



NURTITIONAL STATUS OF UNDER FIVE CHILDREN OF WARD 3 AND 4 OF
RAJGHAT VDC IN MORANG DISTRICT

BY
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A DISSERTATION SUBMITTED TO THE CENTRAL DEPARTMENT OF
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Recommendation

This is to certify that the dissertation entitled "**Nutritional Status of Under Five Years Children of ward 3 and 4 of Rajghat VDC in Morang District**" prepared by Mr. Narahari Neaupane under my supervision. He has collected the primary data for this purpose in Brahman, Tharu and Satar communities and completed successfully the requirements for dissertation in Master of Arts in Population Studies.

I recommend this dissertation for evaluation by the Dissertation Committee.

Bidhan Acharya

Supervisor

June 2010

Approval Sheet:

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by

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A Dissertation
Submitted to CDPS,
TU as partial fulfilment of the courses required for the degree of
Master of Arts in Population Studies

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ACRONYMES

ARI	Acute Respiratory Infection
CBS	Central Bureau of Statistics
CDR	Crude Death Rate
CDPS	Central Department of Population Studies
HMG	Then His Majesty's Government
IAPC	Indian Academy of Paediatrics
ICPO	International Conference on Population and Development
IDA	Iron Deficiency Anaemia
IDD	Iodine Deficiency Disorder
i.e.	That is
IMR	Infant Morality Rate
MUAC	Mid Upper Arm Circumference
NDHS	Nepal Demographic Health Survey
NGOs	Non Government Organization
NLSS	Nepal Living Standard Survey
NNSS	Nepal Nutritional Status Survey
NMIS	Nepal Multiple Indicator Surveillance
NMNSS	Nepal Micro-Nutrient Status Survey
PEM	Protein Energy Malnutrition
TU	Tribhuvan University
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAD	Vitamin A Deficiency
VDC	Village Development Committee
WHO	World Health Organization

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CHAPTER I: INTRODUCTION

1.1. General Background

Nutrition is concerned about the food that a person eats to live, to grow, to reproduce, to keep healthy and well, and to have energy for work. Nutrition is an important environmental factor in realizing full growth and potential development of an individual. It is essential important and required to be balanced during childhood especially under the age of five years. Nutrition is the process of taking in and absorbing nutrients. If the nutritional status of the children is good, the child health status may be good. In growth and development of children, nutrition and heredity play a vital role. Generally, families with enough resource have their children's growth and development in right way but those have not enough resource might result in their children's Malnutrition. In contrast, there may be the cases of nutritional deficiencies due to the food habits. Poor people can have nutritional intake and people living in urban may be sufficiency from food and nutritional deficiency, even though, they have resources.

Malnutrition is the physical and mental disability that results when the human body does not get the nutrients it needs to grow and function properly. It is a serious problem in Nepal, especially among young children protein – energy malnutrition is the major type. Poor nutrition leads to much of the morbidity and mortality of children under the age of five years, this problem mostly concerned among the disadvantaged and poor. It varies from district to district, community household and individual. Due to Malnutrition children are mainly suffering from vitamin 'A' deficiency, Anemia, Goiter and Cretinism (MOHP, New Era and Macro Inc. 2007).

Malnutrition is usually the result of combination of inadequate dietary intake and infection. Poor nutrition is partly or fully responsible for low birth weight. Increased incidence of stillbirth is associated with high mortality during childhood, decreased longevity, increased susceptibility to infection

and poor productivity. Measuring height and weight is the most common way of assessing Malnutrition.

Nepal is multi lingual and multicultural country. There are more than hundred castes /ethnic group of people. They have their own dresses, languages, religion and lifestyles. Among the many castes of people found in Nepal “Brahmin” is the major one. This group of people is originally found in hilly region. But they are migrated to the Tarai and other parts of the country. This ethnic group of people is quite advanced in every aspect. They are equally involved in political, social and other activities of the country. They speak Nepali as their mother tongue. They follow Hindu Religion.

Similarly, “Tharu” is another ethnic group of people found in Tarai region of Nepal. They are the marginalized group of people. They have their own language and dresses. They also follow Hindu Religion like the “Brahmin” people. They are not as advanced as Brahmin people in the field of social, political, educational and economic activities. This group of people occupies 6.75 percent of the total people in Nepal (CBS, 2003).

Likewise, “Santhal” is another ethnic group of people found in the different part of Tarai Region. They are quite marginalized people. This group of people is being extinct day by day. They are excessively black in their complexion. They have own dresses, language and life styles. They are economically poor and are suffered from poverty, illiteracy and other evils. This group of people occupies 0.19 percent of the total people in Nepal (CBS, 2003).

Children and women in developing countries are most vulnerable to malnutrition because of low dietary intake, infectious diseases, lack of appropriate health care and inequitable distribution of food within the household (NDHS 2006:192). The poor nutritional status of children and women has been considered a serious problem in Nepal for many years. The most common forms of malnutrition in the country are protein energy malnutrition (PEM), Iodine deficiency disorders (IDD), Vitamin ‘A’ deficiency (VAD) and Iron deficiency Anaemia (IDA) (MoHP, New Era and Macro Inc, 2007:173).

In terms of nutrition, breast feeding is universal in Nepal, Exclusive breastfeeding is necessary and sufficient to meet the nutritional needs of

infants up to age 4 – 6 months. It protects the child from diarrhoea and Acute Respiratory Infection (ARI) and other disease. Over 90 percent of children in Nepal are exclusively breastfed up to 6 months mostly children are provided solid food in addition to breast feeding after five to six months (CBS, 2003).

In most communities a day is observed as an important one as 'Pasnee' or rice feeding day. It is mostly preformed in the fifth month for a female child and sixth month for the male child. The child's share of milk is gradually reduced with the rice feeding ceremony. However, majority of mothers continue to breastfeed their children up to two years. The healthy children as the pillar of the country 'food and nutrition policy' has been set for the first time in the eight plan in the process of formulating national development policy (CBS, 2003).

Without improvement in bad nutritional status of Nepalese children, health condition of people can never be improved. Adequate nutrition is very important in achieving growth both physical and mental growth and it plays positive role in the maintenance of good health throughout the lifetime of children.

1.2 Statement of the Problem

Awareness is one of the best ways to reduce health problems and prepare healthy citizen for the nation. Various diseases can be avoided by only precaution. Nutrition covers the major part of health. The socio-economic practices and economic condition play the vital role in nutrition of any community.

Nepal is a multi-lingual, multi-ethnic and multi-cultured country. Nepali culture has been composed from different community cultures. Such as Hindu community culture, Muslim culture, Buddhist culture etc. As culture differs with respect to habit, health care system also differs. Due to cultural effect mainly on food habit, nutritional status and other health related factors also vary from community to community to better information and regarding nutrition.

The Nepali society lacks of access education village health workers play important role for the maintenance of nutritional status. Beside social, political, economic, cultural factors are also equally responsible.

Most mothers in traditional societies, particularly in rural areas in developing countries, still breastfeed all their children for a long time. Few, however practice exclusive breastfeeding, and many do not provide colostrums to their babies (Latham, 1997:66)

DHS 2006, observed one in two Nepali under five children stunted, 19 percent wasted and 39 percent sufficient underweight. Malnutrition affects the nutritional status, health status and socio economic status. Socio-economic condition affects the nutritional condition; nutritional status is also related to health status of the people.

Inadequate dietary intake and disease particularly infection are immediate causes of malnutrition, healthy food is the most important to grow of child. So “Growth failure is the first sign of Malnutrition.” It is obvious that each person must eat an adequate amount of good quality and safe food throughout the year to meet all nutritional needs for body maintenance work and recreation and for growth and development in children.

Nepal is one of the highest child and infant mortality country. One in every 15 children born in Nepal dies before the fifth birthday. Seventy-eight percent of death among children under five occur during the first year of life, infant mortality is 51 deaths per 1,000 live births. During infancy, the risk of neonatal death (34 per 1,000) is more than double as high as the risk of post neonatal death (16 per 1,000) [MOHP, New Era, Macro International 2007].

The study area is composed with different ethnic groups like Brahman, Chhetri, Tharu, Satar, Kami etc. This study is focused mainly on three ethnic groups (Brahmin, Tharu and Santhal). In this area there are two kinds of main problems one is health related and other is socio-economy. These problems are malnutrition, low women literacy rate, early marriage, educational problem, more smoking and drinking habits, more contact and belief to ‘Dhamijhankri’ and traditional health professional and most of the men and women don’t utilize health problem. More than 85 percent people depend on agriculture, but production of food is not increased and not sufficient for any family. Socio-economic condition is going to be worse day by day. Its effects fall on nutritional status. So, this dissertation focuses only the impact of socio economic conditions on nutritional status of the under five year’s children in a mixed community in Rajghat.

1.3 Objectives of the Study

The general objective of the study is to analyze the nutritional status of under five year's children of Rajghat VDC. Following are the specific objectives of this study.

-) To access the nutrition status of under 5 years of children by social variables.
-) To examine the nutrition status of under 5 years of children by economic variables.
-) To access the nutrition status of under 5 years of children by demographic variables.

1.4 Significance of the Study

The study is designed to find the impact of socio economical conditions on nutritional status of under five years children of different community in Rajghat VDC. This study is also intended to determine according to cast ethnicity, age, sex, and selected socio economic characteristics of the house in study area. Socio economic factors are among the essential factors for improvement of children nutritional status. The study:

-) Will be useful for local level governmental organization, NGOs and INGOs as base line study in the field of nutrition.
-) Will be useful as a guideline for future researcher in similar studies of similar areas.

1.5 Limitations of the Study

This research is based on the under five children of Rajghat VDC in Morang district so it has following limitations.

-) This study is limited to the under five children.
-) This study is conducted only one VDC in Eastern in Morang District, so it may differ from the result of other geographical areas and communities of the country.
-) This study included some selected caste, so which can not represented the over all caste.
-) This study covers only 90 household in Rajghat VDC ward no. 3 and 4

1.6 Organizations of the Study

The dissertation prepared on nutritional study of children under five has been organized into six parts. The first chapter is concerned with introduction of the study dealing with research problem, objectives, importance of the research and limitation of the study area. The second chapter is devoted to literature review. This chapter deals with the review of the available literature and conceptual framework with research question. Questions are related to the objectives. The third chapter forwards the methodology adopting for the study in which various methods of data collection and analysis is elaborated. The fourth chapter shows the different characteristics of the study population. The chapter fifth consist of analysis a nutritional status among under five children by selected variables. Finally, chapter six summarizes the major findings with conclusion and recommendations.

CHAPTER II: LITERATURE REVIEW

This chapter deals with the related literature on the socio economic condition and nutritional status of under five children. First section deals with the theoretical aspect of socio economic status and its impact on nutrition. The following section presents a brief sketch of empirical literature on nutritional status, measurement, impact of socio economic status on the nutrition of children.

2.1. Theoretical Literature

According to Collins dictionary 'Malnutrition' is simply the inadequate nutrition. Some believe that malnutrition is a result of imbalance in the intake of nutrients while others say it is a clinical syndrome with typical symptoms and signs, depending upon the type of nutrients responsible for diseases, nevertheless both over nutrition and under nutrition are considered as malnutrition.

Adhikari, and E Krentz (1997) highlighted that the nutritional status can be assessed in various ways by looking at the person (clinical examination) by taking measurement of the body weight (anthropometry) and by examining the blood for the concentration of nutrients, haemoglobin (biochemical examination) etc. They further highlights that majority of the Nepalese children are malnourished as they are shorter or lighter than the children of same age in the well nourished communities. As for protein energy malnutrition (PEM) they say that it is range of pathological condition arising out of coincident lack of protein and energy in varying proportions most frequently seen in infants and young children and usually associated with infections. This was the approach of world health organization [Dahal 2006:13].

Malnutrition or undesirable physical or disease conditions related to nutrition can be caused by eating too little, too much or an unbalanced diet that does not contain all nutrients necessary for good nutritional status (Latham, 1987:8).

The first milk colostrums are of particular nutrition and health value to the infant given its high content of protein and fat soluble vitamins and its anti-infective properties. It is the infant's first immunization. Giving any

other food or drink to the breast feed infant before about four months of age is usually unnecessary and may entail risks. This further leads to make infant more vulnerable to diarrhoeal and other diseases. Because of its effect on sucking and milk secretion any other food or drink given before complementary feeding is nutritionally required may interfere with the initiation or maintenance of breastfeeding (WHO / UNICEF, 1980)

More than one in three children are breastfed within one hour of birth (35%) and 85 percent within one day of birth. 37 percent of children are given a predicted feed, that is something other than breast milk during the first three days of life (NDHS 2006:173). Over 200 million children in developing countries under the age of five are malnourished. Malnutrition contributes to more than half of the nearly 12 million children under five death in developing countries each year (UNICEF 1998 : 6). Child malnutrition rates in Pakistan are among the highest in the world, as is the proportion of low – birth weight infants at 25 percent. Half of south Asia's children are malnourished. In Africa one of every three children is under weight (UNICEF 1998: 10).

The poor nutritional status of pregnant women results in a high incidence of low birth weight deliveries, infants who are more susceptible to illness, particularly Acute Respiratory Infection. The average incidence of low birth weight deliveries is less than 10 percent in most developed countries. Data in Nepal on low birth weight are based on samples and are variable. At the maternity hospital in Teku Kathmandu, the average birth weight is 2.77 kg overall and low birth weight rate of 20.7 percent is reported (Dahal, 2006:12).

Since foods are widely used they have been broadly grouped under three heads from the nutritional point of view; according to Swaminathan 1992, they are : i) Energy yielding foods ii) Body building foods iii) protective foods. They are briefly discussed below.

Energy Yielding Foods:

Foods rich in carbohydrates and fats are called energy yielding foods. Cereals roots and tubers provide food sugar and fats are included in this group. Cereals contain, in addition, fair amounts of proteins, minerals and certain

vitamins and form the important sources of the above nutrients in poor dietaria.

Body Building Foods:

Foods rich in proteins are called body building foods. Milk, meat, fish, egg, pulses, oilseeds, nuts and low fat oilseed flours are included in the group of body building foods.

Protective Foods:

Foods rich in proteins vitamin and minerals are termed protective foods. Milk, egg, lever, green leafy vegetables and fruits are included in this group. Protective foods are broadly classified in to two groups a) foods rich in vitamins, minerals and proteins of high biological value e.g. Milk, eggs and liver and b) foods rich in certain vitamins and minerals only i.e. green leafy vegetable and fruits.

Pant (1999: 37) find that mothers with no education fathers with no education and mothers who are not working outside home are the major hindering factors in improving the overall nutritional status of the children in Nepal. Higher order births of a child, children aged one or more years of age and female Children were found to be the Ferrier for the overall improvement of child nutritional level in the country.

Social factors and cultural practices in most countries have a very great influence on what people eat. on how they prepare food on their feeding practices and on the foods they prefer. Nonetheless, cultural food practices are very rarely the main or even an important cause of malnutrition. On the country many practices are specifically designed to protect and promote health; providing women with rich energy dense foods during the first months following child birth is an example. It is true however, that some traditional food practices and taboos in some societies may contribute to nutritional deficiencies among particular groups of the population. Nutritionists need to have knowledge of the food habits and practices of the communities in which they work so that they can help to reinforce the positive habit as well as strive to change any negative ones (Latham, 1997: 31).

The lives of 3.2 million children a year are now being saved by the immunization efforts of the 1980's 3 in addition, there are almost 2 million

children who are now walking, running and playing normally in the developing world who would have been crippled by polio were it not for the achievement of the 80 percent immunization goal (UNICEF 1992 :14).

It is the pathological condition brought about by the inadequacy of one or more of the essential nutrients that the body cannot make but that are necessary for survival for growth and education, and for the capacity to work, learn and function in society. People whose diets fall short of standard international levels of intake for these nutrients are said to suffer from malnutrition. Because the dominant malnutrition problem in large population is sufficient intake of food energy (which for many people also commonly carries over to inadequate protein), energy-protein malnutrition, a broad term encompassing deficiencies of both calories and protein, has been the principal target of the activities of the World Bank (Bhurtel, 2000).

The ICPD, 1994 states that indigenous people generally have higher infant and child mortality rates than the national norm. Poverty, Malnutrition decline in breast feeding or inadequacy, lack of sanitation and lack of facilities are all factors associated with high infant and child mortality. The conference as solution to this highlights the best nutrition and specific protection against a range of disease. It further states that by means of legal, economic, practical and emotional support, mothers should be able to breast feed their infants exclusively for four to six months without food or drink supplementation and continue breast feeding infants with appropriate and adequate complementary food up to the age of the two years or beyond (Dahal 2006 : 13).

The nursing association of Nepal undertook a study of the feeding practices 0-3 years' children among different ethnic groups in Nakathum Panchayat of Bara District. During the analysis of data, it was found that there were no differences between ethnic groups. But the knowledge of the significance of colostrum feeding was not similar among all mothers. Some fed one year and some fed for three years. The idea of supplementary feeding was highly ignored. The kind of food supplementary was also found inappropriate according to the age of the baby. It was also found that the supplementary food like "Jaulo and Sattu" were used as replacement of breast milk rather than additional feeding need for growth and development. Maximum number of mothers were feeding their babies during diarrhoea which was very appreciable.

According to the finding to the study it was important to educate the mothers about the feeding of colostrums, timely introductions of weaning food and the continue breast feeding up to two years (Dhakal, 1996:19).

Parents education plays an important role when the degree or level of education of parents is increased, the nutritional status of children is better than the illiterate parents of low degree educations parents. In case of economic source of their parents, ways dependent children are facing more malnutrition problem then other sources of income of their parents (Bohora, 2002: 13).

2.2. Empirical Literature

The prevalence of under nutrition was high in all parts of Nepal as measurable by anthropometric indicators of physical growth. Rates of stunting low height for age (54%) and underweight low weight for age (47%) were high through out the country, while the rate of wasting low weight for height (7% overall) was high in certain sub group of the population. There was striking difference between geographic region and locality with the prevalence of under nutrition significantly higher in rural then urban areas (NMSS, 1998: 112).

A large proportion of children has been and continues to be malnourished not only in terms of important micro nutrients like iodine and iron. Malnutrition among children is considerably higher in the rural area then in the urban area. The proportion of children stunted under weight and wasted in the rural area at 49 – 56 percent, 45 – 58 percent and 10 – 18 percent exceed that in the urban area by 20 – 24 percent 29 – 50 percent and 13 – 67 percent respectively (Chaudhary 2000 : 200).

According to Nepal nutritional status survey that was jointly conducted by HMG and USAID (1975), the 221 sample size from all over Nepal representing all types of geographical area were visited and anthropometric data on 6562 children between 6 to 71 months of age were collected. It was found that 44.8 percent second degree and 5.1 percent of sampled children suffered from Gomez's third degree malnutrition. When they used the Indian Academy of paediatrics classification (IAPC), the 24.1 percent of sampled children suffered from second degree and 5.1 percent are third degree malnutrition. NNS survey (1975), showed that 48.1 percent of children

stunted 2.8 percent were wasted and 3.8 percent were both stunted and wasted from water low classification. The HMG / USAID (1975) survey found more stunting and wasting in the total sample of 2157 children from the Tarai. 50.5 percent were classified as normal, 40.7 percent as stunted and 8.5 percent wasted. This compares with a wasting rate of 5.7 percent and a stunting rate of 51.9 percent for children living in the hill regions only 42.2 percent of hill children were classified as normal (Wagle, 1994:18).

Sharma (1982: 32) on her study on “A survey of the growth and Nutritional studies of the infants” based on the infants 0 to 12 months found that 44 percent infant were suffering from malnutrition and 56 percent were considered as normal. According to the weight for height critical the study had found 70 percent normal and 30 percent suffering from mild to severe malnutrition.

Education plays a positive role on nutritional status of the children mainly women education is more important for improving nutritional and socio-economic condition of family. Children of mother who currently are not working are shown to be 1.41 times highly likely to be undernourished than children of mothers who are currently working (pant,1999:32).

There were very few health personal trained in Nutrition in most countries. Investigations of endemic deficiency disease were assisted such investigations on blood disorders and anaemia in India on endemic in Sri Lanka on protein malnutrition and vitamin deficiency in Indonesia and on endemic goiter and beri – beri in Thailand (WHO 1988:149).

Nutritional status of children about two children of three in Nepal is stunting i.e. 63 percent of children aged 6-36 months is suffer from chronic malnutrition which comprises 49 percent in urban areas and 64 percent in rural areas while 6 percent children under 6 – 36 months are wasting (acute malnutrition) (NMIS – 1995 : 36).

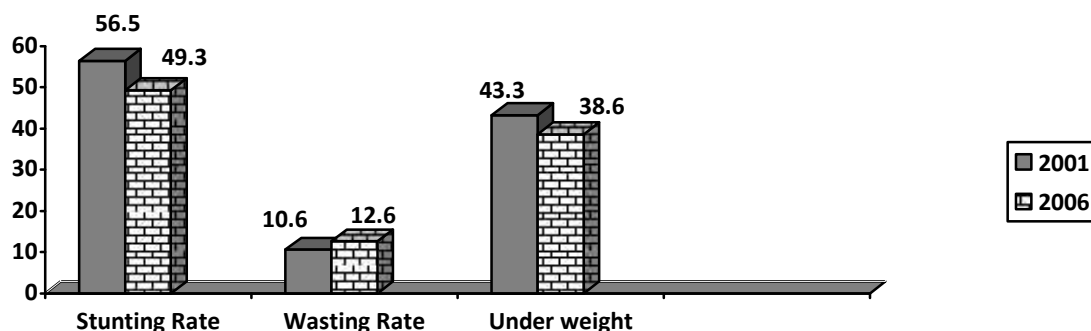
The distribution of children under 3 years of age on the anthropometric indicators according to the place of residence variable shows a very high level of under nutrition children in Nepal. More than two third of all the children are stunted. The degree of stunting is severe for one fifth of the children while it is moderate for approximately one half of all children. Thus

the extent of Nutritional deprivation among children is both pervasive and deep and is rooted in long term inadequacies in food intakes (Pant, 1999:30).

Approximately 3 million child deaths are now being prevented each year by immunization. Two million children die each year because they belong to the 20 percent who are still not immunized with currently available vaccines. A further 5 to 6 million people die annually from diseases which could almost certainly be prevented by the development of new vaccines (UNICEF 1992: 50).

Data from the NDHS, 2006 can be compared with data collected in 2001. There has been a marked decline in the level of stunting over the last five years, a modest decline in the level of children under weight, but very small increase in the level of wasting over the same period. The following figure shows these trends.

Figure 2: Trends in nutritional Status of Children under 5 years Since 2001 - 2006



2.3. Variables Identified

There are many variables are related to malnutrition. The variables like caste/Ethnic group literacy size of land cultivated income, health services, diseases, economy food security, inadequate dietary intake child care practices etc.

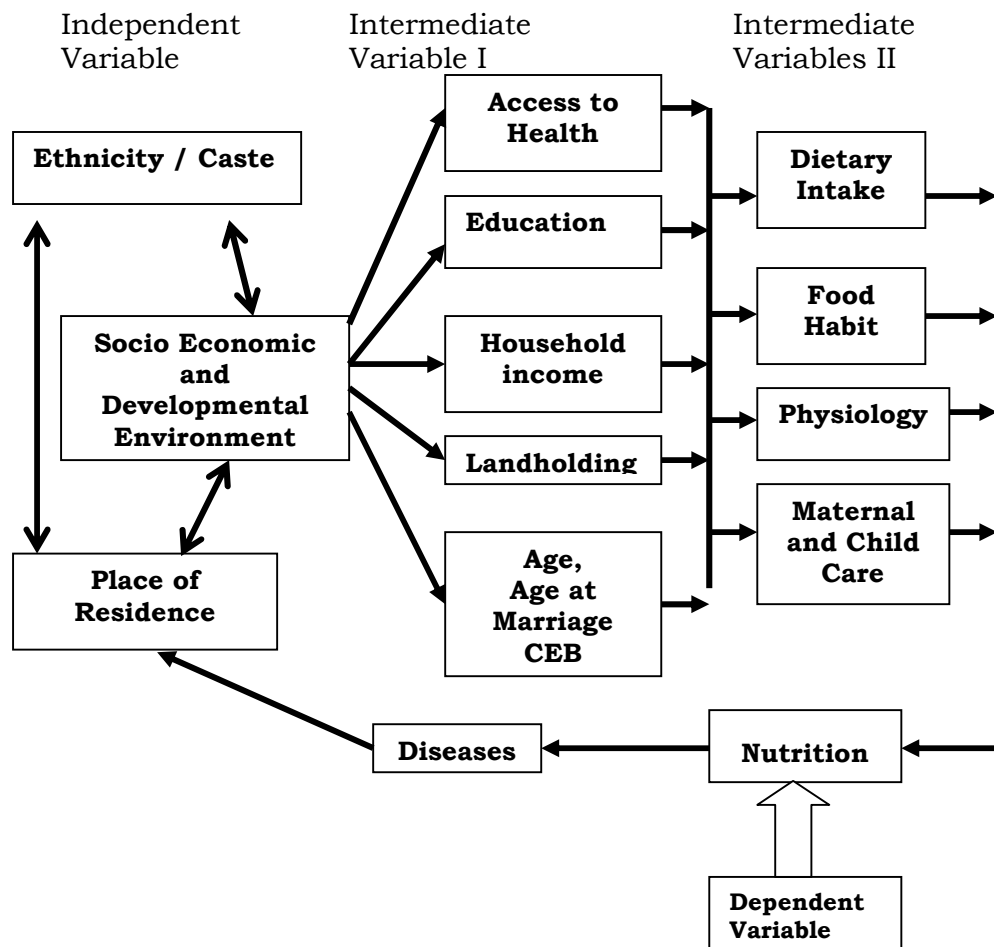
Independent	Intermediate	Dependent
Ethnicity / cast	Inadequate dietary intake	Nutrition
Education	Disease	

Land – holding
 House – hold income
 Environment
 Maternal and child care

2.4. Conceptual framework

On the basis of above literature review and identified variable the following conceptual framework could be formulated to carry on the research. The framework includes the cause of malnutrition as multi-sectoral embracing food, health, caring practices, education and economy. The causes are classified as independent and intermediate, and consequence is defined as dependent variable. Below is the diagram representing the relationship between variables in Conceptual framework .

Figure 2: Conceptual framework



2.5: Research Questions

The study has formulated the following research questions on the basis of above literature review and conceptual framework.

-) To what extent the socio-economic status and ethnic group corresponds with malnutrition of under five years children?
-) Is there any relation of demographic variables to nutritional status of under five children?
-) How do the existing knowledge, awareness and practices of mothers health prevent the nutritional deficiencies in under five years children?

CHAPTER – III: METHODOLOGY

For the completion of the study different types of techniques were developed and applied. This study mainly based on primary data for the success of the study following methodology is applied to ascertain the data of information from the field.

3.1. Research Design

Mainly this study is based on in descriptive types of analysis. It has focused on obtaining the data regarding the existing nutritional status of the child which is closely related to the socio economic status of the parental education, occupation and so on.

3.2. Sample Design

The study was conducted in Rajghat VDC at Morang district. It is closed to ward no. 4. In this area mainly Tharu and Santhal are inhabitants which cover three caste / ethnic groups i.e. Brahamin, Tharu and Santhal.

3.2.1. Selection of VDC

Rajghat, one of the 66 VDCs of Morang district, is selected purposively for the study. This is not such a developed village though it is near to Mahendra Highway. Tharu, Santhal, Brahmin, Chhetry, Rai are main inhabitants of this village. The total population of this VCD is 12722 with 2396 households, among them male population is 6079 and female 6643 (CBS, 2003). So, in this study the researcher choose this area for the research.

3.2.2. Selection of Household

In this study, all together 90 households were sampled out of 225 households. Using the method of purposive sampling households were selected. Among the selected household 90 households were children below the age of 5. Altogether, there were 103 children and studied in detail for their nutritional situation.

3.2.3. Selection of Respondent

There are 90 responded selected on the basis of purposive sampling method. At first, Tharu and Santhal households were identified from VDC profile of Rajghat VDC. In this method only under five children mother are taken as sample size. Then household questionnaire and individual questionnaire related to child's food habit were administered to women of reproductive age (15 – 49) who had at least one child under the age of five.

3.3. Questionnaire Design

For this study a structured questionnaire was developed on the basis of social, economic and demographic characteristics of mothers and children. The questionnaire was divided into two parts. The first part included the household information i.e. social economic and demographic characteristics of the family of the under five children. Similarly, the second part is individual schedule which covers the social and demographic characteristics of mothers who have children below five and this part are also included anthropometry measure of under five children.

3.4. Data Collection and Processing:

Initially the study area observed and discussed with local people, teachers, employees of government and non – governmental sectors. Most of the interviewees were the head of the household. The study comprises various methods of data collection technique. Anthropometry provides one of the most important indicators of nutritional status of children. Therefore, this study is also measured of children namely weight for age, height for age and MUAC.

After collecting data from various sources in raw forms it was arranged in logical and sequential pattern. The collected data are presented in frequency distribution and cross table.

CHAPTER IV:
INTRODUCTION TO STUDY POPULATION

Health and nutrition status of people is the result of interaction among different factors like economic condition, physical environment, family size, education level, occupation and also demographic variables. So, it is essential to understand the socio economic characteristics of population.

4.1: Social Characteristics

In the society, social factors are most important role to determine the nutritional status of children. In this part some social variables such as parent's education, types of family of sample population are describe below.

4.1.1 : Parents education

Education and nutrition are closely interrelated. Education makes aware to the mothers as a result they can be able to care their children and her at the proper time. Below table presents the real picture of educational status of in the study area.

4.1.1.1: Education of Mother

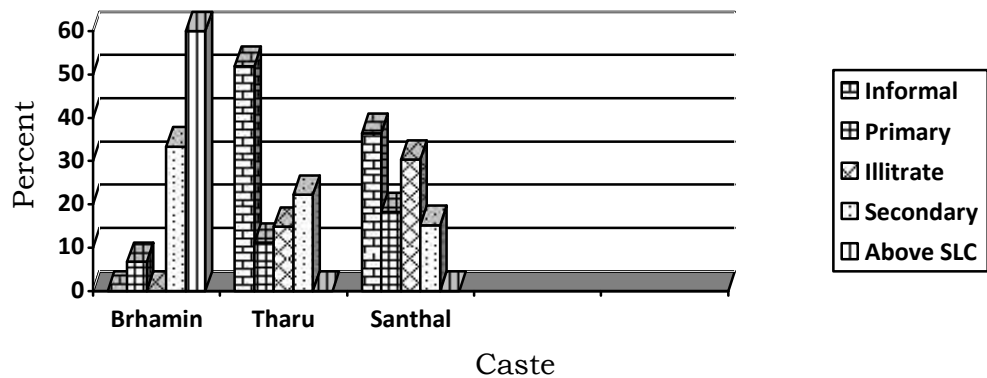
Some 42.2 percent of mothers were completely illiterate whereas the highest percent (21.1) were across secondary level of education. But among these all women were Brahmin. There were no Tharu and Santhal women acrossed secondary or more education. The number of mothers who passed SLC and above was 6. This represented the 6.7 percent of women in Sample population (Table 1).

Table 1: Distribution of Education of Mother by Caste

Education of Mother	Caste			Total	N
	Brahmin	Tharu	Santhal		
Informal	10.0%	37.0%	9.1%	17.8%	16
Primary	6.7%	7.4%	21.2%	12.2%	11
Illiterate	-	55.6%	69.7%	42.2%	38
Secondary	63.3%	-	-	21.1%	19
Above SLC	20.0%	-	-	6.7%	6
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source : Field survey 2009

Figure 3: . Distribution of Education of Fahter By Caste



4.1.1.2: Education of Father

In general, it was observed that the educational status of fathers was better than that of their wives. It would have been due to patriarchal nature of society, men and women in Tharu and Santhal community were illiteracy than in Brahmin community.

Table 2: Distribution of Education of Father by Caste

Education of Father	Caste			Total	N
	Brahmin	Tharu	Santhal		
Informal	-	51.9%	36.4%	28.9%	26
Primary	6.7%	11.1%	18.2%	12.2%	11
Illiterate	-	14.8%	30.3%	15.6%	14
Secondary	33.3%	22.2%	15.2%	23.3%	21
Above SLC	60.0%	-	-	20.0%	18
Total	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field survey 2009

In total some 15.6 percent of fathers were unable for reading and writing. However, 20 percent of fathers had completed SLC education. By caste 60 percent of fathers belongs to Brahmin had above SLC level of education. But Incase of Tharu and Santhal none of them had completed above SLC level of education (Table 2).

4.1.2: Types of Family

In this study family were classified into only two categories namely nuclear family and joint family. Nuclear family consists of parents and their children but joint family consists of two or more family members.

Table 3: Distribution of Types of Family by Caste

Type of Family	Caste			Total	N
	Brahmin	Tharu	Santhal		
Joint	60.0%	40.7%	51.5%	51.1%	46
Neuclear	40.0%	59.3%	48.5%	48.9%	44
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field survey 2009

Out of 90 households, around 51 percent were belongs to joint family with compared to around 49 percent for nuclear family. By caste 60 percent of Brahmin households were belongs to joint family. This percentage was 40.7 percent and 51.5 percent for Tharu and Santhal household respectively (Table 3).

4.2: Economic Characteristics

Economic factor are also determine the nutritional status of children. Health and nutritional status of people is directly interrelated to economic factors. So, it is essential to understand the economic characteristics of population.

4.2.1: Occupation of Father

This is a village situated in Tarai region. Most of the people were engaged in traditional farming occupation. The people working in farm, services and business were categories separately. However, those who were working out of these three sectors and in foreign countries as labor were placed into 'other' categories.

Table 4: Occupational Difference by Ethnicity, Sample Area, Sample Population and Year of Survey

Occupation of Husband	Caste			Total	N
	Brahmin	Tharu	Santhal		
Agriculture	60.0%	59.3%	100.0%	74.4%	67
Business	6.7%	14.8%	-	6.7%	6
Service	26.7%	-	-	8.9%	8
Others	6.7%	25.9%	-	10.0%	9
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field Survey 2009

Observing this table, we know that about 75 percent fathers were engaged in traditional farming occupation where as 8.9 percent were involved in services. But, in case of Santhal no father were found in service and business category. Though research area is in rural condition, 6.7 percent of fathers were involved in business sector; here 10 percent fathers were involved in different occupation (Table 4).

4.2.2: Landholding

Landholding affects directly to the nutritional status. So, those who owned land, their children nutritional status were good.

Table 5: Distribution of Area of Land of Household (in kattha) by Caste

Area of land of family in kattha	Caste			Total	N
	Brahmin	Tharu	Santhal		
≤10	23.3%	55.6%	60.6%	46.7%	42
11-20	23.3%	-	9.1%	11.1%	10
21-30	-	-	3.0%	1.1%	1
30+	50.0%	-	3.0%	17.8%	16
None	3.3%	44.4%	24.2%	23.3%	21
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source : Field survey 2009

A majority (76.7%) of family had their own cultivated land where as 23.3 percent had no cultivated land. Out of 27 household of Tharu 44.4 percent does not had land. Similarly, out of 33 household of Santhal 24.2 percent had no cultivated land. Among them 90 household, nearly 47 percent family had less than 10 Kattha land. The table also showed that 11.1 percent family had 11 – 20 Kattha and 17.8 percent had more than 30 Kattha land (Table 5).

4.2.3: Income of Household

The level of income is one of the main indicators which determine the economic status of people. As education affects directly to the nutritional status so income level affects it directly. Poverty is the root cause of Malnutrition. When the parents had high income there increase the quality and frequencies of eating food as a result the nutrition status of children become stronger.

Table 6: *Distribution of Yearly Income of Household by Caste*

Yearly Income	Caste			Total	N
	Brahmin	Tharu	Santhal		
≤24000	10.0%	66.7%	66.7%	47.8%	43
24001-50000	33.3%	33.3%	33.3%	33.3%	30
50001-60000	23.3%	-	-	7.8%	7
60000+	33.3%	-	-	11.1%	10
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field survey 2009

A majority of some total (43) households earn less than Rs. 24000 annually. Similarly people of 30 household earn Rs. 24000 – 50000. There were only 17 household earn annually above Rs. 50000. But none of them found Tharu and Santhal earned above Rs. 50000. Out of 27 household of Tharu 66.7 percent family earn less than Rs. 24000 annually and this percentage was 66.7 percent for Santhal household (Table 6).

4.3: Demographic Variables

Demographic variables are most important part of any study whose are linked to the nutritional status of children. Therefore, it is essential to understand demographic variable of sample population.

4.3.2: Age at Marriage

Culturally and religiously Nepalese women interred into reproductive phase after her marriage. In these communities follows this ritual. Therefore, it is important to know mothers age at marriage.

Table 7: *Distribution of Age at Marriage of Mother by Caste*

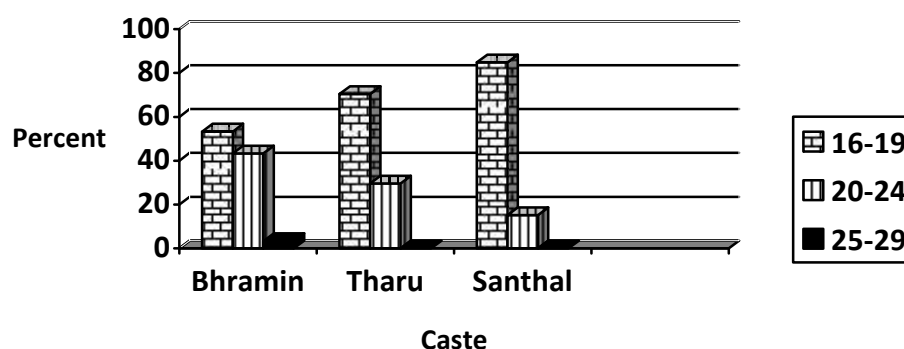
Age at Marriage	Caste			Total	N
	Brahmin	Tharu	Santhal		
16-19	53.3%	70.4%	84.8%	70.0%	63
20-24	43.3%	29.6%	15.2%	28.9%	26
25-29	3.3%	-	-	1.1%	1
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source : Field survey 2009

Most of the women (70 %) got marriage between the ages 16 – 19, only one woman got married between ages 25 – 29, whereas she is Brahmin. In case of Santhal caste, out of 33 household, nearly 85 percent women were

married between the age of 16 and 19 and only 15.2 percent women married 20 – 24 age group. Similarly, out of 27 households of Tharu 70.4 percent were in 16 – 19 and 29.6 percent 20 – 24 age group. Therefore, this table shows that most of Tharu and Santhal women married early (Table 7).

Figure 4: . Distribution of Age at Marriage of Mother by Caste



4.3.2: Age at First Birth

Early marriage means started to child bearing in early age. Most of the sample area, mothers were illiterate, they worked in traditional occupation. They had no knowledge about contraception. They become mother just after getting marriage in relatively younger age.

Table 8: Age at First Birth of Mother by Caste

Age at first birth of mother	Caste			Total	N
	Brahmin	Tharu	Santhal		
16-19	6.7%	40.7%	60.6%	36.7%	33
20-24	83.3%	59.3%	39.4%	60.0%	54
25-29	10.0%	-	-	3.3%	3
Total	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field survey 2009

Majority of women (60%) had become pregnant at the age of 20 – 24. Only 3 women who became pregnant between 25 and 29 were Brahmin. In case of Santhal 60.6 percent women were pregnant at the early age group i.e. 16–19 where as only 40.7 percent of woman in the same age for Tharu. A Majority of Brahmin women (83.3%) were pregnant at the age of 20 -24 (Table 8).

Above figure depicted that Brahmin women were pregnant at later age compared to Tharu and Santhal. It indicated a higher status standard of Brahmin women than others.

4.3.3: Children Ever Born

Children ever born (CEB) play an important role to determine children's health and nutritional status. More number of children of higher the chances of low birth weight and high positively unhealthy. It is because, the mother's age becomes older and the health condition of mother's also will be in risk than the previous pregnancies.

Table 9: Distribution of Number of Children Ever Born by Caste

Children Ever Born	Caste			Total	N
	Brahmin	Tharu	Santhal		
1	33.3%	25.9%	9.1%	22.2%	20
2	66.7%	66.7%	60.6%	64.4%	58
3	-	7.4%	18.2%	8.9%	8
4+	-	-	12.1%	4.4%	4
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source : Field survey 2009

In a study area, most of the women (64.4%) had two children. Table also showed that 4.4 percent woman had above 4 children. By caste, it was also found that most of Brahmin, Tharu and Santhal women had only two children. The percentages were 66.7, 66.7 and 60.6 respectively (Table 9).

4.3.4: Number of Children Under Five

Out of 90 household 77 household had one child and 13 households had two children.

Table 10: Distribution of Number of Under 5 Children by Caste

No. of Under 5 Children	Caste			Total	N
	Brahmin	Tharu	Santhal		
1	96.7%	81.5%	78.8%	85.6%	77
2	3.3%	18.5%	21.2%	14.4%	13
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source: Field survey 2009

Majority of household (85.6 %) had a one child under the age five and only 14.4 percent household had two children. In case of Santhal 21.1 percent

household had two children under the age five. But among Brahmin only 3.3 percent household had two children. In Brahmin 96.7 percent household had only one child under the age five {Table 10}.

4.3.5: Number of Family Member

Family is a union of people living together in a house with blood and social relation. A combine number of family member i.e. father, mother, brother, sister, son, daughter, grandfather, grandmother etc. determine the member of family.

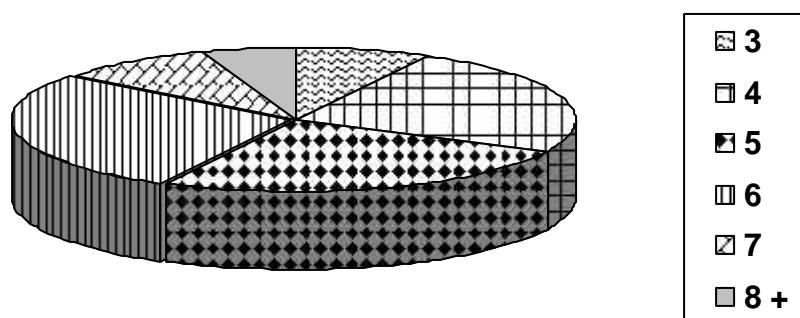
Table 11: Number of Family Members by Ethnicity

No. of Family Members	Caste			Total	N
	Brahmin	Tharu	Santhal		
3	13.3%	7.4%	3.0%	7.8%	7
4	20.0%	22.2%	30.3%	24.4%	22
5	16.7%	33.3%	27.3%	25.6%	23
6	33.3%	25.9%	24.2%	27.8%	25
7	10.0%	11.1%	6.1%	8.9%	8
8+	6.7%	-	9.1%	5.5%	5
Total Number	30	27	33	90	90
Total Percent	100.0%	100.0%	100.0%	100.0%	

Source : Field survey 2009

Nearly one third of household were small family sized. The household had not more than four family members. In this study nearly 28 percent household had six members. There were five households which had more than 8 members. Out of 33 households of Santhal, only 3 percent households had three members whereas, 9.1 percent had more than 8 members. Similarly, 27 household of Tharu, 33.3 percent household had 5 members and 7.4 percent had only 3 members [Table 11].

Figure 5: No. of Family Member



CHAPTER V:

ANALYSIS OF NUTRITIONAL STATUS AMONG UNDER FIVE CHILDREN

To analyze the nutritional status of children, a number of item related to the food availability were considered. The correct answer for food intake were coded as 1 (one) and all negative answers were coded as 0 (zero).

The answer 1 for the availability of various food were added together and an Index was summed. The total sum of the index was further divided by 'N' which resulted in the index that had a range from 0(zero) for total unavailability to '1' (one) for all items available.

After dividing the Index that range from 0 to 1 the total cases were further categorized into three as from 0.00 to 0.33 as low, 0.34 to 0.66 as medium and 0.67 to above as high. The further analysis of nutritional status of children in major three communities depend upon this index of nutrition.

5.1. Nutritional Status by Demographic Variables

In this part some demographic characteristics of sample children mothers are analyze. This part is closely related to sample population and nutritional status of under five children.

5.1.1. Age at Marriage and Nutritional Status of Under Five Children

Highest percent (81%) of children were observed with low nutritional status from age 16 to 19. For the mothers who were married at the age of 16 and 19 were in low condition whereas, 12.7 percent were normal in this age.

Table 12: Age at Marriage and Nutritional Status of Under Five Children

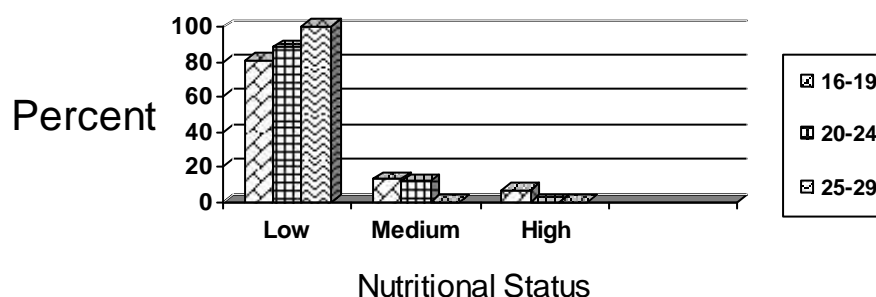
Age at Marriage	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
16-19	51	81.0%	8	12.7%	4	6.3%	63	100.0%
20-24	23	88.5%	3	11.5%	-	-	26	100.0%
25-29	1	100.0%	-	-	-	-	1	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

Similarly, 88.5 percent of children were in low nutritional category for the mothers who were married at the age of 20 to 24. Likewise the children were

fewer (12.7%) in the medium category and too few (6.3%) in the high category of nutritional status for their mothers (Table 12).

Figure 6: Age at Marriage and Nutritional Status



5.1.2: Age of Child and Nutritional Status of Under Five Children

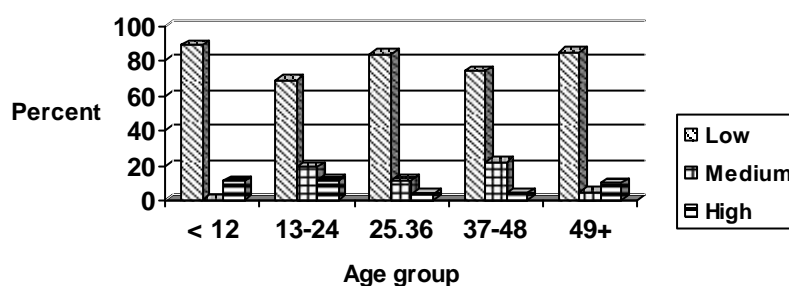
The age wise nutritional status of children in the study area showed that some total 78.6 percent children were in low nutritional status, 13.6 percent children were medium status and 7.8 percent were in high nutritional status.

Table 13: Age of Child and Nutritional Status of Under Five Children

Age group of first children	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		Count	Row %
	N	Row %	N	Row %	N	Row %		
less than 12 month	8	88.9%	-	-	1	11.1%	9	100.0%
13-24	18	69.1%	5	19.2%	3	11.5%	26	100.0%
25-36	21	84.0%	3	12.0%	1	4.0%	25	100.0%
37-48	17	73.9%	5	21.7%	1	4.3%	23	100.0%
49+	17	85.0%	1	5.0%	2	10.0%	20	100.0%
Total	81	78.6%	14	13.6%	8	7.8%	103	100.0%

Source: Field Survey 2009

Figure 7: Age of Child and Nutritional Status



There number of children with high degree of nutritional status for every age was very low. The large proportion of children below age 1 were suffered from low degree of malnutrition (Table 13).

5.2: Nutritional Status by Social Variables

Social norms and values are also affects the nutritional status of children. So this part shows some social variables which are closely related to child nutritional condition.

5.2.1: Education of Mother and Nutritional Status of Under Five Children

Table 14: Education of Mother and Nutritional Status of U5 Children

Education Level	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
Illiterate	31	81.6%	6	15.8%	1	2.6%	38	100.0%
Primary	21	77.8%	3	11.1%	3	11.1%	27	100.0%
Secondary	18	94.7%	1	5.3%	-	-	19	100.0%
Secondary+	5	83.3%	1	16.7%	-	-	6	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source : Field Survey 2009

In total the educational level of mothers had no significant impact on nutrition. However, illiterate mothers had a majority of children in low category (81.6%), some in medium category (15.8%) and only one (2.6%) in high category. Likewise, mothers with primary level education had also in low category (77.8%), a few in both medium and high category (each 11.1%). Table also showed that mothers with secondary and above secondary level education had none of them children were high nutritional status.

In conclusion, education effect in nutrition in Rajghat was found almost negligible (Table 14).

5.2.2: Education of Father and Nutritional Status of Under Five

Children

The finding of research shows that variation in nutritional status among fathers according to their educational status.

Table 15: Education of Father and Nutritional Status of U5 Children

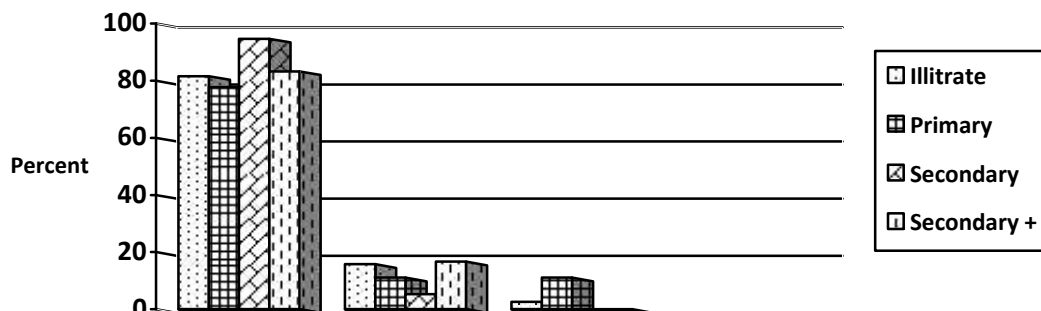
Education Level	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
Illiterate	11	78.6%	3	21.4%			14	100.0%
Primary	31	83.8%	5	13.5%	1	2.7%	37	100.0%
Secondary	17	81.0%	1	4.8%	3	14.3%	21	100.0%
Secondary+	16	88.9%	2	11.1%			18	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

The highest number of children (31) in low nutritional status who was belong to primary educated fathers. Fathers who were completely illiterate none of them children were found high degree of nutritional condition status. Similarly, fathers with secondary level education had some 14.3 percent children were high nutritional status. Likewise fathers with primary level education had also feel (13.5%) children were medium status.

The table indicate that the level of education of father and the nutritional status of children had positive (Table 15).

Figure 8: Fig. 7. Education of Fathers and Nutritional Status



5.2.3: Types of Family and Nutritional Status of Under Five Children

The nutritional status may not be same among joint and nuclear family. Here, the study has tried to find the nutritional status according to types of family.

Table 16: *Types of Family and Nutritional Status of Under 5 Children*

Type of Family	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
Joint	36	78.3%	6	13.0%	4	8.7%	46	100.0%
Nuclear	39	88.6%	5	11.4%			44	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

The higher percentage (88.6%) of children under the age of five had low nutritional status from nuclear family. In this family 11.4 percent children were found in normal condition. There was no children had high nutrition status from nuclear family. Similarly, 78.3 percent children were found in low nutritional status from joint family whereas 8.7 percent children were high nutritional status (Table 16).

5.2.4: Ethnicity and Nutritional Status of Under Five Children

There is a unity in diversity in Nepalese social composition. In this study, the nutritional condition of three different caste groups of children were analyzed

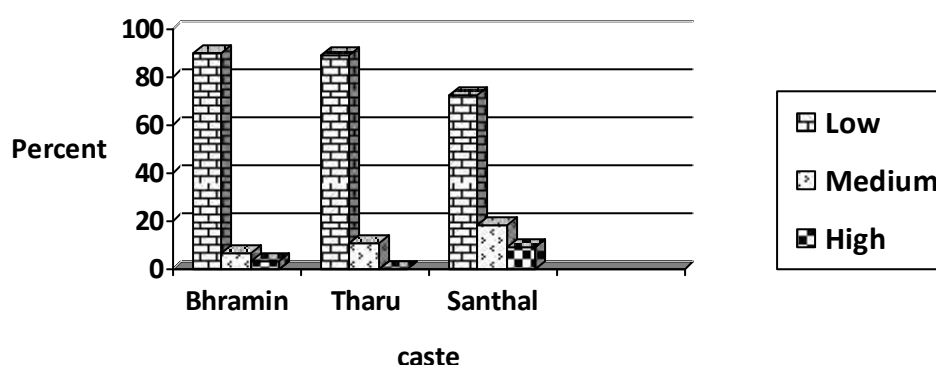
Table 17: *Ethnicity and Nutritional Status of Under Five Children*

Ethnicity	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
Bhramin	27	90.0%	2	6.7%	1	3.3%	30	100.0%
Tharu	24	88.9%	3	11.1%			27	100.0%
Santhal	24	72.7%	6	18.2%	3	9.1%	33	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

The findings of study showed that majority of Santhal household children (9.1 %) had high nutritional status. There were only one children of Bhramin had high nutrition status. Table also showed that some 88.9 percent Tharu children had a low condition of nutrition and none of having a high condition of nutritional status (Table 17).

Figure 9: Fig. 8. Ethnicity and Nutritional Status of U5 Children



5.3: Nutritional Status by Economic Variables

5.3.1: Occupation of Father and Nutritional Status of Under Five Children

The nutritional status of children also can be different on the basis of occupation of their father. It was found that the nutritional status of the children had better for those fathers involved in agriculture occupation.

Table 18: Occupation of Father and Nutritional Status of Under 5 Children

Occupations	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
Agriculture	53	79.1%	10	14.9%	4	6.0%	67	100.0%
Business	6	100.0%	-	-	-	-	6	100.0%
Service	8	100.0%	-	-	-	-	8	100.0%
Others	8	88.9%	1	11.1%	-	-	9	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

The children whose fathers were involved in farming had better nutritional status with compared to other occupation. This table also showed that the children whose fathers were involved in business and services had no found high and medium condition of nutritional status. Similarly, 14.9 percent children whose fathers' occupations were agriculture had found in normal condition. There were only one child (11.1%) found normal condition in other categories [Table 18].

5.3.2: Landholding by Family and Nutritional Status of Under Five Children

The nutritional status closely related to land holding size. In the study area, most of the family don't have much land and their children are in low condition of nutrition status.

Table 19: Landholding by Family and Nutritional Status of Under Five Children

Area of Land in Kattha	Nutritional Status of Under Five Children						Total	
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
less than 10 kattha	38	90.5%	3	7.1%	1	2.4%	42	100.0%
11-20	7	70.0%	1	10.0%	2	20.0%	10	100.0%
21-30	1	100.0%	-	-	-	-	1	100.0%
30+	13	81.3%	3	18.8%	-	-	16	100.0%
None	16	76.2%	4	19.0%	1	4.8%	21	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

The highest number (38) of household people had low condition of nutrition whose family had less than 10 Kattha land. Around 76 of the children had low nutritional status for the household having no land. Those families who had 11 – 20 Kattha land, 20 percent of their children had high nutritional status. Similarly, 19 percent children were in normal condition who had no land (Table 19).

5.3.3: Household Yearly Income and Nutritional Status of Under Five Children

Incomes of the households also determine the nutritional status of the children. The nutritional status of children had improved with increasing household income.

A majority of household (35) with yearly income less than Rs 24000 had a low condition of nutritional status of their children. In this rank a very few (2.3%) children were in high status. Likewise some 20 percent of children had medium category whose family income above Rs 6000 and table also showed that none of them children in high condition in this rank (Table 20).

Table 20: Household Yearly Income and Nutritional Status of U5 Children

	Nutritional Status of Under Five	Total
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Yearly Income of Household	Children							
	Low		Medium		High		N	Row %
	N	Row %	N	Row %	N	Row %		
less than 24000	35	81.4%	7	16.3%	1	2.3%	43	100.0%
25001-50000	25	83.3%	2	6.7%	3	10.0%	30	100.0%
50001-60000	7	100.0%	-	-	-	-	7	100.0%
60000+	8	80.0%	2	20.0%	-	-	10	100.0%
Total	75	83.3%	11	12.2%	4	4.4%	90	100.0%

Source: Field Survey 2009

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1. Summary

It is not an easy task to find out the nutritional status of children. There are no exact data of malnourished children in the world. Though, WHO has developed different way for measuring children's nutritional status. The research was conducted to know the nutritional status of Brahmin, Tharu and Santhal children's who are in under five years age and living in Rajghat VDC Morang.

-) There were all together 103 under five children from 90 selected households in Rajghat VDC. Among them 52 children were girls and 51 Children were boys. These children were studied on the basis of caste/ ethnic group, age group and different socio economic characteristics.
-) Among the 90 household of father more than 84 percent of father literate and 15.6 percent illiterate. Similarly, more than 57 percent mothers were literate and 42.2 percent illiterate.
-) There were 51.1 percent sampled household from joint family and 48.9 percent household from nuclear family.
-) Among the 90 household of father 74.4 percent were found as agriculture as major occupation, business 6.7 percent and 8.9 percent found as services.
-) In the study it was found that 76.7 percent household had their own cultivated land and 23.3 percent have no land. Among them 46.7 percent household had less than 10 Kattha land. Study also found that 47.8 percent household had less than Rs. 24 thousand yearly incomes.
-) In the study out of 90 household 77 (85.6%) houses had one child and 13 (14.4%) household had two children in case of under five years.
-) Majority of the women got married 16 – 19 age group (70.0 %), 28.9 percent got married 20 – 24 age group and only one found 25 – 29 age groups.
-) In the study, there were mainly three classification of measuring nutrition of children. That was low status, medium status and high status of children.
-) In the study, it was found that 75 household had a low nutritional status. 11 household had medium and only 4 household had a high nutritional status.

-) Almost eighty (79.1) percent low nutritional status was found with father having farming occupation. Similarly, 88.9 percent were low nutritional status whose father's occupation was labour and others.
-) From the study, it was found that out of 30 household of Brahamin 27 (90%) household had low nutritional status, out of 27 household of Tharu 24 (88.9 %) had low nutritional status. In case of Tharu caste there was no high nutritional status and out of 33 household of Santhal 24(72.7%) household had low nutritional status. Whereas 9.1 percent household had high nutritional status.
-) The finding showed that 78.6 percent of child had low nutritional status. Similarly, 13.6 percent medium and 7.8 percent child had a high nutritional status.

6.2. Conclusion:

-) In the study, it was found that parent's education had not significance impact on nutritional status of children.
-) The nutritional status of children belongs to Tharu Community was very poor with compared to other caste
-) Children from farming occupation parents are in better position rather than other occupation.
-) The comparative age wise nutritional status of children indicates that low age group had a low nutritional status of children.
-) In case of structure of family joint family had a better nutritional status than nuclear family.

6.3. Recommendation:

For the betterment of the under five child nutritional status the study has proposed following recommendation.

-) Public awareness programs should be launched specially for women related to their individual and community health.
-) Nutritional and health program like immunization against infectious diseases should be launched for specially uneducated mothers.

-) The opportunity of educational status of child, specially female child should be raised.
-) There should be good cooperation between different government organization and non government organization. So that the promoted programs can make positive on society for raising children's nutritional status.
-) Nutritional education should be taught to the women of Tharu and Santhal community by electronic media because majority of them are illiterate and awareness program through other media would be less effective.
-) Locally available foods are more notorious than market product foods. So, investigation should be made for use and implementation of local and fresh food.
-) Parents should be provided job opportunity and special program should be launched by the government to raise the socio – economic status Tharu and Santhal community as a result they will be able to purchase nutritious food and aware about care the health of the children.
-) The government should conduct similar study in different areas of the country to know the real situation of nutritional status of the children. So that the nutrition programs should be carried out effectively.
-) Low economic condition, food insecurity and hunger are the major problem of Tharu and Santhal community. Therefore for the increment of nutritional status of children, occupation of parents should be guaranteed and professionalized.
-) Exclusively breast feeding is not enough for the growing children after three month. They should be fed liquid and solid food substances.

**APPENDICES I
QUESTIONNAIRE FORMATION**

Nutritional Status of Under five Children : of Ward 3 and 4 of Rajghat VDC in Morang District.

- G.Q.No. 1. District :-
 G.Q.No. 2. VDC :-
 G.Q.No. 3 Ward No. :-
 G.Q.No. 4 Name of Household Head :-
 G.Q.No. 5 Name of Respondent :-
 G.Q.No. 6 Caste of Respondent :-
 G.Q.No. 7 Religion of Respondent :-

Household Questions

HC1.

S. No. 01	Members Name 02	Sex 03	Age 04	Education 05	Level of Education 06	Occupation 07

Index of 05

- 0 = Illiterate
 1 = Literate

Index of 06

- 00 = Informal
 01 = Primary
 06 = Secondary
 11 = Above Secondary

Index of 07

- 1 = Agriculture
 2 = Business
 3 = Service
 4 = Others

HC2. Types of family

1. Nuclear 2. Joint

HC3. Housing Status

1. Own 2. Rent

HC4. Who work in your family ?

1. Servant 2. Children 3. Old Person 4. Own
 5. Husband 6. Others

HC5. Occupation of Husband

1. Agriculture 2. Business 3. Contract 4. Service
 5. Others

HC6. Do you have your own land?

1. Yes 2. No

HC7. If Yes, How many?

..... Kattha

HC8. What types of crops do you cultivate in your land?

	Yes	No	Unknown	No Response
1. Rice	1	2	8	9
2. Wheat	1	2	8	9
3. Maize	1	2	8	9
4. Potato	1	2	8	9
5. Sugarcane	1	2	8	9
6. Others	1	2	8	9

HC9. How much do you produce?

Crops	Production in Quintal
Rice
Wheat
Maize
Potato
Sugarcane

Others

HC10. Do you have any fruit production?

1. Yes 2. No

HC11. If yes what type?

1. Mango 2. Banana 3. Guava 4. Others

HC12. Do you have any vegetable productions?

1. Yes 2. No

HC13. If yes what type?

HC14. What is the main source of water?

1. Tape 2. Tube well 3. Pond 4. Others

HC15. What type of facilities do you have in your family?

	Yes	No	Unknown	No response
1. Electricity	1	2	8	9
2. Bio gas	1	2	8	9
3. Telephone	1	2	8	9
4. Radio	1	2	8	9
5. T.V.	1	2	8	9
6. Others	1	2	8	9

HC16. What source of light do you use in your house?

	Yes	No	Unknown	No Response
1. Electricity	1	2	8	9
2. Solar Power	1	2	8	9
3. Bio Gas	1	2	8	9
4. Kerosene	1	2	8	9
5. Others	1	2	8	9

HC17. What source do you use for cooking?

	Yes	No	Unknown	No Response
1. Electricity	1	2	8	9
2. Solar Power	1	2	8	9
3. Bio Gas	1	2	8	9
4. Gas	1	2	8	9
5. Others	1	2	8	9

HC18. Do you have animal husbandry?

1. Yes 2. No

HC19. If yes

Cattle	Number
Cow
Buffalo
Goat
Others

HC20. Do you have milk production?

1. Yes 2. No

HC21. If yes how many?

1. ltr.

HC22. What is the main source of income?

1. Agriculture 2. Business 3. Service 4. Others

HC23. What is the yearly income of your family?

Rs

HC24. Does it maintain your family for a year?

1. Yes 2. No

HC25. If no, what do you do?

1. Loan 2. Labour 3. Others

Individuals Questions

IC 26. How old are you?

.....

IC 27. What is your age at marriage?

IC 28. Do you have given any live birth?

1. Yes 2. No

IC 29. Do you live together with your children?

1. Yes 2. No

IC 30. If yes

1. sons
 2. daughter

IC 31. Do you have any child died after birth?

1. Yes 2. No

IC 32. If yes

1. son
 2. daughter (If no 00)

IC 33. What was your age during first child?

..... years

IC 34. Where do you delivered your child?

1. Home 2. Hospital 3. Others

IC 35. What is the age of your small child?

..... months

IC 36. Is child your son or daughter?

1. Son 2. Daughter

IC 37. Do you breast feed your small child?

1. yes 2. No

IC 38. It is Sufficient for your child?

1. Sufficient 2. Not sufficient

IC 39. If not what you feed?

1. Litto 2. Jaulo 3. Others

IC 40. How many times do you feed in a day?

1. One 2. Two 3. Three 4. Four 5. Above

IC 41. Who will feed your child?

1. Myself 2. Child self

IC 41. What do you eat daily?

Food items	Daily	Usually	Sometimes	Never	Don't know
Rice	1	2	3	4	5
Dal	1	2	3	4	5
Milk	1	2	3	4	5
Vegetables	1	2	3	4	5
Meat / eggs	1	2	3	4	5
Pickle	1	2	3	4	5
Fruits	1	2	3	4	5

IC 42. What does your child eat daily?

Items Time	Tea 01	Milk 02	Rice 03	Roti 04	Litto 05	Meat 06	Biscuits 07	Noodles 08
Breakfast								
Lunch								
Tiffin								
Dinner								

IC 43. When did you start feeding supplementary food to your child?

1. After 3 months 2. After 6 months
 3. After 9 months 4. Above

IC 44. Do you feed following food to your child?

1. Vegetables 2. Meat 3. Fruits 4. Others

IC 45. How long is your birth spacing?

1. 1 - 2 years 2. 2 - 3 years
 3. 3 - 4 years 4. Above 4 years

IC 46. Did your child suffer from any disease in past one years?

1. yes 2. No

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