

## CHAPTER I :INTRODUCTION

### 1.1: Background of the Study

Health is a valuable property of human beings. Human power is very important for the construction and development of the country. In the context of quality of life, the health condition of the people of country is very important. It is also one of the important and necessary factor to live a happy life. Health is considered as wealth, thus it is everything for the human being. We need healthy people, healthy homes, villages, country as well as healthy world for the development and for the happy life.

Some people have their own land and some do not have but this study is based on landless people in Sijuwa VDC, Morang. It is situated in the eastern part of Nepal in Terai zone. Kohabara VDC of Jhapa district is situated in the eastern part to it, Jhurkiya VDC is in south, Govindapur VDC is in west and Itahara is in North side of this VDC. People follow different religions and are from various castes. They generally speak Nepali as their medium of communication between different ethnic communities. The major number of population is engaged on agriculture.

Most of the Nepalese people do not have latrine due to the lack of knowledge and poor economic condition. Also due to the lack of land, the people cannot make toilet. It is a major issue in landless community. According to the National Planning Commission (1998) over 70 percent of peasants own less than one hectare of arable land in Nepal. Likewise, the Human Development Report 1998 has mentioned that the bottom 40 percent of the population own only 9 percent of the arable land whereas the top 6 percent own around 33 percent.

According to census 2001, 25 percent of the household own on land or less than two ropanies of land. They are usually considered as the agriculturally landless people. The prevalence of landlessness is higher in Terai districts than in the hilly districts.

According to Gyawali (2010), 43.4 percent households have toilets and 57 percent family households still defecate openly in Nepal. Maximum no. of toilet in western Nepal - 53.5 percent and Minimum toilets in far western Nepal - 29.1 percent In

western Nepal - Kaski district with maximum toilets i.e. 87.47 percent , Kapilvastu with least toilets - 21.78 percent .

Environmental sanitation is very important factor to determine the health condition of the people. Disease is caused due to the disturbances in the balance between human and the environment around them. Three ecological factors (host, agent and environment) are responsible for disease. The high child mortality rate, and low health status are all due to defective disposal of human excreta and refuse, poor housing and prevalence of insects and rodents. Therefore improvement of environmental sanitation for the prevention of disease and promotion of health of both individual and community are very important. Sanitation is the foundation of public health, education, social development, environment and dignity. Moreover, the access to sanitation is the fundamental right of citizen.

Food is essential for the survival of human beings. Usually human beings eat different food stuffs to live their healthy life. On the other hand, excreta disposal is common to all of us. The excreta excreted from human body consist bad smell and filthy sight. Excreta pollutes the soil. So it should be defecated in proper places i.e. in latrine but in the landless community we find that river bank, water sources, street corner, garden and side of the jungle are freely and openly used as a open latrine by both villagers and city dwellers which pollute the environment, creating environmental sanitation problem, making contamination of surface and ground water. According to Maharjan (2000), the open Defecation of human excreta helps in breeding of flies which convey germs and ova of worms from faeces to food. And also the cattle and pigs may swallow worm ova passed through the human faeces, if people eat such animal's meat without cooking properly, the ova may transfer to them and they may get infected by worm. Maharjan added that wounds in the skin may get infected with tetanus from the faeces in soil. Also the open improper Defecation of human excreta led to spread of communicable disease like diarrhoea, typhoid, jaundice, aemobiasis, hepatitis, polio, dysentery and so on (cited by Satyal, 2010).

Latrine problem is seen as one of the most burning problems to be solved, which can be seen in village, landless community, semi urban and urban areas. It is becoming

more destructive in densely populated urban areas and landless community than in thinly populated villages, where there are no systematic sewerage and drainage system. It is expensive to construct and develop underground sewerage system in a underdeveloped countries like Nepal. It is beyond the capacity of those living in rural area to manage drainage system that demands huge amount for its development and maintenance.

Human excreta disposal is a main aspect of environmental sanitation therefore, proper attention should be given to the management of human excreta disposal which is the target of national and international health policies too. People should be educated and motivated in the field of disposing human excreta applying a safety measures. To solve the problem of open defecation, poor economic condition is to be reduced and the people should be made aware of their personal behavior. As each type of problem depends upon human behavior, so people must change their bad behavior.

#### Concept of Total Sanitation

- Complete elimination of Open Defecation
- Universal coverage and access (100% access to sanitary latrines) and ensuring that every uses a hygienic latrine
- Hygiene behaviour change (personal hygiene/hand washing in critical times)
- Proper management of solid and liquid waste
- Improving environmental sanitation and domestic hygiene including water and food hygiene.
- CLTS refers to Community-Led Total Sanitation, an integrated approach to achieving and sustaining open defecation free (ODF) status through collective efforts of the community for changing their sanitation behavior rather than constructing toilets only. *Dr. C.B. Budhathoki, Community Led Total Sanitation, Paper presentation*

In our country, 85.8 percent of the people who are living in rural and remote area use riverside, streamside, free shadows, open ditch of the land, corner side of the way etc. for defecation. This is due to the lack of knowledge about effects of environment pollution, lack of knowledge about cause of communicable disease and due to the poor economic status or low income level. According to the report of human development index 2009 the average income rate of Nepalese is 360 \$ per year but 24 percent of the poor people who earn below 1 \$ per day. Thus, it is necessary to play proper attention to aware the people about the effects of open Defecation and government should also make policy for the construction of latrine in each house and public places. Nowadays, to implement the government policy and to achieve the aim of government, different national and international agencies too are assisting in people's awareness programme, motivating the people to make latrine and defecating only in the latrine. They are also providing fund and support for building latrine in public place and household.

People's participation always plays important role for the proper use and management of latrine. Open defecation practice is a common problem of landless community due to the poor economic condition, lack of knowledge, lack of own land to make latrine. So the study is necessary to mobilized different national and international agencies to make people aware and control such type of problem. So, this study is important for the research work.

## **1.2: Statement of the Problem**

Nepal is least developed country of the world which is determined by measuring the income level , per capital income, health status as well as education status. Human excreta is a main sources of the infection and the cause of the environmental pollution. Most of the landless community people are poor, uneducated and have no knowledge about sanitation. The problem of open defecation and scattered ness of human excreta openly in public place which is found in a great extent in the rural and urban areas. Proper disposal of human excreta is a challenging problem in many communities like landless community of Nepal. If it is not properly disposed then many communicable disease can be spread in the community. If human excreta is not

properly disposed, water and soil, may get polluted, food may get contaminated and disease will get increased at that instant. Some people are unable to make latrine due to the lack of money, knowledge and inadequacy of land and inability of cleaning their latrine properly due to the lack of sufficient water.

Landless people of Sijuwa VDC have low economic status, they are deprived from education, they do not have knowledge of environmental sanitation, similarly they had not proper land to construct the toilet. Nowadays, different national and international agencies like: JICA, New Era etc. are also working in Nepal to provide fund support to make toilet in home and aware people about environmental sanitation but landless community cannot receive the fund to support and to make toilet. But still there is the problem of open defecation in Sijuwa VDC. So, the researcher has choose the title "barriers to the utilization of latrines and hygiene practice among landless people". Hence, this study attempts to find the various information on latrine practice.

### **1.3: Objectives of the Study**

The human excreta is the source of social, environmental and physical health problems. It can spread the various fatal diseases if it is not disposed safely and properly. It's complexity is based on education level, culture, social believes, low income, knowledge and attitude level of family, quality life of the community people etc. But the problem has not been reduced due to the lack of awareness and lack of positive attitude of the people. Any study has its own objectives, the major objectives of this study is to find out the barriers in the utilization of latrine and their hygiene practice; however, the specific objectives of the study are as follows:

- a. To find out the knowledge and attitude on the use of latrine.
- b. To analyze the barriers in the utilization of latrines.
- c. To identify the hygiene practice related to the use of latrine.

#### **1.4: Significance of the Study**

Study on such subjects like the use and barriers of the using latrine has the great significance in the Nepalese rural context. Our sanitation habits and situations are regarded as the old fashioned and traditional because it is still very far from the practices of the modern life style. To accelerate the civilization and human behaviors, it is necessary to launch the various programs through the governmental and private sectors. In the same respect, the government of Nepal is going to declare 'Open defecation free area'. The old sanitation situation which is due to the influence of religion, culture and traditional believes are thus the obstacles in our behavior which can not help on progressing in the optimal health of the people.

This study depends upon the landless people in Sijuwa VDC. The landless people are those who do not have legally authorized personal land. That's why it is the problem for them to make latrine and to manage human excreta. It is a burning issues of landless community in Nepal- who do not have their own house to live.

A safe toilet is as necessary as other basic needs in order to keep sound family health. Many fatal diseases may spread due to open defecation practice. The human excreta affects directly or indirectly to people if it is not disposed safely and properly. But it is the major problem for the developing countries like Nepal to dispose human excreta properly. It is only possible to make toilet when people gain effective knowledge about latrine or the awareness. Many national and international organizations works in the field but people can not change their KAP by the lack of effective programmes, poor economic condition, traditional values and believes, lazy behavior etc. So, this study has its own rationale. In short, the main points of significance of the study are as follows:

1.4.1 The finding of the study will be helpful for the policy makers of government and non-governmental agencies to plan awareness programmes about latrine.

1.4.2 The study's result will suggest them for the construction, maintenance, practice and healthy behavior in the landless community.

- 1.4.3 The results of this study will be beneficial for the development of related programs and for developing awareness about latrine and hygiene behavior.
- 1.4.4 Study's result will also encourage the researcher for the further study and other researchers to research on such subjects.
- 1.4.5 The community people (landless) will understand about their situation on it and further it will help to improve their behavior.
- 1.4.6 This study will provide the information of study area for the new researcher.

### **1.5: Delimitation of the Study**

The study is limited on the barriers to the utilization of latrine and hygiene practice of landless people in Sijuwa VDC of Morang district. As it is a quite wide area of the study but due to the lack of time and budget the researcher is compelled to be delimited in the study. The delimitations of the study are as follows:

- 1.5.1 The study is delimited within Sijuwa VDC including ward No. 6 only.
- 1.5.2 Household guardians or productive age group members aged (15-59) were selected as respondents.
- 1.5.3 The tools / instrument of the study are based on primary (interview schedule, observation checklist) and secondary (annual report, journals, research reports etc.) sources of data.
- 1.5.4 This study only covered with barriers to the utilization of latrine and hygiene practice.
- 1.5.5 This study is concerned with landless people only in Sijuwa VDC.

### **1.6: Definition of the Terms Used**

- 1.6.1 Awareness :** State of being informed.
- 1.6.2 Barriers :** In this study, people faced obstacle to use latrine is called barriers.
- 1.6.3 Diarrhoea:** Liquid stool is passed out more than three times in a day is called diarrhea.

- 1.6.4 Illiterate :** Person who is unable to read and write.
- 1.6.5 Landless:** In this study, those people who have not legally authorized land to make latrine is called landless people.
- 1.6.6 Latrine:** A large bowl attached to a drain on sits or stand over when one wants to get rid of waste matter from the body.
- 1.6.7 Literate:** Person who is able to read and write.
- 1.6.8 Respondent:** The Person who gives answer of interview schedule.
- 1.6.9 Rural Area:** In this study rural area means only VDC where the density of population and facilities are lower than that of urban area.
- 1.6.10 Sanitation:** The science of safe guarding health.
- 1.6.11 Sulabh Sauchalaya:** It is basically an ordinary low volume water seal latrine connected to off set equal sized composting pits technically known as pour-flush latrine



## CHAPTER II: LITERATURE REVIEW

The purpose of this chapter is to review the literature pertaining to "barriers to the utilization of latrine and hygiene behavior among landless people" at Sijuwa VDC, Morang. In this chapter the researcher will attempt to locate the literature related to this study. A review provide a basis to design the research methodology and explain the result from the analysis carried out in the thesis.

### 2.1: Theoretical Literature

According to Jha (2005), proper disposal of human excreta in both rural and urban area is quite a big problem. Poverty, lack of knowledge, ignorance, rapid population growth, lack of awareness for health, uncontrolled migration etc., directly and indirectly affect in environmental pollution. In fact construction should be managed compulsory for the safe disposal of human excreta either individually or community. Personally people are bearing their responsibility for the management of latrine but the government of Nepal looks staying quite in the management of latrine. Although in the 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> five years plan, the issue of the environment of sanitation and waste disposal was included, the program of construction of latrine was not included properly. Some INGOs run program for the construction of Sulav Sauchalaya in the rural and poor community in the context of latrine promotions. They also help by financial to construction of latrine. Some VDC, municipality and districts assist in the promotion of environment by providing economic support, technical support for construction and management of latrine.

1.7 billion people in Asia and the Pacific do not have access to improved sanitation - more than half (880 million) practise open defecation. 88% of the under-five deaths from diarrhoeal diseases are attributable to unsafe drinking water, poor sanitation and poor hygiene behavior (*Global Burden of Disease, 2002*) Around 2.2 million people, most of whom are children under five, die each year from diarrhea (UNICEF, 2006)

According to Park (2007), Human excreta is a sources of infection. It is an importance cause of environmental pollution. Every society has a responsibility for its safe removal and disposal so that it does not constitute a threat to public health. The health hazards of improper excreta disposal are soil pollution, water pollution, contamination

of foods and propagation of flies. The resulting diseases are typhoid and paratyphoid fever, dysenteries, diarrheas, cholera, hookworm, disease, ascariasis, viral hepatitis and similar other intestinal infections and parasitic infestations. These diseases are not only a burden on the community in terms of sickness, mortality and a low expectation of life, but a basic deterrent to social and economic progress. Proper disposal of human excreta, therefore, is a fundamental environmental health service without which there cannot be any improvement in the state of community health.

Pit Latrine is a circular pit about 30" in diameter and 10-12 feet deep. It is dug into the ground over which a squalling plate is placed. When the pit is full, it is covered with earth and a new pit is dug (HLMC, 2008).

These VDC are Amale, Khangsang, Tamajor and Pokhari. There are 576 households here according to the district water supply and sanitation division office. Hari Bahadur Magar a resident of Amale tells that toilets have been unable to come up because the need has not been realized 'Toilet construction has not taken place since the time of our fore fathers', he said "That is why the forests and riverbeds have been used as toilets" (Kantipur Daily, August 12, 2008).

Celebrating world toilet day, to celebrate the World Toilet Day, NEWAH as a member of the EWP and WASH conducted a journalist orientation and shared the importance and rationale of celebrating the day in Nepal on 7<sup>th</sup> November, 2008.

The journalist produced news, features, public voices and opinions regarding the importance of toilets, national target on sanitation and work to be done to achieve the target etc. In addition to this, a street play entitled 'Suru Garau' (Lets start) using professional artists was organized on 19 November, 2008. The street plays were shown in public places in Kathmandu. The purpose of this event was to promote. Sanitation awareness and motivate people to use toilet. It was celebrated with equal enthusiasm in Baglung, Gorkha, Chitwan, Bhading, and Sindhuli districts with the support and facilitation of NEWAH Central and Western Regional Office (NEWAH, 2008/09).

The DDC Kavre has set a goal of declaring Kavre Palanchowk and ODF district by 2015. However, there are still such VDCs like Devitar in Kavre which do not have

toilets in majority of its households. Devitar VDC is 30 kilometers away from the Kathmandu and only 6 km. off from Dhulikhel. out of the 458 houses in Devitar VDC, only 42 have toilet. According to the sub-health post only 30 households use toilet in the VDC of the three municipalities and 87 VDCs in Kavre, Devitar happens have the least sanitation coverage i.e. 9.2 percent (Gautam, Bhim, 2010).

Preparation for the announcement of Open Defecation Free (ODF) Chitwan, ..... The LDO of Chitwan, Mr. Basanta Adhakari has stated that a Committee has been formed to announce chitwan as Open Defecation Free District. ....Ratnanagar Municipality has been the first municipality of Nepal to announce Open Defecation Free area.... Mr. Krishna Hari Poudel, the general secretary of the committee stated that the strategy was developed before four years for implementation. ...(Kantipur National Daily, 9<sup>th</sup> Bhadra 2068).

Environment is defined as the surrounding made up of many living and non-living things with which man has constant relationship. This relationship between man and his environment is called Human Ecology. Many illness are related to a poor environment is an essential objective of community health.

Maladjustments of human organism in social environment may cause ill health such as drug addiction, alcoholism, crime, violence, suicides, divorce, mental illness, hypertension, duodenal ulcer etc. Human behavior is related on it.

Sanitation is defined as "the science of safe guarding health". Environmental sanitation is very important in health. Diseases are caused due to disturbance in the balance between man and his environment. Three ecological factor (agent, host and environment) are responsible for disease. The high infant death rate, sickness rate and low health status - all are due to defective disposal of human excreta and refuse, poor housing and prevalence of insects and rodents. Therefore, improvement of environmental sanitation for the prevention of diseases and promotion of health of both individual and community are very important. Sindhuli, appears quite unusual that there is no toilet in a whole VDC but here, not only one, four VDCs are toilet less. Not a single toilet have been constructed in these VDCs. People from these villages defecate along the streams, river beds and forests.

The human excreta of a sick person or a carrier of disease is the main focus of infection. It contains the disease agent which is transmitted to a new host through various channels: Water, fingers, flies, soil and food. These events are as shown in

**fig. 1. Figure 1: Transmission of Faecal borne Diseases**

The disease cycle (Fig. 1) may be broken at various levels: Segregation of faeces, protection of water supplies, protection of food, personal hygiene and control of flies of these, the most effective step would be to segregate the faeces and arrange for its proper disposal so that the disease agent cannot reach the new host, directly or indirectly. Fig. 2 shows the segregation of the excreta by imposing a barrier called the "Sanitation barrier". In simple terms, this barrier can be provided by a 'Sanitary latrine' and a disposal pit. The more elaborate schemes envisage installation of a sewerage system and sewage treatment plants.

**Figure 2: Sanitation barrier to Transmission of Faecal born Diseases**

If we search the history of the latrine we found sitting type toilet practiced by human being in 2500 B.C. to till date different types of latrines are using in different communities and houses (Kayastha, 2008). According to Park (2007) the commonly used latrine types are as follows: Service type latrines, Non-service type (Sanitary) latrine and Latrines suitable for camps and temporary use.

Different people of different communities are using different types of latrine according to their wish, need and capacity. Specially landless people are defecating faeces openly in public areas due to the lack of knowledge poor economic and land status to build latrine.

#### Some facts on Sanitation Coverage in Nepal

In Nepal, only 46% of the population has access to latrines against water supply coverage of 76%. (at 90% in urban areas and 80% rural). The gap between sanitation and water supply facilities is over 30%. About one third of the 75 districts have sanitation coverage of below 20%. The coverage among the rich people is 80% whereas among the poor is 12%. the coverage in rural area is 30% and in urban 81%.

#### **Stakeholders to maintain proper Sanitation and Hygiene in Morang district.**

- |  |                                |
|--|--------------------------------|
| 1. DDC   | 2. Political Parties           |
| 3. VDC   | 4. NGOS/ INGOS                 |
| 5. District Education Office                     | 6. District Health Office      |
| 7. Donor agencies                                | 8. District Sanitation Board   |
| 9. District ODF Information Centre               | 10. Medias and media activists |
| 11. Drinking water and sanitation consumer group |                                |
| 12. Civil society and board of stake holders     |                                |

13. Division office of drinking water and sanitation.

14. District drinking water, sanitation and hygiene coordinating committee.

DDC is considered as the leading organization to coordinate, draft policies and program and implement them in the field. It allocates 20% of its internal budget in the sector of sanitation and Hygiene. It has managed to award the selected social worker to support the campaign of Open Defecation Free area.

Formation of VDC water sanitation and hygiene Coordination Committee V-WASH-CC. District Education Office has authorized the public schools to grant 10 marks to the students having latrine at their house under practical evaluation.

According to the DDC office of Morang out of 186578 household there consists 79482 no of latrine. It shows that 2.35 families share one latrine. With respect to Sijuwa VDC there consist 2391 household comprising 1535 no of latrine. It shows 1.56 household share one latrine. (*Source:DDC office of Morang*)

## **2.2: Empirical Literature**

New Era (1991) made a survey on the topic 'Sanitation Education in Choking' and submitted to the UNICEF Nepal. The organization ascertained the following facts as the people's attitude towards the use of latrine. The surveyors asked the sample households "Do you wish to install a latrine at your house ?" The survey shows that 81 percent of the sample liked to install latrine and 19 percent already had a pit latrine in their garden.

Baruwal (1992) in his descriptive study as cited in Gautam (2005) on the 'Attitude and practice of sanitation in Kirtipur" stated that the households who had their toilets were found positive in their attitude about toilets and use them regularly by most of the family member. Only the things that they want are more help on the technical side of toilet to control rate and pit filling problems with bad smell.

Maharjan (2050): Studied on "Effectiveness and acceptance of Sulabh Shauchalaya in Kirtipur". In this study, he found that most of households have managed water in latrine and have simple cleanliness. Only 11 percent latrine are found dirty, most of the families used to clean latrine by the family member, only 25 percent respondents

used phenyl to clean latrine. Almost of the respondents realized that for the control of communicable disease, toilet use is must in each houses.

Gurung (2000) studies on "A study on KAP of latrine in Khadbari Municipality Sankhuwasabha". The main objective of the study was to identify people's KAP on the use of latrine. For the study 100 households were selected by using random sampling. Questionnaire was used as a tools of the study. He found cent percent people wash their hands with soap and water and properly maintaining their toilet condition regularly. Many disease spread in the community due to the open disposal of human excreta.

Sharma (2001) studied on "Use of latrine in Balkot VDC with their types'. The main objective of the study was to examine the latrine facilities sample random sampling used to select sample size, sample size is 108 households. The research tools are questionnaire, interview and observation. He found the overall observation of the study indicated that latrine was necessary to be safe from communicable diseases and for environmental sanitation. Education and economic status play a vital role in constructing and good sanitation of latrines.

Gautam (2005), conducted a descriptive research on "Use of latrine in Dhakre VDC", Dhading district. 135 households were selected by random sampling method. Questionnaire and observation were used as research tools. Only 2 percent people had sufficient water supply inside the toilet and 62.2 percent people were used soap to wash hand. Education and economic status play vital role for constructing and good sanitation of latrine.

Kayastha (2008) studied on consequences of latrine practice in Rajbahak Community of Madhyapur Thimi Municipality. The main objective of the study was the explore the consequences of latrine practice for the study 150 households were selected randomly and questionnaire, interview schedule and observation form were used as a tools of the study. In the study, she found that 66.66 percent of the respondents has own latrine and they were using their latrine properly. Study conclude that 98 percent respondents wash hands after defecation, among them 84.66 percent respondents wash hands with soap and water.

District Sanitation Coordination Committee (DSCC) (2010), in Nepal, only 46 percent people used latrine but 59 percent people has not construct latrine in Morang district. Due to the lack of sanitation, 33 thousand people are dying every years. Among them 10 thousands are under 5. Morang district has targeted to control open defecation practice by 2015 December. To control of open defecation practice, community led total sanitation and school led total sanitation programme are conducting in community area. Urlabari VDC of Morang district was declared as the open defecation free area for the first time in Nepal.

**Table 1**  
**Condition of Sanitation of Different VDC in Morang**

<b>Accessible of Sanitation</b>	<b>No. of VDC or Municipality</b>
Below 10 percent	15
11-20 percent	9
21-53 percent	28
54-60 percent	5
61 percent +	9

Satyal (2010) studied on "Practices of latrines use and it's effects on the health of Dalit Community". For the study 100 households were selected by using random sampling method. Interview schedule and questionnaire are used as tools of the study He found 39 percent people have not toilet and 55 percent respondents did not wash their hands after defecation. Mostly Dalits suffered from different health problem in the study area due to their poor sanitation practices.

On the basis of above review literature the main cause of environmental pollution and communicable diseases are unmanaged defecation of human excreta. Only 46 percent of the total population are using latrine. On the other hand, many NGOs and INGOs are working in sanitation field. Barriers of utilization is emerging issue in many Nepalese community. After reviewing the above literature, researcher develop the wide concept about thesis and to give proper guidelines. The topic "Barrier to the utilization of latrine and hygiene behaviors among landless people in Sijuwa VDC Morang" is selected on the basis of above reviewed literature for the study.



## **CHAPTER III: METHODOLOGY**

### **3.1: Research Design**

Research design is the conceptual structure of research work.. According to Kothar (2004), "A research design is the arrangement of condition of collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy". According to Kothari "descriptive studies are those studies which describing the characteristics of particular individual or group". This study has also focused with small size of population of fixed area and try to find out barriers and hygiene practice to use of latrine in landless people. Thus, on the basis of above discussed definition of research design and the nature of this study, this study is descriptive in design, mainly based on quantitative in nature.

### **3.2: Sources of Data / Population of the Study**

Both primary and secondary data were used for the study. Primary data were obtained by the field survey with interview and observation. All the landless people of ward No. 6 are the sources of data in this study. There are 202 household in the study area and the total population is 1256. Also secondary data were collected from the journals, books, previous thesis report, VDC office, research report etc as possible.

### **3.3: Sampling Procedure / Sample Size .**

For the collection of data, Simple random sampling method was employed. Sampling is a technique of selection of a significant small group from a population which includes all the essential needed for investigation All the households of landless people of Sijuwa VDC, Ward No. 6 ( 52 ) are the respondents of the study.

### **3.4: Data Collection Tools**

In order to achieve the objective of the study, the researcher used interview schedule and observation form. Interview schedule was developed for the primary data collection. The other publication (Book, Article, Journal) and VDC records were used as the tools for secondary data collection. An observation form was developed to observe existing condition, its types and hygiene practice of latrine.

### **3.5: Validation of the Survey Tools/ Instruments**

The interview schedule and observation form were employed as the main tool of the data collection. For the valid and reliable information; interview schedule and observation form (set of tools) were pre-tested on Rajghat VDC Ward No. 6 named Sombare which is closely similar to the study area. For the pre-test of tools, 10 household were taken which is supposed to be similar to the study area. The tools were revised and given final shape after collecting feedback from pre-test and experts help of Health, Physical and Population Education Department.

### **3.6: Data Collection Procedure**

First of all, the researcher visited Sijuwa VDC Office with the authorized letter from Department of Health and Population Education, Sukana Multiple campus Sundarpur, Morang. Then he discussed about the purpose of the study and requested for help by calling the meeting of landless leaders of ward no. 6 in Sijuwa Village Development Committee. Then the researcher visited from door to door with the help of landless leaders in the selected household area after taking permission from VDC chairman. The researcher collected information from each respondent by using interview schedule, explaining the nature of the study. The observation forms were filled up by observing the latrine and hygiene practice.

### **3.7: Analysis and Interpretation of Data**

After collecting the necessary data and information, it was checked and verified as the field research manually to reduce the errors and the data is further tabulated in master table. Analysis and interpretation of data was based on numerical and percentage as well as secondary data were presented systematically and logically. The required tables and figures were prepared using the computer program, MS Excel and SPSS. Finally the conclusion and recommendations were expected to be made for improvement and further studies.

## CHAPTER - IV

### ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the analysis and interpretation of collected data which are presented in the following main sections: Demographic characteristics, Knowledge and attitude of latrine, Barriers to the utilization of latrines and Hygiene practice related to the use of latrine

#### 4.1 Demographic Characteristics

##### 4.1.1 Age Structure

All the landless people of ward no. 6, in Sijuwa VDC were the population of the study but household guardians or productive age group member aged (15-59) from each selected household were taken as a respondents of the study. The distribution of the respondents were grouped in seven age groups by keeping ten year difference in each age group. Respondents are presented according to their age in figure 3. In this figure each shaded part indicates the given percentage.

Figure 3 shows that out of 52 respondents, 3.85 percent respondent's age lie between 10-20 years, 11.54 percent were between 20 to 30 years, 15.38 percent were between 30 to 40, 30.77 percent were between the age of 40 to 50, 28.85 percent were between the age of 50 to 60 years, 3.58 percent were between the age of 60-70 and remaining

5.77 percent were between age of 70 and above years of age group. It seems that the maximum of the respondents were in productive age group who can earn or produce the required materials by working themselves.

#### 4.1.2 Ethnicity / Caste

Sijuwa VDC of Morang has different ethnic / caste groups. In this study, researcher had classified main four ethnic groups: Brahmin and Chhetri, Dalit, Janajati and other. The study of the population according to the major castes are shown in Table 2 below:

**Table 2: Ethnic/Caste Groups**

<b>Ethnic Groups</b>	<b>Number of Ethnic</b>	<b>Percentage</b>
Brahmin and Chhetri	9	17.31
Dalit	15	28.85
Janajati	24	46.15
Other	4	7.69
<b>Total</b>	<b>52</b>	<b>100</b>

The above table no. 2 shows that the Brahmin and Chhetri in the study area were 17.31 percent, 28.85 percent were Dalit, 46.15 percent were Janajati and 7.69 percent were others.

#### 4.1.3 Religion

This study area is inhabited by the population belonging to Hindu, Buddhist, Christine, Kirat and other religions. The following table shows the religion of the respondents.

**Table 3: Religion**

<b>Religions</b>	<b>Number of Respondent</b>	<b>Percentage</b>
Hindu	18	34.62
Buddhist	11	21.15
Christine	5	9.61
Kirat	12	23.1
Other	6	11.54
<b>Total</b>	<b>52</b>	<b>100</b>

According Table 3, out of sampled population, 34.62 percent respondents were Hindu, 21.15 percent respondents were Buddhist, 9.61 percent were Christine, 23.1 percent were kirat and 4 percent were other.

#### 4.1.4 Occupational Status

Directly or indirectly, occupation also affects our health, education, behaviour, knowledge, practice etc. In our context, people's health condition depends on their occupation. In this study, the occupation of the respondents is analyzed and shown in the following table.

**Table 4: Occupational Status**

<b>Occupations</b>	<b>Number of Ethnic</b>	<b>Percentage</b>
Agriculture	11	21.15
Labour	28	53.85
Business	10	19.23
Service	3	5.76
<b>Total</b>	<b>52</b>	<b>100</b>

Table 4 reveals that among 52 respondents, 21.15 percent respondent's occupation is agriculture, 53.85 percent were engaged in labour, 19.23 percent were in business and 5.76 percent in service. So, the study shows that maximum landless people were engaged in labor and least were engaged in service. The people who were engaged in agriculture, they used the land on rent( Adhiya and thekka) and the labour work in the others' farm and construction sides.

## 4.2 Knowledge and Attitude of Latrine Use

### 4.2.1 Advantages of Having Latrines

All of the respondents knew about the latrine and also maximum respondents responded that latrine is necessary for good health. At the time of research work, the researcher asked "What are the advantages of latrine ?" Table 5 shows the advantages of latrine reported by the respondents:

**Table 5: Advantages of Having Latrine**

Status of respondents	To control environmental pollution		To control communicable disease		To live healthy life		To control open defecation practices	
	No.	percent	No.	percent	No.	percent	No.	percent
Illiterate	6	11.54	1	1.92	0	0	4	7.69
Literate and Primary	9	17.31	7	13.46	2	3.84	4	7.69
Secondary	4	7.69	3	5.77	3	5.77	3	5.77
Higher Secondary and above	3	5.77	2	3.84	1	1.92	0	0
<b>Total</b>	<b>22</b>	<b>42.31</b>	<b>13</b>	<b>25</b>	<b>6</b>	<b>11.54</b>	<b>11</b>	<b>21.15</b>

On the basis of above table, 42.31 percent of the respondent showed the importance of latrines as to control the environmental pollution. Among them, 11.54 percent were illiterate, 17.31 percent were literate and primary level completed. 7.69 percent were from secondary level and 5.77 percent of them were from higher secondary level and above.

Among the total population, 25 percent of total respondent pointed out that the 'advantages of having latrine' is to control the communicable diseases. Among these respondents, 1.92 percent were illiterate, 13.46 percent were literate and attended the primary level. 5.77 percent of those respondents were from secondary level and 3.84 percent of the respondents were from the higher secondary and above. 11.54 percent of the respondents thought that, those who have latrine could live a healthy life. From these respondents, none of them were illiterate, 3.84 percent of them were literate and were from primary level. 5.77 percent of respondents were from secondary level and 1.92 percent of the respondents were from higher secondary and above.

On the total respondents, only 21.15 percent showed the importance of latrine is to control open defecation practice. Among them the percentage of illiterate and literate

completing primary level were 7.69 percent. And 5.77 percent were from secondary level.

Thus the study concluded from above table that respondents do not have effective knowledge on the advantages of latrine. The most important advantage of latrine is to have healthy life but only 11.54 percent of the respondents responded the important advantage. Although other points are also the advantage of having latrine but the final aim is to achieved the healthy life. As only the less number of respondents have actual knowledge on advantage of latrine which is not satisfactory.

#### **4.2.2 Attitude Towards the Need of the Public Latrine**

There were not any public toilets in the landless community in Sijuwa VDC at ward no. 6 but maximum respondents felt it as necessity in the village. Only 2.67 percent of the respondents felt public toilet as not necessary. Local people fully agreed that health is wealth and the healthy environment helps them to become a healthy person. Public toilet is necessary to those people who do not have their own latrine. Need of public latrines is shown in the following Table 6.

**Table 6: Reasons for Need of Public Latrine**

<b>Reasons</b>	<b>Total Number</b>	<b>Percentage</b>
To keep the local environmental clean	21	40.38
To maintain beauty	8	15.38
To facilitate the incoming travellers	17	32.69
Others	6	11.54
<b>Total</b>	<b>52</b>	<b>100</b>

Above Table 6 shows that, among 52 respondents, 40.38 percent respondent reported the need of public latrines as to keep the local environment clean, 15.38 percent respondent showed to maintain beauty, 32.69 percent showed to facilitate the incoming travellers and remaining 11.54 percent said other reasons.

### 4.2.3 Knowledge about the Reasons for Occurring Communicable Diseases

Respondents were asked if they knew the reason of occurring the disease in their family member. Response reported by them shows that maximum respondents have known the reason of occurring the disease. It seems that, landless people are becoming conscious about the health and hygiene day by day. However, 17.31 percent landless people still did not have knowledge about the reasons of occurrence of communicable disease which might be the reason of their illiteracy. Table 7 presents the reasons of communicable diseases reported by respondents.

**Table 7: Knowledge about the reasons for occurring Communicable Diseases**

<b>Reasons</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Lack of proper latrine for defecation	7	13.46
Unmanaged solid waste disposal	11	21.15
Due to the temporary latrine	8	15.38
Due to open defecation	17	32.69
Don't know	9	17.31
<b>Total</b>	<b>52</b>	<b>100</b>

Table 7 reveals that out of 52 respondents, 13.46 percent of the respondents reported that the reason of communicable disease found in the people of their community was the lack of proper latrine for defecation, 21.15 percent reported the unmanaged solid waste disposal, 15.38 percent reported due to the temporary latrine, 32.69 percent reported open defecation and 17.31 percent reported that they had no ideas about the reasons of communicable disease. In Nepal, only 43.4 percent have got sanitation facility.

If we analyze the reason of spreading communicable disease reported by respondents, we can see that, all the reasons are related or focused to the practice of safe latrine. Thus, it is said that due to the unsafe and temporary latrine and wrong practice of latrine, landless people of Sijuwa VDC of Morang district are facing different health problem and faecal borne diseases day by day.



### 4.3 Barriers to the Utilization of Latrines

#### 4.3.1 Educational Status

Education helps to raise the socio-economic status of people in society. Generally, in the society where people have better education, knowledge and awareness they live standard life. Sometimes they too are perceived as an elite people due to the chances of better opportunities for them. So, during the study, the respondents were asked to report the level of education that they attended. The level of education reported by the respondents can be seen in Figure 4.

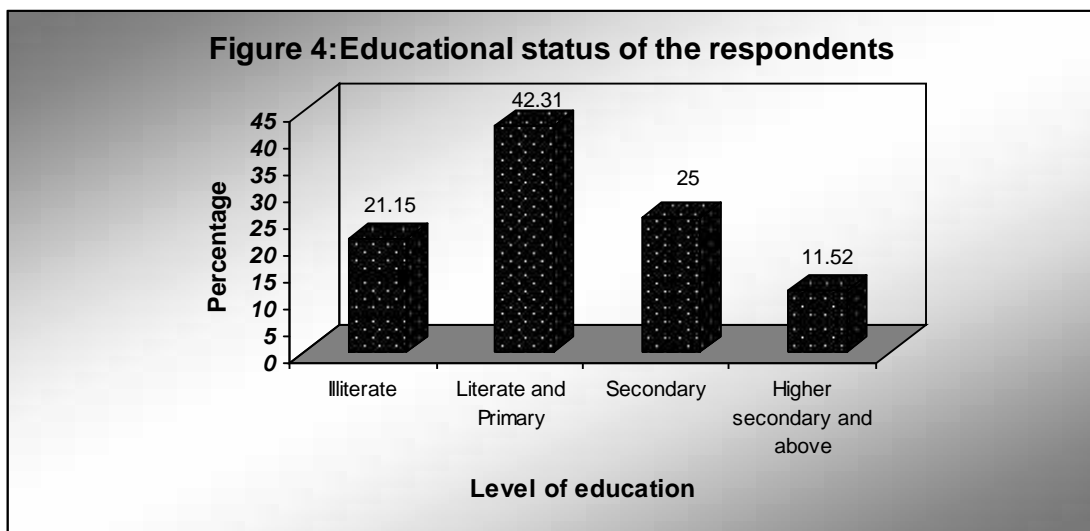


Figure 4 shows that 21.15 percent of the respondents were illiterate, 42.31 percent were literate and attended their primary level who can read and write very common words. Similarly, 25 percent of the respondents had secondary level education and only remaining 11.52 percent had higher secondary level and above education. After analyzing the education level of the respondents, it can be said that the number of respondents above higher level very limited. It means that the level of education and the socio-economic status of the respondents was very poor. It also shows that the so called higher caste have higher education than the other caste. According to CBS report 2001, only 53.74 percent of the people were literate. Among them 65.5 percent were man and 42.8 percent were female.

### **4.3.2 Separation of Respondents on the Basis of Land Property**

After knowing that almost all of the respondents were involved in agriculture, researcher further asked "Do you have land for farming ?" and the response reported by the respondents can be seen in Figure 5.

Figure 5 shows that, 46.1percent of the respondents had no land, 30.77 percent have their land for farming and remaining 23.15 percent did not have their land for farming which was not even legalized, they were using other's land in rent for faming. Whereas those who have their land for farming also did not have sufficient land in proportion to their family size.

### **4.3.3 Presence of Latrine**

Latrine has significant role to dispose the human excreta and it is also the major factor for making us healthy or sick. One of the best way of safe disposal of human excreta is presence of latrine and its proper use. In this study in order to find out the presence of latrines the selected households were observed and the result is presented in Table 8 in page no 27.

**Table 8: Presence of Latrine in Landless Community**

<b>Variables</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Yes	19	36.54
No	33	63.46
<b>Total</b>	<b>52</b>	<b>100</b>

Table 8 shows that more than half (63.46 percent ) of the respondents reported that there was not latrine at their home whereas 36.54 percent had their own latrine. Who had not their own latrine, they go to river bank, open field, side of the jungle etc. for the defecation.

From the study, it can be said that lack of land, money and knowledge are the barriers to have their own latrine. Due to the absence of the latrine for safe disposal of human excreta, there is probability of spreading communicable diseases, Specially faeces borne disease among the landless people in Sijuwa VDC of Morang district.

#### **4.3.4 Types of Latrine**

Latrines are categorized in two types. They are service and non-service type. But here in this study, types of latrine are studied as permanent and temporary. In order to find out the types of latrines in each respondents to see if they had their own latrine, they were asked the kind of latrine did they had. Their response is presented in Figure 6 below.

Figure 6 reveals that out of 19 respondents possessing latrine in their premises, 27 percent respondents had permanent latrines and remaining 73 percent had temporary latrines at their home. It seems that the condition of latrine and use of latrine are poor in landless community.

#### **4.3.5 Reasons of not Building Latrine**

In the study area, majority of the respondents were agreed upon the need of latrine. Among the total respondents, only 36.54 percent of the respondents had built their own latrine. Respondents who were using open and public place for defecation were asked about the reason for not building latrine at their home. The reasons reported by the respondents are shown in Figure 7 below.

Here, the Figure 7 reveals that out of 33 respondents who did not possess their own latrine, 24.24 percent did not build latrine in their home because they did not want to make, 12.12 percent of the respondents did not build latrine at their home due to the lack of knowledge. Likewise, 54.54 and 9.10 percent had lack of money (poverty) and lack of proper land to build latrine respectively.

The study results indicate that the wider participation of NGO and INGOs is necessary in study area to launch public awareness programmes and also to provide fund and materials that will support to build latrine in each and every home.

#### **4.3.6 Number and Location of the Latrines**

Human excreta is a source of disease and infection. It is one most significant cause of environmental pollution. C.L. Anderson has prescribed one toilet for hundred people as necessary minimum requirement facilities point of view. So one latrine is sufficient for a family. Likewise, some prefer in the garden and some prefer in the jungle to make latrine because they had different reason such as odour, lack of money, lack of proper land, dirtiness and so on.

In this respect, each selected respondents were observed and asked as "how many latrine do you have and where is your toilet ?" The response is presented in Table 9 below:

**Table 9: Location of the Latrine**

<b>Variables</b>	<b>No. of Respondents</b>	<b>Percentage</b>
In the garden	8	42.1
In the jungle or river bank	11	57.9
<b>Total</b>	<b>19</b>	<b>100</b>

Table 9 reveals that hundred percent respondents had one latrine. The location of latrine was also observed. Out of 19 respondents, 42.1 percent respondents had latrine in the garden and 57.9 percent had latrine in the jungle and river bank. Their response indicates that they were not-interested to have their latrines inside the house due to lack of proper land, odour and pollution. All of the respondents reported that they had latrine out side the house.

#### **4.3.7 Place Used to Defecation in the Absence of Latrine**

Latrine is the best solution or place of safe disposal of human excreta. Maximum (63.46percent ) respondents of the study area were unable to manage and construct latrine. In order to find out the place of defecate area on the absence of latrine, respondents were asked the question and their response is given in the following table:

**Table 10: Place of Defecate Area in the Absence of Latrine**

<b>Place used for defecation</b>	<b>No. of Respondents</b>	<b>Percentage</b>
In river bank	10	30.30
In an open field	15	45.45
Side of the jungle	8	24.24
<b>Total</b>	<b>33</b>	<b>100</b>

Table 10 indicates that out of 33 respondents who had not built latrine at their home, 30.30 percent of the respondents used river bank for defecation, 45.45 percent used an open field, public toilet are not used for defecation because there is not any public toilet and 24.24 percent of the respondents used side of the jungle fore defecation. It seems that there are high chances of spreading communicable diseases at any time and season due to the open defecation in public open places.

#### **4.3.8 Disposal of Children's Stool**

Children can not go to latrine for excreting stool and urination. 33 (63.46 percent ) of the respondents did not have latrine at their house. So, they were using different places for disposing their children stool, which is presented in the figure below.

The Figure 8 denotes that, among the total 33 respondents who did not have their own latrines, used to dispose their children's stool in different places. 12.12 percent of the respondents disposed the stool of their children in the river, 60.60 percent disposed in an open field, 9.1 percent respondents disposed the stool of their children in the public places and remaining 18.18 percent used to dispose in the pit. It seems that only

18.18 percent respondents had an idea of better disposing of the children's stool in the absence of latrine. This result will be the main cause for spreading of the communicable diseases in the study area.

#### 4.3.9 Distance of Sources of Ground Water from the Latrine

Ground water is one of the cheapest sources of clean water. Underground water is usually germ free. If there are many minerals in ground water, it may not be good for health. Ground water is also polluted if latrines are built near the sources of water. C.L. Anderson prescribed that the sources of ground water should be more than 15 meter far from the latrine. Table 11 shows the distance of latrine from the sources of ground water.

**Table 11: Distance of Latrine from the Sources of Ground Water**

<b>Distance</b>	<b>Total no. of Respondents</b>	<b>Percentage</b>
More than 15 meters	12	63.15
Less than 15 meters	7	36.84
<b>Total</b>	<b>19</b>	<b>100</b>

The above table shows that out of the total respondents who use underground water for drinking purposes, 63.15 percent had more than 15 meters distance of their sources of drinking water and 36.84 percent had latrine less than 15 meters of distance.

The study indicates that majority of the people of the study areas who used underground water had fair knowledge on the effect of latrine to the sources of ground water and they dug up well or tube-well far from the latrine. Among those people, some of them were compelled to do so due to the lack of sufficient land and knowledge. Ground water is polluted if latrines are built near the sources of water. So sources of ground water should be more than 15 meter far from the latrine.

#### 4.3.10 Available of Water Supply in the Latrine

Most of the communicable diseases are caused by the lack of proper sanitation in the use of latrine. Proper water supply helps to maintain good sanitation. Each of the selected households of landless people who have their own latrine were asked 'How much water is available in your toilet ?' Table 12 shows the response reported by them.

**Table 12: Available of Water in the Latrine**

<b>Description</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Sufficient	1	5.23
Satisfactory	4	21
Insufficient	11	57.89
No	3	5.78
<b>Total</b>	<b>19</b>	<b>100</b>

Table 12 indicates that 5.23 percent respondents had sufficient water supply in their latrine, 21 percent had satisfactory water supply and 57.89 percent and 5.78 percent respondents had insufficient and not water supply respectively in their latrine. It was found that most of the latrines in landless community were unhygienic due to the lack of sufficient water supply in the latrine.

#### **4.3.11 Cleanliness of Latrine without the Water Supply**

The respondents who did not have water supply in the latrine were asked about the way they were following for the cleanliness of latrine and uses. The ways reported by them are presented in Table 13 below.

**Table 13: Ways Followed for Latrine and Users Cleanliness**

<b>Ways</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Bring water in bucket	2	14.28
Bring water in small jug	8	47.1
Use shrubs and leaf	2	14.28
Not clean	2	14.28
<b>Total</b>	<b>14</b>	<b>100</b>

According to the Table 13, out of 14 respondents, 14.28 percent of the respondents used to take a bucket of water for the cleanliness, 47.1 percent of the respondents used



to take a small jug of water for the cleanliness, 14.28 percent of the respondents used to take shrubs and leaves for their cleanliness and remaining 14.28 percent of the respondents did not use any things for the cleanliness. In fact some respondents seem to be neglecting the fact about the cleanliness which might be the reason for illiteracy.

#### 4.3.12 Management of Human Excreta after Filling the Pit

The latrine with septic tank is the proper methods for human excreta disposal but it needs more space and is expensive to construct in developing countries like Nepal in order to find out the management of human excreta after filling the pit because there is not any septic tank in the landless community. The researcher collected information from the selected households. The responses are presented in the table below.

**Table 14: Management of Excreta after Filling the Pit**

<b>Description</b>	<b>No. of Respondents</b>	<b>Percentage</b>
An open field	14	73.68
River	3	15.78
In the drainage	0	0
Maintenance of next pit	2	10.53
Others	0	0
<b>Total</b>	<b>19</b>	<b>100</b>

Table 14 indicates that none of the respondents had latrine with septic tank. Above table also shows that people who have no septic tank in their toilet have to apply alternative ways for the management of excreta after filling the pit. Among those respondents, 73.68 percent disposed excreta in an open field, 15.78 percent disposed in the river and 10.53 percent of the respondents had maintained of next pit. Finally it can be concluded that most of the respondents were not conscious to manage human excreta disposal after filling the pit.

#### **4.3.13 Overall Condition of Latrine**

Condition of latrine plays important role. The provision of the roof, floor, walls, light, ventilation, water, clean materials etc. should be maintained in a latrine. In this study to find out the overall condition of selected households, latrines were observed and the result is presented in figure below:

Figure 9 shows that among the 19 respondents, 15.78 percent of the respondents had latrine with good condition, 26.32 percent of the respondents had satisfactory condition and 57.89 percent had poor condition of latrine.

On the basis of the study, it is concluded that more than half (57.89 percent) have the poor condition of latrine due to poor knowledge, lack of awareness programme, economic condition, careless etc.

#### **4.3.14 Barriers and challenges to slow progress of sanitation**

Hygiene and sanitation is least prioritized within the national budget. Lack of uniformity in approaches of hygiene and sa. Out track of poor, disadvantaged and high risk group from the mainstreaming financing. Ineffective translation of policy into action due to inadequate coordination among the sector actors. Urban sanitation especially of solid and liquid waste management is a challenge

## 4.4 Hygiene Practices Related to Use of Latrine

### 4.4.1 Proper use of Latrine and Reason of Improper Use

If latrine is not used and managed properly there will be the chances of spreading many communicable disease. The knowledge on the use of latrine is important phenomenon in the context of environmental sanitation. One of the main aim of this study was to find out the proper use of latrine and their reason of improper use. Their responses are presented in following table.

**Table 15: Proper Use of Latrine and Reasons of Improper Use**

<b>Proper Use of Latrine</b>		
<b>Variables</b>	<b>No. of respondents</b>	<b>Percent</b>
Yes	7	36.84
No	12	63.16
<b>Total</b>	<b>19</b>	<b>100</b>
<b>Reasons of Improper Clean of Latrine</b>		
Carelessness of the children	6	50
Old persons do not care	2	16.66
Other reason	4	33.33
<b>Total</b>	<b>12</b>	<b>100</b>

The Table 15 shows that among 19 respondents, only 36.84 percent respondents used latrine properly and 63.16percent of the respondents did not use their latrine properly. The causes of improper use of latrine as showed in above table reveals that out of 12 respondents who did not clean latrine properly, 50 percent respondents told that it is due to the carelessness of their children, where as 16.66 percent respondents showed reasons for it as the unwillingness of old person and 33.33 percent respondents said it is due to other reasons such as lack of interest to use latrine, awareness and unavailability of materials to clean the latrine etc.

The result indicates that most of the landless community do not use and clean latrine properly. It is the negative aspect in the use of latrine. It is not satisfactory result in the context of study area.

#### 4.4.2 Duration of Time in Cleanliness of Latrine

To keep latrine durable and odorless, it is necessary to clean it regularly. After each defecation, the latrine must be flushed with water. Duration of time of cleaning the latrine plays a vital role in keeping the well condition of the latrine as well as on spreading the communicable diseases. The respondents who had their own latrine and who clean latrine were asked how often they clean their latrine. Responses are presented in the following table:

**Table 16: Duration of Time in Cleanliness of Latrine**

<b>Variables</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Everyday	2	10.52
Once a week	6	31.57
Twice a week	3	15.78
Once in 15 days or more	8	42.1
<b>Total</b>	<b>19</b>	<b>100</b>

Table 16 shows that out of the 19 respondents, 10.52 respondent used to clean latrine everyday, 31.57 percent of the respondents cleaned their latrine in once a week, 15.78 percent cleaned their latrine in twice a week and 42.1 percent of the respondents cleaned their latrine once in 15 days or more. The study result indicates that duration of time in cleanliness of latrine is not sufficient. It is not a positive signal of hygiene and better sanitation.

#### 4.4.3 Use of Latrine for Urination

The liquid excreta eliminated from the human body are known as urine. The uncontrolled discharge of it can spread different communicable diseases as well as unpleasant smell around the household and community. So, it is necessary to use latrine for urination and it also needs frequent cleanliness of latrine after urination. Table 17 shows that the use of latrine, cleanliness of latrine after urination and latrine cleaning person.

**Table 17: Use of Latrine for Urination and Latrine Cleaning Person**

<b>Variables</b>	<b>No. of Respondents</b>	<b>Percentage</b>
<b>Use of Latrine for Urination</b>		
Yes	10	52.63
No	9	47.27
<b>Total</b>	<b>19</b>	<b>100</b>
<b>Latrine Cleaning Person</b>		
Head of Household	6	31.58
Female member	4	21.1
Any Family member	9	47.27
<b>Total</b>	<b>19</b>	<b>100</b>

Table 17 presents that, only 52.63 percent of the respondents used latrine for urination and 47.27 percent did not use latrine for urination. Among the latrine users all most all of the respondents did not clean latrine after urination due to the lack of knowledge. It is thus necessary to provide basic knowledge to the landless people to solve the problem.

Table 17 also presents that among the total respondents who clean latrine after defecation, 31.58 percent respondents used to clean their latrine by head of household, 21.1 percent respondents reported that the female members used to clean and 47.27 percent respondent's latrine is cleaned by any member of their family. The head of the household, female members and other family members were seemed to be directly concerned on the latrine cleaning on the landless community.

#### **4.4.4 Latrine Cleaning materials Used by the Respondents**

Most of the respondents use chemicals to clean the latrine. It makes their latrine neat, clean and odorless. It is necessary to clean latrine regularly. Therefore, the selected respondents who have latrine and clean latrine at their home were asked to report the latrine cleaner that they were using for cleaning toilet. Their answers are presented in the figure no 10 in page no 38.

Figure 10 reveals that out of 19 respondents, 73.68 percent of them used water to clean the latrine, 10.52 percent clean it with Brush, 16 percent used Harpic, Brush and water to clean the latrine and none of the respondent had used phenol to clean the latrine. However, more than two third (73.68percent ) of the respondents never cleaned their latrine using Harpic, Phenol etc which might be due to financial crises, lack of knowledge, carelessness, having only temporary latrine as well as due to their illiteracy.

#### 4.4.5 Things Used While Washing Hand after Defecation

It is hygienic to wash hand with soap after using the latrine. Some of the major causes of spreading communicable disease are the unhygienic trend of washing hand. In the study area, 5.77 percent of the respondents did not wash their hand after defecation. The respondents who reported that they have the habit of washing hands after defecation were further asked to report the name of the materials that they use for washing hands. The response is presented in Table 18 below.

**Table 18: Things Used While Washing Hand after Defecation**

<b>Variables</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Water and clay	4	7.69
Water and ash	7	13.46
Water and soap	17	32.69
Water only	21	40.38
Never wash	3	5.77
<b>Total</b>	<b>52</b>	<b>100</b>

Table 18 shows that the trend of applying the materials to be cleaned after defecation. The table shows that 7.69 percent respondents wash their hand by water and clay, 13.46 percent respondents used water and ash to wash their hand, 32.69 percent respondents used water and soap to wash their hand, 40.38 percent of the respondents used only water and 5.77 percent respondents did not wash their hand after defecation.

The study indicates that only 40.38 percent of the respondents wash their hand after defecation with soap and water. It shows that maximum landless people had no knowledge about washing hand properly after defecation which can be regarded as the very poor condition in the study area.

#### 4.4.6 Existence of Communicable Disease in the Family

The main sources of infection and communicable disease are haphazard disposal of human excreta and unsanitary habit. People may be infected by various diseases if their local environment is unhealthy. Mostly diarrhea, typhoid, jaundice, dysentery, worm and different type of germs and infection can occur and they are transmitted through facial organ. Existence of communicable disease in the study area is response as given below.

**Table 19: Existence of Communicable Disease in the Family**

<b>Description</b>	<b>Have Latrine</b>	<b>Have no Latrine</b>	<b>Total No. of Respondent</b>	<b>Percent</b>
Diarrhoea	0	1	1	6.25
Typhoid	1	2	3	18.75
Cough and common cold	2	3	5	31.25
Jaundice	1	2	3	18.75
Dysentery	0	1	1	6.25
Others	1	2	3	18.75
<b>Total</b>	<b>5 (26.31 )</b>	<b>11(33.33)</b>	<b>16</b>	<b>100</b>

Table No. 19 shows the existence of communicable disease during the research work in the family either there is present or absent of latrine. The comparison between the two tables indicates that respondents suffering from different communicable diseases who had latrine was 26.31 percent whereas 33.33 percent of the respondents suffered from communicable diseases where latrine is absent. It also indicates that the rate of spreading and affecting by the communicable disease were seen high in the houses who do not have latrine than the respondents who have latrine in their family. If construction and management of latrine and environmental sanitation is maintained, the health condition transmitting communicable disease can be improved certainly. Thus it is felt that there is still the need of the education for the construction and management of latrine.



## **CHAPTER -V**

### **SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

Latrine is one of the factor which influences the condition of house and community directly. If there is no latrine in the house the family members should go out of house for defecation. It is essential to have a latrine in each house and that should be used properly. It is obvious that the dirty latrines deteriorate the environment and help to transmit diseases easily. So, the condition of toilet should be checked daily. For this purpose, latrine should be made according to the necessity and as per the number of family. The provision of sufficient water should be made available and it should be clean from time to time. Chemical such as phenol, harpic etc. should be used to keep the latrine clean and all of the family member should be conscious about it.

The present study on 'Barriers to the utilization of latrines and hygiene practice among landless people' has been conducted with the main objective of exploring the barriers and behaviours related to the use of latrine among the landless people.

The study is descriptive in nature and mainly based on primary data collected from 52 household respondents who were selected from census method from ward No. 6 of the Sijuwa VDC. They were asked questions on different aspect about barriers and practice related to the use of latrine. The researcher also used an observation form and interview schedule as the tools of data collection. After collecting all information and data, the researcher rechecked and tabulated on master table in different heading. Then the data and information are grouped as objective wise and calculated the percentage for the further analysis. Then the data were analyzed and interpreted with the help of figure, tables and previous research findings.

#### **5.2 Major Findings**

The major findings found during the time of analysis and interpretation of data are presented below.

### 5.2.1 Demographic Characteristics

- It was found that 13.74 percent respondents were more than 60 years age and 86.53 percent were less than 60 years.
- Out of four listed ethnics / caste, 17.31percent were Brahmin and Chhetri, 28.85 percent were Dalit, 46.15percent were Janajati and 7.69percent were other.
- Out of 52 respondents, 34.62percent were Hindu, 21.15 percent were Buddhist, 9.61 percent were Christine,23.1 percent were Kirat and 11.54 percent were other. Most of the respondents were Hindu.
- It was revealed that 21.15percent of the respondents were involved in agriculture,53.85 were involved in labour, 19.23 percent were involved in business and 5.76 percent were engaged in service.

### 5.2.2 Knowledge and Attitude of Latrine Use

- Out of 52 respondents, 42.31 percent responded that the advantages of latrine was to control environmental pollution, 25 percent argued that it was to control communicable disease, 11.54 percent responded it as to live healthy life and 21.15 percent pointed that it was for the controlling of the open defecation practice.
- Though, all respondents felt the need of public latrines but among them, only 40.38 percent felt that it as to keep the local environmental clean.
- Out of total respondents, 13.46 percent of the respondents reported that the reason of spreading communicable disease are due to the lack of proper latrine for defecation, 21.15 percent reported it as due to unmanaged solid waste disposal, 15.38 percent pointed due to the temporary latrine, 32.69 percent reported that as due to the open defecation and 17.31 percent of the respondents reported that they don't know the reason of spreading communicable disease in their community.

### 5.2.3 Barriers of the Utilization of Latrines

- There were 21.15 percent illiterate and the most 42.31 percent one of the respondent were literate with primary education.
- 46.1percent of the respondents did not have their land, 30.77 percent have land for farming and 23.15 percent had land to reside but not to farm.
- Only 27 percent of the respondents had permanent latrine.
- Due to the lack of proper land, 9.10 percent did not build their own latrine because of temporary settlement, 12.12 percent due to the lack of knowledge, 54.54percent because of poverty and 24.24 percent did not want to build toilet.
- Out of 19 respondents, 42.1 percent of the respondents had their latrine in the garden and 57.9 percent have in the jungle and river bank.
- Among the total 33 respondents who did not have latrine, 30.30 percent of them used river bank, 45.45 percent used an open field and 24.24 percent used side of the jungle for defecation.
- Only 18.18 percent of the respondents disposed their children's excreta in pit who did not have their own latrine.
- Only 5.23 percent respondents had sufficient water supply inside the latrine and 73.67 percent respondents did not have water supply inside their latrine.
- Out of 14 respondents, who did not have water facility inside their latrine, 14.28 percent of them bring water in bucket from their home, 47.1 percent bring water in small jug, 14.28 percent use shrubs and leaf and 14.28 percent do not clean the latrine after defecation.
- 73.68 percent of the respondent reported that they dispose the excreta to open field after filling the previous pit. Only 10.53 percent of the respondents managed excreta after filling of the previous pit by the maintenance of next pit.

- The overall condition of latrine was found in poor condition. 57.89 percent were in poor condition whereas only 15.78 percent were in good condition.

#### **5.2.4 Hygiene Practice Related to the Use of Latrine**

- Out of 52 respondents 36.54 of the respondents have latrine in their house/residential area.
- Proper users of latrine was found only 36.84 percent.
- The respondents who argued the reasons behind the improper use of latrine as carelessness and unwillingness of old person were 50 percent and 16.66 percent respectively.
- It is found that 10.52 percent of respondents cleaned the latrine daily whereas 31.56 percent of the respondents use to clean the latrine once a week and 42.1 percent of the respondents reported that they clean once in 15 days or more.
- Only 52.63 percent of the respondents used the latrine for urination.
- The number of family members who were involved in cleaning the latrine were 47.27 percent , only 31.58 percent head of household and 21.1 percent were female members.
- More than two third of the respondents use only water to clean the latrine and 16 percent of the respondents use Harpic, brush and water.
- only 31.33 percent respondents wash their hands with soap and water after defecation.
- Out of 52 respondents, 30.77 percent of the respondents were suffered from different communicable disease at the time of research work.
- In the study area, the rate of communicable disease were lesser(26.31) in those houses having toilet than those houses which did not have toilet(33.33).

### **5.3 Conclusion**

After analyzing the data obtained from the study, it is concluded that majority of the respondents (landless people) have positive attitude toward the construction, management and the use of latrine. However, they are not practicing latrine for defecation due to lack of knowledge, poor economic conditions, carelessness and lack of the own land to build latrine.

In the study area, it is found that approximately all the respondents have knowledge regarding the importance of latrine for proper disposal of human excreta. The overall condition of latrine is found in poor. Very few of the respondents clean their latrine daily. Open defecation practice rate was high in the study area. There is not any public latrine for defecation in the whole VDC. Landless people do not build their own latrine due to the lack of proper land, poverty, lack of proper knowledge, carelessness etc. In the study area, the rate of communicable diseases are lesser in those houses having toilet than those houses which do not have (Table No. 19). It is necessary to launch 'one house, one safe latrine' programme in those landless community thereby reducing poverty. Also, public awareness programmes should be launched for the increment of the knowledge about the open defecation and communicable disease from different levels and organization.

### **5.4 Recommendations**

Recommendations is mainly given for the present reformations and future improvements. On the basis of findings, I want to give the following present and further recommendations.

#### **5.4.1 Recommendations for Improvement**

- Government, NGOs and INGOs should provide fund and materials support to the landless people for constructing safe latrine.
- Government should provide appropriate land for housing for landless and homeless people.
- Government should provide land to the landless people for constructing latrine.

- People should be aware and encouraged for the improvement of public health and for the environmental sanitation of the communities.
- The improvement of people's attitude and awareness towards human excreta management should be studied properly.
- Such study has to be conducted in a larger population covering whole VDC.
- Environmental sanitation programme has to be launched in the study area in order to protect life of people from communicable people disease like diarrhea, typhoid, dysentery, jaundice, parasitic worms etc.
- There are maximum landless and illiterate people, so government should launch literacy programme for landless people.

#### **5.4.2 Recommendations for the Further Study**

- Comparative study can be conducted with different classes to find out the exact situation on this matter.
- A study can be conducted on analyzing how the local organization can help in improving sanitary condition and its management.

## REFERENCES

- Baruwal, H.B. (1992). *A study on the attitude and practice of sanitation in Kirtipur*. Thesis Submitted to the Indian Institute of Ecology and Environment, New Delhi.
- CBS (2003). *Population monograph of Nepal*. Vol. II.
- DCCS (2010). *Morang is going to be open defecation free area*. Morang: DDC.
- Gautam, Bhim (11 Oct, 2010). *No toilets in majority households*. Rajdhani Kavre.
- Gautam, Lilanath (2005). *Use of latrine in Thakre VDC of Dhading district*. An Unpublished M.Ed. Thesis Submitted to Health, Physical and Population Education. Department of T.U., Kirtipur.
- Gurung, T. (2000). *A study on knowledge, attitude and practice of latrine in Khadbari municipality of Shankuwasabha*. An Unpublished M.Ed. Thesis Submitted to Health, Physical and Population Education. Department of T.U., Kirtipur.
- Gyawali, Deepak (2010). *About 60 percent HHs still lack toilets*. The status of sanitation in Nepal (Series 8), NEWAH.
- Health Learning Materials Center (2008). *Community nursing*. Kathmandu: T.U., IOM.
- Jha, A.K. (2005). *Introduction to health and physical education*. Kathmandu: M.K. Publishers and Distributors.
- Kantipur Daily, (12 August 2008). *There is no toilet in a whole VDC but here not only one*. Four VDCs are toilet less. Kathmandu: Publishers.
- Kayastha, G. (2008). *Consequences of latrine practice in Rajbahak community of madhyapur Thimi municipality*. An Unpublished M.Ed. Thesis Submitted to Health, Physical and Population Education, Department of T.U., Kirtipur.
- Kothari, C.R. (2004). *Reserch methodology*. Delhi: New Age International Private Limited.

- Kumar, R. (1998). *Research methodology*. New Delhi: Sage Publication.
- Maharjan, R.K. et al. (2000). *Health and physical education for secondary school*. Bhaktapur: Janak Shikchha Samagari Kendra.
- Maharjan, S.S. (2050). *A study on effectiveness and acceptance of Sulabh Shauchalaya in Kirtipur*. An Unpublished Research Work, Mahendra Ratna Campus, Tahachal.
- New Era (1991). *Sanitation education in chocking*. A report on the baseline survey. Volume 1. Submitted to UNICEF, Nepal.
- NEWAH (2008-09). Annual Report. Kathmandu: Author.
- Park, K. (2007). *Park's Text book of preventive and social medicine* (19<sup>th</sup> ed.). Jabalpur, India: M/S Banarsidas Bhanot Publishers.
- Pathari-Kathmandu Maitri Samaj (2068). *Mero pathai mero diary*. Kathmandu: Anamnagar.
- Satyal, B.K. (2010). *Practices of latrines use and its effects on the health of dalit community in Madi Rambeni VDC*. An Unpublished M.Ed. Thesis Submitted to Health, Physical and Population Education. Department of T.U., Kirtipur.
- Sharma, Prakash (2001). *use of latrines in Balkot VDC with their types*. An Unpublished M.Ed. Thesis Submitted to Health, Physical and Population Education, Department of T.U., Kirtipur.
- An essay on the use of latrine in Nepal*. Retrieved, on February 17<sup>th</sup> 2011. [www.communit.com](http://www.communit.com).



## APPENDIX - I

### An interview schedule for respondents about use of latrine use regarding health effects

#### a) Demographic Information of the Respondents

Name of the household leaders :

Date:

Name of the respondent:

Age :

Caste:

Religion:

Sex:

VDC:

Ward No.

Village

Occupation:

Family Size

**Education:** Illiterate / Literate / Primary / Secondary / Higher Secondary and above

**Possession of land :** Have land for farming, No land for farming, Have no land

#### b) Knowledge and Attitude of Latrine

1. Do you agree that latrine is necessary for good health ?  
(a) yes, I agree                      (b) No, I disagree
2. If yes, what are the advantage of latrine ?  
(a) to control environmental pollution  
(b) to control communicable disease  
(c) to live healthy life  
(d) to control open defecation practice
3. Are there any public toilets in your village ?  
(a) Yes                      (b) No
4. Why are public toilets necessary at your village ?  
(a) To keep the local environment clean  
(b) To maintain beauty and civility  
(c) To facilitate the incoming travellers (d) Otherelse
5. Do you know the reason of occurring the disease in your family member ?  
(a) Yes                      (b) No

6. If yes, what is the reason ?
- (a) Lack of proper latrine for defecation
  - (b) Unmanaged solid waste disposal
  - (c) Due to the temporary latrine
  - (d) Due to open defecation

**c) Barriers to the Utilization of Latrine**

1. Do you have latrine at your home ?
- (a) Yes
  - (b) No
2. If yes, where is your toilet ?
- (a) Inside the home
  - (b) In the garden
  - (c) Elsewhere
  - (d) In the jungle
3. What kind of latrine do you have ?
- (a) Permanent
  - (b) Temporary
4. If you don't have latrine where do you defecate ?
- (a) In river bank
  - (b) In an open field
  - (c) Public toilet
  - (d) Side of the jungle
5. Where do you dispose your children's stool ?
- (a) In river
  - (b) Open field
  - (c) Public toilet
  - (d) In pit
6. Why did not you build latrine at your home ?
- (a) do not want to make
  - (b) due to lack of knowledge
  - (c) due to poverty
  - (d) lack of proper land
7. What is the distance of source of ground water from latrine ?
- (a) more than 15 meters
  - (b) less than 15 meters
8. How much water is available in your toilet ?
- (a) Sufficient
  - (b) Satisfactory
  - (c) Insufficient
  - (d) No
9. If no, how you clean the latrine after defecation ?
- (a) Bring water in bucket
  - (b) Bring water in small jug
  - (c) Use shrubs and leaf
  - (d) Not clean

10. If your latrine does not have saptice tank, where do you dispose excreta after filling in the pit ?  
 (a) Open field (b) River (c) In the drainage (d) Maintenance of next pit  
 (e) Others

**d) Hygiene practice Realted to the Use of Latrine**

1. Does your family use latrine properly ?  
 (a) Yes (b) No
2. Does your family clean your latrine ?  
 (a) Yes (b) No
3. If not, why ?  
 (a) Carelessness of the children  
 (b) Old person's don't like to do so  
 (c) Other reason
4. If yes, how often do you clean your latrine ?  
 (a) Everyday (b) Once a week  
 (c) twice a week (d) Once in 15 days
5. Does your family use latrine for urination ?  
 (a) Yes (b) No
6. Do you clean your latrine after urine ?  
 (a) Yes (b) No
7. Who is the person to clean the latrine ?  
 (a) Sweeper (b) Household Leader (c) Family member (d) Others
8. What things do you use to clean your latrine ?  
 (a) Harpic + Brush (b) Only water  
 (c) Brush only (d) Phenol (e) Harpic + brush + water
9. Do your family wash hand after defecation ?  
 (a) Yes (b) No

10. If yes, what things do you use to wash hand ?  
(a) Water and clay      (b) Water and ash  
(c) Water and soap      (d) Only water
11. Are there any communicable diseases problems in your family ?  
(a) Yes                      (b) No
12. If yes, what kinds of communicable disease are seen in your family ?  
(a) Diarrhoea              (b) Typhoid              (c) Cough and common cold  
(d) Jaundice              (e) dysentery              (f) others
13. Do you have any suggestin on use of latrine ?  
.....

## APPENDIX - II

### Observation Checklist

1. Presence of latrine  
(a) Yes (b) No
2. Number of latrine  
(a) 1 (b) 2 (c) 3 (d) 4
3. Location of the latrine  
(a) Inside the building (b) Outside the building
4. Odour from the toilet  
(a) Very strong odour (b) Mild (c) No odour
5. Sanitatin of toilet  
(a) Good (b) Satisfactory (c) Poor
6. Use of toilet cleaner  
(a) Yes (b) No
7. Types of latrine  
(a) Permanent (b) Temporary
8. Overall condition of latrine  
(a) Good (b) Satisfactory (c) Poor

#### Indicators

- Good = Attractive construction and maintenance of latrine.  
 Satisfactory = Semi-permanent and uncomplete maintenance.  
 Poor = Weak construction and management, cleanliness of latrine.  
 Permanent = Latrine is durable for long time  
 Temporary = Latrine is not durable for long time.  
 Very strong odour = Smell spread for long distance which directly affect the people..  
 Mild = Odour is spreaded near the latrine

**APPENDIX - II**  
**Map of Sijuwa VDC**