had premarital sexual intercourse compared to Christians as well as those who practiced traditional religion while in Kenya and Togo Christian women were reported to be more likely to be sexually experienced as compared to other religious sects. In addition other variables like literacy, age at sexual intercourse were found to be significant as well as place of residence except in Burundi and Togo. Meanwhile in Ghana, Kenya, Liberia, Mali and Zimbabwe place of residence was found not significant. As a result women's employment status, wealth index and contraceptive use were ignored in this study.

In another study, Gyimah et al. (2013) studied the young people's attitude towards premarital sex based on their religion and religiosity in an informal settlements of Nairobi, Kenya. They used longitudinal study data drawn from Transition-To-Adulthood (TTA) conducted by the Africa Population and Health Research Center (APHRC) and they sampled 2846 youth aged 12-22

years. Keeping religion constant, the study found that young people of pentecostal faith had conservative attitude towards premarital sex than those in other christian faiths. Also, the study found that high level of religiosity was associated with more conservative attitude towards premarital sex, and this was more pronounced among the pentecostal groups than other groups. On the other hand, the role of intermediate variables in influencing fertility were down played.

Agardh, Tumwine, and Östergren (2011) studied the impact of socio-demographic and religious factors that influence sexual behaviour among Ugandan university students. They did cross-sectional surveys in Mbarara University of Science and Technology (MUST) using self administered questionnaire of which 980 undergraduate students were interviewed in 2005. The study used the proxy question like having previously had sexual intercourse. The study found that respondents who rate religion having no importance in their family were highly associated with early sex debut and also being associated with multiple partners. Interestingly, the study established that religion had no influence on condom use. Finally, the study used students of one university so the sample size used is too small to be generalized to the entire universities in Uganda. the authors concluded that religion is an imparative factor in influencing sexual behaviour among students in Ugandan universities.

## **2.3 Demographic factors and non-marital childbearing**

### ***2.3.1 Age at sex debut and Non-marital Childbearing***

It is evident from literature that early sexual initiation and childbearing is not uncommon. It shows the level of socio-economic development, whether there was a shift in the traditional system or no sexual initiation at young ages is present, what appears to vary though is the magnitude of childbearing between population groups. Kaestle et al (2005) studied age at first

sexual intercourse and Sexually Transmitted Infections (STI) among adolescent and young adults in the US. They used data from National Longitudinal Study of Adolescent Health (NLSAH) 2002 and the sample size was composed of 9,844 respondents. In the study it was found that early sexual initiation to intercourse is highly associated with risk of contracting STIs among adolescent than the young adult. Therefore, the study established that early initiation to sexual intercourse was highly associated with STIs and the chances reduce as adolescents progressed to young adults above the age of 23 years. However, the role of media, as well as the use of contraceptives like condom was ignored in this study. Nevertheless, the current study considers it as appropriate for empirical review.

Similarly, Doyle et al. (2012) carried a study among 24 Sub-Saharan African countries, on sexual and reproductive behavior among adolescents. The study used data from Demographic and Health Surveys and other health related surveys from AIDS Impact Surveys (2000-2010). The study sampled 948 to 6493 females and 416 to 2532 males respectively. In this study it was found that, 25 percent of the adolescents have had their sexual intercourse before the age of 15 years. In addition, the study further established that sexual debut was common among women of poor socio-economic status. Finally, the study also found that early sexual debut was commonly associated with STIs, unplanned pregnancies and multiple partners.

Furthermore, Amoateng and Kalule-Sabiti (2014) studied the biosocial correlates of age at first sexual intercourse among grade 9 and 11 pupils in North West province in South Africa, using data collected on cross sectional surveys. The sample size of 1697 was selected using multi stage sampling of self-administered questionnaire in the data collection process. It was found that high academic performance by girls were positively associated with age at first sexual intercourse. Besides, girls who live in disorganized societies were likely to initiate sexual

intercourse earlier than boys. In addition, age was found to be negatively associated with timing of first sexual intercourse. Lastly, youths who reported to have had sexual partner were more likely to initiate early sexual intercourse compared to their counterparts. Like Kaestle et al (2005) the study was faulted by ignoring the role of media and availability of modern contraceptive such as condoms in influencing early sexual among adolescent.

In addition, Zaba et al (2004) studied age at first sex between males and females using the recent trends in African demographic surveys. The data was obtained from Demographic Health surveys (1988-2001) in six African countries: Ghana, Kenya, Tanzania, Uganda, Zambia and Zimbabwe. In the study, it was found that there was slow rise on age at first sex between countries. The study also further found that Ghana, Kenya and Uganda have witnessed decline in premarital sexual intercourse than Tanzania, Zambia and Zimbabwe. Therefore, age at first sex was found to be statistical significant. Finally, it was found that Uganda had a short interval between onset of sexual intercourse and marriage between both sexes. Age at sexual debut is synonymous with age at as birth since both set are vital demographic variables that act as indicator of onset of childbearing among women (Ngalinda, 1998). The following paragraph discusses the relationship between age at birth and childbearing among women.

### ***2.3.2 Age at first birth and Non-marital Childbearing***

Empirical evidences did pin-point age at first birth being very vital in determining the level of fertility among women, and scholars found it to be transmitted intergenerational. For example Barber (2001) studied the intergerational transimission of age at first birth among married and unmarried men and women in the US. They used data from Intergenerational Penal Study of Parents and Children (IPSPC) for eight-waves of 31 years longitudinal study of mother and child



pairs and mothers were interviewed shortly after child birth. The study found a strong relationship between intergenerational transmission of mother's age at birth and her daughter as well as her sons. It was established in the study that social circumstances through which the young mothers were raised resulted to intergenerational transmission of first birth timing. Lastly, non-marital childbearing among women was explained by the grandfathers' socio-economic and demographic status while for young men it was explained by their mother's level of education.

Furthermore, Rabbi and Kabir (2013) studied factors influencing age at birth among Bangladeshi women using data from Bangladeshi Demographic and Health Survey (2007). The study composed of 10,996 women of reproductive ages and detailed background of 30474 live births was collected, of which three prior births to the survey were used. Holding age at birth constant, against other socio-demographics and proximate covariates, the study found that age at birth has direct effect on the number of children a woman may have in her entire reproduction period. In addition the study also found that factors such as fecundity, couple's educational level and mothers' participation in labor force influence age at first birth among Bangladesh women.

Sibanda et al (2003) investigated the proximate determinants of fertility declining below replacement levels in Addis Ababa, Ethiopia, using data from National Family and Fertility Survey (NFFS) and Ethiopia Demographic and Health Surveys (1990-2000) and two other surveys composed of sample size 8,757 and 15,367 of women aged 15-49. The study was analyzed using Bongaarts model in order to determine the contribution of proportion married, contraceptive use, proportion sterile and postpartum infecundity to overall level of fertility. It was found that the median age at first birth has increased in the city as well as urban centers. For example, it was estimated that in Addis Ababa around 1990 to 2000 the median age at marriage rose from 19 to 24 years within the age group of 25-29 while median age at first birth also

increased six times within the same age group over the years. Therefore, factors solicited among many were poor employment prospect and high housing cost which encouraged couples to delay marriage and reduce marital fertility as well. Although the social factors influence fertility, their influence is indirectly. They operate through proximate factors to influence fertility outcome (Bongaarts, Frank, and Lesthaeghe, 1984). Therefore, the following paragraph will discuss the effects of proximate factors in influencing the level of fertility in general as clearly articulated below.

## **2.4 The contribution of intermediate determinants on non-marital childbearing among women in Uganda**

Bongaarts et al (1984) collapsed a set of eleven proximate determinants of fertility proposed by Davis and Blake (1956) into eight factors and then he grouped them into three broad categories; exposure factors, deliberate marital fertility control factors and natural marital fertility factors (Bongaarts, 1978). Bongaarts (1982) further rated the intermediate variables and found that four proximate determinants of fertility such as: proportion married, postpartum Infecundability, contraception and induced abortion had higher inhibiting effects on the overall levels of fertility. Although Bongaarts based his fertility majorly on married women, due to changing behaviors on childbearing behavior among women childbearing no longer take place in marriage but outside marriage as argued by Reinis, 1992 and Stover, 1998. Therefore, proportion of women used in this literature will comprise of unmarried women (single or living together) and their effect on nonmarital fertility as clearly discussed below:

### ***2.4.1 Marital status and Non-marital Childbearing***

Bumpass and Lu (2000) studied the trends in cohabitation and its implications for children using the United States (US) data for National Survey of Families and Household (NSFH) 1997-1988.

The study used sample of 13017 including cross-sectional sample of 9643 person aged 19 years and above. It was found that there was increasing cohabitation in the US and also children living under cohabiting union. Additionally, the study further found that there was increased proportion of birth to unmarried women in the US. Finally, it was concluded that the extent to which children spend their family lives was found to be increasing in cohabitation and decreasing in married families. The study was faulted by ignoring the role played by socio-economic variables in influencing cohabitation among the US community. Irrespective of such limitation, the study made a contribution to empirical development in the subject matter.

Musick (2007) inquired on the cohabitation and non-marital childbearing as well as marriage process in the US using longitudinal survey data from National Survey of Family Growth (NSFG) which comprised of 10847 sample size. He found that cohabitation has increased the level of non-marital fertility among women compared to single women. Besides, it was also further established that births that occur to cohabiting partners tend to be more planned than those that occur to single women, and finally it was also concluded that cohabitation acts as a transition to marriage and it also remained a marriage status of its own. On one hand the study ignored the role of proximate determinants of fertility such as contraceptive use, induced abortion and breast feeding in influencing level of fertility among the cohabiting and single women in the US.

Furthermore, Perelli and Gerber (2011) used retrospective union and births to examine non-marital births in contemporary Russia. The data were obtained from Russian Generation and Gender Surveys (1980s) and the sample size used in their study was 7,038 women aged 15-79 years old. In the study, it was established that the growth on the proportion of non-marital births were due to growing number of women who were cohabiting prior to conception but not due to

changing fertility behavior among women. The study also found that least educated women were major contributors of non-marital births as opposed to their counterparts with both the cohabiters and single mothers. In addition, it was also found that non-marital childbearing was more associated with the patterns of disadvantages than second demographic transition. However, the role played by intermediate variables in influencing fertility was also ignored in this study.

Likewise in sub Saharan Africa, Calves (1999) did studies on the marginalization of African single mothers in marriage market in Cameroon. He used data from Cameroon Demographic and Health Surveys (CDHS) 1991. The CDHS was a national representative sample survey carried on 3,871 women aged 15-49 years, holding motherhood status constant. The study found that premarital childbearing increases with age, women aged below 15 years old had births less than 10 percent compared to those aged 15 years and over. In addition, motherhood status was found to be highly associated with her socio-demographic characteristics. The study was seemingly faulted by ignoring the role of media and ethnicity that has influence on non-marital childbearing and also other intermediate variables that influence the levels of fertility outcome were ignored in this study. On one hand, cohabitation was believed to play a greater role in influencing the level of fertility among women, what seems not to be known is the level of cohabitation among women of childbearing age in Uganda. On the other hand, for the cohabiters to influence the level of fertility, there should be either low or high use of modern contraceptives among them. Therefore the following section will interrogate the level of contraceptive use among the never married women.

#### ***2.4.2 Contraceptive use and non-marital Childbearing***

Modern contraceptive use varied across the developing countries. Khan et al. (2007) studied contraceptive trends in developing countries using data from Demographic and Health Survey reports conducted between 2000 and 2005 in 35 countries. They found that there was a greater variation of contraceptive use among married women who have ever used any method of contraceptives. This difference ranged from 37 percent in Cambodia (2000) to 91 percent in Vietnam (2002) in South/ Southeast Asia. Meanwhile, similar variation was also experienced in Ethiopia (2000) and Namibia (2000) where contraceptive use ranged from 17 to 73 percent respectively. Factors that act as driving force in low use of contraceptives were attributed to the level of socio-economic development among these countries. The study was faulted by ignoring the role played by other intermediate factors such as the; proportion married, induced abortion and the intensity of breast feeding in influencing fertility levels in the developing countries.

On the contrarily, fertility in sub-Saharan Africa has stalled since 1950s. Garenne (2010) investigated the situation of fertility stall in sub-Saharan Africa using the proximate determinants of fertility. The study revealed variations in the level of contraceptive use among countries. For instance, in Tanzania and Ghana fertility has stalled despite low use of contraceptive, while in Rwanda, Kenya and Nigeria fertility stall was neither associated with decline in contraceptive use nor in the increase thereof. However, the study attributed fertility stall to different levels of socio-economic development among these countries.

Furthermore, Okech, Wawire, and Mburu ( 2011) also studied contraceptive use among women of reproductive age in the city slums of Kenya. The main purpose of their study was to established the level of utilization of family planning services, so as to determine the level of demand for family planning services among women. The data was obtained through survey

design where self administered questionnaire was issued to the respondents. The study population comprised of women from three cities of Nairobi, Mombasa, and Kisumu and the sample size was selected using multistage stage random sampling. In this study it was found that low use of family planning services were associated with partners approval, friendliness of service providers, women's knowledge about the family planning services, women's income level, distance from health facility and religiosity were the leading factors that contributed to low use of contraceptive among women in the city slums of Kenya. However, the study was faulted by failing to subject the variables to multicollinearity diagnosis and the role of other intermediate variables like induced abortion were ignored.

In Uganda, Nalwadda et al. (2010) did a study to explore reasons for low use of contraceptive among young people in Uganda. He obtained qualitative data through 16 focused group discussion. The study population comprised of homogenous young married and unmarried men and women aged 15-24 in Mityana and Mubende district. It was found that there was misconception toward contraceptive use; most of the respondents felt that contraceptives might interfere with their childbearing capacity; gender and power relation was found to be a hindering factor towards use of contraceptives, sociocultural expectations and contradiction that lay the sole purpose of a woman toward childbearing at the same time condemning any sexual activity outside marriage. Also cultural norms seem to prohibit parents from talking about sexual affairs with their children. In addition, other factors hindering contraceptive use were peer pressure and pleasure from sex have overridden the fear for pregnancy and HIV infection. Lastly, lack of youth friendly clinics and unfriendly staff from the clinics made the youth to shy away from accessing modern contraceptives. A major limitation of the study was on the sample of district used. Uganda has 112 districts, therefore the information obtained in this study represent the view of

the youths in those two districts and due to lack of heterogeneity of Ugandan people such study cannot be generalized.

Similarly, Mehra et al. (2012) studied non-use of contraceptives and its determinants among Mbarara University of Science and Technology (MUST) undergraduate students in Uganda. The study sampled 1,954 undergraduate students. Out of those who were sampled, only 1,179 who reported to have been sexual active were selected for the study. The data was obtained using self administered questionnaire which was issued to the student. During the survey, it was found that only 18.6 percent respondent who reported to have been sexual active did not use contraceptive during their last sexual intercourse preceding the survey. Also students who reported to have not been in relation had high odds of non-use of contraceptives. In addition, it was found that age at sex debut, area of growing up, education level of household head were highly associated with non-use of contraceptive among student. Lastly, being currently in relationship and early sexual debut also were associated with non-use of contraceptive among student. Although the study did well by providing an insight information on the level of contraceptive use among the students, the method used for data collection cannot be generalized to the entire universities in the country. In addition, what remained unknown in case of contraceptive-use failure ? Do they resort to do abortion? The following paragraph will discuss the role of abortion in influencing the level of fertility among women.

#### ***2.4.3 Levels of abortion and childbearing***

Despite low prevalence of modern contraceptives across Sub-Saharan Africa, Lauro (2011) investigated induced abortion and unwanted pregnancies in the region. Her findings show that: the use of abortion within the region has surpassed the use of modern contraceptives and is more

common among all reproductive ages. She also observed that in most rural areas women usually resort to abortion due to lack of other alternative to modern contraceptives. In addition, lack of accessibility to both facility and contraceptives were also found to be among the major hindrance towards use of modern contraceptives in the region. Notably, the low status of women in the region, stigmatization of premarital childbearing, and also to some extent tolerance of abortion in other parts of the region, coupled with availability of modern facilities for abortion in some parts of the region were among the driving forces of abortion in sub-Saharan Africa.

Likewise, Cohen (2009) did a study on abortion experiences in the developing world. The results show that most developing countries do not permit abortion except with specific reasons, but in Angola and Egypt for example it is totally prohibited. Meanwhile in Cameroon, Nigeria, Malawi, Botswana and Uganda it is permitted on medical and rape cases only and in Zambia it is based on socio-economic conditions of couples or individuals, while in South Africa and Tunisia abortion is liberalized.

Additionally, Jagwe-Wadda et al (2006) also studied abortion and morbidity from two communities from Kampala a capital city and urban district of Mbarara in Uganda . The sample comprises of women of their reproductive ages (18-49 years) as well as women who were out of their reproductive ages (50-60 years) and men aged 20-50 years. In addition, the study also included community health providers as well and the study sampled 115 respondents. The data was collected using focused group discussion. The study found that unintended pregnancies were blamed on loss of traditional norms where girls no long received sex education from the elders and young women may also not want pregnancy because they may want to further their education. The study also further found that spontaneous abortion was associated with sexually transmitted diseases and malaria. In addition, the respondents believed that women experience



more abortion cases at the present day than at the past. The study also lacked heterogeneity due its concentration on urban areas. Including rural settings could add value to this particular study and also the sample size used was too small to be generalized to the entire country population. Rather, it reflects the situation of the urban cities.

Furthermore, Singh et al. (2005) inquired on the incidence of induced abortion in Uganda. They obtained the data from health facility surveys and the service providers in 2003 nationwide. Meanwhile other source of data came from Demographic and Health Surveys for 1995 and 2000-01, the data was used to obtain information on contraceptive and unintended pregnancy among 7,000 women aged 15-49 years. The study composed of 313 health facilities and 53 professionals who work in this facilities. It was found that 297,000 abortions cases occurred in Uganda every year. The study further found that abortion cases were estimated at 54 per 1000 women aged 15-49. In addition, the study also found that abortions rate have varied regionally. The Northern Region recorded the highest cases followed by Central Region, ranging from 70 to 62 per 1000 women and unintended pregnancies were higher among the married women (51%) compared unmarried (12%). The major limitation of the study was ignoring the effects of socio-economic and cultural factors influencing the level of abortion among women, rather it was only analyzed based on the number of the cases that occurred in hospitals and the background characteristics of women who committed abortion were neglected.

In Uganda, abortion is not legalized but permitted under certain specified conditions as stated in the constitution. However cases of abortion are common and women are being treated in hospitals and clinic with regard to such case. Therefore, during the Uganda Demographic and Health Surveys 2011 women were asked the following questions; (a) did you have any miscarriage, abortion or still birth? (b) when was the last pregnancy that you terminated before

2006 end? (c) when did your last menstrual period start? Based on the responses to these questions, it was reported that only 28 percent of the women had miscarriage, abortion and still birth in the past five years preceding the surveys. These proportion is higher (35%) among women aged 15-19 and 30-34 years respectively (UBOS and ICF International, 2012). Although some of these cases were reported to be miscarriages and still births in Uganda, this experience might be similar to Botswana where abortion is not legalized. Some of these cases were reported to be spontaneous abortion because the doctors might want to avoid being prosecuted therefore they choose to record them in such a manner so as to avoid answering cases from the courts (Letamo and Majelantle, 1999).

However, what remained unanswered also was the proportion of abortion committed by single and cohabiting women specifically and how these impact on the overall level of fertility in Uganda. Although abortion was seen to be influencing a number of live births among women in Uganda, there is need to establish what happens to women who gave live births. Put differently, to determine if they usually breastfeed their children and for how long do they do so. Scholars like Bongaarts, Frank, and Lesthaeghe (1984) have argued that intensive breastfeed have negative influence on fertility levels as it plays a crucial role delaying the ovulation process. Therefore, the following paragraphs addressed the role played by breastfeeding in influencing fertility levels.

#### ***2.4.4 Breastfeeding and non-marital childbearing***

Studies have shown that excessive and intensive breastfeeding effectively blocks ovulation for a period of time and this has the potential of preventing a woman from conceiving, and it was also found that the length of ovulation return is also determined by the length of time of breastfeeding

(Bongaarts, Frank, and Lesthaeghe 1984). According to Bongaarts and Potters (1983, in Bongaarts, Frank, and Lesthaeghe, 1984) the duration of amenorrhea last longer up to one or two months without breastfeeding after delivery. However, if breastfeeding lasts up to one or two years or more the duration of amenorrhea increases between 60 to 70 percent.

Breastfeeding was considered important in increasing the state of amenorrhea, its prevalence have varried among different generations. Pilkauskas (2014) studied the association between three generations namely; grandparents, parents and children coresidence and breastfeeding behaviours among the U.S. communities in the period of 1998 and 2000. She used two data sets from Early Childhood Longitudinal Study (ECLS) and Fragile Families and Child Wellbeing Studies (FFCWS) a national representative sample of 8250 and 4053 respectively. The data contain cases of information on household structure and breastfeeding as well as information on breastfeeding in the three coresidence. In the study, an association was found between ECLS three generation coresidence and the odds of having ever breastfed. Meanwhile among the economical disadvantage (FFCWS) generation coresidence, the odds of having breastfed was found to be significant. In addition, with regard to the duration of breastfeeding, the study further found that in both ECLS and FFCWS the three generations were signifantly associated with lower odds of breastfeeding for six months or more. In conclusion, it was confirmed in the study that the three generation coresidence was associated with less breastfeeding behaviour. However, the study was faulted for failing to subject the variables understudy for multicollinearity diagnosis.

Similarly, maternal religion seems to influence breastfeeding. Burdette and Pilkauskas (2012) studied maternal religion and breastfeeding initiation and duration so as to establish the link between religion and breastfeeding among US cities. They used data from longitudinal study

from two waves of year 1998 and 2000. The data was obtained from Fragile Families and Child Wellbeing Study (FFCWS) and the sample of 4166 mothers were randomly selected for the study and the mothers were interviewed shortly after birth and also follow up was made after a year. The authors established that the odds of breastfeeding increases with services attendance. Protestants, muslims and other christian and other members of other denomination were more likely to breastfeed their children as compared to those who were not affiliated to any religious group. The study was limited to cities in the US hence this can not be generalized to entire population. Lastly, the variable also under study were not subjected to multicollinearity diagnosis.

Previous studies in sub-Saharan Africa have mentioned breastfeeding being universal and also having common intent in the region (Bongaarts, Frank, & Lesthaeghe 1984). Meanwhile other studies documented variations in mean duration of breastfeeding within the region. For instance the mean duration of breastfeeding in Lesotho is high lasting to over 19 months, Ghana 18 months, Sudan and Kenya 16.5 months respectively. In addition, abstinence increases insusceptibility period to 18 months in Lesotho and 12 months in Sudan (Casterline et al., 1983 in Bongaarts, Frank, & Lesthaeghe 1984). However, over time sub-Saharan Africa has experienced changes in the average duration of breastfeeding. In Lesotho the average years for breastfeeding decreased from 21 months in 2004 to 17 months in 2009; in Ghana it was estimated to 20 months; Kenya 21 months; Egypt 17.1months and Uganda 19 months. The median duration for amenorrhea is high in Uganda (9.4 months) and the lowest being in Egypt (3.4 months). Finally, the insusceptibility also varied between countries, ranging from 11.4 months in Lesotho to 3.8 months in Egypt (GSSGHS & ICF international, 2009; KBOS & ICF International, 2010; MOHSWL & ICF International, 2010; MOHPEEA& ICF International,

2015). However, what remained unknown is the level of contribution of breastfeeding to reduction of fertility among women in Uganda.

## **2.5 Theoretical framework**

Non-marital childbearing is being theorized as a rational choice among the single and cohabiting women (Wolfe et al, 2001). The assumption of this premise is that when teens anticipate less benefits from non-marital births, they are more likely to modify their behavior leading to lower chances of bearing children out-of-wedlock and vice versa. Similarly, both Garfinkel et al (2003) and Willis (1999) argued that reduction in child welfare payment by the public, coupled with strong laws enforcement of child support payments as well as establishment of paternity are associated with low non-marital births.

Based on foregoing propositions, non-marital childbearing can clearly be conceptualized under three theories: Social Disorganization theory, Second Demographic transition theory and Economic theory of fertility (Kubrin, 2009; Van de Kaa, 2002; Willis, 1999). On the basis of the limitations of each theory, especially in failing to articulate all the concepts and factors surrounding non-marital childbearing as they are mostly concentrated on the experience of the Western countries, the study adopts the combination of the three theories. The rationale is that the strength of each theory makes up the deficiency of the other and vice versa. The paragraphs that follow succinctly discuss each of the three theories.

### *2.5.1 Social Disorganization Theory*

The Social Disorganization theory was basically used to explain the occurrence of social disorder among young adolescents among the residence which was perceived not random across locales. Kubrin (2009) argued that the central proposition of the theory was based on social breakdown

between two communities, within a given residence, one end being socially organized community while the other end was being socially disorganized. Social disorganization theory mostly focuses on the type of families that fail to promote good behavior within neighborhood resulting to social disorder in terms premarital sex and pregnancy among the young adolescents and youth. Therefore, based on this proposition, in an organized society, families will be able to monitor and mentor good character that facilitate positive interaction, resulting to moral preservation that shape positive characters among the young generation. Tewksbury et al (2013) also contended that due to society failure to supervise the behavior of young generation resulted to family social disorganization. Therefore, these social breakdowns are associated with high rate of poverty among the young generation, this tend to render them more vulnerable to early sexual activity and childbearing. In addition, the situation is worsened by ethnic heterogeneity brought about by migration among the settlements; consequently, social breakdown that results to weakening of family cultural norms of good behavior among young generation (Kubrin, 2009; Tewksbury, Higgins, and Connor, 2013).

### ***2.5.2 Second Demographic Transition Theory***

Linked with social disorganization theory is the Second Demographic Transition Theory (SDTT) (Lesthaeghe, 1992; Van de Kaa (2002). It is based on the premise that socio-economic developments among countries have weakened the institution of marriage. This revolution brought by SDTT provides a framework to describe demographic change which had occurred in family formation typically characterized by; substantial decline in period fertility resulting from postponements of births, decline in rates of marriage, coupled with increased mean age at first marriage, increased divorce rates, increase in the rates of cohabitation, increased proportion of extra-marital births and modern contraceptives replacing the traditional methods of birth control .

Consequently, (Singh, Darroch, and Frost, 2001; Thornton, Axinn, and Hill, 1992) averred that these revolution in family formation have greatly affected the traditional family formation norms, which were previously been guided by the cultural principles such as early marriage, low divorce, large family size, discouraged premarital sex and pregnancy while the characteristic of second demographic transition, which were part of modernization are more pronounced among women of high socio-economic status. For instance women with low income status and education are more likely to initiate early sexual intercourse and less likely to use contraceptives in first intercourse and bear children at an early age compared to those with high level of income and education.

### ***2.5.3 The theory of Out-of-Wedlock childbearing***

Related to Second Demographic Transition Theory is the Theory of Out-of-Wedlock childbearing by Willis (1999) who argued that, fathers can also shift the costs of child rearing to single mothers, in a precondition that females are in excess supply and have sufficiently resources, a breakeven point occurs in marriage market where children are born within marriage to high-income parents, whereas among the low resourced men prefer to father children through multiple partners outside of marriage. In addition, the mothers of the children were voluntarily willing to care for them in the absence of the fathers.

Therefore, the theory is based on proposition that, for non-marital childbearing to occur, women must have sufficient resources both in absolute numbers and relative terms to be able to care for their children. To add to the foregoing, Willis (1999) argued that men who have low-income opt to father children out of marriage with different women, and women from the lower income groups were said to have voluntarily taken the responsibility of rearing the children out of

marriage using their personal resources without or minimum support from the fathers of their children.

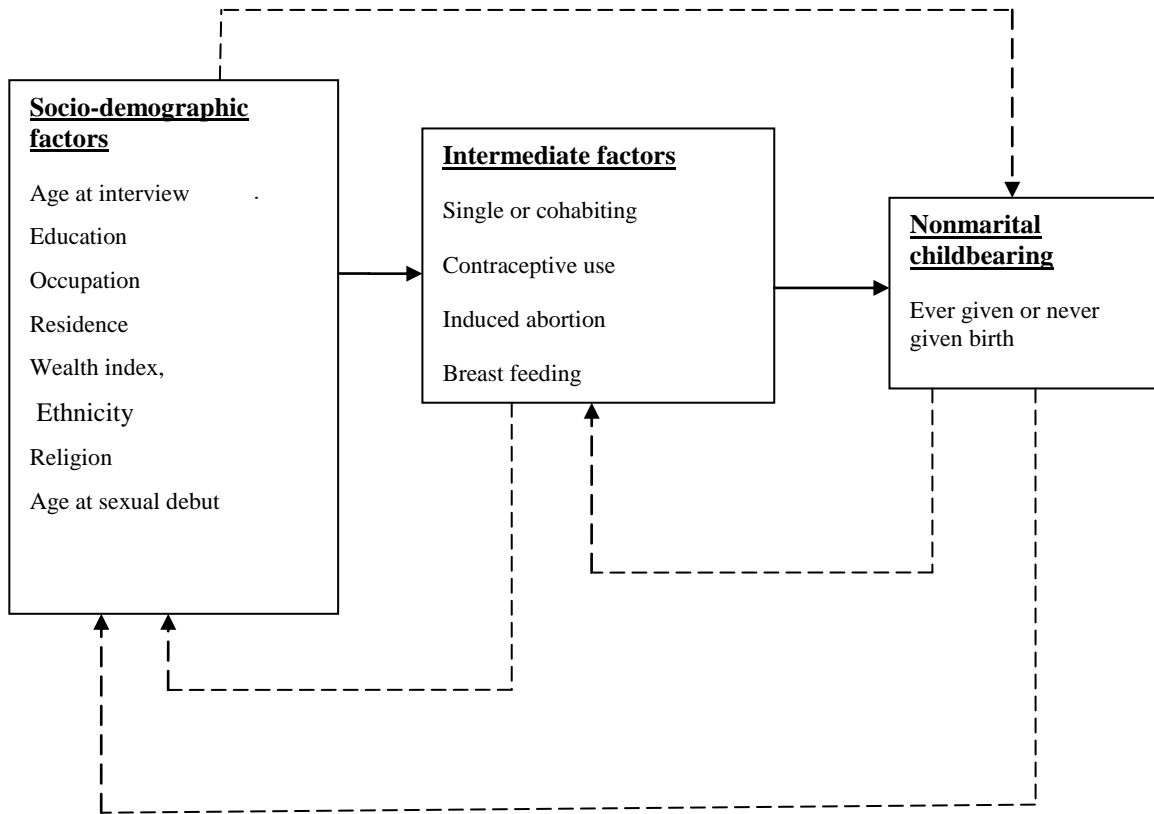
Consequently, the theory supports the view of the literature that suggests that reduction in welfare programmes followed with strong law enforcement on child support and establishment of the paternity of the child will minimize the prevalence of non-marital childbearing (Garfinkel et al., 2003). Therefore, the following paragraph discusses how the variables in both literatures review and theoretical framework operates to influence fertility outcome among the single and cohabiting women as illustrated using the conceptual framework below.

## **2.6 Conceptual framework**

Based on the above theories and literature, a conceptual framework was adapted as shown in figure 1 overleaf. The model shows how the variables operate both directly and indirectly to influence the overall level of non-marital fertility among Ugandan women. These variables were grouped into two parts namely; 1) Socio-demographic; 2) Intermediate factors. The intermediate factors comprise of factors that influence fertility directly while the socio-demographic variables operate indirectly through Intermediate factors to influence the levels of non-marital fertility among women. That is to say, socio-demographic characteristics like, age at interview, level of education, occupation, residence, wealth index, ethnicity, religion, and age at sex debut operate indirectly by modifying the intermediate factors such as proportion single or cohabiting women, contraceptive, induced abortion, and breastfeeding to influence overall level of non-marital fertility among women in Uganda resulting to ever given birth and never given birth. Therefore, the thick arrows in the figure below represent the direct relationship between the background variables and the intermediate variable leading to fertility outcome. The dotted arrows represent the remote relationship that operates between the variable under study.



**Figure1:** Conceptual Framework shows how the Socio-demographic factors operate remotely through intermediate factors to influence nonmarital childbearing among women in Uganda.



Adapted from Bongaarts framework of proximate determinants of fertility (1978) and wood, 1994.

## CHAPTER THREE

### METHODOLOGY

#### ***3.0 Introduction***

This chapter describes the source of data, description of variables and analytic techniques used in this study.

#### **3.1 Source of data**

The study used cross sectional data collected during Uganda Demographic and Health Surveys (UDHS) 2011. The national representative sample of 8674 women of reproductive age 15-49 who answered the questionnaire correctly constituted the study population (UBOS, 2012) .

The 2011 UDHS drew sample of population within the country which comprise of both rural and urban areas, within the ten regions in Uganda. A sample representative of 10,086 was selected for 2011 UDHS study. The sample was selected into two stages. The first was 404 enumeration areas based on 2009/10 Uganda National Household Survey (2010 UNHS) all these are based on 2002 population census sample frame. And the second stage being the listing of the households within the cluster listed in the enumerated areas. All women aged 15-49 who were permanent residents in the household including visitors and also men aged 15-54 were listed for the study (UBOS and ICF International, 2012).

The survey used four types of questionnaires namely; household, women, maternal mortality and men's questionnaire. Current study used women's questionnaires which covered women aged 15-49 years and it contained important information such as their background characteristics, birth history, breastfeeding, knowledge and use of family planning methods, marriage and sexual activities, women's work background and awareness and behavior regarding AIDS and Sexually

Transmitted Infections (STIs). Therefore, all these information help to provide detailed information about the women fertility history in this study (UBOS and ICF international, 2012). During the study, 9,247 eligible women were solicited from the households, out of which 8674 women completed the questionnaires correctly yielding the response rate of 94 percent (UBOS, 2012). Out of the 8674 women who were interviewed, a sample of 4489 never married women were selected for this study and these comprised of women who were not in union and those who were cohabiting.

## **2.2 Description of variables and their measurements**

The dependent variable used in this study is birth over the past twelve months which is re-coded into dichotomous form of question. This variable was re-coded to 0 if a woman had not given live birth and 1 if a woman had given live birth. The code 1 was used as an indicator of non-marital birth based on her marital status.

The independent variable such as the socio-demographic factors and intermediate factors forms the background characteristics of the never married women. These social factors were composed of; current age, level of education, occupation, wealth index, ethnicity, and religion, while the demographic factors refers to age at sex debut and finally the intermediate factors were made up of marital status, contraceptive-use, induced abortion and breastfeeding. Therefore, age at interview was recorded into seven categories in five years age interval; e.g. 15-19, 20-24...44-49 which form a cohort. The level of education was re-coded into three categories which comprise of women with no education and primary education were combined to form a group of primary or less, women with secondary education, and finally those women with higher level of education. Women's Wealth Index were re-coded into three categories: poor, which comprise of the poorest and poorer in wealth index groups, women of middle wealth index group and rich

forms a combination of the rich and the richest wealth index group and all this were calculated using household assets ownership e.g. a dwelling with adequate walls, crowding to name a few. Women's occupation was also recoded into two categories: those who are working and those who were not working. Those who are working comprise of, women who work as; technical, managerial, clerical, sales services, self-employed in agricultural activities and those who work as agricultural employees.

Other measures analyzed include the usual places of residence, categorized into rural and urban. Ethnicity was grouped into four major ethnic groups and other minor ethnic groups: The Bantu (Baganda, Banyakole, Basoga, Bakiga, Banyarwanda/Mufumbira, Bagishu, Batoro, Bunyoro, Bagwere and Bakonjo); the Nilotic (Langi, Alur, and Acholi, Karamajong and Iteso); and other ethnic groups (Lugbara, Madi and others). Women's religion mainly comprised of Christians and Muslims. The Christians were comprised of Catholics, Protestants, Pentecostal and SDA. Meanwhile the Muslims remained a single religion. The demographic measures included in this age cohort were categorized into; age at birth, which was recorded into three groups; age below 20 years, 20-24 and 25 years and above. This age was grouped into such category for the purpose of understanding the highest peak in age through which nonmarital births do occur. Meanwhile age at sex debut was grouped into two categories; less than 20 years, 20 years and above. The reason is to understand the risk ages at which sexual debut usual occur among unmarried women. Marital status comprised of never married women who have not been in union and those who were living together with a partner.

The intermediate determinants of fertility consist of factors that influence fertility directly. These comprise of proportion of women of sexually active women (Never in union and living together). The method of contraceptives used ranges from: not using any method, pills, IUD, Injections,

Condom, female sterilization, periodic abstinence, withdrawal, Implant/ Norplant and others which were re-coded into three categories: not using any method, modern contraceptives and traditional method. Induced abortion, consist of those who have ever terminated pregnancy and those who did not and finally women who gave birth in the past 12 months and were breastfeeding and those who do not were also included.

### **3.3 Analytical Techniques and Specifications of the Model**

Statistical Package for Social Sciences (SPSS) version 21 and excel spread sheet was used for analyzing the data. The analyses were carried out in five parts. Firstly, univariate analysis of descriptive statistics was conducted to describe the percentage distributions of non-marital births among the never married women according to their background and behavioral characteristic. Secondly, Bongaarts model was used to analyze the contribution of non-marital fertility to overall level of fertility among women in Uganda. Thirdly, the level of associations between the dependent variable (non-marital birth) where the question whether a woman had ever given birth were used as a proxy variable) and the selected background and behavioral characteristics were tested using Pearson's Chi-squares ( $\chi^2$ ). Fourthly, correlation matrix was conducted to test the strength of correlation and the effects of multicollinearity on the variables. And fifthly, logistic regression analysis was used to test the odds of occurrence of non-marital birth among the never married women. Therefore, all these statistical analyses were applied so as to determine the effect of socio-demographic and intermediate factors influence on non-marital childbearing among the never married women in Uganda.

### 3.4 Application of Bongaarts model to estimate the contribution of non-marital fertility

The demographic implication of proximate determinants have long been studied by demographers like Davis and Blake who identified eleven variables in which they believed to have influence on the overall level of fertility. These variables were later on collapsed by Bongaarts and Potter into eight main proximate determinants and grouped into three broader categories. Therefore, it is well known that these factors produce great changes that affect fertility directly like change in marriage, contraceptive use, abortion and postpartum Infecundability (Bongaarts, 1978; Bongaarts and Potter 1983). However, scholars like Reinis (1992) also argued that the fertility-inhibiting effects of non-marriage, contraceptive use, induced abortion and Lactational Infecundability prevents a population from realizing its possible fecundity. Therefore, in this study Bongaarts model is adapted because it is cheap to use and require fewer data and at the same time it is very informative. Although the model was previously designed specifically to address marriage component based on the European experience, in African societies marriage is a process so the meaning have varied in its context. For this particular study, the proportion non-married were used instead of proportion married as proposed by Reinis and Stover who argued that in case of increased sexual activities and childbearing outside marriage the proportion non-married can be used (Reinis, 1992; Stover, 1998). Below is the summary of Bongaarts model which is summarized as follow;

$$TFR = C_m * C_c * C_a * C_i * TF$$

Where  $C_m$  is the index of proportion married,  $C_c$  is the index of contraceptive use,  $C_a$  index of abortion,  $C_i$  index of postpartum Infecundability and TF is the total fecundity which is estimated at average child birth 15.3 per woman. However, the model has a specificity which is used to

calculate the effects of these variables separately based on five years age specifics, that is 15-19 to 45-49 (Bongaarts, 1982).

(a) *Index of proportion married*

$C_m$  equals to 1 if all women of reproductive age are married and 0 in the absence of marriage.

$$C_m = \{\Sigma(f(a)*m(a)) / \Sigma f(a)\}.$$

Where  $m(a)$  equals to proportion married among females aged 15-49 and  $f(a)$  represents age specific fertility rates. Therefore, marriage is used as a proxy for sexual activity but primarily it was meant to estimate the period where a woman was not sexually active. The reason being that by then the data on sexual activity was rare. The model was widely used due to lack of information on sexual activity and childbearing which was mostly restricted to marriage in 1978. However due to socio-economic development, several surveys on fertility were carried out by Demographic and Health Surveys (DHS) and information on sexual activity was made available (Stover, 1998). This study used information on women who were sexually active and disaggregated them to different marital status such as living together and never in union suggested by Bongaarts model, so as deduce the contribution of unmarried women to overall levels of fertility in Uganda.

(b) *C<sub>c</sub> index of contraception*

The index of contraceptive use varies according to the level of prevalence and use effectiveness, where contraceptive use equals to 1, if all fecund women do not effectively use contraception to prevent pregnancy and equals to 0 if all fecund women use effective contraceptive to avert pregnancy according to Bongaarts and Potter (1983), this was expressed as follows:

$$C_c = 1 - 1.08 * e * u$$

Where;  $u$  is contraceptives prevalence among married women and  $e$  is the use effectiveness of contraception: where 1.08 is the adjustment factors (or the age specific equivalents: 1.02, 1.02, 1.03, 1.04, 1.12, 1.33, and 2.08) was designed to remove infecund women from the equation, so that the contraceptive index would become zero if effective prevalence reached 92.5 percent (the remaining women are assumed to be infecund) (Stover, 1998). In this equation, it is assumed that only fecund women used contraceptives.

(c)  $C_a$  *Index of induced abortion*

The index of induced abortion is intended to measure the inhibiting effects of induced abortion on fertility in a given population. The index of induced abortion assigned to this study is 1.0 due to inadequate data. Therefore, the index of abortion is calculated using the following formula;

$$C_a = TFR / (TFR + b * TA) = TFR / (TFR + 0.4(1 + u) * TA)$$

Where  $u$  = prevalence of contraceptives use among married women.  $b$  = births averted per induced abortion and  $b = 0.4(1+u)*TA$ .  $b = 0.4$  when  $u = 0$  when  $u = 1.0$ .  $TA$  = Total Abortions,  $C_a = 1.0$  if the  $TA$  is 0. In this particular study the total abortion rate is 0

(d)  $C_i$  *index of postpartum Infecundability*

The index of postpartum Infecundability describes the effect of extended period of postpartum amenorrhea. The index is calculated using Bongaarts model as shown below:



$$C_i = \frac{20}{18.5 + i}$$

Where  $i$  = average duration of postpartum insusceptibility. However in the absence of  $i$  estimate, it is calculated from average months of breastfeeding using the following formula;

$$i = 1.753 \exp(0.1396x B - 0.018772x B^2)$$

Where  $B$  is the duration of breastfeeding, in this study, the Uganda Demographics and Health Surveys 2011/2012 had provided the mean postpartum insusceptibility at 12.3 months.

### *Bivariate Cross Tabulations*

Categorical variables were cross-tabulated with the dependent variable, such as marital status of women (non-marital) and women who have ever given birth. The SPSS Program was used to compute the Chi-Square values, and the confidence interval was set at 95%, and the level of significance was defined at 5%. The decision criterion that the researcher used was as follows;

- (a) *“If the  $\chi^2$  value is greater than 5 percent (0.05) it means the level of association is not significant.*
- (b) *“If the  $\chi^2$  value is less than 5 percent (0.05) the relationship is significant.*

Then finally chi-squares formula below is adopted for this study;

$$\chi^2 = \sum(f_o - f_e)^2 / f_e$$

Where;  $\chi^2$  = computed Chi-square;

$\Sigma$  = sigma notation/ summation sign.

$f_o$  = is the observed frequency from responses in different questions.

$f_e$  = expected frequency, computed from the given observed frequency.

Therefore, in order to assess whether the bivariate significance remained, there is need to examine the level of association using multivariate context using logistic regression.

### *The Logistic Regression*

Since the dependent variable is binary (*dichotomous variable*), the *logistic regression model*, which is a special type of *multinomial regression*, was adopted where the dependent variables take the values 0 or 1. Its parametric estimators are *beta-coefficients* ( $\beta$ ), and *odds ratio*. In this model, the predictor/explanatory variables (independent variables) were several in numbers. The magnitude of the influence of each independent variable “X” on the dependent variable “(non-marital birth), ever given birth,” was expressed as “Odds Ratio”, which signifies the importance of each categorical variable of the main variable in relation to the appropriately designated “*reference category*” in the model. This study modified logistic regression model by (Peng, Lee, and Ingersoll (2002)), which was specified as follows:

$$\ln \frac{p_i}{1-p} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12}$$

Where; P denote the probability of event occurring (non-marital childbearing), 1-P denote the probability of event not occurring (non-marital childbearing),  $\beta_0$  denote the Y intercept (represents the value of the criterion where the predictor is equal to zero),  $\beta$  Denotes the regression coefficient to be estimated and ln in model represent the log of the odds of a woman having non-marital child birth.

$X_1$  represents the age at interview which are categorized into age groups below 20 years, 20-24 years, and those aged 25 years and above.  $X_2$  represents place of residence which is categorized into rural and urban.  $X_3$  represents level of education among the unmarried which is also categorized into three groups namely: primary, secondary and higher level of education.  $X_4$

represents occupation which is also categorized into three groups, namely: those who were not working, those who were working as service providers and those unmarried women who work in agricultural industry.  $X_5$  denote wealth index which is divided into three groups; the poor, middle income and the rich wealth index bracket.  $X_6$  denote ethnicity which is made of Bantu, Nilotic and other ethnic groups.  $X_7$  denotes Religion which is categorized into two; the Christian and Moslems.  $X_8$  denote unmarried women age at sex debut which is divided into two categories namely: women aged less than 20 years and those aged 20 years and above.  $X_9$  represents marital status which is made up of two groups, those who are in union and those who fall in the categories of living together.  $X_{10}$  denote contraceptive use which is divided into three categories; those who were not using any method and those who used traditional method of contraceptives and the group who used modern method respectively.  $X_{11}$  denotes induced abortion which is made up of those who had abortion and those who did not experienced any abortion. Finally  $X_{12}$  denote breastfeeding, which is also divided into two categories namely; those unmarried women who had breastfeeding and those who did not.

## CHAPTER FOUR

### 4.0 DATA ANALYSIS AND INTERPRETATION

#### *4.1 Introduction*

This chapter presents data analysis and their interpretations. The results are presented in the following paragraphs, the results begins with background characteristics of the never married women which comprised of socioeconomic-demographic and proximate factors as shown in table 1 and 2 below. Table 3 and 4 presents the data required to apply Bongaarts model, as well as the indices calculated from the model. Table 5 presents the results of bi-variate analysis from chi-square test to assess the level of association between the independent variables and dependent. Table 6 presents correlation matrix for both dependent variables and independent variable for detecting the effect of Multicollinearity in the variables. In table 7 and 8 the predictor variables were subjected to binary logistic regression model to determine the odds of having non-marital birth among the never married women in Uganda.

**Table 1: Background characteristics of the non-married women**

<b>Variables</b>	<b>Number (N)</b>	<b>percent (%)</b>
<b>Age</b>		
15-19	1799	40.1
20-24	1020	22.7
25-29	729	16.2
30-34	388	8.6
35-39	288	6.4
40-44	167	3.7
45-49	98	2.2
<b>Marital status</b>		
Not in union	2208	49.2
Living together	2281	50.8
<b>Place of residence</b>		
Urban	1546	34.4
Rural	2943	65.6
<b>Level of education</b>		
Primary or less	2855	63.6
Secondary	1295	28.8
Higher	339	7.6
<b>Occupation</b>		
Not working	1553	34.5
Services providers	1135	25.3
Agric industry	1801	40.1
<b>Wealth index</b>		
Poor	1421	31.7
Middle	700	15.6
Rich	2368	52.8
<b>Ethnicity</b>		
Bantu	2706	60.3
Nilotic	935	20.8
Other ethnics	864	18.9
<b>Religion</b>		
Christian	3863	86.7
Muslims	591	13.3

In Table1 above, at least a third (40.1) of the unmarried women in Uganda were aged between 15-19 years old. The second larger proportion ranged between the ages of 20-24 years (22.7%) while third large age group ranged between 25-29 (16.2%) respectively. Only smaller proportion of the unmarried women were aged 30 years and above. Over half (51%) of the respondents were made up of cohabiting (living together) while 49% belong to never in union category. More than half (66%) of the unmarried women live in rural areas compared to those who live in urban areas (49%). Besides, (63.6%) of the unmarried women had primary or no education, followed by those who had secondary (28.8), and those with high education (7.6%) respectively. Over a quarter (40.1%) of the unmarried women were engaged in agricultural industry, followed by

those who were not working (34.5%), while the rest of them were engaged in providing professional services (25.3%). Above half (52.8%) of the unmarried women belong to the rich category in the wealth index, followed by those who fall in the poor wealth index category (31.7%). Only 15.6 % of unmarried women belong to middle wealth index bracket.

Furthermore, over half (60.3%) of the unmarried women belong to Bantu ethnic groups, while less than a quarter (20.8%) of the unmarried women came from Nilotic ethnic group, and lastly 18.9 % belonged to other ethnic groups in Uganda. Lastly, majority (87%) of the unmarried women were from Christian background while less than a quarter (13%) were from Muslim background.

**Table 2: Shows the intermediate determinants of fertility and non-marital births, among women in Uganda**

<b>Variables</b>	<b>Number (N)</b>	<b>percentage (%)</b>
<b>Birth within 12 months</b>		
Yes	3695	17.7
No	794	82.3
<b>Age at sexual debut</b>		
Under 20	2657	88.4
20+	347	11.6
<b>Contraceptives</b>		
No method	3633	80.9
Traditional method	743	16.6
Modern method	113	2.5
<b>Induced Abortion</b>		
<b>No</b>	4250	94.7
<b>Yes</b>	238	5.3
<b>Breastfeeding</b>		
No	3393	75.6
Yes	1096	24.4

In Table 2 above shows the intermediate determinants of fertility and nonmarital births among the never married women in Uganda. The results in the Table 2 above show that only 17.7% of the unmarried women have given birth. The median age at sex debut in Uganda is 15 years. With

regards to age at sex debut, majority (88.4%) of the unmarried women had their sex debut at age less than 20 years while smaller proportion had their sex debut at age of 20 years and above.

Furthermore, 80.9 % of unmarried women in Uganda did not use any method of contraceptive compared to those who use modern method of contraceptives (16.6%) and traditional method (2.5%) respectively. Besides, smaller (5.3%) proportion of unmarried women reported to have had abortion compared to majority (94.7%) of them who did not. Lastly, almost quarters (24.4%) of the respondents were reported to have had breastfeeding compared to three quarter (75.6%) of them who did not breastfeed preceding the survey.

#### **4.2 Fertility inhibiting effects of intermediate determinants on Non-marital Childbearing**

In order to estimate the effects of four major proximate determinants of fertility which were proposed by Bongaarts and Potter (1983) for the sake of convenience, the proportion of women who single and cohabiting was used to replace proportion married as suggested in the original model, contraception, induced abortion and postpartum insusceptibility (Breastfeeding). The contribution of nonmarital childbearing is measure by apply three types of marital status; married, married and cohabiting, cohabiting and singles and finally combination of married, cohabiting and the singles. The rational of using these unions is to find out the fertility inhibiting effect of single and cohabiting and their contribution to overall level of fertility. The Total Fertility Rates (TFR) was calculated from sum of Age Specific Fertility Rates (ASFR) of five years age groups multiplied by 5. Age Specific Marital Fertility Rate (ASMFR) or Age Specific Non-Marital Fertility Rate (ASNMFRR) was calculated by summing up ASMFR for each five years age group and the total was multiplied by five, whereas Age Specific Fertility Rates (ASFR) was derived by dividing the number of births by the sum of women in five years age brackets among different kinds of unions. The proportion of contraceptive use was calculated

from sum of modern contraceptive use among different age groups of sexual active women divided by sum of women in the reproductive age groups (15-49). Total Abortion Rates (TAR) was obtained by dividing the sum of abortions among women against the total women of reproductive age. The average duration of postpartum amenorrhea was obtained from UDHS 2011 report, while the effectiveness for contraceptive use was estimated. Total fecundity here refers to the absence of fertility-inhibiting effects of proximate determinants which were also prior estimated in the Bongaarts model. The summary information required for the application of Bongaarts model is presented in the table below.



**Table 3: Estimates for reproductive measures used in this study form UDHS 2011**

<b>Variables</b>	<b>Reproductive information</b>	<b>Values</b>
<b>Married</b>	Total Fertility Rate (TFR)	8.8188
	Total marital fertility Rate (TMFR) in the Bongaarts index	3.1129
	Proportion of contraceptive use(u)	0.2481
	Contraceptive use effectiveness(e)	0.85
	Average duration of postpartum amenorrhea (i)	12.3 months
	Total Abortion Rate (TFR)	0.2576
<b>Married and Cohabiting</b>	Total Fertility Rate (TFR)	8.7534
	Total marital and cohabitation fertility Rate (TMCFR) in the Bongaarts index	5.5504
	Proportion of contraceptive use(u)	0.2464
	Contraceptive use effectiveness(e)	0.85
	Average duration of postpartum amenorrhea (i)	12.3 months
	Total Abortion Rate (TFR)	0.2478
<b>Cohabiting and Never in union</b>	Total Fertility Rate (TFR)	6.1691
	Total Non-Marital Fertility Rate (TNMFR) in the Bongaarts index	2.6977
	Proportion of contraceptive use(u)	0.1655
	Contraceptive use effectiveness(e)	0.85
	Average duration of postpartum insusceptibility (i)	12.3 months
	Total Abortion Rate (TFR)	0.1290
<b>Married, cohabiting and Never in union</b>	Total Fertility Rate (TFR)	6.7293
	Total Marital, Non-Marital fertility Rate (TMNMFR) in the Bongaarts index	5.8106
	Proportion of contraceptive use(u)	0.1991
	Contraceptive use effectiveness(e)	0.85
	Average duration of postpartum amenorrhea (i)	12.3 months
	Total Abortion Rate (TFR)	0.1812

**Table 4:** Shows the indices of intermediate determinants of fertility based on the marital status of women in Uganda

<b>Marital Status</b>	<b>C<sub>m</sub></b>	<b>C<sub>c</sub></b>	<b>C<sub>a</sub></b>	<b>C<sub>i</sub></b>	<b>C<sub>c</sub>*C<sub>i</sub></b>	<b>TF</b>	<b>TFR</b>
<b>Married</b>	0.3530	0.7722	0.9856	0.6494	0.5015	15.3	2.67
<b>Married and Cohabiting</b>	0.6341	0.7738	0.9861	0.6494	0.5025	15.3	4.81
<b>Cohabiting and Never in union</b>	0.4373	0.9848	0.9396	0.6494	0.6400	15.3	4.02
<b>Married, cohabiting and Never in union</b>	0.8633	0.8172	0.9872	0.6494	0.5307	15.3	6.92

The results presented in Table 4 above shows that in 2011 Uganda Demographic and Health Surveys (UDHS), the proportion of women who were cohabiting and those who were never in union contributed the highest reduction effect on fertility 56% percent ( $C_m=0.4373$ ), while the postpartum infecundity became the second most important variable, that contributed 35 percent ( $C_i=0.6494$ ) fertility reduction effect, induced abortion came the third important contributor, it accounted for 6 percent ( $C_a=0.9396$ ) fertility reduction and contraceptive use was the least contributor towards reduction of fertility, it amounted to 2 percent ( $C_c=0.9848$ ) and combination of contraceptives and postpartum amenorrhea accounted to 36 percent ( $C_c*C_i=0.6400$ ) fertility reduction among the cohabiting and women who were never in union.

Additionally, married women had the highest fertility reducing effect, they accounting for 65 percent ( $C_m = 0.3530$ ) towards overall level of fertility reduction. This is simply so because

marriage is no longer a requirement for childbearing as proposed by Reinis (1992). Therefore, this result confirms that marriage in Uganda has declined as a requirement for childbearing among women. Contraceptives Postpartum amenorrhea was the second contributor, it accounted for 35 percent ( $C_i=0.6494$ ). Came the third contributing factor, which amounted to 23 percent ( $C_c=0.7722$ ) fertility reducing factor and induced abortion was the least, it only contributed 1 percent ( $C_a=0.9856$ ). Combining the effects of contraceptive and postpartum amenorrhea, both the two factors contributed 49.9 percent ( $C_c * C_i=0.5015$ ) fertility reduction effect among married women in Uganda.

Besides, combining marriage and cohabitation, their proportion remained still the most important fertility reducing factor, it reduces total fecundity rate by 37% ( $C_m=0.6341$ ) and postpartum amenorrhea became second important factor in reducing fertility, accounting for 35 percent ( $C_i=0.6494$ ) while the contraceptive use became the third important fertility reduction factor, it reduces fertility by 23 percent ( $C_c=0.7738$ ). Abortion became the least with negligible effect of reducing fertility by 1 percent ( $C_a=0.9861$ ). The combination of contraceptive and postpartum infecundity accounted for 49.9 percent ( $C_c * C_i= 0.5025$ ) reduction in total fecundity among married and those who were in cohabiting union preceding the survey.

Lastly, the combination of married, cohabiting and those women never in union, the highest fertility inhibiting factor was the postpartum amenorrhea, it contributed 35 percent ( $C_i=0.6494$ ), the second important factor was the level of contraceptive use, it accounted for 18 percent ( $C_c=0.8172$ ) fertility reduction among women who were sexual active preceding the survey and the proportion of sexual active women became the third factor, which accounted for 14 percent ( $C_s=0.8633$ ) fertility reduction among them and induced abortion had the least fertility inhibiting factor, it accounted for 1.3 percent ( $C_a=0.9872$ ) fertility reduction among sexual active women in

Uganda. Finally the combination of contraceptive and postpartum amenorrhea contributed 47 percent ( $C_c * C_i = 0.5307$ ) toward fertility reduction among sexual active women in Uganda.

**Table 5:** presents the percentage distribution of respondent background characteristics by whether they experienced births in the last 12 month, Uganda 2011.

Variables	(Non-marital births)		(N)	Total
	No (%)	Yes (%)		
<b>Age</b>				
15-19	92.9	7.1		1799
20-24	74.4	25.6		1020
25-29	69.3	30.7		728
30-34	74.5	25.5		388
35-39	77.4	22.6		288
40-44	92.2	7.8		167
45-49	95.9	4.1		98
$\chi^2 = 311.740$		df =6		p =0.000
<b>Marital status</b>				
Not in union	95.7	4.3		2208
Living together	69.3	30.7		2280
$\chi^2 = 538.354$		df =1		p=0.000
<b>Place of residence</b>				
Urban	85.1	14.9		1546
Rural	80.8	19.2		2942
$\chi^2 = 12.795$		df =1		p=0.000
<b>Level of education</b>				
Primary or less	80.5	19.5		2855
Secondary	84.2	15.8		1295
Higher	90.3	9.7		338
$\chi^2 = 24.567$		df =2		p=0.000
<b>Occupation</b>				
Not working	86.6	13.4		1553
Working	80.0	20.0		2936
$\chi^2 = 30.075$		df =1		p=0.000
<b>Wealth index</b>				
Poor	77.1	22.9		1421
Middle	80.9	19.1		700
Rich	85.9	14.1		2368
$\chi^2 = 47.633$		df =2		p=0.000
<b>Ethnicity</b>				
Bantu	82.0	18.0		2706
Nilotic	83.2	16.8	935	
Other ethnics	82.3	17.7		848
$\chi^2 = 43.441$		df =2		p=0.000
<b>Religion</b>				
Christian	82.4	17.6		3862
Muslims	81.2	18.8		591
$\chi^2 = 0.533$		df =1		p=0.453
<b>Age at sexual debut</b>				

Under 20	75.0	25.0	2657
20+	75.8	24.2	347
$\chi^2 = 0.101$		df = 1	p = 0.751
<b>Contraceptives</b>			
No method	82.7	17.3	3633
Traditional method	81.3	18.7	743
Modern method	18.6	23.9	113
$\chi^2 = 3.923$		df = 2	p = 0.141
<b>Induced Abortion</b>			
No	82.4	17.6	3632
Yes	81.5	18.5	579
$\chi^2 = 0.116$		df = 1	p = 0.727
<b>Breastfeeding</b>			
No	97.7	2.3	3393
Yes	34.8	65.2	1096
$\chi^2 = 2251.818$		df = 1	p = 0.000
<b>Total</b>	<b>3695 (82.3)</b>	<b>794 (17.7)</b>	<b>4489</b>

N= Number, %= Percent, CI= Confidence interval; ® Reference category; Level of significance: \*\* <0.05

Table 5 above shows 4489 unmarried women who were interviewed during the 2011 Demographic and Health Surveys, of which 4488 responded to all questions correctly. Out of those women who responded for this questionnaire correctly, less than a quarter (17.7 %) of them reported to have given birth in the past twelve months preceding the survey. Out of the 17.7 percent of unmarried women who reported to have given birth, a higher percentage (31%) were aged between 25-29 years, compared to those aged between 20-24,30-34 and 35-93 (25.5%, 25.5% and 35-39) respectively. Only 4.1% of unmarried women aged between 44-49 years old reported to have given birth. In addition, births between age groups of 15-19 and 44-49 were almost similar in relative terms (7.1% and 7.8%). The chi square test between women's age and non-marital birth were statistically significant,  $\chi^2 (6, N=4488) = 538.354, p < 0.000$ .

In addition, majority (30.7%) of non-marital births were reported from those women who were cohabiting compared to those who were not in union (4.3%). The chi square test between the never married status and having given birth were statistically significant,  $\chi^2 (1, N = 4488) = 538.354, p < 0.000$ . Regarding resident status, 19.2 % of the never married women who reside in

rural areas were reported to have given birth compared to those in urban areas (14.9%). The chi square test between resident status of the unmarried women and non-marital birth were statically significant,  $\chi^2(1, N =4488) =12.795, p<0.000$ .

Furthermore, 19.5% of the unmarried women with primary education or less were reported to have given birth compared to those with secondary education (15.8%). Only 9.7% of unmarried women with higher level of education reported to have given birth. The relationship between level of education and non-marital birth among women were statistically significant,  $\chi^2(2, N =4488) =24.567, p<0.000$ . With regards to occupation, 20.0% of the unmarried women who were working were reported to have given birth compared those who were not working respectively (13.4%). The chi square test between occupation and never married women who reported to have given birth were statistically significant,  $\chi^2(1, N =4489) = 30.075, p<0.000$ .

Nearly quarter (23%) of the unmarried women from poor wealth index bracket were reported to have given birth compared to those from rich wealth index bracket (14.1%). Only 19.1% of unmarried women who belong to middle wealth index bracket had birth in the 12 months preceding the survey. The levels of association between wealth index bracket and nonmarital childbearing were statistically significant,  $\chi^2(2, N=4488), 47.633, p<0.000$ .

Among the different ethnic groups in Uganda, 18% of the Bantu ethnic group reported to have given birth compared Nilotic ethnic women (16.8%) and other ethnic groups (17.7%) respectively. The level of association between women's ethnicity and non-marital birth were statistically significant,  $\chi^2(2, N =4448) = 43.441, p<0.000$ .

More to that, 18.8 % of unmarried women from Muslim faith were reported to have given birth in the past twelve months preceding the survey compare to unmarried women from Christian

faith (17.67%). The chi square test shows that the relationship between religion and non-marital birth was not statistically significant,  $\chi^2(1, N = 4453) = 0.533, p < 0.343$ . A quarter (25%) of never married women who had their sexual debut at age less than 20 years old were reported to have given birth compared to those women who started their sexual debut at age of 20 years old and above (24.2%). The chi square test between age at sex debut and non-marital childbearing were not statistically significant,  $\chi^2(2, N = 4484) = 0.101, p < 0.751$ .

Additionally, nearly a quarter (24%) of unmarried women who used modern method of contraceptive were reported to have ever given birth compared to those who used traditional method (18.7%) and those who did not use any method of contraceptive (17.3%) respectively. The association between contraceptives use and non-marital birth were not statistically significant,  $\chi^2(2, N = 4488), 3.923, p < 0.141$ . Besides, 18.5% of respondents who had an induced abortion were reported to have given birth compared to 17.6 percent who did not. The chi square test between having had induced abortion and ever given birth were statistically significant,  $\chi^2(1, N = 4488) 0.116, p < 0.727$ .

Lastly, of the respondents who were asked whether they have been breastfeeding their children preceding the survey, over half (65.2%) reported to have given birth compared to those who were not breastfeeding (63.3%). The relationship between breastfeeding and non-marital birth, was statistically significant,  $\chi^2(1, N = 4488) 2251.818, p < 0.000$ .

**Table 6: Correlation Matrix for checking Multicollinearity among the predictor variables used in the model**

Correlations													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	.157	1											
3	.346	<b>.649</b>	1										
4	.053	.015	.107	1									
5	-.073	-.027	-.205	-.389	1								
6	.082	.293	.238	.089	-.083	1							
7	-.103	-.023	-.160	<b>-.506</b>	.423	-.119	1						
8	-.006	-.064	-.012	.107	-.144	.012	-.334	1					
9	.011	.038	.012	-.115	.029	-.083	.138	-.072	1				
10	-.006	.140	-.062	-.115	.288	.056	.075	.011	-.061	1			
11	.027	.244	.231	-.146	.119	.099	.148	-.113	.030	.002	1		
12	.005	.310	.221	.040	-.107	.093	-.029	-.035	-.019	-.039	.080	1	
13	<b>.708</b>	.234	.442	.112	-.125	.108	-.171	.041	-.001	-.020	.077	.032	1

10% represented \*\*Correlation is significant at the 0.01 level. While 5% represent \*Correlation is significant at the 0.05 level.

- 1) Birth in the past 12 months, 2) Respondent's current age 3) Women's marital status, 4) Type of residence, 5) Level of education, 6) Respondent's occupation, 7) Wealth Index, 8) Ethnicity, 9) Main religions in Uganda, 10) Age at first sex, 11) method of contraceptive 12) Terminated pregnancy before the calendar year, 13) currently breastfeeding.
- 2) The Pearson correlation coefficient was used to test the strength of the relationship among the predictors' variables. The criteria used for judging the strength of correlation among variables was if  $r$  is less than 50 percent, the relationship was regarded to be weak and vice versa. Besides, the effect of Multicollinearity between the pairs of predictors was regarded to be strong when values of  $r$  are closer to 1 or -1.
- 3) In addition, the level of significance of correlation coefficients was tested at  $p < .05$ . Based on these criteria, most variables in table 4 above seem to have weak correction amongst



themselves, except strong positive correlation was found between; Breastfeeding and ever given birth in the past 12 months ( $r=.71$ ). In addition, respondent current age and their married status ( $r=.65$ ) was also found to be strongly correlated. Finally strong negative correlations was found between wealth index and type of residence ( $r=-.51$ ). These variables are statistically significant at  $p<.05$ .

With reference to the effect of multicollinearity among the predictor variable above, the table shows no sign of multicollinearity among the variables was detected. Therefore, the variables used in the model(1) Respondent's current age (2) Women's marital status, (3) Type of residence, (4) Level of education, (5) Respondent's occupation, (6) Wealth Index, (7) Ethnicity, (8) Religion (9) Age at first sex, (10) method of contraceptive (11) Ever terminated pregnancy, (12) Currently breastfeeding. The variables under study were purposively selected as they were deemed to be independent from each other. Therefore, the variables under study present no multicollinearity effect between the independent variables as well as the dependant variable (Ever given birth). The variables were then used in logistic regression models as shown in Table 7 below.

**Table 7: Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth by socio-demographic and intermediate variable among women in Uganda**

Variables	Model I 95 CI for EXP (B)			Model II Exp (B)	95 CI for EXP (B)	
	EXP (B)	Lower	Upper		Lower	Upper
<b>Age</b>						
Under 20	0.026**	0.016	0.041	0.025**	0.015	0.041
20-24	0.180**	0.114	0.285	0.167**	0.103	0.270
25-29	0.893	0.528	1.515	0.813	0.473	1.397
30+®	1			1		
<b>Marital status</b>						
Not in union	0.108**	0.081	0.140	0.107**	0.083	0.138
Living together®	1			1		
<b>Place of residence</b>						
Urban ®	0.831	0.618	1.117	0.803	0.596	1.082
Rural	1			1		
<b>Level of education</b>						
Primary or less	5.158**	3.296	8.072	5.682**	3.605	8.958
Secondary	3.664**	2.404	5.585	3.854**	2.518	5.898
Higher®	1			1		
<b>Occupation</b>						
Not working	0.748**	0.576	0.972	0.765**	0.588	0.995
Working®	1			1		
<b>Wealth index</b>						
Poor	1.396	0.912	1.982	1.381	0.935	2.041
Middle	1.256	0.843	1.874	1.239	0.830	1.851
Rich®	1			1		
<b>Ethnicity</b>						
Bantu ®	1.576**	1.125	2.208	1.547**	1.101	2.174
Nilotic	1.337	0.899	1.988	1.354	0.909	2.017
Others	1			1		
<b>Religion</b>						
Christian®	0.662	0.459	0.953	0.659**	0.457	0.949
Muslims®	1			1		
<b>Age at sexual debut</b>						
Under 20	3.823**	2.621	5.576	3.628**	2.478	5.312
20+®	1			1		
<b>Contraceptives</b>						
No method				0.581	0.274	1.232
Traditional method				1.079	0.494	2.356
Modern method®				1		
<b>Induced Abortion</b>						
No				1.449	0.604	3.347
Yes®				1		

**Model I=4449 cases**, Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth by socio-demographic  
**Model II = 4449 cases**, Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth by socio-demographic and intermediate variable among women in Uganda. CI= Confidence interval; ® Reference category; Level of significance: \*\* <0.05

### **4.3 Socio-demographic factors influencing women's life time fertility (children ever born)**

Direct logistic regression was performed to determine the number of factors (socio-demographic) influencing the likelihood of single women who would report that they have ever given birth in their life time. The model contains nine independent variables (current age, marital status, place of residence, level of education, occupation, wealth index, ethnic, and religion, and Age at sex debut). The full model containing all independent variables was statistically significant,  $\chi^2$  (14, N = 2979) 1702.656,  $p < .001$ , indicating that all single women who reported and did not report on the nonmarital birth cases in their life time. Therefore, the model as a whole was able to explain between 43.5 % (Cox and Snell R square) and 63.6% (Nagelkert R square) of variance of ever given birth in their life time and they were accurately classified at 87.2 % of cases.

As displayed in Table 7, **Model I**, only five independent (socio-demographic) factors made significant contribution for the model (Current age, marital status, level of education, occupation, ethnicity and age at sex debut). The strongest predictor of single women reporting that they have ever birth was their level of education recorded an odd ratio of 5.1. This implies that single women who had primary or no education were 5.1 times as likely to report to have given birth in their lifetime compared to those single women with higher level of education, controlling for all other factors in the model. This is followed by single women who had secondary education were 3.6 times as likely to report that they have ever given birth compared to those with higher level of education, controlling for other factors in the model.

Furthermore, single women who started their sex debut early age (less than 20 year) are 3.8 times as likely to report to have given birth compared to those who had their sex debut above 20 years. Single women from Bantu ethnic group were 1.6 times as likely to report to have given birth in

their life time compared to those who belong to other ethnic group, controlling for all other factors in the model. In addition, single women who belong to poor wealth index bracket were 1.3 times as likely to report to have given birth in the past month compared to those women who belong to the rich bracket of wealth index, controlling for all other factors in the model, although the relationship was not significant.

In addition, single women from Christian Background were 0.7 times less likely to report to have ever given birth compared their Muslim counterpart, controlling for all other factors in the model. The last category is single women who were not working are 0.8 times less like to report to have ever given birth compared to those who were working, controlling for other factors in the model. Single women aged less than 20 years were 0.03 times less likely to report to have ever given birth compared to women aged 30 years and above, controlling for other factors in the model, followed by those aged 20-24 years age group (0.2) respectively. The following paragraph contains the combination of socio-demographic and intermediate variables on single women life time fertility.

#### **4.4 Socio-demographic and proximate factors influence on non-marital childbearing**

After introduction of intermediate variables into the socio-demographic variables, a direct logistic regression was performed to control for the likelihood that single woman would report to have ever given birth as shown in table 7 Model II above.

The model contains eleven independent variables. These include: Current age of the respondent, marital status, place of residence, level of education, occupation, wealth index, ethnicity, and religion, age at sexual debut, contraceptive use and abortion. The full model containing all the predictors variables were statistically significant,  $\chi^2 (17, N =2978) =1719.177, p<.001$ , indicating that unmarried women who reported and did not report to have given birth in their life time. The

model as a whole explained between 43.9 % (Cox and Snell R square) and 64.1% (Nagelkerke R square) of variance in having given birth status of women, and correctly classified 87.4 % of the cases. With reference to Table 7, **models II**, only seven variables made outstanding statistically significant contribution to the model (respondent current age, marital status, level of education, ethnicity, religion, and age at sex debut).

The strong predictors of ever given birth in unmarried women life time were their level of education (5.7). Therefore, this meant that unmarried women who had primary or no education were 5.7 times as likely to report to have given birth compared to those who were not breastfeeding, controlling for other factors in the model. This was followed by those unmarried women who had secondary education (3.9) respectively.

Single women who had their sex debut at age less than 20 years were 3.6 times as likely to have given birth compared to those who had their sex debut at age of 20 years and above, controlling for other factors in the model. In addition, unmarried women of Bantu ethnic group were 1.5 times as likely to report to have given birth compared to other ethnic groups, controlling for other factors in the model. In addition, unmarried women aged under 20 years were 0.03 times less likely to have given birth compared to women aged 30 and above, controlling to other factors in the model.

Similarly, this was followed by unmarried women of age group between 20-24 were 0.02 times less likely to report to have given birth as compared to unmarried women aged 30 years and above, controlling for other factors in the model. More so, women who were not in union were 0.1 times less likely to report to have given birth compared to those women living together with a partner, controlling for other factors in the model.

Furthermore, unmarried women who were not working were 0.8 times less likely to report to have given birth compared to those women who were working, controlling for other factors in the model. Single women of Bantu ethnic group were also 0.8 times less likely to report to have given birth compared to other ethnic group, controlling for all other factors in the model.

Finally, single women of Christian faith were 0.7 times less to report to have given birth in their life time as compared to Muslim women, controlling for all other factors in the model. Therefore, the following table presents an analysis of the change effect of socio-demographic and intermediate variables on non-marital fertility behaviour over time based on the current fertility.

**Table 8: Net Odd ratios for Logistic Regression Model Estimating the Likelihood of having non-marital birth in the past 12 months by socio-demographic and intermediate variable among women in Uganda**

Variables	Model I	Model II	Model III
	Gross model ( $\beta$ )	Exp (B)	Exp (B)
<b>Age</b>			
Under 20	0.322**	2.025**	2.067**
20-24	1.444**	2.655**	1.718**
25-29	1.862**	2.159**	1.520**
30+®	1	1	1
<b>Marital status</b>			
Not in union	0.100**	0.241**	0.516**
Living together ®	1	1	1
<b>Place of residence</b>			
Urban	0.737**	0.881	1.266
Rural ®	1	1	1
<b>Level of education</b>			
Primary or less	2.248**	1.566**	0.933
Secondary	1.734**	1.621**	1.032
Higher®	1	1	1
<b>Occupation</b>			
Not working	0.620**	0.935	0.876
Working®	1	1	1
<b>Wealth index</b>			
Poor	1.800**	1.509**	1.027
Middle	1.437**	1.226	1.113
Rich ®	1	1	1
<b>Ethnicity</b>			
Bantu	1.021	1.144	1.433**
Nilotic	0.939	0.871	0.790
Others®	1	1	1
<b>Religion</b>			
Christian	0.921	0.935	0.973
Muslims®	1	1	1
<b>Age at sexual debut</b>			
Under 20	1.043	0.783	0.854
20+®	1	1	1
<b>Contraceptives</b>			
No method	0.666		1.845**
Traditional method	0.733		0.982
Modern method ®	1		1
<b>Induced Abortion</b>			
No	0.943		1.421**
Yes ®	1		1
<b>Breastfeeding</b>			
No	0.943		0.021**
Yes	1		1

**Model I:** Gross model for individual variables; **Model II:** Net odds for socio-demographic variable; **Model III:** Net odds for Socio-Demographic and intermediate variables; ® Reference category; Level of significance: \*\* <0.05

#### **4.4 Socio-demographic and intermediate factor's influencing the current fertility among single and cohabiting women.**

A gross logistic regression Model I was performed on individual socio-demographic and intermediate variables to establish their individual influence on single women's birth status in the past 12 months preceding the survey. These variables comprise of woman's current age, marital status, place of residence, level of education, occupation, wealth index, ethnicity, religion, age at sex debut, contraceptive use, induced abortion and breastfeeding.

Out of these twelve variables, only half (6) of the independent variables made statistically significant contribution to the model (current age, marital status, place of residence, level of education, occupation and wealth index). The strong predictors of having given birth over the past 12 months were women's level of education (2.2). This means that single women with primary or no education are 2.2 times as likely to report to have given birth in the past 12 months compared to those with to those with higher level of education.

It is also followed by those with secondary education were 1.7 times more likely to report to have given birth in the past 12 months compared to those with higher level of education. Single women aged between 25-29 years old 1.9 times more likely to report to have given birth in the past 12 months compared to those aged 30 years and above. Followed by women aged between 20-24 years old were 1.4 times more likely to report to have given birth compare to those aged 30 years old and above. Single women aged below 20 years old were 0.3 times less likely to report to have given birth compared to those aged 30 years and above.

Single women who fall in poor wealth index bracket were 1.8 times more likely to report to have given birth in the past 12 months as compared to those from rich wealth index bracket. Single women who reside in urban areas were 0.7 times less likely to report to have given birth



compared to those who live in rural areas. Single women who were not working were 0.6 times less likely to report to have given birth in the past 12 months compared to those who were working. Lastly women who were not in union were 0.1 times less likely to report to have given birth in the past 12 months compared to those who were living together.

In Model II above, after controlling for socio-demographic factors such as; current age of a Single woman, marital status, place of residence, level of education, occupation, wealth index, ethnicity, religion and age at sex debut. Only four variables made statistically contribution to unmarried women birth status (Current age, marital status, level of education and wealth index).

The strong predictor of a woman giving birth on the past 12 months was her age (2.7). This means that women aged between 20-24 years were 2.7 times more likely to report to have given birth compared to women aged 30 years and above, controlling for other factors in the model.

This was followed by women aged 25-29 years old and those aged below 20 years (2.2 and 2.0) respectively, compared to women aged 30 years and above, controlling for other factors in the model. The second leading variable was the women's level of education, women primary or no educations as well as those who had secondary education were 1.6 times more likely to report to have given birth in the past 12 months preceding the survey compared to those with higher education, controlling for other factors in the model.

Wealth index also made a significant contribution, Single and cohabiting women from poor wealth index bracket were 1.5 times more likely to report to have given birth compared those from rich wealth index bracket, controlling for other factors in the model. Lastly women who were not in union were 0.2 times less likely to report to have given birth in the past 12 months

preceding the survey compared to those who were living together, controlling for other factor in the model.

Furthermore, after the introduction of intermediate variables (Contraceptives, induced abortion and breastfeeding) into socio-demographic variables in Model III above, only five socio-demographic and intermediate variables made statistically significant contribution to the model such as; current age, marital status, ethnicity, contraceptive, abortion and breastfeeding. The variable such as; current age and marital made significant contribution in all the three, gross Model I, net odds on socio-demographic (Model II) and the combine model of socio-demographic and intermediate variables (Model III).

In all the models, the strong predictor of having given birth in the past 12 months preceding the survey is women's current age (2.1). This means that women aged below 20 years are 2.1 times as likely to report to have given birth compared to those aged 30 years and above, controlling for other factors in the model. This was followed by single women aged between 20-24 years were 1.7 times as likely to report to have given birth compared to those aged 30 years and above, controlling for other factors in the model. Single women aged between 25-29 years were 1.5 times as likely to report to have given birth in the past 12 months preceding the survey compared to the women aged 30 years and above controlling for other factors in the model.

The variable which has made continuous contribution was the marital status. Women who were not in union were 0.5 times less likely to report to have given birth compared to those living together with a partner, controlling for other factors in the model. In addition, variable like ethnicity was not significant in the Model I, Model II and became statistically significant after introduction of intermediate variables. For instance, single women from Bantu ethnic group were

1.4 times as likely to report to have given birth in the past 12 months compared to other ethnic groups in Uganda.

Single and cohabiting women who did not use any method of contraceptive were 1.8 times more likely to report to have given birth compared to those who use modern method of contraceptives, controlling for other factors in the model. In addition, single women who ever had an abortion were 1.8 times more likely to report to have given birth in the past 12 months compared to their counterparts, controlling for other factors in the model.

Lastly, single and cohabiting women who gave birth in the past 12 were 0.02 times less likely to report to be breastfeeding as compared to their counterpart, controlling for other factors in the model. Therefore, based on these findings from the current study, the following paragraph will discuss the findings as they relate to the reviewed literature as well as the existing theories. In addition, the findings will also be discussed on how they diverged from the existing literature.

## CHAPTER FIVE

### 5.0 DISCUSSIONS, IMPLICATION, CONCLUSION, GENERAL LIMITATIONS AND RECOMMENDATIONS

#### *5.1 Introduction*

This chapter discusses the main findings of the present study. The chapter begins with the main aims of this study. It is followed with a brief summary of the primary elements of design and methodology. The key findings of the study are summarized and measured in relation to prior empirical literature. In addition to this, the chapter interprets the findings collectively in light of the theoretical framework; also included in the chapter are the critical appraisal of the current study that is the strength and weakness. In line with this review, the study also presented the conclusion, recommendations and outlined areas of future research.

#### *5.2 Objective of the present research*

The main objective of the current study was to establish the socio-demographic and intermediate factors that influencing non-marital fertility among women aged 15-49 years in Uganda. Therefore, to achieve this, the current study quantitatively analyzed the factors that influence nonmarital childbearing among unmarried women in Uganda. Given the fact that limited work has been done in Uganda regarding these issues, this study addressed the following objectives;

- To ascertain the background characteristics of unmarried women of childbearing age in Uganda.
- To establish the fertility inhibiting variables on nonmarital fertility among women in Uganda.

- To examine the contribution of fertility inhibiting variables on overall level of non-marital fertility among women in Uganda.
- To assess the association between socio-demographic and intermediate variable on non-marital fertility.
- To determine the effect of socio-demographic and intermediate variable on unmarried women's fertility.

### ***5.3 Current Age and non-marital childbearing***

The first hypothesis of the current study stated that single and cohabiting women aged less than 20 years were less likely to have non-marital birth compared to those aged 20 years and above. A quantitative exploration on the influence of current age on non-marital childbearing was performed. This hypothesis yielded statistically significant findings with regard to age and non-marital childbearing.

The general findings that emerged were that single and cohabiting women aged 20 years and above were more likely to have non-marital births compared to those aged below 20 years. However, it is clear that these findings were not exclusive since other factors in this study such as education, occupation to name a few might have such influence on nonmarital childbearing. The wide variety of factors reported in this study has also some impact on non-marital childbearing was borne out of the literature. Thus one can still conclude that current age of a woman plays a significant role in influencing non-marital childbearing behavior among women.

As it was articulated by earlier researches, Calves (1999) did find similar pattern in Cameroon, that premarital childbearing increase with age, women under the age of 15 had less births compared to women aged above 15 years, and motherhood status also influenced women's

socio-demographic characteristic. Similarly, Sibanda et al. (2013) carried out a study in Ethiopia, and found that the median age at first birth in Addis Ababa rose from age of 19 to 24 years as well as median age at birth mainly due to change in socio-economic situation in the urban areas.

In addition, similar study such as Rabbi and Kabir (2013) in Bangladesh also pointed toward this direction as it was found that increase in median age in marriage and factors such as fecundity, women's level of education were attributed to increase on fertility in late ages among women. Therefore, it was posited in the current study that age is an important variable that influence non-marital fertility among women in Uganda. Thus, addressing the issues on non-marital fertility extent beyond age also requires the assessment of other variables such as marital status that influence non-marital childbearing as well.

#### **5.4 Marital status and non-marital childbearing**

The second hypothesis of the current study stated that single and cohabiting women who were single and cohabiting were less likely to have non-marital birth as compared to those who were cohabiting. In order to analyze this hypothesis, the current study used quantitative exploration to determine the marital status effect (singles and cohabitation) and their influence on non-marital childbearing. This hypothesis yielded statistically significant findings with regard to the effect marital status on non-marital childbearing. Therefore, the general findings that emerged were that single women were less likely to have non-marital birth compared to those women who were cohabiting.

Although the results were not conclusive as other factors may influence the level of non-marital childbearing among women. Therefore, after subjecting this variable on different models, it emerged that single women were less likely to have nonmarital births, compared to those who

were cohabiting. These findings were in line with other findings from the United States, for example, where Bumpass and Lu (2000) and Perelli and Gerber (2011) also found that there were an increasing number of children under cohabitation union as compared to the married union in the country. In the same light, Musick (2007) also reported that cohabitation have increased number of nonmarital births compared to the single. He also found that births that occur to cohabiting couples seems to be more planned compared to those that occurred to the single women.

Based on the foregoing reviews and the results from the current study, it could be can conclude that non-marital childbearing that occur across single and cohabiting women varied in terms of magnitude due to planned decisions made by cohabiting partners as compared women who were singles. Therefore, these findings cannot necessarily be limited to marital status of single and cohabiting women alone, it also extends beyond, and addressing the issues of nonmarital childbearing requires a thorough assessment of other variables like place of residence.

### ***5.5 Place of residence and non-marital childbearing***

The third hypothesis of this study stated that single and cohabiting women who reside in urban areas were less likely to have non-marital births compared to unmarried woman who live in rural areas. This hypothesis was analyzed using quantitative exploration and the findings yielded not statistically significant results.

The results shows that single and cohabiting women who reside in urban areas were more likely to report to have had non-marital births as compared to those who reside in rural areas. It is clear that the results from these findings cannot be generalized due to change in their socio-economic status of single and cohabiting women. However, these results were consistent with Baranowska-

Rataj (2014) who found similar results in Poland where the proportion of non-married birth did vary according to the place of resident.

On contrary to this, studies in United States reported that women who reside in non-metropolitan are more likely to report non-marital birth compared to live in metropolitan areas (Albrecht and Albrecht, 2004). Furthermore, studies in Lesotho posited different views where urbanization was found to be undermining culture that resulted into premarital sex and childbearing among the Basotho communities. Based on the foregoing findings, we can conclude by suggest that non-marital childbearing is not influenced by the place of residence, and that place of residence might have little or no influence on non-marital childbearing. However, the factor might work hand in hand with other factors to influence overall level of fertility.

#### ***5.6 Level of education and non-marital childbearing***

The fourth hypothesis of this study stated that single and cohabiting women with higher level of education were less likely to report non-marital birth, compared to those with primary or no education as well as those with secondary education. This hypothesis was analyzed using quantitative exploration, and found no statistically significant relationship between education and non-marital childbearing. Therefore, single and cohabiting women with higher level of education were less likely to have nonmarital birth compared to their counterparts; however these results cannot be generalized, as other factor may have bigger influence on non-marital childbearing. The wide variety of studies reported in this study, regarding non-marital childbearing has impact on childbearing behavior borne out of these literatures.

These suggest that, in the long run, fertility behaviors among single and cohabiting women do not vary according to their level of education. That is to say, non-marital childbearing will occur



regardless of education status. This finding corroborated with the study conducted by Rutaremwa (2013) on adolescent pregnancy and fertility in Uganda, in which it was found that education was a poor predictor of adolescent pregnancy. Surprisingly he reported that the marital status and age and regional variation were key predictor in influencing fertility among adolescent women in Uganda.

Similarly, Masua, Kasovi and Tonui,( 2012) did a study on the demographic, socio-economic and cultural factors influencing non-marital fertility in Kenya and they found that marital status and age were better predictors of non-marital childbearing while the education was found to be a weak factor. In addition, other studies in sub-Saharan Africa were also reported that more births occur among women with primary or no education (Darroch, Singh and Frost, 2001; Mela and Kopalle, 2002). Although the role of education has been downplayed in influencing non-marital fertility among unmarried women, education as regulating factor fertility cannot be ignored, since it worked hand in hand with other variables to influence the overall level of fertility.

### ***5.7 Occupation and non-marital childbearing***

The fifth hypothesis of the current study stated that single and cohabiting women who were working were less likely to have given birth as compared to those who are not working. This hypothesis was analyzed using quantitative exploration and it was found that women who were not working were more likely to report non-marital births compared to those who are working. This did not yield any statistically significant outcome with regard to non-marital fertility as a result; it cannot be seen as conclusive, as other factor might have similar influence on the level of non-marital childbearing.

These results significantly relate with Kreyenfeld (2010) in which it was found that job uncertainty result to postponement of marriage and childbearing among the unemployed women meanwhile employed women bore children. On the basis of these findings and other empirical evidences reported in literature on occupation of woman, unemployment to lesser degree does influence level of fertility among women. Therefore, the next paragraph explores the role of wealth index influence on nonmarital childbearing.

### ***5.8 Wealth index and non-marital childbearing***

The sixth hypothesis of this study stated that single and cohabiting women from rich wealth index bracket were less likely to have nonmarital birth compared to those who belong to poor wealth index bracket. In order to analyze this hypothesis, a quantitative exploration was performed. It was found that single and cohabiting women from rich wealth index bracket were less likely to report non-marital birth compared to those single women in poor wealth index bracket and this hypothesis yielded not statistically significant results on non-marital childbearing. From this indication, one can deduce that these findings cannot be generalized, as other factors have more influence hence, making the level of significance to disappear.

Additionally, studies by Hoffman and Foster (1997) and Ratcliffe (2010) also revealed that non-marital childbearing was associated with poor women and they also established that women who had non-marital births had similar socio-economic statuses at old age. On the contrary, some studies revealed that there is no association between non-marital fertility and welfare among women in different states in the United States (Garfinkel et al., 2003). Therefore, this further shows that addressing non-marital fertility issues extends beyond wealth index, but requires the assessment of other variable like ethnicity that support it as well.

### ***5.9 Ethnicity and non-marital childbearing***

The seventh hypothesis of this current study stated that single and cohabiting women from Bantu ethnic groups were less likely to have given birth compared to those single and cohabiting women from other ethnic groups. This hypothesis was analyzed using quantitative exploration. It was found that single and cohabiting women from Bantu ethnic group were more likely to have given birth as compared to women from other ethnic group and this hypothesis yielded statistically significant results between ethnicity and non-marital childbearing. However, it was clear that these findings were exclusively cannot be generalized as other factors might have an influence on non-marital childbearing. The wide variety of single and cohabiting women who reported to have nonmarital birth in this study was bone out of literature.

Similarly, Manning and Landale (1996) found that non-marital childbearing have varied among different racial group in Unite States (U.S.). Wildsmith and Raley (2006) also reported that non-marital childbearing was also associated with women's ethnicity, for instance non-marital childbearing among the blacks is less likely to influence union as compared to whites. Therefore, the variation in non-marital childbearing among different ethnic groups in Uganda could be attributed to variation in their cultural backgrounds. Related to these, Garenne and Zwang (2006) studied premarital fertility among the Namibian community, he found variation non-marital childbearing among a Namibian community.

These were attributed to acculturation rather than the level of socio-economic development among them, experience might as well explain difference in non-marital childbearing among the ethnic groups in Uganda. Although ethnicity has a role to play in influencing the level of nonmarital childbearing among unmarried women, it cannot be conclusive of other factors. Therefore, it works in hand with other factor like religion to influence the state of non-marital

childbearing. The following paragraph discusses the influence of religion in influencing non-marital childbearing among Ugandan women.

#### ***5.10 Religion and non-marital childbearing***

The eighth hypothesis of this study stated that unmarried Christian women were less likely to have given birth compared to Muslim women, this hypothesis was analyzed using quantitative exploration. It was established that single and cohabiting Christian women were less likely to have non-marital birth compared to unmarried Muslim women and the hypothesis yielded not statistically significant results between religion and non-marital childbearing. It is clear that one can deduce from the results that these cannot be generalized on nonmarital childbearing, as other factors may have influenced the state of non-marital childbearing. The wide variety reported in this study have impact on nonmarital childbearing was borne out of the literature. Thus one can conclude that non-marital childbearing requires earlier critique from other studies.

For instance, Hayford and Morgan (2008) studied the role of religiosity influence on fertility they found an association between women's religiosity and fertility. However, women who reported that religion was important in their lives had higher fertility as compared to women who did not believe that religion was important in their lives. In addition, other studies found an association between religion and premarital sexual activity, and children who were raised on highly religious families were associated low level of premarital sex compared to their counterparts (Agardh, Tumwine and Ostergren, 2011; Gyimah et al., 2013 and Meekers, 1994).

However, this could be case in Uganda due to secularization which has weakened religious values that put restriction on pre-marital sex and childbearing (Lesthaeghe, 1992; Van de Kaa, 2002). Therefore, addressing the issues on non-marital childbearing extends beyond religion but

it requires an assessment of other variables like age at sex debut and their influence non-marital fertility.

### ***5.11 Age at sex debut and non-marital childbearing***

The ninth hypothesis of this study stated that single and cohabiting women who had their sex debut at age above 20 years are less likely to have given birth compared to the one who started sexual intercourse at age below 20 years. This hypothesis was analyzed using quantitative exploration. It was found that single and cohabiting women who started their sex debut at age of 20 years and above were more likely to report to have given birth in the past 12 months compared to those women who started sex debut at age less 20 years and it yielded not statistical significant results between age at sex debut and nonmarital childbearing. Therefore, these results cannot be generalized on non-marital childbearing, as other factor like contraceptive use can influence the state of non-marital childbearing as well. The wide report on non-marital childbearing was borne out of the literature.

Contrary to the findings of the current study is that of, Zaba et al., (2004) which reported a statistically association between age at sex debut among males and females. In addition, they established that the interval between ages at sex debut and marriage was short in Uganda. In addition, studies on age at sex debut in the U.S. also found an associated between age at sex debut and pregnancy as well as Sexual Transmitted Infection (Amoateng and Kalule-Sabiti, 2014; Doyle et al., 2012). Although age at sex debut was not significant, this could be due to the influence of other variables. Thus, addressing the issues non-marital fertility extend beyond age at first sex, consequently it requires an assessment of other variables that influence non-marital childbearing as well. The following paragraph discusses the effect of contraceptive use on non-marital childbearing.

### ***5.12 Contraceptive and non-marital childbearing***

The tenth hypothesis of this study stated that single and cohabiting women who use modern contraceptive are less likely to have given birth compared to those who did not use any method of contraceptive. This hypothesis was analyzed using quantitative exploration. It was found that women who did not use modern contraceptives were 1.8 times more likely to report to have given birth in the past 12 months compared to their counterparts and it yield statistically significant results between contraceptive use and non-marital childbearing.

However, it is not clear that these findings can exclusively be generalized as other factors had such influence on non-marital childbearing. The wide variety reported in this study has an impact on nonmarital childbearing was borne out of the literature. However, Khan et al. (2007) and Garenne (2010) attributed the low use of contraceptives in the developing countries to low level of socio-economic development.

Similarly, Okech, Wawire and Mburu (2011) and Nalwadda et al.,(2010) argued that the low use of family planning services among single and cohabiting women to low level of socio-cultural development. Although the current findings did point to contraceptive use as an important variable in influencing fertility among single and cohabiting women in Uganda, there is need to evaluate this findings on this variable against favorable disposition of other independent variables in the hypotheses. Therefore, addressing the issues of non-marital childbearing extend beyond the use of modern contraceptive but also it requires the assessment of other variables that support it. The next paragraph will discuss the role of abortion in influencing non-marital childbearing among women in Uganda.

### ***5.13 Abortion and non-marital childbearing***

The eleventh hypothesis in this study stated that single and cohabiting women who had induced abortion are less likely to give birth as compared to those who did not. This hypothesis was analyzed using quantitative exploration. It was found that single and cohabiting women who ever had abortion were more likely to report to have given birth compared to their counterparts and the findings yielded statistically significant between abortion and non-marital childbearing. However, it is not clear that this finding was exclusively to be generalized as other factors may influence the state of non-marital childbearing.

The wide variety reported in this study has an impact on non-marital childbearing was borne out of the literature, thus these findings on abortion corroborated with studies by (Jagwe-Wadda et al. 2006; Singh, et al. 2005) who found that abortion was very low among unmarried women as compared to married women. These low rates of reports on abortion in Uganda could be due to unlawful label on the practice. For instance abortion cases in Uganda were treated as spontaneous abortion due to the fear of legal implication, similar situation as also reflected, where abortion cases were reported as spontaneous abortion (Letamo and Majelantle, 1999).

Despite the abortion cases being underreported in Uganda, in sub-Saharan Africa, abortion cases were reported to have by passed contraceptive use (Lauro, 2011). Therefore, addressing issues regarding abortion influence on non-marital childbearing requires broader analyses that support this hypothesis. Thus addressing the issues on non-marital childbearing extends beyond abortion, but it requires the assessment of other variables like breastfeeding that influence non-marital fertility. The following paragraph discusses the role of breastfeeding in influencing non-marital childbearing among women in Uganda.

#### ***5.14 Breastfeeding and non-marital childbearing***

The twelfth hypothesis of this current study stated that single and cohabiting women who gave birth in the past 12 months were more likely to breastfeed their children as compared to their counter parts. This hypothesis was analyzed using quantitative exploration. It was reported that single and cohabiting women who gave birth in the past twelve months were more likely to breastfeed their children compared to their counterparts and the finding yield statistically significant results between breastfeeding and non-marital childbearing. However, these findings are not exclusive and cannot be generalized on breastfeeding as other factors might have worked together with breastfeeding to influence the levels of non-marital fertility. The wide variety reported in this study has an impact on nonmarital childbearing was borne out of the literature, thus the results from this study require critiques from earlier research. Bongaarts, Frank and Lesthaeghe (1984) argued that excessive and intensive breastfeeding for more than a year has the potential of suppressing ovulation process and also can delay conception. Furthermore, the findings from this study also corroborated with Pilkauskas (2014) who found that the odds of having breastfed and gestation was significant.

Similarly, it can be argued that due to modernization women who have gave birth can either choose not breastfeed due to their involvement in formal jobs as well as religious influence on breastfeeding. For instance Burdette and Pilkauskas (2012) found a relationship between breastfeeding and religion. In addition, breast feeding also varied among countries, studies conducted in sub-Saharan Africa have shown that breastfeeding have varied among countries, for example in Lesotho it last up to 17 months in 2009 LDHS, in Sudan was 12 months while in Uganda the median month for breastfeeding last up to 9.4 months. Recent study on breastfeeding estimated the state of return of amenorrhea among women in Uganda at 12 months (MoHSWL



and ICF International, 2010; UBOS and ICF International, 2012). Based on the results women who had birth in the past twelve month, majority them were reported to be breastfeeding. However, reduction on non-marital childbearing cannot solemnly be skewed to breastfeeding since breastfeeding as an intermediate factor worked hand in with other socio-demographic factors to influence the state of non-marital childbearing.

Since this research was guided by a number of theories, there is need to evaluate the findings from these study in light with these theories. The following section discusses the results in consideration with the theoretical framework used in this study.

### ***5.15 Consideration of the findings in the light of the theoretical framework***

#### ***5.15.1 Social disorganization theory***

As outlined in Chapter Two of this study, the theory of social disorganization assumed that the basis of behavioral problem is squarely reliant on the neighborhood structural and cultural states. According to this theory, social disorganization can lead to youth sexual exposure hence affecting the family structures and stability, which is usually linked to failure of the family to reinforce rules and regulation that will deter bad character among the young adolescents. Therefore, due to the family failure to offer guidance and reinforce good character among adolescence there is high increase in sexual activities (Tewksbury, Higgins and Connor, 2013).

The position this theory was not thought of as actual historical states of affairs or primitive culture, but as purely hypothetical situation that contains a conception on non-marital childbearing. Therefore, the findings from this current study, shows the variation in the state of non-marital childbearing between single and cohabiting women according to their ethnic groups. Consequently, this also signals the failure of families to serve as embodiment of good character

to their children. This is due to the heterogeneity in ethnicity, brought by the cultural integration that comes from migrations. Additionally, this was also reflected by high number of adolescents who had their sexual debut at younger age, with majority of them becoming teenage mother. In this study it was also found that non-marital births varied according to place of residence, there were more births that occurred in urban areas as compared to rural areas.

Furthermore, with regard to neighborhood structural arrangement, there were more non-marital births that occurred to single and cohabiting women from poor wealth index bracket as compared to those who belong to middle and rich wealth index bracket respectively. Therefore, the findings from the present study indicates that, in situation where a society failed to give equal economic and social benefits to its women, there will be unjustly economic opportunity resulting increase rates of poverty contributing to social disorganization. Social disorganization in a given society is manifested through early involvement in sexual activities, high rates of premarital childbearing and rural urban migration. The theory posits that for any fair society there must be equity that sustain and prevent unfairness in future social arrangement, in this case non-marital childbearing. Applied to the current study, the findings of this study supported the assumption of social disorganization theory that any control over adolescent behavior, such as peer influence from different ethnic groups, place of residence and poverty reduction to mention a few can reduce the rate of non-marital childbearing.

However, due to the limitation of social disorganization theory in fully explaining the other factors that prompt the occurrence of non-marital childbearing among unmarried women, this study employed two additional theories: the Second Demographic Transition Theory (SDTT) and Out-of-Wedlock theory to support social disorganization theory. The sub-section that follows explains the findings using SDTT as shown below.

### ***5.15.2 Second Demographic Transition Theory***

As pointed out in Chapter Two of this study, the second demographic transition theory posits that the improvement of socio-economic development among countries has weakened the institution of marriage. This revolution was characterized by the following factors: fall in the proportions married, rise in age at first marriage, rise in divorce, decline in remarriage of divorced and widowed, rise in cohabitation, decline in fertility, increase in age at first parenthood, efficient use of contraceptives, rise of extra marital fertility, rise of parenthood within cohabitation, rising definitive childlessness in the union and rise in egalitarian society as well as an increase in secularization (Lesthaeghe, 1992; Van de Kaa, 2002).

The variation in non-marital childbearing behavior between the single and cohabiting women in Uganda is seen as template for non-marital childbearing. This position was thought of as actual historical state of affairs or modern culture. It is also a hypothetical situation that leads to conception of non-marital among young adolescents. This is supported in this current study as the findings indicates that, in an environment where there is socio-justice and equity women are given equal chances, and this lead to an egalitarian societies. Throughout this study, it was found that the age, marital status, ethnicity, contraceptive use abortion and breastfeeding were significantly related with non-marital childbearing, while other factors like level of education, occupation, religion, age at sex debut and were not really associated with the concept. Thus, according to the second demographic transition theory, when there is an improvement in the level of socio-economic development in the country, society's value change and this lead to the emergency of egalitarian society which in return have effect on the lifestyle of women.

Based on theory, this study found that having a socio-economic development in the country guarantee autonomy for women and increase their chance of having non-marital births. Applied

to non-marital childbearing, giving women equal opportunities in the society would shape their decision regarding the future of their fertility. Therefore, to understanding non-marital childbearing, this study used the economic theory of fertility to support the theories earlier discussed in this study. The following sub-section is to integrate the economic theory of out of wedlock with the findings of this study.

### ***5.15.3 The theory of Out-of –wedlock childbearing***

As highlighted in chapter two of this study, the theory of out-of-wedlock states that fathers can shift the cost of child rearing to single mothers. In precondition that women must be in excess supply and they must have enough resources, and the breakeven occur in marriage market where children are born within a marriage to high-income parents meanwhile among the low-income, men father children through multiple partners' out-of-wedlock (Willis, 1999).

The original position of this theory corresponds to the state of nature of non-marital childbearing. This position however is not thought of as an actual historical state of affair but hypothetical situation that explains the occurrence of non-marital fertility. Therefore, the findings of this study show that more births occurred to unmarried women from poor wealth index bracket as compared to unmarried women from rich wealth index. Through wealth index was found to be influencing non-marital childbearing among unmarried women. This according to the findings can be linked to socio-economic status of the family. However, according to the theory when there is social inequality in the society, people are subjected to poverty and this influences their decision to get married. As a result, men who are poor choose not to get married instead they choose to have children out-of wedlock (Otiso, 2006).

Furthermore, the theory believe that for a fair society, there must be equity and justice that would sustain and prevent unfairness in the established social arrangement. Though, the wealth index findings did not support the findings of this current study, however poverty eradication among the single and cohabiting men and women is more likely to reduce the number of non-marital births. As articulated in the foregoing discussion these study has implication to theory, policy and research. The following paragraphs discuss them in details.

## **5.16. IMPLICATIONS OF THE FINDINGS**

The implications for this study are discussed under three headings. These include implications on theory; implication on policy formulation; and implication on research.

### ***5.16.1 Implications to theory***

This study was guided by three theories. This is due to the limitation of one theory to explain the factors that influence non-marital childbearing. The three theories employed in this study include; social disorganization theory, second demographic transition theory and out-of-wedlock theory. Therefore, based on the findings of this study, the theories have important implications and they are discussed in the subsequent paragraphs.

To begin with, the social disorganization theory was dependent on communities intervening and exogenous construct: the intervening of community was measured by its ability to supervise and control teenage peer groups, local friendship networks, and the local participation in informal and voluntary organizations, the exogenously was based on heterogeneity and urbanization that decrease community control due to diverse opinion on how to control crime from the community (Tewksbury, Higgins and Connor, 2013).

Meanwhile, the second demographic transition posits that the advancement in socio-economic development among countries have weakened the institution of marriage leading to the

emergence of egalitarian society characterized with: rising in age in marriage, divorces, decline in remarriage of divorced and widowed, rise in cohabitation, decline in fertility, increase in age at parenthood, rise in parenthood within cohabitation, increase in the use of contraceptive as well as childlessness and weakening in religious believes leading to secularization (Lesthaeghe, 1992 ; Van de Kaa, 2002).

Likewise, Willis (1999) asserted that due to weakening institution of marriage, fathers can shift the cost of child rearing to single mothers in a condition that women are in excess supply and they have resources. Hence, the equilibrium point will occur in marriage market where children are born within marriage to high-income parents meanwhile men with low income will prefer to father children through multiple partners and the women were said to be willing to take the responsibility of rearing the children.

Therefore, based on these three propositions from these theories a conceptual frame was developed to link these theories so as to explain the interaction of these variables to influence the outcome on non-marital fertility among women in Uganda. The variables in this current study were grouped into two major categories of those that affect non-marital fertility indirectly were referred to as socio-demographic variables while those that affect non-marital fertility directly were referred to as intermediate variables. The socio-demographic variables that influence non-marital childbearing indirectly is the age of the woman, as a woman's age increases without prospect of marriage, they may opt to have child out-of-wedlock as an old age security.

Besides, the cultural factor also put pressure on her due to societal expectation at certain age a woman should either be married or have a child (Pitso and Carmichael, 2003). Likewise, the marital status of the woman also determines her childbearing status, as she became of age and no

prospect of marriage. They can choose either be living with a partner or living a single life. Therefore, during this process women who were cohabiting become more likely to have non-marital births as compared to those who are never in union.

In addition, those women who were not in union might also opt to have non-marital births. Therefore, such occurrence are common in among single and cohabiting women compared to single women in their adolescent age, these are attributed to the need of old age security as well (Lesthaeghe, 1992; Van de Kaa, 2002). Woman's level of education determine the timing of child bearing, and women who have high level of education are less likely to have non-marital births due to their increased knowledge on the safe periods on conception as well as contraceptive use compared to those women with primary or no education. Additionally, highly educated women also have the bargaining power on when to have a child when not to have a child (Darroch, Singh and Frost, 2001; Ikamari, 2005; Uchudi, 2001).

Single and cohabiting women who are working are less likely to have nonmarital child births as compared to those who are working. The reason attributed to this could be due to the work fatigue that kept them busier and finance resources wise they more resourced compared to those women who are not working. As a result, unemployment among the unmarried men and women also render them to be more vulnerable to non-marital childbearing as they look for social welfare to sustain their living (Kreyenfeld, 2010). Place of residence has influence on non-marital childbearing, women who reside in urban areas are more likely to non-marital child births as compared to those who reside in rural areas. This could be due to cultural integration resulting from the heterogeneity which has weakened the strong norms of early marriage as well as lack of tolerance to premarital sex and childbearing (Otiso, 2006; Lesthaeghe, 1992; Van de Kaa, 2002; Makatjane, 2002).

The women's wealth index bracket also determines their childbearing behavior, Women who belong to poor wealth index bracket are more likely to report to have had non-marital births in the past twelve months as compared to those in rich wealth index bracket. Additionally, in situations where modern contraceptives are paid for, poor women cannot afford to pay for them, also places where health facilities are distant from rural areas, this involve transport cost hence limiting accessibility for contraceptives (Ratcliffe and McKernan, 2010). Besides, when men and women have fewer resources, men are more likely to father children through multiple partners and the burden of child is likely to be left on women as attested by the economic theory of fertility (Willis, 1999).

Ethnicity also determines the nonmarital childbearing among women, in cultural settings some ethnic groups do tolerate bearing of childbearing out-of-wedlock meanwhile others do not. For instance, non-marital childbearing was found to be common among the Bantu speaking people than other ethnic groups in Uganda meaning some communities among Bantu do tolerate pre-marital sex and childbearing (Lesthaeghe, 1991-2 and Van de Kaa, 2002; Otiso, 2006; Shell-Duncan and Wimmer, 1999). While religion was seen as a factor that influencing women's decision to bear children, in conservative religious society pre-marital sex and the use of modern contraceptives were condemned. Therefore, these tend to reduce or increase the state of non-marital births. However, due to secularization, these values do not hold value; marriage became optional, premarital sex and out-of-wedlock behaviors have cut across different religious sects (Hayford and Morgan, 2008; Lesthaeghe, 1992; Van de Kaa, 2002).

Age at first sex plays an important factor in determining childbearing among women in general. Women who started sexual activity at tender age are more likely to be subjected to unplanned pregnancy and sexual transmitted diseases as compared to those who started sex debut in later



age in life (Doyle et al., 2012; Kaestle et al., 2005; Lesthaeghe, 1992; Van de Kaa, 2002). Besides, contraceptives as intermediate variable are a deliberate practice or measure taken to limit or control conception among the fecund women, regardless of their marital status, this includes abstinence, sterilization and pills depend on the degree of use. When sexual active women involve in intensive use of contraceptive, this tends to reduce chances of getting pregnant and vice versa (Bongaarts, 2008).

Furthermore, the other mediating factor is abortion. This involves deliberate interruption of the normal course of gestation. These have varied among countries. In Uganda, for example abortion is not legalized but it is permitted under certain conditions such as health and rape. Despite such legal restrictions women still do practice it illegally. Therefore, if women continue to carry such practices, this has the potential of limiting non-marital birth among them and vice versa (Bongaarts, 2008; UBOS and ICF international, 2012). Lastly, intensive breastfeeding as an intermediate variable also help woman to remain infecund. For instance, after a woman has given birth, it takes a few months after birth for ovulation and menstruation to return, depend on the level of breastfeeding. As a result, these act a medium through which a woman will conceive to a next child (Bongaarts, 2008).

In summary, the intermediate variables have direct influence on non-marital fertility. That is to say, they modify the outcome of fertility by either permitting or preventing its occurrence while the socio-demographic factors operate remotely through the intermediate variables to influence nonmarital childbearing. Furthermore, children who were born through non-marital process eventually mature and add into the reproductive population. In this process, their fertility behavior is influenced by the socio-demographic factors and intermediate factors as well. In addition, the children ever born who join the circle have the ability to influence both the socio-

demographic and intermediate variables in the circle leading to change in non-marital fertility levels in a given population resulting to never given birth.

### ***5.16.2 Implication to policy***

The non-marital childbearing is common at the peak of childbearing age (20-39 years). There is need for policy makers to come up with policies that target women at their reproductive ages. The previous programmes were target adolescent pregnancy case there is need to come up with programmes that help them to limit the number of children as well as providing the women with appropriate resources. Therefore, this can help single and cohabiting women to participate equally on the labor market so as to realize their full potential. In addition, at the same time it can help in eradicate poverty, hence the need to preserve family norm.

Therefore, throughout this study, it was found that family norms of bearing children with wedlock were weakening as evident by the surge of non-marital births and increase in the number of single and cohabiting women. This study also found that non-marital childbearing has varied among different ethnic groups. Single and cohabiting women from Bantu ethnic groups were reported to have given birth as compared to those in other ethnic groups. There is need for dialogue between leaders of different ethnic groups and policy makers in the country so as to discourage cultural practice of non-marital childbearing.

Furthermore, modern contraceptive use was found to be important in controlling the non-marital births, these was evident by substantial number of single and cohabiting women who did not use any modern contraceptive were reported to have given birth. These provide policy loopholes for that the policy makers. They need to understand the levels and patterns contraceptive use among unmarried women in Uganda.

Abortion was found to be significant variables which influence the state of non-marital childbearing. Since abortion was is not legalized in Uganda, policy makers need to assess the level of abortion in the country in order to find ground whether to legalize it since it is practiced by women. In this study it was also found that a higher proportion of unmarried women who have given birth in the past year were breastfeeding. There is need to encourage women who gave birth and were breastfeeding their children since it increases duration of amenorrhea that can help in reducing the rate of non-marital childbearing among unmarried women in Uganda.

### ***5.16.3 Implications for research***

Studies on non-marital childbearing are very scanty in Uganda; fewer studies have focused on non-marital childbearing. For instance, Otiso (2006) have documented issues regarding pre-marital sex and childbearing that they were highly prohibited in some societies and are punishable by death especially among the Bafumbira. Meanwhile among the Karimajong there is measure of liberality on issues regarding pre-marital sex except penalties were paid in case of pre-marital pregnancy. In addition, Otiso (2006) noted that cohabitation was an emerging marital union commonly practiced in urban areas. He further argued that such practice of cohabitation were common among the poor who cannot afford to pay bride price. While recent studies on marriage cultures among the Bafumbira still indicate that in the verge of modernization, cultures of early marriage are still common and pre-marital sex is also punishable among the Bafumbira (Ruguma, 2015).

Furthermore, Rutaremwa (2013) studied factors associated with adolescent pregnancy and fertility, he found that marital status, age and regional variation were strong predictors for women to have given birth in the five years preceding the survey and being pregnant. However, most of these studies did not focus mainly on non-marital fertility per say. Therefore, this current

study have contributed directly to research by unearthing the factors that predispose women to bear children out-of-wedlock and also laid a foundation for future research to be conducted.

The study also shows that cultures of marriage and the norms of bearing children within the wedlock are at the verge of collapsing. This can be seen through the findings from the Bongaarts model which shows that non-marital births do contribute to overall level of fertility, and they have sub-passed the births within wedlock. In addition, the proportion of single and cohabiting women has increased over time. Therefore, the findings of this study, to a greater extent lay foundation for future study to be conducted on non-marital fertility. Consequently, the norms of childbearing out-of-wedlock and cohabitation among some society in Uganda are new phenomena. Thus, if not addressed it can threaten the core principle of marriage and childbearing which is a danger to many cultures, which at its own, can create pressure on resources as it contribute to population growth hence poverty in the population.

## **5.17 CONCLUSIONS**

This study was set initial to attempt to explore the socio-demographic and intermediate factors in influencing non-marital childbearing among women aged 15-49 in Uganda. Although it can be challenging to suggest policy recommendations at this juncture, but some conclusions can be drawn from this study as well as recommendation.

First of all, age at interview of unmarried women seems to be the most important variable in determining factor in influencing non-marital childbearing. With the age bracket the adolescent women were more likely to have non-marital birth, and the likelihood kept decreasing with age within the reproductive ages. Secondly, women's ethnicity, women who belong to Bantu ethnic groups were more likely to have given birth as compared to those in other ethnic groups.

Thirdly, marital status seems to be influencing the level of non-marital childbearing, the result suggests that women who were not in union were significant less likely to have given birth compared to those who were cohabiting. Fourthly, less significant proportion of unmarried women who gave birth in the past 12 months were likely to breastfeed compared to their counterparts. Education, contraceptive use which provides positivity in fertility delay seems not to provide significant effect on influencing non-marital childbearing among women in Uganda. In addition, religion which also provides positive effect on fertility by discouraging pre-marital sex fertility and childbearing was found not significant in this study.

Although some conclusion can be drawn from the findings from this study, some of these findings, theories, literature review in this study contain some limitations that ought to be mentioned. The following paragraph discusses the limitations from this study. They are explained below.

#### **5.18 GENERAL LIMITATIONS TO THE STUDY**

This study has identified the factors that influence non-marital childbearing among women aged 15-49 year in Uganda. However, the study has its own limitation originating from methodology, theories and findings. First of all, one of the methodological limitations arises from the data which the study used. The study employed secondary data hence the validity of the data cannot be ascertained.

The Demographic and Health Survey used structured questionnaire, a result, most of the answers are predetermined, and therefore these could not provide the respondents with opportunity to give their own views like the case with in-depth interviews. In addition, the data missed an important demographic question of age first birth for every woman but instead it collected

information on first birth in the past 12 months preceding the survey. Therefore, there was under reporting of age first birth as such age at interview was used, however, this could help the researcher to establish women's transition into motherhood as the fertility transition among women (Ngalinda, 1998).

Besides, this study used women who are singles and those who were cohabiting only. Consequently, addressing factors influencing non-marital childbearing among women requires the inclusion of married women who had birth prior to marriage and are current raising their children from non-marital births step fathers. Additionally, women who were separated with their spouses by either through divorce or death, after their separation whether they gave births after the occurrence of the incidence with different man or the deceased was not captured.

Similarly, women who reported to have terminated pregnancy were reported to have given birth, however, whether the births occurred before or after pregnancy had been terminate could not be established. Besides, the proportion of women who reported has ever terminated pregnancy were quite fewer.

Furthermore, other limitations that arose from the theories used one theory could not explain all the factors that influence nonmarital childbearing among women; the social disorganization theory was dependent on communities intervening and exogenous construct. While the second demographic transition theory was solely based on the advancement in socio-economic development among countries and its effect on marriage institution. Correspondingly, out-of-wedlock concentrated on weakening institution of marriage, where father can shift the cost of child rearing to single mothers in condition that women are in excess supply and they have resources to support their children.

## **5.19 RECOMMENDATIONS**

The factors associated with non-marital childbearing among women are equally of paramount for health, economic and social concern. Based on the findings and the limitations from the current study, recommendations are made. For instance, the findings show that the age of the women, their ethnicity, marital status and breastfeeding status were of significance in influencing non-marital childbearing and variable like education, contraceptive and religion that play a positive role in reducing births among unmarried women were not significant. Therefore, based on the findings and limitations, the following recommendations are made:

- 1) Comprehensive social policies that target unmarried women in all age groups as well as women who were cohabiting in order to mitigate the behaviors of non-marital childbearing among them should be designed.
- 2) Dialogue is required between policy makers and cultural leaders of Bantu ethnic groups so as to reach consensus in order to discourage the norms of bearing children out-of-wedlock among Bantu ethnic group.
- 3) Explicit policies that encourage intensive breastfeeding among women help in reduction of the numbers of non-marital births.

### ***5.19.1 Areas of future research***

- 4) There is need for further studies on non-marital childbearing that augment the current study using primary data so as to provide complete historical information on women's childbearing.
- 5) A further study is also required on the role of socio-cultural and environmental factors influencing non-marital childbearing at individual, household, and community level to

fully understand the role of these factors in influencing the state of non-marital childbearing in Uganda.



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