FERTILITY BEHAVIOR OF RAI COMMUNITY
(A Case Study of Indranipokhari VDC, Khotang)

A THESIS
SUBMITTED TO
DEPARTMENT OF POPULATION STUDIES,
RATNA RAJYA LAXMI CAMPUS
TRIBHUVAN UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER IN POPULATION STUDIES

BY
Kamal Khatri

Department of Population Studies,
Ratna Rajya Laxmi Campus
Tribhuvan University (TU)
Kathmandu
December, 2013

DECLARATION

Except where otherwise acknowledged in the text, the analysis in this thesis represents my own original research.

Kamal Khatri
December, 2013

RECOMMENDATION

This is to certify that the thesis

Submitted by

Kamal Khatri

Entitled

Fertility Behavior of Rai Community

(A Case Study of Indranipokhari VDC, Khotang)

is Recommended for External Examination.

Dr. Bina Rai _____

(Thesis Supervisor)

Date: .....

Tribhuvan University
RATNA RAJYA LAXMI CAMPUS
DEPARTMENT OF POPULATION STUDIES
Exhibition Road, Kathmandu, Nepal
Ph. No. 01-4225891

Date: .....

VIVA-VOCE SHEET

We have conducted the viva-voce examination of the thesis

Submitted by

Kamal Khatri

Entitled

Fertility Behavior of Rai Community

(A Case Study of Indranipokhari VDC, Khotang)

and find that the thesis to be an independent work of the student written according to the prescribed format. We recommend the thesis to be accepted as the partial fulfillment of the requirements for Master Degree in Population Studies.

Evaluation Committee:

Naba Raj Thapa _____

(Head, Department of Population Studies,
Ratna Rajya Laxmi Campus, TU)

Dr. Bina Rai _____

(Thesis Supervisor)

Govind Subedi _____

(External Examiner)

ACKNOWLEDGEMENTS

First of all, I would like to express my special gratitude and thanks to **Dr. Bina Rai, Associated Professor**, Department of Population Studies, Tribhuwan University (TU), Ratna Rajyalaxmi Campus, who not only encouraged me to prepare this dissertation, but also helped providing special guidelines, suggestions and materials in preparing overall aspects of this dissertation.

I would like to express my sincere gratitude to **Mr. Naba Raj Thapa, Associated Professor**, Head of the Department of the Population Studies, Ratna Rajyalaxmi Campus and all other faculty members, for providing me an opportunity to complete this dissertation for partial fulfillment of my Master Degree.

I extend my deepest gratitude to my parents, younger brothers and sisters and my wife, Mrs. Tara Koirala, who not only continuously supported me but also encouraged me to complete my Master Degree. I would specially like to thank my uncle/aunt, Mr. and Mrs. Bhim Kumar and Shailaja Rai for their support during my study. Similarly, all respondents of Indranipokhari VDC are also to be thanked for providing their precious responses and time as interviewee during the survey period.

I would also like to express my sincere thank to the external examiner, **Dr. Govind Subedi, Associate Professor**, Principal of Tribhuwan University Central Campus. Besides, I would also like to thank my colleagues, Mr. Lumba Nath Kharel, Mr. Sita Ram Karki, Mr. Shekhar Shrestha, Mr. Narendra Pokharel and Mr. Bhushan Gautam, as well.

December, 2013 Kamal Khatri

ABSTRACT

This was a cross-sectional study, which covered 180 married Rai women of 15-49 years of age-group of Indranipokhari Village Development Committee of Khotang district. The main objective of this study was to observe the fertility behavior of married Rai women with the relationship of some selected socio-economic, socio-cultural and demographic variables. Number of children ever born is one of the best indicators for fertility study, which was taken as dependent variable and measured in terms of number of child birth of the respondents in the study area.

Method: Main data were collected by administering well-structured questionnaire on households and individuals to collected socio-economic, demographic and cultural background of the household and individual considering these variables would be responsible for affecting fertility behaviors of the study area. Proportionate sampling method was used for the selection of households assuming that each household may consist of one married women aged 15-49 years with at least one child. However, this study was focused on purposively to study fertility behavior of Rai women of Indranipokhari Village Development Committee of Khotang district. Chi-square test was performed to observe the relationship between fertility behavior and education and occupation of respondents' and their husbands, age at first marriage, age at first birth, knowledge about family planning, having decision on respondents' health care and their children, interval of breastfeeding, timing of sexual intercourse and cash contribution to the household expenditure.

Results: Among the selected variables, only eight variables were turned out to be statistically significant. Education, husbands' occupational status and decision on children health care were found significant at 1 percent whereas cash contribution, age at first marriage, age at first birth, breastfeeding and family planning were turned out to be significant at 5 percent and occupational status of respondents and decision on respondents' health care were revealed just significant factors impacting their fertility behavior at 10 percent only.

Conclusion: Only individual characteristics of the respondents' and their husbands were turned out to be statistically significant factors for influencing fertility and not household characteristics. Hence, individual development regarding socio-economic, demographic and cultural norm, particularly more focus on women that will assist to regulate fertility behavior in order to reduce population growth rate and improve reproductive and maternal and child health status, which will be also helpful to achieve some Millennium Development Goals. If the government and other concerned agencies have to formulate effective policy and program in future regarding to reducing population growth rate and improving reproductive and maternal and child health in the country, findings of this study could be useful and equally applicable to other similar social groups of Nepal.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

CBS	Central Bureau of Statistics
CDPS	Central Department of Population Studies
CEB	Children Ever Born
CPR	Contraceptive Prevalence Rate
CMR	Child Mortality Rate
FP	Family Planning
HH	House Hold
HI	Household Interval
HMG	His Majestry of Government
ICPD	International Conference on Population and Development
INGOs	International Government Organization
IMR	Infant Mortality Rate
MOH	Ministry of Health
MOPE	Ministry of Population and Environment
NDHS	Nepal Demographic and Health Survey
NFHS	Nepal Family Health Survey
NGOs	Nepal Governmental Organization
NLSS	Nepal Living Standard Survey
SH	Sample Household
SLC	School Leaving Certificate
SMAM	Singulate Mean Age at Marriage
SPSS	Statistical Package for Social Sciences
TFR	Total Fertility Rate
T.V.	Television
TU	Tribhuvan University
UN	United Nations
UNFPA	United Nations Fund for Population Activities
USA	United States of America
VDC	Village Development Committee
X^2	Chi-square

CHAPTER ONE

INTRODUCTION

Nepal is geographically as well as socio culturally heterogeneous country. It is a nation of various tribes, castes, language, religion, customs and culture etc. The community of Rai is concentrated in Indranipokhari Village Development Committee (VDC) of Khotang District in majority. Rai ethnicity is one of the Mongolian groups, which is known as indigenous people of Nepal. It is a nation of various tribes, castes, language, religion, customs and culture etc. The community of Rai is concentrated in Indranipokhari Village Development Committee (VDC) of Khotang District in majority. Rai ethnicity is one of the Mongolian groups, which is known as indigenous people of Nepal. There are various sub-groups of Rai ethnicity. This study covers only Chamling and Bantawa sub-groups and Rai is used for the research work for the convenience._Besides Khotang District, They are mainly residing in Bhojpur, Sankhuwasabha, Ilam, Dhankuta and Solukhumbu districts as well. They have their own culture, religion and mother tongue. The share of Rai ethnicity was 2.8 percent (635,751) of the national population according to the 2001 census (CBS, 2003).and 2.3 percent (620,004) in 2011 census (CBS, 2012)

1.1 Background to the Study

Everything affecting the demographic character of a population – its size, rate of increase, geographic distribution, age and sex structure, life expectancy and family composition – has to reckon with one of three demographic variables, namely fertility, mortality and migration. Of these, fertility is the major dynamic element. “To understand fertility is, therefore, to understand not only a major portion of all demographic behaviour, but a fundamental element in social structure and the human condition, generally” (Day, 1983:2).

With fertility levels below replacement level in several counties, and high fertility levels resulting in high population growth, high dependency rates and a compounding of impediments to development in many of the poor developing areas of the world, understanding fertility behaviour – that is monitoring trends and identifying “factors” and “conditions” that influence fertility behaviour – has become a major concern in many

countries and, indeed, the world (Lottrt, 1998). Conventionally, it is defined as a process of childbearing performance of women during their lifetime and observed in terms of the number of live births i.e. children ever born (CEB). There are various socio-economic and demographic variables that determine the fertility behaviour in any communities. The level of income, education, child survival, socio-economic status and cultural and religious factors may have affect in fertility behaviour.

There are several determinants, among them socio-economic and cultural factors seem to exert their influence in regulating fertility (CBS, 1995:76) marriage usually takes place at early age in Nepal. As the literacy rate in Nepal is low age at marriage makes a real different in governing fertility; some studies have demonstrated that an increase in female age at marriage contributes to reduction in fertility. This also true in the context of Nepal, where an inverse relationship between age at marriage and fertility has been observed (Chhetry, 1993).

Fertility is the consequence of the interaction between socio-economic, socio-cultural, demographic and psychological variables in a society. However, fertility is generally defined as to indicate the actual reproduction performance of women (Hansraj, 1998:29). Generally, a higher rate of fertility may have over use of resources and it results an adverse effect on other development activities of the nation, particularly where lack of abundant resources, low level of science and technology and poor governance. It is evident from the developing countries where fertility is higher and level of development activities is lower compared to developed countries.

Agriculture is the major occupation for the livelihood of all people in Nepal. More than 75 percent of the total population was found to be engaged in agriculture (NDHS 2011). Many of the Gurung, Tamang and Rai are found in defense service with in or outside the country (Acharya, 1994:13). A significant proportion of Rai ethnic people are involved in foreign employment, especially British Gorkha Army in the world.

The theory of demographic transition states that fertility is high in poor traditional societies because of high mortality, particularly infant and child mortality rates, lack of opportunity for individuals, less advancement and higher income values of children that may have changed with modernization or industrialization (Caldwell, 1977:18)

1.2 Statement of the Problem

Population of Nepal has been increasing rapidly since last few decades with about 2 percent annually due to high fertility and declining mortality besides the latest national census 2011 (1.35 percent annually, CBS, 2012). Generally, in many developing countries, it has been evident that a high fertility rate is resulted due to low age at marriage with low level and high unmet need of contraceptive rate and high demand for children of either sex from economic, social and cultural values. Hence, Nepal is also a developing country where child marriage is universal; contraceptive prevalence rate (57.0 percent: NDHS, 2011) is low with a high level of unmet need (27.0 percent: NDHS 2011) of it and traditional outlook is highly persisted due to low level of socio-economic and cultural development for the modernization, which is considered as one of the negatively associated factors with the fertility behavior of the population.

Each community has its own cultural trait, social norm, religious value and economic activities which may shape directly and indirectly to determine the fertility behavior of the community. According to census 1991, 59 ethnic/caste groups were categorized in Nepal, whereas they were identified as 100 ethnic/caste groups in the 2001 census (Dahal, 2003). Among them 59 ethnic indigenous groups, Kirant Rai is one of the oldest and ancient ethnic indigenous groups of Nepal. Every ethnic group has its own identity and important role for the development in the national context.

Nepal has officially introduced family planning programme as a population policy to maintain balance between economic growth rate and population growth rate in 1965. However, population growth rate in Nepal is evident constantly increasing more than 2 percent annually since then and challenging the economic growth rate of the nation besides the latest national census 2011. It is obvious that such a higher population growth has been persisted in Nepal is due to the result of its higher level of fertility rate and declining mortality rate if one ignores the role of migration, particularly emigration, which is nominal.

Therefore, in order to have socio-economic development in the nation, Nepal has to reduce its population growth rate by reducing fertility rate compatible to the declining mortality rate. Notably, Nepal is one of the member countries of the United Nations and it has committed to

achieve each and every Millennium Development Goals by 2015. One of the Millennium Development Goals is to reduce extreme poverty by 2015, which is not possible to achieve if socio-economic development of the nation is not maintain at least in a minimum level. In addition, fertility rate also affects the level of maternal and child health status directly and indirectly. Generally, it is assumed that higher fertility rate may result higher level of maternal and infant mortality even child/under five mortality rates in the society while these are also some Millennium Development Goals to be achieved in Nepal by 2015. The total population of Nepal was enumerated as 26494,504 with an annual growth rate of 1.35 percents. It indicates that the present population of Nepal would be doubled in about 52 years while it was just to be in 26 years in 1981. In many developing countries with higher growth rates often double their populations in 35 years. In this regard, one may assume that population pressure in Nepal is relieving in the time of course. However, in Nepal the level of socio-economic development and its infrastructure to fulfill the demand of growing population is very low and insufficient. Such as there are not enough services and resources like food, water and services like health care, sanitation, education and transport to support and sustain the growing population regardless its pace of growth rate. The majority of people in Nepal have to survive from keeping livestock and growing food and vegetables in the available area. Population growth and its doubling time could be also taken as one of the indicators to predict poverty in any country.

Besides, the growing population in Nepal may be problematic in coming future from global warming. Hence population should be managed for the sustainable development. From this perspective, any kind of research study focus on fertility behavior and its determinants of anyone would be rational one for the management of population in the nation. In this regard, a research study on fertility behaviour of Rai community of Indranipokhari VDC in Khotang district and its determinants would be the same for the national population management. Some socio-economic and demographic factor might be playing vital role for encouraging fertility behavour in a Rai community in Indranipokhari VDC like in anywhere. A majority of Rai is involving in farming as well as foreign employment and other occupation. There is no sufficient health facility, educational institution, economic activities and so on. In my knowledge, there is no any study has been performed yet in the study area in attempting fertility behaviour of Rai community with its determining factors so far. This study basically

focused on socio-economic and demographic variables which are directly or indirectly associated with fertility behaviour of Rai community. Therefore, it is necessary to find out the key socio-economic and demographic factors and its impact on fertility behaviour in Rai community.

1.3 Objective of the Study

The general objective of this study is to assess socio-economic and demographic conditions and the determinants of fertility behaviour of Rai community in Indranipokhari VDC, Khotng district. However, the specific objectives of this study are as follows.

- To examine the socio-economic and demographic characteristics of Rai community.
- To examine the relationship between socio-economic and demographic variables and fertility behaviour of Rai community through Chi-square test.
- To find out the level of knowledge and use of contraceptives of among married women of reproductive age 15-49 years.
- To suggest policy recommendation based on findings regarding fertility behaviour and its influencing factors.

1.4 Hypotheses

It is hypothesed that fertility behavior will be lower for those respondents who are educated with educated husbands, who are engaged in non-agriculture with the same occupation of husband, who are able making decision on their own health care and children health care, who are having family planning knowledge and have taken antenatal check-up than those who are illiterate, who are engaged in agriculture with the same occupation of husbands, who are not able making decision themselves on their health care and children health care, who do not have family planning knowledge and not taking antenatal check-up respectively. Similarly, fertility behavior will be lower for those respondents whose age at first marriage and first birth is higher than 20 years, who practice breastfeeding greater than 2 years, who star sexual intercourse more than 6 months after a child birth, who belong to the household which has bank balance 101-3000 thousand and who contribute cash in household expenditure compared to those whose age at first marriage and first birth is lower than 20 years, who practice breastfeeding less than 2 years, who star sexual intercourse less than 6

months after a child birth, who belong to the household which has bank balance 3-100 thousand and who do not contribute cash in household expenditure.

1.5 Rationale of the Study

In Nepal, very few studies have been conducted about socio-economic and demographic variables which enhancing the fertility behaviour, especially in backward ethnic groups. A country's prosperity depends upon development of each social group within country. Each study should be conducted in each and every social group in every part of country to understand the deep knowledge of each social group. Hence, this study becomes more important in a country like Nepal, where people are living in diverse characteristics in terms of religion, culture, occupational status, and ethnicity and so on. So, this study has attempted to examine the various socio-economic and demographic impacts on fertility behavior of the Rai community. Similarly, the findings of this research work could be a literature for those people who want to know about the fertility behavior and socio-economic status of Rai community in Indranipokhari VDC for a further research. No such study has yet been conducted of this community in this VDC. This type of study itself may be useful information in raising the awareness in community member. The specific rationale of this study are as follows.

- This study is important to identify the fertility behavior of Rai community in Indranipokhari VDC in Khotang district.
- The study is important to find out the socioeconomic and demographic factors of Rai community, which are likely to impact the fertility behaviour of them in Indranipokhari VDC in Khotang district.
- The finding of this study will be useful for the researchers for a further research work for the same and for the planners, policy maker as well as INGOs/GOSs.
- It may be useful for those who are involving to improve the life cycle of disadvantage community.

1.6 Limitation of the Study

- This study is limited to only Rai community of Indranipokhari VDC in Ward No. 1, 2, 3, 4 and 8 of Khotang district due to the nature of study and time with resource constraint.

- Only some selected socio-economic and demographic variables are taken to observe the relationship between these variables and fertility behaviour of Rai community by using Chi-square test only, which can not rule out other variables effect in measuring the impact of selected variables on fertility behaviour.
- Information was collected from only selected sample household and study units of study area.

1.7 Chapter Plan

This study is divided into seven chapters with different topics. The chapter one deals with seven sub topic i.e. general background, statement of the problems, objective of the study, hypothese, rationale of the study, limitation of the study and chapter plan. Chapter two consists of theoretical, empirical literature review and conceptual framework. Chapter three presents research methodology of the study. Chapter four and five reveal socio-economic and demographic characteristics of the household and respondents respectively. The chapter six presents the impact of selected socio-economic and demographic variables on fertility behaviour of the respondents. And finally, chapter seven deals with the summary recommendation and conclusion.

CHAPTER TWO

LITERATURE REVIEW

This chapter attempts to review some relevant past studies of fertility behaviour. It is divided into two parts, first one is theoretical aspect of literature review and another is empirical one. The chapter further represents the conceptual framework for the study based on assumed influencing factors that impact the fertility behavior of Rai community.

2.1 Theoretical Literature

There are various theoretical and empirical literature in the study of fertility behavior. Fertility behavior is determined by different physiological factors and their interplay with social, economic, and cultural factors.

Rijal and Shrestha, (1989) has said that fertility behaviour of any groups and community is affected by caste, ethnicity, religion, cultures, women's education, occupation, sex performance, use of contraceptives and age at marriage. In the case of those variables, Brahman, Chhetri and Newar have lower fertility levels than other ethnic groups.

In the context of fertility behaviour, Bongaarts (1983) has indicated seven sets of variables, which affect fertility. These are age at marriage, marital disruption on site of permanent sterility, duration of post partum infecundability, use and effectiveness of contraception, induced abortion and spontaneous intrauterine mortality. He attributed variations in TFR to four determinants, which are married proportion, prevalence of contraception, post partum infecundability and abortion. Frank Notestaine (1946) has summarized the various steps of fertility and mortality in demographic transition theory. This theory explains from the state of high fertility and mortality to a state of low fertility and low mortality with the improved social, economic and demographic status of every country. This transition theory is generally based on European countries and some other developed countries. According to Frank Notestaine (1945) in a traditional society fertility and mortality levels are high which can fall down rapidly because of economic and social status change including rising level of living

standard, better nutrition, education and control of different types of diseases emphasized by Notestaine in his fertility theory.

Davis and Blake (1956) developed an analytical framework for the comparative sociology in fertility. They defined a set of eleven variables that they called "intermediate variables". This framework provides a classification of the intermediate variables which any social factor influences the level of fertility. These are intercourse conception and gestation variables. On the basis of this classification of variables, Davis and Blake then proceeded to examine how some types and elements of social organization enhance social fertility. The intermediate variables are viewed being directly related to specific aspects of the social and economic structure as income, education of wife, occupation of husband, area of residence and some summary index of overall social and economic status or indirectly related to social and economic status or social norms or standards of behaviour, regarding family size and the intermediate variables themselves.

In a sociological framework for the study of fertility presented by Freedman, he argued that the intermediate variables proposed by Davis and Blake are not always used to limit fertility and often their effect on fertility is an unintended result of cultural patterns in 1982, Ronald Freedman developed a model for the sociological framework of fertility in this model he introduced two types of norms about fertility. These norms are as norms about family size and norms about intermediate variables. Family planning programme is considered as one of the social programme that has a goal to reduce fertility that may influence the norms about family size and norms about intermediate variables, which in turn affect fertility behaviour. (Tuladhar 1989, 43-44).

The theory of diffusion explains how the concept of birth control spread all over the world. According to this theory, fertility has been declining, attitude and practices conductive to diminishing fertility have been adopted first by the better educated, wealthy and high social status groups of the city population and transferred in duration of time to intermediate and lower status groups and to the rural areas.

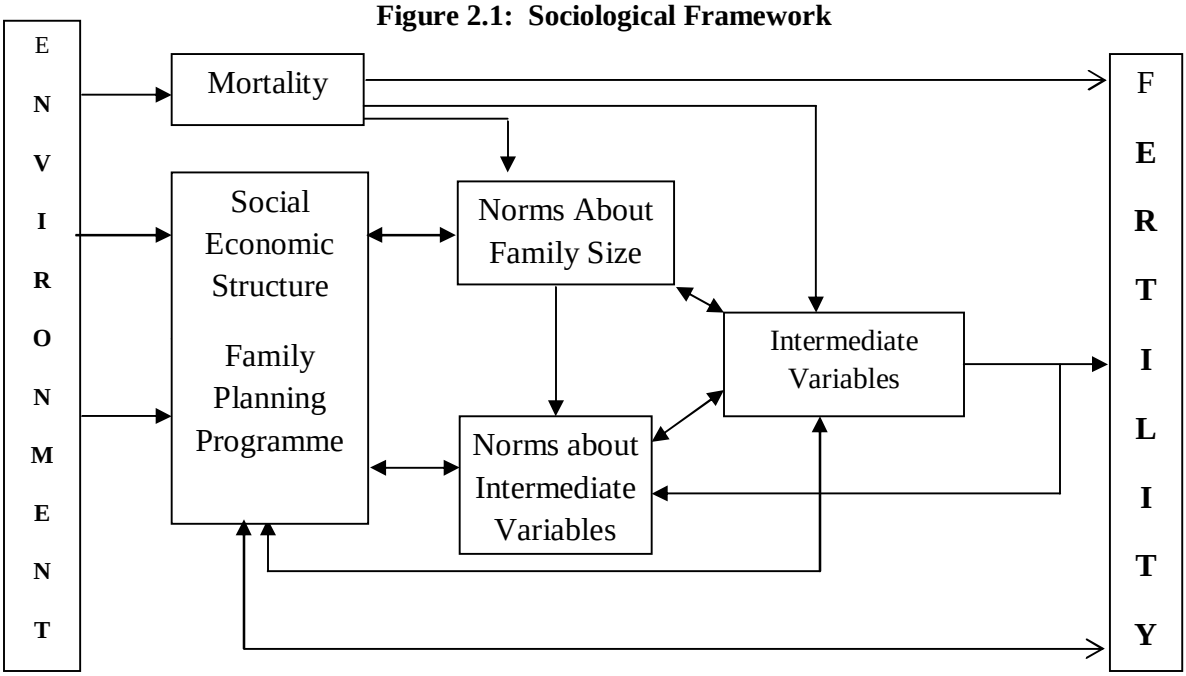
The theory of diffusion of cultural pointed out that the decline in birth rate in western countries was due to change on values and attitudes towards reproduction, resulting in the deliberate use of methods of birth control. This included contraception, abortion and

voluntary abstinence (Bhande and Kanitkar, 1996-24). Bhende and Kanitkar have shown a framework of fertility in their book "Principle of Population Studies" in fertility chapter. This framework has been shown below.

Dahal (1992) analyzed the determining factors of high fertility and found that Nepalese society, such as high economic and social values of children low education and social status of women, poor health and insufficient nutritional food, inaccessibility of quality of family planning and its unmet demand are determining factor of high fertility in Nepal.

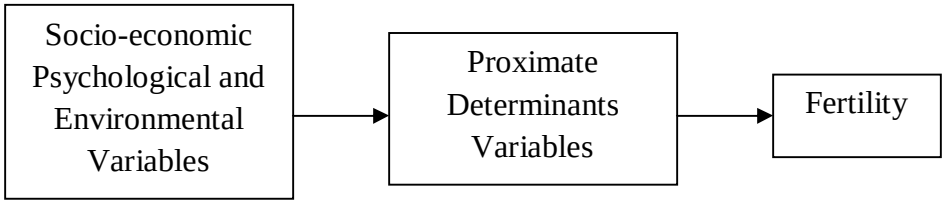
Tuladhar (1989) examined the persistence of high fertility in Nepal using data from Nepal fertility survey 1976. He found that higher infant mortality levels, joint family system, early marriage system, low education status, low working status of women are main contributing factors of high fertility in Nepal.

Figure 2.1: Sociological Framework



Source: Freedman, 1982, P. 279

Figure 2.2: Proximate Determinant Framework



Source: ROSS John, 1982, P. 276

2.2 Empirical Literature

This part present the review of empirical literature related to fertility and other socio-economic and demographic variables studied in Nepal and other countries. The main factor of population increase is low level of mortality and high level of fertility rate. This type of demographic status in Nepal gives the Nepalese population growth rate 2.25% annually (2001 census report). Some of the variables regarding the determinants of fertility are selected and presented below.

2.2.1 Education and Fertility

In the context of fertility, education plays a vital role. Education and fertility have close relationship between them. It is directly related to determine fertility behaviour of human being. Education and fertility are related. Increase in education level decrease fertility rate and decrease in education level increase fertility among the women with elementary level of education than graduate in U.S.A (UN, 1973).

Education has been considered as a catalytic agent to reduce fertility in Nepal. Educated women are more aware of the issue of quality of children than non-educated (Rijal and Shrestha, 1989). In Nepal, the average number of CEB is 1.9 for literate women specially for primary education and 1.5. For graduate which is lower than literate with CEB 2.8 (CBS, 1991) ICPD 1994 in its chapter eleven reveals that the education is a key variable in sustainable development. Education helps to reduce fertility, morbidity and mortality. The increase in education of women and girls contributes to women's empowerment, to postponement of marriage and to reduction in family size (UN, 1994). In Nepalese context, where many women are out of education facility, women who have no education have 3.5 CEB, primary education 2.4 CEB and secondary have 2.1 CEB only. CEB of a woman whose husband is illiterate is 3.6 CEB, with primary education 3.1 CEB and secondary 2.7 CEB (Acharya 2000).

Literacy rate is increasing day by day in Nepal. According to 10^{th} census report total literacy rate is 53.7 percent. 10^{th} census report has showed male literacy rate 65% and female 42.5%. This data shows the great difference between male and female literacy rate. Social status of women in society is low which restricts their mobility out side home and encourage the

system of early marriage. The education status of women is more catalytic in reducing fertility than that of husband (Dahal, 1999).

2.2.2 Occupation and Fertility

Occupational status poses indirect relationship with fertility. It is one of the determining factors of fertility. Increasing occupational opportunities in the country give individuals to go outside home, which help to reduce the level of fertility (Dahal, 1993:85). According to CBS, 1995:79, the level of fertility is observed in 1961 for professional and technical workers, administrative and clerical workers (1.6 CEB per woman) compared to sales 2.4 per woman, farmer (2.7 CEB per woman) production and labour (2.3 CEB per woman) and other occupation (2.1 CEB per woman).

The employment might signal increased resources and status of women. The key to whether female employment affect demographic change lies in whether work translates into increase in power for women. In most countries of the world, women who work for cash have fewer children than those who don't work for cash.

In the context of Nepal, the non-agricultural work has increased in all sectors. Nepal is an agricultural based country. Nepalese female are still concentrated in agricultural sector than male. About 48 percent of female are working as agricultural labourers and 73 percent of economically active women are engaged in agricultural (Acharya 2003:237). In the rural area, women are working on their farm or work as agricultural or wages labourers (Dahal, 1992:5).

In order to reduce poverty in Nepal, it is highly important to effectively implement fertility reduction programmes. Various studies show that since 1970, developing countries with lower fertility have slower population growth with higher productivity more savings and more productive investment. Economic growth, investment in health, education and gender equality, family planning programmes and population assistance were responsible for almost one third of the global decline in fertility from 1972 to 1994. These social investment attack poverty directly and empower individual specially women. (CBS, 2003).

2.2.3 Age at Marriage and Fertility

Age at marriage is also one of the determinants of fertility. There is inverse relationship between age at marriage and fertility in Nepal. In the context of Nepal, age at marriage is found to be lower than developed countries with 15.4 years for females and 19.5 years females in 1991 (MOPE, 2000). In Nepalese society is the sexual function is allowed before marriage. Nature has given a lot of sexual capacity for every male and female. So, they want to fulfill sexual desire but our society does not allow such type of function. So, marriage is very essential in our society.

The values of SMAM have increased by three years for males and four years for females since 1961. In 2001 the values are 23 years for males and 20 years females. These data show a definite decline in male females difference in SMAM from 4 years during the early 3 decades (1961-1991) to 3 years during the immediate last 4 decades (1961-2001) (CBS 2003).

A study shows that women marrying at 20 and 24 ages have similarly fertility; if the marriage age reached 35 or over would be a significant reduction of fertility. This type of delayed marriage is one of the most important ways to reduce high fertility in Nepal (Karki, 2003).

The number of CEB is affected by the socio-economic condition of the people in the country. The empirical studies have shown that number of CEB and poverty are positively associated like Nepal. The maternity health and family planning are interrelated and they have an impact on quality of population. The mean number of CEB per women (15-49) years is estimated to be 2.4 (NLSS 2003/04). As expected this increases with age group of women. Rural areas have more children per woman than urban areas. The estimated TFR is 4.1 per woman in 2001. Census report 2001 shows TFR to range from 3.7 to 3.9 (CBS, NLSS, 2003/04).

Marriage is one of the proximate determinants of fertility, and others are contraception, abortion and breast feeding/(Bongaarts and Potter, 1983). According to Acharya the mean age at marriage is 13.4 years for the women with 5 children ever born. The correlation between age at marriage and child ever born was found to be -0.4172 in a study in Hill

village of western Nepal. According to 10th census report 2001, 94 percent of the women and 81 percent of the men were married before they reached the age of thirty; nearly 2 percent of the 10-14 years girls and 33 percent of (15-19) girls were already married (Acharya, 2003: 222). According to 10th census report male and female age at marriage are 21.9 and 19.5 years.

Age at marriage must be high because it helps to reduce fertility, which help to control population growth of the countries. Early marriage increase fertility rate, which is popular in Nepal. So, Nepalese population is increasing rapidly day by day and in this situation-delayed marriage must be emphasized in the context of Nepal. Therefore the examination of fertility by age at marriage provides much clear ways to arrest problem of high fertility to Nepal.

2.2.4 Infant and Child Mortality and Fertility

Morality and fertility have strong relationship between them. Mortality is that component which helps to reduce population. Poor health facility, low nutrional food, more children are causes of dying and the risk of dying is still aggregated if they are born to very younger older mother short interval and with many children (cited in pant 1999). Higher IMR and CMR had to higher fertility rate. Women whose experience of no child loss has 2.5, with one child loss 4.3 and those with two or more child loss 6.5 CEB. Therefore women with higher loss experience have higher CEB (Acharya, 2000).

Adhikari clearified in different points of high IMR and CMR in 1996. According to Adhikari the poor level of social and economic development is the most important factor for high level of infant mortality and fertility. Poor health facilities services, lack of nutritional food, sanitation of the reproductive aged women impair the personal health of mother and children in Nepal (New Era, 1986). A close relationship is found between IMR and CEB. Knowndel (1997) exhibited a strong correlation between level of infant mortality and fertility from data of nineteenth century of Germany. According to (NFHS, 1996) there is a close relationship between survivorship of previous child and birth interval (NFHS, 1991) Reproductive performance is affected by the experience of child loss which affect the number of CEB (Adhikari, 1996).

Fertility and infant mortality have interdependent relationship between them which suggest that reduction in IMR and CMR will trigger a subsequent decline in fertility; it has also found that lower IMR motivates couples to produce less number of children (Karki, 2003).

According to tenth census report 2001, child mortality rate is 91.2 per 1000 children or 91.2 will die before they reach the age of 5 years and infant mortality rate is 64.4 per 1000 live births (Karki, 2003).

2.2.5 Family Planning and Fertility

Family planning is one of the most important way to population control of the country. It helps to control fertility. In Nepal, Family planning programme is not successful than other developing and developed countries. There are many causes available in Nepalese society which obstacle to have effective of family planning programme. These causes are social, economic, cultural, psychological and other variables which affect the demand for children. Knowledge of contraceptive methods is presented for ever married and currently married women and men by specific methods finding from the 2001 NDHS shows that knowledge of at least one modern methods of family planning is nearly universal in Nepal with little difference between women and men. The most widely known modern contraceptives methods among both ever married and currently married women are female sterilization 99 percent, male sterilization 98 percent, injectables 97 percent, the pills 93 percent and condoms 91 percent. 54 percent of currently married women and 69 percent of currently married men used a method in the past in the past and 50 percent of currently married women and 63 percent of currently married men have used a modern method. Among currently married women the most commonly used modern methods were injectables 21 percent, female sterilization 15 percent, pills and condoms percent each and male sterilization 7 percent. Among currently married men use of condoms 35 percent was highest followed by injectables 22 percent, female sterilization 17 percent and pills 14 percent.

The 2001 NDHS indicates that 39 percent of currently married women are using a method of family planning. The 35 percent who are using modern contraceptives represents a dramatic increase in the use of modern methods from 26 percent in the 1996 NFHS (Pradhan et.al, 1997)

There are substantial difference in the use contraceptive methods among sub group of currently married women and men. Women in urban areas are more likely to use a family planning than rural areas. Urban women are likely to be educated than rural women. The CPR for any methods is 62 percent in urban areas compared with 37 percent in rural areas. The difference is largely due to more women in the urban areas using modern contraception 56 percent than in the rural areas 33 percent. In the public sector, 27 percent of users obtained their contraceptives methods from government sub-health post and 26 percent from mobile camps. In the most commonly used source providing contraceptive methods to 6 percent of all users of modern methods.

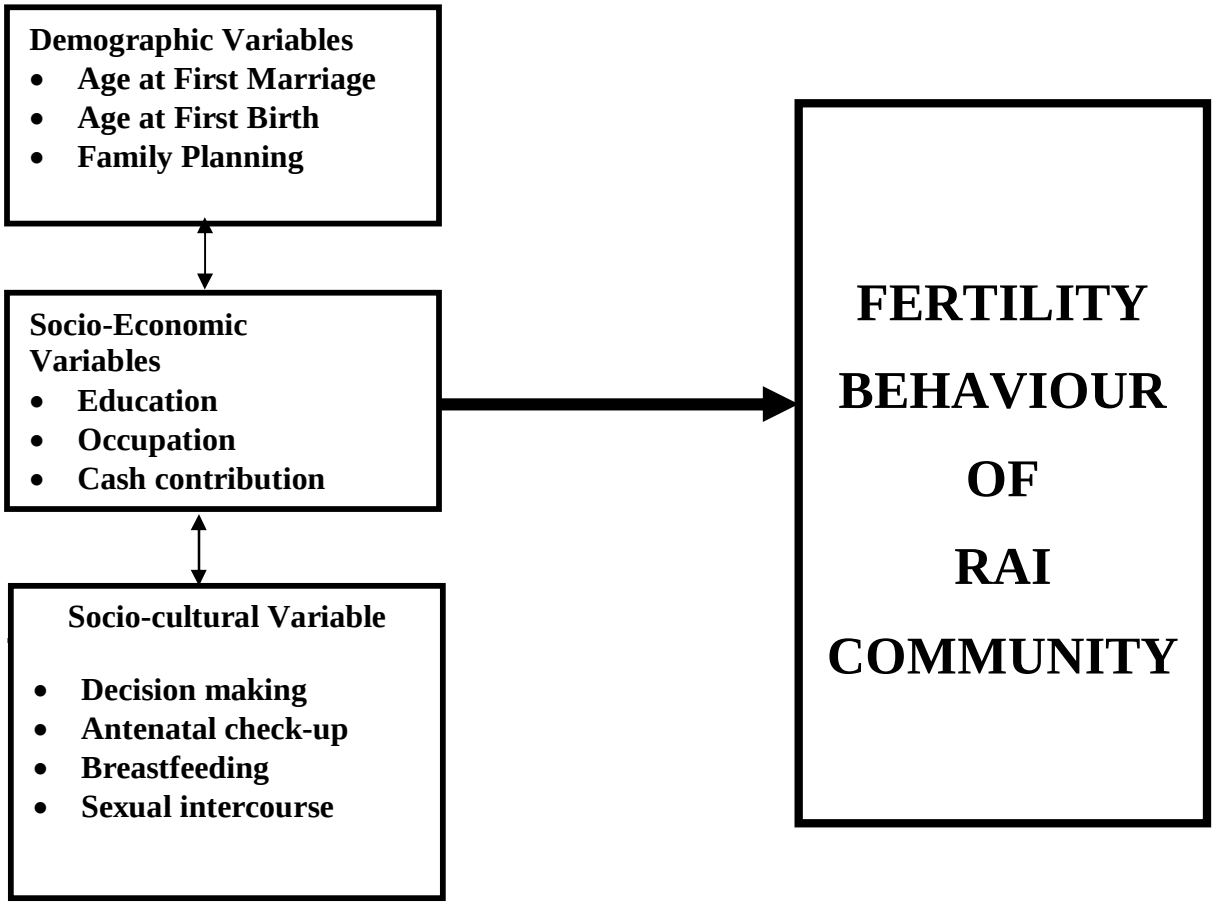
In 1998, K.C. reported that only 38.4 percent of women with 4 living children had used contraception and 40.5 percent of women with 3 and more living sons. It shows that women who have few sons do not use contraceptive device and women who have more living sons use contraceptive. In the context of Nepal, 34 percent of reproductive women with five children use contraception in 1996 (Acharya, 1999).

In Nepal, different sectors are working to reduce fertility rate. These sectors are HMG, NGOS and INGOS which are trying to reduce fertility by launching family planning programme and increasing the percent of contraceptive users but they are not getting successful because there are several obstacles in Nepalese society. These are social, economic, cultural psychological and other. So, fertility rate is also high in Nepal.

2.3 Conceptual Framework

The above reviewed literature provides important basis for the establishment of relationship between variables and fertility. This literature review suggests that socio-economic, demographic and psychological variables are important for determining the fertility behaviour of woman. Basically, based on literature review and proposed objectives and hypotheses, the conceptual framework is formulated to show how the variables affect children ever born to ever marriage women of reproductive age. This is depicted in figure 2.3 below.

Figure 2.3: Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This is a cross sectional survey research work, which attempts to observe the relationship between some selected socio-economic, socio-cultural and demographic variables and fertility behaviour of Rai community of Khotang district. Hence, this research work is designed to analyse the collected data in descriptive and analytical forms with Chi-square test.

3.2 Research Design

This research is designed to study fertility behavior of Rai community at Village level of Khotang district, namely Indranipokhari using primary data. Therefore, the following design was adopted.

3.2.1 Selection of Site

At macro level, Indranipokhari VDC of Khotang district (See Map 3.1) was selected purposively as the researcher was interested in to study about the fertility behaviour of the Rai community in considering it would be a new research work on the one hand and on the other hand out of total population of Khoang district, Rai ethnicity shares the highest one i.e. about 40.0 percent (CBS, 2011). And lottery method was used for the selection of Ward number. Accordingly, Ward No. 1, 2, 3, 4, and 8 were selected out of 9 Wards of the VDC. It is depicted in map 3.1.

3.2.2 Selection of Sample Size

As stated in site selection, Indranipokhari VDC has been selected as the study area for the present study and 180 households were selected proportionately from each of five Wards as assuming that would be interviewed married women with at least have experience of

pregnancy and given a birth could be found in each selected household with i^{th} interval, if otherwise, the very next household will be selected as the sample unit or household[1].

Household selection was done at Ward level on the basis of proportional sampling based on 180 households, which was decided to be surveyed for each Ward. It is presented in table 3.1.

Table 3.1: Sample Distribution of the Study Area, 2011

Sample Ward	Total Household	Sample Units and Household Interval	
		SH*	HI*
1	44	32	1
2	47	34	1
3	65	47	1
4	48	35	1
8	44	32	1
Total	248	180	1

Source: Central Bureau of Statistics, National Population of Nepal, 2001.

SH***** = Sample household and HI***** = i^{th} household interval.

The i^{th} interval of each household is found just to be skip only one household yet it was very time consuming and a bit difficult to visit selected household due to physical constraints as it is a hilly district.

[1] But, during survey, an eligible respondent was found in each household. Thus, there was no need to jump to the very next household for the sake of eligible respondents.

3.3 Definition and Measurement Techniques of Dependent Variables and Independent variables

Dependent Variable

Fertility behavior is taken as the depended variable, which defined as number of birth (children ever born) of the respondents. It is measured as whether the respondents have 1-2 children and 3 and above children for the Chi-Square test since it is evident that many independent variables did not have minimum value (5 cases) of dependent variables if number of birth is to be categorized into more than two categories.

Ten independent variables are proposed for the Chi-Square test to observe their association and impact with the dependent variable. Such as:

1. **Education:** It refers to the educational status of the respondents and their husbands only, which is categorized into three categories i.e. illiterate, primary and secondary and above. Illiterate is coded as '1' and primary is coded as '2' and secondary and above is coded as '3'.
2. **Occupation:** It refers to the main occupation of the respondents and their husbands. It is categorized into two categories: agriculture and non-agriculture and measured as a dichotomous variable. Agriculture is coded as '1' and non-agriculture is coded as '2'.
3. **Age at First Marriage:** It refers to the age of the respondents at their first marriage. It is categorized into two categories: 15 to 19 years and 20+ years. 15 to 19 years is coded as '1' and 20 years and above is coded as '2'.
4. **Age at First Birth:** It refers to the age of the respondents, which is recorded in completed years during last childbirth. It is categorized into two categories: 15 to 19 years and 20+ years. 15 to 19 years is coded as '1' and 20 years and above is coded as '2'.
6. **Knowledge about Family Planning:** It refers to the knowledge of the respondents about family planning, which is observed as yes and no. Yes is coded as '1' and no is coded as '2'.

7. **Having Decision on Respondents Health Care:** It refers to the status of decision taking on respondents' health care and their children' health care, which is measured as herself, both and others. Herself is coded as '1', both is coded as '2' and others is coded as '3'.
8. **Interval of Breastfeeding:** It refers to the interval of breastfeeding of the respondents, which is measured as less than 2 years, 2 years and 2 years and above. Less than 2 years is coded as '1', 2 years is coded as '2' and 2 years and above is coded as '3'.
9. **Timing of Sexual Intercourse After Last Child Birth:** It refers to the timing of sexual intercourse of the respondents, which is measured as 'less than 6 months', 'and 6 months and more. Less than 6 months is coded as '1' and 6 months and more is coded as '2'.
10. **Cash Contribution in the Household:** It refers to the cash contribution of the respondents in the household expenditure. It is observed as yes and no responses and yes is coded as '1' and no is coded as '2'.

3.4 Source of Data and Method

This research work has used secondary and primary, both types of data. Secondary data are basically used for introduction part. These include government source, particularly, Central Bureau of Statistic, Village Development Committee and Demographic Health Survey. As mention above, it is a cross sectional survey. Thus, the main part of research work is based on primary data collected through field survey. In field survey, household questionnaire and individual questionnaire were used to collect data. Household questionnaire was used to the head of household for the information of household characteristics and Individual questionnaire was used to have information about fertility behavour of the married women of that respective household who have at least the experience of childbirth in their conjugal life.

3.5 Method of Data Analysis

The collected data are analysed through SPSS (Statistical Package for Social Sciences). Univariate analysis has been applied to estimate percentages and frequency distribution of household characteristics and respondents background information for the descriptive analysis of the study area. Bivariate analysis has been performed to observe the association of dependent variable i.e. fertility behaviour of the respondents with the selected independent variables though cross tabulation. Chi-square test has been used to examine the impact of the selected independent variables on fertility behaviour.

3.5.1 Chi-Square Test

Chi-Square test has been used to observe whether the independent variables have a significant and predictable association with the dependent variables. It can be test by the following formula:

$$\text{Chi-Square} = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where O_i = Observed frequencies and

E_i = Expected frequencies

Null Hypothesis:

There is no any significant association between independed variables and dependent variable in tabular data.

Alternative Hypothesis:

There is a significant association between independent variables and dependent variable in tabular data.

Decision Rule:

Null hypothesis should be accepted if the calculated value emerges less than to table value at given level of significance with (c-1) (r-1) degrees of freedom. But, if the calculated value of chi-square is greater than the table value at given level of significance with (c-1) (r-1) degrees of freedom, null hypothesis should not be accepted.

Figure 3.1: District Map

CHAPTER FOUR

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTIC OF HOUSEHOLD

In this chapter, background characteristics of the household are analysed. The main purpose of this chapter is to relate the socio-economic and demographic characteristics with the fertility behaviour of the respondents in the study area. Generally, household status may also determine the status of women, which ultimately determines fertility behaviour of them. Hence, household information is also collected and analyzed in order to observe association of socio-economic and demographic status of the household with the fertility behaviour of the respondents.

4.1 Demographic Characteristics

Fertility is one of the demographic components. The large number of family members in a household with inadequate resources creates more problems in the family. This makes obstacles women to achieve the meaning of life and she may have to involve in bearing of children and just only doing household work. This section deals with household characteristics such as household size, economic status of the household, facilities, religion, etc.

4.1.1 Age-Sex Structure of the Population

Age and sex are basic characteristic of any population to be analysed. One may generally characterized a situation of economic, social and demographic of any population based on its age-sex structure in a given time period. It is necessary to know age structure of people of households. Fertility is affected by age structure of women. Age sex structures are the basic factor to effects the fertility level of any society. Generally, if there is high prevalence of age group of male and female in young age group, there is the high chance of to be high fertility. Sex composition of population puts important role in the study of population dynamics. Such as fertility, mortality and migration behaviour of male and female uses to be differed that directly and indirectly affects in demographic and socio-economic aspects of the society, it affects in cultural aspect as well. Therefore, any kind of demographic analysis gives importance of sex composition of the population. The composition of age sex structure of the

study area is presented in table 4.1. The total household is 180 and the total population are recorded 812; among them 352 are males and 460 are females.

Table 4.1 shows that the percentage of total population is found the highest (14.8%) in the age-group 15-19 followed by 12 percent in the age-group 5-9 years. The lowest percentage of population are observed in the age group 55-59 years (1.4%) and (2.9%) in age group 60 and above years. This indicates that there exists higher proportion of population in the lower age group resulting higher fertility and lower proportion of population in the old age indicates the low life expectancy at birth. According to sex, 5-9 age group has higher number of male and 15-19 age group are higher in female

Table 4.1: Percentage Distribution of Total Population by Age-sex Structure, Study Area

	Male		Female		Total	
Age group	No.	Percent	No.	Percent	No.	Percent
0-4	45	5.5	52	6.4	97	11.9
5-9	66	8.1	32	3.9	98	12
10-14	47	5.8	46	5.7	93	11.5
15-19	47	5.8	73	9.0	120	14.8
20-24	44	5.4	62	7.6	106	13
25-29	35	4.3	37	4.6	72	8.9
30-34	21	2.6	32	3.9	53	6.5
35-39	16	2.0	37	4.6	53	6.6
40-44	14	1.7	25	3.1	39	4.8
45-49	6	0.7	28	3.4	34	4.1
50-54	4	0.5	9	1.1	13	1.6
55-59	4	0.5	7	0.9	11	1.4
60+	3	0.4	20	2.5	23	2.9
Total	352	43.3	460	56.7	812	100

Source: Field survey, 2012

4.1.2 Sex Ratio of the Population

The sex composition of a population is expressed by sex ratio and presented in table 4.2 and in the figure 4.2. It is defined as males per females and it is obtained by dividing total number of male by total number of females and multiplying by hundred. Sex ratio is very important in the study of demography. It directly affects the fertility behavior. If sex ratio is high in any community, it means there is the higher proportion of male; it assumed that fertility behavior would be low in that community people. The sex ratio of study area is revealed to be about

71 males per 100 females, which is very low. It may be due to Ghorkha recruitment of Rai males.

Table 4.2: Distribution of population by Sex Ratio, Study Area

Age group	Sex Ratio
0-4	86.5
5-9	206.2
10-14	102.1
15-19	64.3
20-24	70.9
25-29	94.5
30-34	65.6
35-39	43.2
40-44	56.0
45-49	21.4
50-54	44.4
55-59	57.1
60+	15.0
Total	71.32

Source: Field survey, 2012

Table 4.2 shows that sex ratio of household member, in age group 5-9 and 10-14, sex ratio is evident to be high i.e. more males compared to females. In the remaining age-groups it is seen low i.e. females are more than the males in the study area. The sex ratio for age group 0-9 years is evident unusual theoretically. Due to lack of data researcher is unable to explain the main causes for this evident. Based on demographic component (Fertility, Mortality and Migration) are consider affecting age structure of a population. For this age group mortality rate for both sexes could be one of the cause's .On the other hand, age misreporting for either sexes could be another reason since migration could not be the cause for this age group.

4.1.3 Religion Composition of the Household

Religion composition of any population is used to be analysed in any research work as considering whether it affects any kind of socio-economic and demographic behavior of the population. It is seen that in various studies that Muslim religion support the high fertility in the society, so, religion is one of the important factor to be analysed in any population. According to religion, people may have different beliefs that directly and indirectly affects the fertility. In this study also the respondents were asked their religious status. The responses are tabulated in Table 4.3.

Table 4.3: Percentage Distribution of Household by Religion, Study Area

Religion	Number	Percent
Hindu	54	30.0
Buddhist	1	0.6
Kirat	120	66.7
Christian	5	2.7
Total	180	100

Source: Field survey, 2012

Table 4.3 shows that the percentage of total population is found the highest in Kirat religion (66.7%), followed by Hindu (30.0%), Christian (2.7%) and Buddhist (0.6%) respectively.

4.1.4 Educational Status of the Population

Education is one of the basic requirements for enhancing social, economic and political development of the nation at macro level. Whereas in micro level, it may indirectly affects individual's fertility, mortality and migration behaviour likely through positive perspective. Similarly, educated person's socio-economic and health condition also could be better off comparatively. Thus, it is necessary to know the educational status of any society or community. Those people are literate who can read and write. The literacy status of people determines the standard of life of people. Various studies related to fertility behaviour show that educated people have lower fertility than uneducated. It is necessary to study the literacy status of people with reference to Nepal where such status is still in critical phase until the time of 21th century. The literacy rate of Nepal is very low compared to other country of world. The educational level of study area population is given in table 4.4.

Table 4.4: Percentage Distribution of Population by Level of Education, Study Area

	Male		Female		Total	
Level of Education	Number	Percent	Number	Percent	Number	Percent
illiterate	16	2.0	108	13.3	124	15.3
literate	45	5.5	57	7.0	102	12.6
primary	112	13.8	111	13.7	223	27.5
secondary	65	8.0	75	9.2	140	17.2
10+	67	8.3	56	6.9	12.3	15.1
*Nabalak**	47	5.8	53	6.5	100	12.3
Total	352	43.3	460	56.7	812	100.0

Source: Field survey, 2012

Nabalak:* under 6 years age of population

The table 4.4 shows that out of total population 12.6 percent are literate and 15.3 percent are illiterate. Similarly, according to educational status, highest percentages (27.5%) were attending the primary level of education. Similarly, the secondary attainment were (17.2%), 10+ (15.1%), and *Nabalak* (under 6 years age of population) were (12.3%).

Among the illiterate population highly (13.3 %) female are illiterate and only (2.0 %) are male. Similarly, in primary, secondary and 10+, level of education female percent is less than male percent. We can see that from the table 4.4, 15.3 persons are still uneducated in the study area It shows that there is still deep gap between male and female education attainment. And the proportion of uneducated people is still high in the study area which supports the high fertility.

4.1.5 Marital Status of the Study Area Population

Marriage is a social phenomenon in which two different sexes bonded each other and live their life together mostly. Marriage can't put far from the study of demography. In other words, demographic studies have put greater attention on the study of marital status of people, particularly from estimating fertility behaviour and rate. Early age marriage determines the high level of fertility and vice-versa. The marital status of the study area population is presented in table 4.5.

Table 4.5: Percentage Distribution of Marital Status of the Population, Study Area

	Male		Female		Total	
Marital Status	Number	Percent	Number	Percent	Number	Percent
Married	113	13.9	245	30.2	358	44.1
Unmarried	238	29.3	209	25.7	447	55.0
Widow/er	-	-	6	0.7	6	0.7
Divorced	1	0.1	-	-	1	0.1
Total	352	43.3	460	56.7	812	100.0

Source: Field survey, 2012

Table 4.5 shows the marital status of the household member. The total population was 812; where the single number of population were 447 (55.0%) and the married number of population were 358 (44.1%), widow/er number were 6 (0.7%) and the divorced number was 1 (0.1%).

Similarly, among the married population (30.2%) are female and (13.9%) are male. The proportion of female unmarried population is 25.7% and male proportion is (29.3%).This shows that the female married population is greater than male and unmarried population is less than male which supports high fertility.

4.1.6 Linguistic Composition of Household

In study area, it has been found that after taking interview with all respondents they can speak Nepali language. Only 20 household reported that they speak Rai language as their first language, it is given in table 4.6.

Table 4.6: Percentage Distribution of household by Language, Study Area

language	Number	Percent
Nepali	160	88.9
Rai	20	11.1
Total	180	100

Source: Field survey, 2012

Table 4.6 indicates that language status of population, where majority of people (88.9%) speak Nepali, and (11.1%) speak Rai respectively.

4.2 HOUSEHOLD CHARACTERISTICS OF HOUSEHOLD

4.2.1 ECONOMIC CHARACTERISTICS OF HOUSEHOLD

4.2.1.1 Households Income of the Study Area

Source of income is one of the better indicators of socio-economic status of the population. Quality of life depends upon the income source of household. There is inverse relationship between source of income and fertility. In Nepal, the majority of people are poor who are more likely to have many children as considering children are the source of income and old age security. In this context, research has attempted to collect the information regarding income source of the household in the study area and presented in Table 4.7.

As table 4.7 shows that income sources of household where agriculture source accounted for 56.1 percent, service 18.3 percent, remittance 11.7 percent, daily wages 7.8 percent, pension 3.3 percent and business 2.8 percent respectively. It generally indicates that agriculture shares as the highest source of income of the household in the study area and one may assumes that fertility behaviour of the study area could be more likely to be high. Since the results of various studies, have found higher fertility rate for those whose occupation is agriculture than those whose occupation is non-agriculture, particularly service and business/trade.

Table 4.7: Percentage Distribution of Household by Main Source of Income, Study Area

Source of income of the Households	Number	Percent
Agriculture	101	56.1
Service	33	18.3
Remittance	21	11.7
Daily wage	14	7.8
Business	5	2.8
Pension	6	3.3
Total	180	100.0

Source: Field survey, 2012

4.2.1.2 Land Holding Size of Households

The land holding size also indicates the socio-economic status of the households in a country like Nepal where the majority of the total population are engaged in agriculture. Table 4.8 consists of information of land holding size of household. Being the agricultural society, most of the households are found to be holding land more or less in the study area. Data in table 4.8 indicates that more than 76.3 percent households of the study area have only 1 to 10 Ropani of Khet, followed 11 to 20 Ropani of Khet (17.8%) and 21 to 30 Ropani of Khet (5.9%). It generally, indicates the majority of the respondents of the study area are belong to small land holding size of Khet.

Data in table 4.8 indicates that more than 55 percent households of the study area have only 1 to 10 Ropani of Bari followed11 to 20 Rponni of Bari (33.3%) and 21 to 30 Ropani of Bari (7.2%),31 to 40 Ropani of Bari (2.2%),41 to 50 Ropani of Bari (1.7%)and 51 to 70 Ropani of Bari (0.6%). It also generally indicates the majority of the respondents of the study area are belong to small land holding size of Bari.

Table 4.8: Percentage Distribution of Household by Land Holding Size (Khet and Bari)

Area in Ropani	Khet		Bari	
	Number	Percent	Number	Percent
1-10	**90**	**76.3**	**99**	**55.0**
11-20	**21**	**17.8**	**60**	**33.3**
21-30	**7**	**5.9**	**13**	**7.2**
31-40	**-**	**-**	**4**	**2.2**
41-50	**-**	**-**	**3**	**1.7**
51-75	**-**	**-**	**1**	**0.6**
Total	**118**	**100.0**	**180**	**100.0**

Source: Field survey, 2012

Note:-16 Aana= 1 ropani

4.2.1.3 Occupational Status of the Population

The pattern of occupation of any population reflects the economic condition of the society whereas it is also considered one of the factors that affects fertility behaviour of the individuals. It is generally assumed that those couples who have engaged in agricultural sector could have many children compared to those couples whose occupation is non-agricultural sectors i.e. service, business, trade and so on. higher level of occupation as a result lower fertility exist in those women.

Occupational pattern of the population of the study area is presented in table 4.9. status is another factor, which reflects the socio-economic status of person and fertility. Occupation indicates the socio-economic status of a household in any society or community. It is playing a vital role to determine fertility. There are different types of occupation of the study population which is presented in the table 4.9. According to the table 4.9, most of the household populations i.e. more than 53.0 percent are engaged in agricultural activities. Only about 15.0 percent of the household are found involved in service, business and foreign employment whereas more than 19.0 percent population are revealed engaged in various types of activities. Significant proportions i.e. 8.4 percent of the population in the household are evident engaging in household work.

Table 4.9: Percentage Distribution of Population by Occupational Status, Study Area

Occupational Status	Number	Percent
Agriculture	277	53.1
Service	32	6.1
Business	14	2.7
Daily/wages	23	4.4
Foreign employment	30	5.8
Household work	44	8.4
Others*	102	19.5
Total	522	100.0

Source: Field survey, 2012

Note: *Others refer to seasonal work i.e. fishing, woodcutting, build other houses.

4.2.1.4 Type of House

In general, the types of household also indicate the economic status of a household, hence, the respondents were asked about the type of their houses. The responses are tabulated in table 4.10.

Table 4.10: Percentage Distribution of Respondents by Types of House, Study Area

Types of house	Number	Percent
Kachhi	162	90.0
Semi-Pakki	18	10.0
Pakki	-	-
Total	180	100.0

Source: Field survey, 2012

Table 4.10 shows that most of the respondents house is Kacchi, which is accounted for (90%), (10%) house is Semi-Pakki and no house is Pakki. This shows that they have lower family status.

4.2.1.5 Cultivation of Other's Land

Some of the households who have no land or less land which is not sufficient to feed the family members, they may have cultivated other's land to support the family, which can be taken as a proxy economic indicator. Considering this fact, respondents were asked about the other's land holding status. The responses are shown in the table 4.11.

Table 4.11: Percentage Distribution of the Households by Cultivation Status of Other's Land, Study Area

Cultivating other's land	Households	Percent
Yes	31	17.2
No	149	82.8
Total	180	100.00

Source: Field survey, 2012

Table 4.11 shows that 17.2 percent of the households are cultivating other's land and 82.8 percent households are not cultivating other's land. This indicates that the majority of the respondents are residing in the households, which have their own land for the cultivation in the study area.

4.2.1.6 Sufficiency of Food of the Household

The status of food sufficiency of the household indicates the economic status of the people in a country like Nepal where main livelihood of the majority population is comes from agricultural sector. Hence, it is assumed that those households which have enough food sufficiency from their own land could be better of economically compared to those households, which have reported not sufficient one. Therefore, respondents were asked about the food sufficiency status and their responses are presented in table 4.12.

Table 4.12: Percentage Distribution of the Households by Sufficiency of Food, Study Area

Sufficiency of Food(in month)	No. of Household	Percent
$\leq$ 3 months	3	1.7
4-6 months	21	11.7
7-9 months	39	21.7
10-12 months	101	56.1
More than 12 months	16	8.9
Total	180	100.0

Source: Field survey, 2012

As the table 4.12 indicates 56.1 percent of the total households (101households) have 10-12 months sufficiency of food followed by 21.7percent 7-9 months, 11.7 percent 4-6 moths and

8.9 percent more than 12 months. The least proportion (1.7%) have ≤ 3 months sufficiency of foods. This indicates the poor economic-status of the community. According to the data of food sufficiency, only 65.0 percent of the respondents have food sufficiency for the year and more whereas the remaining 35.0 are seemed lacking of food for one year.

4.2.1.7 Livestock

Live stocks are also sources of household income, particularly in rural area. Some families who have less land may sustain themselves by selling domestic animals. In order to know their economic status and sources of incomes respondents were asked about the live stock. It is presented in table 4.13.

Table 4.13: Percentage Distribution of Household by Types of Livestock, Study Area

Types of Livestock	No. of Households	Percent
Buffaloes	118	65.6
Cows	78	43.3
Goats	46	25.6
Bull	86	47.8
PIG	169	93.9
Sheep	4	2.2

Source: Field survey, 2012

Table 4.13 shows that the majority of the households i.e. 93.9 percent have pig, 65.6 percent have buffaloes, 47.8 percent have bull, 43.3 percent have cows, 25.6 percent have goats and least 2.2 percent of households have sheep.

4.2.2 Household Facilities

4.2.2.1 Access to Drinking Water and Sanitary Facility

Public health is directly related to drinking water and sanitation. It means that health depends on clean water and good sanitation. It is said that more than 60 percent diseases are carried by impure water. Thousands of children die each year due to diarrhea, dysentery, Cholera etc. These are mainly due to consumption of polluted water. Because of high infant mortality in the community, women may give birth to more children thinking if one died, other would live. Water is life and impure water may cause the loss of life and health impurity.

Respondents were also asked the source of drinking water that they are using. The responses are tabulated and presented in table 4.14a.

Table 4.14a: Percentage Distribution of the Households by Sources of Drinking Water Study Area

Water resources	No. of households	Percent
Private	32	17.8
Public	117	65.0
Open source*	31	17.2
Total	180	100.0

Source: Field survey, 2012

Note: *Open source refers to river, well and pound.

It can be seen from the table 4.14a that most of the households are using public water resources proportion using public water resources is accounted for (65.0 %) and (17.8 %) of the households are using private and (17.2 %) of the households are using open sources l. This shows that the drinking water status of the study household is weak.

The respondents were also asked about the toilet whether they have in their home. The responses are tabulated below table 4.14b.

Table 4.14b: Percentage Distribution of Households by Toilet Facility, Study Area

Toilet facility	No. of Households	Percent
Yes	88	48.9
No	92	51.1
Total	180	100.0

Source: Field survey, 2012

It is clear from the table 4.14b that 48.9 percent of the households have toilet facilities and 51.1 percent have not toilet facility. As the table 4.10b shows that the toilet facility is poor at the study area.

4.2.2.2 Household Amenities

Possessing Households amenities also indicate the economic status of the family. Generally, respondents who belong to the household that possess most of the household amenities are considered well off, which may also affect fertility behaviour. Hence, information of

household amenities has been collected for this research work too. The collected data of household amenities are given in table 4.15.

Table 4.15 indicates that the majority of the households have Radio facility which is accounted for 93.9 percent followed by telephone 23.3 percent, solar 18.9 percent, TV 12.8 percent, electricity 9.4 percent, newspaper 9.1 percent and fuel used for cooking is wood accounted for 100 percent .

Table 4.15: Percentage of HHs with Household Facility, Study Area

Facility	No. of Households	Percent
Electricity	17	9.4
Radio	169	93.9
Telephone	42	23.3
Solar	34	18.9
Television	23	12.8
Newspaper	10	9.1
Cooking fuel(wood)	180	100.0

Source: Field survey, 2012

CHAPTER FIVE

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTIC OF THE RESPONDENTS

This chapter deals with the analysis of socio-economic and demographic characteristics of the respondents of the study area. As it is assumed that socio-economic and demographic characteristics of the respondents would affect the fertility behaviour of them.

5.1 Age of the Respondents

Age of women is one of the demographic factors which influences on fertility. The general age pattern of fertility is that the level of fertility is increased with the increment of age of women. Table 5.1 shows the respondent's age classified by five years age group.

According to table 5.1, 20 percent of the respondents are in 20-24 years of age group. 19.4 percent respondents are in 25-29 years of age group, 17.2 percent are in age group of 35-39 years and 14.4 percent are in 30-34 years of age group. The least number of respondents are in 15-19 years (3.9%) and 45-49 years (10.6%) of age groups. It simply indicates that about 40.0 percent respondents are concentrated in prime age group i.e. 20-29 years.

Table 5.1: Percentage Distribution of the Respondents by Five-year of Age Group, Study Area

Age group in years	Number	Percent
15-19	7	3.9
20-24	36	20.0
25-29	35	19.4
30-34	26	14.4
35-39	31	17.2
40-44	26	14.4
45-49	19	10.6
Total	180	100.0

Source: Field survey, 2012

5.2 Age at First Marriage of the Respondents

Age at first marriage is also important determining factor of fertility. Nepalese society where marriage is thought to be universal and is taken as a main responsibility of parents, there is a great role of marriage to determine the fertility behaviour of women. It is almost universal

that low age at marriage results higher number of children ever born in a society where contraceptive level is low. In the study area, age at marriage of women is found to be at early ages (Table 5.2). Table 5.2 indicates that about 83.0 percent of the respondents have got first marriage by less than 20 year of age in the study area. It shows that most of the respondents were found married in young ages.

Table 5.2: Percentage Distributions of Respondent by Age at First Marriage, Study Area

Age group	Number	Percent
14-17	44	24.4
17-19	105	58.3
20-26	31	17.2
Total	180	100.0

Source: Field survey, 2012

5.3 Educational Status of the Respondents

Education of the women is one of the most important determinants of fertility behaviour and it is usually associated negatively with fertility i.e. higher the education lower the fertility and vice-versa. Education directly or indirectly affects the fertility. Generally, literate women are found more conscious about their family size, more knowledge about using contraceptives. Women's educational status is taken as key factor for reducing fertility. Educated women understand the consequences of population growth and they use the means of family planning and do not give the preference for son as well. Data on educational status of the respondents is presented in table 5.3. It reveals that about 32.0 percent of the respondents are illiterate and 37.2 percent of them have primary education, followed by secondary (19.4%) and SLC and above level (11.7%). The level of education of the respondents is not satisfactory. Comparatively, educational status of the respondents' husbands is seemed better than the respondents (Table 5.4).

Table 5.3: Percentage Distributions of Educational Status of the Respondents, Study Area

Educational Status	Number	Percent
Illiterate	57	31.7
Literate	123	68.3
Total	180	100
Level of education		
Primary	67	37.2
Secondary	35	19.4
SLC and above	21	11.7
Total	123	68.3

Source: Field survey, 2012

5.4 Educational Status of the Husbands

Husband education also plays vital role to determinant of fertility. When the husband educational level is high fertility will be low .Educated people are more conscious on their optimum family. It is presents in table 5.4.

Table 5.4: Percentage Distributions of Educational Status of Husband, Study Area

Educational Status	Number	Percent
Illiterate	20	11.1
Literate	160	88.9
Total	180	100.0
Level of Education		
Primary	71	39.5
Secondary	56	31.1
SLC and Above	33	18.3
Total	160	88.9

Source: Field survey, 2012

Table 5.4 shows the educational status of the husband. Out of the total, 160 respondent's husbands were literate, which represent 90.0 percent against 20 with 11.1 percent .Among them 39.5 percent were attained in informal plus primary followed by 31.1 were secondary, 18.3 percent were SLC and above education respectively.

5.5 Occupational Status of the Respondents

Occupational status is another determinant of fertility. Usually, it uses to be assumed that fertility level would be higher for those respondents whose occupation is agriculture compared to the non-agriculture occupation. Hence, information about occupation of the respondents is also collected, which is presented in table 5.5. Out of the total, about 84.0 percent respondents are found engaged in agriculture and the remaining 16.0 percent in non-agricultural activities in the study area.

Table 5.5: Percentage Distributions of Occupational Status of the Respondents, Study Area

Occupational Status	**Number**	**Percent**
Agriculture	151	83.9
Non-Agriculture*	29	16.1
Total	180	100.0

Source: Field survey, 2012

Non-Agriculture*: refers to service, business, foreign employment, household work, others

5.6 Occupational Status of the Husband

Occupational status of husband is another fertility determining factor. Thus, it is essential to know the husband occupation. It is presented in table 5.6.

Table 5.6: Percentage Distributions of Occupational Status of the Husbands, Study Area

Occupational Status	Number	Percent
Agriculture	84	46.7
Non-Agriculture	96	53.3
Total	180	100.0

Source: Field survey, 2012

Table 5.6 shows the occupational status of the husband. Out of the total, about 46.7 percent respondent' husbands are found engaged in agriculture and the remaining 53.3 percent in non-agricultural activities in the study area.

5.7 Age at First Birth

Marriage only may not be a factor which affects the life of women. For example, if a woman marriages in her younger age but she does not give birth to a child until 20^{th} of her age, she may be better of than the woman who marriages in her 17^{th} and bears a child in 18^{th}. So, the gap between marriage and first birth also affect in fertility level of women including their personal development. Respondents were asked about their first birth and result from the study population is presented in table 5.7.

Table 5.7: Percentage Distribution of Respondents by Age at First Birth, Study Area

Age at first birth	Number	Percentage
16-19	107	59.4
20-25	68	37.8
25-28	5	2.8
Total	180	100.0

Source: Field survey, 2012

Table 5.7 shows that more than 59.0 percent of the respondents have given their first birth at less than 20 years of age, it indicates not only a higher level of fertility behaviour, but also a poor level of maternal and child health of the study area. Only 37.8 of respondents have given their first birth at age of prime reproductive age 20-25 years of age and about 3.0 percent of them have given their first birth at age of 25-28 years.

5.8 Number of Children Ever Born

Number of live births also determines the use and non-use of contraception and desire for children which affect the life of women and determines their status. If women have already achieved the desired number of children, they are likely to use permanent method of contraceptive and those women who have not achieved not likely to use contraceptive or they want to use birth spacing methods. The national CEB of Nepal is still high. The fertility status of women of the study area is given in table 5.8.

Table 5.8: Percentage Distribution of the Respondents by Number of Children Ever Born, Study Area

No. of Children	Number	Percent
1	28	15.6
2	61	33.9
3	38	21.1
4	31	17.2
5	17	9.4
6	2	1.1
7	3	1.7
Total	180	100.0

Source: Field survey, 2012

Table 5.8 shows that only 15.6 percent of the respondents have 1 child and 33.9 have 2 children, in total less than 50.0 percent of the respondents have 1- 2 children, followed by 21.1 percent of respondents have 3 children, 17.2 percent of respondents have 4 children and 12.2 percent respondents have 5 and above children indicating a higher level of fertility behaviour in the study area.

5.9 Child Loss Experience

Loss of child has many effects in family and health of mother. Status of women also determines by her child loss experience which determines the fertility behaviour of a couples as well. If one couple frequently loss their children they tend to give birth to more children because they can't be sure that all of their children will survive. And if they tend to give more birth, they don't give importance about using family planning methods. Respondents were asked about the child loss experience. The results are presented in table 5.9.

Table 5.9: Percentage Distribution of Respondents by Child Loss Experience, Study Area

Child Loss Experience	Number	Percentage
Yes	34	18.9
No	146	81.1
Total	180	100.0
Number of Child Loss		
1	21	61.8
2	10	29.4
3	3	8.8
Total	34	100.0

Source: Field survey, 2012

Table 5.9 shows that 18.9 percent respondents have child loss experience and 81.1 percent respondents don't have child loss experience in the study area. Among 34 respondents with child loss experience about 62.0 percent of the respondents have lost one child and 29.4 percent respondents have lost two children and 8.8 percent respondents have lost three children. From this information, one may urge that the highest level of one child loss in the study area could be due to the practice of low age at first marriage and first birth.

5.10Decision Making Position

In modern era, equality is being a hot slogan in every sector of human life. But, Nepali society is quite different. Women have not given equal right, they are deprived from their own right. Generally male are supposed to give last decision of in any sector. Women who involved in decision making process; they make the rule in their favor, which support them to raise the status. In the study area, respondents were asked about their involvement in decision making process of household, which is given in table 5.10

Table 5.10: Percentage Distribution of the Respondents by Decision Making, Study Area.

Decision	Respondent's Health		Son and daughter's Health	
	Number	Percent	Number	Percent
Self	17	9.5	20	11.1
Both	105	58.3	122	67.8
Others	58	32.2	38	21.1
Total	180	100.0	180	100.0

Source: Field survey, 2012

Table 5.10 shows that out of total respondents, their last decision on their health care is noted as 9.4 percent by self, 58.3 percent by both and 32.2 percent by others. Whereas their decision on about their son and daughter health care is noted as 11.1 percent by self, 67.8

percent by both and 21.1 percent by others. It indicates that female's role in decision making is very poor in the study area like in other ethnic groups of the country.

5.11 Cash Contribution

Cash contribution of women on household expenditure also one of the major factor to explain the status of women in the household. Those women who have job or business and contribute the cash on household expenditure, they have the strong status comparing the women who have not job and contributes cash. Many research findings have shown that fertility is directly related to the status of women. Generally, women with low status may have the more children since they are more likely to be dependent and less likely to decide the number of birth compared to their husbands and other family members. Respondents were asked about their involvement in Cash contribution on household expenditure. This is presented in table 5.11.

Table 5.11: Percentage Distribution of the Respondents by Cash Contribution in HH Expenditure, Study Area

Cash contribution on HH Expenditure	Number	Percent
Yes	37	20.6
No	143	79.4
Total	180	100.0
How Much in Average		
little	22	59.5
Half	7	18.9
Half +	1	2.7
All	7	18.9
Total	37	100.0

Source: Field survey, 2012

Table 5.11 shows the cash contribution of respondent in household expenditure. Out of total respondent, 20.6 percent respondent contributes cash in household and 79.4 percent respondents don't contribute cash in household expenditure. Among the cash contributes respondent 59.5 percent respondent contributes cash a little, 18.9 percent respondent half, 2.7 percent respondent half plus and 18.9 percent respondent contributes all amount of the household expenditure. Data shows that very few women have cash contribution to the household expenditure with nominal share indicating lower status of them.

5.12Sexual Intercourse after Child Birth

Couple's involvement in sexual intercourse is the first step of fertility. After child birth, if the period of sexual intercourse interval is long, definitely fertility period of women decrease and vice-versa. It is an important factor to analyzed the fertility behavior. Respondents were asked about their sexual intercourse interval period after child birth; this is given in table 5.12.

Table 5.12: Percentage Distribution of the Respondents by Sexual Intercourse after Child Birth, Study Area

Sexual Inter-course in Month	Number	Percent
Less than 6 months	134	74.4
6 months	19	10.6
More than months	27	15.0
Total	180	100.0

Source: Field survey, 2012

Table 5.12 shows the respondent sexual intercourse interval period after child birth. Most of the respondent's sexual intercourse interval period after child birth is found after six month of child birth with higher 74.4 percent, followed by 10.6 percent in six month and 15.0 percent more than six month respectively. According to this data, possibility to be higher level of fertility is revealed in the study area.

5.13Breastfeeding Practice

Extensive research has documented that breastfeeding has significant effects on fecundity. Breastfeeding is an important determinant of the duration of post-partum amenorrhea. Thapa (1987) use the data of Nepal Fertility Survey 1996 and concluded that breast-feeding was most important fertility reducing facts in Nepal. An average of nearly 25 months of breast-feeding contributes about 18 months of post partum amenorrhea, which is important factor affected fertility in Nepal. (Mainali, 2009). Respondents were asked about their breast feeding period which is given in table 5.13.

Table 5.13 shows the breast feeding period of respondent, Most of the respondent's breast feeding period is found one to two years with higher 56.1 percent, followed by 37.2 percent greater than two years and only 6.7 percent found one years respectively. It may be one of

the important factors to affect not to be as much as high against to lower level of age at first marriage and first birth of the respondents with lower level of contraceptive use in the study area.

Table 5.13: Percentage Distribution of the Respondents by breastfeeding period, Study Area

Period in Year	Number	Percent
1Year	12	6.7
1-2Years	101	56.1
More than 2 Years	67	37.2
Total	180	100.0

Source: Field survey, 2012

5.14Knowledge and Currently use of Family Planning Method of the Respondent

Family planning methods are the most important way to control population growth. Knowledge of FP method is important especially to the couples. But unfortunately few numbers of couples have knowledge of FP methods in the study area. The respondents were asked about knowledge of FP method, which is tabulated in table 5.14.

Table 5.14: Percentage Distribution of the Respondents by Knowledge and Currently Used of FP Methods, Study Area

Knowledge of FP Methods	Number	Percent
Yes	103	57.2
No	77	42.8
Total	180	100.0
Currently used of FP Methods		
Female Sterilization and Female temporary method	34	33.0
Male sterilization and Male temporary method	69	67.0
Total	103	100.0

Source: Field survey, 2012

Table 5.14 shows that 57.2 percent respondents have knowledge of FP methods and 42.8 percent respondents don't have knowledge about FP methods. Only 57.2 percent of the respondents are currently using family planning methods. Among currently users 33.0 percent respondents have using female methods (Female Sterilization +Female temporary) and 67.0 percent respondents have using male methods (Male sterilization +Male temporary method) unlike to the nation where use of female family planning methods is used to be found higher than the use of male method from every survey and research.

5.15 Antenatal Check-Up Status

Antenatal checkup is very important to make healthy pregnant and safe delivery. Of the 180 respondents, about 52.0 percent (93) did have knowledge about antenatal check-up in the study area. Most of the women marry and become pregnant before age of 20 years in Nepal. The younger ages are immature and unsuitable for marriage and become pregnant. It may cause fetal loss and malnutrition of mother and baby. Respondents were asked about antenatal checkup status at their last child birth. The responses are tabulated in table 5.15.

Table 5.15: Percentage Distribution of the Respondents by Status of Antenatal Check up at their last Child Birth, Study Area

Status of Antenatal Check up	Number	Percentage
Yes	42	45.2
No	51	54.8
Total	93	100.0

Source: Field survey, 2012

Table 5.15 indicates that out of the 180 respondents, 51.7 percent (93) have knowledge on antenatal checkup and 48.3 percent of them don't have that kind of knowledge in the study area. Among 93 respondents, only 45.2 percent have had the antenatal check-up in their pregnancy whereas more than 54.0 percent of them had not have that check-up. But it is considered that if a pregnant woman takes antenatal check-up, she is more likely to have information about use of family planning, benefit of birth spacing and breastfeeding, which are directly and indirectly related to the fertility behaviour of the couples.

CHAPTER SIX

STATISTICAL ANALYSIS WITH SOCIO -ECONOMIC AND DEMOGRAPHIC VARIABLES

This chapter deals with fertility behaviour of married Rai women aged 15-49 years by some selected socio-economic, socio-cultural and demographic variables. Number of children ever born (CEB) to women in reproductive ages is one of the best indicators for fertility study, which is taken as dependent variables. It is measured in terms of number of child birth of the respondents in the study area. A cross-tab has performed to observe the relationship between dependent and independent variables and a statistical tool Chi- square test has run to examine the impact of the selected independent variables on the dependent variable i.e. fertility behaviour. In this context, 10 independent variables are selected as follow:

6.1 Number of Birth by Level of Education

Number of birth is usually considered to be affected by educational attainment of people. It is generally said that higher the level of education lower the fertility of women. Generally, educated women are found more conscious about their family size, more knowledge about using contraceptives and negative consequences about maternal and child health as well. Most of the studies have found that higher the education, lower the number of children. Hence, this research has also envisaged to observe the impact of educational level of the respondents on their fertility behaviour. The result is presented in table 6.1 and in figure 6.1.

Table 6.1: Percentage Distribution of the Respondents by Educational Level, Study Area

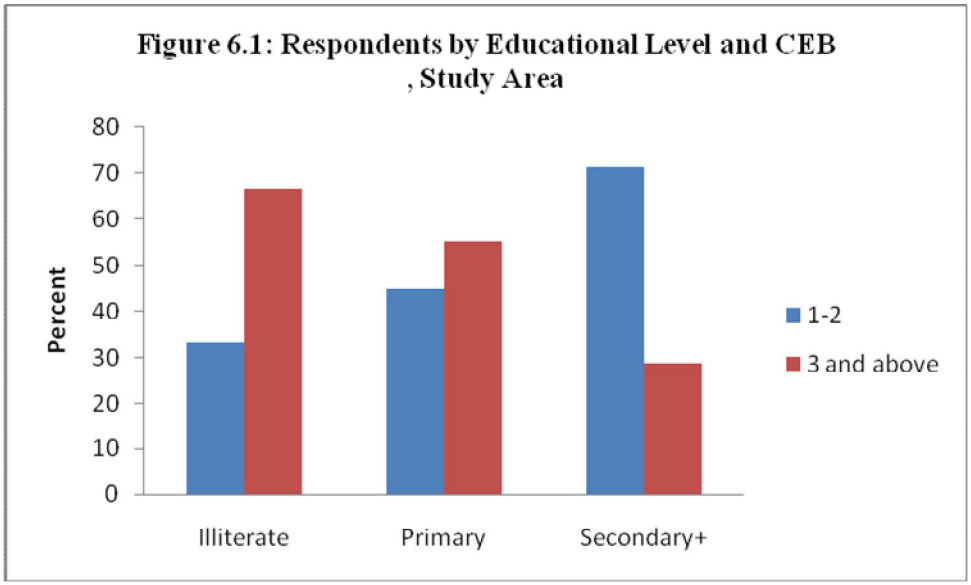
Number of birth	Educational level of the respondent			
	Illiterate	Primary	Secondary+	Total
1-2	(19) 33.3	(30) 44.8	(40) 71.4	(89) 49.4
3 and above	(38) 66.7	(37) 55.2	(16) 28.6	(91) 50.6
Total	(57) 100.0	(67) 100.0	(56) 100.0	(180) 100.0
X^2				1%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Table 6.1 shows that there is inverse relationship between level of education and fertility behaviour of the respondents with 1 percent of significance level as it is hypothesed. The proportion of the respondents having higher number of birth is declined as their educational status increased while it can be observed significantly declined from illiterate respondents to the respondents having secondary and more education compared to the respondents having primary education only. Such as the proportion of the respondents having the higher number of birth i.e. 3 and more children is declined more than two times from the illiterate respondents (67%) to the respondents having secondary and more education (29%) while it is only declined by one time (55.2%) for the respondent having primary education. Whereas the proportion of the respondents having the lower number of birth (1-2 children) is revealed to be increased by the same times from the illiterate respondents (33.3%) to the respondents who have secondary and more education and primary education (44.8) by the same trend.

Figure 6.1: Percentage Distribution of the Respondents by Educational Level, Study Area



6.2 Number of Birth by Level of Husband Education

Level of husband education also plays a vital role for determining the fertility behavior of women in any society. In some cases, it is revealed to be a stronger factor to impact fertility behaviour of the women compared to their own education in the society, particularly in a male dominated one. But, in this research, it did not turn as a stonger factor than the respondents' education. It may be due to liberal cultural taboo practice in Rai community.

However, it is assumed that with the increase of education level of husband, there exist lower levels of fertility behavior of the respondents. Number of birth of the respondents by their husband education is given in the table 6.2 and in figure 6.2.

Table 6.2: Percentage Distribution of the Respondents by Educational Level of Husband, Study Area

Number of birth	Educational level of the Husband			
	Illiterate	Primary	Secondary+	Total
1-2	(5) 25.0	(29) 40.8	(55) 61.8	(89) 49.4
3 and above	(15) 75.0	(42) 59.2	(34) 38.2	(91) 50.6
Total	(20) 100.0	(71) 100.0	(89) 100.0	(180) 100.0
X^2				1%

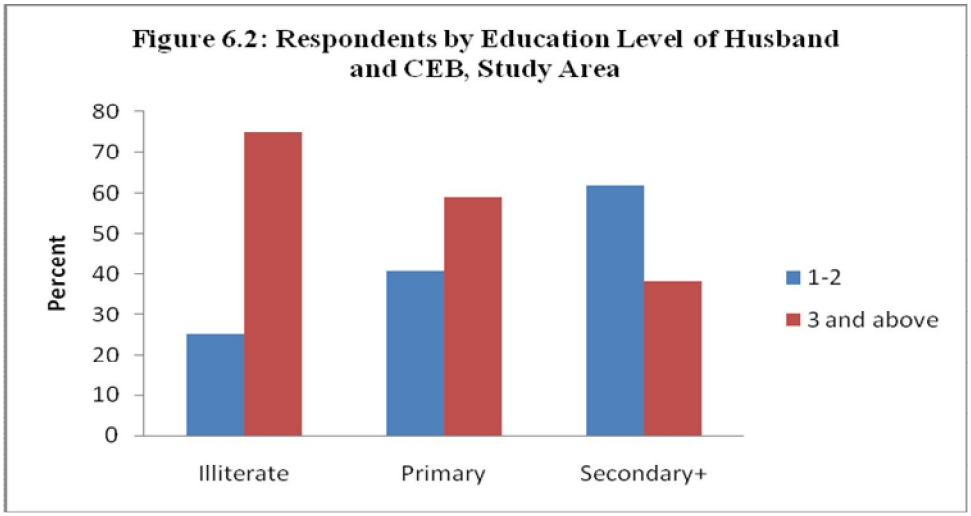
Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Table 6.2 shows that respondent's husband education level and number of birth. It indicates the same pattern as the respondents educational impact in table 6.1. For example, respondent who have 1-2 children are diverse with the level of their husband education i.e.25.0 percent birth are with the illiterate husband, 40.8 percent with having primary education and 61.8 percent with the secondary and above Education.

Similarly, respondent who have 3 and above children are found as 75.0 percent with illiterate husband,59.2 percent with having primary education and 38.2 percent with the secondary + education respectively. Statistical tool chi-square also shows that there is highly significance between education level of husband and fertility behavior of women at 1 percent of significance level.

Table 6.2: Percentage Distribution of the Respondents by Educational Level, Study Area



6.3 Number of Birth by Occupational Status of the Respondent

Occupation is an economic factor, which also determines the fertility behaviour of individual. It is hypothesed that respondents who engaged in agriculture may have more fertility performance than the respondents who engaged in non agricultural occupation. Education plays a vital role in determining occupation. Information regarding fertility behaviour and occupation is given in table 6.3 and depicted in figure 6.3. It is observed that people with more education are engaged in service, business and less educated people are engaged in farming and labour force occupation. Relationship with respondents with their occupation is tabulated in table 6.3.

Table 6.3: Percentage Distribution of the Respondents by Occupational Status of the Respondent, Study Area

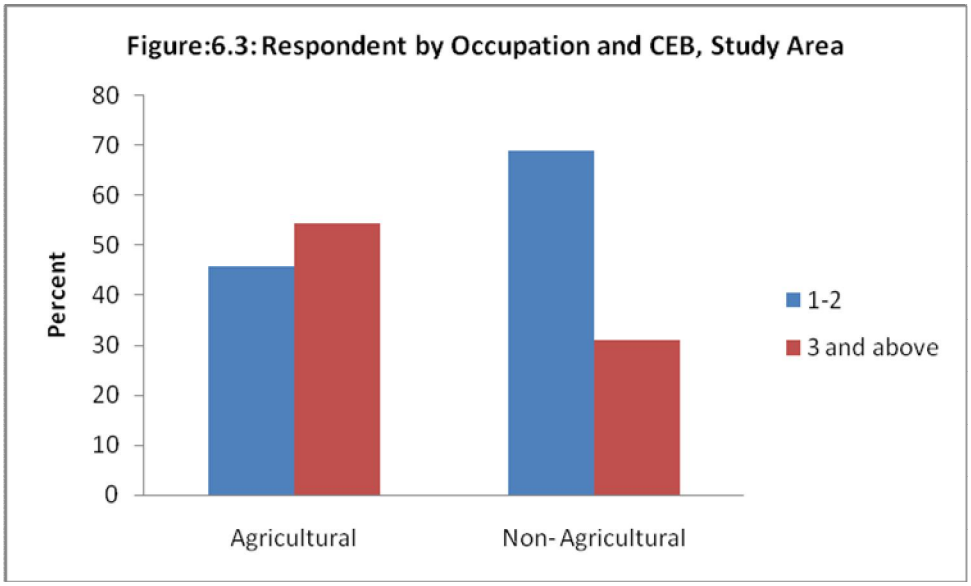
Number of Birth	Occupational status of the of the respondent		
	Agricultural	Non- Agricultural	Total
1-2	(69) 45.7	(20) 69.0	(89) 49.4
3 and above	(82) 54.3	(9) 31.0	(91) 50.6
Total	(151) 100.0	(29) 100.0	(180) 100.0
X^2			10%

Source: Field survey, 2012.

Note: Parenthesis denotes the number of the respondents.

Table 6.3 shows that as hypothesed respondent who are engaged in agriculture are having lower number of 1-2 children and higher number of 3 and more children as compared to the respondents who are engaged in non-agricultural occupation. For instance, the proportion of the respondents who have agriculture occupation is found as 45.7 percent and respondent who have engaged in non agricultural occupation is found as to be 69.0 percent. On the other hand, respondent who have 3 and above children have found higher percent 54.3 percent who are engaged in agriculture occupation whereas only 31.0 percent respondents are revealed having 3 and more children whose occupation is non-agriculture. But it is turned to be weak factor to impact fertility behaviour at only 10 percent of significance level. It may be few number of the respondents are found to be engaged in non-agricultural sectors (see table 5.5).

Figure 6.3: Percentage Distribution of the Respondents by Occupational Status of the Respondent, Study Area



6.4 Number of Birth by Occupational Status of the Respondent Husband

Husband's occupation plays important role for determining the fertility behaviour of their women. Hence, it is hypothesed that number of birth of the respondents would be lower if their husbands' occupation is non-agriculture compared to the husbands whose occupation is agriculture in this research too. Number of birth of the respondents by their husband occupation is given in the table 6.4 and in figure 6.4.

Table 6.4: Percentage Distribution of the Respondents by Occupational Status of their Husband, Study Area

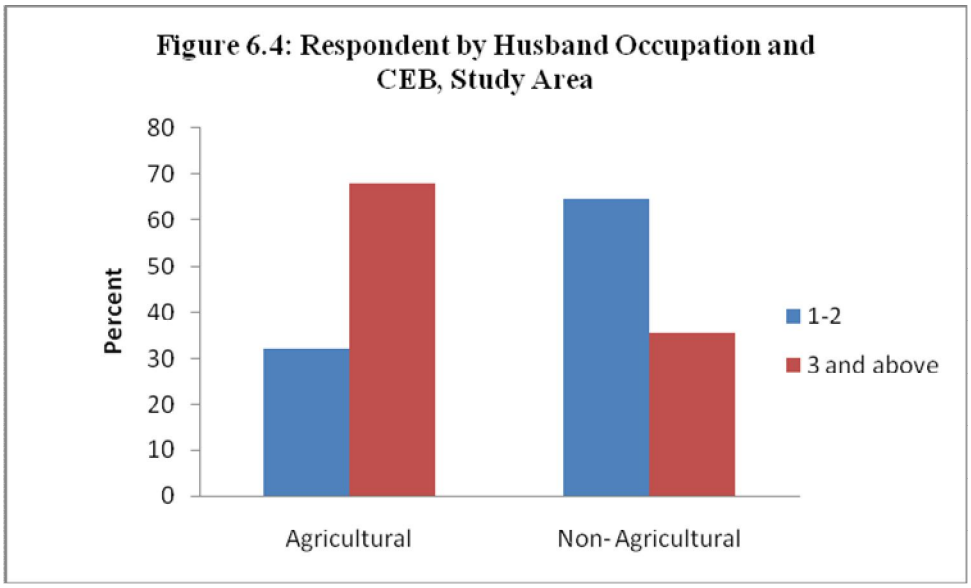
Number of Birth	Occupational status of the of the respondent husband		
	Agricultural	Non- Agricultural	Total
1-2	(27) 32.1	(62) 64.6	(89) 49.4
3 and above	(57) 67.9	(34) 35.4	(91) 50.6
Total	(84) 100.0	(96) 100.0	(180) 100.0
X^2			1%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Table 6.4 shows the association of husband occupation and fertility behaviour of the respondents and result of Chi-square test. According to this table 6.4, unlike repondents' occupation, the impact of husband occupation is found to be strong as it is revealed to be significant at 1 percent level of significance. The proportion of the respondents for 1-2 children is evident to be 64.6 percent whose husbands' occupation is non -agricultural and only 32.1 percent found for the respondents whose husbands' occupation is agricultural. Similarly, 3 and above children are found higher 67.9 percent in agriculture occupation and 35.4 percent are found in non -agricultural occupation. Therefore, husband's occupation also direct affect to the Number of birth of their women. Our statistical tool chi-square also shows that there is highly significance between occupation level of respondent husband and fertility behavior of their women.

Figure 6.4: Percentage Distribution of the Respondents by Occupational Status of their Husband, Study Area



6.5 Number of Birth by Decision Making on Respondents, Health Care

Giving last decision about respondent health care also shows the level of women strength and it is considered that it may impact on their fertility behavior. It is said that women are compelled to giving more birth than their wish. Therefore, it is hypothesed that respondents who are able to make decision themselves on their health care issue will be also able to regulate their fertility behavior as they wish than those respondents who are not able to do so. Results about it is presented in table 6.5 and in figure 6.5 with Chi-square test.

Table 6.5: Percentage Distribution of the Respondents by Decision Making on Respondents, Health Care, Study Area

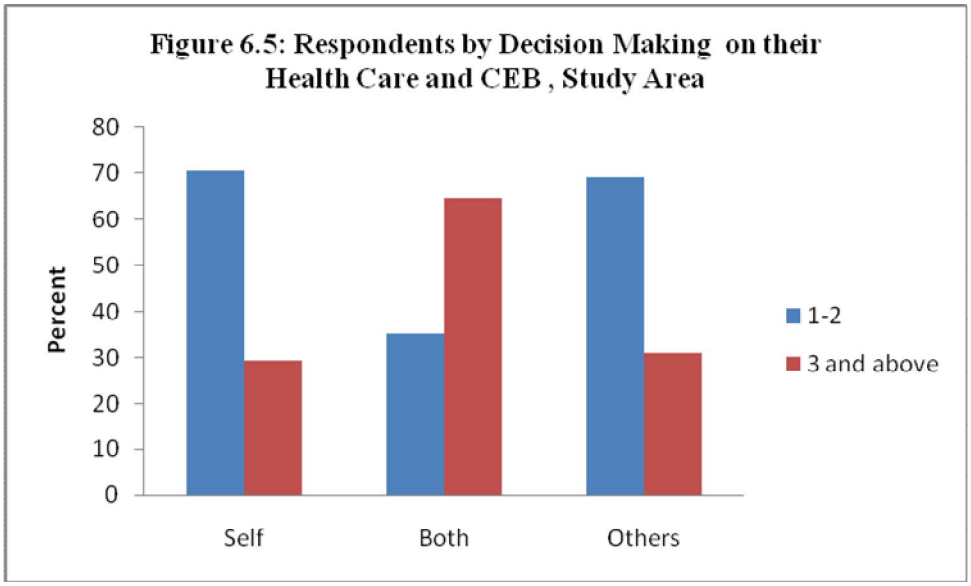
Number of Birth	Decision on Respondents' Health Care			
	Self	Both	Others	Total
1-2	(12) 70.6	(37) 35.2	(40) 69.0	(89) 49.4
3 and above	(5) 29.4	(68) 64.8	(18) 31.0	(91) 50.6
Total	(17) 100.0	(105) 100.0	(58) 100.0	(180) 100.0
X^2				10%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

As table 6.5 shows the proportion of the respondents who are able making decisions about their health issue is higher by two times for having 1-2 children i.e. 70.6 percent against 35.2 percent for those respondents who are not able making decision alone for the same. Similarly, only 29.4 percent of the respondents are turned out to have 3 and above children if they are able making decision on their health issue. But the proportion is turned out be more than two times i.e. 64.8 percent if they are made compelled to have decision for the same with their husbands while the same has to be made decision with others is turned out to be 31.0 percent. However, it is not turned out to be strong factor to impact fertility behaviour in this research work since the proposed hypothesis is accepted at only 10 percent significance level in this research.

Table 6.5: Percentage Distribution of the Respondents by Decision on Respondents' Health Care, Study Area



6.6 Number of Birth by Decision on Children Health Care

In many instances, it is considered that women empowerment is also one of the factors that my impact their fertility behaviour and decision making power is used to be taken as one of the indicators of women empowerment. In this regard, whether respondents are able or not to make decision on their children health care issue themselves is taken as one of the factors to observe their fertility behaviour in this research. And hypothesed that respondents who are able to make decision themselves on their children health care issue will have fewer number of birth than who are compelled to make decision with others. Collected data on it is presented in table 6.6 and in figure 6.6. According to the table 6.6, 70.0 percent of the

respondents are found able to have only 1-2 births whereas more than 76.0 percent of the respondents are found compelled to have 3 and more children while other members in the family are supposed to make decision on children health care issue in the study area. Unlike decision making on respondents' health care, the impact of this factor on fertility behaviour is revealed to be strong one with 1 percent level of significance.

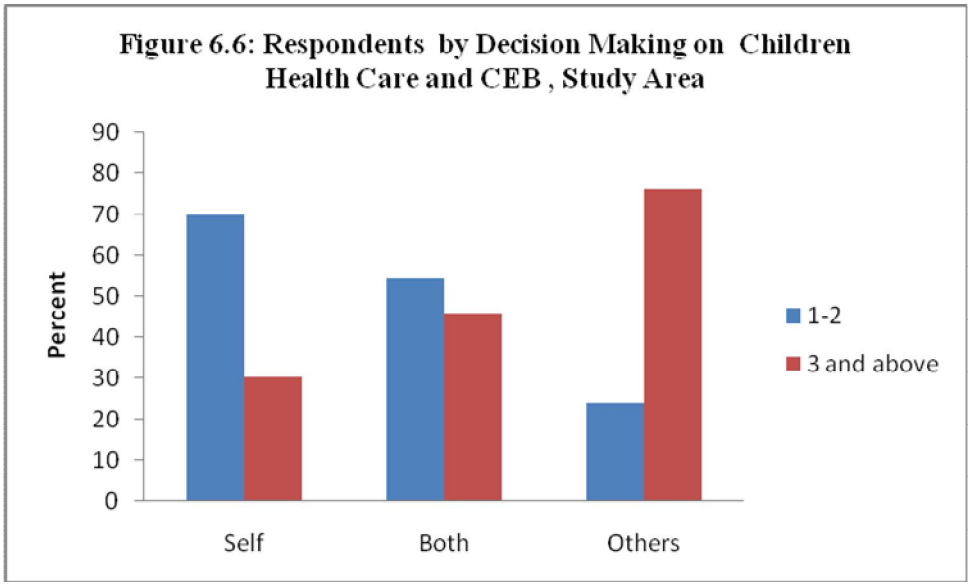
Table 6.6: Percentage Distribution of the Respondents by Decision on Children Health Care, Study Area

Number of Birth	Decision on Children Health Care			
	Self	Both	Others	Total
1-2	(14) 70.0	(66) 54.1	(9) 23.7	(89) 49.4
3 and above	(6) 30.0	(56) 45.9	(29) 76.3	(91) 50.6
Total	(20) 100.0	(122) 100.0	(38) 100.0	(180) 100.0
X^2				1%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Figure 6.6: Percentage Distribution of the Respondents by Decision on Children Health Care, Study Area



6.7 Number of Birth by Cash Contribution to Household Expenditure

Many studies have shows that negative relationship between women's economic status and their fertility behaviour. Hence, this variable is taken as an indicator of the respondents well of economic status in the family and hypothesed that if the respondents are in the position to contribute cash to the household expenditure, then they will be able to regulate their fertility behaviour. The information regarding it is given in table 6.7 and in 6.7 figure too.

Table 6.7 shows that it is assumed that those women who contribute cash in HH expenditure are engaged in any high profession and they are conscious about the result of high fertility. Numbers of birth and by cash contributor women are presented in below table 6.7.

Table 6.7: Percentage Distribution of the Respondents Cash Contribution to Household expenditure, Study Area

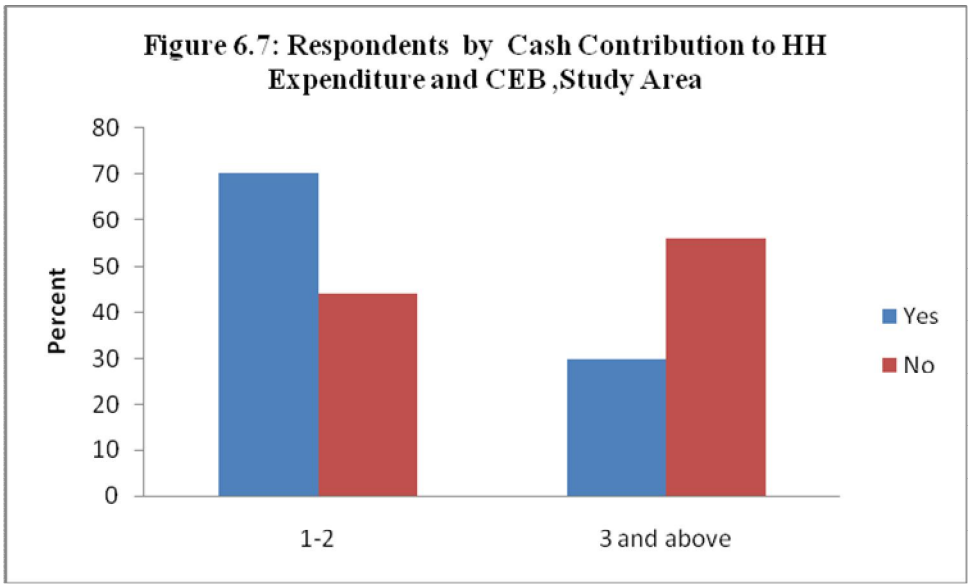
Number of Birth	Respondents by Cash Contribution to HH expenditure		
	Yes	No	Total
1-2	(26) 70.3	(63) 44.1	(89) 49.4
3 and above	(11) 29.7	(80) 55.9	(91) 50.6
Total	(37) 100.0	(143) 100.0	(180) 100.0
X^2			5%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Table 6.7 show that the proportion of the respondents who are found able to contribute cash to the household expenditure for having only 1-2 and 3 and more children is evident to be 70.3 percent and 30.0 percent respectively. Whereas the proportion of the respondents who are not able to contribute cash to the household expenditure is 44.1 percent and 56.0 percent for having only 1-2 and 3 and more children respectively. It confirms that the proposed hypothesis is accepted. But the impact of this factor on fertility behaviour of the respondents is turned out to be moderate only.

Figure 6.7: Percentage Distribution of the Respondents by Cash Contribution to HH Expenditure, Study Area



6.8 Number of Birth by Age at First Marriage

Age at marriage is also one of the affecting factors of fertility behaviour. It is fact that the women who marry in the earlier age have more children than the women who marry later ages in absence of or low use of contraceptive methods. Because women who get marry at early age are more likely to use their most of the reproductive period for child birth. Many research works found the same. Thus, age at first marriage is also proposed to observe whether it may impact the fertility behaviour of the respondents in the study area like in the other previous research works. As the table 6.8 indicates that like assumed hypothesis, respondents who had got their first marriage at age of 20 and more years are more likely to have fewer number of births compared to the respondents who had got their first marriage at age of less than 20 years in the study area. Such as about 74.0 percent of the respondents have only 1-2 children who had reported they had got their first marriage at age of 20 and more years against 44.0 percent for the respondents who had got their first marriage at age less than 20 years. And the opposite result can be observed for having 3 and more children i.e. only 26.0 percent of the respondents had 3 and more children who had got their first marriage at age 20 and more years whereas 56.0 percent of the respondents had happened to have 3 and more children who had got marriage at age less than 20 years. The impact is observed to be only moderate one.

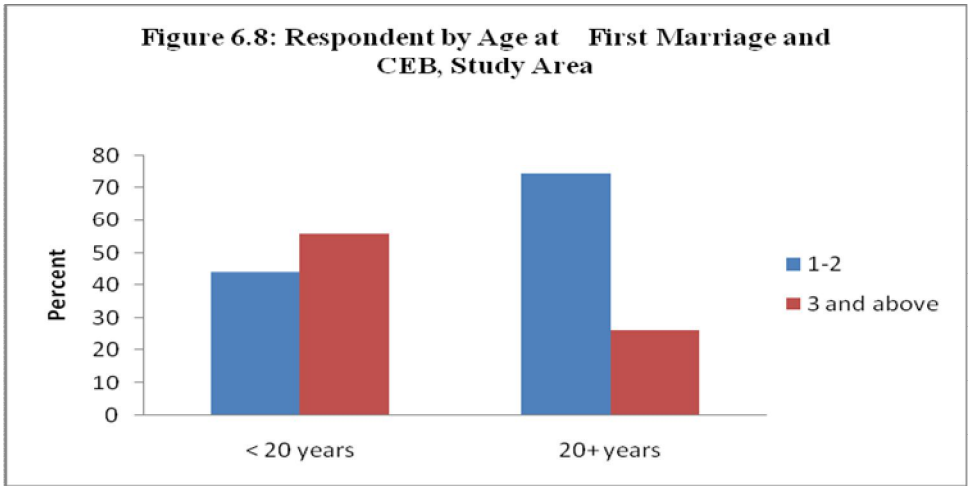
Table 6.8: Percentage Distribution of the Respondents by Age at First Marriage of the Respondent, Study Area

Number of Birth	Respondents by Age at First Marriage		
	< 20 years	20+ years	Total
1-2	(66) 44.3	(23) 74.2	(89) 49.4
3 and above	(83) 55.7	(8) 25.8	(91) 50.6
Total	(149) 100.0	(31) 100.0	(180) 100.0
X^2			5%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Figure 6.8: Percentage Distribution of the Respondents by Age at First Marriage of the Respondent, Study Area



6.9 Number of Birth by Age at First Birth

Like the other factors, age at first birth also play important role in affecting fertility behaviour of women. There is opposite relationship between age at first birth and fertility. If a woman, she gives her first birth at the low age, certainly her fertility will be higher than those women who give their first birth at high ages in a society in Nepal where contraceptive use is still very low. Therefore, in this reseach also, it is envisaged to observe the impact of it on fertility behaviour of the respondents. Results of cross tab and Chi-square test are given in table 6.9 and in figure 6.9. According to the made hypothesis, higher percent of the respondents (62.2%) have only 1-2 children who had reported they had given their first birth at age of 20 and more years against 40.6 percent for the respondents who had given their first

birth at age less than 20 years. And the opposite result can be observed for having 3 and more children i.e. only 38.0 percent of the respondents had 3 and more children who had given their first birth at age 20 and more years whereas 59.0 percent of the respondents had happened to have 3 and more children who had given their first birth. Its impact on fertility behaviour is also observed to be only moderate one.

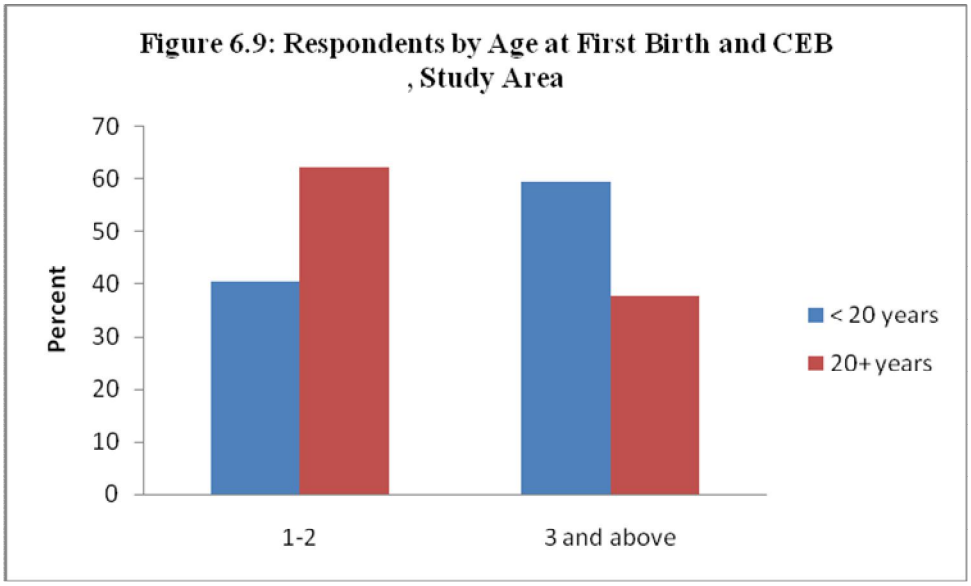
Table 6.9: Percentage Distribution of the Respondents by Age at First Birth of the Respondent, Study Area

Number of Birth	Respondents by Age at First Birth		
	< 20 years	20+ years	Total
1-2	(43) 40.6	(46) 62.2	(89) 49.4
3 and above	(63) 59.4	(28) 37.8	(91) 50.6
Total	(106) 100.0	(74) 100.0	(180) 100.0
X^2			5%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Figure 6.9: Percentage Distribution of the Respondents by Age at First Birth of the Respondent, Study Area



6.10 Number of Birth by Interval of Breastfeeding

Breastfeeding is an important natural factor to affect the fertility behaviour of women. It has been evident from previous research findings that women who have long time of breastfeeding period have the lower fertility comparing to those women who breastfeed for the shorter time period. This research has also attempted to observe the impact of breastfeeding of the respondents on their fertility behaviour. Hence, data on it is collected and Chi-square test has run to observe the impact of breastfeeding of the respondents on their fertility behaviour, which are presented in table 6.10 and in figure 6.10 of the study area. For example, the proportion of the respondents for having fewer number of birth i.e. 1-2 children is found increasing from 40.0 percent to 54.0 percent and 60.0 percent as the breastfeeding time is increasing from less than 2 years to 2 years and 2 years and more respectively. Whereas the proportion of the respondents for having more number of birth i.e. 3 and more children is found decreasing from 60.0 percent to 46.0 percent and 40.0 percent as the breastfeeding time is increasing from less than 2 years to 2 years and 2 years and more respectively. However, the impact of this factor is revealed to be very weak as it turns out to be significant at 10 percent only.

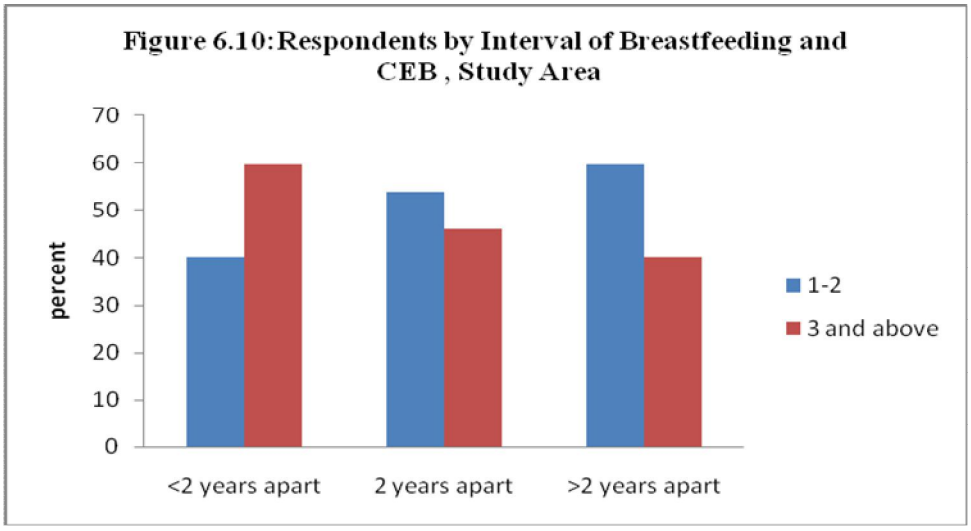
Table 6.10: Percentage Distribution of the Respondents by Interval of Breastfeeding, Study Area

Number of Birth	Respondents by Interval of Breastfeeding			
	<2 years apart	2 years apart	>2 years apart	Total
1-2	(35) 40.2	(14) 53.8	(40) 59.7	(89) 49.4
3 and above	(52) 59.8	(12) 46.2	(27) 40.3	(91) 50.6
Total	(87) 100.0	(26) 100.0	(67) 100.0	(180) 100.0
X^2				10%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Figure 6.10: Percentage Distribution of the Respondents by Interval of Breastfeeding, Study Area



6.11 Number of Birth by Timing of Sexual Intercourse after Last Child Birth

The time period of couple's sexual intercourse after child birth is also an important factor to see the fertility behavior of women. It is assumption that, there is negative relationship between number of birth and sexual intercourse after child birth. It is hypothesed that respondents who have initiated early sexual intercourse after childbirth will have many number of birth compared to the respodents who have initiated sexual intercourse late after childbirth. To test this assumed hypothesis, Chi-square test has used and results are presented in table 6.11 and in figure 6.11. According to the Chi-square, this factor is also not turned out to be significant factor to impact the fertility behaviour of the respondents in the study area.

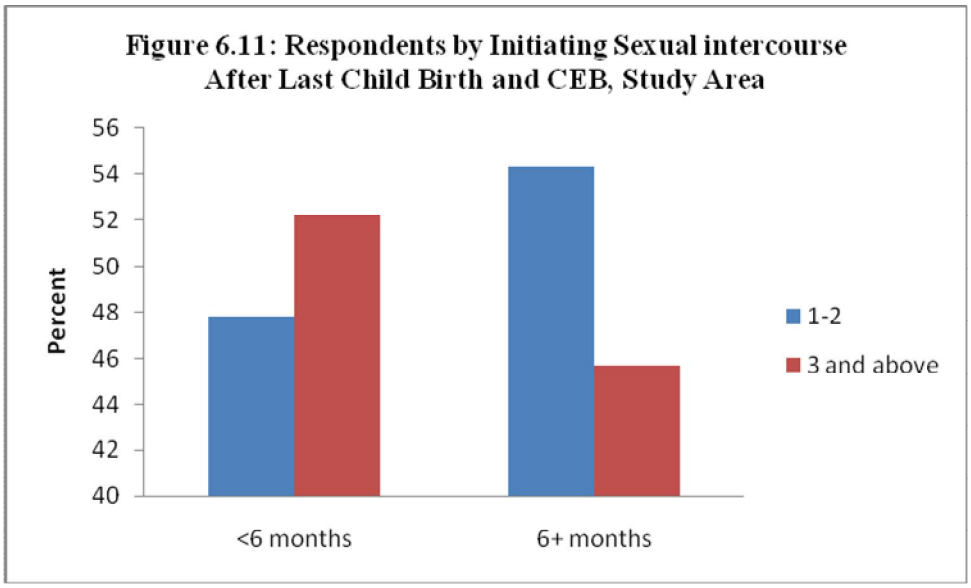
Table 6.11: Percentage Distribution of the Respondents by Timing of Sexual Intercourse After Last Childbirth, Study Area

Number of Birth	Respondents by Initiating Sexual intercourse After Last Child Birth		
	<6 months	6+ months	Total
1-2	(64) 47.8	(25) 54.3	(89) 49.4
3 and above	(70) 52.2	(21) 45.7	(91) 50.6
Total	(134) 100.0	(46) 100.0	(180) 100.0
X^2			274

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Figure 6.11: Percentage Distribution of the Respondents by Timing of Sexual Intercourse after Last Childbirth, Study Area



6.12 Number of Birth by Knowledge of Family Planning

Using family planning methods is to regulate fertility behaviour of the individuals. So, it is obvious that the women who use family planning methods and have knowledge about it are more likely to have fewer number of Children than those who have not knowledge and used family planning methods. In this context, information about it is collected and hypothesed that respondents who have knowledge about family planning are more likely to have fewer number of birth than those who have no knowledge for the same. Chi-square test has run to test the hypothesis. Results are given in table 6.12 and in figure 6.12. A relationship of number of births with women's knowledge about F.P. has been presented below in the table.

Table 6.12: Percentage Distribution of the Respondents by Knowledge of FP, Study Area

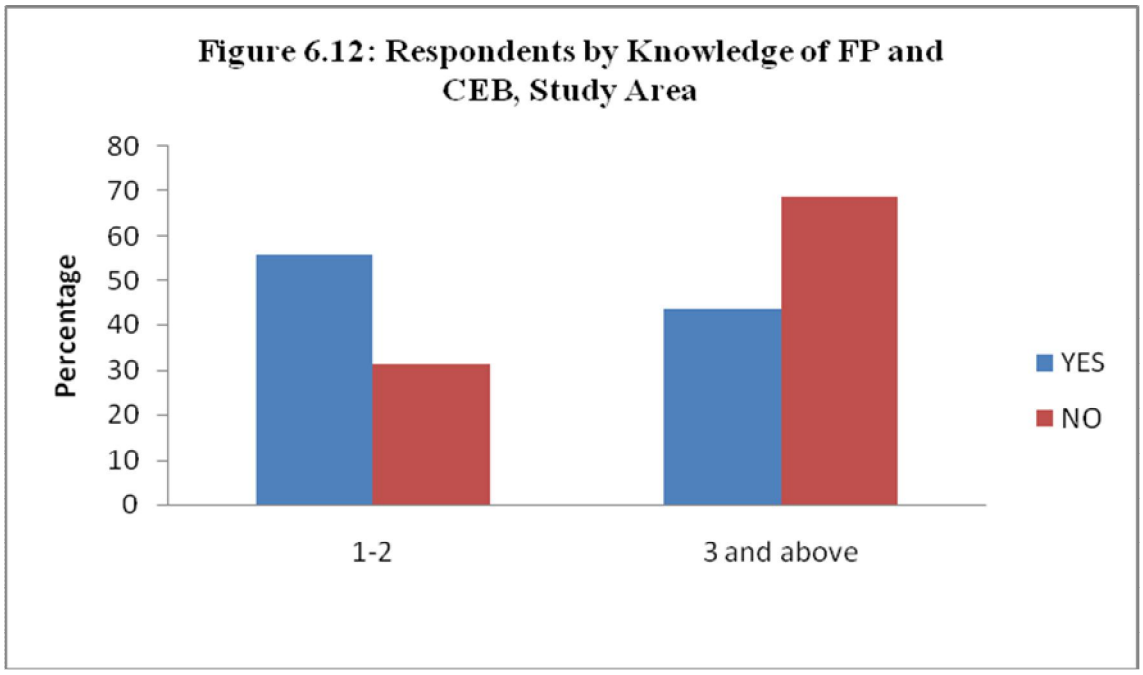
Number of Birth	Respondents knowledge of FP		
	YES	NO	Total
1-2	56.1	(15) 31.3	(89) 49.4
3 and above	(58) 43.9	(33) 68.8	(91) 50.6
Total	(132) 100.0	(48) 100.0	(180) 100.0
X^2			5%

Source: Field survey, 2012.

Note: parenthesis denotes the number of the respondents.

Table 6.12 shows that the proportion of the respondents who have knowledge about family planning and have 1-2 children is 56.1 percent comparing to those respondent who do not have knowledge about family planning is 31.3 percent .Similarly, the proportion of the respondents who have 3 and above children and have knowledge about family planning is 43.9 percent comparing to those respondents who don't have knowledge about family planning is 68.8 percent. This indicates that fewer number of children are with those respondents who have knowledge of FP and vice-versa. Chi square test shows the significance at 5 percent only.

Figure 6.12: Percentage Distribution of the Respondents by Knowledge of FP, Study Area



CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, the core part of the thesis lies. This chapter presents the summary of the findings, conclusions and recommendations for policy implications regarding to formulate effective programmes to regulate fertility behaviour of the couples, which may play a vital role for regulating population growth rate and enhancing maternal and child health status. It is well known that maternal and child mortality rates are still very high in Nepal though these have been reducing over the time period. Nepal has already committed to achieve all eight Millennium Development Goals by 2015 AD. Out of eight goals, four and five goals consist of reduce child mortality and improve maternal health respectively. Based on findings, conclusions drawn and according to conclusions drawn, recommendations are attempted to made in order to improve the respondents' status of the study area so that their fertility behaviour could be regulated at micro level and at macro level.

7.1 Summary of the Findings

The main objective of this study is to observe the relationship and impact of some proposed socio-economic, socio-cultural and demographic independent variables on depended variable (as given in conceptual framework in figure 2.1) through Chi-square test. Other proposed objectives are to examine the socio-economic and demographic characteristics of Rai community, to find out the level of knowledge and use of contraceptives of among married women of reproductive age 15-49 years and to suggest policy recommendation based on findings regarding fertility behaviour and its influencing factors. The following presentation highlights the characteristics as obtained from data collected in study area.

The total population of the study area was found at 812. Among them, male and female percents were observed at 43.3 percent and 56.7 percent respectively.

Majority of the respondents' occupation is agriculture i.e. 83.9 percent.All of the respondents' (100%) are living their own houses.

Most of the respondents' house is Kacchi which accounted for 90.0 percent.Among the respondents who have their own land (khet) 76.3 percent are found holding 2-10 ropani of land followed by 11-20 ropani (17.8%), 21-30 ropani 5.9 percent.

Some 17.2 percent respondents are cultivating other's land .Among the respondents 8.3 percent have 1-5 months sufficiency of food, followed by 41.7 percent 6-10 moths, 47.2 percent, 11-15 and only 2.8 percent 16-21 months.

All of the respondents, have domestic animals, Only few of the respondents have electricity facility which is accounted for 9.4 percent followed by Radio (93.9%), Telephone. 23.3 percent, solar 18.9, T.V. 12.8 percent and newspaper 9.1 percent.

All of the households (100%) are using wood fuel for cooking. Among the respondent 48.9 have toilet facility at their home.

About 20.0 percent of the respondents belong to age-group 20-24 years, followed by 25-29 years (19.4%).Majority of the respondents (83.9%) are engaged in agricultural sector.

About 22.8 percent respondents have had their first menstruation at the ages 10-12 years followed by 13-15 years (77.2%). Majority of the respondents were married at the age of 17-19 years which accounts 58.3 percent.

Among the respondent 37.4 percent of the respondents have given birth to their 16-18 years followed by 19-21 years (45.8%), 22-28 years (16.8%).

The proportion of women having 1-2 children is found 31.1 percent followed by three children (24.4%) and 4-6 children (44.4%).

About 19.0 percent of the respondents have child loss experience. Most of the respondents have knowledge about family planning methods, which accounts 57.2 percent

Among the respondent who have knowledge about family planning methods, 33.0 percent of them are found using female methods (female sterilization and female temporary method) followed by 67.0 percent male methods (male sterilization and male temporary method).

About 51.7 percent of the respondents have found that they have knowledge on prenatal checkup. Among the total respondents, who had knowledge on prenatal checkup, only 45.2 percent have recorded they had taken part in pre-natal check up.

Majority of the respondents are found desiring 4-6 children i.e. 44.4 percent. It is observed that with increase in age of the respondents fertility has been increased.

Early age at marriage, greater the number of children is observed among the study population. Educated respondents with educated husbands are found having fewer number of birth compared to the illiterate respondents with their illiterate husbands.

Respondents and their husbands who are engaged in non-agricultural sector are observed having fewer number of birth than the respondents and their husbands who are engaged in agricultural sector.

Respondents who had got their first marriage and had given their first birth at age of 20 and more years are found having fewer birth compared to the respondents who had got their first marriage and had given their first birth at age of less than 20 years.

Respondents who have knowledge about family planning methods are found fewer number of childbirth than those respondents who have not knowledge about family planning methods.

Respondents who have more than 2 years breastfeeding period are found having fewer number of children than those respondents who have less than 2 years breastfeeding period.

It has been observed that there is no significant impact of bank balance and sexual intercourse period after child birth on the number of having children in the study area.

Respondents who are able to contribute cash to the HH expenditure are found having fewer numbers of children than those respondents who are not able to contribute cash to the HH expenditure.

7.2 Conclusions

Socio-economic characteristics of the household were not emerged to be statistically significant factors impacting the fertility behaviour of the study area. Individual characteristics of the respondents' and their husbands were turned to be statistically significant factors for impacting fertility behaviour. Such as hypotheses made on education, husband's occupation, decision on child health care and fertility behaviour are accepted at 1 percent level of significance. So these variables turned out to be important factors impacting fertility behaviour. Similarly, the hypothesis made on cash contribution on household expenditure, age at first marriage and family planning and fertility behaviour are accepted at 5 percent level of significance. So these variables have moderate impact on fertility behaviour in the study area. Whereas hypotheses made on decision on respondent health care, breastfeeding and fertility are accepted at 10 percent level of significance. Hence, these factors have negligible impact on fertility behaviour.

In order for socio-economic, demographic and cultural factors to continue to be significant for regulating fertility behaviour, there needs to be an increased focus on creating such environment that favors individual development regarding socio-economic, demographic and cultural norm, particularly more focus on women that will assist to regulate fertility behaviour in order to reduce population growth rate and improve reproductive and maternal and child health status, which will be also helpful to achieve some concerned Millennium Development Goals. As Rai community is one of the social groups in Nepal. If the government and other concerned agencies have to formulate effective policy and programme in future regarding to reduce population growth rate and improving reproductive and maternal and child health in the country, findings of this study could be useful. On the basis of this study the main conclusion are as follows:

- The lower age at first marriage and first birth is associated with higher fertility behaviour among Rai women in Indranipokhari VDC of Khotang district.
- Non-agricultural occupation is turned out to be a factor to impact fertility behaviour of Rai community.

- There are no varities of occupational facilities available for Rai women. Varities of occupations provide opportunities of interaction with low fertility selective group of people.
- The majority of Rai households had lower income level.
- The child loss experience of women is motivated to bear more and more babies.
- The overall socio-economic status of Rai women of Indranipokhari VDC is very low.

7.3 Recommendations for Policy Implications

- Government should give emphasis to improve the educational sector for all development in general and for regulating fertility behaviour in particular. As the present study shows that the literacy status of women of this Rai community is low. It is obvious that female education has important role for overall development and population control despite only regulating fertility behaviour alone.
- Government should strictly implement the passed law for minimum age at first marriage to reduce early marriage practice in the community to change the prevalence of cultural norms and traditional values towards early marriage since the practice of early marriage is found prevalent in the study area. IEC programme should be also launched in this community, especially targeting to raise awerness about negative consequences for women's reproductive health and their socio-economic development that may cause from early marriage and unregulated fertility behaviour.
- Government should formulate and implement various socio-economic, socio-cultural and demographic policies and programmes focusing on negative consequences on maternal and child health due to too early birth i.e. at age less than 20 years including too many, too close and too late birth. Because age at first birth is also low in this Rai community which is also a direct factor to impact fertility behaviour positively in a country like Nepal where contraceptive use is still very low.
- Government should implement specific family planning programmes targeting specific socio-cultural and socio-economic groups like Rai community who has low level of knowledge about family planning and its use despite targeting only to the reproductive age-group of female population at macro level. The low level of knowledge about family planning may be due to low level of literacy and educational attainment of Rai women

and its low level of use may be due to lack of enough knowledge about contraceptives, fear of side effect, not easily available, traditional values and other causes like husband's disapproval. To manage this problem, awareness and family planning service should be expanded in order to increase prevalence of contraceptive users with easily available of contraceptive to this Rai community.

- Government should give emphasis on the availability of non-agricultural activities in the study area in general, in particular for female population that may empower them to decide about their fertility behaviour ignoring cultural taboos as being economically independent.
- Government should provide wide range of opportunities such as income generating schemes and reservation for employment sector etc for females to make them enable to earn much more cash since their cash contribution to the household expenditure is found affecting their fertility behaviour negatively.
- Majority of women are within low income. So, income generating schemes are to be adopted for Rai women.
- Government should launch such a programme that may raise awareness towards breastfeeding for the longer period i.e. more than 2 years and more years not only among mothers but also among whole community including family members. Because in this study, this factor is turned to be moderate factor to affect fertility behaviour of the respondents.

7.4 Recommendation for Further Study

Any research that may conduct a comparative study of fertility behaviour of Rai community and other ethnicities by using a multivariate statistical method with the combination of qualitative method could be better to explore factors affecting fertility behaviour. Based on findings of such research could be effective one to recommend future policy and programme regarding fertility behaviour besides a research that focus on only Chi-square test and one community. If it is possible a longitudinal survey is better one to study fertility behaviour than such a cross-sectional survey since fertility behaviour is a dynamic phenomena.

- This study covered Rai community of Indranipokhari VDC of Khotang district only. Rai communities are found in other areas of Nepal. In some aspects they are similar to each

other and in some aspects they are different from others. A detailed study on Rai community with appropriate and nationally representative sample is required.

- This study is restricted only 180 respondents but to get more reliable figure about this area, large number of sample size is required.
- It is required to compare with other caste/indigenous groups.
- This study had an objective of fulfilling the requirement of a given curriculum, and had limited scope, areas, sources and time. Detailed and large scale research on Rai people's reproductive choices with corporation of more social, economic, psychological, cultural, and IEC related variables is essential to reveal their exact fertility performances.

REFERENCES

Acharya, B. (1992). Determinants of Age at Marriage and Fertility**,** in Bal Kumar K.C. (ed), *Nepal Population Journal*, (Kathmandu: PAN) Vol. – 5, No. 4, P. 44-60.

Acharya, B. (1999). ''Contraception in Nepal: Prospect and Challenges'', in Bal Kumar K.C.(ed) *Population and Development in Nepal* (Kathmandu :CDPS),5(4) P.19-30

Adhikari, K.P. (1996). Effect of Infant and Child Mortality on Fertility Biological and Volitional Response, *Nepal Population Journal*, (Kathmandu: CDPS) Vol. 5, No. 4, P. 101-112.

Bhande, A. and Kanitkar, T. (1997). *Principles of Population Studies,* (Bombay: Himalayan Publishing House).

Bongaarts, J. and Potter, R.G. (1983). *Fertility-Biology and Behaviour,* An Analysis of proximate Determinants, (London: Academic Press).

Caldwell, J., 1977, Persistency of High Fertility, Canberra: *The Australian National University*, 1:30-33, VI18

Central Bureau of Statistics (1995). *Population Monograph of Nepal* (Kathmandu: CBS).

Central Bureau of Statistics (2003). *Population Monograph of Nepal* (Kathmandu: CBS).

Central Bureau of Statistics (2012),*National population and housing census 2011*(Katmandu: CBS).

Chhetry, R.K.1993,"Age at Marriage and Fertility Planning in Nepal", *South Asia Study on Population Program and Strategies*, (Kathmandu: UNFPA), 73-97

Dahal, D.R. (1992). *Determinants of Fertility in Nepal,* Bal Kumar K.C. (ed) *Population and Development in Nepal*, Vol. 1, (Kathmandu: CDPS).

Dahal, 2003, Social Composition of the Population in Population Monograph of Nepal, Chapter III, Central Bureau of Statistics

Davis, K. and Blake, J. (1956). *Social Structure and Fertility, An Analytical Framework,* Economic Development and Social Change, P. 211-235.

Day, L. H. (1983). *Analysing Population Trends*. New York: St. Martins Press.

Freedman, R. (1982). *Fertility Decline Theories,* in John A. Ross (ed) International Encyclopedia of Population, (New York: Free Press), P. 258-286.

Hans Raj, 1998, *Fundamentals of Demography* (Surjeet Publication: New Delhi).

Karki, Y.B. (2003). Fertility Levels, Patterns and Trends in Nepal, *Population Monograph of Nepal*, (Kathmandu: CBS), P. 37-53.

Lottrt, J. M. (1998). *Factors Socio-Cultural Factors and Fertility*. Human Sciences Research Council

Mainali , Kalika (2008), *Fertility Behavior Among Thami Community: A study of Sundrawoti VDC*, unpublished MA dissertation (Kathmandu: Central Department of Population studies, TU).

Ministry of Population and Environment (2000**)**. *Nepal Population Report,* **(**Kathmandu: MOPE).

MOHP (Nepal) New ERA, USIAD and ICF Intermnatioal Inc, 2012, *Nepal Demographic and Health Survey, 2011*, Kathmandu, Nepal. MOHP, New ERA ,UASID and ICF International Inc.

New Era (1986). *Fertility and Mortality/rate in Nepal,* **(**Kathmandu: National Commission on Population).

Rijal, R.P. and Shrestha, A. (1989). *Fertility and Its Proximate Determinants*, South Asia Studies of Population Policies and Programme in Nepal, (Kathmandu: UNFPA), P. 22-70.

Tuladhar, J.M. (1989**)**. *The Persistence of High Fertility in Nepal*, (New Delhi: Inter India Publication).

UN (1973). *The Determinants and Consequences of Population Trend*, Vol. 1.

ANNEX – 1

TRIBHUVAN UNIVERSITY
Central Department of Population Studies (CDPS)
(This information will be secret; it will be used for only M.A. Thesis Purpose)
Questionnaire Design

"FERTILITY BEHAVIOR AMONG RAI COMMUNITY"

First Part: Background Characteristics of Household

Q.No1 General Information

1.1 District Name: VDC Name: …….. Ward No.…

1.2 Household number: ……..

1.3 Name of the Household Head and Caste:…….

1.4 Name of the Respondent and Caste:…….

1.5 Name of the Respondent's Husband and Caste:……..

1.6 Religion: …….. Language:

1.7 Number of family…… 1 Total …… 2 Male …. 3 Female …….

QNo.2 Socio-economic and Demographic Information of the Households

S.N.	Name	¤Relation with HH Head	@Age	Sex	*Marital Status	+Educational Status	#Occupational Status

@Sex: 1 Male 2 Female

¤**Relation with HH Head** *1 Husband/Wife 2 Son/Daughter 3 Son /Daughter in law 4 Daughter -Son in law 5 Grand Son /Daughter 6 Mother/Father 7 Brother/Daughter in law 8 Cousins 9 Other related*

***Marital Status:** 1 Married 2 Unmarried 3 Widow/er 4 Divorced 5 Others

+Educational Status: 1 Illiterate 2 Literate 3 Primary 4 Secondary 5 10+

6 *Nabalak*

#Occupational Status: 1 Agriculture 2 Service 3 Business 4 Dailly/wages 5 Foreign employment 6 Household work 7 Unemployment 8 Others

QNo.3 Is this your own home? *1 Yes* *2 No*

QNo.4 House types ……

QNo.5 Do you have your own agricultural land?

1 Yes *2 No*

Note: If no, go question number 9

Qo.6 If yes, how much?

Area of Land	*Khet*	*Bari*

QNo.7 How much annual production of your own land? Write in *Muri /Pathi* in following table

Production of land	*Khet*	*Bari*
DHAN		
GAHU		
KODO		
MAKAI		
JAU		
OTHER		

QNo.8 How many months could be fed your family from your own land food production? Write in months ……

QNo.9 Do you cultivate other's land? If no, go question number 13

QNo.10 If yes, how much land do you cultivate?

Area of Land (in *Ropani*)	*Khet*	*Bari*

QNo.11 How much annual production of other's cultivated land? Write in *Muri/ Pathi* in following table

Production of land	*Khet*	*Bari*
DHAN		
GAHU		
KODO		
MAKAI		
JAU		
OTHER		

QNo.12 How many months could be fed your family from others' land food production? Write in month ……..

QNo.13 Do you have any types of cash crops farm?

Note: If no, go question number 15

QNo.14 If yes, which types of cash farm? Write in table with annual income.

Cash -crops	Annual income (Rs.)
1.Vegetable	
2.Fruits	
3.Elichi	
4.Others	

QNo.15 What is the source of your drinking water? *1 Personal 2 Public 3 open source*

QNo.16 Do you have toilet facility in your home*?* *1 Yes 2 No*

QNo.17 Do you have electricity in your home?

QNo.18 What types of fuel used for cooking? *1 Wood 2 Kerosene 3 Electricity 4 Others*

QNo. 19 Do you have following amenities in your home? If yes write check in box, other wise cross in box.

Radio		*Phone/mobile*		*Hal Goru*	
T.V.		*Solar*		*Other,(mention)*	

QNo. 20 Do you have following types of animal? If yes, write number in the box other wise cross the box

Pig		*Goat*		*Sheep*		*Cow*		*Buffalo*		*HalGoru*		*Others*	

QNo. 21 Do you have any bank saving account?

1 Yes 2 No

Note: If no, go question number 23

QNo.22 If yes, how much balance is saving for last month……?

QNo.23 Do you have any pension? *1 Yes 2 No*

Note: If no, go question number 25

QNo.24 If yes, how much is per month……..

QNo.25 What is your main source of household expenditure? Write…..

QNo.26 How much money do you spend annually? Write……

Second Part: Respondent Related Information

(All married women age of 15- 49 years during survey will be eligible respondent .But if there is more than one woman at the time of survey, question is asked only that woman who has youngest child)

QNo.1 How old are you and your husband?

1 Respondent age (year)…….., 2 Husband's age (year)……

QNo.2 Do you read and write? *1 Yes 2 No*

Note: If no, go question number 4

QNo.3 If yes, which class passed? Write answer ……..

QNo.4 If no, what is main cause of not going school? Write answer….

QNo.5 Does your husband read and write? *1 Yes 2 No*

Note: If no, go question number 6

QNo.6 If yes, which class passed? Write answer ……..

QNo.7 Do you read newspaper? *1 Yes 2 No*

(This question ask to only educated women)

QNo.8 Do you listen radio? *1 Yes 2 No*

Note: If no, go question number 10

QNo.9 If you listen, how many times in a week? Write answer ….

QNo.10 Which programme do you listen specially?

QNo.11 Do you watch T.V.*?* *1 Yes 2 No*

Note: If no, go question number 13

QNo.12 If watch, how many times in a week? Write answer ……

QNo.13 Which programme watch specially? Write answer …..

QNo.14 What is your main occupation?

1 Agriculture 2 Service 3 Business 4 Foreign employment 5Dailly/wages 6 Others

QNo.15 What is your husband main occupation?

1 Agriculture 2 Service 3 Business 4 Foreign employment 5Dailly/wages 6 Others

QNo.16 Who takes last decision about cash on household expenditure?

1 Self 2 Husband 3 Both 4 Others

QNo.17 Do you help cash on household expenditure? *1 Yes 2 No*

Note: If no, go question number 18

QNo.18 If yes, how much in average? *1 Little 2 Half 3 More than half 4 All*

QNo.19 Do you have fix assets? *1 Yes 2 No*

Note: If no, go question number 21

QNo.20 If yes, Do you sell them by self decision? *1 Yes 2 No*

QNo.21 Do you have any animal as your own assets? *1 Yes 2 No*

Note: If no, go question number 22

QNo.22 If yes, Do you sell them by self decision *1 Yes 2 No*

QNo.23 Who takes the last decision on following things in family? (Write symbol number in box)

1 About your health				
2 About son/daughter's health				
3 About going to meet relations				

1 Self 2 Both 3 Husband 4 Others

QNo.24.Does your husband's other wife? *1 Yes 2 No*

Third Part: Information about Reproduction

QNo.1 How old was you at the time of your first menstruation? Write year…….

QNo.2 Do you have means cycle now? *1 Yes* *2 No*

QNo.3 If no, how old was you at the time of stop? Write answer…

QNo.4 How old was you and your husband at the time of first marriage?

1 Respondent's age (year)……..2 Husband's age (year)……

QNo.5 Are you continuous living with husband after marriage? *1 Yes* *2 No*

Note: If yes, go question number 7

QNo.6 If no, how many time you were separated with your husband? Write answer in following table

Times	*Time period*		*Cause mention*
	Months	*Years*	
First			
Second			
Third			
Others			

QNo.7 When did you be pregnant first time after marriage? Write answer…….

QNo.8 How old were you at the time of your first child birth? Write answer…….

QNo.9 How many children did you ever give birth till now?

1. Total numbers ……. 2 Son ….. 3 Daughter.....

QNo.10 Have your any children died? *1 Yes* *2 No*

Note: If no, go question number 12

QNo.11 If yes, 1 *Total …* *2 Son ….. 3 Daughter.....*

QNo.12 How was the birth interval of these children? Write answer…..

QNo.13 Are you pregnant now? *1 Yes* *2 No*

(This question is asked to only those women who have a child greater than one year.)

QNo.14 In general, what time after the child birth your menstruation started? Write answer…..

QNo.15 Have you experienced miscarriage?

Note: If no, go question number 17

QNo.16 If yes, how many time have you experienced? *Write answer….*

QNo.17 How many children would you like to give birth in your opinion?

1 Total number…. 2 Number of son…. 3 Number of daughter…

QNo.18 How many children would you like to give birth in your husband's opinion?

1 Total number… 2 Number of son…. 3 Number of daughter…

QNo.19 What times after the child birth were you involved in intercourse?

QNo.20 Do you have knowledge of family planning? *1 Yes 2 No*

Note: If no, go question number 27

QNo.21 Have you used any contraception? *1 Yes 2 No*

Note: If no, go question number 25

QNo.22 If yes, which contraception method have you used?

1 Female sterilization 2 Male sterilization 3 Male condom 4 Female temporary method 5 others

QNo.23 Have you any side effect of used contraception method? *1 Yes 2 No*

Note: If no, go question number 25

QNo.24 If yes, what was the types of side effect? Write answer…

QNo.25 Do you talk to your husband about family planning? *1 Yes 2 No*

QNo.26 If no, what is the main cause of not talk? Write answer…

QNo.27 Do you have knowledge of abortion? *1 Yes 2 No*

Note: If no, go question number 32

QNo.28 If yes, have you aborted? *1 Yes 2 No*

QNo.29 If yes, how many times? Write answer …

QNo.30 In which way did you aborted? Write answer…

QNo.31 What was the main cause of abortion? Write answer…

QNo.32 In general, how many months did you breastfeed?

QNo.33 How many times did you breastfeed in a day? Write answer…

QNo.34 What did you feed to your *DHUDE BALAK* except breastfeed?

QNo.35 Do you have knowledge of pregnant service? *1 Yes 2 No*

QNo.36 If yes, have you ever taken that service? *1 Yes 2 No*

QNo.37 Do you know is there any health post near to your home? *1 Yes 2 No*