CHAPTER-ONE

INTRODUCTION

1.1 Background of the study:

Diarrhea is a leading cause of childhood morbidity and mortality in Nepal, a developing country where the larger proportion of the population live in rural areas. Poverty, illiteracy, lack of health care facilities at local level, demographical distribution and traditional beliefs are the major obstacles for getting proper and timely healthcare. There is a necessity to consider the cultural beliefs of different ethnic communities before designing any educational protocol or guideline. Educational protocol or guidelines which respect the local cultural beliefs and stimulate the utilization of their locally available facilities can be easily accepted and would be more suitable to achieve the objectives.

Childhood diarrhea is a major cause of illness and death in Nepal. It is very strongly related to the adequacy of supply of clean water, hygiene practices and sanitation provision. The Nepal Multiple Indicator Surveillance scheme, which began in 1994, provides a framework to study the incidence and severity of diarrhea in children and the risk factors associated particularly water supply and sanitation arrangements.

Diarrhea is common in children under five years of the age in Nepal. There may be several reasons for the higher incidence of infant as well as maternal mortality in Nepal and other developing countries, but one of the main rural settings. Nepal Demographic and Health Survey, (NDHS, 2006) found that about one half of the children with diarrhea under the age of five are not taken to the health care centers.

Instructions for preventing diarrhea, based on a knowledge-deficit model, are a common health-promotion approach aimed at the providers of child care attending nutritional rehabilitation centers. However, there is rarely an assessment of baseline knowledge to justify the need for this type of intervention and to guide its form. This study investigated the practice and knowledge of recommended diarrhea-prevention behaviors caregivers of 78 malnourished children consecutively admitted to a reorientation programmed. Major deficits included: 39% not boiling (or not planning on boiling) drinking water after the child reached two years of age; 35% not always washing

children's hands before meals; only 17% reporting that it was rare for their children to go barefoot; and the majority breastfeeding for less than one year. However, almost all measures of knowledge, based on open and closed questions, were not related to the corresponding practice. Several types of barriers to preventive practices were reported on open questions, including, "beliefs," "children as barriers," and "time." This information may be helpful in designing more effective health-promotion programmed.

With the increase in temperatures over the past few weeks and scarcity of safe drinking water Sources, diarrhea cases are on the rise in remote districts of the mid- and far-western regions of Nepal. The latest reports from the government's Epidemiology and Disease Control Division (EDCD) of the Department of Health Services indicate that 19 deaths and 369 cases of infection were registered to date. The diarrhea situation has been gaining more attention over the past two weeks, with mass media reporting a higher number of deaths. As the monsoon season is fast approaching causes of child death in Nepal is diarrhea disease. Childhood mortality rate is higher in families which are poor, living in rural areas and whose mothers lack basic education. Diarrhea is about 13% higher in rural children than urban in the age group between 6 to 23 months. Moreover, there is a higher incidence of diarrhea in children with uneducated mothers as compared to those whose mothers have some primary education. It was further found that knowledge about ORS was less among younger mothers (15 to 19 years) than their older counterparts especially in, it is anticipated that a greater number of communities and districts are at risk of a rapid spread of diarrhea, as has been seen in previous years. The government is on high alert and has given instructions to authorities at district level to be well prepared for possible diarrhea outbreaks.

Over half of Nepal's children (55.7%) defecate in open spaces. Recent calculations by WHO estimates that about 13,000 children aged under-five years die each year in Nepal from diarrhea diseases and a further 13,000 from Acute Respiratory Infections. This mortality is caused by and aggravated by poor sanitation, inadequate personal hygiene and a lack of access to quality water. (http://www.saathi.org.np/).

Diarrhea is a major public health problem in Nepal. It is characterized by the passage of three or more loose or liquid stools per day, or more frequently than is normal for the individual. The infection may be spread through contaminated food or drinking-

water, or from person to person as a result of poor hygiene. It is an important cause of morbidity and mortality in many regions of the world, with more than 4 billion cases and 2.5 million deaths estimated to occur annually. Intestinal infection with *V. cholera* results in the loss of large volume of watery stool leading to severe and rapidly progressing dehydration and shock. Without adequate rehydration therapy severe cholera kills about half of affected individuals. Recently, there was an outbreak of diarrhea diseases in Jajarkot, mid-western region of Nepal. The objective of this study was to detect the causative organism and analyze the epidemic outbreak patterns of diarrhea in selected health institutions in Jajarkot district, in terms of demographic characteristics and laboratory findings of stool specimens. (Bhandari, 2009)

Diarrhea disease kills an estimated 1.8 million people each year, and accounts for 17% of deaths of children under 5 years of age in developing countries. Ninety-four percent of this disease burden is attributable to the environment, including risks associated with unsafe water, lack of sanitation and poor hygiene. While piped-in water supplies are an important long-term goal, the WHO and UNICEF acknowledge that it is unlikely to meet the MDG target of halving the proportion of the people without sustainable access to safe drinking water and basic sanitation by 2015. As a result, they and others are seeking alternative interventions that can deliver the health gains of safe drinking water at lower cost. Among the candidates are conventional source- and a variety of household-based water treatment interventions. (WHO, 2008),

The Human Development Report (2010) highlights that Nepal is one of the fastest movers in the Human Development Index (HDI) since 1970 and is 3rd among the ‘Top Ten Movers' list in terms of progress in health and education. Between 1970 and 2010, Nepal's HDI value increased from 0.210 to 0.428, an increase of 104 per cent, while Nepal's Gross National Income per capita increased by 94 per cent during the same period. The gap between Nepal's life expectancy and the global average has narrowed by 87 percent over the past 40 years.

Over half of Nepalese children (55.7%) defecate in open spaces. Recent calculations by WHO estimates that about 13,000 children aged under-five years die each year in Nepal from diarrhea diseases and a further 13,000 from Acute Respiratory Infections. This mortality is caused by and aggravated by poor sanitation, inadequate

personal hygiene and a lack of access to quality water. (GHDR, 2010).Nepal is a small land-locked Asian country situated in south east part of the continent. Nepal is known t the outer world due to its wide spectrum of bio-diversity, wide variation in climatic condition, varied culture, and multi-characteristics land topography. Most of the people in Nepal are farmers and the main occupation of Nepali people is agriculture. In this regard, we can boldly say that Nepal is an agriculture country. Educational situation of the country is still backward as many children living in rural areas do not have assessed to education. This may be due to the lack of appropriate educational laws and their effective implementation. At present the literacy percentage is only 53.7%. That is why most of the Nepalese people are compelled to rely on old and traditional system of education till now. Until and unless the people of nation are not educated, the progress of the nation is simply the fake dream. On the other hand, the present population growth rate is also high. According to the census of 2058 B.S., it is 2.24% per annum and the present population is nearly 3 corers, approximately.

If, same people growth rates exist with no improvement of population management, the country will have to face a great problem in the different sectors. Such kind of rapid population growth affects not only the economic sectors; it also affects other sectors of the country including health. That is why, in order to minimize the different adverse affects due to RPG, it is necessary to conduct different programs related to health and sanitation. Fore example, programs for waste disposal awareness to MCH, personal and community health programs and others. Such programs will help to minimize the child birth rate, infant mortality rate (IMR) control of lot of communicable disease i.e. diarrhea, cholera, typhoid, HIV/AIDS, maternal mortality rate (MMR).

In fact turning back to see the Nepal's history, the concept of health was so traditional or conservative. Thus, to burning up the slogan "Health is wealth" in reality we need to have a lot of changes in many sectors of public life along with building up the educational health foundation. It is necessary to make health education as the basic human need. Regarding this, different scholars and organization have given different definition as, "Health is quality of life that enables the individual to live most and serve best" (William, 1930)

Health is a state of complete physical, Mental and social well-being and not merely the absence of disease of infirmity (WHO, 1948). Thus in general, we can say that, health is all physical, mental, social, and economic and emotionally well-being to live successfully. So it is necessary to understand “Health is a sound mind in a sound environment” for the same, the conference held in USSR (Alma Ata conference in 1978) put forwarded the slogan “Health for all”. To make the slogan come true, the concepts of primary health care came in to existence.

The main reasons that our country, is far behind in the sector of health and population education is poverty lack of education, blind faith and superstition, conservative thinking and lack of health consciousness. The need of Nepali cannot be fulfilled due to rapid population growth. But, with the motive to overcome the people’s health problems, the government of Nepal has established one health care center for each VDC. More ever, with the motive to provide preventive, promotive, and curative health services to all, various programs are being conducted. Even that these efforts being not supportive, Nepali people have to be the victim of countless disease such as HIV/AIDS, T.B., diarrhea, cholera, kalazar, malaria and typhoid etc.

According to Bhatt Bhasudev, (2060); 6,50,000 people are treatment by warm infection, 65% Nepalese are suffering from different disease by poor sanitation 70% people are suffering from infected disease due to lack of pure water, 23.3% of urban people and 82.3% of village people are not known about latrine. If we take household survey of village area there will not get more than 10% latrine.

Diseases that are transmitted from person to person are called infectious disease. Some of the communicable diseases have taken a great loss of human life in the past. The science dealing with the mode of transmission of infectious disease is termed epidemiology. Mechanism of developing protection against the attack is termed immunology.

Hygiene prohibit is also a major cause of diarrhea. Sixty-five percent of the caregivers reported that they “always” wash the children’s hands before meals. Thirty-one percent reported that they “sometimes” or “usually” do this, while four percent reported “almost never” engaging in this practice. However, 90% of the total group reported that bacterial or parasitic contamination was the reason for washing hands before

eating. There was no relationship between the practice and this measure of knowledge. The mother being away during meals or being too busy were the most commonly reported obstacles to regular hand-washing.

Only 17% of the caregivers reported that it was “rare” for their children to go barefoot. Fourteen percent reported that their children “almost always” go barefoot, and 70% reported that “usually” or “sometimes” their children go barefoot. Ninety-four percent of the caregivers felt the importance of wearing shoes all the time. There was no relationship between agreeing with this recommendation and the practice. There was also no difference between the practice and the frequency of reporting that the wearing of shoes can protect one from getting parasitic or microorganism infection. The main obstacles to wearing shoes by their children all the time were that the family could not always afford to get shoes for their children or that the children would remove the shoes themselves.

Communicable diseases are caused by bacteria, virus, protozoons, and worms. The credit of establishing that many of the disease are due to microorganisms like bacteria, un potable water sanitation etc. unhygienic behaviors is the main cause of communicable disease, by that the disease communicate from unhealthy person to healthy person.

Although a few studies have found a relationship between general diarrhea knowledge, diarrhea-prevention practice, and the incidence of diarrhea, there is a lack of assessment of specific knowledge about specific recommended prevention practices. In addition, there are some negative findings between knowledge and practice. A follow-up study of a comprehensive water supply, sanitation, and hygiene-education programmed demonstrated little difference in knowledge about transmission of diarrhea between the intervention and the control sites, despite the improved health practices and decreased diarrhea rates in the intervention community. Our recent study of a per urban community sample in the Dominican Republic found no relationship between specific diarrhea prevention practices and knowledge of these specific practices.

Factors that may negate or weaken the relationship between knowledge and practice include various barriers, cultural factors, and beliefs. Gilman and Skill corn illustrated an economic barrier in their estimates of the cost of boiling drinking water in a

fuel scare community. Various qualitative studies have argued the importance of considering cultural factors, such as local beliefs about disease causation and classification that may have important implications for the impact and design of health-promotion interventions. (Mclennan, 1998).

Etiology of diarrhea shows; in infants breast-feeding affords protection against - symptomatic infection with *Shigella spp*. (8, 19-21), *Vibrio cholerae* (8, 20, 22), *Campylobacter spp*. (21, 23), *Salmonella spp*. (8, 21) and enterotoxigenic Escherichia coli producing heat-labile toxin (LTETEC) (24). Protection against *cholera* and *Shigella spp*. appears to extend into the second and third years of life, albeit at a lower level than in infancy. In Bangladesh, breast-feeding was found to reduce the severity of infection with *Shigella spp*. (25) and *V. cholerae* (22). It is not clear whether breast-feeding offers protection against rotavirus, although breastfed cases may experience less severe episodes. (WHO, 1997).

The government of Nepal has a long term health plan (1997-2017) targeted to benefit the most vulnerable populations, namely women, children and those who are poor, under-privileged, marginalized and live in rural areas. It also 'aims at equitable access by extending quality services to remote areas with full community participation and gender sensitivity by technically competent and socially responsible health personnel'. The plans of the government are to increase the use of oral rehydration solution (ORS) & zinc and to increase awareness in the people.

The increasing numbers of reported diarrhea cases across the country and confirmed deaths have triggered concerns in Nepal, which faces an outbreak of diarrhea every year due to unsafe hygiene practices, open defecation and lack of access to safe drinking water. The peak of diarrhea outbreaks usually occur during the monsoon period when higher temperatures and heavy rains increase the spread of water-borne diseases. Although it is still pre-monsoon, there have already been reports of 19 deaths in the mid- and far- western districts and a total of 369 reported cases of infection across the country. All deaths reported this year have occurred in people's homes, which reflect the experience of the outbreak in 2009. It is estimated that the total number of cases is under-reported. Poor infrastructure and difficult access to health services in remote districts continue to pose great challenges for remote communities. This is particularly so for

marginalized groups and for those whose traditional beliefs and practices discourage them from seeking medical treatment. (NRCS, 2010).

An updated review of no vaccine interventions for the prevention of childhood diarrhea in developing countries is presented. The importance of various key preventive strategies (breast-feeding, water supply and sanitation improvements) is confirmed and certain aspects of others (promotion of personal and domestic hygiene, weaning education/food hygiene) are refined. Evidence is also presented to suggest that, subject to cost-effectiveness examination, two other strategies - vitamin A supplementation and the prevention of low birth weight - should be promoted to the first category of interventions, as classified by Feachem, i.e. those which are considered to have high effectiveness and strong feasibility. (WHO, 1997)

With continued high attack rates, diarrhea disease is also an enormous economic burden, resulting in significant direct costs to the health sector and patients for treatment as well as in lost time at school, work and other productive activities. Hence, from the given overall historical perspective and present status of diarrhea disease in Nepal; I would like to research on diarrhea like communicable disease; knowledge attitude and awareness among secondary students of Itahari municipality.

The infectious agents associated with diarrhea disease are transmitted chiefly through the faecal-oral route (Black, 2001). An estimated 94% of the diarrhea burden of disease is attributable to the environment, and associated with risk factors such as unsafe drinking water, lack of sanitation and poor hygiene. (Prüss-Üstün & Corvalán, 2006). While conventional interventions to improve water supplies at the source (point of distribution) have long been recognized as effective in preventing diarrhea (Esrey, 1985, 1991), more recent reviews have shown household-based (point-of-use) interventions to be significantly more effective than those at the source (Fewtrell, 2005; Clasen, 2006). As a result, there is increasing interest in such household-based interventions.

Among three municipality of Sunsari district, the Itahari municipality lies in east boarder of the district headquarter Inurawa. It lies 26° 40’ north to the 26°42’ Northern latitude and 87° 17’ east to the 87°20’Eastern longitude. It coverage 4277 hectors of land and 116 to 164 Meters of altitude. Itahari is the road crossed chock on east-west highway, Budikhola covers an east boundary, Hardiea Khola covers West boundaries,

Charkoshe jungle covers North boundaries and Khanar and Akemba VDC covers the south boundaries of the municipality. It is one of the urbanizing popular cities of east Nepal. The total no of house hold in Itaharie are 8624, according to census report 2058 B.S. The size of total population is 41210 among them, females are 20613 (50.14%) and male are 20597 (49.86%). Because of its natural beauty, it is renewed from the tourism point of view. Being a center of education, business, health, and industry the urbanization process is rapidly growing along with the trend of international migration.

The most important casts were Brahmin (8411), Chhetri (6835), limbu (1525), Rai (3630), Newar (2280), Gurung (616), Batar (1952), Tamang (1378), Tharu (4561), Magar (1005), Muslim (1260), Damai+Kami (824+732) etc. and the lower casts are including Sarki, Damai, Kami, Mushar, Chamar, Nepali etc. Most of the people in this municipality generally understand and speaks Nepali language. The Gurung, Limbu, Tamang, etc. speaks their native language. Most of people believe on Hindu religion. (Census report 2048 B.S.)

According to the municipality report there were altogether 49 educational institutes along with government, private, child care, orphans, and other types, campus, +2, and others. One of the campus running up to degree level in different subject is the Janta multiple college. There were altogether six Government secondary schools, among them 700 students are learning in class 10. The respondents' of this research was 200 i.e.12% in trumps of all Government secondary schools of Itahari Municipality.

1.2 Statement of the problems

The lack of knowledge, attitude and awareness among people, the south Asian countries become threatened about Diarrhea. Diarrhea is a major public health problem in Nepal. It is characterized by the passage of three or looser of liquid stools per day, or more frequently than in normal for the individual. The infection may be spread through contaminated food or drinking-water, or from person to person as a result of poor hygiene. It is an important cause of morbidity and mortality in many regions of the world, with more than 4 billion cases and 2.5 million deaths estimated to occur annually. Diarrhea disease kills an estimated 1.8 million people each year, and accounts for 17% of deaths of children under 5 years of age in developing countries. Ninety-four percent of

this disease burden is attributable to the environment, including risks associated with unsafe water, lack of sanitation and poor hygiene.

Some of the communicable diseases have taken a great loss of human life in the past. In the contest of Nepal, like developing country the communicable disease like diarrhea and cholera are; rapidly spread from one person to another and are of great concern of the society. In the far-western region along with over-all Nepal, a lot of people are suffering from this disease and brings to the death of many people. Recent calculations by WHO estimates that about 13,000 children aged under-five years die each year in Nepal from diarrhea diseases and a further 13,000 from Acute Respiratory Infections. This mortality is caused by and aggravated by poor sanitation, inadequate personal hygiene and a lack of access to quality water. In Nepal, 65% Nepalese are suffering from different disease by poor sanitation 70% people are suffering from infected disease due to lack of pure water, 23.3% of urban people and 82.3% of village people are not known about latrine

It was necessary to know the existing problems before making the survey of a particular place. Further it was necessary to mention the way to identify such existing problems and was compulsory to visit the targeted place beforehand. On visiting the government school of Itahari municipality; a lot of students are absent in summer classes due to the reasons of summer disease, like fever, diarrhea, cholera etc. it was found that the community is one of the most backward, in which the miracles of science and technology of twenty first century have no effect on the people. The minor-looking problems, but having major effect on community health sector like, toilet, drinking water, disposal of waste matter, health and educational facilities was found lacking; these were the fundamental factor of communicable diseases like typhoid, cholera, and diarrhea etc.

Hence, for the reason of above mention problem it was necessary to conduct a research programmed on diarrhea. And it was decided to conduct the survey, to know the knowledge, attitude, awareness, mode of transmition and control preventive measure of diarrhea to the student of ten graders, who are studying in government schools of the Itehari municipality in Sunsari district. This survey may help to aware those students they did not know about the communicable diseases, transmitting factors, transmitting variables and control prevention measures etc. on Diarrhea. By the researcher’s activity,

for these reasons, may helps for the motive of positive changes for the above mentioned problems.

1.3 Objective of the study:

In order to carry out the researches, it was necessary to list out the objective of the study. By doing so, it is very easy to achieve the objectives.

The main objectives of this study are to analyze the existing level of the knowledge attitude and awareness on diarrhea, disease among secondary level students of Itahari municipality. However, the specific objectives of the study are as follows;

a) To find out awareness of sanitation of the students about Diarrhea and encourage to solve their problem by themselves.
b) To find out knowledge and attitude of the ten graders on diarrhea.
c) To examine the students knowledge about mode of transmission and preventive measure about diarrhea.

1.4 Rational of the study:

Morning shows the day and youth are pillar of the nation. Productive manpower can contribute to multi-sectored development of the nation. It is possible only through the health people who are physically and mentally sound. “Health is wealth”.

The main aim of the study was to find out the existing level of knowledge and attitude, (awareness about threat picture of diarrhea) among the students of grade 10. Students are the future generation of the nation and they should essentially possess the basic knowledge about public health and killer diseases like diarrhea. What extents of the existing perception are true and what amount of knowledge is false must be assessed.

We know that research study is used in social, economic, educational, and development of society for the human welfare. The research hopes that, the research is useful for the following purpose.

a) The result of the study will help to assess and compare knowledge, awareness, and attitude of adolescent students towards diarrhea among tenth graders.

b) The result will help to the teachers, to point out the strength and weakness regarding their teaching on communicable diseases like; diarrhea, in health contents of grade ten.

c) The finding of the research will helpful to know the level of knowledge and attitude of secondary school students on communicable disease like diarrhea.

d) The finding of the research may gives input to curriculum experts, policy makers, NGOs, and INGOs, who are working in communicable diseases and public health education. It helps for their formulation and conduction of programmed.

e) The study may be a valuable literary asset for, up coming researches.

1.5 Delimitation of the study:

The social investigation of any phenomenon is a complex and incomprehensible one. Regarding the matter of fact, it is generalized the reality in certain constraints of the tentative truth. In this regard, this study may not be concretely generalized as the social reality. Due to the limited time and budget present study has following limitations;

a) The study had been conducted in six government secondary schools of Itahari municipality; Sunsari district and was covers only 200 respondents among 700s students of class ten.

b) The researcher compelled to carry out the study within very short time by very hard work within limited budget.

c) If any orientation programmed about health had not given to the teachers before their teaching; the teaching tactic and educational materials would not fruitful (matched).

d) No any specific package of education had been developed for the intervention of diarrhea like communicable disease. The government text-book will teach as usual by the respective subject teacher.

1.6 Definition of the terms used:

Age ratio: - It is the ratio of age in a population. On the basis of reproductive period of the individuals, a population can be divided into three age groups.

Attitude: - An attitude is a dispositional readiness to respond to certain situation, one's typical mode of response. (Freeman, 1976). A tendency to react positively or negatively is required to person, policy or other subject. An attitude has affective, cognitive and action component (certain, 1993). In this study attitude refers to the favorable or, unfavorable reaction to statements in the attitude scale devised by the researcher.

Bacillus spp: - Primary causative agent of Diarrhea.

Communicable disease: - These are caused by pathogens or biological agents. They rapidly spread from one person to another and are of great concern of the society. They are either, Bacterial, viruses, fugal, protozoan, or Helminthes etc.

Dalits: - Specific type of cast i.e. Damai, Kami, Sarki, Chamar, Malliek, Dum, et. Lower cast, as mention by Government of Nepal; in cast profile.

Death rate: - (mortality), It refers to the number of death per thousand of population. This is a population–decreasing factor.

Demography: - Study of human population statically is known as demography.

Epidemiology: - The science dealing with the mode of transmission of infectious diseases is termed epidemiology.

Incubation period: It is the periods between the entry of pathogen and the first symptom of the diseases.

Infection: The entry and development or multiplication of the disease producing agent in the body of man or animals. An infection may or may not lead to a disease state. (Park J.E. and park K.1991, 148).

Immunity; Protect the body from infection by recognize, killing them and remembering what they look like, so that they was able to fight them of again.

Immunology: Mechanism of developing protection against the attack is termed immunology.

Knowledge: Dictionary meaning of knowledge is a clear and certain mental perception, understanding. The fact of being aware of something experience of acquaintance or, familiarity with information of learning that which is known, facts learned or acquired (Ramachandrm, 1993). In this study knowledge refers to understanding of concepts, prevention, causes, and mode of transmition and symptoms of opportunity disease of diarrhea.

Non-communicable disease: diseases that remain confined to a person. They do not spread and are caused due to some specific factors. They are concern of an individual not in society.

Pathogen: These are organisms which are responsible for producing diseases. Degree of the effect bought about by the pathogen resulting in the intensity of diseases in termed virulence.

CHAPTER -TWO

REVIEW OF RELATED LITURATURE

2.1 Introduction of review of literature.

This chapter deals with the study of review of literature. The review of literature is an essential part of all studies. It is a way to discover what other research in the area of our problems has uncovered. A critical view literature help the researchers to develop a through understanding and insight into previous research works that relates to present study. It is also a way to avoid investigating problems that have already been definitely answered. The purpose of reviewing the literature is to develop some expertise in one's area see what new contribution can be made and to receive some ideas for developing research design. A literature review is the process of locating, obtaining, reading abs evaluating the research literature in the area of the student's interest. (Wolf, 2005).

Due to lack of community participation and sense of awareness about community health, the health problems in the community are still remaining the same. This study will

try to improve every aspect of the community health and feed back to the teacher for teaching health education.

Cholera is an acute diarrhea illness caused by infection of the intestine with the bacterium *Vibrio cholera*. The infection is often mild or without symptom, but sometime it can be severe characterized by profuse watery diarrhea, vomiting, and leg cramps. In these persons; rapid loss of body fluid lead to dehydration and shock. Without treatment death can occur within hours, drinking water or eating food contaminated with the cholera bacterium may leads to this problem. In an epidemic, the source of the contamination is usually the faces of an infected person. The disease can spread rapidly in areas with inadequate treatment of sewage and drinking water. It is also common in people who travel to those areas where cholera is endemic. Drinking boiled or treated with chlorine or iodine water safe beverages include tea and coffee with no ice, eating only foods that have been thoroughly cooked and remains hot. One should avoided food and beverages from street vendors or for general use because of the brief and incomplete immunity if offers.

According to WHO (1946), definition of health is a state of well-being, interpreted by the WHO in its constitution as a state of complete physical, mental, and social well-being not merely the absence of disease or infirmity.

According to Nepal's National Plan of Action (NPA 1990) for the Children and Development for the 1990's, three sets goals related to childhood diarrhea are mortality, knowledge and use of oral rehydration therapy (ORT), water supply and latrine coverage. The indicators from this cycle of the NMIS can be compared with the goals in the NPA. The correct use of ORT (20%), defined as giving extra fluids and continued feeding, is approaching the 1996 goal of 25% in the Nepal National Plan of Action. Access to 'safe' water (44%) is below the 1996 NPA goal of 53% nationally, mainly because of low access in rural areas. The indicator used here is an approximation to that used by the HMG Government Department of Water Supply and Sewerage. The definition of 'safe' water is quite a generous one; not everyone would agree that piped water, for example, is safe to drink in all parts of the country. There is still being a long way to go to reach the final goal of universal access to safe water. Access to sanitary means of excreta disposal' for which goals are set in the NPA, is taken as coverage with latrines. The national latrine

coverage (15%) meets the NPA goal of 16% for 1996. The urban coverage (63%) more than meets the NPA goal of 50% and the rural coverage is the same as the 12% goal. The weighting process means the high urban coverage does not contribute very much to the national figure. Latrine coverage may not be synonymous with sanitary means of excreta disposal if latrines are poorly built and badly maintained. In this survey, the presence of a latrine does not reduce the risk of childhood diarrhea. Perhaps there is some truth in the perception by households and communities that latrines are often unsanitary; many prefer to go into the surrounding area to defaecate.

According to Last (1995) Communicable disease is an illness due to a specific infectious agent or its toxics products that arise through transmission of that agent on its products from an infected persons, animal, or reservoir to a susceptible host, either directly or indirectly through an intermediate plant or animal host vector or inanimate environment. A communicable disease is a pathological state of a person due to a specific infectious agent or its toxic products.

According to Pokhrel (1996) the study of the etiological agents of diarrhea in children below 14 years of age (study was conducted from May 1995 to April 1996) reported that One thousand one hundred seven (1,107) children with acute diarrhea receiving Oral Rehydration Therapy (ORT) at National Kanti Children's Hospital were included in this study. Stool samples of these patients were investigated at the Microbiology Laboratory, Department of Microbiology, and Institute of Medicine. None of the stool samples showed the growth of *Vibrio cholerae* 0139 synonym Bengal. In Nepal, *V.cholerae* could be isolated from June to November. From December to May, no cases of *V. cholera* were detected. Therefore, we address to this incidence as outbreaks rather than endemic. Mixed infections along with V. cholera were also seen in 29% of cholera patients. *V. cholera* 01, *Hikojima* types were the major isolates in our study followed by Ogawa type. V. cholera, *Hikojima* and *Ogawa* serotypes were associated with mixed infection in 16.1% and 12.9% of patients, respectively. These isolates were associated with *Shigella, Salmonella* and pathogenic *E. coli.*

Several updates of Feachem & Kolinsky (1997) identified good quantification of the effect of breast-feeding on diarrhea mortality among infants in various socioeconomic settings as the highest research priority. Other research needs included clarification of the

levels of protection against diarrheas of different etiologies and assessment of the relationship between feeding mode and both diarrhea severity and persistent diarrhea.

According to WHO (1997) the study conducted in southern Brazil, have assessed the association between LBW and diarrhea mortality in infants. The first involved over 200 infant deaths among a birth cohort of almost 6000 children, 25 of which were due to diarrhea. Despite the relatively small number of deaths, an inverse relationship was found between birth weight and diarrhea mortality. Death rates ranged from 12 per 1000 in children weighing <2000g at birth to 2 per 1000 for those weighing ¢'3500g. The relative risk of infant death due to diarrhea associated with LBW was 2.5 (95% CI = 0.9-6.7), while that for infant death due to all causes was 11.0 (95% CI = 8.7-14.4). Among deaths not due to prenatal causes, however, the relative risks were broadly the same. In a second study, using the case-control approach, risk factors for post-prenatal mortality were investigated by comparing cases with healthy neighborhood controls. After adjustment for confounding factors, LBW infants had twice the risk of death due to diarrhea (Odds ratio (OR) = 2.0; 90% CI = 1.1-4.4) than those weighing: 2500g at birth. A similar odds ratio was found for deaths due to respiratory infections, but that for deaths due to other infectious diseases was greater (OR = 5.0; 90% CI = 1.3- 18.6). Another study from Brazil examined prognostic factors for deaths due to diarrhea in Rio de Janeiro by comparing those children <12 months of age who were hospitalized for diarrhea and died (cases) with those also hospitalized for diarrhea but who survived (controls). LBW infants were three times as likely to die as those weighing -2500g at birth. No data from developing countries were found on the effect of LBW on death as a result of diarrhea after the first year of life.

According to Shrestha (1997) the peak morbidity and mortality of the people by Diarrhea was found from mid June to mid July in the season. According to John D. (1998) the age of the 78 children (47% males) ranged from two weeks to 5.86 years with a mean of 1.4 years. The average birth weight, 2.9 kg, is approximately 90% of the 50th percentile of the NCHS standards. Eighty-three percent of the caregivers reported that their children had had diarrhea within the two weeks prior to presentation at the clinic. Forty-seven percent reported vomiting during this same time period. Biological mothers constituted 93.6% of those interviewed with grandmothers, a father and an aunt

constituting the rest. The age of the mothers ranged from 14 years to 40 years, with an average age of 23.6 years. Formal schooling of the mothers averaged just over five years with 15% reporting no formal education at all. The caregivers had, on an average, 2.8 live-births. Most homes were crowded with a mean of 3.8 persons per sleeping room. Forty-two percent reported that they did not have their own water tap, and 26% reported that they did not have their own latrine.

According to John D. (1998) found that Eighty-three percent of the caregivers reported that they presently purified drinking water for the index child, primarily through boiling (87%). We combined the variables “at what age did you stop boiling water” (for those who had stopped boiling) and “at what age do you plan on stopping boiling water” (for those who were still boiling water at the time of the interview) to create a new variable. Thirty-nine percent either stopped or planned to stop boiling water at or before the time the children reached two years of age. Twenty-five percent of the caregivers reported “providing good drinking water” to the open question “how can you prevent diarrhea.” Seventy-three percent of the respondents stated that boiling water kills microorganisms or parasites. There was no difference in response on these items by whether the caregiver was presently providing purified drinking water for the child of particular interest is the group that demonstrated knowledge of the relationship between water and diarrhea, but still did not provide purified drinking water to the index child. Only 42% of the respondents reported that they used chlorine drops in the drinking water. However, 74% reported that chlorinating water was a good idea. There was a significant relationship between practice and knowledge. Not liking the taste was the most common reason for not using chlorine amongst those who reported that it was a good idea.

Sixty-five percent of the caregivers reported that they “always” wash the children’s hands before meals. Thirty-one percent reported that they “sometimes” or “usually” do this, while four percent reported “almost never” engaging in this practice. However, 90% of the total group reported that bacterial or parasitic contamination was the reason for washing hands before eating. There was no relationship between the practice and this measure of knowledge. The mother being away during meals or being too busy were the most commonly reported obstacles to regular hand-washing. Only 17% of the caregivers reported that it was “rare” for their children to go barefoot. Fourteen percent reported that their children “almost always” go barefoot, and 70% reported that

"usually" or "sometimes" their children go barefoot. Ninety-four percent of the caregivers felt the importance of wearing shoes all the time.

According to Shrestha (2001) Cholera continues to be major public health problem despite the fact that the public health aspects of the disease were described in detail over a century ago. According to Klshone (2002) Diarrhea is a term used to describe a group of diseases in which the predominant symptoms is loose stole. Diarrhea may be associated with urgency perennial discomfort, incontinence or a combinations of all these. When stool is associated with blood than it is called dysentery. The most common cause of death in diarrhea is dehydration that is why its treatment with fluid replacement saves lives. Only in some causes antibacterial antibiotic is required.

According to Goldman (2002) health seeking behavior and the choice of treatment are affected not only by the traditional beliefs, but also by socio-demographic factors, distance of modern health care facilities and the type of health care providers. Stone highlighted that there is a negligence of caregivers' traditional beliefs and practices at primary health care level in Nepal. In rural settings of developing countries, there are many factors like availability of health services/providers, out of pocket expenses, occupation, income, geographical location and transportation facilities which act as barriers for caregivers to have access to the modern biomedical approaches. Therefore, it would be worthwhile to understand the caregivers' traditional beliefs before designing an intervention.

According to Rehan (2003) found an unsatisfactory level of knowledge, attitude and practice of mothers regarding diarrhea and its management. There was less preference towards fluid consumption during diarrhea and one of the reasons for this is the directive of child's grandparents.

According to Tamang et al. (2005) reported that 46 laboratory confirmed *V. cholerae* cases out of 148 cases of watery diarrhea (31%), which was conducted in a hilly district Kavre.4 In this study, only strain 01 (El Tor, Ogawa) was reported. This is also reflected in our findings where Vibrio cholera 01 biotype El Tor serotype Ogawa was found to be the predominant strain.

According to Kansakar et al. (2005) reported that *V. cholerae* 01 El Tor Ogawa responsible for cholera outbreak in Kathmandu Valley. A study by Das et al. (2005) found that drug sellers are the major site of consultation (80%) for diarrheas illnesses and

moreover, their knowledge about diarrhea and its management was very unsatisfactory. Das BP, Deo SK, Jha N, Rauniar GP, Naga Rani MA: Knowledge, attitude and practices (KAP) regarding the management of diarrhea by pharmacists and licensed drug sellers in eastern Nepal.

A study by Jha et al. (2006) indicated that the prevalence of childhood diarrhea is high especially in rural communities of Nepal. About 45,000 children less than five years of the age die due to diarrhea in Nepal annually. Recently, hundreds died in far western districts of Nepal due to a diarrhea epidemic.

According to NDHS (2006) Diarrhea is common in children under five years of the age in Nepal. There may be several reasons for the higher incidence of infant as well as maternal mortality in Nepal and other developing countries, but one of the main causes of child death in Nepal is diarrhea disease. Childhood mortality rate is higher in families which are poor, living in rural areas and whose mothers lack basic education. Diarrhea is about 13% higher in rural children than urban in the age group between 6 to 23 months. Moreover, there is a higher incidence of diarrhea in children with uneducated mothers as compared to those whose mothers have some primary education. It was further found that knowledge about ORS was less among younger mothers (15 to 19 years) than their older counterparts especially in rural settings. Nepal Demographic and Health Survey (NDHS) 2006 found that about one half of the children with diarrhea under the age of five are not taken to the health care centers.

According to NDHS (2006) showed that the point prevalence of diarrhea is higher in monsoon (April to August). It also added that about 50% of diarrheas cases were treated at home without any medication while only 13% received ORS. A comparison of NDHS 2001 and 2006 showed a decreasing order in the use of ORS for managing childhood diarrhea. There is a common tendency among the mothers to seek health care only when the case becomes serious.

According to Australasian Medical Journal (2009) several studies have found that there are different traditional beliefs, barriers and practices about childhood illnesses and their management at local level as perceived by different communities. Practices such as reduction in breast feeding, restriction of foods and fluids, use of enema and selected herbs as well as belief on magical power were observed in caregivers.

According to news website in Nepal (2009) Jajarkot district has been affected very badly with 150 dying in the month of July, 2009, with around 6,000 severely affected in Jajarkot and surrounding districts like Rukum, Dang, Rolpa and Salyan in the year 2009.

Nepal Health Research Council, (2009); the total number of cases (n=425) admitted to District Hospital, Khalanga from mid-march 2009 to mid-July 2009 were analyzed. The first four weeks starting from third week of March 2009 indicate a steady rise in morbidity with no reported cases of mortality. However, from the first week of April 2009 the morbidity trend increased and reached up to 41 cases in mid May. There was steady trend of low morbidity and mortality till the second week of June with sudden increase in morbidity and mortality from third week of June. The morbidity was increasing by the end of July, whereas mortality trend was decreasing. The maximum number of morbidity cases (97) was recorded in the second week of July 2009. In terms of mortality, the peak of 38 cases was observed in the second week of July 2009. Stool samples from district hospital, Khalanga and Dali health post were collected and tested in Nepal Public Health Laboratory. Out of the total 13 samples tested, 5 were diagnosed as harboring *Vibrio cholerae* (*V. cholerae* 01 biotype El Tor serotype Ogawa)

Table No. 1: Organism detected in the stool sample

SN	Organism	No (%)
1	*Vibrio cholerae*	5 (38.46)
2	*E. coli*	3 (23.07)
3	*Salmonella*	1 (7.69)
4	None	4(30.76)

Nepal Health Research Council, (2009); out of the total of 425 morbidity cases as registered in DHO hospital Khalanga, 58% were male and 42% were female. Likewise at Dalli Health post, out of 453 morbidity cases, 53% were male and 47% were female. The reproductive age group (15-44 years) appeared to be the most affected by the diarrhoeal outbreak. In DHO hospital, 65% percent of 15-44 age groups were diarrhoeal cases, while in Dali health post, 53% of similar age group was admitted with diarrhoeal symptoms. Children appeared to be the least affected group with only 0.2% at DHO hospital.

Table No. 2: Age wise distribution of diarrhea in Jajarkot district.

S.N.	Age group	DHO Khalanga (%)	Health Post Dalli (%)
1	0-4	1 (0.2)	51 (11)
2	5-14	119 (28)	87 (19)
3	15-44	275 (65)	242 (53)
4	45-59	20 (5)	32 (7)
5	≥60	10 (2)	41(9)
6	Total	425	453

Nepal Health Research Council (2009) Jajarkot district is widely inhabited by Dalit group (ethnic code 1), Disadvantaged group (ethnic code 2) and Upper Caste group (ethnic code 6). Table 3 shows that out of the total number of patients visiting the district hospital, majority (49 %) were of the Upper Caste group (Brahmin, Chhetri, Thakuri etc) while at the Dalli Health Post the majority of the affected population appeared to be of the Dalit group (50%). Disadvantaged group also appeared to be in the higher-affected category at both sites. From the diarrhea mortality and morbidity data provided by the district health office for the Jajarkot district as a whole, the attack rate (AR) was calculated to be 8.2% and case fatality ratio (CFR) was 1% (number of cases 12,500, deaths 128, and Jajarkot population 151,551). The most affected VDCs in terms of mortality were Majhkot and Kortang where number of deaths was 19 and 16 respectively. As reported, only 10 deaths out of 128 occurred in the health institution, which suggests that patients with access to public health institutions were less likely to die from diarrhea.

Table No. 3: Ethnicity distribution of diarrhea causes in Jajarkot districts

S.N.	Ethnicity	DHO Khalanga (%)	Health Post Dalli (%)
1	Dalit	143 (34)	228 (50)
2	Disadvantaged Janajatis	64 (15)	79 (17)
3	Disadvantaged non-dalit Terai caste groups	11 (3)	2 (0.4)
4	Relatively advantaged Janajatis	1 (1)	1 (0.2)
5	Upper caste groups	206(49)	143 (32)
6	Total	425	453

Nepal Health Research Council, (2009); Clinical presentation of extensive watery loose motion, vomiting and rapid dehydration of diarrhea cases leading to death in a short time had raised suspicion about the possibility of cholera infection in Jajarkot and Midwest diarrhea epidemic. To find around 40% (5 out of 13) stool samples positive for Cholera imparted a strong suggestion to consider Jajarkot diarrhea as a case of Cholera epidemic. This initial finding was substantiated later by further detection of Cholera

organisms from the stool samples collected from Jajorkot, Rukum and Dailekh during the preparation of the article.

According to Shrestha (2010) 20 percent of literate mothers and 38 percent of illiterate mothers believed the cause of diarrhea was related to hot/cold about 10 percent and 10 percent through food should not be taken at all. About 36 percent literate and 28 percent illiterate mother breast feed their children up to 24 months 28 percent illiterate mothers dependent on Dhami Jhakri and 26 percent literate mothers treat by home made solution medicine for treatment of diarrhea. It is evident that 48 percent + 48 percent both groups of mothers' hears about ORS and ORT only 18 percent literate and 4 percent illiterate mothers can prepare ORS and ORT correctly. In conclusion, a large majority of mothers do not have adequate information about diarrhea diseases. The result of the study shows that there is a growing need for a well planned result oriented health education strategy ona continuing basis. This study recommends that the mothers of Gundu need to be educated and provided skill on the prevention and use of ORS.

According to NRCS (2010) the current situation is not officially declared as an outbreak, it has triggered the concern of the government, UN agencies, non-governmental organizations and the media to act more rapidly this year to prevent mortalities. On 28 April 2010, the Office of the United Nations Resident and Humanitarian Coordinator issued a press statement in response to the current situation calling for a dramatic increase in investment in water and sanitation facilities in high risk communities to break the tragic cycle of waterborne illnesses. Given previous trends, it is anticipated that without an immediate and sustained intervention, the country could soon be facing an outbreak with numbers of deaths similar to or higher than previous years once the monsoon begins. In 2009, there were more than 370 diarrhea deaths, mostly in western Nepal, according to the government's Epidemiology and Disease Control Division (EDCD). In addition, there were some 67,000 diarrhea cases reported across the country in 2009.

According to NRCS (2010) the current operation was developed bringing in the lessons learnt from the NRCS's acute watery diarrhea outbreak response in 2009, during which the national society responded in 17 outbreak-affected districts and reached nearly 790,000 people. The focus of the NRCS operation covered by this Emergency Appeal is to address the gaps identified from the resource mapping undertaken by the government

and the WASH cluster to reduce the immediate risk of a diarrhea outbreak as well as the long-term risk of waterborne diseases. NRCS will conduct intensive water, sanitation and hygiene promotion campaigns including awareness-raising and information about treatment facilities through volunteer mobilization and will provide diarrhea prevention kits (soap, oral rehydration solution and chlorine tablets) and other supplies like information, education, communication materials, and stretchers at community level. In addition, NRCS will undertake longer term activities to ensure the vulnerable communities remain resilient to outbreaks in the future.

Literature review gives the fundamental knowledge about the complication of any types of research work. It generates several ideas about the thesis work, i.e. what types of methodology should we adopt? How the work should run smoothly? What is the fundamental requirement for the completion of the thesis work? What was the figure of diarrhea in different contest? The data that was already recorded by the other researchers provides an ample idea, analytical feed-back, methodology, comparative analysis, situation and position, occurrence of diarrhea in different contest etc. for the complication of this thesis work. In this respect different types of book, journal, project work, government record, field work, etc. by various researcher had been studies and ideally generate a conceptual frame work for the complication of this thesis work. The generated conceptual frame-work is given below.

2.2 Conceptual framework.

The conceptual frame work of the research was designated on the basis of review of related literature as diagrammatically as mention in the following diagram. It was thought that the above mention existing problem of diarrhea, I think it was necessary to conduct a research about the knowledge, attitude and awareness of the ten graders who are studying In the Government school of Itahari municipality, in Sunsari district. At first the objectives of the research was designated. To meet the objective of the research ideally a diagrammatic sketch was mad.

These parameters are of two types, one explains about the factor that may certainly causes the diarrhea and another groups are the variables these may certainly acts as the antagonistic in function for the spread and transfer of diarrhea. Factors are the point from where the diarrhea becomes out-break and variables are the sources of measurement, which help to facilitate the increase or decrease of the diarrhea. I.e. better management/knowledge of the factors and variables certainly improve the good health condition/ healthy (no diarrhea), even though the bad management/ knowledge of the factors and variables bring to the bad health, diseased condition (diarrhea). So the variables and factors mention above to the health and diarrhea are vice-versa in relation.

CHAPTER-THREE

METHODOLOGY

In order to carry out any sorts of study work, their need a certain methodology of research work. It is regarded as the technological aspect of any research work or survey. Study methodology provides a road map or guideline of research work that assist to achieve the formulated study objectives through well-designed method of data collection, tabulation, analysis and interpretation.

In this chapter, an attempt was made to describe the procedures adopted for the research study. This chapter deals with the research methodology which attempts study on diarrhea; awareness among secondary school students of Itahari Municipality, The

eastern region specially Sunsari district; Itahari Municipality is selected as the site for study.

3.1 Research design:

The study was proposed for quantitative. The study was based on simple descriptive study design.

3.2 Source of data/ population

There were altogether six Government secondary schools, among them 700 students are learning in class 10. The respondents' of this research was 200 i.e.28.57% in trumps of all Government secondary schools of Itahari Municipality.

The research was based on the primary source of data. And the quantitative data was collected and was used in the present study. Primary data was collected through structured question. A total of 200 respondents' of grade 10 was the sample unit of the study.

3.3 Sampling procedure:

There were six secondary schools in Itahari municipality. Since, whole population was not possible to study within the limited time and resources so that; among 700 students only 200 of the responding students was selected on the basis of systematic simple random sampling method. To adopt the systematic simple random sampling method; at first according to percent basis of sampling respondents 28.57% from each school, the respondents were manage to taken. However according to the percentage basis the responding population should changed in hole no by adding or subtracting the population from the main data on the basis of no of student present in the class in that day. For example in Kachana secondary school, there were altogether 80 students 28.57% of 80 students is become 22.8, but in the interview time some selected respondent are absent hence the exact no changed in round figure become 22 only. For example in Kachana secondary school, to choose the respondents in each section (1,4,8,12,16,20,24,28,32,36,40=11) multiple of 4 should use along with first and become 11 respondents among the 40 student in each class, hence altogether there are 22 respondents from two section. Hence to choose the respondents the multiple or even or odd no i.e. 3, 4, and 5 should adopt according to total no of student present in the class in

interviews days. Hence no of respondent and person should manage in researchers favor according to the presence or absence of student in the class, adopting by systematic way on the basis of simple random sampling method.

3.4 Sample size:

The sample size of the study was consists of altogether 200 students studying in grade 10 in the six secondary school among 700 student.

3.5 Research tools:

Open structured question or structure schedule were the major tools, for the data collection. The used tools had been relevant to all the respondents.

Various materials were used to find out the present situation of the problem. Research papers, magazines, books, journals, past publication, were consulted to construct research tools. For the purpose of data collection the researcher was use structured schedule that was developed on the basis of reference materials.

3.6 Validation / Standardization of the Tools:

The reliability and validity of this study depend upon the reliability and validity of the information provided by the respondents of the target population. The sampling error had been minimizing by maximizing the sample size. The structured schedule has been designed with the previous research reports and with discussion among the surveyors after ocular visit. Suggestions of supervision and concerning to expert of related subject has been taken for standardization report. Pre-test of 5% structured questions of total sample respondents had been pre tested. The test was same type of students in the Va.shi. Higher secondary school, in Va.Shi.VDC; for, identify the practicability and determine validity and objectivity of the research.

3.7 Data collection procedure:

From the six secondary schools in Itahari municipality, whole population was not possible to study within the limited time and resources so that; among 700 students only 200 of the responding students was selected on the basis of systematic simple random sampling method. In course of collection of the data, first of all, the authority latter given by the campus, after submition of the proposals, was submitted to the related schools

headmaster and renounced them about the thesis work. The headmaster announced the fact to their staffs, assistances and students for the cooperation and facilitation to the requirement of the researcher. After getting authority from the headmaster, the student of class ten were renounced about the fact and influence them by providing reward for giving the answer of the question i.e. in quiz style, which were become top ten.

After making and standardizing the tools of data collection, the respondents had been chosen, by the systematic simple random sampling method. The structured schedule had given to the respondents and data had collected.

3.8 Data analysis and interpretation procedure:

There may be error during the process of data due to many reasons. In order to minimize the probable error and inconsistencies, the field structured schedule has carefully checked. The data had been analyzed with the help of simple statistical as well as mathematical tools such as percentage, average, mean etc. These data had been presented in the simple descriptive methods, table, figure, pie-chart and bar-diagrams as per the convenience and necessity. The analysis and interpretation was mad with the help of table, figure, pie-chart and bar-diagrams to make the presentation more clear. Finally, the conclusion had been done and recommendation will be for the further study.

CHAPTER-FOUR

ANALYSIS AND INTERPRETATION OF DATA

Collected data were tabulated in sequential order according to the objectives of the study. The following presentation highlights' each of these characteristics as obtained during data collection period. The analysis and interpretation have been shown in tabular form along with pi-chart, bar-diagrams with short description of each aspect.

The analysis and interpretation of this study have been presented in the following section;

4.1 Demographic and socio-economic characteristics of the respondents.

4.2 Personal hygienic character.

4.3 Knowledge on diarrhea.

4.4 Attitude towards diarrhea.

4.5 Awareness toward diarrhea.

4.1 Demographic and socio-economic characteristics

The level of awareness of diarrhea primarily depends on the demographic characteristics of the respondents, so this part consists of general background of the respondents. The variables such as; age, sex, cast, religion, levels of education of the parents, and occupation etc.

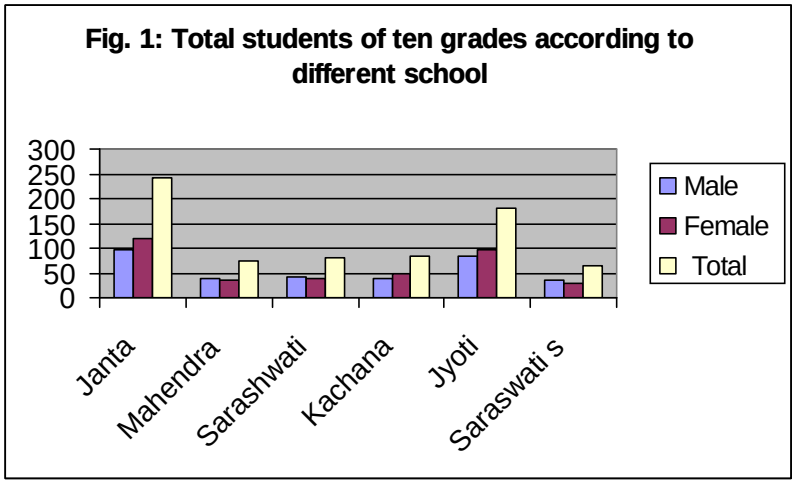
Several variables were included in questionnaire to examine the socio-economic characteristics of the respondents as well as to find out the relationship between dependants and independents variables. The variables used to collect individuals background characteristics have been describe within this sub section.

Table No. 4: Respondents according To School, No of students and sex ratio.

SN	Schools	Total students	Male	Female	Total respondents	Male	Female
1	Janta S. school	241	96	118	65	30	35
2	Mahendra S. school	75	40	35	21	10	11
3	Sarashwati Sec.	80	42	38	22	11	11
4	Kachana S. sec.	85	38	47	24	12	12
5	Jyoti S. school.	180	84	96	51	25	26
6	Saraswati sadan	66	37	29	17	8	9
Total		700	373 (48.14)%	363 (51.86)%	200(28.57)%	96 (48)%	104 (52.0)%

Above table, shows that; there were 700 students in the six secondary school in Ithari municipality. Among the, 700 students (48.14%) boys and (51.86%) girls. Hence the respondent's percentage is also taken as 48% boys and 52% girls among the 200 respondents; from, six secondary schools.

The fact of the ratio is unknown; either by sex ratios of Nepal's population structure or May, parents sends their girls to the Government school and boys to Private Boarding school.



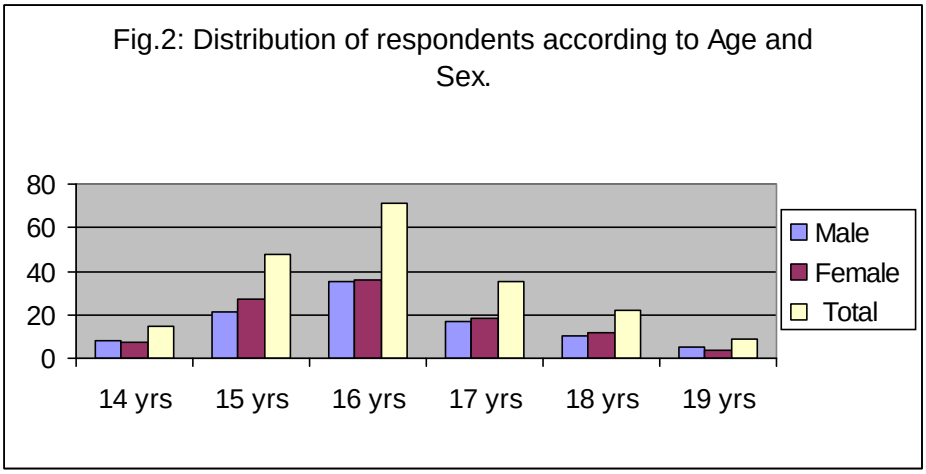
4.1.1 Age and Sex Composition

In this section the age and sex of the respondents is recorded on the basis of the school records. The recorded result is tabulated below,

Table No. 5: Distribution of Respondents according to Age and Sex.

SN	Age	Male		Female		Total	
		No	%	No	%	No	%
1	14	8	8.33	7	6.73	15	7.5
2	15	21	21.87	27	25.96	48	24.0
3	16	35	36.46	36	34.61	71	35.5
4	17	17	17.7	18	17.3	35	17.5
5	18	10	10.42	12	11.54	22	11.0
6	19	5	5.20	4	3.84	9	4.5
Total		96	100	104	100	200	100

The above table shows that 35.5% respondents are of 16 years old, 24% are of 15 years old, 17.5% are of 17 years old, 7.5% are of 14 years old and 4.5% are of 19 years old. Among the respondents 48% are boys and 52% are girls.



The student, those are of 19 years, either they come from the hilly region due to political tug of war or they are the week students and attained class in late age. The fact of the boys and girls ratio is unknown; either by sex ratio of Nepal's population structure or May, parents sends their girls to the Government school and boys to the private boarding school.

4.1.2 Religion.

From the beginning of the human civilization religion is deeply rooted in the attitudinal and behavioral part of human being. It has been regarded as the function of social control. The faith on any religion directly influences the human behavior as well as it determines the individual value system sometimes the religious belief may support for the risk behavior, which may result in getting disease.

Therefore, the respondents have been selected to represent different religions. The data regarding the distribution of religion is given below.

Table No. 6: Distribution of Respondents by religions.

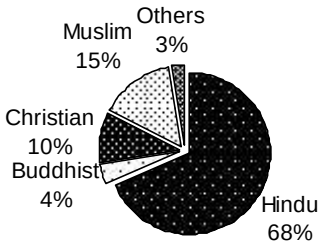
S.N	Types of Religion	No of respondents.	Percentage. (%)
1	Hindu	137	68.5
2	Buddhist	8	4.0
3	Christian	20	10.0
4	Muslim	30	15.0
5	Others	5	2.5
	Total	200	100

Above table revealed that that the 137 (68.5%) respondents believe on Hinduism which stands as the major ones, and which belongs to Brahmin, Chhetri, and Choudhary

cast group etc. Similarly 30 (15%) respondents believe on Muslim as the second largest group. In the same way, Christian were 20 (10%), Buddhist 8 (4%), and remaining respondents 5 (2.5%) are believed on other religion.

The above result is also represents as the multi-religion structure property as in Nepal.

Fig.3: Distribution of respondents by religion



4.1.3 Cast of respondents.

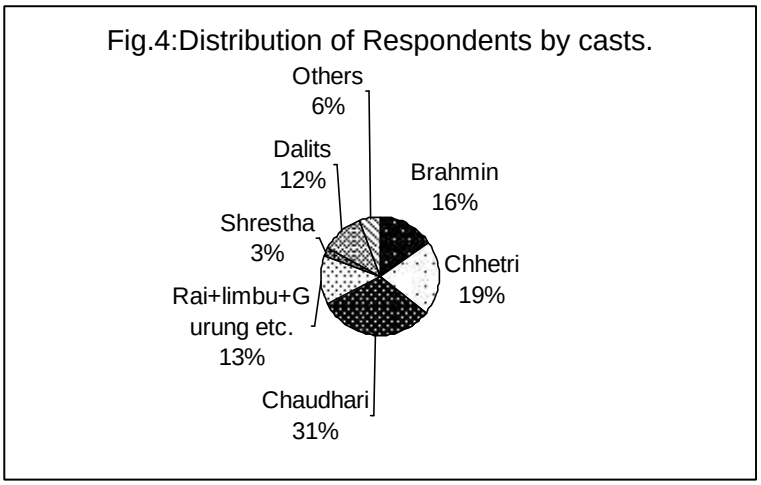
Various casts were studying in the Government school. But, all are not submitted in the sampling. The respondents which are of various casts are given in the following table.

Table No.7: Distribution of Respondents by casts.

S.N.	Cast of respondents	No	Percentage
1	Brahmin	31	15.5
2	Chhetri	40	20.0
3	Chaudhari	64	32.0
4	Rai+limbu+Gurung etc.	26	13.0
5	Shrestha	5	2.5
6	Dalits	23	11.5
7	Others	11	5.5
Total		2oo	100

Above table gives the information about the cast and ethnicity of the respondents. The total respondents fall in to seven categories. Among them the heights no of the respondents covers by Chaudhari 64 (32.0%), that is followed by Chhetri 40 (20.0%) and Brahmin 31 (15.5%), Rai+limbu+Gurung etc. are 26 (13.0%), Dalits are 23 (11.5%), and remaining others are 11 (5.5%) respectively.

The variability of cast that shows in the table, according to respondent records is that; there may be the reason of internal migration from hilly reasons due to political instability, facilities orientation and safe. Due to the above mention respect, people are gathered in the municipality, making mix cast resident's area of Nepal. That is as same as the multi-cast structure property of Nepal.



4.1.4 Parental education

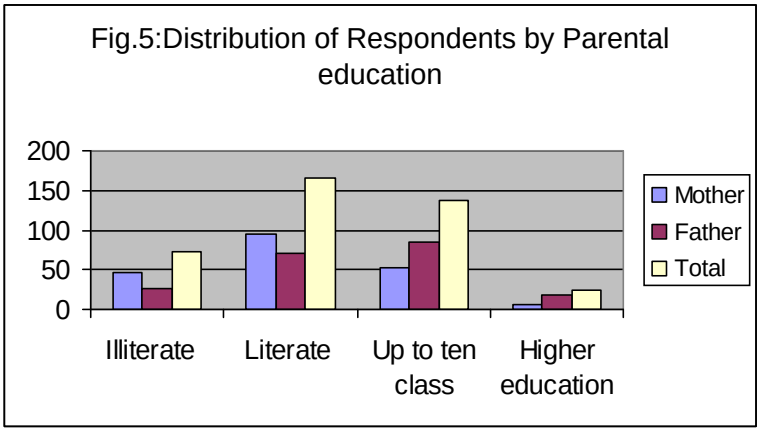
Education is one of the important means of attaining social and economic development. It plays a key role to improve the knowledge and attitude towards communicable disease like diarrhea. Generally education leads a person towards the betterment of life. What level and quality of education a person deserves determine the success in life? From the questionnaire the result obtained was shown in the following table.

Table No. 8: Distribution of Respondents by Parental education

S.N.	Level of education	Mother		Father		Total	
		No	%	No	%	No	%
1	Illiterate	46	23	27	13.5	73	18.25
2	Literate	95	47.5	70	35.0	165	41.25
3	Up to ten class	53	26.5	85	42.5	138	34.5
4	Higher education	6	3.0	18	9.0	24	6.0
Total		200	100	200	100	400	100

From the above table, shows that the educational level of the parents was classified in to four groups (i.e. Illiterate, Literate, Up to ten class, Higher education) there were 165 (41.25%) of total respondent are literate, among them 95 (47.5%) are mother and 70 (35.0%) are father. In this way 138 (34.5%) are Up to ten class among

them 53 (26.5%) are mother and 85 (42.5%) are father. Similarly 73 (18.25%) are of Illiterate among them 46 (23%) are mother and 27 (13.5%) are father. In this way 24 (6.0%) gets Higher education among them 6 (3.0%) are mother and 18 (9.0%) are father respectively.



It is concluded that respondent's mother's education level was lower than their father's educational status in this study. Among the respondent's fewer are get higher education, they may migrated people, those they are permanent cast are shaded/ lack of education due to poverty but become literate due to urbanization and passing their time to the labors. Average people get education up to ten classes due to modernization and fashion.

4.1.5 Parental occupation

An income source of the family is a most important variable. It can play a vital role to determine the awareness level of health and disease. It is significantly associated with knowledge and attitude of communicable disease like diarrhea. During the study period the recorded parental occupation was listed below in the table.

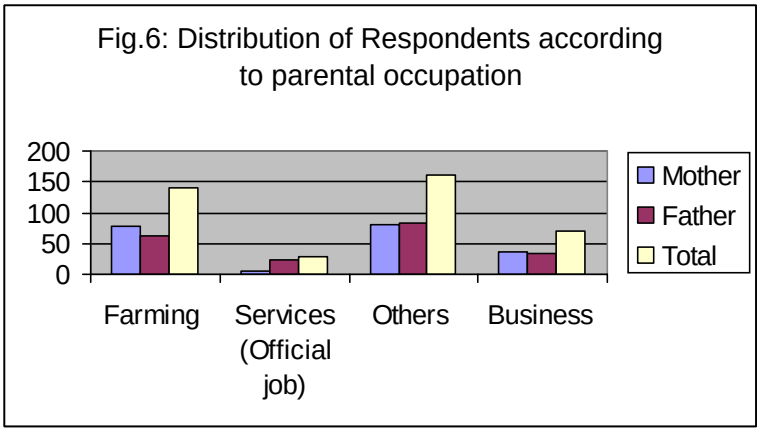
Table No.9: Distribution of Respondents according to parental occupation

SN	Income sources	Mother		Father		Total respondent	
		No	%	No	%	No	%
1	Farming	78	39.0	62	31.5	140	35.0
2	Services (Official job)	5	2.5	23	11.5	28	7.0
3	Others (foreign, civil, daily wage, factory, house work.)	80	40.0	82	41.5	162	40.5
4	Business	37	18.5	33	16.5	70	17.5
Total		200	100	200	100	400	100

As stated in above table, most of the respondents parents are depend upon factories or other types of job, they are of 160 (40.5%), among them 80 (40.0%) are mother and 82 (41.4%) are father. In this way agriculture covers the second position i.e. 140 (35.0%), among them 78 (39.0%) are of mother and the rest 62 (31.5%) are father, that may be the fact as; male are more attracted towards the foreign job than female.

Similarly; 70 (17.5%) are involve in business among them 37 (18.5%) are mother and rest 33 (16.5%) are father. The male had gone to the foreign job or preferred to the factories. There are very less no of parents are involved, 28 (7.0%) in official job among them 5 (2.5%) are of mother and 23 (11.5%) are of father; it means among the respondents the higher education owner are very low.

Due to the reason from the former result (table 10), a lot of people are based upon the factory/daily wises type of job, some are in business due to urbanization, landlord in agriculture and few are depends up on the government job who get higher education. I think the overall result is influence that; those students who are in government school in city area are poor, fashionably the able parents sends their children in private school.



4.1.6 Family size

Small family size is an indicator of healthy and happy family. There is more probability of family relation as well as frankly discussion on health related topics and other in small family. To find out the family size of the respondents an enough questionnaire was given and the reported result was tabulated below.

Table No.10: Distribution of Respondents according to family size.

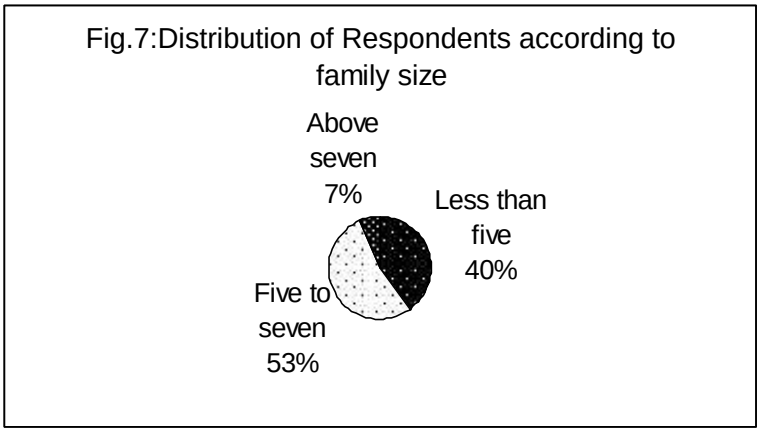
S.N.	Family size	No of respondent	Percentage
1	Less than five	80	40

2	Five to seven	107	53.5
3	Above seven	13	6.5
Total		200	100

Above table shows that 107 (53.5%) respondents records have the family size of five to seven person. In the modern contest this family size is slight large. In the health phenomenon this family size brings the several problems in trumps of health and disease, such as poor sanitary habitat, poor consumption of proper food and balance diet, malnutrition, etc. are the cause of loss of immunity and hence attack of different disease.

Similarly, 80 (40%) respondents reported that their family size was less than five, this is some what good family size in different respect. Likewise, 13 (6.5%) respondents' records that their family size is too large (above seven) this also bring different problems to conduct their family.

Most of the cast i.e. chaudhari, muslim are prefer to live in common family and has the large no of member (more than 7), but other cast Brahmin, chhetri, beside madashey are prefere to live separate family. That is, either their tradition or cultural habits.



4.1.7 House holds facilities.

The respondents were asked to specify, what kind of facilities they have? Availability of the house holds facilities helps to increase the level of knowledge in different parameter. The respondent records about the household facilities are tabulated below.

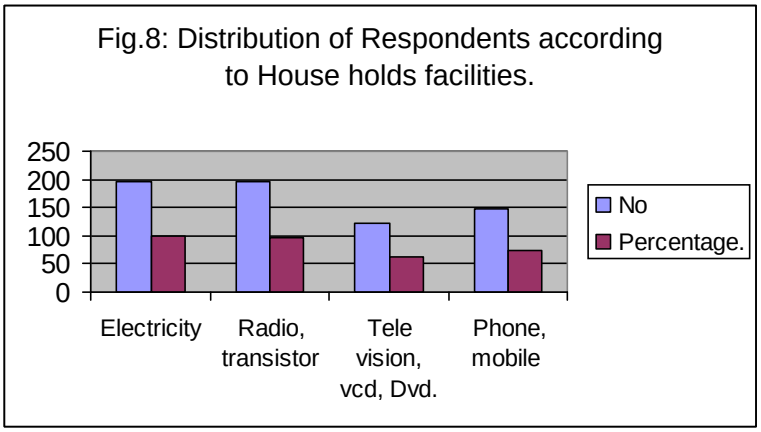
Table No.11: Distribution of Respondents according to House holds facilities.

S.N.	House holds facilities	No of respondents.	Percentage.
1	Electricity	197	98.5
2	Radio, transistor	195	97.5

3	Tele vision, vcd, Dvd.	123	61.5
4	Phone, mobile	147	73.5

Above table shows that 197 (98.5%) have the electricity facilities, 197 (97.5%) respondents have the radio, which is the best electric medium for the information. Similarly 123 (61.5%) have Tele vision, VCD, DVD. etc Facilities, and 147 (73.5%) have the Phone, mobile facilities these are the best source of information media and notify all the events or news throughout the world.

Modern age is the scientific age of twenty first century, advancement of scientific technology. Hence the respondents are not except for the development of communication and all has the several facilities mention above.



4.1.8 Source of information.

The given table provides the information, on the distribution of the respondents who have knowledge on diarrhea by source of information. The electronic media is the main source of information in different respect.

Table No.12: Distribution of Respondents according to Source of information.

S.N.	Source	Male		Female		Total	
		No	%	No	%	No	%
1	Radio	36	37.5	40	38.46	76	38.0
2	Teacher	16	16.66	18	17.30	34	17.0
3	Television	17	17.7	21	20.19	38	19.0
4	Newspaper	5	5.2	3	2.89	8	4.0
5	Friends	15	16.62	17	16.35	32	16.0
6	Others	7	7.29	5	4.8	12	6.0
Total		96	100	104	100	200	100

From the above table, the major sources of information are the Radio 76 (38.5%). Among them male respondents records 36 (37.5%) and female respondents records 40(38.46%). Similarly television 38 (19%), friends 32 (16%), others (pump let and hooding board) 12 (6%), and newspaper 8 (4%) are the means of information medium.

In this sub-unit i.e. Demographic and socio economic character; seven different factors are discussed. This parameters does not measure directly the objectives of this research, but all are the fundamental factors and certainly responsible for the attack/ spread of communicable disease i.e. Diarrhea. For example, little age i.e. under 5 years are high risk of diarrhea because of their hygienic habit and sanitation. Fasting, dieting is one of the cultural habit in some religion i.e. Ramjhan of musalman has bad dietary habits, that strictly prohibited for the health, that may decreases the immunity and attack by several diseases. Good and proper education, occupation, family size, household facilities and source of information certainly provides the good health environment instead of being (diseased) diarrhea.

4.2 Personal hygienic character.

From the beginning of human civilization personal hygiene / health is deeply rooted in the attitudinal and behavioral part of human beings. It has been regarded as the function of social control. The faith on any hygiene directly influences the human behavior as well as it determines the individual value system. Following are lot of variables which directly or indirectly influence for the transmission of several diarrhea diseases.

4.2.1 Bath and Brush.

Daily Bath and Brush makes a man healthy and germ free. Four different types of question were asked for the respondents to their daily habit on Bath and Brush. The respondent results were recorded as in the following table.

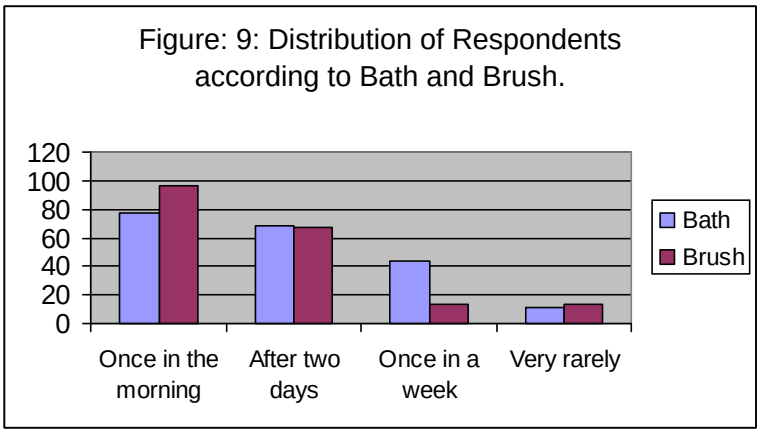
Table No.13: Distribution of Respondents according to Bath and Brush.

S.N.	Parameters	Bath		Brush	
		No	%	No	%
1	Once in the morning	77	38.5	96	48.0
2	After two days	68	34.0	67	33.5
3	Once in a week	44	22.0	14	7.0
4	Very rarely	11	5.5	13	11.5

Total	200	100	200	100

From the above table it was recorded that 77 (38.5%) and 96 (48%) was taken daily bath and brush. Similarly 68 (34%) and 67 (33.5%) takes after two days, 13 (11.5%) take bath and brush very rarely, and remaining 14 (7%) were does once in a week. These habits nearly belong to the health of the people.

The analytical aspect of the above table is that; the people sever by poverty, lives in the gathered area, and land less and labor environment has not scheduler health habit. The population of the research has the same problems as mention above and loss of daily scheduler health habit i.e. bath, brush etc. they are the higher risk population for the out break of diarrhea problem and spread.



4.2.2 Types of toilet and hand wash habit

It is most important factors for the influence of health habit. Good health habit is the fundamental property of good health. For this phenomenon it should necessary to observed the toilets and washing their hands after going toilet. Regarding that some question were asked for the respondent and the result was recorded according to following table.

Table No.14: Distribution of Respondents according to types of toilet and hand wash habit.

S.N	Types of toilet	No	%	Hand wash	No	%
1	Water-seal type	89	44.5	Using Soil	35	17.5
2	Dug-well type	58	29.0	Using Ash	37	18.5
3	Bore-hole type	30	15.0	Using soap	117	58.5
4	Service type*	23	11.5	No such habit	11	5.5
Total		200	100	Total	200	100

* **Service type- Toilet In the open area/ field.**

From the above table 89 (44.5%) respondents has Water-seal type of toilet, followed by 58 (29%) has Dug-well type, 30 (15%) has Bore-hole type and last 23 (11.5%) has the Service type toilet. The record marks that people of certain culture, goes for toilet in open field yet, such type of habit brigs for the transmition of certain bacterial and viral influenza in summer season.

The people who does not wash their hands properly, that is the fifty percent cause of becoming diseased; especially viral, bacterial, nematodes, and various type of influenza. To know the respondents view, some questions were asked for the respondents, according to them 117 (58.5%) used shop, 37 (18.5%) used Ash, 35 (17.5%) used soil and remaining 11 (5.5%) has no such habit for washing their hands after going toilet.

Majority of respondent has managed type of toilet and good hand washing habit but few shows the primitive knowledge and has less ideas about the hygiene. That may be the reason of under education and poverty.

4.2.3 Garbage disposal /management.

Disposal of garbage is the fundamental way of managing the proper sanitary habitat. To know the sanitary management, some questions were asked for the respondent and the obtained reports were tabulated below.

Table No.15: Distribution of Respondents according to garbage disposal.

S.N	Disposal of garbage	No of respondents	Percentage (%)
1	In river	17	8.5
2	In the common pit	48	24.0
3	Collected and burnt	69	34.5
4	No such management.	66	33.0
Total		200	100

In terms of disposal of their garbage for the proper management of sanitary habit 69 (34.5%) were collected and burnt, likewise; 66 (33%) has no such type of habit, 48 (24%) were collected in the common pit, and 17 (8.5%) were thrown in the river.

In the view of disposal management, the people had no any habit of scheduler disposal management, this is because of, either they are in agricultural area or no responsible for the sanitation due to lack of proper health education.

4.2.4 Source of drinking water and using habit.

If we drink potable water; 'fifty percent disease become cure' in trumps of this phenomenon it is necessary to use safe and germ free water. Regarding this question, it is necessary to know the respondents view. The respondent's record was recorded in the following table.

Table No.16: Distribution of Respondents according to Source of drinking water and using habit.

S.N.	Source	No	%	Use	No	%
1	Tube well	89	44.5	After boiling	7	3.5
2	River	-	-	Filtering	38	19.0
3	Well	7	3.5	Putting water guard	11	5.5
4	Pipe water	104	52.0	Directly.	144	72.0
Total		200	100	Total	200	100

From the above table 104 (52%) respondents used pipe water, 89 (44.5%) used tube-well, 7 (3.5%) used well. It is found that no were used the open river for the source of drinking water.

Similarly, 144 (72%) used directly, 38 (19.0%) used by filtering, 11 (5.5%) used by putting water guard, and 7 (3.5%) used by boiling.

In this respect, most of the people are used Tube-well and tape water by not filtering. That is due to that either the Tube-well and tape water are Arsenic free or is properly filtered in the tanks or they may not have any method of purification of the water.

4.2.5 Distance between source of water and Toilet.

It is necessary to know the distance between source of drinking water and toilet, because the toilet certainly contaminated the source of drinking water and may influence the spread of several diseases.

Table No.17: Distribution of Respondents according to distance between source of water and Toilet.

S.N.	Distance	No of respondents	Percentage
1	5-15 meters	124	62.0
2	15-25 meters	62	31.0
3	25-50 meters	11	5.5
4	Above 50 meters	3	1.5

Total	200	100

From the above table the respondent records, i.e. 124 (62%) has (5-15) meters from their toilet and source of drinking water, 62 (31%) has (15-25) meters, 11 (5.5%) has (25-50) meters and only 3 (1.5%) has above 50 meters respectively.

Some of the respondents have nearer their toilet and source of drinking water that is because of the scarcity of the land or may not know the contamination of drinking water by the influence of the toilet.

4.2.6 Types of houses and ventilation system.

Types of houses and ventilation system are another fundamental factor of health. The respondents have following types of houses and ventilation system.

Table No.18: Distribution of Respondents according to Types of houses and ventilation system.

SN	Types	No	%	Ventilation	No	%
1	Concrete	27	13.5	No Ventilation	88	44.0
2	Semi concrete	69	34.5	Poor Ventilation	72	36.0
3	Mud type	74	37.0	Satisfactory	10	5.0
4	Fancy (Bamboo)	30	15.0	Sufficient	30	15.0
	Total	200	100		200	100

From the above table, the respondent records shows that; 69 (34.5%) has Semi concrete type of house, 74 (37%) has Mud type, 30 (15%) has Fancy (Bamboo) type and 27 (13.5%) has Concrete type of houses respectively.

Types of houses and ventilation system are co-related, but; from the respondent result 88 (44%) have No Ventilation, 72 (36%) have Poor Ventilation, 30 (15%) have sufficient ventilation and remaining 10 (5%) have satisfactory ventilation system respectively.

Majority of the student in the urban government school are poor, due to the poverty of their parents; they did not made their house properly, whether they have ideas about the ventilation. This is the fundamental factor for the outbreak of diarrhea in Nepal.

4.2.7 Treatment and relation to hospital.

Todays, the 21st century, yet the people of Nepal are also believed for Dhami/ Jhankri in stead of doctor. In this section it is necessary to know the respondent's habits to goes the hospital during illness or to Dhami/ jhankri for the treatment and habits to

visit hospital. The respondent's records were recorded in the following table. The questions are; (If, there is a diarrhea patient in your family; where do you treat at first? How often did you go to the hospital/ health post?)

Table No.19: Respondents according to Treatment and relation to hospital.

SN	Service	No	%	Suffer	No	%
1	Health post	68	34.0	At list once a months	06	O3.0
2	Personal clinic	47	23.5	At list twice a months	38	19.0
3	Home treatment	40	20.0	Very rarely	87	43.5
4	Dhami/Jhankri	45	22.5	No visited yet.	69	34.5
		200	100		200	100

The recorded respondent result shows that 68 (34%) are goes to the hospital for the treatment. Similarly 47 (23.5%) believes to goes the personal clinic, 45 (22.5%) believes to Dhami/ Jhankri, and remaining others 40 (20%) does home treatment at first, when they become sick. From the above respondent records 87 (43.5%) has visited very rarely to the Hospital, 69 (34.5%) are not visited yet, 38 (19%) visited at list twice a months, and only 6 (3%) visited at list once a months.

From the above result, yet the patient are believes to the Dhami/ Jhankri. The habits of going hospital are very rare. Most of the people of Nepal are out of getting hospital facilities. There is no any smooth relation to the health workers. It may be the facts that, the health workers are only in the district headquarter due to political imbalance or by lacking education they followed the traditional way.

In this sub-unit 'personal hygienic character' seven different factors are discussed. These parameters do not measure directly the objectives of the research but are fundamental factors and may influence the spread of diarrhea. Bath and brush, type of toilet and hand washing habit, disposal management, source of drinking water and using habit, types of houses and ventilation system, treatment and relation to the hospital and distance between source of drinking water and toilet are the high risk variables for the transmitting of diarrhea. The management of these parameters and the chance of outbreak/ spread of diarrhea with each other become vice-versa.

4.3 Knowledge on diarrhea.

The knowledge of diarrhea helps for the prevention and control of diarrhea diseases. It helps people to create awareness and change their Hygienic behaviors. One of

the notable objectives of this study is too aware the knowledge of respondents about diarrhea. This sub chapter discusses the understanding, views and opinion of the respondents related to diarrhea, which is given below.

4.3.1 Hearing on diarrhea.

The foremost important variables assess the knowledge on diarrhea can be taken as heard of diarrhea. The question was asked if the respondent have heard diarrhea or not. The following is the respondent records given in the table.

Table No.20: Distribution of Respondents according to Hearing on diarrhea.

SN	Heard of diarrhea	Male		Female		Total	
		No	%	No	%	No	%
1	Yes	96	100	102	98.07	198	99.0
2	No	-	-	2	1.92	2	1.0
Total		96	100	104	100	200	100

From the above table the respondent records were recorded as 100% male are heard on diarrhea but the result was 98.07 % in case of female. In total the result was that the 198 (99%) was heard on diarrhea. Only 2 (1%) girls show confusion about the heard on diarrhea. Hence, the boys are seems to be clever than the girls.

Due to the information media, teacher and other sources almost all respondents had heard about diarrhea. Few are exceptional, may be the lack of health education or they are low minded.

4.3.2 Types of disease.

The main cause of diarrhea is due to potable drinking water, poor sanitation and personal hygiene. To know the types of disease, it is necessary to know the respondents view. For that some question were asked to the respondents and the record result as tabulated below.

Table No.21: Distribution of Respondents according to Types of disease.

SN	Responses	Male		Female		Total	
		No	%	No	%	No	%
1	Communicable	67	69.79	69	66.35	136	68.0
2	Non- Communicable	06	6.25	7	6.73	13	6.5
3	Fatal	02	2.08	5	4.80	7	3.5

4	Dangerous	21	21.87	23	22.12	44	22.0
Total		96	100	104	100	200	100

From the above table, respondents' record about the types of disease; whether the diarrhea is communicable or not, 136 (68%) records as communicable, among them 67 (69.79%) male and 69 (66.35%) female. In this way; 44 (22.0%) records as Dangerous, among them 21(21.87%) are males and 23 (22.12%) are females. In this regard, they had thought that, in western sides of Nepal a lot of people die out per year. Similarly, 13 (6.5%) record as Non- Communicable, among them 6(6.25%) are males and 7 (6.5 %) are females. Rest of the respondents 7 (3.5%) records as fatal i.e. 2 (2.08%) are males and 5 (4.8%) are the females.

From the above respondent result, majorities have the knowledge about the diarrhea, that is communicable but fewer become confused, because diarrhea killed a lot of people in western region of the country.

4.3.3 Knowledge on symptoms of diarrhea.

To evaluate the knowledge, it is important to ask some question for the respondents. In this instance, first of all respondents were asked, whether they know or not the symptom of diarrhea. Following table records the result of respondents.

Table No.22: Distribution of Respondents according to Knowledge on symptoms of diarrhea.

SN	Knowledge	No of respondent	Percentage (%)
1	Yes, know	183	91.5
2	No, not known	17	8.5
Total		200	100

From the above table, 183 (91.5%) respondents agree to know the little knowledge about diarrhea. But 17 (8.5%) were become confused, what the exact symptoms of diarrhea? An overall record was satisfactory.

Those, the respondents who knew the symptom of diarrhea were asked to specify the symptoms. The following table records the respondent's record below.

Table No.23: Distribution of Respondents according to specific Knowledge on symptoms of diarrhea. (They choice what they know, giving priority)

SN	Specific symptoms of diarrhea	No	Percentage (%)
1	Continuous stool from 3-20 times per day.	183	91.5

2	Stool should be thin and watery.	97	48.5
3	Slight fever.	56	28.0
4	Stomach ash	174	87.0
5	Loss of weight	82	41.0
6	Dehydration/ Tongue become dirty.	77	38.5
7	Loss of functioning of kidney.	1	0.5

From the above table, the respondent records shows, 183 (91.5%) can records the symptoms as Continuous stool from 3-20 times per day, 174 (87.0%) can records the symptoms as Stomach ash, 97 (48.5%) can records the symptoms as Stool should be thin and watery, 82 (41.0%) can records the symptoms as Loss of weight, 77 (38.5%) can records the symptoms as Dehydration/ Tongue become dirty, 56 (28.0%) can records the symptoms as Slight fever, and 1 (0.5%) can records the symptoms as Loss of functioning of kidney respectively.

From the above result almost all has the knowledge about diarrhea majority of them can say the specific and general symptoms of diarrhea, that is the reason of either the disease thought to be very common or has got knowledge from various means.

4.3.4 Causative agent of diarrhea.

The disease is caused by various causative agents i.e. primary and secondary. The primary causative agent is the micro bacteria *Bacillus spp.* And the secondary are the poor sanitary condition, health and food habit, and absence of potable drinking water. To know the respondents view about the knowledge of diarrhea some priority basis question were asked for the respondents and the records of them was recorded as below.

Table No.24: Distribution of Respondents according to Causative agent of diarrhea. (They choice what they know, giving priority)

SN	Causative agent	Respondents no	Percentage (%)
1	*Bacillus spp*. (Primary causative agent)	27	13.5
2	Over crowding	23	11.5
3	Poor sanitary condition	197	98.5
4	Intestinal worm	67	33.5
5	Food poisoning	33	16.5
6	Malnutrition	25	12.5
7	Indigestible food	83	41.5
8	Temper	13	6.6
9	Food habit/ dirty water.	188	94.0

From the above table, the respondent records shows, 197 (94.0%) can records the causative agent as Poor sanitary condition, continuously,188 (87.0%) can records the causative agent as Food habit/ dirty water, 83 (41.5%) can records causative agent as Indigestible food, 67 (33.5%) can records the causative agent as Intestinal worm, 33 (16.5%) can records the causative agent as Food poisoning, 27 (13.5%) can records the causative agent as *Bacillus spp*. (Primary causative agent), 25 (12.5%) can records the causative agent as Malnutrition, 23 (11.5%) can records the causative agent as Over crowding, and 13 (6.6%) can records the causative agent as Temper respectively.

The result obtained was satisfactory, few can records as the primary causative agent, I think those they have good knowledge. Majority had recorded as the general secondary causative agent of the diarrhea, I think; it will be thought that the diarrhea is the simple/ common in everywhere.

4.3.5 Mode of transmition

To know the respondent view about mode of transmition of diarrhea, various questions were asked. The given result in the priority; was recorded as in the following table.

Table No.25: Respondents according to Mode of transmition of diarrhea.

SN	Mode of transmition	Respondents no	Percentage (%)
1	Contaminated food and waters	178	89.0
2	Unhygienic habits and practices	188	94.0
3	Flies	113	56.5
4	Late isolation of patient	73	36.5
5	Bottle feeding	34	17.0
6	None of the above.	3	1.5

From the above table, the respondent records shows, 188 (94 %) can records the Mode of transmition by Unhygienic habits and practices,178 (89.0%) can records the Mode of transmition by Contaminated food and waters, 113 (56.5%) can records the Mode of transmition by Flies, 73 (36.5%) can records the Mode of transmition by Late isolation of patient, 34 (17.0%) can records the Mode of transmition by Bottle feeding, and 3 (1.5%) can records the Mode of transmition by None of the above or they did not know about the mode of transmittion of the diarrhea, respectively.

4.3.6 Major transmitting rout

Diarrhea is one of the communicable diseases, so it is transmitted from one diseased person to the other healthy person. For knowing the knowing the knowledge of respondents, four types of question were asked on the priority of choice. The obtained result was tabulated below.

Table No.26: Respondents according to major transmitting root of diarrhea.

SN	Transmitting rout	No of respondents	Percentage (%)
1	Facial-oral rout	35	17.5
2	Flies	127	63.5
3	Water	38	19.0
4	Others	-	-
Total		200	100

From the above table, the respondent records shows, 127 (63.5 %) can records the rout of transmition from the Flies, 38 (19.0%) can records the rout of transmition from the Contaminated food and waters, 35 (17.5%) can records the rout of transmition from the Facial-oral rout, i.e. the actual answer respectively. This result can interpreted as the level of knowledge of the student for the implementation of health education in the Government school.

From the respondent result, majority can records the mode of transmitting rout of diarrhea are the flies. They thought that the flies settle in dirty places and can carry several diseases that influence the diarrhea.

4.3.7 Preventive measure

'Prevention is better than cure' in this regard, what the respondents were known? About, the preventive measure of diarrheas disease. The respondent's records for this instance were tabulated below.

Table No.27: Distribution of Respondents according to Preventive measure

SN	Preventive measure of diarrhea.	No of respondent	Percentage (%)
1	Good nutrition	29	14.5
2	Safe drinking water and personal hygiene	107	53.5
3	Protection of food from dirty and flies	21	10.5
4	Brest feeding.	3	1.5
5	Disposal of faces/ open toilet	27	13.5
6	Health education	13	6.5
7	Isolation of patient.	-	0.0
Total		200	100

From the above table, the respondent records shows, 107 (53.5 %) can records the diarrhea disease can prevent by Safe drinking water and personal hygiene, 29 (14.5%) can records the diarrhea disease can prevent by Good nutrition, 27 (13.5%) can records the diarrhea disease can prevent by Disposal of faces/ open toilet, 21 (10.5%) can records the diarrhea disease can prevent by Protection of food from dirty and flies, 13 (6.5%) can records the diarrhea disease can prevent by Health education,3 (1.5%) can records the diarrhea disease can prevent by Health education, and nobody has the ideas about Isolation of patient, respectively.

Majority of respondent's records, Safe drinking water and personal hygiene is the major preventive measure of diarrhea and other gives less priority. Because they thought that water is the medium for the transformation of diarrhea.

4.3.8 Treatment of diarrhea (first aid)

What the respondents know? About the first aid treatment, some questions were asked for the respondent and the reported result was recorded as in the following table.

Table No.28: Respondents according to Treatment of diarrhea (first aid).

SN	Treatment of diarrhea	On of respondents	Percentage (%)
1	Salt + Sugar + water	117	58.5
2	Jeevan-Jal/ Nawa Jeevan	58	29.0
3	Water (potable)	23	11.5
4	Tablet medicine (doctor)	2	1.0
Total		200	100

From the above table, the respondent records shows, 117 (58.5%) can records the first aid treatment of diarrhea by providing Salt + Sugar + water, 58 (29.0%) can records the first aid treatment of diarrhea by providing Jeevan-Jal/ Nawa Jeevan, 23 (11.5%) can records the first aid treatment of diarrhea by providing Water (potable), and 2 (1.0%) can records the first aid treatment of diarrhea by providing Tablet medicine (doctor), respectively.

By the cause of information media, most of the respondent has known about the treatment process of the diarrhea i.e. giving Salt + Sugar + water.

This sub-unit discusses about the knowledge of the respondents towards diarrhea. The result from the respondents was that; almost all has heard about the diarrhea disease, majority of them had written easily the disease is communicable, almost all have the knowledge on symptoms and specific symptoms of diarrhea, majority have the

knowledge about the primary and secondary causative agent of diarrhea, almost all has the knowledge on the mode of transmission and transmitting rout of diarrhea, and has the knowledge of different preventive measure. In this regard it can be concluded that, the people of eastern region are less affected than western region by the diarrhea due to the knowledge and awareness to the people.

4.4 Attitudes towards diarrhea.

The diarrhea disease is caused due to the poor sanitary condition, personal health and unsafe drinking water. Due to the lack of unsafe drinking water, a lot of people are dying out in western side of Nepal. People have various views about the disease, some said dangerous and other says fatal. This subchapter includes some question to know the respondent views and opinion regarding the disease diarrhea.

4.4.1 Diarrheas problems.

Diarrhea is a leading cause of childhood morbidity and mortality in Nepal, a developing country where the larger proportion of the population live in rural areas. Poverty, illiteracy, lack of health care facilities at local level, demographical distribution and traditional beliefs are the major obstacles for getting proper and timely healthcare. There is a necessity to consider the cultural beliefs of different ethnic communities before designing any educational protocol or guideline. Educational protocol or guidelines which respect the local cultural beliefs and stimulate the utilization of their locally available facilities can be easily accepted and would be more suitable to achieve the objectives.

Do you agree the diarrhea is the serious problems of Nepal? Regarding the statement, following is the respondents' records given in the table.

Table No.29: Distribution of Respondents according to Diarrheas problems

SN	Attitude	No of respondents	Percentage (%)
1	Strongly agree	3	1.5
2	Agree	63	31.5
3	Disagree	127	63.5
4	Strongly disagree	7	3.5
Total		200	100

Among the respondents, 127(63.5%) are disagree that the disease is not a serious problem. Similarly, 63 (31.5%) respondents were agree, 7 (3.5%) were strongly disagree and 3 (1.5%) were strongly agree about the views respectively.

From the above result it is concluded that, if we maintain our sanitary and health habit; diarrhea is not a so serious disease.

4.4.2 Attitude towards the curative measure.

It was aimed to collect the information with respondents, whether the disease can be cured or not. The following table gives the result of respondent about the views of curative measure.

Table No.30: Distribution of Respondents according to Attitude towards the curative measure.

SN	Attitude	Respondent no	Percentage (%)
1	Curable	190	95.0
2	Not curable (not easily cure)	3	1.5
3	Don't know	7	3.5
	Total	200	100

From the above table, among 200 respondents, 190 (95%) records the result as the disease is curable. Similarly, 7 (3.5%) were not known about the curative measure of the diarrhea, and remaining 3 (1.5%) records as the disease is not easily curable, respectively.

Respondents have the feelings that the patient did not killed only by the diarrhea in their locality. So they believe that the diarrhea is the curable disease.

4.4.3 Attitude towards various statements

In diarrhea, some daily used statements were given in the questionnaires; whether those statements are true of false, regarding for the instance following table gives the respondents result.

Table No.31: Respondents according to Attitude towards the various statements.

SN	Statements (local voice)	Yes	No
1	Should we give water or not during diarrhea.	200 (100%)	0
2	Encouragement of patient by family during disease (helpful/not)	200(100%)	0

From the above result, according to respondent views, the diarrheas person should give more water during diseased time and it is necessary to provide the helpful encourage to the diseased person during diseased time.

That is the reason of that; the respondent believed that during diarrhea, patient are suffered by dehydration.

4.4.4 About communicable or non communicable.

What about the attitude; respondents were known or not about communicable and non communicable disease, had they any ideas or not, a question were asked and their records was recorded as in the following table.

Table No.32: Respondents about communicable or non communicable disease.

SN	Ideas about communicable and non communicable disease	No	%
1	Yes well	66	33.0
2	Yes very little	127	63.5
3	No	7	3.5
4	No concern	-	0
Total		2oo	100

From the above table, among the 200 respondents 127 (63.5%) have an ideas about very little knowledge to the communicable and non-communicable disease. Similarly, 66 (33%) have well knowledge, and 7 (3.5%) have no ideas about the communicable and non-communicable disease.

Respondent has got knowledge from the resources and know about communicable and non-communicable disease.

4.4.5 Awareness of health problem.

How the people are aware? About the diarrhea dieses, what/ who is the best medium to get knowledge and awareness about the health problems? For that, to know the respondents view some question were asked and the result was recorded as in the following table.

Table No.33: Distribution of Respondents about Awareness of health problem.

SN	Medium of awareness	No of respondents	Percentage (%)
1	Teacher	108	54.0
2	Health workers + information advertise	79	39.5
3	Family members	20	5.0
4	Neighbors	3	1.5
Total		200	100

From the above table, among the 200 respondents 108 (54.0%) has aware about the disease by the medium of teachers. Similarly, 79 (39.5%) has aware about the disease by the medium of Health workers, 20 (5.0%) %) has aware about the disease by the

medium of Family members, and 3 (1.5%) has aware about the disease by the medium of Neighbors.

Respondents are aware by their teachers and different advertisement and health workers, that is because they are the pure regular students and living in the urban area and may be the government's facilities of sub health post in each VDC.

4.4.6 Sanitary environments.

Sanitary habitat is one of the primary causes of spreading communicable disease. Regarding that, some question was asked for the respondent's i.e. when was the program conducted in your locality for the sanitation of polluted area? The result of the respondents was recorded as in the following table.

Table No.34: Distribution of Respondents about Sanitary environments.

SN	Conduction of sanitation programmed.	No of respondents	Percentage (%)
1	Before 1 week	17	8.5
2	Before 1 month	57	28.5
3	Before 1 year	89	44.5
4	Not known yet.	37	18.5
Total		200	100

From the above table, the respondent's area was the poor sanitary condition. Only, 89 (44.5%) respondent's area was conducted a sanitary programmed before 1 year. similarly, 57 (28.5%) respondent's area was conducted a sanitary programmed before 1 month, 37(18.5%) respondent's are not known yet about the sanitary programmed, and 17 (8.5%) respondent's area was conducted a sanitary programmed before 1 week. this is one of the major factor for the transmition of communicable diseases.

From the above result, respondent has no any sanitary health habit and health education for that.

4.4.7 Health program.

In each VDC of our country there is one sub-health post. So it might be thought that, the people of Nepal are aware about several communicable diseases. Regarding the fact that, a question was asked and the respondents result was tabulated below.

Table No.35: Distribution of Respondents about Health programmed.

SN	Conduction of sanitation programmed.	No of respondents	Percentage (%)
1	Before 1 week	6	3.0

2	Before 1 month	17	8.5
3	Before 1 year	79	39.5
4	Not known yet.	98	49.0
Total		200	100

From the above table, it was concluded that the effectiveness of health workers was very less in the community. The 98 (49.0%) of the respondents reported as, not known yet such type of programmed yet. Similarly, 79 (39.5%) records that, such type of programmed was conducted before 1 year, 17 (8.5%) %) records that, such type of programmed was conducted before 1 month, and 6 (3.0%) records that, such type of programmed was conducted before 1 week.

It means that, the attainment o the Government was very rare to the target people/ community or only in some occasion. If the policy and implementation of the government rule is stick, various type of communicable disease becomes measure automatically.

This sub-unit discusses about the attitude of the respondents towards diarrhea, and included the seven sub-topics. According to the diarrhea problem, majority of them strongly disagree that the disease is not so serious problem of Nepal; almost all can said that the disease is curable; water should be given during diarrhea. Almost all has the ideas about diarrhea, and are aware by mass media and teacher. This is due to the fact that, either the respondents are of regular students and has the content in their books or are aware from mass media, teacher and informative notice from electronic media.

CHAPTER- FIVE

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary

The present study entitled “A study on diarrhea, knowledge, Attitude and Awareness among Secondary Students of Itehari Municipality” of Sunsari district is based upon 200 respondents out of 700 study population. Among them 96 (48%) are the male and 104 (52.0%) are the female. Diarrhea causes a leading problem in the countries of south East Asia. Nepal is not exception for that. Several people are dying out per year by diarrhea. Hence in this regard, it is necessary to know the existing knowledge, attitude, and awareness of the students who are studying in class ten. The objectives of the study

were, to awareness the students about their health problems and encourage solving their problem by themselves, to identify knowledge and attitude of the ten graders on diarrhea, to examine the students' knowledge, about mode of transmission and preventive measure.

To carry out the research effectively, it was necessary to know the literature, for the review of the research. For the respect of that; several types of literature about diarrhea were collected from books, journals, magazines and web-site, for the theoretical and empirical prospective. The conceptual frame-work also been included for the completion of this research.

To carry out the research work effectively, semi-structured question was designed for the quantitative data collection using systematic simple random sampling method. Most of the questions were pre coded and some open question had also been included in the questionnaire. The question was pre tested to 5% students in the same type of school. After the pre-testing and suggestions from supervisor, some modifications were made on previous question and finalized them. The whole set of the question was divided in to five group in four section. It included the socio-economic and demographic characteristics of the respondents, Personal hygienic character, Knowledge on diarrhea, Attitude towards diarrhea, Awareness toward diarrhea.

The method of study was qualitative both and the findings of this study was analyze descriptively, based on the findings and conclusion was done by using simple statistical tools i.e. percentage, figure with pi-chart and bar-diagrams were adopted for analyzing the data obtained from enumerations. Highest proportions of the respondents (35.5%) are of 16 years of age. Most of them are of grade 10 students and (98%) of them have heard about diarrhea. Knowledge on diarrhea is universal. Almost all (91.5%) respondents know about the symptoms of diarrhea. Most of all known about the preventive measure of diarrhea. Majority of them are known the transmitting rout (63.5%) of the diarrhea. Most of them were known about the treatment process, by providing Jeevan-Jal (29%) and salt+sugar+water (58.5%) for the diarrheas patient.

Based on the small-scale study carried out in different six secondary schools of Sunsari district from the 200 respondents, the major findings were satisfactory according to the objectives of the study. The suggestion is recommended for the school, community, different agencies, and government in shortly. It is recommended that the perceptions

perceived by the respondents can be considered as the entry point for the planners and policy makers relating to these matters. To improve knowledge, attitude and practice of the people on diarrhea; the training of life skills supports to develop creative thinking and self awareness, which ultimately supports to take responsible decisions. Therefore such type of training should be given in the community. To create a supportive environment for preventive measure of diarrhea related activities should be included in school calendar, so that this kind of diarrhea awareness program may be run for a long period in school.

5.2 Findings.

Based on the small-scale study carried out in different six secondary schools of Sunsari district from the 200 respondents, the major findings are presented below.

a. Among 700s students from six secondary schools of Itehari municipality 200 are the respondents i.e. 96 (48%) male and 104 (52%) are the female.

b. Highest proportions of respondents (35.5%) are of sixteen years of age.

c. Majority of respondents (68.5%) are of Hindus, followed by Muslim (15%) and others.

d. The highest proportions of the respondents are Chaudhari (32%), followed by Chhetri and Brahmin (20%) and (15%) respectively.

e. The analysis regarding parental educational level shows that the intervention module need to be designed to address widen education gap among parents.

f. The highest proportions (41%) student's families were associated with factory and other types of job, which is highest risk for the transmition of communicable diseases, followed by the Agriculture, which is (31%).

g. The majority of respondents family size (5-7) which represents (53.5%) out of total.

h. Most of the respondents (98.5%) have electricity and (97.5%) have radios and others for the household facilities.

i. Respondents were found more knowledge about the source of information. The electronic media i.e. the Radio (38%), TV (19%) etc are the chief sources, to know the information about diarrhea.

j. Majority of the respondents (48.5%) brush their teeth daily in the morning and (38.5%) take bath daily in the morning.

k. The highest proportions 44.5%, of the total respondents has water seal type of toilet, which helps to prevent the explosion of gases and check to prevent eradication of the disease.

l. The highest proportions (58.5%) of the total respondent's records that they used soap before toilet.

m. The highest proportions (34.5%) of the total respondents has collected their garbage and burnt, that check the overcrowding of garbage and helps for good sanitation.

n. The highest proportions (44.5%) use Tube-well water directly for drinking purposes.

o. Most of the respondents (72%) used drinking water directly (not boiling, not keeping water guard and not filtering).

p. The distance between toilet and source of drinking water is at least (5-15) meters i.e. (62%) of the total respondents, which influence the contamination of the drinking water.

q. The respondents (37%) have mud type of houses, and (44%) has no ventilation system, that type of houses gives unhygienic environment.

r. Only (34%) of the total respondents goes to the hospital during illness, and (22.5%) were also believed for Dhami/ Jhankri for the treatment. If we should not encourage the people to the hospital, there is the chance of spread of communicable disease.

s. The large no of respondent's i.e.96 (48%) male and 102 (51%) female have heard about diarrhea. Most of them have good knowledge about the types of disease. But only a few of them i.e. 2 (1%) respondents were still in confusion, locked knowledge about diarrhea.

t. Majority of respondents 68% (69.79% male and 66.35% female) have the ideas, as diarrhea is the communicable disease. From the result it was known that the disease is not dangerous and fatal.

u. Majority of respondents (91.5%) have little knowledge about the symptoms of the diarrhea. 91.5% can say the symptoms as out going toilet more than 3 times per day and other can records little knowledge about factual symptoms.

v. Only few no of the respondents can records the primary causative agent (13.5%) and majority can records secondary causative agent (98.5%).

w. There are no effects of parent's education for the knowledge on symptoms of diarrhea of their children. Males are more knowledgeable than females on the symptoms of diarrhea.

x. The educational level of the respondent's inferences the level of knowledge on the symptoms of diarrhea.

y. Almost all respondents (94%) have known the mode of transmitting rout of diarrhea.

z. The highest proportions (63.5%) of the respondents reported that the flies are the major transmitting rout but actual rout is the facial-oral-rout that was (17.5%) only.

aa. According to the respondents, safe water and proper hygiene (53.5%) is the major preventive measure of diarrhea disease. But good nutrition, protection of food, breast-feeding etc are kept in less priority.

bb. Among the respondents (58.5%) reported as salt+sugar+water is the best method of treatment, for the alternative processes (29%) reported as Jeevan-Jal.

cc. The majority of the respondent's records as main sources of information are the Radios. Televisions, Magazines, e-mail, internet are equally important sources of information.

dd. Whatever the attitude toward diarrhea; is it chronic, dangerous or not? Regarding that, respondent agreed the diarrheas are not so dangerous and (63.5%) disagree on the matter of seriousness.

ee. Most of the respondents (95%) are recorded the as the disease is easily curable, but (3.5%) does not know about the cure of the disease.

ff. Most of the respondents (100%) are agreed that, water should be given during diarrhea.

gg. Most of the respondents (63.5%) are well known about the communicable and non communicable disease, but (3.5%) become confused about communicable and non communicable.

hh. Majority of the respondents are aware (54%) from their teacher, which is followed by the heath workers (39.5%) shows the negligence of health workers to visit their local areas to inform about health, disease, and sanitation.

ii. Almost all (100%) respondents reported that they should provide love and respect to the infected person.

jj. Only (8.5%) respondent's reports to conduct sanitary program before 1 week and (18.5%) did not known yet. So, this brings the spread of communicable disease/ summer disease like diarrhea.

kk. The highest proportion of the respondents (49%) does not know the health program conducted to their village by Government, health workers, NGOs, and INGOs. The result shows that the negligence of health workers to visit and conduct health program to their village.

5.3 Conclusions

Best on the findings of the study, it is concluded that the knowledge, attitude and awareness toward diarrhea of secondary level of students are almost universal. Male students are more knowledgeable than female respondents on the symptoms of diarrhea. The main sources of information are the radio and television. That means mass-media plays a vital role in creation awareness on diarrhea. Majority of the respondents have positive attitude towards love and affection, which is needed for infected person. Various INGOs and NGOs have been working intensively against health program but findings of this study do not agree with the effectiveness of the program. Whether, the knowledge and attitude of the students in secondary level towards diarrhea is satisfactory but not enough. To develop high level of knowledge, special care should be given in designing course and including the content about it.

5.4 Recommendations

5.4.1 General recommendation

a. The study has found some common points, for example generation of skillful training and employment opportunity, awareness about the infection, love and encourage to the infected people are to be performed by various sectors, such as governmental, non governmental organizations, community and individual as well.

b. Thus the perceptions perceived by the respondents can be considered as the entry point for the planners and policy makers relating to these matters.

c. To improve knowledge, attitude and practice of the people on diarrhea; the training of life skills supports to develop creative thinking and self awareness, which ultimately supports to take responsible decisions. Therefore such type of training should be given in the community.

d. To improve sanitation, the sanitary program should be conducted to the catchments area under municipality supervision.

e. Municipality should make a mini project and dramatic program for the awareness of health, sanitation, personal hygiene, and diarrhea, on scheduler way in its catchments area by giving priority.

f. Schools should make a weakly schedule for observation of personal hygiene of the student after their prayer line, that helps for the awareness of health and hygiene and check the outbreaks of diarrhea.

g. School should conduct a weakly/monthly (as favorable, health related) programmed by applying dramatic method, quiz programmed, seminar programmed, and debate program about diarrhea/communicable disease and health and hygiene related topics for the awareness of health, sanitation, personal hygiene, communicable disease and diarrhea.

h. The governmental and non-governmental agencies should make the health related proposal asking some funds to the donor and the funds should strictly implemented to the target people in the community for the awareness and management of health programmed about sanitary environment, health habit, treatment in hospital, and communicable disease i.e. diarrhea.

i. NGOs and INGOs should conduct the programmed to the health related topics in the target community by applying and awarding; dramatic method, quiz programmed, seminar programmed etc. who does not know about health and hygiene.

5.4.2 Recommendation for the further research.

a. Interaction program regarding diarrhea in school should be an effective activity to empower knowledge of the students and young people both in school and community; such activity helped to promote trained educators among their peer friends.

b. Teacher training on diarrhea issue should be carried out; so that teachers may feel empowered and lunch decision among youth in school and community.

c. To create a supportive environment for preventive measure of diarrhea related activities should be included in school calendar, so that this kind of diarrhea awareness program may be run for a long period in school.

d. This research may give the fundamental knowledge for the further research and other agencies.

REFRENCES

Australasian Medical Journal, 2009, 1, 14, 235-238236.

Bhatt Bhasudev, (2006); **Environmental education**, Ratna pustak Bhandar Votahity Kathmandu.

Bhandari GP, Dixit SM, Ghimire U, Maskey MK, (2009); **Outbreak Investigation of Diarrheal Diseases in Jajarkot**; Nepal Health Research Council, Center for Molecular Dynamics Nepal)

B M Pokhrel, T Kubo, (1996); **Outbreaks of cholera in Nepal**.; The Southeast Asian journal of tropical medicine and public health (1996) Volume: 27, Issue: 3, Pages:(574-579)

Bulletin of the World Health Organization, 1997, 75 (2): 163-174

Das BP, Deo SK, Jha N, Rauniar GP, Naga Rani MA, (2005); **Knowledge, attitude and practices (KAP) regarding the management of diarrhea by pharmacists and licensed drug sellers in eastern Nepal.** Southeast Asian J Trop Med Public Health 2005 Nov; 36 (6)

Dhakal Shomnath, (2055); **Foundation of health**: Ratna pustak Bhandar Votahity Kathmandu.

Feachem RG, Koblinsky M, (1997**); Interventions for the control of diarrhea diseases among young children:** promotion of breast-feeding. Bulletin of the World Health Organization, 1997, 75 (2): 163-174

Goldman N, Pebleyb AR, Gragnolatic M, (2002); **Choices about treatment for ARI and diarrhea in rural Guatemala.** Soc Science Med 2002 ;(55):1693–1712

Jha N, Singh R, Baral D, (2006); **Knowledge, attitude and practices of mothers regarding home management of acute diarrhea in Sunsari**, Nepal. Nepal Med Coll J 2006 Apr 1; 8(1):27-30.

John D. McLennan, (1998); **Behavioral Health**, Carolinas Medical Center, 501 Billingsley Road, Charlotte NC 28211, USA.E-Mail: jmclennan@css.unc.edu)

Kansakar P, Malla S, Ghimirey G, (2005); **Cholera outbreak in Kathmandu valley in 2004**: A review of National Public Health laboratory findings. J Nepal assoc Med Lab Sciences. 2005; 7:20-3.

Klshone. J., (2002); **public Health Dictionary**, Century publication 46 Masih Garh, P.O. Jama nagar New Delhi India.

National Planning Commission, HMG Nepal and UNICEF-Nepal. **Nepal Multiple Indicator Surveillance**: Health and nutrition - cycle 1, Jan-March 1995. March 1996.

National Planning Commission, HMG Nepal. **Nepal Multiple Indicator Surveillance, Second cycle** - primary education. December 1996.

Nepal Demographic and Health Survey, (2006); **Ministry of Health and Population,** New ERA, and Macro International Inc. Kathmandu, Nepal.

Rehan HS, Gautam K, Gurung K, (2003); **Mothers needs to know more regarding management of childhood acute diarrhea**. Indian J Prev Soc Med 2003; 34(1 & 2)

Pitambar Aryal, NRCS director of disaster management; mobile: +977 9851105681; email: pitambar.aryal@nrcs.org.

Shrestha AD, (1991); **Cholera in Kathmandu Valley**: How prevalent is it? J Nepal Med Assoc. 1991; 29:193-6.)

Shrestha, Bhim Kumari, (2010); **Comparative study on: literate and illiterate mothers about knowledge, attitude and practice of Diarrhea in the Gundu village ward No 1, 2 and 3s**; Nursing Campus, Maharajgunj.

Sherstha C, Thapa M, Oda Y, Subba L, Dhakhwa JR.,(1997); **Outbreak of cholera in Kathmandu Valley**. J Nepal Med Assoc. 1997; 35:66-9

Sac DA, Sac RB, Nair GB, Siddique AK., (2004); **Cholera. Lancet**. 2004; 363:223-33.

Shears P., (2001); Recent development in cholera. Curr Opin Infec Dis. 2001; 14:553-8.

Tamang MD, Sharma N, Makaju RK, Sarma AN, Koju R, Nepali N, et al., (2005); An **outbreak of El Tor cholera in Kavre district**, Nepal. Kathmandu University Med J. 2005; 3(2):138-42.

United Nations, (2007): **United Nations Country Team, Common Country Assessment for Nepal**. Kathmandu.

Wolf, H.K. / panta Prem Raj, 4th Education, (2005), page 39; **A Hand Book for "Social science and Research and thesis writing"**, Buddha Academic Enterprises PVT, Ltd, Putalisadak, Kathmandu.

World Health Organization, (2009); **The treatment of diarrhea.** [Online]. [Cited 2009 Sept 29]. Available from: URL: http:// www.who.int/topics/diarrhoea/en/.

A booklet, (2066 BS); Introduction of municipality; communication center of Ithari municipality Itehari.

APPENDIX-I

A STUDY ON DIARRHOEA, KNOLEDGE, ATTITUDE AND AWERNESS AMONG SECONDARY STUDENTS OF

ITAHARI MUNICIPALITY**.**

Sample questionnaire (structured schedule)

Respondent number:-

Name of the school:-

Student's name: - Class: - Caste:-

Religion: - Age: - Sex: - Date:-

Part-I

Questionnaire on demographic characteristics:

1) What is your father's education?

a) Illiterate b) High school.

C) Literate. d) Higher education

2) What is your mother's education?

a) Illiterate b) High school.

C) Literate. d) Higher education

3) What are the main income sources of your family?

a) Farming b) official job

c) Business d) Others.

4) What is your father's main occupation?

a) Farming b) official job

c) Business d) Others.

5) What is your mother's main occupation?

a) Farming b) official job

c) Business d) Others.

6) Do you get any education of communicable disease like diarrhea, cholera etc, from you parents?

a) Normal b) very close

c) Close d) others

7) Do you have latrine for toilet

a) Yes b) no

8) How many members have you in your family?

a) Less than 5 b) 5-10 c) more than 10

Part-II

Knowledge, Attitude and Awareness about diarrhea

1) Have you heard about diarrhea?

a) Yes b) No c) little.

2) If yes what are the sources of information?

Sources	yes	No
a. Radio		
b. Television		
c. Newspaper		
d. Friends		
e. Teachers		
f. e-mail and net programmed.		
g. Husband/ wife		
h. Poster/ pamphlets		
i. street drama.		
j. Hording board		

3) In your opinion what type of disease is it?

a) Communicable b) non-communicable

c) Fatal d) Dangerous.

4) What are transmission rout of diarrhea?

a) facial-oral rout b) non-potable water.

c) Others d) what you know……

5) How do people acquire diarrhea?

a) Using Potable water and proper hygienic maintenance.

b) Tasty food c) Using medicine

d) Making latrine.

6) Do you know the symptom of Diarrhea?

a) Yes b) No

7) Do you know the symptom of diarrhea? If yes; what are they?

a)…….

b)……

c)……..

d)……

8) Do you know the causative agent of diarrhea? If yes, what are they?

a) Bacillus spp. b) Poor sanitary condition. c) Food poisoning.

d) Indigested food. e) Over crowding F) Intestinal worm.

g) Malnutrition h) Temper i) food habit.

9) How diarrhea is spread? Which one is the mode of transmission of the Diarrhea?

a) Contaminated food and water. b) Unhygienic habit and practices

c) flies d) late isolation of the patients e) bottle feeding f) non of above

10) Which one the major transmitting rout of diarrhea?

a) facial-oral rout b) Water

c) Flies d) Others

11) What is the first aid treatment about diarrhea? Write.

a)……

12) If, there is a diarrheal patient in your family; where do you treat at first?

a) Health post b) personal clinic

c) Dhami/ jhakri d) Home treatment

13) If the person shows diarrheal disease what medicine should you give at first?

a) Salt+Sugar+Water b) Jeevan-jal

c) Medicine (Tablet) d) water.

14) How do you confined, the persons should suffer from diarrhea?

a) If he goes more than three times in a toilet.

b) Three times toilet, having undigested watery discharge in a toilet.

c) Three times toilet but not any difficulty of feeling.

d) Others; ……..

15) Write your opinion about first aid treatment of diarrhea disease.

a)……

……..

16) What is the local voice for diarrheas person; should give water or not?

a)……..

17) What preventive measures should you adopt for the prevention of diarrhea disease?

a)……..

b)……

c)…….

18) Do you agree diarrhea is becoming a serious problem in Nepal?

a) Strongly agree b) Agree

c) Disagree d) strongly disagree

19) Have you seen diarrheal patient in your community? Can it cure?

a) Yes, cure. b) No, not cure. c) don't know.

20) If yes, what are the symptoms and how his family encourages him?

a)…….

21) How such type of disease prevent and what policy should launched by the government of Nepal?

a)……

22) Do you have any ideas about communicable and non-communicable disease?

a) Yes, Well. b) Yes, very little.

c) No c) No concern.

23) Who is the best medium to get knowledge and awareness about health problems?

a) Health workers b) family members

c) Neighbors'. d) Teachers

Part- III

<u>Question related to the personal health and accidental care</u>

1) How often do you take bath?

a) Once a day. b) Twice a day.

c) Once a week d) Very rarely.

2) How often do you brush your teeth?

a) Twice a day after meal b) once in the morning.

c) Once a week d) no brushing habit/ time.

3) What do you use to wash your hands after toilet?

a) Soil b) Ash

c) Soap d) No such habit.

4) If you or your family illness where would you go at first?

a) Health post b) Personal clinic.

c) Dhami/jhankri. d) Home treatment.

5) How often should you go to the hospital/ health post?

a) At least once a month b) At least twice a year.

c) Very rarely, no such problems. d) No visited yet.

6) Where do you dispose the household waste?

a) In the river b) Managed in the common pit.

c) No any conscious management. d) Collected and burnt.

7) How is the food item prevented in your house?

a) By covering simply. b) Kept open in baskets.

c) By keeping under bed. d) By hanging in basket/ others.

8) How do you get the information and knowledge of personal health?

a) From mass media b) from neighbors friends

c) From academic education d) No concern at all.

9) What are the main measures followed in the case of common diseased condition of the family members?

a) Use of locally available herbs. b) Buy medicine from shop.

c) Consult to the health person. d) Visit with doctor.

10) What do you know about balance diet?

a) Food including fish and meet. b) Food with sufficient milk and fruits.

c) Food including all of above. d) I don't know.

11) What May be the reason of malnutrition?

a) Scarcity of nutritious food. b) Insufficiency of food.

c) Lack of awareness. d) Diseases.

12) What supplementary food is provided to your children?

a) Sarbottam pitho. b) Rice only.

c) Noodles. c) Fruits.

13) Do you know any of the programs conducted here in your community related to personal hygiene and health?

a) Before one week. b) Before one month.

c) Before one year. c) Not known yet.

Part- IV

Question related to drinking water and sanitation.

1) What is the source of drinking water in your community?

a) Tube well. b) River.

c) Well. c) Pipe water.

2) How do you use the drinking water?

a) After boiling. b) After filtering.

c) Directly from the tap. / Tuble d) after putting water guard.

3) How do you find your drinking water?

a) Safe b) unsafe

c) Satisfactory d) don't know

4) Do you have a toilet in your house?

a) Yes b) yes, but common for two families.

c) No d) yes a public toilet.

5) Where do people of your community defecate?

a) In open places b) in personal toilet.

c) in common toilet c) haphazardly.

6) What is the major cause of pollution in your community?

a) Lack of awareness. B) The product of household wastes.

c) Industrial wastes .c) none of the above.

7) When was the program conducted in your locality for the sanitation of polluted area?

a) Before one week. b) Before one month.

c) Before one year. c) Not known yet.

8) How often VDC health person visit your community?

a) Once a week. b) Once a month

c) Once a year. d) Only if called.

9) What is the main occupation of the people of your community?

a) Government service. b) Agriculture

c) Non- governmental service. d) Not known.

Part –V

Observation check list.

1) What is the type of your house?

a) Concrete. b) Mud-type.

c) Semi concrete. d) Fence type.

2) How is the ventilation system in your house?

a) No ventilation b) poor ventilation.

c) Satisfactory. d) Sufficient.

3) What about the location of the kitchen room in your house?

a) Separate room in the same house. b) In the same living room.

c) No kitchen room. d) Separate room from the house.

4) How is the lightening system in your house/

a) Electricity b) kerosene lamp.

c) Solar lamp. d) Wax candle.

5) If there is the toilet, what is the type?

a) water-seal b) dug-well

c) bore-hole type. d) Service type.

6) Do the community members are aware of personal health and hygiene?

a) Yes, well aware b) to some extent only.

c) No, not aware at all. d) I cannot say.

7) Distance between source of water and toilet?

a) 5-15 meters. b) 15-25 meters.

c) 25-50 meters. d) Above 50 meters.

8) The situation and location of domestic animals residence.

a) Separate and fare from the house. b) No animal kept

c) Attached to the house. d) Separate, but nearer to the house.

9) The personal hygiene of children.

a) Normal b) well, c) bad.

10) The situation of disposal of water.

a) Any where. b) Drain

APPENDIX-II

Table No. 1: Name and address of the school.

S. No.	Name of school	Address
1	Janta Secondary school	Itehari-1
2	Mahendra Secondary school	Itehari-2
3	Sarashwati Secondary school	Itehari-3
4	Kachana Mahadev Secondary school	Itehari-4
5	Joyti Secondary school	Itehari-5
6	Sarashwati Sadan Secondary school	Itehari-7