CHAPTER- II

Literature Review

The widely pronounced ‘population explosion’ is one of the most significant problems that modern world has faced today. The world for long has been facing varied problems, but never before in the history of mankind. Its number and growth based problem as now. The study of population is therefore, very essential for the present and future relationship between man and land for their adjustment and equilibrium.¹ The population explosion has brought in its trail the most excruciating form of food shortage, unemployment, economic uncertainties, rising incidents of crime and social disorder and environmental pollution….. Over population presents a formidable threat to the survival of a vast segment of the world’s population and its dimensions are as dangerous as a nuclear war…. It is creating a serious problem of administrators…. Forests are cut to accommodate more colonies. It causes pollution and diseases. Monsoon fail, soil fertility decreases. Thus the standard of living is affected.²

Human fertility is responsible for biological maintenance of society. It is a complex process. Several factors like social, cultural, economic, physiological, psychological, religious and political factors influence human fertility. All those factors which determine fertility are determined by education. Because education in fact inspires man to cheek him and his environment and play the role according to his ability and policy of the government as well as society. It gives him knowledge about contraceptives and all other variables of life.

Education means the transmission of culture, which every generation purposely gives to its successors. The main objective of education is to develop personality of an individual. The personality of individual is complex one which has social, moral, physical, intellectual, spiritual and aesthetic aspects. Education has been recognized as basic factor in social and economic development. Human resource of any country also is highly influenced by its educational standard. Education directly plays a vital role in reducing fertility but its relationship with fertility is not always inverse. The age at marriage of wife and husband is increasing with growing educational standards. It helps to increase the level of income of respondents also. Adaptation of contraception and modernity is also the consequences of education.

“A number of scholars are convinced that, education alone can change the attitudes of the people towards family, marriage and birth of a child. So long as the
mass of the population remains illiterate, it cannot be exposed to rational ideas and the level of consciousness will remain what it is. People will not shed irrational ideas and religious superstitions, and will continue to have bigger families even if it causes deprivation and a low standard of living… Education and fertility have been found to be negatively correlated. However, there are many possible interrelations of the relationship between education and reproduction. The fact that a few years of formal education bring a perceptible change in the reproductive behavior, shows a close causal relationship between the two. Education is capable of changing people’s perception, ideas, aspirations, etc. much more significantly than even the micro-economic realities. Education determines the knowledge of an attitude towards diseases, hygiene, nutrition more than the purchasing power does. If such a cognitive change, induced by education, can have a powerful effect upon the survival rate, it should not e surprising if it were to have an equally powerful effect on the incidence of child bearing."^3

Similarly the fertility is also affected by the economic condition of the people. In general, it is concluded that the low economic group has the higher fertility than that of higher one. People of higher economic group have the high cost for child bearing. They invest large amount of money for their children's bright future. But people of low income group have low cost of child bearing and they think the children as a source of income. So, there is high fertility in poor group. In this context the Frank Fetter says, “It is the richer use they can sacrifice immediate pleasure to future, benefits. An additional child is not an asset if born in a rich family but in poor family he is, because he can labour and earn.”^4

So, fertility being one of the most important subject matter, and education as well as economic condition of mass/people is another. There is not any theory which is developed on these variables. But several biologists, economists, sociologists, demographers, health researchers and investigators have attempt to show the cause and effect relationship of fertility with demographic, educational and socio-economic variables. In the following section some of the literatures that are relevant to this study are reviewed:

2.1 Review of Theoretical Literature

The subject of population has attached the attention of number of scholars. They have tried to analyze the relationship between population and socio-economic factor according to their ideology. They could not make any clear vision or image about impact of birth and death rate on economic progress." Chinese thinkers were
pioneers in the field of assessing the impact of population growth on the overall social and economic growth. They focused on the issues of land-man ratio and optimum utilization of land with utmost per capita food output. To ensure an ideal land-man ratio, the Chinese thinkers suggested that the sovereign should shift population from densely populated areas to regions with less population density.  

“The Chinese philosopher Confucius at the very initial stage of development realised that the population explosion could dislocate economic system of a nation.”

In this context, Aristotle observed, “There is, in fact, a limit to the size of states as there is to that of all other things- animals, plants and implements. None of these will be capable of its proper function if it is too small or too large; it will either lose its nature altogether or be defective….. A state which is composed of too few members is not self-sufficing. One that is composed of too many is self-sufficing with regard to more necessaries, as a barbarian tribe may be; but it is not a state, since it is incapable of true constitutional government. A state, then comes into existence only when the population has grown large enough to live well as a political association. Should it exceed this limit, it may indeed be a greater state; but, as I was saying, there must be some point at which it stops increasing…. The best limit of population is the largest number requisite for self-sufficiency, and which can be taken in at a single view, i.e. which will enable all the members to know one another’s character…. If we are to safeguard our future and preserve our culture and civilizations, limiting the population growth is imperative.”

The Romans were largely in favour of growth of population which afforded them a large army to conquer other areas and to defend their territory. They advocated for more children so as to compensate for the loss of men in wars, floods, epidemics and famines occurring due to natural catastrophe.

Ibna-khal-e-Dum, the celebrated Muslim thinker of fourteenth century wrote about the cyclical change in population over time and analysed its relationship with political, socio-economic and psychological state of the age. Botero in sixteenth century, extensively dealt with the relationship between resource-potential which can be exploited to raise income and sustenance and population increase. If population tries to exceed this limit, it is reduced by famines, wars and political troubles.

The traditional Hindu way of life, however, facilitates reduction in the duration of effective period of married life through culturally prescribed sexual abstinence during early and later parts of marital life and also on different inauspicious occasions during the reproductive period. A Hindu is expected to adhere to four major goals in his life, namely, Dharma, Artha, Kama and Moksha. In realizing these goals his life span is divided into four Ashrams (stage in life) namely, Brahmacharya, Grahasthya,
Vanaprastha and Sanyasa. In adhering to the above four stages of life, the Hindus
adjusted their life patterns suitable. They followed intensive religious practices and
tabooed eating certain food items that excite sex during the stages of Brahmacharya
and Sanyasa.\(^\text{10}\)

The earliest, formal and systematic theory of population which is related to
fertility and poverty is that of Malthus. T. R. Malthus was born on February 14, 1766
A.D. He was self educated and entered Jesus College at Cambridge at the age of 18.
In 1798 he published his “Essay on population”. In it he states that the reproductive
power of population is much more higher than the productive power of land.
According to him, population when unchecked has a tendency to increase in a
geometrical ratio, i.e. 1,2,4,8,16……n. If the increase in population is not restricted, it
will double within 25 years. Thus, he came the conclusion that, population has a
constant tendency to increase beyond the means of subsistence and it will balance if
a lot of good land is available. However, the availability of good land is a short run
solution. It is not possible for long-run.

So he had suggested to raise the age at marriage, celibacy and enhanced
moral restrains to control explosion. But he did not mention the importance of
education and income to fertility control.

The another important theory of population is the optimum theory of
population. It is concerned with the size of population and production of wealth or per
capita income. This theory is the outcome of those scholars and economists who
were the workers of economic sector. This theory was first introduced by Edward
West through his book, ‘The application on capital to land’ published in 1815 A.D. It
was modified by Professor Sidg- Wick in his book principles of political economy.
Later, Edwin Canon, Robbins, Dalton and Car-Saunders have contributed this theory.

According to this theory, the optimum size of population is that ideal size, which
gives the maximum income per head with the help of other resources. There are
three conditions of population according to this theory. They ate:

- **Under Population**: The population which is below the optimum population is
  known as under population. It is the condition where the natural resources
  are under utilized, and with the increment of population these resources are
  properly utilized and per capita income increases. Under it the law of
  increasing returns to scale operates.

- **Optimum Population**: The number of people which gives the maximum
  income per head is optimum population. In this condition the productive

\(^\text{10}\)
resources of the country are utilize properly and the law of constant returns operates.

- **Over Population:** The population beyond the optimum level is called over population. In it, the increase in population makes decrease in per capita income. Under it the law of diminishing returns to scale operates in the production.

  So, the theory gives emphasis on the need to control the size of population at that point which ultimately supports family planning programme. It stress on the need to increase per capita income and proper exploitation of natural resources in the cost of human welfare that helps to economic growth of the country.

The demographic transition theory is the modern theory of population growth. It is based on the actual demographic experience of western countries, which have moved from a condition of high mortality and high fertility with consequent slow growth of population to conditions of low mortality and low fertility, once again leading to a low growth of population. Earlier demographers such as Landry (1909) and Warren S. Thompson (1929) had attempted to construct a typology to describe the transition from conditions of high mortality and high fertility to conditions of low mortality and low fertility. In 1947, C. P. Blacker has identified the following five phases of the demographic transition:

i. The high stationary stage, characterized by high birth rates and high death rates.

ii. The early expanding stage with high birth rates and high but decreasing mortality rates.

iii. The late expanding stage, with falling birth rates but rapidly decreasing mortality.

iv. The low stationary stage, with low birth rates balanced by equally low mortality, and

v. The declining stage with low mortality and death exceeding births.

The process of demographic transition in the course of economic development, as experienced by today's industrialized countries, may be briefly explained as follow, “All nations in the modern era, which have moved from a tradition, agrarian based economic system to a largely industrial, urbanized based have also moved from a condition of high mortality and fertility to low mortality and fertility.”

The biological theories are those which consider the law regulating human population to be the same as that which regulates the growth of plants and animals.
Michael Thomas Sadler (1780-1835) an English political economist and liberal was a contemporary of Malthus and his virulent opponent. He developed his own density principle, which was that, “the fertility varies inversely with the density of population”. His statement about this theory is, “the principle of human increase thus obtained may be briefly enunciated and is simply this: The fecundity of human beings is ceteris paribus, in the inverse ratio of the condensation of their numbers; and still in direct contradiction to the theory maintained (i.e. that of Malthus), the variation in that fecundity is effectuated not by the wretchedness and misery but by the happiness and prosperity of the species..... At every step the principle of increase (of population) contracts, and as I contend, would pause at that precise point where it had secured the utmost possible degree of happiness to the greatest possible number of human beings. 

In 1841, the English economist and philosopher Thomas Doubleday (1790-1870) brought out the true law of population, which attempted to establish a relationship between population growth and its food supply. According to him, “there is in all societies a constant increase going on amongst that portion of it which is the worst supplied with food; in short, amongst the poorest. Amongst those in the state of affluence, and well supplied with food and luxuries, a constant decrease goes on. Amongst those who form the mean or medium between these two opposite states, that is to say, amongst those who are tolerably supplied with good food, and not over worked, nor yet idle, population is stationary. Hence if follows that it is upon the numerical proportion which these three states bear to each other in any society that increase or decrease upon the whole depends.

The eminent Italian economist and demographer, Francisco S. Nitti endorsed the view that, poverty itself breeds fertility and improvement in economic status affects procreation. In long run, higher living levels reduce fertility.

Jose de Castro (1920) reported some conclusions regarding fertility behaviour food availability after experimentation on mice. He generally reports that better protienic food has a direct impact on fattening of body. Fattening reduces the oestrogen capacities of the females which results in less reproduction. Rough and less- rich food has no adverse effects on the reproduction system, therefore, the poverty striken groups of population have greater number of children.

Another biological theory was put forward by an Italian biologist, Corrado Gini. He thinks that the basic factor in population growth is the biological change rather than social and economic change. He believes that there are cycles in the rise
and fall of populations. The cycle of the growth of the population is linked to the life cycle of the individual. A nation which has high fertility rate is due to the high number of people who are hereditarily most profile, i.e. high fecund. A decrease in the rate of population growth is due to the loss of most energetic people through war and colonization and partly because the upper classes who have less fertility expand in numbers and there is loss of reproductively. According to Gini, thus the decline in fertility is due to a decline in fecundity.

Several theorists have given sociological explanations for the decline in fertility. These social theories emphasize the fact that human volition has played an important role in fertility decline. The motivational factors operating at the individual level in the social milieu are considered important for explaining reproductive behavior.

The social theory developed by Professor Arsene Dumont pointed out that one has an urge to rise in the social state or scale. He has compared this urge to the inevitable physical law of nature the force of capillarity. It is known under this force, a liquid rise in a very thin tube, oil rises in a wick and sap in a tree during the spring. The liquid in a narrow tube has an advantages over the liquid in a wide tube, in the sense that it can rise higher. Similarly, in the matter of rising in social scale, a person least burdened with unnecessary burdens that is, a person with a small family will rise faster in the social scale. Just as a column of liquid has to be thin in order to rise under the force of capillarity, so a family must be small in order to rise in the social scale. According to Dumont, this aspiration should not be confused with the ambition to dominate others on the basis of power or wealth; it arises out of manual work, or intellectual work or artistic achievements. He has further clarified that, although the urge to rise in the social scale is universal, its fulfillment would be facilitated only in a society in which a vertical upward movement is possible. In a society ridden by caste, where the status of individual is determined on the basis of his/her birth and where there are strong barriers to individual advancement, the force of social capillarity can not operate vigorously, with the result that fertility in such a society is always very high. It was the first logical attempt at offering on explanation for the decline in fertility during a period of social, educational and economic development. 17

The another social theory of fertility is the theory of diffusion or cultural lag. It explains how the concept of birth control spread over the world. “According to cultural lag, theory of fertility differentials, in countries where fertility has been declining, attitudes and practices conductive to diminishing fertility have been adopted first by the better educated, wealthier and socially more favored groups of the city population
and transmitted in the course of time to intermediate and lower status group and the rural areas.”

The most popular social theories were developed by Karl Marx. In his social theories he has explained the social theory of population, which is a particular part of his communism principle. According to him, “Size of population is determined by the socio-economic variables. He further says one should not be worried with growth of population. Since every child born in this world not only has a mouth to eat but he is also equipped with two hands to contribute little to the development of mankind’s long race. The main problem of means of subsistence arises due to the evils of capitalism which would disappear if communism is to adopted.

Therefore Karl Marx believed that it is not necessary to give attention to the growth of population. Before giving attention to the population growth the social reform is necessary which yields marvelous economic returns to feed the increasing population. He remarked that as economic status improves everyone is inspired to exercise some voluntary control over his growth in number.

“In short, the basic Marxist view is that each society at each point in history has its own law of population that determines the consequences of population growth. But capitalism, in this view, has the consequences of over population and poverty whereas for socialism, population growth will always be as per with economy without by side effects.”

Richard R. Nelson (1956) felt that the malady of under developed economies can be diagnosed as a stable equilibrium level of per capita income at or close to subsistence requirements. The point is characterized by very low rates of savings as well as investment per-capita. When income increases, the population growth negates it so as to keep the per capia income again at the low level equilibrium.

In 1963, Kingsley Davis developed a theory in which he attempted to explain the declines in birth rates in developed countries. It is experienced fact that before the secular decline of births rates in developed countries, mortality rates had started declining, as a result of which the rates of natural increase had gone up. To overcome from this situation the people of these countries adopts late marriage system, embraced contraception, began sterilization, utilized abortions and migrated outward.

“Davis suggests that, the most powerful motive for family limitation is not fear of poverty but the loss of social status. Each family was concerned with their
prospective standing in comparison to other families within its reference group. So, people modified their demographic behavior.

**Geoffrey Mc Nicoll and Moni Nag** in their joint paper (1982) very aptly traced the results of population growth affecting pressure on resources. In addition to draining of investment to train and equip an expanding labour force, rapid population growth imposes considerable new organizational demands on a society. Social structure is not neutral with respect to scale: doubling population size in a generation and city size sometimes a decade keeps a country's political and administrative apparatus perpetually off balance..... The impending damages to plant life, ecological degradation and pollution resulting from population growth call for reorganization costs and protection costs. This means cost of maintaining an additional population grows higher and higher. The demographers seek to keep this cost at manageable level by looking into labour productivity and cost of maintenance dimensions analytically.  

Another important socio-economic theory of fertility is 'Theory of intergenerational wealth flow' is developed by **J. C. Caldwell**. According to him, fertility behavior in any type of society at any level of development is rational. In a society, the fertility is high if children are economically useful to parents and low if children are economically not beneficial to the parents. Whether the children are economically beneficial to parents is determined by social conditions: mainly the direction of the inter-generational flow of wealth. This flow of wealth in all primitive and traditional societies had been from younger persons to the older persons, i.e., from the younger generation to the older generation. In other words, children in such societies are economic assets to their parents and naturally more children mean more wealth, leading to high fertility. Fertility will remain high as long as this intergenerational wealth flow is from children to parents..... When the flow of wealth is from parents to children, low fertility becomes economically rational.

One of the important social theory of fertility is theory of increasing prosperity and pleasure. This theory is developed by **Ludwig Brento** a German economist. He tried to relate birth rates with the increasing prosperity and pleasure. According to him, the birth rate of the people is determined by the availability of the means of pleasure and happiness of the family. Rich people have various means of recreation and pleasure or enjoyment other than sex. Enjoyment from sexual activity is one of the alternative means of getting pleasure for rich man. Thus, they marry late and have low birth rates. On the other hand, poor people have no any access on any alternative means of recreation and enjoyment except sex. Early marriage is
common in this class of people. As a result they have high birth rates. So, there is inverse relationship between fertility and prosperity and pleasure.\(^{25}\)

Now a days many economists have made attempts to develop economic theories to explain how decisions on the number of children are made by couples. In these theories they have used many economic terms, such as, commodity, utility of children, cost of children, opportunity cost, shadow prices, demand theory etc. These theories of fertility are based on the assumption that the decisions regarding family size are influenced by economic considerations, and therefore these theories are built within the micro-economic framework.

One of the important economic theory of fertility is developed by Harvey Liebenstein in 1957.\(^ {26}\) His theory explains the factors which determine the number of children desired by each couple. This theory is based on the assumption that people make “rough calculations” regarding the utilities and dis-utilities of children and then decide on the number of children they would like to have.

According to him, three types of utilities are derived from and two types of costs are involved in having an additional child. The types of utilities are:

i. The utility of a child as a ‘productive unit’, i.e. the child is here considered as a source of personal pleasure to the parents.

ii. The utility of a child as a ‘productive unit’, i.e. the child, it is expected, would enter the labour force at some point of time and contribute to the family income, and

iii. The utility of child as a ‘source of security’ in the old age of the parents or even otherwise.

The two types of costs involved in having an additional child are:

i. Direct costs in the sense of conventional current expenses of bringing up a child, according to conventional standards until the child becomes self supporting; and

ii. Indirect cost, which includes opportunities foregone due to the appearance of an additional child, such as the mother’s inability to work; inability to purchase a cycle, T.V. or a motorbike, etc.

Libenstein had found a correlation between per capita income and population growth in the following manner in terms of motivation:
i. When the income is very low, the mortality rate is very high. Since the death rate is high, the birth rate has to be high. The utilities from marginal child is very high, where as the cost of marginal child is very low (At low income, maintenance cost is low).

ii. When the income increases, mortality rate declines, but fertility does not decrease immediately, because people immediately do not know that mortality rate had decreased. The productive age of a child becomes large than the non-productive age. Therefore, the direct cost of child declines. The utilities (as productive agent and at the source of security) of a child increase. Thus, fertility does not decrease.

iii. When income increases still more, and when more children survive, the utility of a child as a source of income and consumption declines. The utility of a marginal child as a source of protection also decreases. On the other hand, cost of a child increases (both money and opportunity cost). Thus, fertility tends to decline.

iv. At a very rate of income, the gap between fertility and mortality gradually reduces. Both fertility and mortality become lower, and country becomes developed.

Liebenstein is of the opinion that a critical minimum per capita income level, after a stage, helps to reduce the rate of growth of population, and thus, stimulates the process of sustained economic development. 27

2.2 The Review of Empirical Literature

Many studies in Nepal as well as many other countries of the world has shown the exploratory capabilities of different socio-economic and demographic variables. The observation on fertility indicates that the increase and decrease in fertility is determined by many variables or factors. The important variables are age at marriage, educational attainment of couples, occupation of couples, income level of family, duration of marriage, level of employment, knowledge and use of contraceptives, ethnicity, tradition and beliefs, mortality rate etc. These studies has taken education and level of income as independent variable, which effect on fertility. Numerous empirical studies during the 1970s and 1980s have demonstrated that, education has a stronger and more consistently negative relationship with fertility than any other single variable.
Some of the empirical studies those takes these variables as the determining factor of fertility are reviewed below:

2.2.1 National Studies

Mohan Man Sainju is his report, “population and development policy, development approach to fertility reduction in Nepal 1972” has argued that, population control by human means must concentrate upon the number of births decided by families rather than by the nation. According to him, fertility is the function of various utility of children to parents, the ability of couples to control fertility, residual factors such as fecundity of couples to bear children. In this connection he has developed the relationship between fertility and other socio-economic variables. Which as follows:

- The higher the social status, the lower the fertility of the family.
- The higher the income status, the lower the fertility of the family.
- The less significant the status of children as income earner or as supporter of parents in their old age, the lower tends to be the fecundity of the family.
- The higher the professional status of women, the lower the family fertility.

Dr. Dahal in his study “Determinants of fertility in Nepal 1992” has identified the social, cultural, breast feeding and contraception as the main determinants of fertility. He further divided them as fertility encouraging and discouraging factors. Among them early marriage and positive value of marriage, family life and procreation, high value of children, son preference, low status of women and securing for men and women are fertility encouraging factors, whereas sexual abstinence on certain occasions, age, separation of spouses for long period of time, education and employment of women outside the house are fertility discouraging factors.

J. M. Juladhar in his Ph. D. Thesis “The persistence of high fertility in Nepal 1984” which was submitted to the Australian National University, Canberra, pointed out that the fertility in Nepal is high due to following reasons:

- The majority of Nepalese society has a universal marriage system.
- Education is not very wide-spread in Nepal, in particular the percentage of women attending school is low.
- There is a lack of communication between spouses. The utility of children outweigh the cost of rearing children in terms of child labour input and old age security and there is also a strong preference for son.
• Use of contraception is extremely low. There is a large proportion of currently
married women still do not know about family planning outlet and access to
an outlet is still very different for the majority of potential acceptors in Nepal.

Dr. Harinder Thapliya has conducted a research entitled ‘High fertility and high
mortality of Nepalese women 1996’. According to him, despite the increases in
family planning services in the village which would make it easier for women to limit
their fertility and to pick the timing and spacing of their births. The results of the study
shows that the high fertility of women is related to non-availability of safe
contraceptives, lack of freedom for women to use family planning devices and other
socio-cultural factors, such as, early marriage, lack of education and value of male
child etc.

Nepal family planning/MCH project conducted Nepal contraceptive prevalence
survey in 1986. It tried to provide comprehensive data necessary for planning and
evaluation the family planning programme of Nepal. It was found that increasing level
of education is a significant variable to increase contraceptive use among currently
married women. It was also found that the child loss experience motives women to
give more birth that they actually desire.

Chalaune in his dissertation which was submitted to Central Department of
Economics in 1997 entitled, ‘Determinants of Fertility, A case study of Lekgaun VDC
Bajhang’ is mainly concerned with the level of fertility and some socio-economic
factors affecting the level of fertility. He conclude, negative relationship between
education and fertility. According to his findings ‘the women whose husbands are
illiterate have been found to have larger mean CEB (3.8) than the mean CEB for
women whose husbands are literate (3.65). He has also found an inverse
relationship between income of the family and fertility level. The mean child ever born
(CEB) for women of high income group is 2.8, middle income group is 3.5 and low
income group is 3.83.

Adhikari (1994) in his dissertation submitted to Central Department of
Population Studies, entitled, ‘The determinants of fertility, a case study of Kafalbote
VDC in panchar District has analyzed the fertility and its socio-economic
determinants. He has taken education as an independent variable. He found
negative correlation between literacy level and fertility. Desire for male children is
also an important factor affecting fertility according to him.

The negative relationship between women’s education and fertility have also
been established from the NFHS (1991) survey. Confirming the relationship, the
total marital fertility rate among women with secondary level of education is lower ‘4’ than among women with no education ‘6.2’.

**Pathak R. S.** in his study, "An analysis of fertility determinants in Nepal" has concluded that, the discussion on the determinants of fertility in the Nepalese context reveals that marriage is universe. Early age at marriage, the leading factor in longer marriage duration is the principal determinant contributing to high fertility in Nepal. Breastfeeding is also universal in Nepal. It is the only factor considered which seems to have had an effect in reducing fertility.....The ever use of contraception is low in Nepal. As most of the ever users of contraception are those with longer marriage duration and high parity.....If fertility is to be brought down, special focus should be given to late marriage......family planning programme.

**Dr. Prakash Datt Pant**, in his study, 'Effects of child loss experience on subsequent fertility in Nepal' has concluded that, the influence of child loss experience on subsequent fertility in Nepal seems to be uniform among major groups of population and all parity groups. Child survival seems to have sufficient influence on the fertility among those who have lost a child. This effect seems to further serious among women who have lost two children....The loss of child has significantly increased the probability of subsequent birth of women of all birth order despite that breast-feeding is universal and the use of contraception over the decade has increased.37

### 2.2.2 International Studies

Many studies conducted in many other countries of the world about education and fertility has shown, the internal relationship between parents' education and their fertility rate. Some of the international empirical studied about it are reviewed below:

A study of American families conducted in 1959 after interviewing 2,713 married women reports: “It seems likely that higher education gives the wife a wider range of contacts and information which are likely to make her treat her problem more rationally. It may cause her to aspire to a style of life and variety of personal relationships which require careful planning, including the planning of family growth.38 similarly as regards economic status the report says: ‘while a substantial majority of couples in all income group are users the size of this majority increases with the husband’s income...... Users are relatively least numerous amongst couples with young wives and low incomes.’ 39
T. N. Krishnan’s study of demographic transition in Kerala, India clearly tends support this view. He has concluded, “whatever may be the nature of relationship between age at marriage and levels of marriage in different states of India, the relationship is very straight forward and clear in the case of Kerala. The age of effective marriage rises from 17.68 for illiterates to 18.68 for literates (below primary) and stays more or less at the same level till it rises further with secondary level. At the secondary levels, it is 20.16. If these relationships are valid, then one can explain the decline in birth rates in Kerala as largely due to the change in the nuptial rates and consequent rise in the age at marriage brought about by continuous and sharply higher rates of female literacy”. 40

Jean Dreze and Amartya Sen contend, “The link between female literacy and fertility is particularly clear. This connection has been widely observed in other countries, as it is not surprising that it should emerge in India too. The unwillingness of educated women to be shackled to continuous child rearing clearly plays a role in bringing about this change. Education also makes the horizon to vision wider, at a more mundane level, helps to disseminate to knowledge of family planning. 41

“Fertility and socio-economic development has quite significant relationship. Fertility differential are evident by education and income groups. The education and development programs need to be accelerated. It is said that prosperity is a good contraceptive. It is said that prosperity is a good contraceptive. It is also observed that the rich get richer and poor get children. Education is capable of changing people’s perceptions and aspirations. If cognitive changes induced by education can have significant effect on survival rate, it should not be so surprising if it were to have equally significant effect on the incidence of child bearing.” 42

“It is well-known fact that the high population growth is consequence of the substantial decline in mortality as against the moderate and high level of fertility. Therefore, control over fertility is very important not only because of its far reaching implication on prosperity and overall growth of nation but also its impact on freedom of young women to lead life of their own choice.” 43

The societies where women confine themselves to the household activities are considered most suitable for the procreation activity. The societies where the women hold equal status with men in all walks of and are economically active limit their total number of children. Likewise, the educated and employed women also tend to avoid having bigger families.” 44
The socio-economic determinants of cumulative and recent fertility were investigated with micro data from Jamaica, a middle income country with low rates of infant mortality and total fertility. It was found that infant mortality has a significant non-linear influence on fertility, and both education and income had strong negative effects on births but the impact of education was large. 45

Working on fertility preferences and fertility behavior of the women and how they vary with differences in the socio-economic and demographic characteristics, in the two villages of Punjab, Province, Pakistan, Nayab found that despite the preferred family size being quite high, it was exceeded by the actual family size. The actual performance of births the women had, was not an outcome of her desire and decisions, but the product or impact of interaction among different social cultural, economic, religious and demographic aspects of life and the factors that affected the fertility preferences and behavior most were the educational level of women and her preferred number of sons. 46

Kirk and Pillet (1998) in their study of fertility trends in 23 countries of sub-saharan Africa over a period of 15 years concluded that, the areas with higher education for women and low child mortality rate, experienced larger reductions in fertility and desired family size. 47

Education has been found to be one of the most important element of fertility decline both at the national and at the regional level in India. The education on one hand and use of contraceptives on the other are thought to be most effective variables towards fertility control. 48

Chaturvedi and others in their study which was conducted in eight rural villages of upper Assam was found that the mother’s education makes better contribution to the fertility, followed by their age. 49

Anubha Shah in his Ph. D. Thesis, ‘A comparative study of status and fertility behavior of rural and urban women in Himalyan Kumaun: a geographical perspective, has concluded that, the education is one of the most powerful factor of fertility control. The total conception rate, rates of children ever born and surviving decreased with the increase in literacy rate. Fertility rate also decreased gradually with the increase in the educational level of the husbands of the respondents. She found out that, the mean CEB of illiterate, literate, middle high school, intermediate and higher was 3.72, 3.28, 3.1, 2.14, 1.75 and 1.5 respectively in rural areas. 50

Sahid Ahmed in his study, “Impact of parental education of family size: A cross-sectional investigation”. 51 which was conducted in the sample of ‘490’
households in Muslim areas in Delhi and Aligarh Uttar Pradesh has found that the education of both male and female are negatively related to family size. In case where both parents are educated they have more preference small family compared to single educated parents. It also indicates the male dominance in choosing the family size. The study further reveals that large families on an average found positively associated with favorable male sex ratio in the family.

**Israt Zuffer Hussain and Baljit Singh** in their village surveys on determinants and factors of fertility levels reported fertility differentials as explained by social customs, education and occupational differences. Education of females was found more effective in persuading for fertility control.\(^5\_2\)

**C. Chandra Sekharan** argued that, extremely poor living conditions have reduced fertility as compared to well to do groups though no voluntary steps had been adopted to control fertility. The practice of abstinence and avoidance of fertility by strict adherence to safe period of cycle have been reasons behind lower size of family in upper middle groups of society where education has the highest impact.\(^5\_3\)

The above discussion clearly indicates that the researchers conducted by different people are only related to education, income and fertility in general. They have not studies the effect of education and economic condition in fertility of different social groups. So, the researcher wants to study of impact of education and economic condition on fertility of different social groups of Nepal.
References:

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