

**A STUDY ABOUT NUTRITIONAL STATUS AMONGST
PUBLIC PRIMARY SCHOOL IN
SUNSARI DISTRICT**

By

Chandra Bahadur Khadka

Symbol: - 2180102

T.U REGD.NO:- 9-2-218-95-2005

A Thesis

Submitted to Health Education Department

In partial fulfillment Of the Requirements for the Master's Degree in Health Education

TRIBHUWAN UNIVERSITY
JANTA MULTIPLE CAMPUS
FACULTY OF EDUCATION
HEALTH DEPARTMENT
ITAHARI, SUNSARI

2015

DECLARATION

I hereby declare that this thesis has not been submitted for candidature for any other degree

Chandra Bahadur Khadka

April 2015

ACKNOWLEDGMENT

This thesis has been completed the great deal of support and guidance from many people, school administrator and organization. It was impossible to complete this without their valuable inputs. Now I am taking this opportunity to express my sincere acknowledgement for the input.

First of all, I would like to express my hearty gratitude to my thesis supervisor Mr. Birendra Karki Asst. lecturer of Health Education, Department of Janta Multiple campus, Itahari-5, Sunsari, for his able guidance, critical suggestion, encouragement, support co-operation and supervision throughout this study . I would also like to express my hearty gratitude to Mr, Sanjib Kumar Yadav, Department Chief Health Department. Janta Multiple Campus, Itahari-5 for providing critical suggestion and cooperation throughout this study.

I would like to express my special thanks to Mr. Manoj Kumar Chaudhary Ass. Lecturer of Health Education Department of Janta Multiple College, Itahari for their co-operation. I would also like to express my hearty gratitude to Mr. Tolnath Kafle coordinator of Education Faculty, Janta Multiple Campus. My sincere thanks goes to all students because without their co-operation, all parents , and school administrator, it wouldn't have been possible to complete this research study. Likewise, I would like to express special thanks to Mr. Tanka Bista and Mr. Raj Kumar Poudel for their useful help on the course of preparing.

Lastly, I musnt forget to thanks Mr. Dilliram Kafle, for seeing if any language errors script through my writing.

Chandra Bahadur Khadka
Janta Mutiple Campus

ABSTRACT

This study is a field based study which has analyzed Nutritional status amongst the primary students of public school in Prakashpur resources center. The main purpose of the study is to identify the nutritional disorders of primary level students, to identify the tiffin practice of government school, and to identify the problems and issue on the nutrition in Primary level schools of Prakashpur resource center. Out of many school, four schools were selected according to simple random sampling method. They are shree Bhagawati lower secondary school, shree Ramdhuni primary school, shree Karnaghanta primary school, shree Bhagawanram primary school. The respondent of the study was school administration, parents, and students of concerned school. It is based on primary data.

This study has taken the help of secondary data. This study has taken the sample of 200 students from four public primary school with 50 students from each school. The responses of 200 children were taken by the help of parents, school administration and students, of concerned schools. This study has taken under 200 students fifty from each class out of 620 students from selected school. All of selected students have been observed by interviewed method . the data collected by above mentioned method has been represented by pie chart and table and also used in figure .

Among 200 students, 110 girls and 90 were boys. Their ration is 11:9. The study was taken under age group 9-15 years. Out of whole students 95% were Hindu and 5% follows other religions. The main occupation of parents found to agriculture. According to yearly height of students among 200 students 48% were in normal nutrition and 21% were in moderate malnutrition.

Similarly 100% students found to be vaccine. The medicine for worm and Vitamin 'A' were regularly provided to students. By the study, parents of public school were not aware about nutrition and tiffin practice however tow school were running school nutrition program.

TABLE OF CONTENT

| | Page No |
|--|----------------|
| TITLE PAGE | i |
| DECLARATION | ii |
| RECOMMENDATION | iii |
| APPROVAL SHEET | iv |
| ABSTRACT | v |
| ACKNOWLEDGEMENTS | vi |
| TABLE OF CONTENTS | vii |
| LIST OF TABLES | ix |
| LIST OF FIGURES | x |
| ABBREVIATION | xi |
| CHAPTER- I: INTRODUCTION | |
| 1.1 Background of the Study | 1 |
| 1.2 Statement of the Problem | 3 |
| 1.3 Objective of the Study | 4 |
| 1.4 Significance of the Study | 5 |
| 1.5 Delimitation of the Study | 6 |
| 1.6 Operational definition of the key terms | 7 |
| CHAPTER-II: REVIEW OF RELATED LITERATURE AND CONCEPTUAL FRAMEWORK | |
| 2.1 Review of Theoretical Literature | 9 |
| 2.2 Review of Empirical Literature | 11 |
| 2.3 Implication of the review for the Study | 12 |
| 2.4 Theoretical/Conceptual Framework | 13 |
| CHAPTER-III METHODS AND PROCEDURES OF THE STUDY | |
| 3.1 Design and method of the Study | 15 |
| 3.2 Population, sample and sampling strategy | 15 |
| 3.3 Study area/field | 15 |
| 3.4 Data Collection Tools and Techniques | 16 |
| 3.5 Data Collection Procedures | 16 |
| 3.6 Data Analysis and Interpretation Procedures | 16 |

CHAPTER- IV ANALYSIS AND INTERPRETATION OF RESULTS

| | | |
|-------|--|----|
| 4.1 | Socio-Demographic characteristics | 17 |
| 4.1.1 | Age and sex composition | 17 |
| 4.1.2 | Religious composition of study area | 19 |
| 4.1.3 | Educational status of parents | 19 |
| 4.1.4 | Occupational status of parents | 21 |
| 4.1.5 | Cast composition | 22 |
| 4.2 | Status of knowledge regarding energy requirements | 23 |
| 4.2.1 | Recommended daily intake of energy | 23 |
| 4.3 | Nutritional disorders | 24 |
| 4.3.1 | Weight at birth | 24 |
| 4.3.2 | Practice and knowledge about vaccinated our children | 24 |
| 4.3.3 | Participation on the programmed of vitamin 'A' Capsule and worm medicine | 25 |
| 4.3.4 | Yearly weight-taking condition and related practices | 25 |
| 4.3.5 | Yearly Height taking condition and related practices | 26 |
| 4.3.6 | Head circumference | 27 |
| 4.3.7 | Status of mid upper arm circumference | 28 |
| 4.3.8 | Weight for Height | 29 |
| 4.3.9 | Modified Gomez classification suggested by the Indian academy of pediatrics | 29 |
| 4.4 | Status of wasted and stunted students (Waterlow's classification) | 30 |
| 4.5 | Association of poverty-lack of education-malnutrition-infections diseases | 31 |
| 4.6 | Status of snacks in tiffin | 31 |
| 4.7 | Summary | 32 |
| 4.8 | Findings | 33 |

CHAPTER- V CONCLUSION AND RECOMMENDATION

| | | |
|-------|-------------------------------------|----|
| 5.1 | Conclusions | 36 |
| 5.2 | Recommendation | 36 |
| 5.2.1 | Recommendation for Policy Related | 36 |
| 5.2.2 | Recommendation for Practice Related | 37 |
| 5.3 | Recommendation for Further Research | 37 |

REFERENCES

APPENDICES

LIST OF TABLES

| Table No. | Title Names | Page No. |
|-----------|--|----------|
| 1. | Age and sex composition | 18 |
| 2. | Literacy and educational status of parents | 20 |
| 3. | Literate and Illiterate status of parents in the study area | 20 |
| 4. | Occupational status of parents | 21 |
| 5. | Ethnicity composition in the study area | 22 |
| 6. | Weight at birth | 24 |
| 7. | Practice and knowledge about vaccinated in the study area | 25 |
| 8. | Yearly weight-taking condition and related practices in study area | 26 |
| 9. | Yearly Height taking of Prakashpur resource center | 27 |
| 10. | Head circumference of Prakashpur resource center | 28 |
| 11. | Status of MUAC of public school students | 28 |
| 12. | Nutritional status on the basis of weight-for-height | 29 |
| 13. | Nutritional status according to weight-for-height | 30 |
| 14. | Status of wasted and stunted students of Prakashpur resources center | 30 |
| 15. | Status of snacks in tiffin | 31 |

LIST OF FIGURES

| Figure No. | Title Name | Page No. |
|------------|--|----------|
| 1. | Conceptual Framework | 14 |
| 2. | Religious composition of Prakashpur resources center | 19 |

ABBREVIATION

| | |
|--------|---|
| BMI | Baby Mass Index |
| CBS | Central Bureau Of Statistics |
| EFA | Education For All |
| FCHVS | Female Community Health Volunteers |
| FRESH | Focusing Resources In Effective School Health |
| INGO | International Non-Governmental Organization |
| IW | Ideal Weight |
| MCHWS | Maternal Child Health Workers |
| NDHS | Nepal Demography Health Survey |
| PEM | Potential Energy Malnutrition |
| PER | Potential Energy Ratio |
| PRC | Prakashpur Resource Center |
| UNICEF | United Nations International Children's Fund |
| VDCS | Village Development Committees |
| VHWS | Village Health Workers |
| WB | World Bank |
| WHO | World Health Organization |

CHAPTER-1

INTRODUCTION

1.1 Background of the study

Health is important aspect of human life. Every work is not success without health. This study is related to pre-primary student's nutritional positions. Many parents of school aged children express concern about their child's eating patterns fussy eating appetite and growth. Healthy children represent a healthy nation. Reducing infant and child mortality has been a goal of population policy. The health of children in Nepal is closely and integrally linked to several factors from geographical location, climate the social cultural practice and altitudes in the country.

As has been stated earlier, the population censuses 2011 reports that population in the age group 0 - 14 comprised 40% of the total population over 82.93 percent of country's population is rural and more than 40 percent children in this area suffer from malnutrition and various diseases. Diarrhea diseases continue to be major causes of a death among Nepalese children. The use of oral re-hydration therapy is still low at 32 percent.

Nepal government is committed to "Health for All" and focused its attentions towards primary health care, But existing inadequate health infrastructure, insufficient health manpower and limited resources are the major obstacles in attaining government objectives in the health sector. The major health facilities available in the country are centered on the urban areas.

Rural people generally do not visit the health post and 70 percent of births happen without any contact with trained parishioners. Health services in most of the rural areas are provided by village Health workers (VHWS), maternal

Child health workers (MCHWS), Female community health volunteers (FCHVS) and traditional health practioners.

Children under-nutrition is a global burden. 3Worldwide, more than one billion people are undernourished and under-nutrition contributes to more than30percent of all deaths in

children below 5 years. Under-nutrition includes being stunted (Low height for age). Wasted (Low weight for height) and underweight (low weight for age). The causes of under nutrition are multi factorial and embrace inadequate directly intake and diseases food in security, inadequate care, unhealthy environment and inadequate health services. Nepal is one of the countries with the highest level of the children below 5 years are stunted. Due to the financial crisis and frequently natural disasters, several nutritional services has been conducted in the Nepal.

Geography Nepal is a land locked country in the foothills of the Himalayas. The country is surrounded by India in the east, south and west and China in the North. Nepal is divided in to three regions in which Himali, Mountain and Terai part are lie respectively from North to South. Only seven percent of the population lives in the Himali part which ranges from 4,877 - 8848m above the sea level. 44 percent stay in the mountain at 610 – 4876m above sea level. The Terai regions represents the most populated area of Nepal because of the flat land scape, 48 percent of population lives in the Terai. Nepal is further divided in to five development region(Eastern, Central, Western, Mid-western and far western). Each of these regions in further divided into fourteen zones and seventy five administrative districts and 3913 village development committees (VDC).

According to this division Sunsari is one of the district of Koshi zones situated in eastern development region. It is located at latitude of $26^{\circ} 25-26 30''$ North and longitude $87^{\circ} 16''$ East. The total area is 1257 square kilometers and 152 meters high at southern part and 914 meters high at northern part. Political this district is divided in six election regions three municipalities 49 VDC and 15 Ilaka in Sunsari district there are 763487 populations out of them 371229 male and 392258 female in Sunsari district has been divided in to twelve resources centers on the basis of education sections. There are 209 primary government schools, 63 lower secondary, 88 secondary schools, lower secondary also there are 113 primary private, 105 lower secondary and 95 secondary private schools, 72 Madarsha, 4 Gumba, 7 Aashram and Gurukul, altogether here are 775 schools are still now.

Sunsari district has been divided into twelve resources centers on the basis of education sections. According to the record Prakashpur resources center there are thirty one public secondary school and 11 private schools (19 primary schools, 27 lower secondary, 5 secondary schools). Among them 19 schools have been running primary classes. It is found

that among 1050 students 544 are girls and 506 are boys. The percent of girls and boys are 51.8percent and 48.2 percent respectively.

1.2 Statement of the problems.

Children's as the future leaders and the builders of the nation need special attention care their issues have to be well reflected in the development planning process of the country. The nutritional statue of children under age five is an important measure of children's health. The anthropometric data on height and weight collection in the 2011 NDHS permit the measurement and evaluation of the nutritional status of young children in Nepal. This evaluation allows identification of subgroups of the child population that are at increased risk of faltered growth disease, impaired mental development and death (NDHS Report2011).

Child under-nutrition remains a major health problem on Nepal. Nearly fifth percentages of children bellows 5 years of age are undernourished. The nutritional problems are essentially social problems because it is one of the major causes of infant death in our country. The Nepal Demographic and health survey out in 2011 found 29.3 percent children between six years chronically stunting, 38.6 percent of the children in this age group to be underweight. The data revealed that more than 50 percent of woman of child bearing age and 63 percent of lacting mothers suffer from nutritional anemia. Vitamin "A" deficiency is another major problem in children below five years of age in the country. (Nepal Demography Health Survey-2011 NDHS)

The above mentioned children are likely to study on the basics of their nutrition status for the analysis the students of government school children in primary level. Most of organization has given a great contribution to develop the nutrition level of the children. After the agreement in 1967 between Nepal government and food programmed has been providing an aid to the schools in Nepal. During 1990 to 1995 the programmed was known as "Health, Nutrition and fundamental necessary of education" After the agreement of November 2002, WFP has run the programmed food for education till now.

The objectives of the programmed are to:--

-) Increase the percent of student environment.

-) Increase the present of student.
-) Discourage the systems of school leaving.
-) Enhance the ability of learning by improving health condition.
-) Increase the number in girls going school by improving their economical and nutrition condition.
-) Decrease the concept of gender discrimination among school and social family.

The study is aimed to analysis the student of government school in terms of health states. Condition of nutrition in Primary level of Prakashpur resource center. Although Nepal government has separated 23 from total budget to the education sector the status of primary level of government school has been going down. It has not been successful to achieve goal. On the other hand, the condition of private school primary level children in the above terms has been found satisfactory without any aid from the government school.

1.3 Objective of the Study:-

The main purpose of the study about trend and practices on nutrition in primary level student of Prakashpur resources center. The specific objectives of the study will as follow:-

-) To identify the nutritional disorders of primary level students of Sunsari district.
-) To identify the tiffin practice of government school.
-) To identify the problems and issues on the nutrition in primary level school.

1.4 Significance of the study:-

Children issues were not of the greater importance to Nepalese government till 19805. Children has development concern was only included for the first time in the seventh plan (1985-90). Nepalese children are facing various difficult due to social beliefs, persistence of poverty, gender discrimination, and illiteracy relating to their development.

All people believe that all their family member are healthy but isn't really all right. No one can be successful unless they have healthy life. All family members want to see their children

healthy. As result, they invest more money than they can. But isn't taken much care for primary student in school and at home. Some misconception has been brought up due to the lack of education and conservative feelings. Parents generally send Tiffin to their children with readymade market food instead of preparing at home. They hardly use fruit for Tiffin. They never give interest at baby mass index (BMI), potential energy ratio (PER), potential Energy malnutrition (PEM), ideal weight (I.W) of their children. The above Mentioned subjects are directly affected by the nutrition status of the students.

The significance of the study will be in the following:-

-) The study will be useful to study about nutritional status of public primary student in Prakashpur Resource Center.
-) It can be useful as a chance for the improvement of nutritional level of respective parents.
-) It is useful for school administration to know the condition of nutritional status about their students.
-) It can be useful for the concerned part who are studying about their students.
-) It can be useful for the concerned parts who are studying about nutritional status of primary level students.
-) It can be useful for the NGO and INGO.
-) It is useful for preparing thesis.

1.5 Delimitation of the study:-

Delimitation of the study is marked being concerned to time, financial resources and materials to make the study more valuable and reliable. The limitation of the study can be stated as follows:-

-) The study will limit in the primary level students of public school in Prakashpur Resources Center.
-) The study will be limit within four public school such as Bhagawati lower secondary, Bhagawanram primary, Ramdhuni primary and Karnaghanta primary.
-) Four public schools from this resource centre are involved and two hundred students are mentioned here according to their gender and castes .
-) The respondents of the study will be school administration, parents and students of concerned schools.
-) Nutritional disorders.
 - Macronutrient and micronutrient.
-) Obesity (overweight)

Screening test of Nutritional Status

- Mid upper arm circumference test
- PEM or Gomez's classification test.
- Measurement of Height and Weight.
- Ideal Weight (Boca's index)
- Protein Energy Ratio (PER)
- Waist Hip Ratio (WHR)
- Weight velocity
- Height Velocity
- Head Circumference Growth Velocity.

1.6 Operational definition of the key terms

Malnutrition:-

It is a pathological condition relative from relative or absolute deficiency or excess of one or more essential nutrients in the diet. It includes under nutrition over nutrition.

Health Education:-

Health education is that aspect of health care directed to words promoting and reinforcing health behavior through full participation of the individual and communities concerned - WHO Geneva-1990.

Kwashiorkor:-

It is a characteristic by the symptoms of lethargy restarted growth, lack of proper development of the muscles, obscene of muscles tone, presence of edema on the legs, arms and face (Moon face and enlargement of the liver).

School Health programmed:-

"School Health Programmed is a sum of different process and actives prepared to provide promotion and prevention in the health condition of students and school related personnel"- Shaller and Nemir

"School Health education programmed is the real result of sound inter-relation ship between healthful school environment available health service and health education". (Join Commission of American Health Education Association)

Macronutrients:-

They include proteins, Fats and Carbohydrates, which are taken in large quantities and from the main bulk of food.

Micronutrients:-

They include Vitamins and minerals and required in very small quantities.

Marasmus:-

it is characterized by wasting of the subcutaneous fat and muscles with retardation of growth and less of weight.

Obesity (Overweight):-

Obesity means excessive accumulation of fat in the adipose tissue located especially in the waist, hips and breast with increased body weight by 10% or more over the standard reference weight for the age, sex and height.

Underweight:-

When the body weight is decreased by 10% or more below the standard reference weight for the age, sex and height the body is under weight.

Health:-

Health is a state of complete physical, Mental and social well-being and not merely the absence of disease or infirmity-WHO1948

Disease:-

“A condition of the body or some part or organs of the body in which its function are disturbed or deranged”.(oxford English dictionary)

CHAPTER –II

REVIEW OF RELATED LITERATURE AND CONCEPTUAL FRAMEWORK

This chapter presents some literature review related to the nutritional status of amongst public primary level of children in Nepal, as well as in the global context some of the factors and study reports related to this study are reviewed in this chapter.

2.1 Review of Theoretical Literature

Nutrition is a multidisciplinary subject with community as it practices area. It is a focal point for health and well being. It has special significant is countries with disadvantage in socioeconomic and hygienic standards the problems of poverty, safe drinking water, environment hygiene and poor literacy contribute to the problems of nutrition and public health. Protein energy malnutrition (PEM) particularly stunting has severe functional consequences, including vulnerability to disease and increased risk of mortality, lethargy with reduced capability to benefit from stimulation and reduced learning capacity.

Nutrition is the science of food and its relationship to health. Nutrition plays an important role in the promotion and maintenance of health and prevention of human disease especially the nutritional deficiency disease malnutrition, Under-nutrition and the nutritional problems of today. Malnutrition cause certain specific nutritional deficiency disease as Kwashiorkor, Marasmus, Blindness due to Vitamin "A" deficiency, anemia etc

Save the children's School Health and Nutrition (February 2011) Core interventions aim to

-) Increase health and nutrition services at school including deforming (Neglected tropical disease), micro nutrition supplementation and control of malaria as well as vision and hearing screening.
-) Increase access to safe water sanitation and hygiene (wash) in schools.
-) Promote lifelong health behaviors through skill based health education.

According to the safe the children, School health and Nutrition programs are cost-effective and complementary to save the children's Early Childhood Development and Basic Education efforts, helping children, especially girls be healthy to learn and learn to be healthy.

Poor health and Malnutrition prevent children from attending school and from learning while there. The equivalent of more than 200 million schools years are lost each year in low income countries as a result of ill health and the impact on learning and cognition is equivalent to a deficit of more than 630 million IQ points, School Health and Nutrition Programs Contribute to Health out comes and are cost of effective for UNICEF, WHO and World Bank lunched the FRESH School Health and Nutrition Framework at the World Education forum in Dakar, Senegal as party of a global effort to mainstream school health and Nutrition in education sector programs. (The World Bank, School Health and Nutrition, Education resources Guide and Advisory Services, 2011)

The focus of school health and nutrition programs in low-income countries has shifted from a medical approach that favored elite that improves health and nutrition for all children particularly the poor and disadvantage. School Health and nutrition programs are not only important contributors to health out come. They are also exceptionally cast-effective contributors to improved education access and completion of education.

Malnutrition and under nutrition are often used interchangeably As "Malnutrition" includes both over nutrition and under nutrition "Under nutrition" will be used in this thesis, under nutrition includes being stunted (Low height for age), wasted (Low weight for height) and under weight (Low weight for age). The growth of the infants and children is related to socio economic environment in which they live. Children form developing Countries grow more slowly and achieve a shorter adult height than those from wealthier regions. Wasting is a measure of thinness. A wasted child has suffered form substantial weight loss, usually as a consequence of acute food shortage and disease under nutrition is influenced by both the weight of the child, and reflects body, mass relative to chronological age.

Under nutrition has serious affect on the child the family and the development of the country. An undernourished child is move likely to be sick and die. Further, Under nutrition can lead to stunted growth, impaired cognitive and behavior development poor school performance

and lower working capacity and lower income. Under nutrition restraints the societies to increased cost in health care.

Good nutrition is a fundamental right. Nepal with its ratification in 1990 of the convention on the rights of children, by UN General Assembly in 1989, Committed its self to recognizing and implementing a Wide range of Civil and political right for Nepalese children. The convention recognizes children's right to survival and to the height attainable stander of health. Implies a healthy environment, nourishing food, quality health service and personal awareness. In order to improve the nutritional status of the children in Nepal, the natural nutritional programmed has setout certain goals. One of the main strategies is to promote, facilities and utilize community participation and involvement for all nutrition activities. Few more strategies are to ensure the activities, decentralization of authority from the very beginning of needs assessment through planting implementation and monitoring, and to conduct the national and social advocacy campaigns.

2.2 Review of Empirical Literature/Previous Studies

Life expectancy has gone up among the males from 42 years (in 1990) to 62.9 years (in2006) however is still among the lowest in south Asia. Female life expectancy has gone up from 40 years (in 1971) to 63.7 years (in 2006) about one in 25 children dies during the first month infant mortality among the highest in the world. World and neonatal mortality accounts for 55% of all deaths among children below 5 years the one who survive are vulnerable to disease like diarrhea and acute respiratory infections which are leading cause of death in children below 5 years of age in Nepal. Other threats to the child's heath are vaccine preventable disease like measles tetanus and polio all children below one years are offered the full course of routine immunization during the first year of life in addition to the routine immunization program the government has successfully managed to developed a disannul vitamin "A" supplementation program linked with distribution of deforming tablets.

According to Nepal demographic and health survey, 2011, the percent prevalence for underweight and wasted children of under 5 years of age are 48.3 and 10 percent around 50 percent the under five children are stunted children in rural areas are more likely to be student 52 percent than urban area 37 percent Nepal micronutrient status survey 1998 (6-59 months) indicate that 54.1 percent were stunted, 6.7 percent showed wasting and 47.1 percent were

under weight. National family health survey (NFHS, 1996) in a nationally representative sample of children (6-36 months) showed that overall, 54.8 percent were stunted, 12.7 percent showed wasting and 54.2 percent were underweight. The first national nutritional survey in 1975 also showed similar findings of 48.1 percent stunted, 2.8 percent wasted and 50 percent underweight. The data suggest that there is no improvement in the nutritional status in the country although per capita energy consumption showed an upward trend of 2270 Kcal per days.

Studies have showed that breast feeding has positive effects on the nutritional status. Early initiation of breast feeding is vital because the first breast milk contains colostrums full of nutrition and antibodies that protect the newborn from the infections. Around 31 percent of the children in Nepal are breastfed within one hour and 64.9 percent of them receive it within one day of birth. More urban children are breastfed within one hour (34.2) percent and within one day (72.3%) as compared to rural children within 30.9% and 60.9% respectively. Around 69% of the children are fed with the first breast milk.

Many people in Nepal do not have access to Vitamin "A" rich food. The denied access is revealed through Nepal Demographic and Health Survey 2001 data which shows that only 28% of the children under three years of age consumed the fruits and vegetables rich in Vitamin "A" at least once in the seven the seven days prior to survey. Thirty seven percent of urban children as compared to 28% of rural children consumed fruits and vegetables rich in Vitamin "A".

2.3 Implications of the Review for the Study

The literature review is a task that continues throughout the duration of the thesis. It has help to search a suitable topic. The present work also has had the review of related literature. The theoretical literature review has its implication to guide the research. Similarly empirical literature review has illustrated the practice relate to the research area. It also has provided the idea to prepare questionnaire and conduct the research work in the scientific manner.

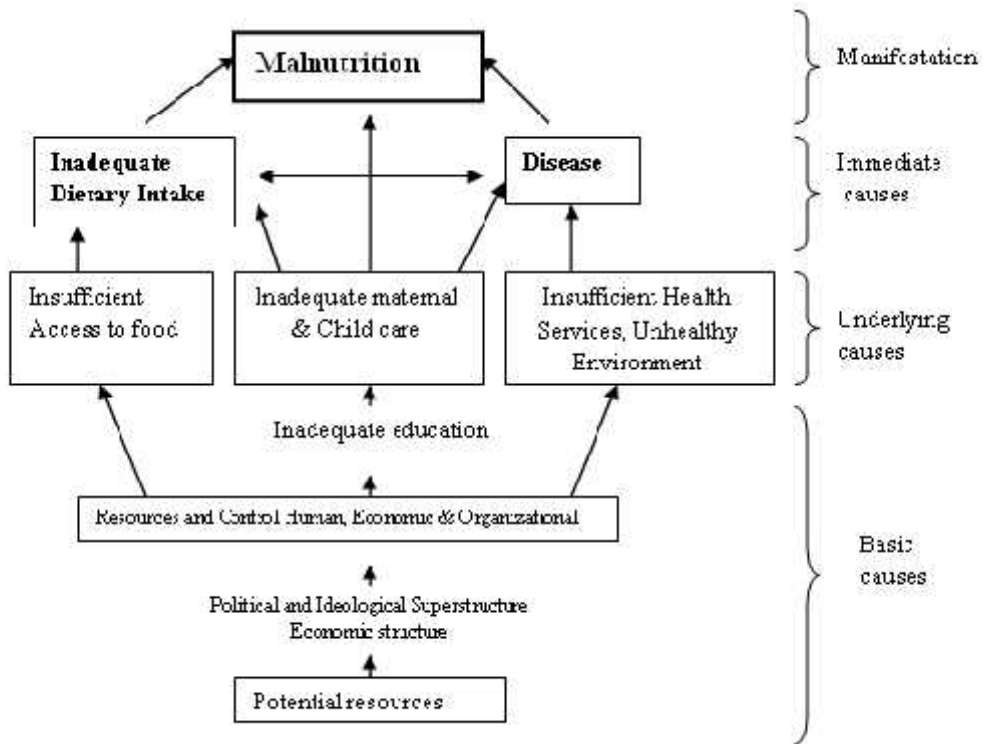
2.4 Theoretical/ Conceptual Framework

Malnutrition and undernutrition are often used interchangeably. As “malnutrition” includes both overnutrition and undernutrition, “undernutrition” will be used in this thesis. Undernutrition includes being stunted (low height for age), wasted (low weight for height) and underweight (low weight for age). The growth of the infants and children is related to socio economic environment in which they live. Children from developing countries grow more slowly and achieve a shorter adult height than those from wealthier regions. Wasting is a measure of thinness. A wasted child has suffered from substantial weight loss, usually as a consequence of acute food shortage and/or diseases. Undernutrition is influenced by both the height and the weight of the child, and reflects body mass relative to chronological age.

Undernutrition has serious affect on the child, the family and the development of the country. An undernourished child is more likely to be sick and die. Further, undernutrition can lead to stunted growth, impaired cognitive and behaviour development, poor school performance and lower working capacity and lower income. Undernutrition slows economic growth and leads to higher levels of poverty. Undernutrition restrains the society to meet its fully potential through loss in productivity, cognitive capacity and through increased cost in health care.

In the field of Nutritional status of primary level school children different writer and researcher have developed different types of conceptual framework. The present researcher has developed a conceptual framework according to objective of the study. This framework is given in diagram.

Figure – 1: Conceptual Framework



There are various factors that directly and indirectly affect nutritional status of amongst public primary school children.

CHAPTER III

METHODS AND PROCEDURES OF THE STUDY

3.1 Design and Method of the Study

This study is basically of a descriptive research design. It has used the survey method, which is the most common in descriptive researches.

3.2 Population, Sample and Sampling Strategy

The study was done in children of four schools lie in prakashpur resource centre. The population of study is from the students studying primary level (1-5). Shree Bhagawati lower secondary school, shree Ramdhuni primary school, Shree Karnaghanta primary school and Shree Bhagawanram lower secondary schools were selected by purposive sampling method. There were 620 children in primary level where as 200 children were respondents by using questionnaire. Simple random sampling method had been used.

3.3 Study Area/Field

Prakashpur resource center of Sunsari District is selected for the study area. The population of primary level children of Shree Bhagawati lower secondary school, shree Ramdhuni primary school, Shree Karnaghanta primary school and Shree Bhagawanram lower secondary schools were selected. The total population 620 only 200 population were selected for sample.

3.4 Data Collection Tools and Techniques

The source of data had been primary. The researcher used primary data so that data collection were very essential. For the collection of data from primary source, the researcher used weight machine, height scale meter, interview and observation schedule, therefore a set of structured schedule acted as data collection tools. The data has been collected with the help of questionnaire as well as interview schedule. To meet of objectives of the study the research tool were used. It was trial-tested to 20 children of Shree Bhagawati lower secondary school, prakashpur Sunsari District. Beside this the questionnaire was shown to supervisor and other experts. After feedback provided from trial test supervisor and other experts, the tools was revised, restructured and finalized.

3.5 Data Collection Procedures

The researcher personally visited each primary school and met the Headmaster. The researcher explained his purpose of the study. The researcher also studied the relevant documents and data about Nutritional status amongst public primary school students. The questionnaire is directly administrated to the selected students. Copies of questionnaire are distributed to all selected respondents from each school. During the administration of the questionnaire, the respondents are closely supervised. A careful approach to administer the tool, he involved himself in data collection process with assistance of school teachers from the respective school. 200 of total of 620 students are enumerated for the purpose of this study.

3.6 Data Analysis and Interpretation Procedure

In the processing of data after filling of the questionnaire, the questionnaires which are filled up by students are carefully checked in the raw data. After cleaning and editing the raw data, the necessary data are presented in master chart. The data are analyzed and interpreted with the help of tables and figure.

CHAPTER –IV

ANALYSIS AND INTERPRETATION OF RESULT

This chapter is concerned with analysis and interpretation after the data. It was tabulated and kept in sequential order according to the requirement of the study. Collected data was analyzed and interpreted in table, graph and chart etc. There are some simple statistics rules; number and percentage are more follows to make presentation more.

4.1 Socio – Demographic characteristics

This subsection deals with some important demographic characteristics of sample population such as age and sex composition, status of religion, educational status of parents, occupational status of parents.

4.1.1 Age and sex composition

Age and sex are the basic characteristic or the biological attributes of any demographic group and affect not only its demographic but also its social, economic and political structure. Age sex structure of the population determines major components of Nutritional status of Public primary students in sunsari districts.

Table – 1: Age and sex wise population of public school children

| variable | sex | | | | Total | |
|-----------|--------|---------|--------|---------|--------|---------|
| age group | boy | | girl | | Number | Percent |
| | Number | Percent | Number | Percent | | |
| 9 years | 9 | 10 | 12 | 10.91 | 21 | 10.5 |
| 10 years | 21 | 23.34 | 28 | 25.45 | 49 | 24.5 |
| 11 years | 32 | 35.56 | 38 | 34.55 | 70 | 35.0 |
| 12 years | 8 | 20 | 12 | 10.91 | 30 | 15.5 |
| 13years | 5 | 5.55 | 8 | 7.27 | 13 | 6.5 |
| 14 years | 5 | 5.55 | 12 | 10.91 | 17 | 8.5 |
| 15 years | - | | - | | - | |
| Total | 90 | 100 | 110 | 100 | 200 | 100.0 |

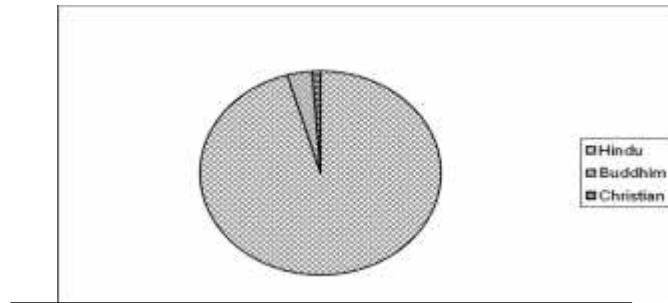
The table – 1 shows the distribution of population by age and sex composition of study area. Out of the total sample population 45 percent are boys and 55 percent are girls. For male he highest percent of population 35.56 percent was found in age group 11 years. followed by 23.34percent in the age group 10 years, 20percent in the age group 12 years likewise for girl highest percent of population 34.55percent was found in the age group 11 years, followed by those in age group 25.45percent was found in the age group 10 years similarly, the both boys and girls largest. The highest percent of population (i.e.35.00 percent) was found in the age group of 11 years whereas the boys and girls of population are 35.56 and 34.55 percentage respectively. The 24.50 percent of the second largest population was found in the age group 10 years whereas 23.34 percent are boys and 25.45 percent are girls.

Sex ratio is defined as number of male per 100 female a sex ratio over hundred (100) represent an access of male over female and ratio below 100 represents and access of female over male. The overall sex ratio was 81.81percent. According to census 2001, national sex ratio is 99.38.The sex ratio of Nepal in 2001 to 94.16 in 2011 census.

4.1.2 Religious composition of Study area.

Nepal is secular state. Multi religious people are living in Nepal. Religious is also an important factor to analyze the demographic and social characteristic of Nutritional status. Religious has greater impact on the life style of people. The religious composition of respondents in the study area is shown in the table below.

Figure – 2: Religious Composition of Prakashpur Resource Center



Above figure no. 1 shows that out of 200 total population 95% were Hindu. Similarly, 4% were Buddhism and 1% was Christian in this study area. Most of population was Hindu because of Majority of Nepal celebrated Hindu religion.

4.1.3 Educational status of parents

In general, literacy is the ability to read and write. Education always plays crucial role in all round development of the nation. It is an important indicator of attaining social and economical development and of opening the individual the door of innovative ideas and actions.

Similarly, education has been one of the most powerful determining factor of occurrence of disease, its acceptance and treatment because It is enhances the physical, Mental, Social and emotional status of individual. Education enables an individual to proper adjustment, which signifies healthy status of person. A family with quality life usually places a high priority on the management of nutritious food. The literacy and educational attainment of parents are shown in table 3.

Table – 2: Literacy and Educational status of parents

| Educational Attainment | Number | Percent |
|------------------------|--------|---------|
| Illiterate | 25 | 12.5 |
| Literate | 50 | 25.5 |
| Primary | 55 | 27.5 |
| Lower Secondary | 35 | 17.5 |
| SLC | 35 | 17.5 |

The table no 2 shows the literacy and educational status of sample population whereas 12.5% was illiterate and 25% were literate. Most of people are literate in the study area caused by facilities of public school. The highest populations of 27.5% have completed the primary level, 75% have completed lower secondary level, and also 17.5% have completed secondary school (S.L.C.) in the study area.

We have compared among four public primary schools in table no.3. It shows four different public schools educational and literacy status in the given table No. 3 as follows.

Table – 3: Literate and Illiterate status of Parents in the study area.

| S.N. | School's Name | No. of parents | Literate no. of parents | Illiterate no. of parents | Literate percentage | Illiterate percentage |
|------|----------------------------------|----------------|-------------------------|---------------------------|---------------------|-----------------------|
| 1 | Shree Bhagawati L.S. School | 50 | 45 | 2 | 96 | 4 |
| 2 | Shree Bhagwanram L.S. School | 50 | 48 | 6 | 88 | 12 |
| 3 | Shree Karnaghanta Primary School | 50 | 44 | 6 | 88 | 12 |
| 4 | Shree Ramdhuni Primary school | 50 | 40 | 10 | 80 | 20 |
| | Total | 200 | 176 | 24 | 352 | 48 |

The Average percentage of literate and illiterate, according to table no 3, is described here. The total literate percentage is 352. The number 352 is divided by four (4) schools. So the average literate percentage is 88. The total number of illiterate percentage is 48. So the number 48 is also divided by 4 schools. So the average illiterate percentage is 12. The table no 3 shows that the highest literate percentage of parents is in shree Bhagawati L.S. school because of good educational environment and good opportunity learning and the lowest literate percentage of parents is in shree Ramdhuni Primary school.

4.1.4 Occupational Status of Parents

Nepal is an agricultural country where Majority percent of population is engaged in agro based occupation. Occupational status has directly linked to individual health status. Occupations health is now in major concern while diagnosing any communicable and non-communicable diseases. Many empirical studies have shown that people who have received higher educational attainment are involved manly in services some kind of business works.

The people whose occupation is very important, basic needs about human life. That is related in any fields which gives the successful life. Without occupation people cannot meet the increasing requires of the family, personnel, society and country occupation also effects the human health protection which affects their social, mental, physical and spiritual health condition.

Table – 4: Occupational statuses of the parents

| Occupational status | Number | Percent |
|---------------------|--------|---------|
| Agriculture | 87 | 43.5 |
| Foreign Employment | 29 | 14.5 |
| Labor | 34 | 17 |
| Industry | 23 | 11.5 |
| Service | 20 | 10 |
| Business | 7 | 3.5 |
| Total | 200 | 100 |

The table no – 4 shows that the major occupation of household are divided into six different categories such as agriculture, foreign employment, labor, industry, service and Business.

Among them, 43.5 percentage of total household's occupation is engaged in agriculture. Similarly, 17 percentages were labor, 14.5 percentages were foreign employment, 11.5 percentages were industry, 10 percentages were service and only 3.5 percentages households were business.

4.1.5 Caste composition

Caste is one of the important social characteristic of nutrition. As we know, Nepal is multi-caste , multi-ethnicity, multi-religious , multi-cultural and multi-language country, there are many ethnic groups in the study population such as Brahmin , chhetri, Rai, limbu kami, Damai, mandal and other caste . Demographic condition of this study has been shown in the following table.

Table – 5: Ethnicity composition in the study area.

| Caste | Boy | percent | Girl | percent | Total | percent |
|-----------|-----|---------|------|---------|-------|---------|
| Brahmin | 8 | 08.88 | 9 | 08.18 | 17 | 08.53 |
| Chhetri | 10 | 11.12 | 10 | 09.09 | 20 | 10.00 |
| Rai | 7 | 07.78 | 9 | 08.19 | 16 | 08.00 |
| Limbu | 8 | 08.88 | 9 | 08.18 | 17 | 08.50 |
| Kami | 4 | 04.44 | 7 | 06.37 | 11 | 05.40 |
| Damai | 5 | 05.55 | 7 | 06.37 | 12 | 05.96 |
| chaudhary | 9 | 10.00 | 13 | 11.81 | 22 | 11.01 |
| Yadav | 10 | 11.12 | 12 | 10.90 | 22 | 11.01 |
| Meheta | 7 | 07.78 | 9 | 08.18 | 16 | 07.98 |
| Mandal | 10 | 11.12 | 10 | 09.09 | 20 | 10.10 |
| Majhi | 12 | 13.34 | 15 | 13.64 | 27 | 13.49 |
| total | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |

From the above table number - 5 it can be seen that out of 200 students the highest population of Majhi 13.49 percent, similarly Yadav 11.01 percent, Chaudhary 11.01 percent, Mandal 10.10 percent, Chhetri 10.00 percent, Brahmin 08.53 percent, Limbu 08.53 percent, Rai 08.00 percent, Meheta 07.98 percent, Damai 05.96 percent and Lami 05.40 percent. Therefore caste was directly affected by nutrition.

4.2 Status of knowledge Regarding Energy Requirements

Energy is the capacity for doing work, which is the primary requirement for body functions and growth. For all the daily activities some amount of energy is required. The type of energy needed for various activities varies from the type of work being done in the body also various voluntary and involuntary activities are taking place, which need energy in order to fulfill these demands we consume food. The total energy requirement of an individual is made up of two main components (a) basic or resting state (when the body is in the complete bed rest) – energy requirement for vital function such as sleeping, respiration and circulation etc. (b) The energy required for actual physical activity. It is the later component, which varies depending upon age, sex and occupation and climatic conditions for the surroundings. The energy required for both the components is obtained from food. Protein supply 10-12 percentage carbohydrates about 60 percentage and fat about 30 percentage energy. The quantitative food requirements are usually estimated in terms of energy, i.e. calories.

4.2.1 Recommended Daily intake of Energy

Energy intake and expenditure of an individual should be balanced because any surplus energy consumption will be stored, as fat and continuous excess in take will lead to obesity. FAO/WHO committee suggested that the age of 1-3 years, body weight be 12.02 kg and 240 kcal required per day. Similarly 4-6 years group children their body weight be 18.87 kg and 1690 kcal be required per day. The parents of public school have not shown the interest in the record of kcal of everyday accordingly age and weight. The children of 4-6 years need 29gm protein, 25gm fat, 200-250 gm carbohydrate each day. Above mentioned food should be provided in proper ratio. Such factor has not been popular.

4.3 Nutritional Disorders

Growth and maturation (Development) are the most distinctive attributes of children, which distinguish them from adults. The anatomical characteristics and functional maturity of organs at different ages affect the incidence and manifestations of disease in children and childhood disorders can profoundly and adversely affect the growth and development of children. Protein-energy malnutrition is the care health problem in children. Which makes them vulnerable to develop a variety of infectious diseases perpetuating a vicious cycle of disease and debility?

4.3.1 Weight at Birth

According to the nutritionists, the weight of a child at birth affects their physical, mental and emotional condition up to five years. And it also affects the activities of adolescent. Weight of child at birth sis showed in table no 6.

Table – 6: Weight at birth

| | Number | Percent |
|------------------------|--------|---------|
| a. Less than 2.5 kg | 46 | 23.00 |
| b. Between 2.5to 3 kg | 119 | 64.50 |
| c. Between 3 to 3.5 kg | 18 | 9 |
| d. More than 3.5 kg | 17 | 8.50 |
| Total | 200 | 100.00 |

The table no. 6 shows that the weight at birth of sample population 23% was less than 2.5 kg similarly 64.50% was between 2.5 to 3 kg. 9% was between 3 to 3.5 kg and also 8.5% was more than 3.5 kg. The highest percent of population whom health was 64.50% and babies who are small at birth were 23% have not had enough nourishment in their mother's womb.

4.3.2 Practice and knowledge about vaccinated our children

The infant may have the risk of infection if the mother is not immunized during the pregnancy. Besides this the immunization helps to safe guard the child from various cross infection. Baby should be immunized against 6 types of killer diseases within the period of 12 months from the time of birth.

While studying it was found that all parents of primary level student at public schools have vaccinated against six types of killer diseases.

Table 7: Practice and knowledge about vaccinated in the study area

| status | Boys | percent | Girls | percent | total | percent |
|--------|------|---------|-------|---------|-------|---------|
| Yes | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |
| No | — | — | — | — | — | — |

The table no. 7 shows that all parents of children were well knowledge about vaccination in which reacherser found 100 percent vaccinated by both boys and girls which was best result then previous data . This result is very helpful for improving nutritional status of Nepal.

4.3.3 Participation on the programmed of vitamin 'A' capsule and worm-medicine

The government of Nepal has been distribution vitamin 'A' capsule and worm-medicine for the children under the age of five years from time and time again.

According to the USAID report 2010 September, 87.percent children under 5 years of Nepal have involved in vitamin A companion. Similarly, 74.6 percent children involved in deworming medication companion.

4.3.4 Yearly weight-Taking condition and Related practices.

The periodic weight record provides valuable information regarding growth of velocity of the child as opposed to a single weight on a particular occasion trend or slope of the weight curve is more important , during early infancy weight gain depends upon the gestational age, birth weight, health and well-being of the mother and adequacy of breast feeding.

The parents of public school haven't shown the interest in the record of weight of annually according to age such factor has not been popular. yearly weight – taking condition of there has been shown in the following table-

Table – 8: Yearly weight- Taking condition and related practices in study are

| S.N. | Level of Weight Status | Percent Value | Boy | Girls | Total |
|------|------------------------|---------------|-----|-------|-------|
|------|------------------------|---------------|-----|-------|-------|

| | | | No. | % | No. | % | No. | % |
|---|------------------|-----------|-----|--------|-----|--------|-----|--------|
| 1 | normal | Above 90% | 37 | 41.11 | 42 | 38.18 | 79 | 40.00 |
| 2 | Acute stunted | 80-90% | 26 | 28.88 | 37 | 33.63 | 63 | 31.50 |
| 3 | Moderate stunted | 70-80% | 12 | 13.33 | 16 | 14.54 | 28 | 14.00 |
| 4 | Severe stunted | Below 70% | 14 | 15.55 | 15 | 13.63 | 29 | 14.50 |
| | total | | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |

The table no.8 show that weight condition of prakashpur resource centers students out of 200 , in which normal weight percentage of boys and girls are 41.11 % and 38.18 % respectively. similarly 26% boys and 30% girls are in acute stunted group, 12% boys and 16% girls are of moderate stunted group then 14% boys and 15% girls are under severe stunted group respectively. It is due to lack of nutritional food according to age group with less concentration in their childrens weight.

4.3.5 Yearly Height taking condition and related practices

During a period of observation of at least 6 months, if the growth velocity is led than 4cm per year after age of 4 years, it is suggestive of growth failure or poor liner growth. The parents of public school have not shown the interest in the record of height of annually according to age. The condition of yearly height taking has been shown in the following table

Table – 9: Status of Yearly Height of Prakashpur Resource Center

| S. N. | Level of Height | Boys | | Girls | | total | |
|----------|----------------------|------|-------|-------|-------|-------|-------|
| | | No. | % | No. | % | No. | % |
| 1. | More Than 90% (>90%) | 39 | 43.34 | 57 | 51.82 | 96 | 48.00 |
| 2. | 85-90% | 28 | 31.11 | 34 | 30.90 | 62 | 31.00 |

| | | | | | | | |
|----|--------|----|--------|-----|--------|-----|--------|
| 3. | 75-85% | 23 | 25.55 | 19 | 17.28 | 42 | 21.00 |
| | TOTAL | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |

From the table no. 9 it can be seen that out of 200 students , 43.34 % boys and 51.82% girls were normal nutritional status 31.11% boys and 30.90% girls were in border line . rest 25.55 % boys and 17.28% girls were moderate malnutrition . with observation of above data , researcher found general condition in height of students .in the above showing data the primary schools student's condition were very poor.

4.3.6 Head circumference

The marasmic children are seen to have relatively large head of their body size because brain growth is minimally affected by malnutrition. During states of undernutrition of varying severity, weight (subcutaneous fat and muscles), linear growth (height) and brain growth are affected in that order. The status of head circumference of children according to age. The parents of public school have not shown the interest in the record of head circumference.

Table – 10: Status of head circumference of prakashpur resource center

| Age variable | h.c. | Boys | | Girls | | Total | |
|--------------|-------------|-----------------|-----------------|----------------|-----------------|------------------|-----------------|
| | | No. acc. to age | Not.acc. to age | No.acc. to age | Not.acc. to age | h.c. acc. To age | Not.acc. to age |
| 9 | 48.50-50.50 | 5 | 4 | 7 | 5 | 12 | 11 |
| 10 | 50.50-51.50 | 21 | 10 | 15 | 13 | 36 | 23 |
| 11 | 52.00-53.00 | 18 | 14 | 22 | 16 | 40 | 30 |
| 12 | 52.00-53.00 | 5 | 3 | 8 | 4 | 13 | 7 |
| 13 | 51.00-53.00 | 4 | 1 | 6 | 2 | 10 | 3 |
| 14 | 50.00-53.50 | 3 | 2 | 8 | 4 | 12 | 6 |
| total | | 56 | 34 | 66 | 44 | 112 | 78 |

The table no. 10 show that out of 200 students have actual head circumference according to age of normal which is 61.00% rest 39.00% students have not head circumference according to age . its show that 39.00% of students are in under – nutrition.

4.3.7 Status of mif upper arm circumference

To measure the circumference of the arm the child after the age of one year of the cheeking malnutrition. The status of mid upper arm circumference of public school students shown in table 7.

Table – 11: Status of MUAC of public school students

| Variable | Boy | | Girl | | Total | |
|--|--------|---------|--------|---------|--------|---------|
| | Number | Persent | Number | Persent | Number | Persent |
| Between 12.15 and 13.5cm greater then 13.5cm | 77 | 85.55 | 86 | 78.18 | 163 | 81.5 |
| | 13 | 14.45 | 24 | 21.82 | 37 | 18.5 |
| Total | 90 | 100 | 110 | 100.00 | 200 | 100.00 |

The table no. 11 shows among that 90 boys 85.55 percent were indication of mild-moderate malnutrition. Rest 14.45 percent were a sign of a satisfactory nutritional status. Similarly, among 110 girls 78.18 were indication of mid moderate malnutrition and rest 21.82 percent were a sign of satisfactory nutritional status.

4.3.8 Weight for Height

Weight for height is expressed as a percentage of the reference median weight expected on the basis of weight for height public schools. Parents was not measure their children. But when I observe the children, found normal nutritional status of weight for height.

Table – 12: Nutritional status on the basis of weight –for – height

| Variable weight for height | Boys | | Girls | | total | |
|----------------------------|--------|---------|--------|---------|--------|---------|
| | number | percent | number | percent | number | percent |
| More than 90% >90% | 38 | 42.23 | 49 | 44.54 | 87 | 43.50 |
| 85-90% | 28 | 31.11 | 29 | 26.36 | 57 | 28.50 |
| 75-85% | 24 | 26.66 | 32 | 29.10 | 56 | 28,00 |
| total | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |

The table no. 12 shows that 43.50 percent students were normal nutritional status , 28.50 percent were border line malnutrition and 28 percent were moderate malnutrition.

4.3.9 Modified Gomez Classification Suggested By the Indian Academy of Paediatrics

The weight – for – age is reliable index of the nutrition status of a child . the severity of under – nutrition can be assessed on the basiss of classification proposed by indian academy of pediatrics . the Gomez classification of malnutrition based on weight - for – age given in the table number -12

Table – 13: Nutritional Status According to Weight - for – Age

| Wt.as% age of the standard weight | Boys | | Girls | | total | |
|-----------------------------------|--------|---------|--------|---------|--------|---------|
| | number | percent | number | percent | number | percent |
| >80% | 32 | 35.55 | 41 | 37.27 | 73 | 36.50 |
| 71-80% | 24 | 26.76 | 32 | 29.09 | 56 | 28.00 |
| 61-70% | 12 | 13.44 | 19 | 17.27 | 31 | 15.50 |
| 51-60% | 22 | 24.45 | 18 | 16.37 | 40 | 20.00 |
| total | 90 | 100.00 | 110 | 100.00 | 200 | 100.00 |

The table no.13 shows that out of 200 students, 73 students were normal , which is 36.50 percent , 28.00 percent were grade one malnutrition , 15.50 percent were grade second malnutrition and rest 20.00 percent were grade three malnutrition.

4.4 Status of wasted and stunted students (waterlow's classification)

This classification is based on the age of child and the measurement of weight and hight. This method is clasifying melnutrition is more informative on the process leading to mal nutrition . Status of wasted and stunted students of public primary level is shown in table 14

Table – 14: Status of wasted and stunted students of prakashpur resource center

| Weight for height | Height for age | Boys | | Girls | | total | |
|-------------------|------------------|--------------|-------|---------------|-------|---------------|-------|
| | | No. | % | No. | % | No. | % |
| <80% | $\bar{\geq}$ 90% | 7out of 90 | 7.77 | 9 out of 110 | 8.18 | 16 out of 200 | 08.00 |
| $\bar{\geq}$ 80% | < 90% | 43 out of 90 | 47.77 | 53 out of 110 | 48.18 | 96 out of 200 | 48.00 |

The table no. 14 shows that overall 8.00 percent students were wasted and 48.00 percent were stunted . according to the nepal demography and health survey (NDHS,2011) half (50%) of children under 5 years were stunted and 20 percent severely affected with 10 percent of children wasted and 1 percent severly wasted.

4.5 Association of poverty-lack of education- malnutrition – infectious diseases

Poverty further intensifies health problems in Nepal. This situation allows the prevalence of numerous easily preventable and or treatable infectious diseases in Nepal. It is known that the economic status of parents of public schools. Children of public school were more affected by malnutrition. This has been attributed to poverty of parent lack of education of parents and rampant infectious diseases.

4.6 Status of Snacks in tiffin

The status of snacks in tiffin in four public primary school is shown in table no 5

Table – 15 : Status of snacks in tiffin

| S.N. | School's Name | No. Student with Snacks | Percentage | No. Of Student without Snacks | Percentage |
|------|----------------------------------|-------------------------|------------|-------------------------------|------------|
| 1 | Shree Bhagawat L.S.School | 32 | 64 | 18 | 36 |
| 2 | Shree Bhagawaram L.S.School | 30 | 60 | 20 | 40 |
| 3 | Shree Karnaghanta Primary School | 50 | 100 | 0 | 0 |
| 4 | Shree Ramdhuni Primary School | 50 | 100 | 0 | 0 |

According to table no.1 5 , 64 percent student of Shree Bhagawati take Snacks in tiffin, and 36 percent student of this school don't take snacks. Similarly, 60 percent students of mohan secondary school take snacks and 40 percent students don't take snacks in tiffin. All student

of both Karnaghanta and Ramdhuni primary schoold take snacks in tiffin because of facility of government.

4.7 Summary

Nutrition is the proces of taking right foods in right amount to make our body strong and healthy. When we eat various types of foods, our body doesn't absorb all the from the food materials. The body absorbs the necessary substances from the food and unecessary things are defected out from the body. The things which are necessary for our body to grow, develop, get energy, and protect are known as nutrients. The purpose of taking fod is to obtain necessary nutrients for the body. Carbohydrates, fats, proteins, vitamins, minerals, and water are the nutrients required for our body.

This research is related to nutritional status amongst public primary school in sunsari district. The objectives of this tudy was to study the nutritional disorders of primary level students of sunsari district, also to identify the tiffin practice of government school and to identify the priblems and issues on the nutrition in primary level school in the sutdy area.

This study was descriptive in nature. Many liberature have been reviewed directly and indirectly with nutritional status. Sampling method was used for collcting primary data through fild study. Out of total 31 school in prakashpur resource center 32 percent (4) schools were selected by using simple random sampling method.

For collecting primary data different questionnaires and interriews were among the respindent in prakaspur resouce enter. Collected data was analyzed and interpreted by using table, bar diagram, graph charts and pie charts in percentages. The tatal population in study area 200 among them 90 are male and 110 are females population and total schools population are 625 in this study area out of these 32 percent (4) schools were taken for the study.

Bramin, Kshetri, Rai, Kami/Damai/Sarki, Pal, Majhi, Uraw, Yadav, Meheta, and Newar caste are the main ethnic group found in the study area. Hindu religion is the most dominant religion in the study area out of the total population 95 percent are Hindus. Similarly 4 percent Bhddhist and 1 percent Christian were found. The liteerate rate in the study area was

87.5 percent and illiterate was 12.5 percent , similarly 17.5 percent were SLC, primary level were 7.5 percent and lower secondary were 17.5 percent.

Similarly, high majority of occupation belong to Agriculture were 43.5 percent and labor were 17 percent, also foreign employment were 14.5 percent, industry were 11 percent and also service and business 10 and 3.5 percent parents found in the study area.

In the study area the trend of nutritional status increased form 2060 to 2070 B.S. whereas only 20 percent were students to take breakfast in tiffin time. The main prblem and issues to practice tiffin nutrition lack of education, poverty, and busy for labour, nepalese children sufter from malnutrition children of public school. This has been atribute to poverty, lack of education and rampant infectious disease

4.8 Findings

This study about nutritlonal status maongst public primary school in prakashpur resource center. Following facts were founded in this study which are given below:

-) The total study population were 200 and of this 45(90) percent were male and 55 (110) percent were female.
-) Majority populaton is literate 87.5 percent and 12.5 percent were illirecto.
-) The most dominant religion is Hindu in the study, out of tatal population 95 percent Hindu whereas only 1 percnet christian.
-) The highest status of occupation in the study area is agriculture 43.5 percent whereas only 3.5 percent were in business sector
-) The highest literate status of shree bhagawati L.S.School 96 percent and lowrest literate status of Ramdhuni primary school 80 percent.
-) In this stady area the highest status of snacks in tiffin Ramdhuni primary and Karnaghanta primary 100 percent student take snacks , also Bhagawati L.S. school 64 percent and Bhagawanram school's student to take snacks 60 percent.

-) The main problem and issues to practice tiffin snacks lack of education, poverty, labour, life.
-) Among 200 children of public school 100 percent were vaccinated and vitamin 'A' capsule.
-) Among 200 children of public school 100 percent were used toilet themselves than wash hand with soap.
-) Among 200 children of public school 81 percent were normal nutritional status, 19 percent were malnutrition.
-) Immunization less than one year of age for 6 killer diseases were 100 percent.
-) Among 200 children, weight of 5.33 percent children was less than 2.5 kg at birth, 73.67 percent were between 2.5 and 3 kg at birth, 15 percent were between 3 kg to 3.5 kg at birth and 6 percent was more than 3.5 kg.
-) In this study there are many castes found such as Majhi (13.49%), Yadav(11.01%), Chaudhary(11.01%), Mandal(10.10%), Chhetri (10.00%), Brahmin(08.53%), Limbu(08.50%), Rai(08.00%), Meheta(07.98%), Damai(05.96%), Kami(5.40%) where highest population was Majhi and lowest population was Kami.
-) According to table of yearly height of students, 48 percent were in normal nutritional status where 21 percent were moderate malnutrition.
-) Among 200 students only 61.00 percentage were normal conduction in head circumference data.
-) With close observation only 43.50 percent students were normal in weight for height where 28.00 percent were moderate malnutrition.

CHAPTER – V

CONCLUSIONS AND RECOMMENDATION

5.1 Conclusion

This study about nutritional status amongst public primary school in prakashpur resource center is concluded with main objective to identify the nutritional disorders of primary level students of sunsari district and to identify the tiffin practice of government school and also identify the problems and issues on the nutrition in primary level school.

This study was done among 200 children. Among 200 children were 90 male and 110 female from public schools. From the general study it was found that the ratio of boys and girls of public was 81.81 percent. the age of children ranged from 6 years 10 percent children were less than 2.5 kg at birth. 100 percent children of public schools have involved in vitamin 'A'. in the contaxt of parents occupation , the most dominants occupation was agricultue than is 43.5 percentage in the study area. Mojority population is literate 87.5 percent.

The nutritional status of public school's children was good. Children of public school's were suffered from mal-nutrition. This has been atributed to poverty of parent's lack of education of parents and rampant infectious diseases.

5.2 Recommendation

From the observation of the study, the following recommendation are made under different sector.

5.2.1 Recommendation for policy Related

-) We can increased number of "Bal Vita" to provide small children which keep children The advanced course about nutrition should be involved into lower to secondary curriculum however education has the ability to change the status of people.
-) We can conduct different formal and non-formal education about nutrition based on different age group in different place.

-) We can prepare strategies for effective nutritional provide system.
-) We can conduct awareness programmed to encouraged people through different Media.
-) We can encouraged people with children creating programmed based on importance of nutrition with participation of them .

It is better to launch Tiffin food programmed by government to all the public school .

It is better to have well canteen in every public school in order to get fresh, neutralized food .

Severe forms or malnutrition should be preferably admitted in hospital .

5.2.2 Recommendation For Practice Related

-) The teachers must be friendly to share ideas about nutrition for students through which can raise themselves.
-) For mild malnutrition, nutritional advice for proper feeding and treatment of underlying condition which may be responsible for poor feeding may be enough strong mentally, physically.
-) In some school there is launched nutritional programmed to reduce malnutrition.

5.2.3 Recommendation For Further research Related

Nutritional status of public primary level students in emerging primary level students is emerging challenges since time beyond. Different issues related children are necessary for further research is as follows :

-) Nutritional status of children and mother is education.
-) Nutritional status of children and gender equity.
-) Nutritional status of children and poverty.
-) Maternal and child nutritional.
-) It may be guidelines for other researcher those who research on this topic.

-) To know information about nutrition status of Sunsari district that help to bring program based on nutrition for government.
-) NGOs and INGOs will be benefitted from this research their contribution.