

**Knowledge Attitude and Practice of Community on Kala Azar
Control Activities in Araria District, Bihar**

**Internship Training
at
CARE India**

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**Post Graduate Diploma in Hospital & Health Management
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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr Afaq Amir Ahmad** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from Institute of Health Management Research, Jaipur has undergone internship training at **CARE, Bihar** from **27th January 2014** to **30th April 2014**

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



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He comes across as a Committed, Sincere & Diligent person who has a strong
drive & zeal for learning

We wish him all the best for future endeavours

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Knowledge Attitude and Practice of Community on Kala Azar Control Activities in Araria District, Bihar** and submitted by **Dr Afaq Amir Ahmad** Enrollment No. **17-1286** under the supervision of **Professor Suresh Joshi** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from **27th January 2014** to **30th April** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



Signature

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List of Abbreviations

ANC - ANE NATAL CARE
ANM - AUXILLARY NURSING MIDWIFE
ASHA - ACCREDIED SOCIAL HEALTH ACTIVIST
AWC - ANGANWADI CENTRE
AWW - ANGANWADI WORKER
BCC - BEHAVIOR CHANGE COMMUNICATION
BCG - BACILLUS CALMETTE GUERIN
BHM - BLOCK HEALTH MANAGER
BTAST - BIHAR TECHNICAL ASSISTANCE AND SUPPORT TEAM
DDT - DICHLORO DIPHENENYL TRICHLOROETHANE
DH -DISTRICT HOSPITAL
DPO - DISTRICT PROGRAM OFFICER
EBC - EXTREMELY BACKWARD CLASS
FGD - FOCUS GROUP DISCUSSIONS
GOI - GOVERNMENT OF INDIA
HSC - HEALTH SUB CENTRE
ICDS - INTEGRATED CHILD DEVELOPMENT SERVICES
ICU - INTENSIVE CARE UNIT
IDSP - INEGRATED DISEASE SURVELLIANCE PROJECT
IEC - INFORMATION EDUCATION COMMUNICATION
IFHI - INTERGRATED FAMILY HEALTH INITIATIVE
IRS - INDOOR RESDUAL SPRAYING
KAP - KNOWLEDGE ATTITUDE PRACTICE

LS - LADY SUPERVISOR
MAM - MEDIUM ACUTE MALNOURISHED
MI - MALARIA INSPECTOR
MOIC - MEDICAL OFFICER IN CHARGE
MOU - MEMORANDUM OF UNDERSTANDING
NVBDCP - NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME
OBC - OTHER BACKWARD CASTE
OT - OPERATION THEATRE
PHC - PRIMARY HEALTH CENTRE
PKDL - POST KALA AZAR DERMAL LIESHMANIASIS
RI - ROUTINE IMMUNIZATION
RMNCH+A - REPRODUCTIVE MATERNAL NEW BORN CHILD HEALTH +
ADOLESCENTS
RPM - REGIONAL PROGRAM MANAGER
SAM - SEVERE ACUTE MALNOURISHED
SDH - SUB DIVISIONAL HOSPITAL
SKAEP - STRENGTHENING OF KALA AZAR ELIMINATION PROJECT
SPSS - STATISTICAL PACKAGE FOR SOCIAL SCIENCES
VHSND - VILLAGE HEALTH SANITATION AND NUTRITION DAY
VL - VISCERAL LIESHMANIASIS

DISSERTATION REPORT

**Knowledge Attitude and Practice of Community on Kala
Azar Control Activities in Araria District, Bihar**

1.1 Abstract

A clear understanding of the knowledge, attitudes and practices of a particular community can help design of the Behaviour Change Communication (BCC) and Information Education Communication (IEC) campaigns to influence acceptance and use of any kala azar control measures. This study is an attempt to assess the Knowledge attitude and practices of the community on the various Kala Azar control activities in two blocks of Araria District, which is among the high focus districts for kala azar in Bihar, India. The study covered 200 household heads, collecting quantitative data through a structured questionnaire. Qualitative data was collected by Focus Group Discussions (FGDs) with different groups of people.

The data indicated that 40 percent respondents were illiterate, only 4 percent were aware that Kala azar is caused by sand flies where as more than half (55 percent) thought it is caused by mosquitoes. Dirty places or Garbage (48 percent) was the most common breeding site known. Fever (55 percent) was the most common sign known while a third (35 percent) did not know of any signs or symptoms. About half (51 percent) respondents were aware of free facilities of diagnosis and treatment in the PHC but out of those, two thirds (66 percent) thought that the facilities at PHCs were not adequate. More than half (55 percent) of the respondents did not use any protective measures against kala azar. About half (53 percent) of the respondents were unhappy with the DDT spraying service as they thought it excites and hence increases biting by other insects. The results of the study may be useful in planning and developing suitable control strategies for kala azar in this high endemic area

1.2 Introduction

Visceral Leishmaniasis or more widely known as Kala-Azar is a slow progressing indigenous disease caused by a protozoan parasite of genus *Leishmania* (*L. Donovanii* in *India*). It is the second largest parasitic killer in the world, only after malaria. It is one of the World's most neglected and poverty-related diseases, affecting the poorest people in developing countries associated with malnutrition, weakness of the immune system, displacement, poor housing, illiteracy, gender discrimination, and lack of resources. *Kala azar* is spread over a large geographical area across the globe with estimated yearly incidence of *Kala azar* of 500,000 cases¹ which lead to loss of nearly 2.4 million disability-adjusted life years (DALYs) each year. Since the last century several outbreaks of *Kala azar* have affected South-East Asia. Various programmes to control the disease have failed despite considerable efforts being done for prevention and control of the disease.

More than 60% of the world's VL cases are reported from India, Nepal and Bangladesh alone². In India, out of the four states where Kala Azar is prevalent i.e, West Bengal, Jharkhand, Bihar and Uttar Pradesh³. Bihar contributes to more than 80% of the cases⁴, reason being its low economic status, thus increasing the vulnerability of poverty, which is one of the main factors responsible for the poor living conditions, leading to this deadly disease. Though the situation has improved over the years, still the poorest sections of the society e.g, the *musahar tolas*, BPL families, SC and ST populations and other marginalized populations are at a higher risk

Government of India had been able to lower the cases to a very less number in the 1950s owing to the IRS through Malaria Control Programme. However in the 1970s,

due to reduction in IRS, the number of cases surged up. Thus in 1992, due to high incidence rate, centrally sponsored Kala-azar Control Programme was launched which was merged with NRHM in 2005 under NVBDCP. Government of India in 2002 National Health Policy had set a goal to eliminate *Kala azar* by year 2010, which could not be attained. India, Bangladesh and Nepal have demonstrated strong political will and commitment towards elimination of *Kala azar* by signing a Memorandum of Understanding (MoU) during the World Health Assembly in Geneva in 2005. The goal of Tripartite MoU was to contribute for improving the health status of vulnerable groups and at-risk population living in *Kala azar* endemic areas of Bangladesh, India and Nepal by the elimination of *Kala azar* so that it would no longer be a public health problem. Presently the Tripartite MoU aims towards reducing the annual incidence of *Kala azar* and post *Kala azar* dermal Leishmaniasis (PKDL) to less than one per 10,000 population at the district (or sub-district) level by the end of the year 2015.

However, despite all such efforts by GOI, incidence of Kala-Azar is still high in most districts of Bihar and so Jharkhand. So GoI, has entrusted CARE, an international organization with the task of providing technical assistance and much needed human resource to help them achieve the goal of elimination of Kala-Azar by 2016. Thus CARE India, has started a project **Strengthening Kala Azar Elimination Programme (SKAEP)**, under its Family Health Initiative project, funded by Bill and Melinda Gates Foundation, to help GoI achieve its goal of elimination

1.3 Review of literature

According to a study “Knowledge about sand flies in relation to public and domestic control activities of kala-azar in rural endemic areas of Bihar. (Kumar N et al, J Commun Dis, June 2009) majority respondents were neither aware about the vector of kala-azar, nor they had any idea about transmission of the disease. About 61% had wrong impression that mosquitoes were causing kala-azar. Regarding knowledge about breeding and resting sites of vectors, 20% reported cattle shed, 16% crevices in the household followed by 15% damp dark places.

Awareness About Kala Azar Disease and Related Preventive Attitudes and Practices in a Highly Endemic Rural Area of India (NA Siddiqui et al, Southeast Asian J Trop Med Public Health, Vol 41 no 1, Jan 2010) showed 4% had correct knowledge that sandfly bites caused kala-azar, 26% do not know any specific transmission agents for kala-azar. A majority (72%) of respondents were not able to recognize sand fly, 33% had no specific knowledge about the symptoms. Just over half (66%) of the respondents were not using any prevention measures to avoid contacting disease.

The study Knowledge, attitudes, and practices about kala-azar and its sandfly vector in rural communities of Nepal.(koirala et al, Bull wolrd Health Org, 1998) showed that 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. Most also failed to recognize the common symptoms of kala-azar.

Knowledge, attitude, and practices related to Kala-azar in a rural area of Bihar state, India. (Singh et al, Am J Trop Med Hyg. 2006 Sep) showed that a majority believed that the disease spreads by mosquito bites (72.8%). For 63.6%, the breeding site of the vector was garbage collection. Only 23.6% preferred the public health sector for treatment, and 55.9% believed that facilities at primary health centres are not adequate.

1.4 Statement of the problem

Poor knowledge attitudes and practices in the community for the various control activities has been leading to increased Kala Azar related mortality and morbidity in the Araria district of Bihar.

1.5 Rationale of the Study

Visceral Leishmaniasis (Kala Azar) is a disease of the poorest of the poor. Though it is among the second largest parasitic killer in the world, only after malaria, still it continues to be a neglected disease. It is associated with poverty and malnutrition and is lethal if left untreated. Bihar bears the burden of more than 80 percent of the kala azar cases in the country. Since the last few years, government has been spreading awareness about kala azar and its prevention and control. In addition to that, spraying of insecticide (DDT) is also being done in endemic areas. In spite of this, it has been noted from previous studies, that the awareness about kala azar is very low even in the highly endemic areas.

Araria district has been a highly endemic area for kala azar since a number of years. Although the number of cases being reported each year is reducing, but even now, Araria district contributes to among the highest number of case incidence of kala azar in bihar. In 2013, 746 cases of kala azar were reported from Araria district alone.

Hence this study was conducted to assess the knowledge, attitudes and practices of the community on the various kala azar control activities being implemented by the government.

1.6 Research Question

What are the knowledge, attitudes and practices of the community on the various Kala Azar control activities.

1.7 Objectives

- 1) To understand the knowledge and attitudes of the community towards the kala azar control activities.
- 2) To understand the practices of the community towards the kala azar control activities.

1.8 Methodology

Study Design

This was a descriptive cross sectional study.

Study Location

Study was conducted in Araria District, Bihar.

Study Subjects

Head of the Household for questionnaire

Homogenous Groups of 6-8 persons for FGDs

Sampling

Sampling type was Stratified Sampling/Simple random sampling

2 blocks to be selected based on performance in the district. Five Sub Centers from under each PHC would be selected randomly. From each Sub Center, two villages are selected randomly. Five household heads were interviewed in each village.

Sample Size - 200 Questionnaires (2 blocks*5HSCs*2Villages*5household heads)

FGDs of different groups of population were conducted to know the KAP of the community

Methods and Instruments of Data Gathering

Checklist for FGDs

Semi-structured questionnaire through face to face interviews

A semi-structured questionnaire was used as a data collection tool. This study was a questionnaire-based survey. The study population comprised of household heads of the community. A briefing was given about the nature of study, and the procedure of completing the questionnaire was explained. Sample of 200 households was taken.

Different groups of people were selected for FGDs and the checklist was used to guide the FGD.

1.9 Statistical Treatment

Data collected was cross checked for any incomplete or partial filling. Using SPSS Version 16 collected data was then be edited, coded, tabulated and organized into various frequency distributions.

1.10 Ethical Considerations

Informed consent was taken before starting the interview. If anyone disagreed to become part of the data collection process they were not forced by any means. Prior information was given before visiting any health facility. Confidentiality was ensured to all participants.

1.11 Results

1.11.1 Socio Demographic Characteristics of Population

About a fifth (18.5 percent) were in the age group of up to 30 years. A major chunk, about two fifths of the population (41.5 percent) were of the age group 31 to 45 years and a third (34 percent) fell in the age group 46 to 60 years.

Hindus and Muslims were almost equal in number, with about 44 percent population being Hindus where as 56 percent of the respondents were Muslims.

A fifth (20.5 percent) of the population were in the SC/ST category but more than half (51.5 percent) were in the OBC category. A few of the respondents (14 percent) fell in the extremely backward caste (*Mahadalit*) and minor proportion of respondents (3.5 percent) did not know their caste.

About two fifths (40 percent) of the population was illiterate and a little less than a third (29 percent) had education only up to primary level. Very few of the respondents (3.5 percent) had education up to graduation or post graduation.

More than three quarters (78.5 percent) of the people lived in *kuchcha* houses. Only a few (12.5 percent) respondents had *pucca* houses.

Table-1.1: Socio Demographic Characteristics of Study Population (n = 200)

Characteristics		Percentage of respondents
Age	Upto 30 Years	18.5
	31 to 45 Years	41.5
	46 to 60 Years	34.0
	61 and Above	6.0
Religion	Hindu	44.0
	Muslim	56.0
Caste	SC/ST	20.5
	OBC	51.5
	Others	10.5
	EBC(Mahadalit)	14.0
	Don't Know	3.5
Education	No education	40.0
	Primary	28.5
	Middle	17.0
	Secondary	11.0
	Graduate/Post Graduate	3.5
Type of House	Kuchcha	78.5
	Semi Pucca	9.0
	Pucca	12.5

1.11.2 Respondents suffering from kala azar

Less than a fifth of the total respondents (16.5 percent) were found to be having some member in the family who suffered from kala azar.

Table-1.2: Any member of the family suffered from kala Azar (n=200)

Response	Percentage of respondents
Some member has suffered from kala azar	16.5
No one has suffered kala azar	83.5

1.11.3 Communicability of Kala Azar from a person to person

More than two fifths (43 percent) of the respondents believed that Kala Azar could be transmitted from one person to the other and about a third (30 percent) were not aware about its communicability from a person to another. A large group of people were either not aware about communicability or thought that kala azar can be communicated from one person to the other.

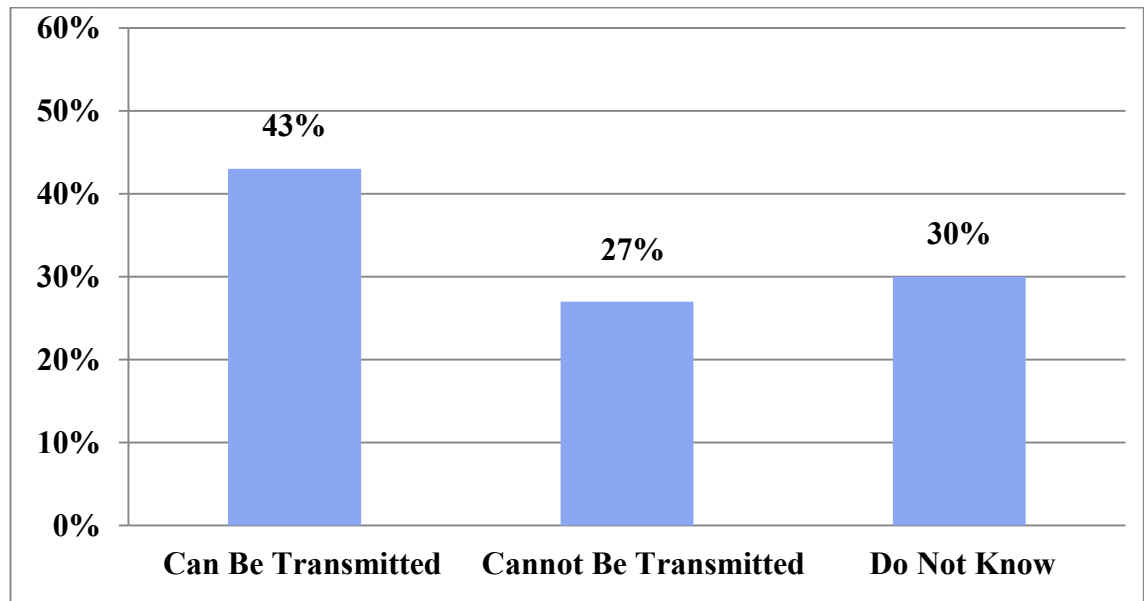


Figure 1.1 – Knowledge of Communicability of Kala Azar from one person to another (n=200)

1.11.4 Vector Responsible to Cause Kala Azar

More than half of the respondents (55 percent) thought that Kala Azar was caused by mosquito bites and more than a third (38 percent) were not aware of the vector responsible to cause kala azar. Very few (4 percent) respondents correctly mentioned Sand Fly as the vector.

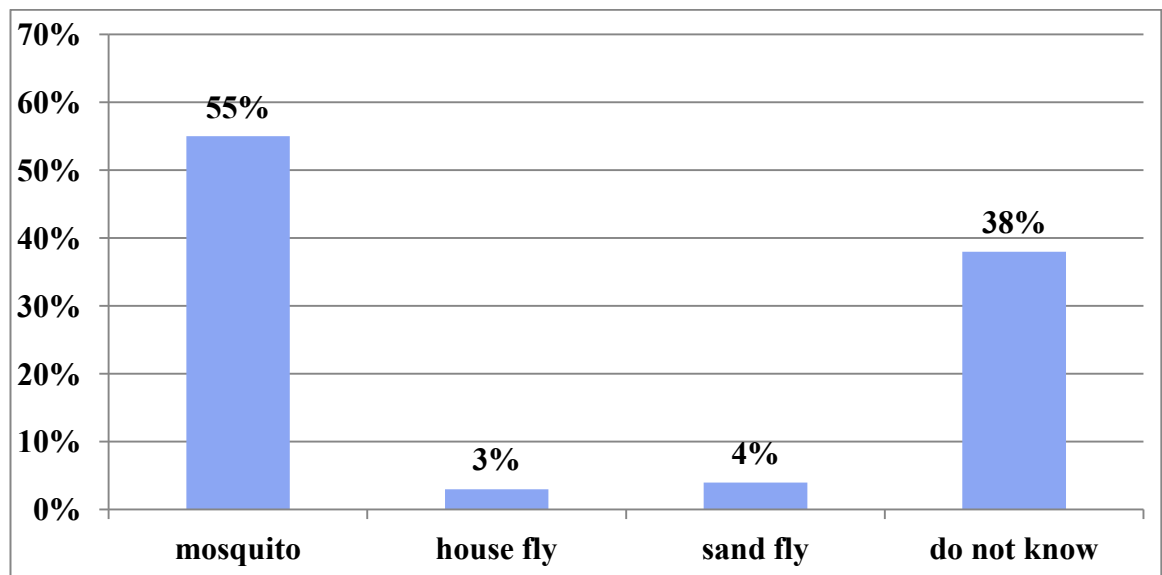


Figure 1.2 –Knowledge of Vector responsible to cause Kala Azar (n=200)

1.11.5 Knowledge of Breeding Place of the Vector

About half the respondents (47.5 percent) felt that dirty places with garbage were the sites for breeding of the vector and about 30 percent thought polluted water to be the breeding site. More than a third of the respondents (37 percent) did not know of the breeding places of the vector causing kala azar

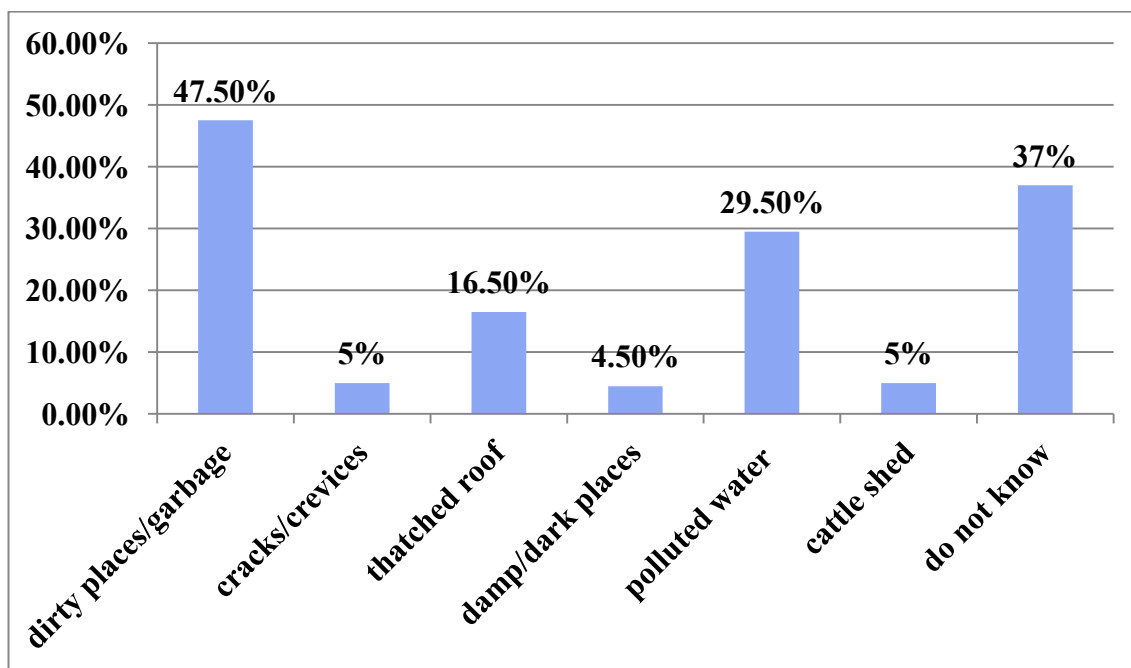


Figure 1.3 – Knowledge of Breeding Site of Vector (n=200)

1.11.6 Time of bite of the vector

Half of the respondents (50 percent) said that the vector bites at night whereas third (33 percent) did not know about the time of bite. Few respondents (6 percent) felt that the vector bites during the day

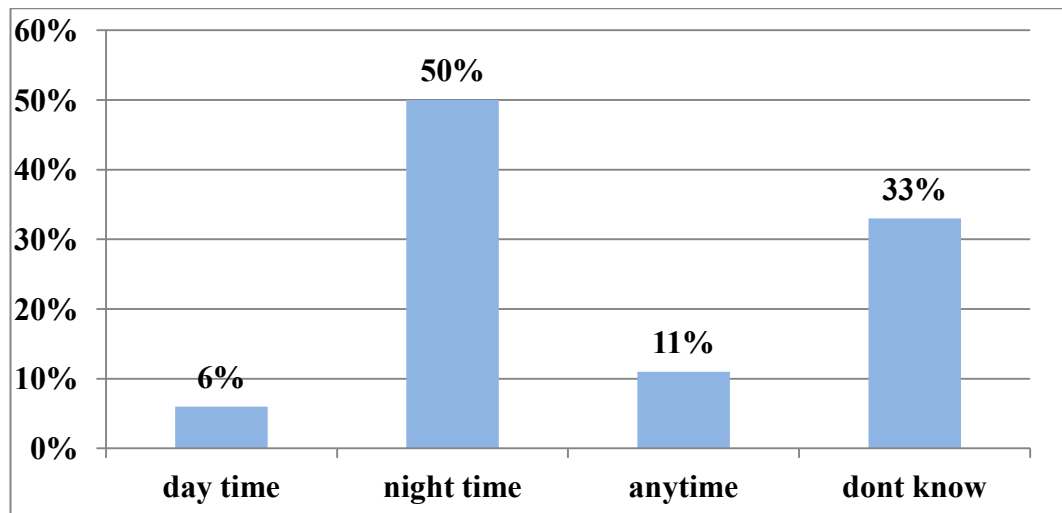


Figure 1.4 – Knowledge of Time of bite of Vector (n=200)

1.11.7 Threat of Disease if left untreated

On being asked if Kala Azar could kill them if left untreated, about two thirds of respondents (64.5 percent) said yes and about a third (32 percent) did not have any answer. Only a small proportion (3.5 percent) of people thought that Kala Azar could not kill them.

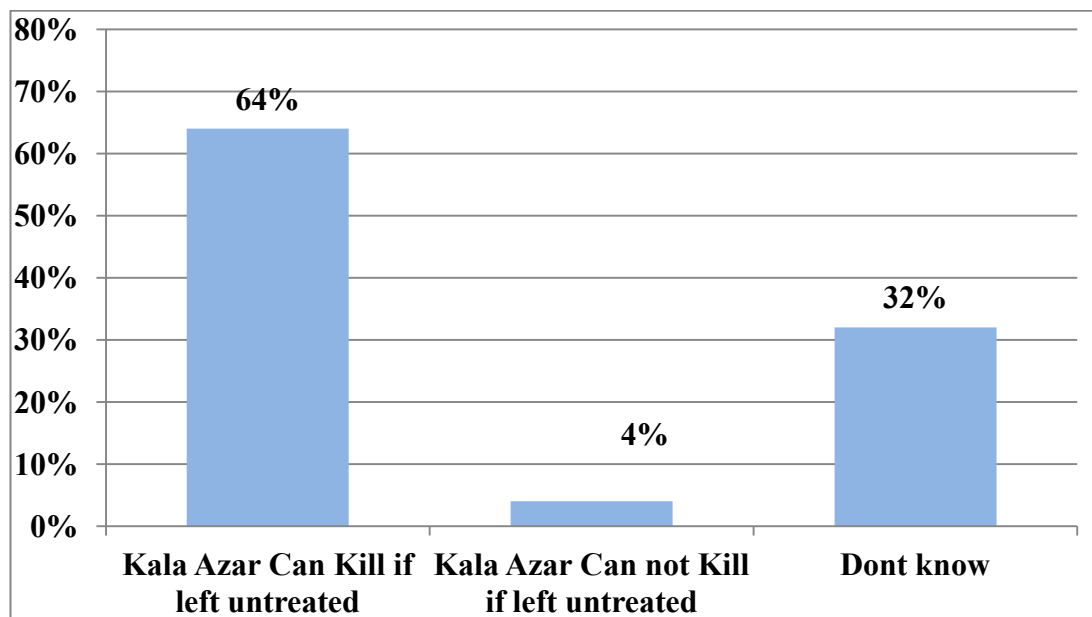


Figure 1.5 - Threat of Kala Azar if not treated (n=200)

1.11.8 - Most commonly known symptoms

As shown in figure 1.6 little over a third (35 percent) respondents did not know about any symptoms of kala azar. Out of the remaining, 65 percent (130 respondents), fever was he most commonly known symptom to 85 percent of respondents.

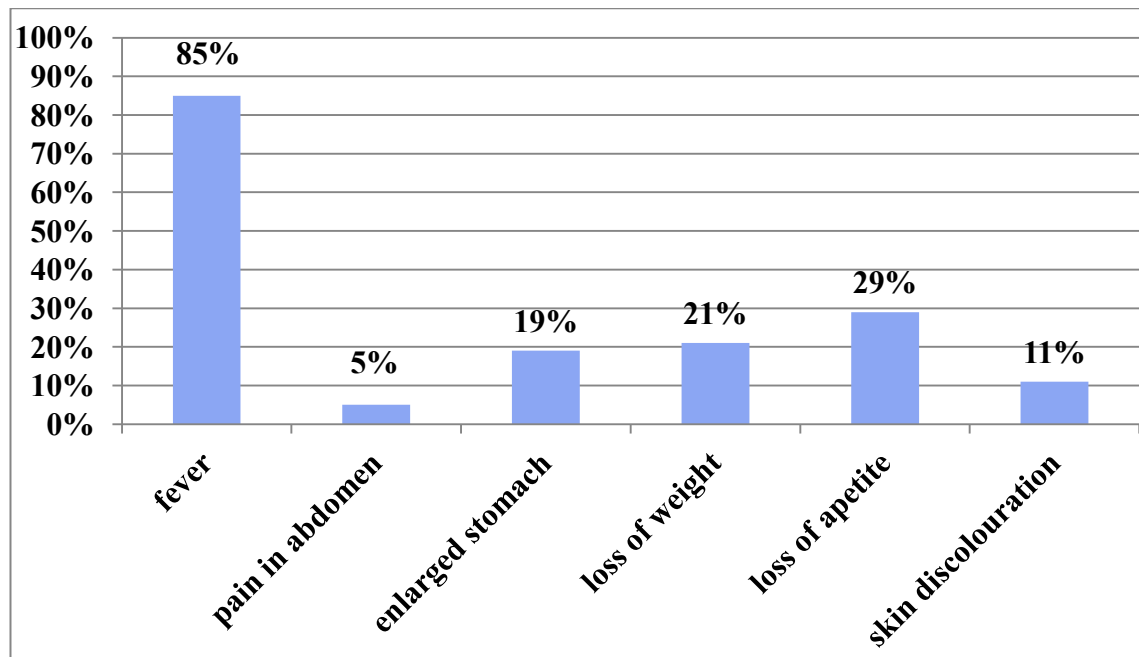


Figure 1.6 – Knowledge of symptoms (n=130)

1.11.9 Perception of information of Kala Azar (n=200)

On being asked if the respondents thought they had enough information on kala azar, only about 10 percent said that they thought they had enough information and a majority (90 percent) said they did not have enough information on kala azar. This may be because community awareness has been really low among the population as even the health workers do not do any specific counseling on kala azar in all the areas. This also shows the very low level of awareness about the disease in the general population.

1.11.10 Information preferred by respondents

When asked what kind of information would be sought by the respondents, more than two fifths (41.3 percent) said that they want Any kind of information on kala azar. About a third (34.5 percent) wanted information on treatment and the others sought information on prevention and signs and symptoms. This shows a positive attitude of the population towards trying to learn more about kala azar.

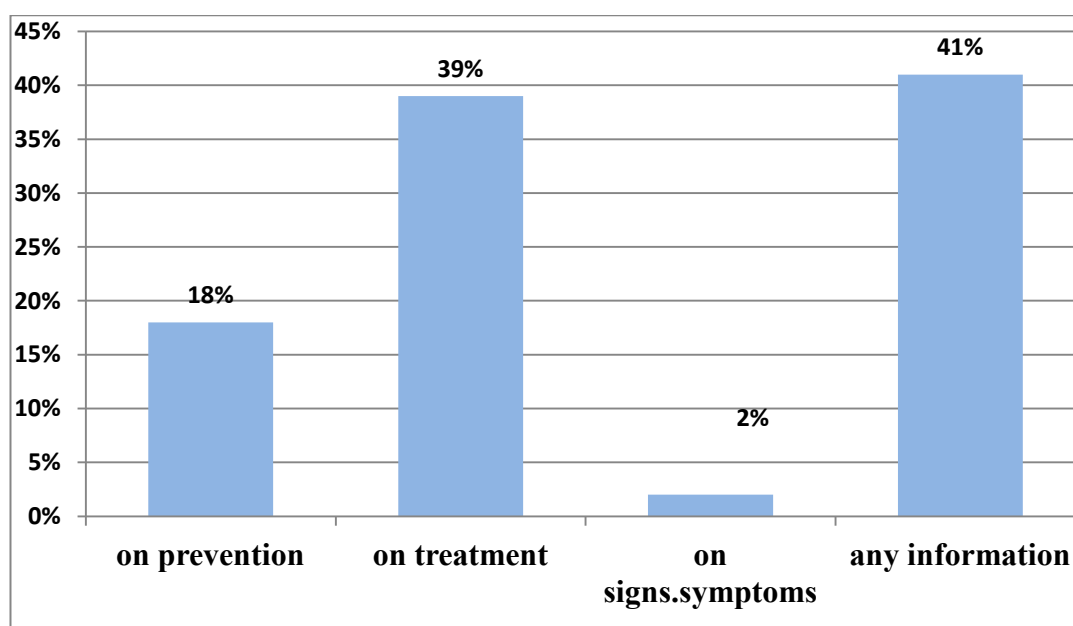


Figure 1.7 - Information sought by respondents on Kala Azar (n=179)

1.11.11 Choice of channel of communication

The respondents were asked their preferred channel of communication through which they would wish to receive information about kala azar. About a third (29 percent) preferred information to be given through health workers and about two fifths (39 percent) preferred community meetings to be the choice of communication. This shows that the health workers can be used to spread awareness among the community about the disease. Also, community meeting seems to be an important part of the culture of the people, hence important information on kala azar can be floated through these means.

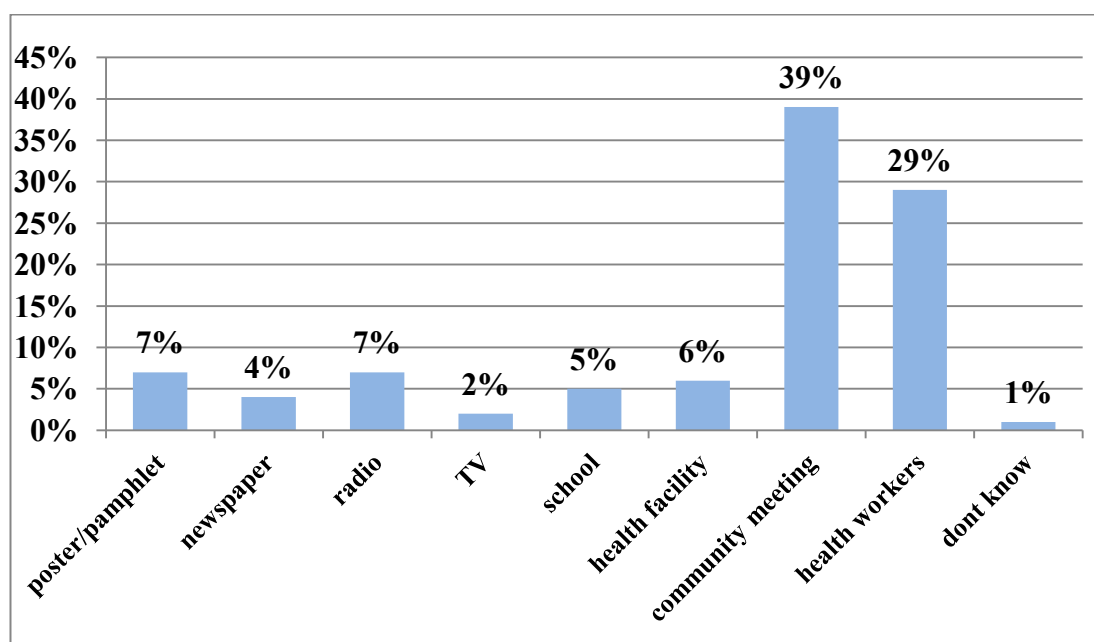


Figure 1.8 - Preferred communication channel for information on kala azar (n=179)

1.11.12 – Choice of health service for treatment of Kala Azar (n=200)

More than half the respondents (52 percent) preferred the government facilities for treatment of kala azar, but about two fifths (40 percent) preferred private doctors for treatment. A small proportion (3.5 percent) preferred traditional healers for treatment. This result shows that a large number of people do not prefer to go government facilities for treatment.

1.11.13 – Knowledge about free diagnosis and treatment of Kala Azar in the PHC (n=200)

Only about half the respondents (51 percent) were aware of the free diagnosis and treatment facilities in the PHC whereas the others (49 percent) were not aware of the free facilities in the PHC. This lack of awareness may also be one among the reasons of the PHC not being the preferred facility for treatment of kala azar.

1.11.14 - Perception of Adequate facilities being available at PHC for Kala azar Management

The respondents who were aware of free treatment being available at PHCs were asked if they thought the facilities were adequate at the PHC to manage kala azar cases. Two thirds (66 percent) of the respondents said that the PHC did not have adequate facilities to manage kala azar cases. The reason behind such a response could be the non availability of drugs being a constant problem.

Table 1.3 – Perception on PHC having adequate facilities to manage Kala Azar cases (n=102)

Response	Percentage of respondents
PHC has adequate facilities to manage Kala Azar Cases	34.3
PHC does not have adequate facilities to manage kala azar cases	65.7

1.11.15 - Curability of the Kala Azar (n=200)

About three quarters of the respondents (74.5 percent) felt that complete cure of kala azar was possible and about a fifth (20 percent) of the respondents said they were not sure if kala azar was curable. Only about 5 percent of respondents said that kala azar was not curable. There is a need to make everyone aware that the treatment of kala azar is very much possible and that the patient can get completely cured by medicines. This may enhance the acceptability of treatment for the disease.

1.11.16 - Preference of drugs for treatment (n=200)

More than half the respondents (53.5 percent) said they would prefer the prescribed medicines for treatment of kala azar and a quarter (26 percent) were not sure of their preference. However, a fifth (20.5 percent) respondents said they would prefer indigenous medicines for treatment of kala azar. This may be because of the long standing beliefs of people in traditional healers and indigenous medicines. The practice needs to be discouraged and people have to be made aware about the free diagnosis and treatment facilities at the block PHC.

1.11.17 - Can kala azar be prevented (n=200)

About two thirds of the respondents confirmed that kala azar could be prevented, but about a quarter (24.5 percent) were of the view that kala azar can not be prevented. This may be because lack of awareness among the population and less motivation and information being provided by the health workers. A small percentage of respondents (13 percent) were not sure if kala azar could be prevented.

1.11.18 - Use of protective measures against kala azar (n=151)

The total respondents who thought that kala azar can be prevented, or had no knowledge of it were asked if they use any protective measures to guard against kala azar. More than half the respondents (55.6 percent) were not using any protective methods for control of kala azar. This result shows that there is great need for advocacy among the population so that they understand the importance of using protective measures against kala azar.

1.11.19 - Most common methods used for protection against kala azar (n=67)

Among the respondents who were using some personal protection against kala azar, 60 percent used mosquito nets, a little over a third (37 percent) used coils and minor group (3 percent) burned cow dung or leaves to protect themselves. The habit of usage of mosquito nets needs to be enhanced among the population to help effective protection against kala azar.

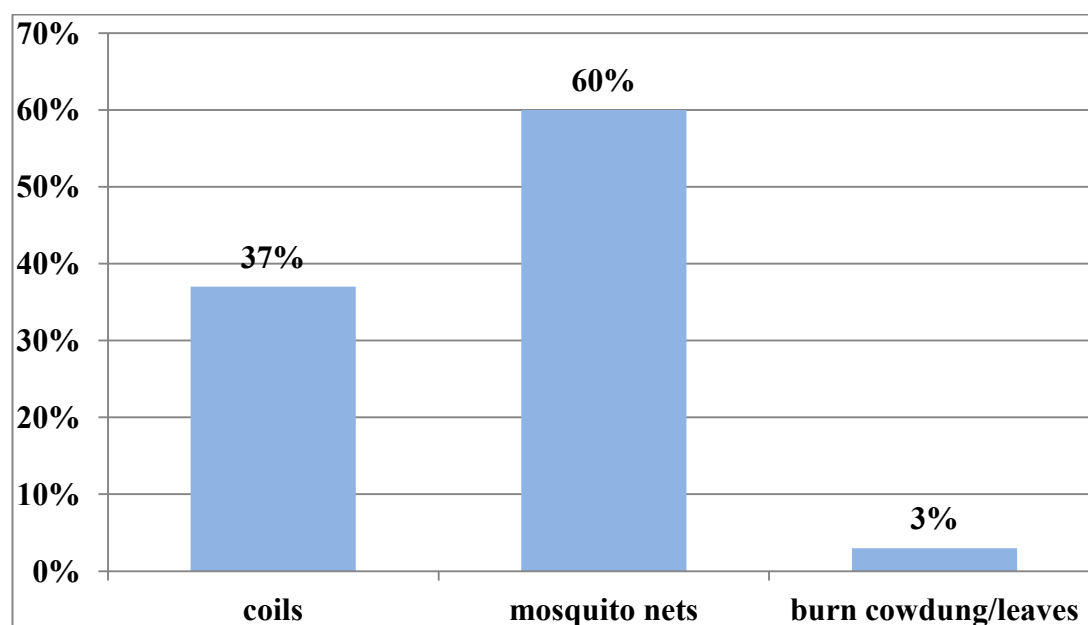


Figure 1.9 - Most common methods used for protection against kala azar

1.11.20 - Availability of bed nets (n=200)

Majority of the respondents (88 percent) said that they had bed net in their homes whereas few of the respondents (12 percent) did not have bed nets in their homes. Although a majority of the respondents possessed bed nets, but the awareness about kala azar remains low.

1.11.21 - Use of bed nets (n=176)

Out of the respondents who had bed nets in their homes, all of them (100 percent) were using them. This shows a positive practice of the population about the use of bed nets. This practice needs to be sustained among all the people and those not having bed nets should be encouraged to use them as well.

1.11.22 – Can kala azar be controlled by DDT spraying

Half the respondents (50 percent) agreed to DDT being able to control Kala Azar and about a fifth (21,5 percent) were not sure if DDT could control kala azar. On the other hand, a little less than a third (28.5 percent) of the respondents thought that kala azar can not be controlled by DDT spraying. The reason for this belief may be previous poor experiences with the DDT spraying rounds. So a need to create awareness among the public about the importance and effectiveness of DDT spraying

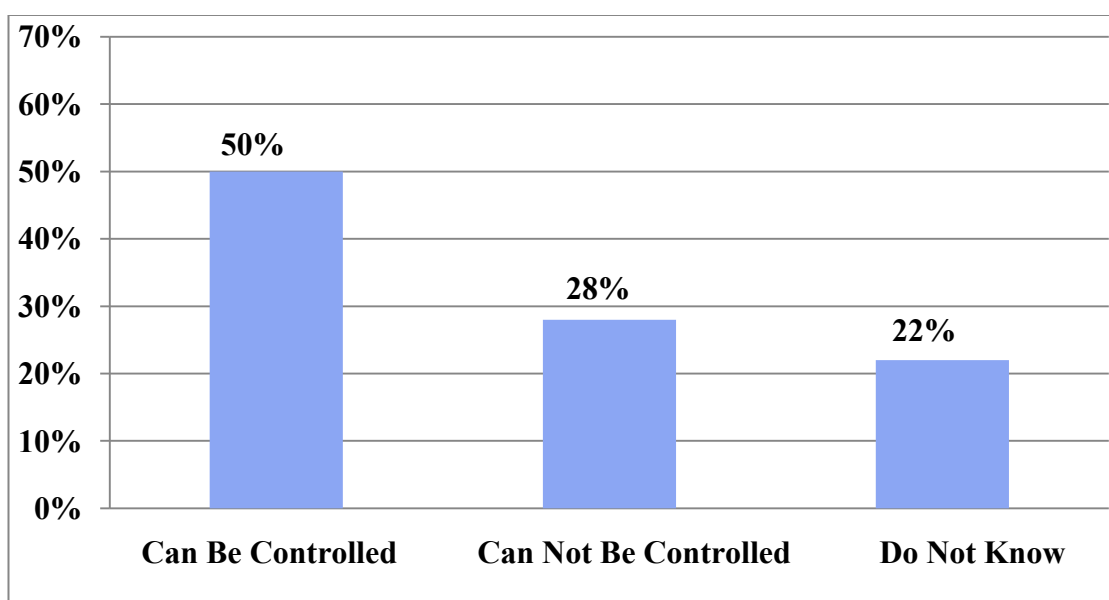


Figure 1.10 - Can kala azar be controlled by DDT spraying (n=200)

1.11.23 Was the house sprayed last year? (n=200)

Among all the respondents, a majority of the households (92.5 percent) were sprayed in the previous year, only a few (7.5 percent) were not sprayed. This may be because either the household would have been locked during the rounds of the spray teams. The houses, specially those in kala azar endemic areas should be sprayed regularly according to the schedule to help in best protection and control of kala azar.

1.11.24 Were the rooms for sleeping sprayed? (n=185)

The respondents whose houses were sprayed in the previous year were asked if all the rooms used for sleeping had been sprayed. In about three quarters of the households (72.4 percent) the rooms used for sleeping had been sprayed. However in about a quarter of the households (27.6 percent) the rooms used for sleeping were not sprayed. The community needs to be made aware about the importance of getting the rooms used for sleeping sprayed as it is the most important place, where resting sand flies can bite the inmates during the night and hence transmit kala azar

1.11.25 Did the spray men explain the reason for spraying? (n=185)

In about three quarters of the households, the spray men did not explain the reason before spraying DDT in the houses. This practice needs to be discouraged as the community should be made aware of the reason and need of spraying so that there is a better acceptance level among the people towards spraying of DDT and hence helping in effective control of kala azar.

1.11.26 Satisfaction with the spraying process (n=185)

More than half the respondents (51.4 percent) were not happy with the spraying services. This shows that the spraying process also needs to be modeled on the needs of the community as many of the respondent were found to be unhappy with the spraying service.

1.11.27 Reason for not being satisfied with spraying service

More than half the respondents (52.5 percent) stated that the spraying of DDT excites the other insects and increases the biting by them. The reason for this strange fact needs to be probed more to find the reason for the this occurrence. Also, about a third (28.4 percent) respondents stated the conduct of spray men as the reason for being unhappy with the spraying service. This includes general demeanor as well as the fact that certain spray squad members go along the houses and ask for some compensation in cash or kind from the houses after spraying is completed for the day. Few respondents (12 percent) stated the smell of DDT being a factor because of which they are not happy.

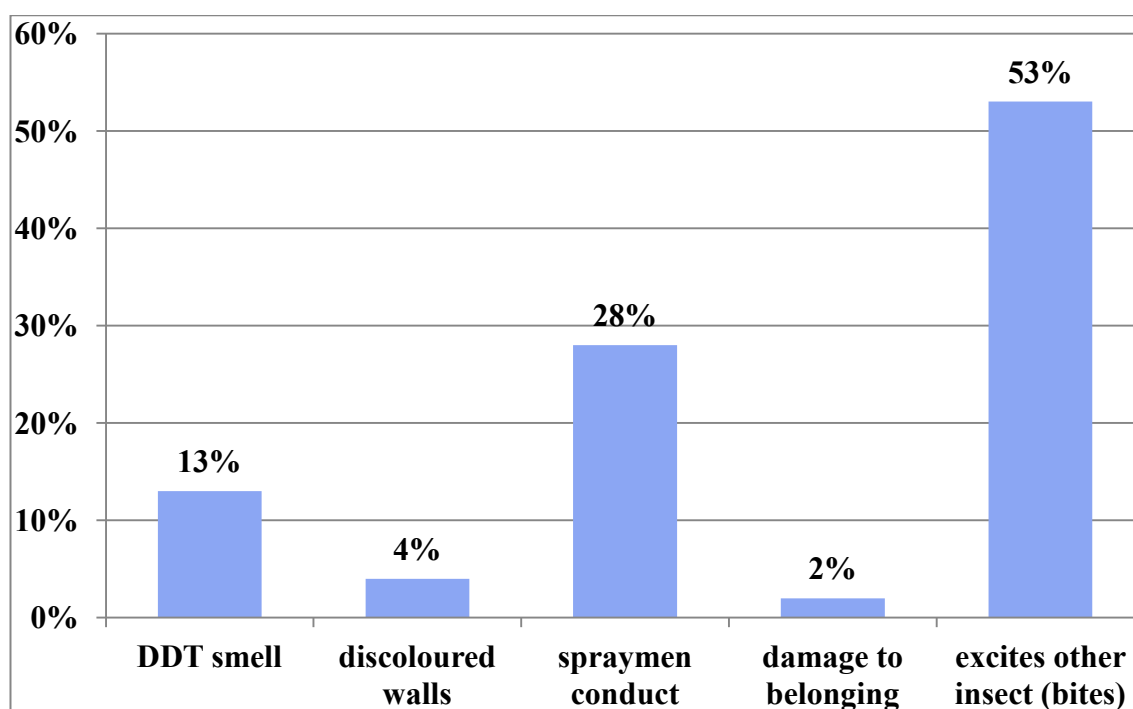


Figure 1.11 – Reasons for not being satisfied with spraying service (n=95)

1.11.28 Were the inner walls re-plastered after spraying last year (n=185)

More than half (56 percent) of the respondents had the inner walls of their houses re-plastered after the spraying being complete. The reason may be that the people feel the spraying excites other insects to bite.

1.11.29 Will you allow DDT spray in your house? (n=200)

More than two thirds (69 percent) of the respondents agreed to allow DDT spray in their homes. But about a third (31 percent) of the respondents were not willing to have their houses sprayed with DDT.

2.12 Discussion

The objective of the study was to find out the knowledge attitudes and practices of the community on the various kala azar control activities in two blocks of Araria district, Bihar.

Having community awareness and community participation is of utmost importance in any elimination program started by the government. This is because it is extremely important for the community to be aware about the interventions being made and more over, the acceptability of the program be increased by attaining community participation.

The study covered 200 household heads in two blocks of Araria district, Bihar. The household heads were asked about their knowledge, attitudes and practices in relation to kala azar. In addition to this quantitative data through structured questionnaire, FGDs of different groups of people were done to further enhance and substantiate the information gathered.

The study showed that about 40 percent of the respondents were illiterate and more than three quarters (79 percent) live in kuchcha houses. This may be a reason for increased prevalence of kala azar in the area as due to illiteracy, people are either not aware about the control mechanisms to be applied for better control of kala azar or have low acceptance to the kala azar control activities. A little over two fifths (43 percent) of the respondents thought that kala azar was contagious and could be transmitted from one person to another and about a third (30 percent) were not sure of its communicability. This shows that there is a great need to burst the myths related to kala azar among the people and bring the right kind of knowledge to them so that they become more aware and have better reception to the government control program. Very few (4 percent)

respondents were able to correctly state the vector (sand fly) in causing kala azar, whereas more than half (56 percent) thought it was caused by mosquito bites and more than a third (38 percent) did not know about any vector. This finding is important as, if the people do not know the causative organism for a particular disease, they may not take enough measures to control the same. The breeding place most commonly known was dirty places/garbage dumps to about half (48 percent) the respondents. Thirty percent of the respondents thought polluted water to be a breeding site and more than a third (37 percent) did not have any knowledge about the breeding place. Fever was the most common sign known to more than half the respondents (55 percent) followed by loss of appetite (19 percent) and loss of weight (14 percent). But more than a third (35 percent) of the respondents were not aware of any signs and symptoms of kala azar. This finding was in slight deviation of previous studies where the respondents were well aware of the signs and symptoms of kala azar. Awareness about the signs and symptoms of a disease prompts patients to seek early treatment. However, in the study population, the knowledge about the signs and symptoms of the disease was very poor despite the fact that the disease has been endemic for such a long time, and fever and splenomegaly are present in almost every patient with kalaazar in India(*WHO -1996*).

Treatment seeking behaviour was assessed and it was found that the respondents wanted to seek information about kala azar, viz that about treatment (35 percent) and about 38 percent said they may seek any information that is given to them about the disease. The most common channel of communication sought by the respondents was through community meetings (35 percent) and through health workers (26 percent). This shows that the people are willing to gather information about kala azar which may help them to better identify it and help in control. Moreover, the importance of imparting

information through community meetings, which is still an important part of the lifestyle of the people in this area is asserted. The health workers are also active but they seldom give any information about kala azar in particular.

Just over half (52 percent) respondents preferred the government PHCs as the choice of treatment but about 40 percent preferred private doctors. This may also be due to the fact that only half (51 percent) the respondents knew that diagnosis and treatment facilities are free of cost in the block PHC. Another cause of concern was that two thirds (66 percent) of the respondents who knew about the services provided at the PHC were of the opinion that the PHC was not having adequate facilities to manage kala azar cases. About a quarter of the respondents (25 percent) thought that kala azar can not be prevented. Out of those who were of the view that kala azar can be prevented or did not have any knowledge about it, less than half (44 percent) respondents used protective measures against kala azar. Only half (50 percent) respondents thought that kala azar can be prevented by DDT spraying. This finding is important and needs to be addressed as the acceptability of the population towards spraying needs to be enhanced. The reason for spraying was not explained by the spray team members in a majority (76 percent) of the respondents households. The spray team members require proper training on spraying techniques and on enhancing community acceptance.

More than more than half the respondents (51 percent) said they were not happy with the spraying service and the major reason cited was that the spraying of DDT excites and increases other insect bites (53 percent). A little less than a third 28 percent were not happy with the spray team members conduct. More than half the respondents (56 percent) re plastered their walls after spraying was done. This practice needs to be discouraged and it should be told that the walls should not be replastered upto at least three months after the spraying to increase the effectiveness. Another cause of concern

was that a third (31 percent) of the respondents said that they would not allow DDT spraying to be done in their homes. This needs to be addressed immediately with the people being told about the benefits and effects of DDT spraying on kala azar control so that there is total acceptance and hence helping in better control.

Discussion in FGDs

During the FGDs, most of the respondents stated that kala azar is caused by mosquitoes. About half of the health workers on the other hand were able to state that kala azar was caused by a sand fly. Fever and enlargement of abdomen were the most common symptoms stated by the community when asked to describe the signs and symptoms. On the other hand, the health workers were aware of symptoms like pigmentation of skin and categorically stated that a fever of more than 2 weeks only should be suspected for kala azar. During the FGDs, the residents confirmed the role of community meetings and health workers being as an information source, citing that the community meetings still are an important part of the culture.

Treatment seeking behaviours were considerably poor. It was mentioned by the community and substantiated by the health workers that the PHC was constantly out of stock of medicines for kala azar, be it the oral miltefosine tablets or the amphotericin b injections and also the diagnostic kits were in short supply. The health workers felt that the community do not take kala azar as a serious disease because they go to a hospital only when they get very sick and once they feel better with treatment, they abandon it.

One ASHA worker reported,

“I know of a village where kala azar is very much prevalent, a lady and all her children suffer from kala azar, but she does not have enough money to bring all of them to the hospital as it is about 20 kilometers away from their village. So the woman comes once to the hospital to get medicine and shares it with the family. Even then she sometimes has to go back empty handed”

(ASHA Worker – Raniganj)

From the FGDs it was also known that kala azar was majorly thought to be a curable disease. Very few respondents were able to state the vector correctly. Even among the health workers (ASHAs and ANMs), some were not able to identify the vector for kala azar as a sand fly. The reason they stated was that they received no formal training on kala azar. Most of the FGDs with community came out with the general view that they thought that kala azar is contagious. But the health workers had correct knowledge about its communicability.

The health workers (ASHA Workers) stated that they were not given incentive due to them for kala azar case detection and ensuring complete treatment since the last two years. A similar problem was stated by the community that they did not receive the loss of wages due to them for being admitted in the PHC for treatment. This was another reason for a poor treatment seeking behaviour among the community. Though majority of the groups responded by saying that they regularly use bed nets, but almost all of them were not aware of any specific control mechanism for kala azar.

Another major reason for not seeking treatment by the community was the distance of the PHC from their respective villages. Kala azar diagnostic test is being done only in the labs of block PHC and medicines are available in the PHCs alone. In some cases, if the patient is not willing to go to the block PHC, he got himself treated by the private practitioner.

Some of the groups said that they wanted spraying to occur in their villages but the spraying teams had not come to their villages since a number of years. Among the other groups, they were not happy with the spraying and stated that the spray does not kill mosquitoes and in fact it excites other insects to bite more once the spraying is done. Another alarming thing reported by the group of EBCs was that they did not want

spraying to be done in their village as the spray workers caused damage to some of the belongings in their homes and have a practice of asking for compensation in kind from the houses after completing spraying.

2.13 Conclusion

The study aimed to assess the knowledge attitudes and practices of the community towards the kala azar control activities. As is evident from the results and the discussions, the knowledge about kala azar signs and symptoms, about the vector, the breeding place of vectors, and even about the diagnosis and treatment being free in the PHCs was pretty low. The attitude and practices of the community were also low as only half (52 percent) the respondents preferred government facilities for treatment though the fact that adequate facilities are not available at PHCs may have helped form his opinion. About a quarter of the respondents felt that kala can not be prevented and more than half of those of who did, were not using any protective measures. Though bed nets were available in a majority (88 percent) of the respondents households, and all of them were being used, but their importance in kala azar control was not known. A third of the respondents said they would not allow DDT spraying to be done in their homes. Hence there is a need for better IEC/BCC strategies to enhance knowledge and favourable attitude and practices among the population so that the kala azar control activities are better accepted and the control program becomes a success.

2.14 Limitations of the Study

This study is done in just 2 blocks of the district Araria, and the sample collected is small, and hence can not be generalized over a large population.

2.15 References

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- 13 – araria.bih.nic.in/

3. Annexures

3.1 Annexure 1

English Questionnaire

Knowledge Attitudes and Practice of Community on Kala Azar Control
Activities in Araria District, Bihar

Interview Schedule

Informed consent : I would like to thank you for taking the time to meet me. My name is Dr Afaq Amir Ahmad. I would like to talk to you about your knowledge on Kala Azar. There are no direct benefits for you a part of this research, However your contribution will help the kala azar control program and the department of health to to design and develop appropriate information resources to help communities effectively recognize signs and symptoms of kala azar and take appropriate action when suspecting infection. The interview should take about 10 minutes. The responses will be kept confidential. This means that the interview responses will be shared only with the research team and we will ensure that any information that we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything that you don't want to and you can end the interview at any time.

Do you have any questions about what I just explained?

Are you willing to participate in the interview?

Block	
Sub center	
Panchayat/Village	
Date of Interview	
Duration of interview (in minutes)	

Section 1 – Background Characteristics									
Q. NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO						
1	What is your name?								
2	How old are you? (Age in completed								

[illegible]

		Radio	5							
		TV	6							
		School	7							
		Health Facility	8							
		Traditional Healer	9							
		Community meeting	10							
		Health workers	11							
		Religious gatherings	12							
		Others, specify	13							
		Don't know	98							
		Not applicable	99							
		9	Can Kala Azar be transmitted from one person to another?		Yes	1				
No	2									
Don't know	98									
Not applicable	99									
10	How is kala Azar Transmitted?	Mosquito bites	1							
		House fly	2							
		Sand fly bites	3							
		Others, specify	4							
		Don't know	98							
		Not applicable	99							
11	Where does the vector (sand fly) breed? Multiple responses possible	Dirty places/garbage	1							
		Cracks/Crevices of house	2							
		Thatched roof	3							
		Damp and dark places	4							
		Polluted water	5							
		Cattle sheds	6							
		Don't know	98							
		Not applicable	99							
12	When does the	During the day	1							

	vector(sand fly) of kala azar bite?	During night	2							
		Any time	3							
		Don't know	98							
13	Do you think Kala Azar can kill you if untreated?	Yes	1							
		No	2							
		Don't know	98							
		Not applicable	99							
14	What are the most common signs/symptoms of kala azar	Fever	1							
		Pain in abdomen	2							
		Enlarged stomach	3							
	Multiple responses possible	Loss of weight	4							
		Anorexia	5							
		Skin pigmentation	6							
		Don't know	98							
		Not applicable	99							
15	Do you think you have enough information on kala azar?	Yes	1	If "1" skip to Q 18						
		No	2							
		Don't know	98							
16	What information would you like on kala azar?	On Prevention	1							
		On control	2							
		On treatment	3							
		On signs/symptoms	4							
		Any information	5							
		Others specify	6							
		Don't know	98							
		Not applicable	99							
17	Where would you like this information communicated to you? (through what channels)	Family	1							
		Friend	2							
		Poster/pamphlet	3							
		Newspaper	4							

		Radio	5							
		TV	6							
		School	7							
		Health Facility	8							
		Traditional Healer	9							
		Community meeting	10							
		Health workers	11							
		Religious gatherings	12							
		Others, specify	13							
		Don't know	98							
		Not applicable	99							

Section 3 – Treatment / Treatment seeking behavior										
Q NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO							
18	Do you think kala azar is a serious disease? (compared to malaria)	Yes	1							
		No	2							
		Equally serious	3							
		Don't know	98							
19	What is the choice of health service you would use for the treatment of Kala Azar if you or a family member acquire symptoms?	PHC/govt hospitals								
		Private doctor								
		Traditional healer								
		Pharmacy								
		No where								
		Others, specify								
		Don't know								
20	Do you know that diagnosis and treatment of kala azar is done free of cost in the block PHC?	Yes	1	If “2” skip to Q 22						
		No	2							
21	Do you think facilities at PHC are adequate to	Yes	1							
		No	2							

	manage Kala Azar Cases	Partially	3						
22	How is care of kala azar patient done?	Medicines	1						
		Cleanliness	2						
		Bed net	3						
		Isolation of patient	4						
		Diet precaution	5						
		Others specify	6						
		Don't know	98						
23	Is complete cure of Kala Azar possible?	Yes	1						
		No	2						
		Don't know	98						
24	What would be your preference of treatment for kala azar	Prescribed medicines	1						
		Indigenous medicine	2						
		No treatment	3						
		Don't know	98						

Section 4 – Personal Protection									
Q NO	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP TO					
25	Do you think kala azar can be prevented?	Yes	1	If “2” skip to Q28					
		No	2						
		Don't know	98						
26	Do you use any protective measures to guard against kala azar infection?	Yes	1	If “2” skip to Q 28					
		No	2						
		Don't know	98						
		Not applicable	99						
27	What is the most common method used by you for personal protection?	Use repellants	1						
		Use Coils	2						
		Use mosquito nets	3						
		Close doors/windows	4						
		Burn cowdung/leaves	5						

		Nets in windows	6						
		Others specify	7						
		Not applicable	99						
28	Does this house have bed nets?	Yes	1	If “2” skip to Q 31					
		No	2						
29	Who owns the available bed nets in the house?	Household head	1						
		Wife of head	2						
		Children over 5 years	3						
		Children below 5 years	4						
		Others specify	5						
		Not applicable	99						
30	Are the bed nets being used?	Yes	1						
		No	2						
		Don’t know	98						
		Not applicable	99						

Section 5 – Spraying and Kala Azar Control Programme									
Q NO	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP TO					
31	Can Kala Azar be controlled by DDT spraying?	Yes	1						
		No	2						
		Don’t know	98						
32	Was your house sprayed last year?	Yes	1	If “2” skip to Q 38					
		No	2						
33	Were the rooms used for sleeping sprayed?	Yes	1						
		No	2						
		Not applicable	99						
34	Did spray men explain the reasons for spraying?	Yes	1						
		No	2						
		Not applicable	99						
35	Are you happy with the	Yes	1	If “1” skip to					

	spraying service?	No	2	Q 37					
		Not applicable	99						
36	Why are you not happy with the spraying?	Smell of DDT	1						
		Discoloring of house walls	2						
		Spraymen's conduct	3						
		Damage to belongings	4						
		Excites other insects (biting)	5						
		No/Few Kala Azar cases	6						
		Others specify	7						
		Not applicable	99						
37	Were your inner house walls replastered or painted after last year's spraying?	Yes	1						
		No	2						
		Not applicable	99						
38	Will you allow DDT spraying to be done in your house	Yes	1						
		No	2						
		Don't know	98						

Thank you for your time and valuable contribution. Do you have any question for me?

Sign of Interviewer

3.2 Annexure 2

Focus group Discussion Guideline

Dt : - -

1)Block: _____ 2) Subcentre _____ 3)Panchayat/Village
: _____

S.No	Name of Participants	Age	Education level	
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Name of the facilitator and designation:

Name of the Note recorder and designation:
.....

FGD Guidelines

Knowledge about Kala Azar

Signs and Symptoms

About the Vector

Transmission of disease

Curability

Health seeking behaviour

Housing pattern

Treatment facilities/delays