CHAPTER - ONE

INTRODUCTION

1.1 Background of the Study

Kala-azar is known as Leishmaniosis, Leishmaniose, and formerly, Orient Boils, black fever, sand fly disease, Dum-Dum fever, or espundia. Leishmaniasis is a disease caused by protozoan parasites that belong to the genus Leishmania and is transmitted by the bite of certain species of sand fly including flies in the genus Lutzomyia in the New World and Phlebotomus in the Old World. The disease was named in 1901 for the Scottish pathologist William Boog Leishman. Most forms of the disease are transmissible only from animals (zoonosis), but some can be spread between humans.

Human infection is caused by about 21 of 30 species that infect mammals. Leishmaniasis can be transmitted in many tropical and sub-tropical countries, and is found in parts of about 88 countries. Approximately 350 million people live tropical and sub-tropical countries. Globally about 500000 cases of the disease occur annually. The settings in which leishmaniasis is found range from rainforests in Central and South America to deserts in West Asia. More than 90 percent of the world's cases of visceral leishmaniasis are in India, Bangladesh, Nepal, Sudan, and Brazil. Leishmaniasis is also found in Mexico, Central America, and South America—from northern Argentina to southern Texas (not in Uruguay, Chile, or Canada), southern Europe (leishmaniasis is not common in travelers to southern Europe), Asia (not Southeast Asia), the Middle East, and Africa (particularly East and North Africa, with some cases elsewhere). The disease is not found in Australia or Oceania. Recurrent outbreaks of visceral leishmaniasis, a parasitic disease also known as kala-azar, have been reported in Southern Sudan, with 6363 cases and 303

deaths (case fatality rate of 4.7%) recorded since outbreaks began in September 2009. The number of cases is more than six times higher than the same period starting in 2007 (when 758 cases were recorded) and 2008 (582 cases). Most affected patients (70%) are children aged under 15 years who already suffer from concurrent malnutrition and other secondary illnesses.

(http://www.who.int/hac/crises/sdn/releases/8october2010/en/index.html)

a. visceral leishmaniasis : popularly known as black fever
b. Cutaneous leishmaniasis: is known under a variety of common name a such as oriental sore.
c. Diffuse cutaneous leishmaniasis.
d. Mucocutaneous leishmaniasis: also known as South America as espudia [5]

Kala-azar is nearly always fatal if untreated. Even with treatment, case fatality rate exceeds 10% in visceral leishmania endemic area of Asia and Africa. Post kala-azar dermal leishmaniasis (PKDL) may occur after the apparent case of systematic disease, the phenomenon is result of an immune response on the part of the host that protects viscera but not the skin.

(http://www.who.int/hac/crises/sdn/releases/8october2010/en/index.html)

Since 1990, South Asia has experienced a resurgence of the lethal parasite disease visceral leishmaniasis (VL). Kala-azar especially occurs among the socially marginalized and the poorest communities. In the SEAR countries, Kala-azar occurs in India, Bangladesh and Nepal. A small focus has also been reported from Bhutan, but the epidemiology of this focus is little known. In the three countries of the region about 189

million people in 190 districts are ‘at risk’. (Kala-azar elimination programme of Nepal, 2009)

In Nepal, the disease affects eastern Terai region which lies adjacent to the Bihar state of India. Although leishmaniasis is regarded as a significant health problem in Nepal by the Ministry of Health, there is no active case detection programme in the country. Information on the morbidity and mortality is thus very limited. By 2065/66, the disease has spread to 12 districts of central and eastern regions of Nepal, and nearly 8.1 million people residing in these districts were at the risk of acquiring the disease. A total of 25890 cases with 599 deaths were reported during the year 1980-2008 (Annual Report 2065/66).

The incidence of VL in Nepal seems to be increasing at a faster rate indicating that the existing control programs have been ineffective. To achieve success in control programs, the existing ones should be amended as there is evolution of resistance in the parasite as well as the vector. Public health education, to make the people aware about preventive aspects of the disease is important. The possibility of the existence of animal reservoirs should also be considered and checked out for better control measures. (ddjoshi@healthnet.org.np).

The parasite migrates to the visceral organs such as liver, spleen and bone marrow and if left untreated will almost always result in the death of the mammalian host. Symptoms include fever weight loss, anemia, and substantial swelling of the liver and spleen. Of particular concern, according to the World Health Organization (WHO), is the emerging problem of HIV/VL co-infection. It is the second-largest parasitic killer in the world (after malaria) responsible for an estimated half-million deaths worldwide each year.

1.2 Statement of Problem

At present, kala-azar is a re-emerging serious public health problem in the Terai region of the Nepal. It is the disease of poor people of developing countries. The cost of treatment is very high which is very difficult for the patient to afford. We know kala-azar is preventable disease therefore, emphasis has to given on the prevention of kala-azar. The government of Nepal has launched various programmes for the elimination of kala-azar disease. At present, government of Nepal provide incentive for the Kala-azar patients after complete the treatment. The incentives are cash Rs 1000 and one insecticide treated net (Supanet).

Jhapa is a terai district having about 10 kala-azar affected VDCs and is situated in the eastern region of Nepal having open border with Bihar and west Bangal state of India. Majority of people are involved in agriculture and having low per capita income. Dharampur is the most affected community of Jhapa District which is situated in western part of Jhapa. This type of research has not been carried out in this area. Kala-azar incentive programme is only lunched by Government of Nepal for 2 years. Therefore, this type of study is necessary in Jhapa district and may assess the impact of incentive in the management of Kala-azar cases in this district so that suitable program should be implementing to bring the disease under control. This study is also useful to find out the actual Kala-azar patients take incentive or not?, do incentive provider follow the national guideline to provide incentive?, treatment seeking behavior with respect to Kala-azar treatment and use of incentive, how many gap between Kala-azar policy and practice of incentive in the Kala-azar cases?.

1.3 Objective of the Study

1.3.1 To find out the socio-demographic and economic characteristics of kala-azar related community.

1.3.2 To find out knowledge of kala-azar and the incentive in the management of kala-azar cases in Dharampur VDC, Ward No – 8, jhapa district.

1.3.3 To identify people's health seeking behaviour with respect to Kala-azar treatment and use of incentive.

1.3.4 To find out impact of incentive in the management of Kala-azar cases in Dharampur VDC, Ward No – 8, jhapa district.

1.4 Significance of the study

the signification of the study are the following:

1. The survey finds out the impact of incentive in the management of Kala-azar cases in jhapa district.
2. The result of the study will be useful for the other researchers and learners as reference.
3. It will be helpful for planning, policy making and program implementation for the government, VDC, NGOs & INGOs, CBOs and other sectors.
4. It will be supporting for community development in concern population and study areas.
5. It will be solving the problems of related issues.

1.5 Research Question

1. What is the socio-demographic characteristics of the Dharampur VDC, Ward No – 8, jhapa district?

2. What is the economic status of the kala-azar affected community.
3. Find out the knowledge of the people of the kala-azar affected community.
4. What is the people's health seeking behaviour with respect to Kala-azar treatment?
5. How is the impact of incentive in the management of Kala-azar cases in Dharampur VDC, Ward No – 8, jhapa district?
6. What is the gap between theory and practice to implementing Kala-azar control and elimination program?

1.6 Delimitation of the study

The following delimitations have considered on the basis of local availabilities of sources, facilities and time.

a. The study was delimited with in the Dharampur VDC, Ward No – 8 (Maghigau), Jhapa district.
b. The study was delimited at the content to incentives and related area in the management of Kala-azar cases in Jhapa district.
c. The study was delimited with in the constraint budget.
d. The study was confined to time limitation of six month.

1.7 Definition of important terms used

Clinical features: Symptoms and signs of kala-azar

Family income: Average monthly earnings combined by all the working members of the family and also income earned from the assets of the family.

Incentive:- Money and other things like net (LLIN) that encourage for Kala-azar patient to receive complete treatment.

Kala-azar: The disease is characterized by irregular fever for long time, splenomegaly, moderate hepatomegaly, skin color change into black, anemia and emaciation.

Method of use: The procedure of applying preventive measures

Mode of spread: Means of transmission of kala-azar from sand fly to person

Post kala-azar dermal leishmaniasis (PKDL) –This phenomenon is a result of an immune response on the part of the host that protect viscera but not the skin

Preventive behavior - The psychological patterns and practical application of concept, attitude, costumes and knowledge regarding the prevention of any type of disease (kala-azar) or unpleasant event.

Preventive measures: The procedure that can stop transmission of kala-azar.

Protozoan parasite - The term Protozoan is a unicellular organism and parasite is ordinarily applied to a weaker organism that obtains food and shelter from another organism and derives benefit from that association causing some form of injuries to the host.

Respondents: The head of the household was primarily selected as the respondent. In the absence of the family head, an adult member of the household who knew about the family, understood question and was willing to cooperate or accepted as eligible respondent.

Sand fly – small insects which play vital role to transmission of kala-azar disease.

Sources of information: Means/Media of getting Information on kala-azar.

Supanet: The Insectcide Treated Net which is provided by the Government to the Malaria and Kala-azar affected community.

Time of use: The scheduled time for using preventive measures.

CHAPTER - TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical literature

Review of available literature from internet, journal, Dissertation / Thesis, Reports Books and Articles related to this subject matter were made to acquire knowledge to conduct this research. Findings of the reviewed literature were also used in different components of this dissertation whenever necessary. Relevant literature and study findings are mentioned in the below paragraph.

Kala-azar is epidemically and endemically in India in well –defined areas in the eastern region of the country (Assam, West Bengal,Bihar,Eastern districts of Utter Pradesh ,foothills of sikkim and to a lesser extent in Tamil Nadu and Orissa).Because of the massive insecticide spraying campaign for malaria eradication between 1958 and 1964.kala-azar and cutaneous leishmaniasis declined to a point of extremely to endemicity. During this period, some patients with PKDL apparently acted as a reservoir of infection, since periodically, new cases of kala-azar were seen, especially in children.

In East Africa, the risk of visceral leishmaniasis infection is increased among men who often sit in communal groups around termite hills and there is a heightened risk of cutaneous leishmaniasis infection among boys who drive cattle into caves to find shelter and salt licks.

In South America the persons at highest risk of infection with cutaneous or mucocutaneous leishmaniasis are those entering forests, such as woodcutters, collectors of rubber and other forest products, hunters, construction workers and farmers. An elevated risk occurs in settlements close to dense forests.

In the Indian subcontinent, indoor and per domestic transmission is more common since visceral leishmaniasis is antroponotic and the vector is strictly peridomestic .In Africa, there is a great variety of epidemiological situation. For example, the risk of being infected is higher for people who sleep outdoors or have outdoor activity at night. An increased risk also occurs in places where there are infected rodents or other host animals. (http://www.who.int/hac/crises/sdn/releases/8october2010/en/index.html)

Koirala S, et.al (1998) have described leishmaniasis (VL),commonly known as kala-azar in Visceral leishmaniasis (VL),commonly known as kala-azar in Nepal was endemic in the southern plain areas of the country during the early 1950s. However, the number of cases gradually declined during 1965-1970, largely due to the spraying of insecticides by the malaria vector control programe. The DDT that was used to control mosquito vector was also effective against the sandfly vectors of VL, Reported are the results of a study of the Knowledge, attitudes and practices (KAP) about kala-azar of the inhabitants of two villages (Titaria and Haraincha) situated in terai (plain) areas of Nepal. The villagers had poor Knowledge about the transmission of Kala-azar, with most villagers perceiving that mosquitoes, instead of sandflies, were responsible for transmission of the infection.

Bem C, Joshi AB, et.al described factors associated with visceral leishmaniasis (VL) has remerged as a public health in lowland Nepal. They conducted a case control study of identity risk factors. They studied, among 84 cases and 105 controls, protective factors included sleeping on a bed or cot and sleeping under a bed net regularly or in the warm month. The bed nets in use in use these regions were commercially available and untreated with insecticide. Ownership of a cow or buffalo was protective, whereas dampness observed in the mud floor of the house was a strong risk factor. I in

multivariable models, bed net usage ,cow or buffalo ownership ,and damp floors were significantly associated with altered risk .A program is increase bed net usage could therefore decreased the incidence of VL in Nepal.

"Kala-azar affects the poorest of the poor, the drives them further down the spiral of poverty from which they are unable to recover". According to WHO "our goal of eliminating kala-azar from the SEAR countries will also contribute to improving he health of vulnerable groups and the population at risk in the three endemic countries of the region, The MOU signals greater political will and commitment to collaborate in reducing the annual incidence of kala-azar to less than 1 per 10000 population, at the district of subjective level, by 2015

According to WHO report, Kala-azar was first noted in an explosive epidemic in India, in the Garo hill areas and adjacent Brahmaputra valley of Assam in 1880,clark of commission drew public attention by reporting 100 cases from Garo hill. From the history it appears that the name kala-azar was present early as 1869. Endemic areas of kala-azar in India Bihar, Bengal, Assam and South-eastern coastal areas of Tamilnadu.These areas experienced severe outbreak accompanied by higher mortality so much that in Assam it was responsible for 25% depopulation in Nawgang between 1800&1900 AD. Before the world war –ll kala-azar was endemic in some part of India sub –continent and was prevalent as far as to the North-west to Punjab, Bangladesh and Nepal. In addition to the endemic cases, waves of epidemics of the disease swift over that region in every 15 to 20 years. Kala-azar in its various endemic areas almost disappeared due to massive insecticide spraying for malaria eradication programmed from 1958 to 1964, but sporadic cases of visceral leishmaniasis and post kala-azar dermal

leishmaniasis were reported. These probably acted as a reservoir of infection. Cessation of spraying of DDT for malaria control in Bangladesh, India and Nepal has evidently resulted in a resurgence of kala-azar in different parts of the country during seventies but little information is available about outbreak reporting system in the country. Since 1980 the number of kala-azar and post kala-azar dermal leishmaniasis (PKDL) cases have increased sharply and reached a level which could provide a reservoir of sufficient magnitude to spark off a major outbreak. Inspite of government effort, the disease could not be controlled. Around 90% of the kala-azar cases occur in Bangladesh, Brazil, India, Nepal, Sudan and Somalia.

India accounts for half of the 600000 visceral leishmaniasis infections that are annually recorded worldwide. Recent data indicates the kala-azar has increased among HIV/AIDS patients could result in disaster.

According to Annual Report of Department of health service of Nepal, (2065/066), a total number of 1,019 cases were reported and treated in different health facilities in this fiscal year 2065/66 in Nepal. Out of the 1,019 cases 1,013 (99.4 percent) cases were improved after the treatment while 6 patients (0.6 percent) were died. In comparison to the FY 2064/65 the reported cases of Kala-azar during the fiscal year 2065/66 have decreased from 1,371 to 1,019. This signifies the effectiveness of interventions focused to interrupt the disease transmission particularly IRS and introduction of active surveillance. As in the FY 2065/66, Central Development Region reported more cases (492) reflecting the incidence of 1.40 per 10,000 areas at risk population than the Eastern Development Region (385) with incidence of 0.93. District data reveals that the highest number of cases was recorded in Sarlahi, Mahottari and Saptari. Since the reported cases are a

compilation of reports from government health institutions mainly, the real scenario may be different. It is known that cases of Kala-azar also cross the border for treatment at the hospitals and private clinics from Nepal to India or vice versa. A total number of 197 foreigner patients of Kala-zar were also treated during the reporting year, such as 73 cases of Mahottari, 97 cases of Sarlahi, 3 cases of Siraha, 1 case of Dhanusha, 5 cases of Rautahat, 5 cases of Bara, and 13 cases of Saptari district from neighbouring country India. In fiscal year 2065/66 the Kala-azar incidence per 10,000 areas at-risk populations ranges from 2.97 in Sarlahi followed by Mahottari (2.49) to 0.00 in Parsa reflecting the national incidence of 1.33 per 10,000 areas at- risk population. Out of those 12 districts 3 districts have an incidence of more than 1, while 9 districts have an incidence of less than 1case per 10,000 areas at-risk population. A steady rise in CFR was observed up to the fiscal year 2061/62 but it started declining from 2062/63onwards. However in the last three consecutive fiscal years the Case Fatality Rate (CFR) did not show much fluctuation. In the fiscal year 2065/66 it was 0.59 percent. This could be attributed to the increase in awareness of people in endemic districts and improvement in the management of cases in the hospitals. Kala-azar treatment failure cases are not reported through the regular information system. Indoor residual spraying in two cycles was conducted in Kala-azar affected areas of 11 endemic districts with hundred per cent achievement against the set targets. During this fiscal year a total of 1,387,475 people were protected with indoor residual insecticide spraying.

2.2 Empirical literature

Kumar R, chowdhary RK et al published reports on investigation of kala-azar cases from one particular village in Varanasi district,India. They did door to door survey to

investigate the epidemiological characteristics of 518 persons in that village was carried out in November and December 1995, using a predesigned and pretested Performa. . Independent variable such as age,sex , and literacy were considered in the survey. Results showed that the overall prevalence and case fatality of the disease were 12.9% and 10.5% respectively. With a history of fever and hepato-splenomegaly noted for all cases. The disease was more prevalent among adults, but it occurred also among children. However there was no clear linear relationship between the prevalence of the disease and age group. Kala-azar was more prevalent among males, and its occurrence did not correlate significantly with income. In view of the outbreak of kala-azar in Pandit ka Purva, it was essential for health authorities to take immediate measure to control the epidemic and prevent its spread to neighboring villages. This will necessitate the development of shorter treatment courses. The improvement of diagnostics method , and close cooperation between universities, public health agencies, and the government and ultimately the change of promotive behavior / life style of community people regarding increasing of kala-azar.

Thakur CP; et al (1994) have found to about 23,670 new cases of kala-azar in the district of Sahibgunj, Bihar in between 1985 and 1990. The social Development center, Dhaka drafted in emergent plan as a solution. 30 villages health worker attended a 3-day training course regarding how to administer sodium Sibogluconate intramuscularly, spray DDT, conduct door-to-door surveys, and refer affected persons to health centre. Kala-azar awareness program in the villages imparted information on the treatment and control of the disease explaining that the disease could not be controlled by with doctors. DDT was sprayed during January/February and May/June on the inner walls of the house and

covered cowsheds in order to eradicate sand fly prevalence persons who had fever for more than 3 weeks underwent examination for total and differential counts of white blood cells, hemoglobin concentration aldehyde test and thick and thin blood film for the detection of malaria parasites. Treatment considered of sodium Stibogluconate given intramuscularly at 20 mg per kg body weight daily for twenty days in new cases and for forty cases in relapsed patients. With a maximum of 850 mg. Clinical cure was achieved if patients became a febrile and their spleens returned to normal size. If no relapse occurred in 6 months, the patients were regarded as definitively cured. Of the 1640 treated patients, 1952 were cured and of the 48 patients who relapsed a second time. 44 patients became unresponsive to sodium Stiglucomate and were sent to hospitals for treatment. The spraying performed by village health workers reduced the incidence of kala-azar and malaria in 3 villages, while increased numbers of case were recorded in 1 village. Remotic tribal areas need educative, preventive and curative programs backed up by mobile hospitals carrying diagnostic and spraying equipment.

Koirala S; et.al (1998) have described that most also failed to recognize the common symptoms of kala-azar. The majority of the respondents, (78.9%) in Titaria and (48.4%) in Haraincha, were aware that the condition can be treated, while fewer than 2% believed that it cannot be treated at all. More than 58% of villagers in titaria and 36.8% in haraincha used bed nets. The residents of both villages were highly responsive to a programme to spray houses with insecticides. Fewer than 5% of respondents slept outdoors in farm outhouses and these individuals did not take any personal vector control measures .The result of this study show the importance of understanding the beliefs and

practices of communities in the successful planning and implementation of kala-azar control activities of Nepal.

A case control study conducted by Ranjan A; Sur D; Singh VP et al since May 15, 2004 to understand the risk factors which are associated with kala-azar in disease endemic area of Bihar, India. A total of 134 kala-azar cases treated at the Rajendra Memorial Research Institute of medical Sciences in Patna and 406 healthy controls selected randomly from the neighborhoods of case in their native villages were included in the study. Analysis showed that education , a history of other disease in the previous year , a history of kala-azar in the family, type of walls in houses ,presence of a granary inside houses , presence of vegetation around houses ,bamboo trees near houses ,and irregular spraying around houses with DDT were risk factors . Again they described that a history of other disease in the previous , a history of kala-azar in the family , mud plastered walls in houses ,a granary inside house , presence of bamboo trees around houses, and houses not spread with DDT in the past six months were significant risk factors for kala-azar.

All the literature review shows the facts of the Kala-azar disease and its programs. In which the Kala-azar is the emerging and global burden problem and the disease is the poorest of the poor. Data also shows the Kala-azar is emerging day by day in tropical and sub-tropical countries. Kala-azar is the big problems of the Tarai districts of Nepal. The Government of Nepal has set provision of incentive toward the Kala-azar patients who complete the full course of treatment or after the total management of Kala-azar cases. The literature review and the study is correlated each other.

2.3 Conceptual framework

Impact of Incentive in the Management of Kala-azar Cases in Dharampur VDC, Ward no – 8, Jhapa district.

Independent Variables **Dependent Variables**

This figure has shown the relationship between independent variable and dependent variable. Independent variable covers the socio-demographic characteristics likes age, sex, education, occupation, cast, religion, income, family size, marital Status, knowledge related factors likes causes mode of transmission, vector and breeding places etc, behavior related factors preventive measures, treatment, incentives, Government policy and it's implementation, treatment seeking behavior of people etc. These factors are interrelated to the dependent variable which is Impact of incentive in the management of Kala-azar cases in Dharampur VDC, Ward no – 8 Jhapa district. The impact is negative or positive which is the question of this study.

CHAPTER – THREE

RESEARCH METHODOLOGY

Methodology is very important to carry out the study or research. It is regarded as the technological aspect of the survey. Survey methodology provides a roadmap or guideline of research work that assist to achieve the formulated study objectives through well-designed method of data collection, tabulation, analysis and interpretation.

3.1. Research Design

This survey was descriptive study based on the primary and secondary sources of information which was quantitative study with the consideration of importance of survey, nature of problems, time and budget etc. of the study.

3.2 Population of the Study

The population of this study was people of Ward no.- 8 of Dharampur VDC, Jhapa district. The people of this community was the marginalized which has consisted of different ethnic groups likes Majhi, Rai, Lambu, Satar, Dalit etc. Most of the cases were occurred from Majhi community. Dharampur VDC Ward no. 8 is the most affected community of Jhapa district.

3.3 Source of Data

Data was based on both primary and secondary sources. The primary data had collected through interviewing with questionnaire of related topic from the community people of Dharampur VDC, ward no - 8 which was the most affected community in Jhapa District whereas secondary data had collected through District Development Committee Office Profile, data of the related Village Profile, District Public Health Office annual report, Mechi Zonal Hospital reports etc.

3.4 Sample size & Sampling Procedure:

The sample size was taken from the community people of the Dharampur VDC ward no – 8, Maghigau of Jhapa District which is the most Kala-azar affected community. Dharampur VDC ward no – 8, Maghigau has consisted total 210 household and total population was 1374. The sample size was 50% of total households which was 105 households and 625 populations. This study was based on systematic sampling method which will be represented the whole selected community.

3.5 Data Collection Tools:

Structural questionnaires were the major tools for data collection of this study. The tool was related with pre-determined objectives, different kinds of health related topics. Questionnaire was converted in local language for better understanding of the respondents.

3.6 Validation & Standardization of the Tools.

Pre test was done in the similar Kala-azar affected community, Anarmani Ward no – 7, Jhapa district with 5% of total questionnaire. This pre-test was tried to minimize the error of the questionnaire and the survey. The questionnaire was designed with the suggestion of supervisors, concerning exports of related subject and previous research report etc.

3.7 Data Collection Procedure

After the preparation, Pretest, revision and approved the tool and to be taken authority letter from the campus as well as the letter from VDC. Data was collected in study area (Dharampur VDC, ward no - 8, Majhigau) by systemic sampling method. Household information was taken from the head of the house through interview with questionnaire. Focus group discussion was also conducted with treatment provider of Kala-azar patients

or related health worker, health worker of Health Post, DPHO Kala-azar programme related persons etc.

3.8 Data Analysis and Interpretation

Collected data was carefully checked to minimize the errors showing in data processing. Raw data was copied in master chart by doing edit and tabulation. The data was analyzed with the help of simple statistical law such as percentage, value etc. as necessary, these data were presented in simple descriptive method, table, figures, pie chart and bar diagrams as per as convenience and necessary.

CHAPTER - FOUR

DATA ANALYSIS AND INTERTRETATION

This chapter has dealed with analysis and interpretation of the data which was collected from the community of Dharampur VDC ward no – 8, Jhapa district, it has mentioned the general characteristics of studied population providing different information relating to demographic and socio-economic status of study area.

4.1 Socio Demographic Characteristics

4.1.1 Age and Sex wise distributions of population.

Demography is the scientific study of human population, primarily with respect to their size, structure, growth and development. Demography includes both demographic analysis and population studies it includes both qualitative and quantitative aspect of human population. Age structure is defined as the proportion of respondents in different age groups. This study has included respondents of 105 household and total population was 625.

Table no. 1

Age and Sex wise distributions of population

Age group	Male		Female		Total	
	No.	%	No.	%	No.	%
0 - 4	22	3.5	27	4.3	49	7.8
5 – 9	50	8.0	35	5.6	85	13.6
10 -14	32	5.1	32	5.1	64	10.2
15 -19	43	6.9	27	4.3	70	11.2
20-24	33	5.3	41	6.6	74	11.8
25-29	23	3.7	21	3.4	44	7.0
30-34	32	5.1	43	6.9	75	12.0
35-39	33	5.3	23	3.7	56	9.0
40-44	14	2.2	8	1.3	22	3.5
45-49	10	1.6	6	1.0	16	2.6
50-54	8	1.3	10	1.6	18	2.9
55-59	4	0.6	6	1.0	10	1.6
60 above	21	3.4	21	3.4	42	6.7
Total	325	52.0	300	48.0	625	100.0

In this study, total respondent were 105 household' person and include 625 populations among them 52 % male and 48 % female. By this table the highest population has been found in the age group of 5-9 (13.6%), followed by the age group of years 30-34 (12%), likewise 20-24 (11.8%), 15-19 (11.2%), 10-14 (10.2%), 35-39 (9%), 0-4 (7.8%), 25-29 (7%), 60-above (6.7%), 40-44 (3.5%), 50-54 (2.9%), 45-49 (2.6%), 55-59 was 1.6%. In this community male populations have been found 4% more than female populations.

This data has shown male are more than female. Children and 60 years populations are also more. It shows, the dependent populations are more than energetic.

4.1.2 Education of the Respondents

Education has played a very important role in community health development. Kala-azar is also a disease relate to the uneducated community.

Figure no – 1

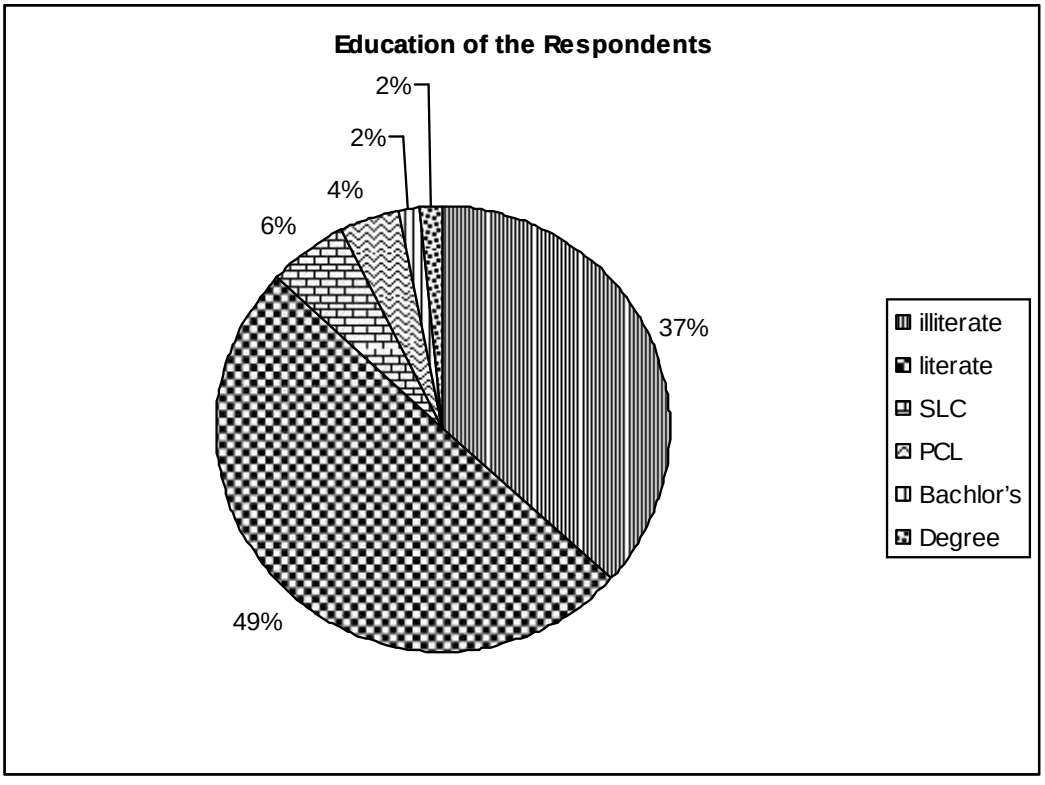
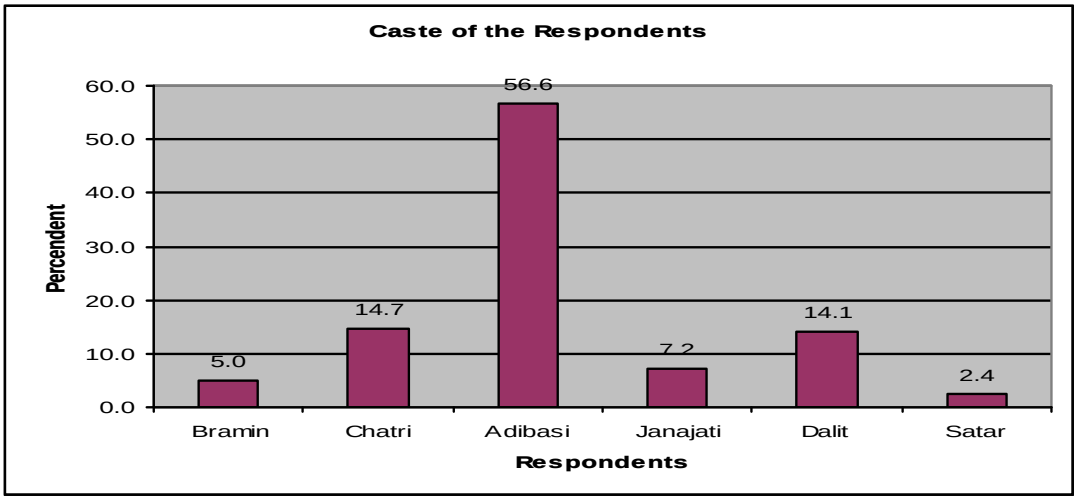


Figure no one has show educational status or literacy status among this community. The 37% peoples of study area were illiterate that is less than the national illiteracy rate (45.9% in 2001) of Nepal. (CBS2003). 49 % peoples were literate, 6% peoples have completed SLC, 4% of the people have completed PCL, 2% of the total people have completed Bachelor's and 2% were Master's degree.

4.1.3 Caste of the Respondents

Caste of the respondents is very important to diseases determination. Kala-azar is also a disease of the lower and low caste community.

Figure no – 2



More than one half 56.6% of the respondents were from Adibasi and Dalit were 14.1%. Other included Chatri 14.7% followed by Janajati 7.2%, Bramin 5% and Satar 2.4%. This shows the Kala-azar is a disease which is related to lower caste community like Adibasi, Dalit, Janajati and Satar.

4.1.4 Religions of the Respondents

Most of the people of the Nepal are Hindu. Religion also play most important role in disease determination.

Table no. - 2

Religions of the Respondents

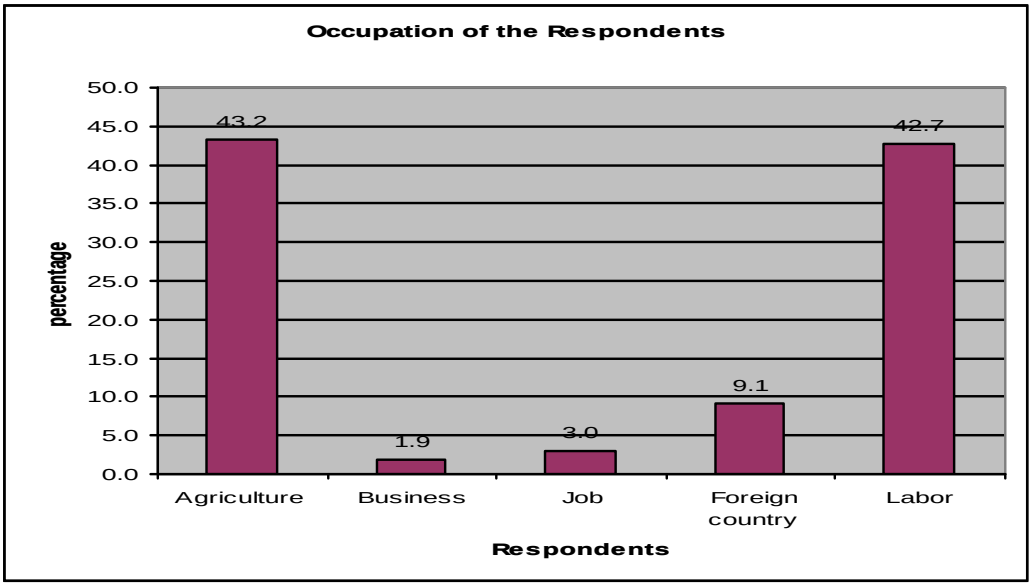
SN	Religions	Respondent	
		Frequency	Percentage
1	Hindu	578	92.5
2	Christian	2	0.3
3	Kirat	45	7.2
	Total	625	100

Most of the respondents 92.5% were Hindu religion and few 7.2% were Kirat followed by Christian 0.3% in this community.

4.1.5 Occupations of the Respondents

Occupation plays a vital role for the status of people. It shows the life style of people. Occupation also reflects the income of individual and his standard of living.

Figure no – 3



Majority 43.2% of the respondents were in agriculture. Followed by 42.7% were engaged in labor, 9.1% were gone to foreign country for labor, 3% were job holder and tread/ business holder are 1.9%.

This means that the majority of respondent's family members were engaged in low economic activity sector. Most of the active population was involved in lower income sector.

4.1.6 Registered Land of the Respondents

Land ownership is one important parameter to study of economic status of people. The persons who own the more area of land are rich and they might get chance to take more goods and services.

Table no. - 3

Registered Land of the Respondents

SN	Registered Land	Respondents	
		Frequency	Percentage
1	Nil	32	30.5
2	Below 5 kattha	49	46.7
3	One Bigha or less	8	7.6
4	More than 1 Bigha	16	15.2
	Total	105	100

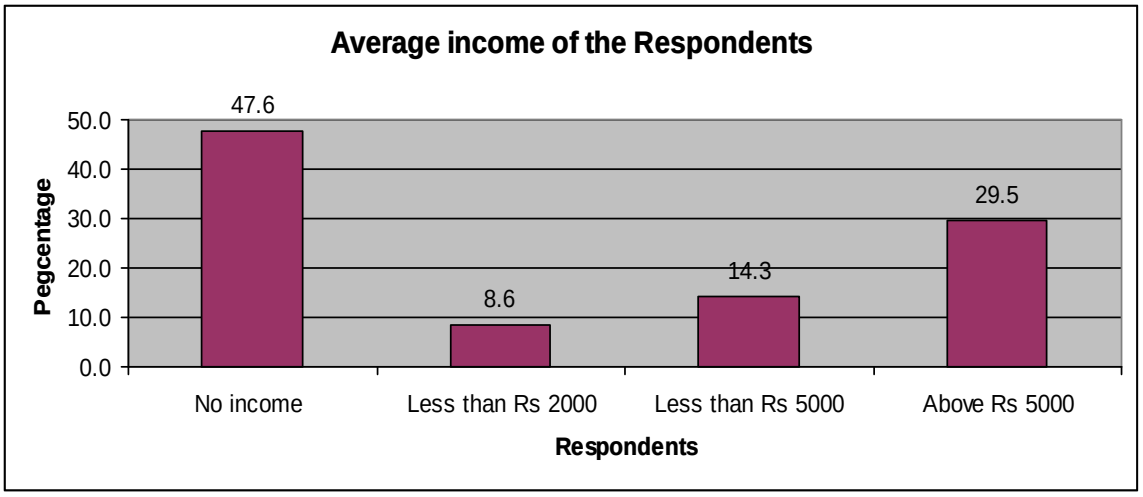
More than one third 30.5% of the respondents were not any own registered land. Majority 46.7% of the respondents had below 5 Kattha, 15.2% were more than one Bigha

and 7.6% had one Bigha or less. This data present the most of the community peoples were under the poverty.

4.1.7 Average income of the Respondents

The word "economic" means "house keeping". It deals with the human relationship in the specific context of population, distribution, and consumption, ownership of resources, goods and services.

Figure no – 4



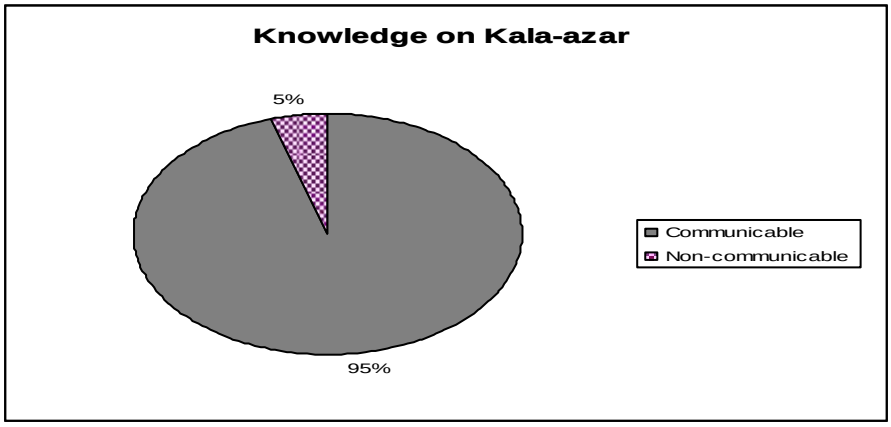
Majority 47.6 % of respondents had no income. 29.5 % of respondents have earned above Rs 5000. 14.3 % of respondents have earned less than Rs 5000 and 8.6 % of respondents have earned less than Rs 2000.

This figure has shown that no income and less income's respondents were more**.** It was not sufficient for maintaining the daily needs in this community and most of the community people were under poverty.

4.2 Knowledge on Kala-azar

Kala-azar is a communicable and protozoal disease which is transmitted by infected female Phlebotomine Argentipus Sand fly.

Figure no – 5



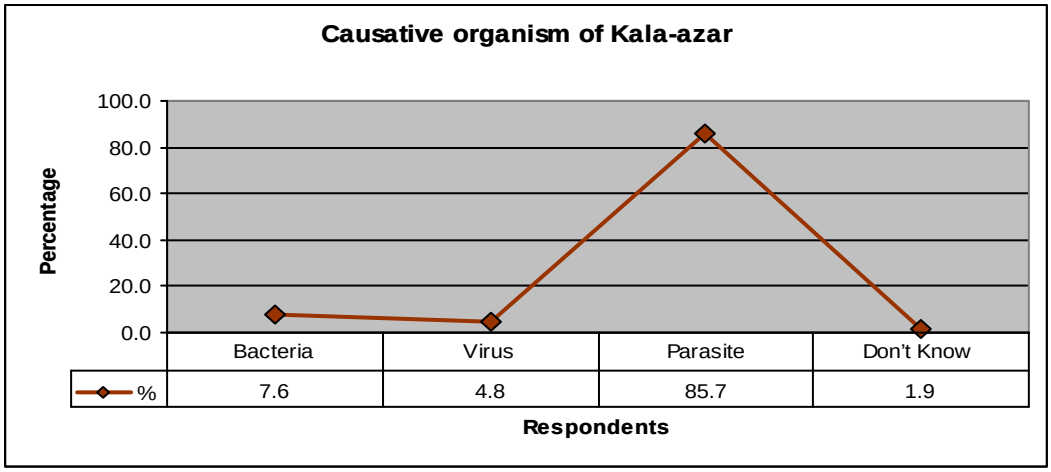
Majority 95% of the respondents have known Kala-azar is a communicable disease and 5% of the respondents told the non-communicable disease.

It shows the most of the respondents know about Kala-azar which is communicable disease.

4.3 Causative organism of Kala-azar

Causative organism of kala-azar is micro parasite (protozoa) which is also called Leismonia Donovani and transmitted by infected female Phelebotomin Sandfly.

Figure no – 6

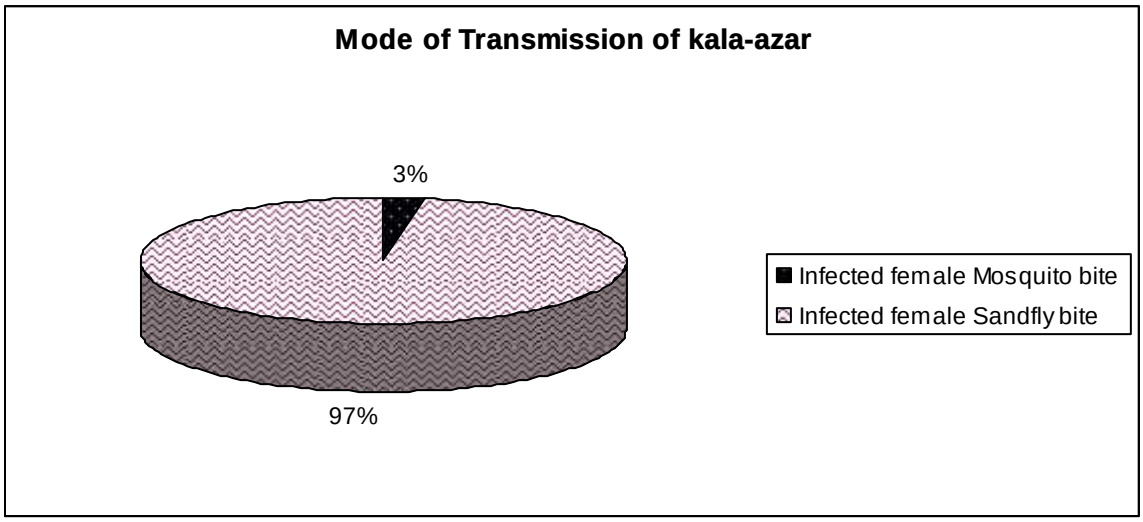


Most of the respondents (85.7%) told parasite and other 7.6% bacteria, 4.8% virus and 1.9% told Don't know. Most of the people of this community were known about the causative organisms of Kala-azar.

4.4 Mode of Transmission of Kala-azar

It is a communicable disease which is caused by Leishmonia Donovani parasite. Infected Female Phlebotomine Argentipus Sand Fly bite is the mode of transmission of Kala-azar.

Figure no – 7

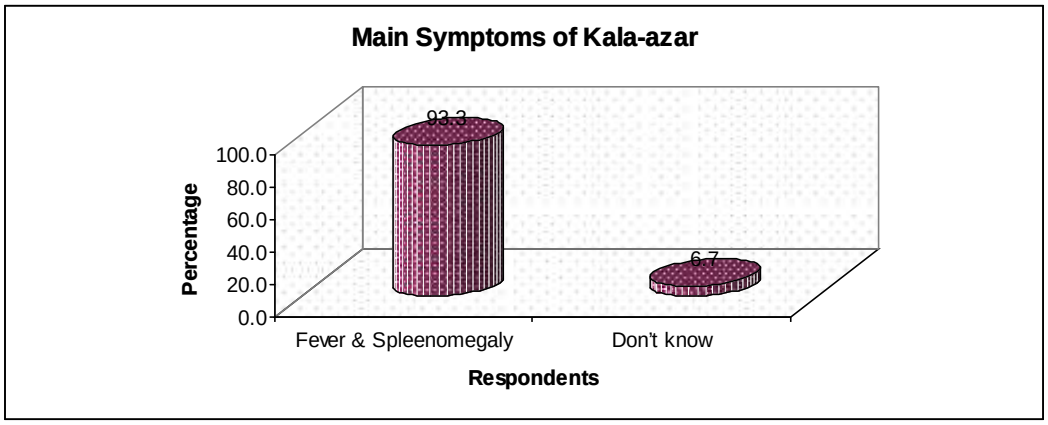


Majority 97% of the respondents were known infected female Sand fly bite is the mode of transmission of Kala-azar and others 3% were told infected female Mosquito bite. Most of the respondents of the community have known about the mode of transmission of Kala-azar.

4.5 Main Symptoms of Kala-azar

Kala-azar is a communicable disease which signs and symptoms are fever with 2 weeks or more than two weeks, spleenomegaly, weakness, weight loss, anaemia and blackening of skin of the face, trunks, upper and lower limbs.

Figure no – 8

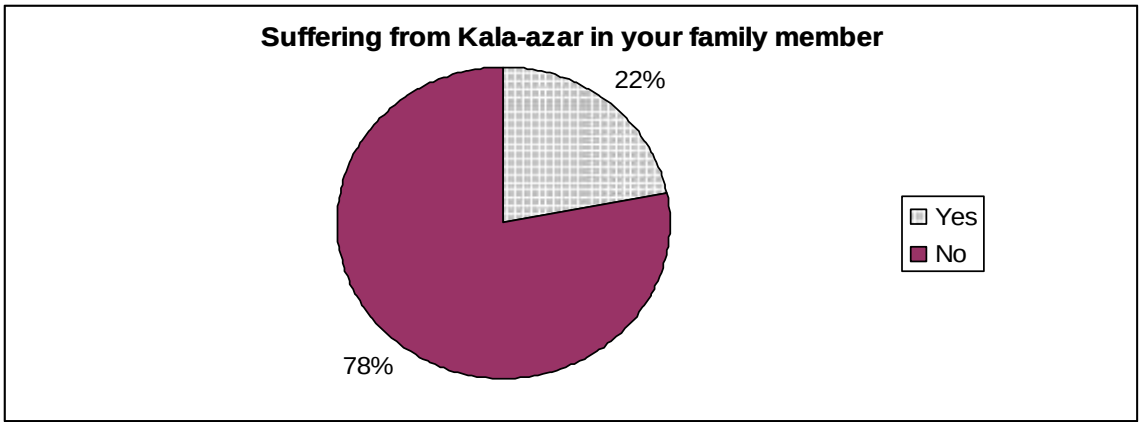


Majority (93.3%) of the respondents noted that the main symptoms of Kala-azar are fever & Spleenomegaly and 6.7% noted don't know about the main symptoms of Kala-azar. Most of the people of this community were familiar to the sings and symptoms of Kala-azar.

4.6 Suffering from Kala-azar in family

Kala-azar is the disease of the poorest of the poor which occur in Terai Region and eastern part of Nepal. Jhapa district is also an affected district of Kala-azar. Dharampur VDC, Ward no – 8, is a most affected community of Jhapa district where are 23 cases up to now.

Figure no – 9



Among the total respondents 105 households, the 78% were not suffering from Kala-azar and 22% were suffering from Kala-azar. Suffering number was 23 which occur one case at one household. It was the more cases regarding to other VDC's Ward of Jhapa district.

4.7 Treatment of Kala-azar

Kala-azar is a chronic disease which is preventable. If patients come with the signs and symptoms likes Kala-azar, diagnose by Rk-39 test. If become positive, we should get complete treatment of Kala-azar. The oral drugs Miltefocine is the first line drug of Kala-azar which is prescribed 28 days. If we have get complete treatment, it is not transmitted to others.

Table no. – 4

Treatment of Kala-azar

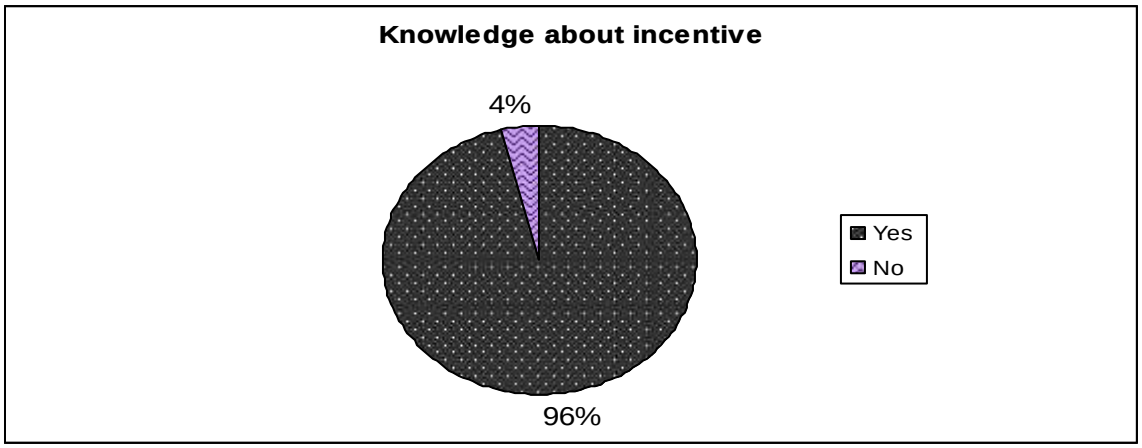
SN	Get Complete Treatment of Kala-azar	Respondents	
		Frequency	Percentage
1	Yes	23	100
2	No	0	0
	Total	23	100

Total numbers of the Kala-azar patients were 23 in which 100% got complete treatment of Kala-azar. It was the positive impact of incentive. After geting complete treatment of Kala-azar, all patients were cure and could not transmit Kala-azar to others.

4.8 Knowledge about incentive

After getting the complete treatment of Kala-azar, Government of Nepal provides Rs 1000 and one Supanet as incentives for the transportation cost regarding the poor community related disease. This provision was implemented since 2067 BS.

Figure no – 10

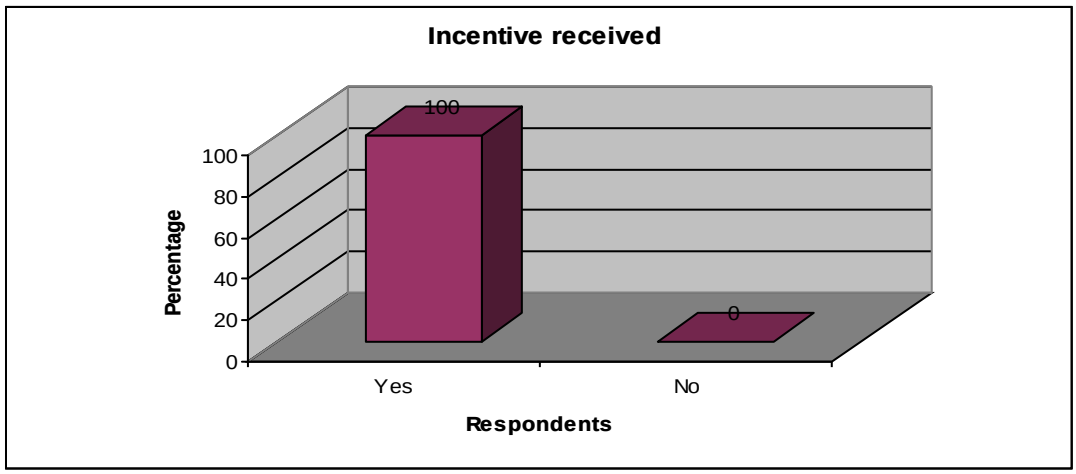


Out of the 105 respondents, 96% of the respondents were known about the incentive after management of Kala-azar cases and 4% were not known about the incentive. It has reflected the awareness of the community was very well regarding Kala-azar and its incentive.

4.9 Incentive received

The incentive is Rs 1000 and one Supanet which is implemented from 2067 BS. Since that all the Kala-azar patients is getting incentive after completing the treatment of Kala-azar.

Figure no – 11

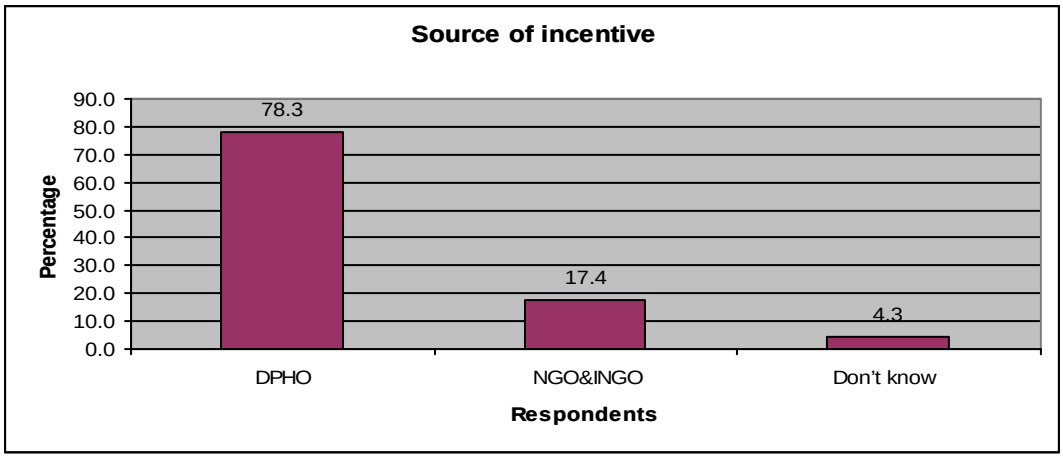


100 % of the Kala-azar patients were getting incentive after completing the treatment of Kala-azar which was Rs 1000 and one Supanet. It has shown the good impact of the Kala-azar control and elimination program. It was not the gap between theory and practice.

4.10 Source of incentive

The incentive is supply from central level which is EDCD, Taku, Kathmandu to DPHO. DPHO provides the incentive from direct or through Health institution (SHP/HP/PHC) to the Kala-azar patients.

Figure no – 12



Majority (78.3%) of the respondents were get incentive from DPHO, 17.4% had told getting incentive from NGO&INGO and 4.3% were told don't know.

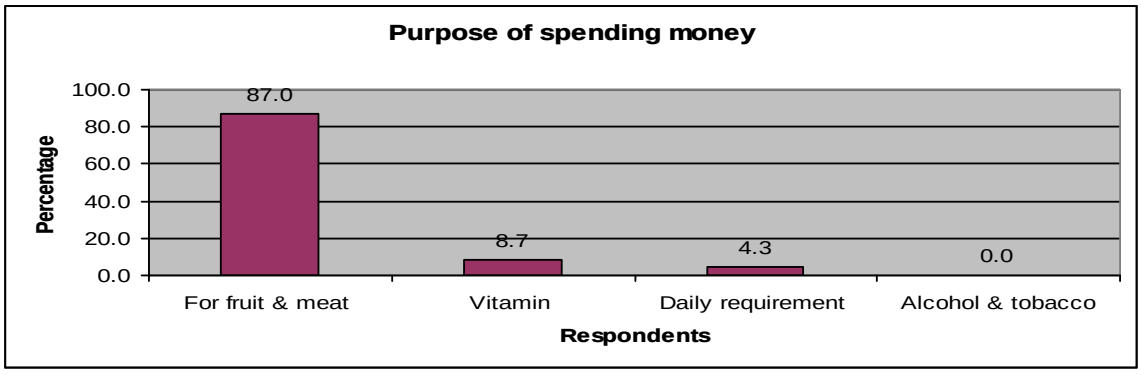
It is fact that the incentive is given from the District Public Health Office, Jhapa and LLIN is given from the NGO, PSI through the Department of Health Service, Government of Nepal.

4.11 Purpose of spending the money

After getting complete treatment of Kala-azar, the patients get Nepalese currency Rs 1000. The money is provided for the transportation cost while getting treatment and

nutritional diet after completing treatment. The majority of the respondents (87%) spent money for fruits and meats. 8.7% spent money for buying Vitamin syrup or tablet, 4.3% spent for daily requirement likes food, rice, vegetables etc. and they are not spent money for Alcohol and Tobacco consumption.

Figure no – 13

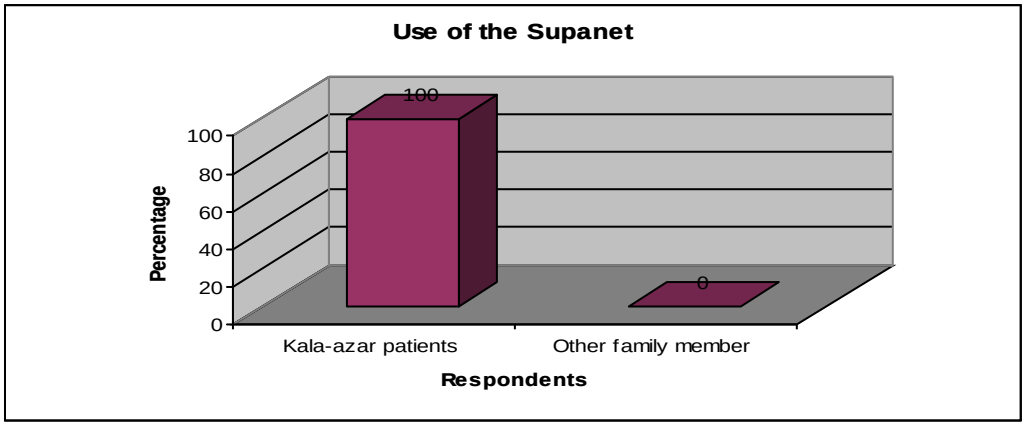


The impact of the incentive found very good because most of the respondents were spent money for useful purpose.

4.1 Use of the Supanet

The insecticide treated bed net (Supanet) is also provided to the Kala-azar patient who got complete treatment against Kala-azar for their personal used to prevent transmission of Kala-azar to others.

Figure no – 14



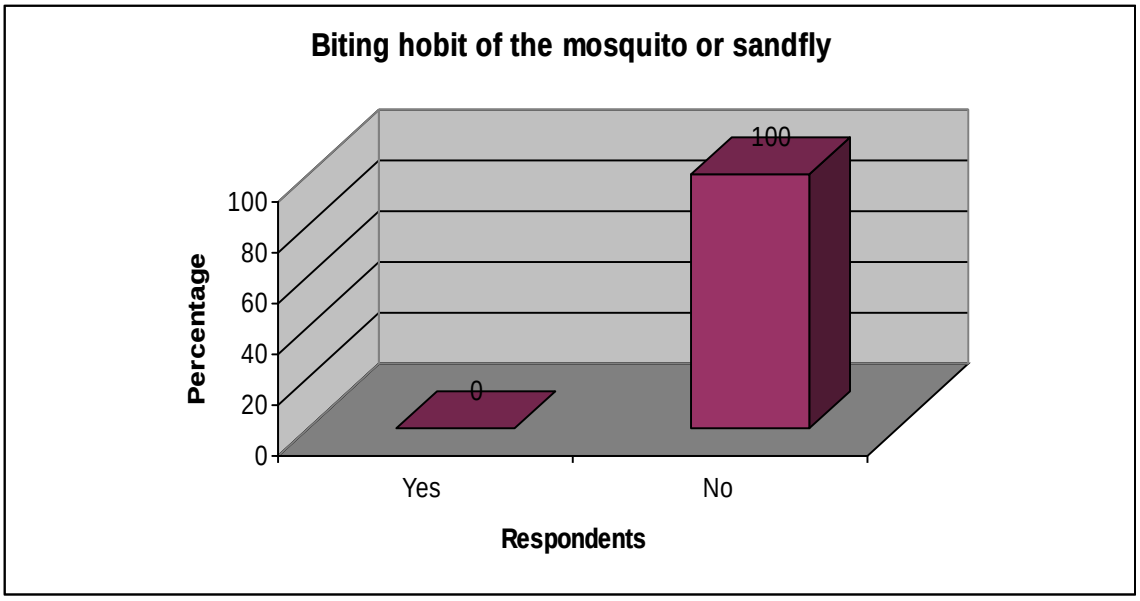
100% of the total Kala-azar patients used the Supanet or insecticide treated net.

It is the provision, the Kala-azar patient must use of Supanet at night. It is the best for the prevention of transmission of Kala-azar to others person.

4.12 Biting habit of the mosquito or sand fly

The net is very good quality which is made with insecticide and it prevent the bite of Sand fly or Mosquito and also kill them.

Figure no – 15



100% of the respondents were prevented against biting from the mosquito or sand fly after using Supanet at night. It was the positive impact of the insecticide treated net.

4.12 Satisfaction of the people after receiving incentive

Incentive money is given to the patient for transportation cost which is spent during treatment of Kala-azar and for the nutritional diet after completing treatment. Nepal Government provides provision Rs 1000 to Kala-azar patient who get complete treatment of Kala-azar. The provision is good or not. This study find out the satisfaction level of the people of the Kala-azar affected community.

Table no. -5

Satisfaction of the people after receiving incentive

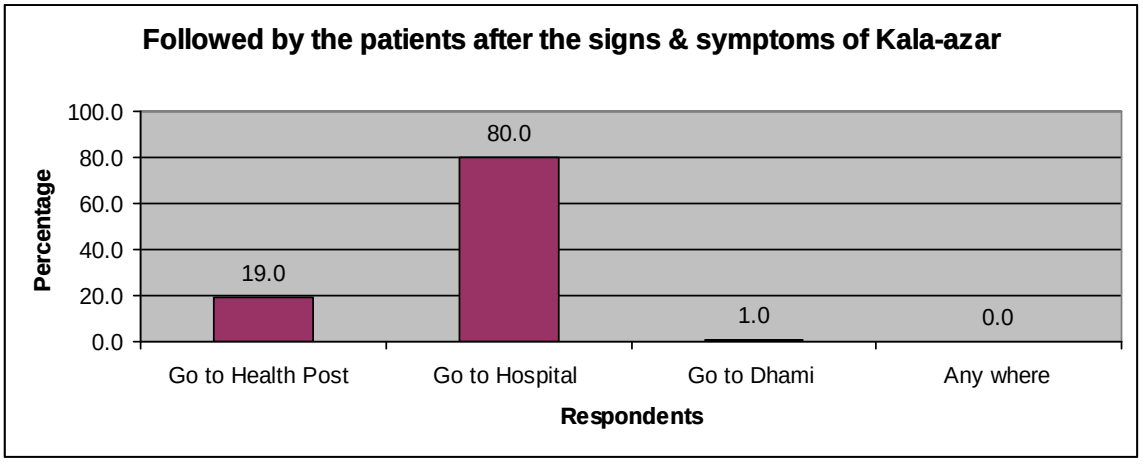
SN	Descriptions	Respondents	
		Frequency	Percentage
1	Yes	103	98.1
2	No	2	1.9
	Total	23	100

Majority 98.1% of the respondents were satisfied after receiving incentive money or provision for giving incentive money and little 1.9% of the respondent were not satisfied. It was the positive impact of the incentive.

4.13 Followed by the patients after the signs & symptoms of Kala-azar

Kala-azar is chronic communicable disease and may be asymptomatic. If the signs and symptoms occur from the affected community, the patient should be referred to better center or hospital.

Figure no – 16



Majority 80% of the respondents were taken to the hospital, 19% were taken to Health Post when occured the signs and symptoms like Kala-azar and 1% were gone to Dhami. It was also a positive impact of incentives and Kala-azar control program.

CHAPTER - FIVE

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This descriptive study was conducted in Dharampur VDC, ward no – 8, Jhapa District of Nepal. The objective of the study was to find out the socio-demographic characteristics of kala-azar related community, to find out impact of incentive in the management of Kala-azar cases in Dharampur VDC, Ward No – 8, jhapa district, to identify people's health seeking behaviour with respect to Kala-azar treatment and use of incentive. Structural questionnaire was prepared for the study and pretest and revised. The study was done in March to August 2011 and the sample size was 105 households and 625 populations. Systemic sampling method was followed for the study. The data was analyzed with the help of simple statistical law such as percentage, value etc. as necessary these data was presented in simple descriptive method, table, figures, pie chart and bar diagrams as per as convenience and necessary.

In this study, total respondent were 105 household's person and include 625 populations among them 52 % male and 48 % female. The 37% peoples of study area were illiterate. More than one half 56.6% of the respondents were from Adibasi and Dalit. This has shown the Kala-azar is a disease which is related to lower caste community like Adibasi, Dalit, Janajati and Satar. Majority 43.2% of the respondents were in agriculture. Followed by 42.7% were engaged in labor, 9.1% were gone to foreign country for labor, 3% were job holder and tread/ business holder are 1.9%.More than one third 30.5% of the

respondents were not any own registered land. Majority 47.6 % of respondents had no income. . This data present the most of the community peoples are under the poverty.

Majority 95% of the respondents have known Kala-azar is a communicable disease and 5% of the respondents told the non-communicable disease. Most of the respondents 85.7% were told parasite is the causative organisms of Kala-azar. Majority 97% of the respondents were known infected female Sand fly bite is the mode of transmission of Kala-azar and others 3% were told infected female Mosquito bite. Majority 93.3% of the respondents noted that the main symptoms of Kala-azar are fever & Spleenomegaly and 6.7% noted don't know about the main symptoms of Kala-azar. Among the total respondents 105 households, the 78% were not suffering from Kala-azar and 22% were suffering from Kala-azar. Suffering number is 23 which occur one case at one household. It is the more cases regarding to other VDC.

Total numbers of the Kala-azar patients were 23 in which 100% were get complete treatment of Kala-azar. It is the very excellent data. After the get complete treatment of Kala-azar, all patients were cure and could not transmit to others. Out of the 105 respondents, 96% of the respondents were known about the incentive after management of Kala-azar cases and 4% were not known about the incentive. 100 % of the Kala-azar patients were getting incentive after completing the treatment of Kala-azar which is Rs 1000 and one Supanet. It shows the good impact of the Kala-azar control and elimination program. It is not the gap between theory and practice.Majority 78.3% of the respondents get incentive from DPHO, 17.4% had told getting incentive from NGO&INGO and 4.3% were told don't know.

The majority 87% of the respondents were spent money for fruits and meats. 8.7% were spent money for Vitamin syrup or tablet, 4.3% were spent for daily requirement likes food, rice, vegetables etc. and they are not spent money for Alcohol and Tobacco consumption. 100% of the total Kala-azar patients were used the Supanet or insecticide treated net. It is best for the prevention of transmission of Kala-azar to others person. 100% of the respondents are said don't mosquito or sand fly bite after using Supanet at night. It the positive impact of the insecticide treated net. Majority 98.1% of the respondents were satisfied after receiving incentive money or provision for giving incentive money and little 1.9% of the respondent were not satisfied. It is also the positive impact of the incentive. Majority 80% of the respondents were gone to the hospital, 19% were gone to Health Post when occur the signs and symptoms like Kala-azar and 1% were gone to Dhami. It is also a positive impact of incentives and Kala-azar control program.

The lesson learned from above finding authority should take the concrete step to prevent the future morbidity related to Kala-azar. Provision of incentive program of Kala-azar patient is very good but it should be proper implemented and maintain the gap between theory and practice. It is found that positive impact of incentive in the management of Kala-azar cases in Dharampur VDC Ward no. – 8, Jhapa district.

5.2 Findings

The impact of Incentive in the Management of Kala-azar Cases in Dharampur VDC, Ward No – 8, Jhapa, District is the topic or problem of the study. The major findings of the study are briefly described as following.

a. In this study, total respondents were 105 household' person and include 625 populations among them 52 % male and 48 % female.
b. The 37% peoples of study area were illiterate. More than one half 56.6% of the respondents were from Adibasi and Dalit.
c. Majority 43.2% of the respondents were in agriculture. Followed by 42.7% were engaged in labor, 9.1% were gone to foreign country for labor, 3% were job holder and tread/ business holder are 1.9%.
d. More than one third 30.5% of the respondents were not any own registered land and majority 47.6 % of respondents had no income.
e. Majority 95% of the respondents have known Kala-azar is a communicable disease and 5% of the respondents told the non-communicable disease.
f. Most of the respondents 85.7% were told parasite is the causative organisms of Kala-azar and other 7.6% bacteria, 4.8% virus and 1.9% were told Don't know.
g. Majority 93.3% of the respondents noted that the main symptoms of Kala-azar are fever & Spleenomegaly and 6.7% noted don't know about the main signs & symptoms of Kala-azar.
h. Among the total respondents 105 households, the 78% were not suffering from Kala-azar and 22% were suffering from Kala-azar. Suffering number is 23 which occur one case at one household.

i. Total numbers of the Kala-azar patients were 23 in which 100% were get complete treatment of Kala-azar.

j. Out of the 105 respondents, 96% of the respondents were known about the incentive after management of Kala-azar cases and 4% were not known about the incentive.

k. 100 % of the Kala-azar patients were getting incentive after completing the treatment of Kala-azar which is Rs 1000 and one Supanet.

l. Majority 78.3% of the respondents get incentive from DPHO, 17.4% had told getting incentive from NGO&INGO and 4.3% were told don't know.

m. The majority 87% of the respondents were spent money for fruits and meats. 8.7% were spent money for Vitamin syrup or tablet, 4.3% were spent for daily requirement likes food, rice, vegetables etc. and they are not spent money for Alcohol and Tobacco consumption.

n. 100% of the total Kala-azar patients were used the Supanet or insecticide treated net.

o. 100% of the respondents are said don't mosquito or sand fly bite after using Supanet at night.

p. Majority 98.1% of the respondents were satisfied after receiving incentive money or provision for giving incentive money and little 1.9% of the respondent were not satisfied.

q. Majority 80% of the respondents were gone to the hospital, 19% were gone to Health Post when occur the signs and symptoms like Kala-azar and 1% were gone to Dhami.

5.3 Conclusion

The impact of Incentive in the Management of Kala-azar Cases in Dharampur VDC, Ward No – 8, Jhapa, district is the topic or problem of the study. The study area was marginal, low facilitated and major basic needs are not available at there. Most of the people of the community were illiterate and they involved in low economic activities sectors i.e. labor/ wage, agriculture of this community. More than one third of the respondents were not any own registered land, they lived in the slum (Sukumbasi) area and Majority of respondents had not any income so it is the poorest community.

Majority of the respondents were knowledge about the Kala-azar like communicable disease, causative organisms, mode of transmission, sings and symptoms of Kala-azar. The awareness level of this community was very good. Twenty three persons were suffering from Kala-azar in this community.

Total numbers of the Kala-azar patients were get complete treatment of Kala-azar. After geting complete treatment of Kala-azar, all patients cured and could not transmit Kala-azar to others. Total Kala-azar patients were getting incentive after completing the treatment of Kala-azar which was Rs 1000 and one Supanet and spent money for fruits and meats and they did not spent money for Alcohol and Tobacco consumption. The total Kala-azar patients were used the Supanet. It is best for the prevention of transmission of Kala-azar to others person. The total of the respondents did not bite mosquito or sand fly after using Supanet at night. Majority of the respondents were gone to the hospital and Health Post when occur the signs and symptoms like Kala-azar. It was not the gap between theory and practice. It has the good impact of the Kala-azar control and elimination program.

5.4 Recommendations

a. To increase the literacy rate among the community people education should be free from higher secondary level and for the adult age grouped by providing adult literacy program.
b. To develop program on health education and behavior change communication related to prevention of Kala-azar and health care seeking to raise the level of awareness of the community.
c. A national level research is necessary to find out the existing problems related to Kala-azar control and elimination program and provision of giving incentive after completing treatment of kala-azar.
d. There is a need for strong legislation provision and strict implementation of the legislation to improve the Kala-azar control and elimination program.
e. To reduce the gap between theory and practice related to Kala-azar, incentive distribution for Kala-azar patients, prevention and control of Kala-azar disease.
f. Should be provision for distribution of insecticide treated net (Supanet) on the basis of the population base, one net to two persons in the Kala-azar affected areas.

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Appendix - I
QUESTIONNAIRES

Impact of incentives in the management of Kala-azar cases in Dharampur VDC, ward no – 8, Jhapa district.

1. Name of Respondent:

Date:

Village/Tole:

2. Numbers of Family members:

S.N	Names	Age/Sex	Education	Cast/ Religion	Occupation	Marital Status	Remarks

3. How much Registered Land do you have?
   a. Nil b. Below 5 kattha c. One Bigha or less d. More than 1 Bigha
4. What is the average income of your family per month?
   a. No income b. Less than Rs 2000 c. Less than Rs 5000 d. Above Rs 5000
5. Does your family save the money from income?
   a. Yes b. No
6. Do you know Kala-azar is which type of disease?
   a. Communicable b. Non-communicable c. Don't Know
7. Which is the causative organism of Kala-azar ?
   a. Bacteria b. Virus c. Parasite d. Don't know
8. Which is the vector of the disease?
   a. House fly b. Sand fly c. Mosquito d. Don't know
9. What is the mode of transmission of the disease?
   a. Infected female Mosquito bite b. Infected female sand fly bite
   c. others d. Don't know
10. What is the main symptoms of Kala-azar?
    a. Fever and spleenomegaly b. Diarrhoea c. Chest pain
    d. Don't know
11. Do you know Kala-azar is a preventable disease?
    a. Yes b. No c. Don't know

12. Do you have suffering from Kala-azar?
a. Yes b. No
13. Have you get complete treatment of kala-azar?
a. Yes b. No
14. How many days do you take medicine of Kala-azar?
a. 28 days b. less than 28 days c. More than 28 days d. Don't know
26. Do you know about the incentives after management of Kala-azar patients?
a. Yes b. No
15. Have you receive incentive after completing the treatment of Kala-azar?
a. Yes b. No
16. From where do you get incentives?
a. From DPHO b. From HP c. NGO&INGO d. Don't know
17 What types of incentive do you receive?
a. Money Rs1000 and Supanet b. Only Money c. Only Net
d. No receive
18. For what purpose, do you spend the money?
a. For fruits b. For meat c. For daily requirement
d. others
19. Do you use the Suppanet (Insecticide Treated Net)?
a. Yes b. No
20. Who use the Supanet?
a. Kala-azar patients b. Other family member
c. Other relatives d. Don't know
21. Do Mosquito bite you after using the Supanet at night?
a. Yes b. No
22. Do you favorite Supanet?
a. Yes b. No
23. Is it the good provision for giving incentives in the management of Kala-azar cases?
a. yes b. No
24. Do you satisfy after receiving incentives or provision for giving incentives?
a. yes b. No
23. What do you do after being the sign and symptoms of likes Kala-azar?
a. Go to Health Post b. Go to Hospital
c. Go to Dhami d. any where
24. Do you need Supanet?
a. Yes b. No
25. The incentive's money is effective and necessary for Kala-azar patients?
a. Yes b. No

Appendix - II