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**Re-Emergence of Kala-Azar : People's Responses and
Political & Administrative Actions in Bihar**
(A case study of a severely affected village in
Vaishali District of Bihar)

Dissertation submitted to the **Jawaharlal Nehru University**
in partial fulfilment of the requirements
for the award of the Degree of
MASTER OF PHILOSOPHY

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CERTIFICATE

This is to certify that the dissertation entitled ,
"RE-EMERGENCE OF KALA-AZAR : PEOPLE'S RESPONSES AND POLITICAL
& ADMINISTRATIVE ACTIONS IN BIHAR" (A case study of a severely
affected village in Vaishali district of Bihar) submitted
by Kishore Kumar for the award of the Degree of Master of
Philosophy (M. Phil.) is his own work and has not been previously
submitted for any other Degree of this or any other University.

We recommend that this dissertation may be placed
before the examiners.

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ABBREVIATIONS USED

Adl. PHC	- Additional Primary Health Centre
BHW	- Basic Health Worker
BVS	- Bihar Vidhan Sabha
BVP	- Bihar Vidhan Parishad
CMO	- Chief Malaria Officer, Bihar
CS	- Civil Surgeon, Hajipur
DDT	- Dichloro Dipheny Trichloro ethane (Insecticide)
DM	- District Magistrate
DMCH	- Darbhanga Medical College Hospital , Darbhanga
DMO	- District Malaria Officer
GOB	- Government of Bihar.
IICB	- Indian Institute of Chemical Biology
ICMR	- Indian Council of Medical Research
JE	- Japanese Encephalitis
KA	- Kala-Azar
KAUM	- Kala-Azar Unmoolan Morcha
LS	- Lok Sabha
Mo I/C	- Medical Officer Incharge
M.I.	- Malaria Inspector
NICD	- National Institute of Communicable Diseases
NMEP	- National Malaria Eradication Programme
PMCH	- Patna Medical Collage Hospital, Patna
RMRI	- Rajendra Memorial Research Institute of Medical Sciences
SKMCH	- Shri Krishna Medical College Hospital
SQ	- Starred Question
USQ	- Unstarred Question
VHAI	- Voluntary Health Association of India
VL	- Visceral Leishmaniasis

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CHAPTER - ONE

Introduction

- 1.1 History of KA in India
- 1.2 History of KA in Bihar
- 1.3 Present situation of KA in Bihar
- 1.4 KA as known to Scientists
- 1.5 Need for the Present Study
- 1.6 Premises of the Present Study
- 1.7 Objectives of the Study
- 1.8 Limitations of the Study

CHAPTER - I

INTRODUCTION

Media have recently been reporting incessantly wide spread occurrences of and consequent deaths due to Kala-azar (KA) in Bihar. The disease Kala-azar or Visceral Leishmaniasis (VL) is no longer unknown even to a common citizen of India. However, the villagers of North Bihar have become more familiar with the menace of it. as it has shown special favour in victimising them. In the decades of late 1950s till late 1960s it remained unknown even to many of the medical professionals; it is not that the disease has created havoc in Bihar for the first time. It has reappeared in the form of a dreaded monster, engulfing the rural population. Despite major breakthrough in medical sciences this disease remains the least known and most misunderstood of all the major parasitic diseases of man. The leading periodicals of the country such as the Reader's Digest (April, 1987) and the Dharmyug (27th August, 1989) have come out with special articles and features on Kala-azar to make the readers aware of the dreaded disease. Consequent upon capturing the attention of media this problem got projected as a major public health issue to the governments as well as the public at large from different perspectives. Recrudescence of this deadly disease indicates a

poor performance of our health services system and, further more, even after its felt reappearance it continues to remain neglected as no concrete results are perceptible. As compared to 1977 governmental data of 28778 cases of KA and 229 deaths there were and 8778 cases and 457 deaths in the year 1989, which is a phenomenal increase in the face of 'big' claims and the so called 'effective' control measures in operation ever since the last 12 years. So much so that in the last 12 years not less than 10,000 each year has been reported; an evidence enough to expose the hollowness of the tall claims made by the guardians of state.

Kala-azar or Visceral Leishmaniasis has plagued mankind since time immemorial. The earliest documented information on this disease dates back to late nineteenth century. It was almost a forgotten disease, but for its explosive reappearance in the state of Bihar, there has been a renewal of interest in this subject in the past two decades.

Kala-azar is an insect-borne, infectious parasitic disease, causing considerable debility. It is characterised by onset of low/high grade irregular fever for long duration, enlargement of liver and spleen, anaemia, decrease in white blood cells and progressive emaciation (Benson 1975, Sehgal et al. 1988). In Indian Kala-azar, darkening of the skin of the face, hands, feet and abdomen

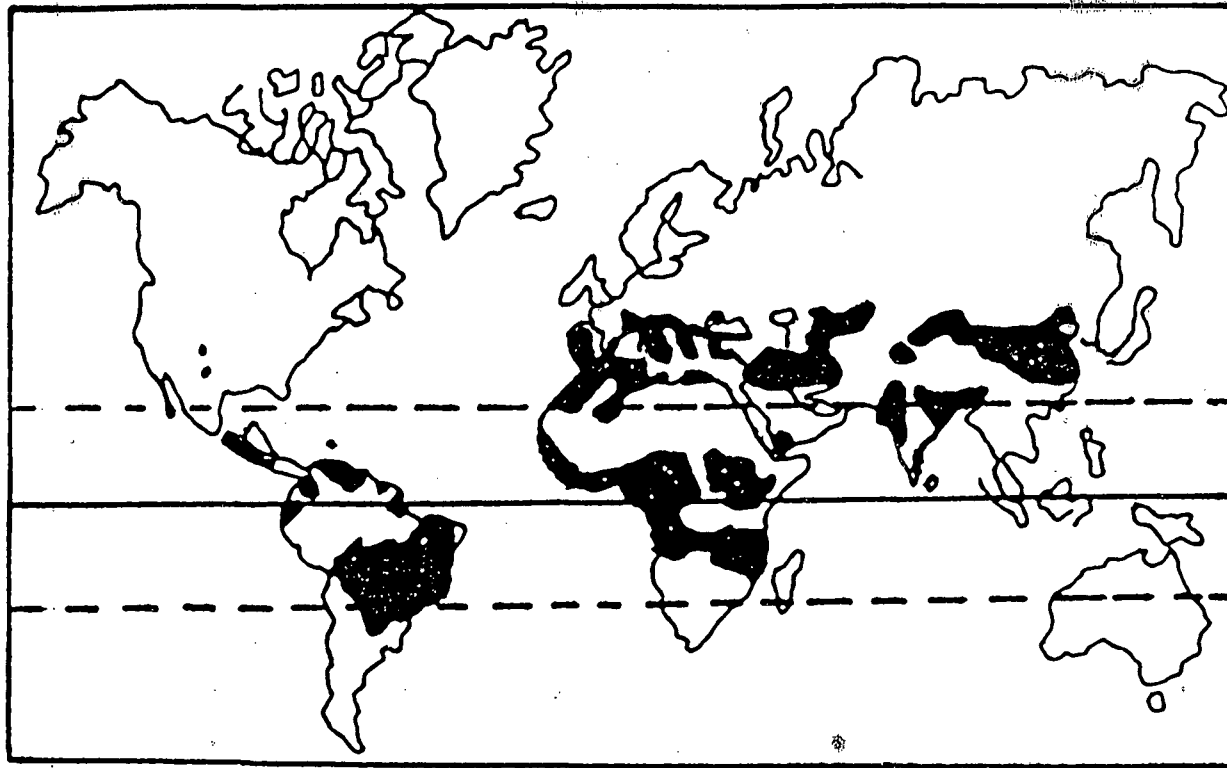


Fig.1. GLOBAL DISTRIBUTION OF VISCERAL LEISHMANIASIS

is common due to which the disease got its name Kala-azar - blacksickness. The skin changes are accompanied by signs of malnutrition (oedema, and hair changes). Intercurrent pneumonia, dysentery and pulmonary tuberculosis are common. If remain untreated, the disease proves to be highly fatal (Benson 1975, Sehgal et al 1988).

This has been occurring in rural areas of most of tropical and subtropical regions of the world. No accurate geographical distribution of this disease could be plotted due to the continuous changing effects of environmental factors on the prevalence of this disease and also because of their grossly underreporting or non-reporting for a variety of reasons. The Fig.1 shows the world wide distribution of kala-azar with maximum reliability (Sehgal et al 1988).

1.1 History of Kala-azar in India: A Synoptive View:

The earliest recorded outbreak of fever which can be ascribed to Kala-azar was in 1824-25 in Jesore now in Bangladesh. This outbreak of fever then known as 'Jwar-Vikar, caused death of no less than 750,000 people during a period of three years. Other epidemics which are attributed to Kala-azar includes Burdawan fever of 1854-75; 'Sarkari-Bimari' of 1869 in Assam; "Kala-dukh" of Purnea in 1882.

Epidemic fever in Patna in 1856-59, and so on (GOB, 1988, Sehgal et al. 1989). A severe epidemic also raged between 1917-29 in eastern part of the entire Indian sub-continent. It has been occurring in India in endemic, epidemic and sporadic forms over the past centuries (VHAI, 1988).

This disease is concentrated in the alluvial plain of the Ganges and the Brahmaputra rivers. Epidemic waves raged from Uttar Pradesh to Assam. In Bengal, the highest number of reported cases were during the period of 1931-'42, while in Assam in the years 1885, 1897, 1913, 1925 and 1944. and in Bihar in 1882, 1885, 1917 and 1933. During these years it rolled on non-alluvial plains but rolled back to its original soil after some period (VHAI, 1988).

Past studies in Indian Kala-azar have been well documented in the form of literature specially, the Reports of the Kala-azar Commission (1926-1932) and other related publications (Zahar, 1980).

In 1930s there came an effective drug, Urea Stibamine, to combat the menace of Kala-azar. Kala-azar control activities were initiated by the Public Health Department of the Government of India. After independence National Malaria Central Programme. (NMCP: 1953-57) and National Malaria Eradication Programme NMEP (1958 onwards) provided a collateral benefit resulting in virtual disappearance of the

T A B L E - 1

DISTRIBUTION OF KALAAZAR CASES IN DIFFERENT STATES/UNION TERRITORIES SINCE 1977

Sl. No.	States/UTs	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 (P)
1.	Assam	NA	NA	6	--	--	4	--	--	--	4	5	4*	3*
2.	Bihar	18589	41953	25172	13620	14165	11120	11832	12983	12029	14029	19179	19639	28778
3.	Delhi	8	--	2	--	3	1*	2	1*	1	4*	1*	--	--
4.	Jammu & Kashmir	1	--	--	--	--	1	--	--	--	--	--	--	--
5.	Meghalaya	7	--	NA	--	--	--	--	--	--	1	1	--	--
6.	Pondicherry	4	--	--	--	--	--	--	--	--	--	--	--	--
7.	Tamilnadu	62	53	NA	--	2	--	--	2	--	--	1*	--	--
8.	Utter Pradesh	9	--	NA	--	--	--	--	3	NA	--	51	19	NA
9.	West Bengal	63	--	71	333	917	1234	2717	4233	4257	3718	4447	3068	2409

Source : N M E P (Draft Document on Action Plan For Control of Kala-Azar in India), Status Reports Presented at Inter-State Meeting, Patna (1988).

N A : Not Available * : Imported from Bihar and other investigation

-- : N I L

disease from the country. Cases of KA started coming by the year 1971 for the treatment to different health institutions, and in the year 1977 there was a colossal figure of 18589 from Bihar, 8 from Delhi, 62 from Tamil Nadu, and 63 from West Bengal and 9 from Uttar Pradesh. In the same year, the government machinery started some work in order to control the problem, and research institutes started working on different aspects of the problem of kala-azar. Rajendra Memorial Research Institute (RMRI) of Medical Sciences, an Unit of ICMR, National Institute of Communicable Diseases, Patna Unit, have been entrusted to carry out research works on the problems of this disease since the last two decades. Table: 1; provides figures of KA incidence and deaths as reported from different parts of the country from 1977 to 1989.

1.2 History of Kala-azar in Bihar:

Fever epidemic in Patna (1856-59; 'Kala-dukh' in Purnia in 1882 are attributed to the earliest recorded outbreak of Kala-azar in Bihar. The peak years in the number of Kala-azar cases were detected in 1882, 1885, 1917, 1933 and 1939. In the year 1939, twentyone temporary Kala-azar treatment centres were put into operation by the Public Health Department and 11848 patients were treated in these centres during the year. There is an unavailability of specific

data for the period 1940-50 while records of Patna Medical College Hospital indicate a sharp fall in the admission of Kala-azar patients from 1942-70. Sanyal et. al (1979) has produced a longitudinal review of Kala-azar in Bihar tracing the ups and downs of the epidemic situation and has analysed the causes of its disappearance as well as reappearance. But this study lacks the continuity and no supportive evidence has been produced till now to confirm the findings. It says that between 1955 and 1960 there were definite decline in the cases of Kala-azar coming down to 3,913 in 1960. A further decline in the cases of Kala-azar is available from the records of children's hospital of PMCH, mentioning only 196 cases from 1961 to 1975. Thus, there was a virtual disappearance of this disease from the state in late 1960s. They have supplemented their data together with the studies carried out in collaboration with NICD and Malaria Unit of Bihar state from 1977-79.

The yearwise cases and deaths due to Kala-azar as mentioned in the Annual Returns of Hospitals and Dispensaries in Bihar of the Year 1912-1939 is presented in Table No.2., while Table-3, shows figures of KA from 1942-1970.

Table : 2
KALA-AZAR CASES IN BIHAR (1912-1939)

YEAR	CASES	DEATHS IN HOSPITAL
1912	1150	29
1913	1253	24
1914	1462	37
1915	1532	27
1916	2112	37
1917	2463	40
1918	2667	44
1919	4600	50
1920	7706	75
1921	11581	121
1922	15723	128
1923	18942	152
1924	28526	169
1925	37125	192
1926	25537	150
1927	36831	150
1928	41633	144
1929	57636	166
1930	57305	168
1931	56145	165
1932	55227	175
1933	54970	190
1934	58476	228
1935	57400	221
1936	68253	237
1937	91942	316
1938	116568	387
1939	119465	388

Source: Annual Returns of the Hospitals and dispensaries 1912-1939.

Table : 3

Admission of Kala-azar cases to Patna Medical College
Hospital

YEAR	CASES	DEATHS
1942	1021	20
1943	947	19
1944	1031	26
1945	987	30
1946	928	28
1947	923	15
1948	1912	15
1949	1528	19
1950	2	-
1951	-	-
1952	2	-
1953	-	-
1954	202	-
1955	2	-
1956	-	-
1957	54	-
1958-70	-	-

Source: Sanyal et. al (1979)

As some of the leading physicians of Patna recalls that the cases of Kala-azar started to recur and steadily increased from 1971 onwards. The number of cases recorded by hospitals in four districts namely, Muzaffarpur, Vaishali, Sitamarhi and Samastipur during 1974, 1975 and 1976 were 40, 850 and 1371 respectively. The then health minister of Bihar stated in his reply to a question in the Assembly (March 22, 1976), that the Kala-azar in North Bihar districts has started recurring since 1974, incidence was quite high in 1975 and there was no deaths due to Kala-azar in the same year. There had been hue and cry from almost all affected districts of Bihar regarding the short supply and unavailability certain anti-Kala-azar drugs since 1974. Thus we cannot look for the definite and written documents to know the exact magnitude of the problem of Kala-azar in the beginning as surveillance and monitoring system of the health services system does not have any such records of these period.

However, in the year 1975, USQ No. 3294 on March 13 and USQ No. 9265 on May 8, 1975 of Lok Sabha called attention of the health personnel and asked the government to do the needful. As mentioned earlier, the recorded cases of K.A. in the year 1976 indicated an incipient outbreak of epidemic. These numbers represent only such cases which

visited the governmental health institutions of the regions, there remains a strong possibility that many more would have remained unrecorded. In the year 1977 there was a colossal rise of figures in records due to Kala-azar reaching 18,589 cases and 229 deaths. It was the year when governments at the state level as well as the centre level took some heed of the problem and tried to control the menace and started Kala-azar control unit in coordination with Malaria Unit. The Table on the next page gives district wise figures of Kala-azar cases and deaths from the year 1977-89 in Bihar.

These figures represent only the tip of an iceberg. Possibility of many more unregistered cases remains certain. This view has been confirmed by a sample survey conducted in Purnea district of Bihar in January 1986 by NMEP, NICD and RMRI, Patna. It is also supported by leading physicians of Patna working on Kala-azar. Dr. C.P. Thakur, Professor Emeritus, suggests that in order to know the actual figure, the governmental figure should be multiplied at least ten times.

1.3 Present situation of K.A. in Bihar:

As evident from the Table No.4 of Kala-azar cases in the year 1989 nos 28,778 and 457 deaths. There has been a lot of reporting in newspapers, national as well local on

TABLE - 4

State: Bihar

District Wise Kala-azar Incidence in Bihar for the year 1977 to 1989

Sl. No.	Name of the District	1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		(Prov.) 1989		
		Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Cases	Deaths	
1.	Patna	42	9	62	1	52	0	178	4	191	2	219	0	269	10	361	7	376	6	220	1	361	14	222	12	384	3	
2.	Nalanda	0	0	15	0	0	0	8	0	1	0	1	0	7	0	31	1	32	0	35	1	30	0	37	0	42	0	
3.	Gaya	5	0	50	0	46	0	10	0	4	0	5	0	3	0	1	0	0	0	0	0	0	0	NR	NR	8	0	
4.	Jahanabad	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	18	0	NR	NR	8	0	
5.	Nawada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6.	A.Bad	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	N	
7.	Bhojpur	2	0	6	0	1	0	1	0	0	0	0	0	0	0	4	0	52	6	11	0	44	0	17	0	9	0	
8.	Rhotas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	61	0	
9.	Saran	89	0	363	0	476	0	282	0	216	0	510	0	469	0	406	1	548	0	463	0	341	0	350	0	552	3	
10.	Siwan	27	0	268	0	535	0	88	0	108	0	110	0	19	0	61	0	325	0	306	0	163	0	200	0	418	2	
11.	Gopalganj	0	0	160	0	148	1	226	0	247	2	180	0	125	0	48	0	125	0	107	0	95	0	106	0	125	0	
12.	E.Champaran	218	0	2549	1	3659	2	1630	0	829	0	205	0	225	0	271	0	223	0	135	0	220	0	368	2	489	2	
13.	W.Chemparan	232	0	72	1	29	0	14	0	0	0	4	0	6	0	19	0	24	0	22	1	38	1	36	0	215	1	
14.	Muzaffarpur	5950	2	9373	24	4625	12	2242	1	126	2	338	1	257	0	428	3	542	2	1146	0	1302	8	1254	6	3858	9	
15.	Sitamarhi	164	2	268	0	228	0	191	0	195	0	216	0	483	61	992	23	1450	4	1284	8	1030	11	1146	1	2043	2	
16.	Vaishali	6337	182	9885	8	4249	0	1522	0	716	0	391	0	282	8	242	1	208	0	175	0	290	1	394	0	3047	1	
17.	Darbhanga	7	1	191	0	273	0	428	0	224	0	676	2	804	0	476	2	537	5	711	13	1123	10	1211	35	2229	3	
18.	Madhubani	10	0	24	0	94	0	75	0	616	0	276	0	509	2	368	1	551	2	580	12	718	7	908	43	1253	2	
19.	Samastipur	3109	5	6794	6	2388	0	1159	0	1124	0	574	0	559	13	485	5	726	1	1295	4	1400	19	1655	16	4287	4	
20.	Bhagalpur	316	0	2566	0	1148	0	7765	0	324	0	336	0	31	0	17	0	85	0	75	0	106	0	341	0	398	0	
21.	Munger	334	0	1850	4	2027	0	788	0	575	0	342	0	121	0	92	0	183	0	0	0	0	0	86	3	177	1	
22.	Khagria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	0	084	0	127	0	178	-	-	-
23.	Begusarai	577	11	1062	4	1145	0	568	2	312	0	152	0	120	0	241	0	214	0	134	0	195	0	221	2	1238	1	
24.	Purnia	34	0	784	5	1042	6	1212	5	5621	25	5117	15	5527	23	5937	20	4263	13	3137	4	2781	3	1775	2	441	-	
25.	Katihar	580	1	869	0	898	0	1044	5	973	2	761	3	1423	2	1615	3	1243	0	1038	2	897	1	674	1	785	-	
26.	Saharsa	455	16	4746	7	2358	7	1186	6	760	3	696	14	481	7	361	0	662	0	1368	2	1024	2	882	0	1519	-	
27.	Madepura	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	403	0	NR	NR	213	0	55	-	-	-
28.	Dumka	3	0	6	0	-	-	0	0	0	0	0	0	146	2	529	0	-	-	21	0	11	0	9	0	0	0	
29.	Sahebganj	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	660	0	1346	0	6918	0	7078	0	4705	2	
30.	Godda	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	NR	NR	364	0	256	0	-	-
31.	Deoghar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	NR	NR	NR	NR	-	-	-	-
32.	Ranchi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33.	Gumala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	NR	NR	0	0	0	0	0	0
34.	Loherdaga	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35.	Palamu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	Hazaribagh	62	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.	Giridih	22	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38.	Singhbhum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.	Dhanbad	3	0	13	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		18589	229	41953	62	25472	28	13620	23	14165	36	11120	35	11832	128	12985	67	13029	39	14079	47	19179	77	19739	123	28778	457	

KA problem. The problem has been brought to notices of the governments through raising questions in state assembly and in the Parliament by the people's representatives from the concerned areas. It has created havoc in the state. In spite of the 'claims' made by the government, there remains nothing substantial to trace the credibility of achievements in containing and controlling the problem of Kala-azar in the state.

Like the previous pattern, resurgence of KA in the beginning was restricted to the districts of north of Ganges in alluvial soils, now the disease has crossed the river and has spread over in the laterite soil. Substantial population in districts of South and Central Bihar has come into the grip of this killer disease, more specifically the district of Sahibganj. According to the health minister's statement in the Parliament (Sept. 1989) no less than 40 million people in endemic areas are exposed to the risk of contracting this debilitating and often fatal disease. At present more than half of the population of Bihar are vulnerable to the problem of Kala-azar.

1.4 Kala-azar: As Known to the Scientists:

Kala-azar's infective agent is a protozoa of species called Leishmania donovani. In general, it is

accepted that the Genus Leishmania belongs to the Family: Trypano-somatidae; sub-order: Trypanosomatina; Order: Kinetoplastidae; Class: Zoomatigophorea Subphylum: Maotigophora and Phylum: Sacromastigo phora. Its life cycle involves an alternate existence in a Vertebrate and an insect host. Its mode of transmission is through bite of infected female Sandfly of Genus: Phlebotomus in the old world. In addition, infections may occasionally be acquired by infected flies being squashed on the skin or being accidentally inhaled or through direct transmission from man to man, transmission by blood transfusion, through sexual contact or bite of infected laboratory animals have also been reported (Benson 1975, Sehgal et al 1988, Mukhopadhyay 1989). Symptoms of KA has also already been given in the beginning.

The proven and suspected vectors in India are Phlebotomus Argentipes and Ph. Papatasi respectively (Mukhopadhyay, 1989). Swaminathan et. al (1942) (Zahar 1980) made a successful demonstration of Phlebotomus Argentipes being the vector of Kala-azar. The Sandfly belongs to Phylum: Arthropoda, Class: Insecta, subclass- Pterygota, Order: Diptera, Suborder - Nematocera, Family: Psychodidae and subfamily: Phlebominae. The word 'Phlebotomus' means the flies which suck blood, Argentipes means the flies having shiny silvery white scales on tarsi

of foot. In our country, these flies are mostly found in the Eastern coast, Assam, Gangetic plains, foot hills of Eastern Himalayas upto the altitude of 600 mts.

In appearance these flies are greyish brown in colour, body covered with hairs and second longitudinal vein of wings forked twice. They are nocturnal in habit and are very poor fliers, move by hoppings. They prefer to rest more in cattle sheds than in human dwellings, take shelter in dark corners setting on or under cobwebs, in empty feeding trough or on any collection of strew or in the cracks on the wall. In human dwelling they are usually found in - cracks on the wall, behind furniture, underside of beds in empty boxes or on hanging in the living room.

Their breeding places in rural areas are debris found in the corners of soil floors of room and cattle sheds and under the feeding troughs. Sometimes it has been observed that they also breed under thick vegetation. In urban areas they breed in the places of similar nature.

Sandflies Ph. Argentipes are predominantly zoophilic where as Ph. Paptasi is anthrophilic in nature. A study conducted in Bihar showed that Ph. Argentipis prefers to feed on bovine (68%) man as second (17.9%) and 6.1% feed on avies. Intermited feeding was found in both the species.

Indian Kala-azar is unique, it is anthroponotic. No evidence of zoonosis has so far been obtained, inspite of the epidemiological evidence suggesting it to be zoonatic. In other geographical regions like Mediterranean area dog is the reservoir. Occasionally these parasites have been identified in foxes, rats, jackals and racoon dogs in certain other geographical regions.

The clinical features of visceral leishmaniasis tend to differ between three situations namely endemic, sporadic and epidemic. It has an incubation period ranging between 10 days to 2 years but is commonly within the range of 3-6 months. The common symptoms are fever, malaise, weight loss, anorexia and discomfort in the left hypochondrium. Cough and diarrhoea are present in some and absent in others. In untreated patients deaths ensues in as many as 90% cases which is usually attributed to concomitant infections. Recovery, whether natural or after treatment, may be complete with rapid regression of fever and of the swelling of liver and spleen and correction of blood picture. In some cases parasites are not completely eliminated and may recrudesce in the skin giving rise to post Kala-azar dermal leishmaniasis (PKDL) (Zahar 1980).

PKDL in Indian sub-continent appears within 2 years of recovery from Kala-azar. Initially, there appears

some faint mottling on the skin. The chronic lesions consist of multiple modular infiltrations of the skin, usually without ulceration. There are numerous parasites in the lesions as well as in normal skin but bone marrow and organ biopsy shows the absence of parasites.

There are several direct and indirect tests for the diagnosis of this disease, like Parasitological diagnosis which is performed to identify the parasites microscopically in the smears prepared from spleen, while indirect tests include aldehyde tests, immunodiagnosis includes ELISA tests, indirect haemagglutination tests, competent fixation test etc.

Only available treatment of Kala-azar is Chemotherapy in nature. The first line drug is the pentavalent antimonials namely Sodium Antimony Gluconate (SAG) and the second line drug is Pentamidine isothionate commonly known as Pentamidine. There are some researches being carried in different institutions to find out some newer and more effective drugs for its treatment.

Epidemiological studies on Kala-azar of past have been well documented in literature specially the Reports of the Kala-azar Commission (1926 and 1932) and other related publications. It was Sinton (1925) who first reviewed

various epidemiological observations related to the 'theory of insect transmission' in relation to climatic and physical conditions and the distribution of the disease. Later Napier (1926) examined climatological and ecological factors namely altitude, rainfall, soil, temperature, humidity, wind direction, subsoil water, watersupply, vegetation and agricultural conditions in relation to the distribution of Kala-azar and mapped the same. Sivarama Krishnaiah and Ramanathan in 1967 further reviewed the same proposition in the context of certain limitations and demarcated the zones favourable for low and high incidence of Kala-azar on map (Zahar 1980).

Sen Gupta (1975) reviewed the previous works and indicated for the changed situation of the distribution of Kala-azar cases with specific reference epidemics of 1940's (Compared to those of earlier studies).

There was no proper study conducted during the period of 1950s - 60s. As mentioned earlier, the disease disappeared from the state in the 1960s. There was no study made to know as to how and why Kala-azar disappeared from the state. There was a renewed interest in the study of Kala-azar as its recrudescence called for an attention of the government, the medical scientists and public health officials. With respect of age/sex distribution of K.A.

Infections Thakur et al (1978) analyzed the 475 cases recorded in Patna Medical College Hospital and his private practice and showed that 60% of these cases were in the age group 10-24 years, and 16.2% of children below ten years, and 4 cases of age groups 50-59 years. Infection was higher in males than females, in the ratio of 5.5:1. They indicated that there is a possibility that more males take treatment in the hospital, hence the higher proportion, while Aiket et al (1979) showed that the maximum prevalence was in the age group 0-10 years followed by the age group of 11-20 years. Sanyal et al (1979) presented his analysis on the basis of intensive studies carried out during 1977-79 in three villages of Muzaffarpur district and concluded the following age-wise distribution of the KA as 0-9 years (20%), 10-19 years (27.2%), 20-29 years (27.2%), 30+ years (16.5%). They indicated that these studies showed differences with those of Ross (1928) and Brahmachari (1928). They further showed that the overall sex distribution of cases i.e., the male to female was of 1.7:1. They attributed this to the greater awakening among females as a possible explanation. However, it remains to be substantiated, as it is contrary to the studies carried out in the field of health behaviour.

They further indicated that the majority of the

cases appeared during April September the highest being during May August, partly coinciding with 'density peak' of sandflies. It was different from what Napier (1926) depicted in past epidemics as the past epidemics have had two 'peaks' one in the November and the other in the February March with the lowest being during May August. Furthermore, Napier (1946) talked of the periodicity of the epidemics as per the records of the period prior to the availability of drug therapy and showed that in an endemic area of Bengal epidemic waves occurred with a definite periodicity of 15-20 years between the rise and fall of incidence. The increase in incidence struck the whole endemic area lasting for a period of three to four years. The recent reviews of Sen Gupta (1968,1975) is based on the analysis of past situation in the principal endemic areas in the Indian subcontinent, which says that the usual pattern of epidemic was the prevalence of a low or moderate incidence of the disease for about ten years of inter-epidemic period and it is followed by an outbreak giving an increase of incidence by four to five times. It mentions that the last epidemic occurred successively in states in India and in Bangladesh between 1940 and 1947 subsiding by 1950s when an inter-epidemic level was reached. Although antimonial drugs could not prevent the occurrence of the outbreak, it succeeded in containing it and saving the lives

of 90% of the KA cases. there came a boon as a collateral effect of antimalarial campaign under NMCP (1953-57) and NMEP (1958 onwards) as KA cases became extremely rare.

The factors which could have influence on the disappearance of the disease, Sanyal et al. (1979) delineate following three, viz.

- i) effective treatment of all cases.
- ii) increase in solid immunity and consequent inter-epidemic lull.
- iii) impact of DDT spraying under NMCP/NMEP.

Undoubtedly, there was a provision of effective treatment of Kala-azar due to availability of potent drug as Urea Stibamine of Brahmachari. But the second factor is subject to further investigation as no supportive immunological studies are available anywhere in this context. Further more there are instances of older people being affected by the disease in the studies of Thakur et al (1978) and Aikat (1979).

About the third factor which they described as a contributory factor for the killing of substantial vector population as collateral effect of insecticides of antimalarial campaigns; it lacks of longitudinal entomological observations during the antimalarial campaign,

and subsequently until the recrudescence of VL cases occurred. Delay in the outbreak of Kala-azar epidemic also question the validity of the arguments of the author. While talking about the reappearance of the disease they mentioned following corollary.

- a) addition of non-immune population
- b) withdrawal of insecticide spray.

As the validity of the factors responsible for the disappearance of the disease remains to be tested, the assertion for the recrudescence of KA is itself far from as neither any immunological/entomological study has been conducted to confirm these hypothesis nor other factor responsible for the reappearance and disappearance of the disease has emerged. Non-availability of such studies indicates the indifferent attitude of academicians and technocrats in the problem of Kala-azar.

The disease is mostly concentrated among the rural poor having poor and over crowded housings, those sharing space with the cattle and have poor sanitation facilities. Sanyal et al (1979) showed that the mean number of family members in the affected household was greater than the mean of other household in the villages. :

1.5 Need for the Present Study:

Inspite of governmental slogans 'Health for All by 2000 AD' and 'people's health in people's hand' the disease of Kala-azar which has been playing havoc in Bihar for the last two decades remains to be tackled. It has been bringing substantial mortality and morbidity in the population, and thereby causing hindrance in the developmental processes of the state. Though no such correlates have been delineated in the present situation.

TH-3479
In the recent weeks media have been reporting many a case of Cholera and subsequent deaths from Patna. These cases of Cholera are in series of epidemics which the state has been experiencing since the last few years. This is what Banerji (1990) calls 'Epidemic of Epidemics'* The series of epidemics includes diseases, namely, KA, JE, Viral Hepatitis and ofcourse Cholera.

Precipitation of such a large number of expidemics indicates the failure of Public Health Services system in the state and indicates that there is something drastically wrong with the Health Services Systems in general.

There is an urgent need to know more about Kala-azar. These information are to be obtained from the fields of epidemiology, entomology, immunology pathology,
* In the course of discussion with Prof. Banerji.



microbiology and so on. It is an imperative to know these in order to evolve an effective treatment of this "Cindrella of diseases." In spite of these requirements one fails to apprehend as to why the disease of Kala-azar remains neglected in the field of academic and research activities. Thus these factors call for a need to study and understand the problem of Kala-azar, in the existing Socio-cultural and politico-economic backdrop of the country. This study is to be made in an interdisciplinary and holistic perspective.

Such an exploratory study may provide some key variables in understanding the problems of Kala-azar vis-a-vis the Health Services System of the State.

1.6 Premises of the Present Study:

The disease of Kala-azar essentially affects the rural poor population as all the environmental conditions conducive to the growth of sandfly, the vector are found in and around their houses. As the disease affects the poor sections of people rural or urban, people of the other sections remain indifferent even towards this dreaded disease. Thus there is a little concern for Kala-azar in the minds of 'elites' who are involved in policy formulation and programme implementation. There is an acute lack of diagnostic and treatment facilities in the affected areas,

as rural health care delivery systems are not developed enough to meet the requirement of population or as per plans. Thus for a long duration the disease remains undetected or misdiagnosed or treated by local quacks as private practitioners demand heavy charges. And consequently there are lots of morbidity and mortality due to Kala-azar.

In spite of so much of attention paid to the health services, rural population still lacks the provision of basic health facilities. It is enigmatic to see nothing concrete coming through despite a big cry. There has been little concern for control activities of Kala-azar in the state. Nothing such has been pursued on the research front on Kala-azar, even though it remains a matter of urgent concern for health planners and administrators. All these factors indicate towards an acute lack of political will and initiative to control the disease of Kala-azar.

Furthermore, there exist many linkages between the culture of a community and its health condition. Each culture has an inbuilt mechanism for heading with its health problems. If any new health problem arises out of certain environmental, ecological or socio-economic changes it responds to combat the same in a particular way. In the modern complex society political and economic forces play a vital role in combating the epidemic problems. Thus there is

a need to explore the socio-cultural, socio-political and politico-economic forces responsible for the negligence of such a major health problem.

1.7 Objectives of the Study:

In the light of mentioned premises this study attempts at and capture the sequence of events which came in the course of reappearance of the disease and the responses to the problem of Kala-Azar since 1970's.

The first major objective of the study is to explore how and when the problem of Kala-Azar was perceived and identified at the state level-by the people and by the governmental authorities. The problem is studied at a macro level.

Second major objective of the study is to look into the governments responses to the problem and the people's demand concerning the problem of Kala-azar by the governmental authorities. The problem is studied at a macro level.

Third major objective of the study is to know what this problem meant to the people and how did they respond to it. It is studied at five different levels namely the centre, state, district, PHC and finally at the village level. It further scoops into the perception and cognition

of the people regarding the governmental programme and policies to combat the problem.

The fourth major objective of the study is to make an analysis of political and administrative measures taken at the state, district, PHC and village levels by the government to tackle the problem. It looks into the various measures taken at all these levels to combat the menace of Kala-Azar.

The fifth major objective of the study is to delve deep into the people's perception and response to the disease of Kala-azar at a village level, specially selected for this purpose, Saharia in Vaishali district. It aims at cultural meaning notion perception and cognition of the disease of Kala-azar in context to 'Health Culture' of the community. It also studies how the people responded to this crisis at the individual as well as at the community levels.

Thus the study tries to look for the causes which are responsible for 'inadequate responses' to the problem of Kala-azar. It tries to study the the political economy of the problem of Kala-azar together with socio-cultural and environmental factors. At a narrative level it tries to explore various causes of the the neglect of such a major health problem and link them to the nature of the society.

1.8 Limitation of the present study :

One of the major limitations of the study is due to difficulty in linking up of the responses to the problem and nature of the society.

Secondly there is an acute dearth of information from secondary sources due to inadequate surveillance and monitoring systems of health services system. Furthermore, problems got aggravated due incomplete records and poor quality of records and poor quality of record keeping.

Diversity of the nature of informations to be collected contributed towards the limitations of the study., It is obvious that the required data has to be collected in the perspectives of epidemiology of Kala-azar, organizational set up, managerial aspects, political processes and so on diversity in the sources of data is equally a contributory factor in the limitations of the study.

Above all time constrains contributed a major limitations in the collection and analysis of the data by a single investigator.

CHAPTER - TWO

Methodology

- 2.1 Data required and the Sources
- 2.2 Selection of the Study area
- 2.3 The village under study, Saharia
- 2.4 Problems of Data collection
- 2.5 Literature Survey

CHAPTER - 2

METHODOLOGY

The present study is basically of an explorative and analytical in nature. It utilizes concepts and methods of different disciplines to identify the problem of Kala-azar at different levels and to know the respective responses at various levels. As mentioned earlier, this public health problem is viewed in holistic perspective. Thus the study is essentially interdisciplinary and holistic in its nature. It explores the various processes of society, culture, politics in addition to the epidemiological impacts of the disease on the society. The impact of technological advancements to control the disease, its tandem with the political and administrative actions have been studied with special interest. The study shows that there is considerable interaction among the various components which precipitates the problem and calls for a response. Besides this, it also considers various components of interaction which are responsible for the functioning of a public health system and changes in its organisation and programme implementation and emanation of policy for a programme and so on. For instance, projection of a problem through media affects change in the outlook of political representatives of the society in the authority,

hence subsequent changes in policy perspective, programme formulation and its implementation which otherwise remain in accordance with the advices and recommendations of the technical experts or 'technocrats'. This change arises out of pressure on the political leadership to respond in a particular way. Thereby it requires concepts and methods of different disciplines in analysis of the data too.

Studying the problem of KA and its responses involves a careful analysis of the following factors.

- a. epidemiological factors.
- b. social, cultural, economic and political forces influencing the problem and their responses.
- c. administrative factors including organizational setup and behaviour in health delivery systems.
- d. operational/technical and other associated factors.

Analysis of the data involves these forces to interact with one another and to operate in influencing the policy formulation, programme implementation and performance of the programme over a period of time since early 1970's till date.

It further tries to explore the causality as to why there is such a dismal response to the problem of such a

vast magnitude by looking into the dynamism of social, economic and political forces which influence and shape the health services system in general.

Adoption of such a perspective to study the problem of Kala-azar presented a number of methodological problems. The process of data collection also brought about some challenges in carrying out the study too. Till now no interdisciplinary and holistic study has been attempted to study the problem of KA, thus considerable efforts have been made in designing the study, working out the procedure for data collection, analysis and interpretation of the data.

The study is made at five different levels, namely the centre, the state, district, PHC at the village concerned. It plans to go for a comprehensive analysis of the problem of KA, within the existing socio-political setup. It is a case study of a severely affected village, where all the activities related to the problem is zeroed down, and linked upto the study from a micro to macro level and vice versa. Pseudonyms for informants from village level study have been used.

2.1 Data required and the sources:

The study required data of the following nature with specific reference to resurgence of the disease since

early 1970s at different levels of the study.

1. How and when was the problem identified and perceived by the people and the governments (Central and the State)?
2. What are government's response to the problem and to the people's demand concerning the problem? Meaning thereby responses of the State Government as well as that of the Central Government.
3. What is people's perception of the problem as well as governmental measures regarding the problem?
4. What are the people's responses to the problem and the governmental actions regarding the problem?

A part of these data were collected from Patna and Delhi by looking into various sources like archives of news paper, governmental reports, committee reports and by interviewing informed and concerned sections of the people as well as the affected ones - government officials, doctors, and persons from social, political and voluntary organizations. These data are as per the requirement of centre and state level study.

District level study required data of the following nature:

1. Details of governments programme in Vaishali district to tackle the problem of Kala-azar in relation to the population of the district, health institutions available and nature of the facilities available and accessible to the people.

2. These data were collected from the district hospital and district malaria officers by looking into their records and programme directives with reference to the problem of KA. It was supplemented by interviewing persons holding responsible offices. Secondly, regarding the problem of KA and responses to the KA control activities responses were recorded by interviewing the concerned and affected people through formal structured interviews, like patients in sadar hospital, local leaders, students and so on.

PHC level study required data of the similar nature as that of the district level in more details concerning the activities of Sahdei Bujurg PHC. These data were collected from the records of PHC and was supplemented by interviewing doctors, paramedical officials involved in KA control activities. Some concerned and affected people were also interviewed which included the medicine - shop owner, local youth, patients visiting PHC and some local leaders who also worked as social worker in that particular

locality. Some of such informants are also teachers.

The requirement of the village level study was one of anthropological perspective methods, and techniques of this discipline were used, such as observations, informal interviews and indepth case study. Data of the following nature were collected.

1. Perception and cognition of the problem of KA, in the population, in general, and the members of affected families in particular.
2. Specific responses to the problem at the individual and community levels.
3. Perception and responses of the governmental programmes related to KA problems.
4. Ecological and environmental setup of the village.
5. Dynamism of village power-structure, social and economic realities of the community and its influence over the problem.

The sample of the population interviewed consisted of 110 people out of which 60 people were there those who had suffered due to KA or someone of theirs family members had suffered due to it. Rest of the people were

selected at random and a few of the them were interviewed incidentally who had come to that village for some purpose or the other. The detailed case history took into account of fifteen informats and opinion of the community heads of different castes as well in a systematic and intensive indepth interview. These informants were cross-checked with ~~different~~ people and the key informant, being a local student studying in class tenth in a near by school; out of this three has been presented in summary form.

The case study also recorded the information of references of visiting different health institutions and rough expenses spent and experiences made in the process of the treatment. Such type of information helped in understanding and recording data related to a particular type of actions in response to governmental programmes.

2.2 Selection of the Study areas:

Problem of Kala-azar is an acute public health problem in the state of Bihar. As mentioned earlier kala-azar has resurged in the state in the early 1970s and is still prevalent in whole of the north Bihar, specially in the plains of alluvial soils in north of the Ganges. Since last two years it has crossed across the river to the south and spread in the districts of south and central Bihar, in

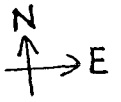
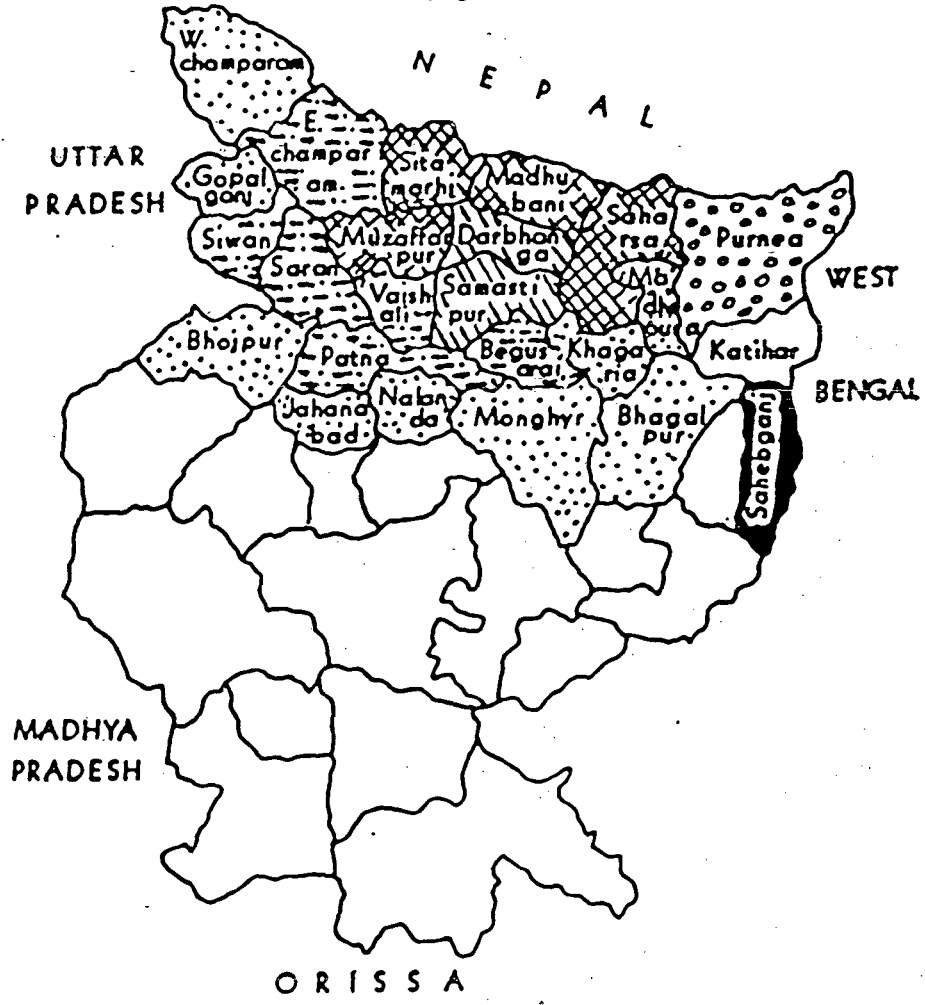


Fig.2. KALA-AZAR INCIDENCE IN BIHAR 1987.



CASE INCIDENCE

 1-100
 101-500
 501-1000
 1001-2000
 2001-4000
 4001 AND ABOVE

the regions of laterite soils.

Bihar lies between the latitude 22° N and 28° N and longitude 84° and 88° E. It has an area of 173876 km^2 . It is bounded in the north by Nepal, in the east by West Bengal, in the South by Orissa and in the west by Uttar Pradesh and Madhya Pradesh. The state is divided for administrative convenience in a number of districts which again are subdivided into subdivisions and blocks; and a Primary Health Centre is located in each block of the state.

The North Bihar and South Bihar is separated by the river Ganga. Vaishali is one of the districts of North Bihar with its headquarter at Hajipur. This district is further subdivided, geographically, into two sub-micro regions, namely the Gandak-Burhi Gandak flood plains and Ganga-Gandak flood plain. The Ganga-Gandak Flood Plains lies in south-eastern portion of the district. Mahnar Bazar is famous for its grain Bazar in the region. This town is situated at 48 metres above the sea level. It has average annual rainfall of 107.98 mm. Paddy, wheat, maize, sugarcane and banana are the main crops of this area. This region consists of numerous chauris and Tal lands. They remain filled with rain water during the season. This district has been selected because of convenience for the investigator.

The PHC, under study, Sahdei Bujurg is located in this region and covers 109 villages. In the year 1989 it reported 454 cases of KA and 48 consequent deaths. Statistics related to KA were not available prior to 1981. In the course of study it was brought to notice that till 1983, this PHC was at Desari, a place where an additional PHC is functioning. In a report to CMO(1989), this PHC mentions that 54 villages of this block are under the grip of this disease.

The village selected for study, Saharia, is covered under this PHC and is the worst affected among the all the villages. In the same year i.e., 1989 it reported 30 deaths and 267 cases of KA as per the official records; while villagers claim of 50 deaths due to the killer disease.

2.3 The Village under study; Saharia

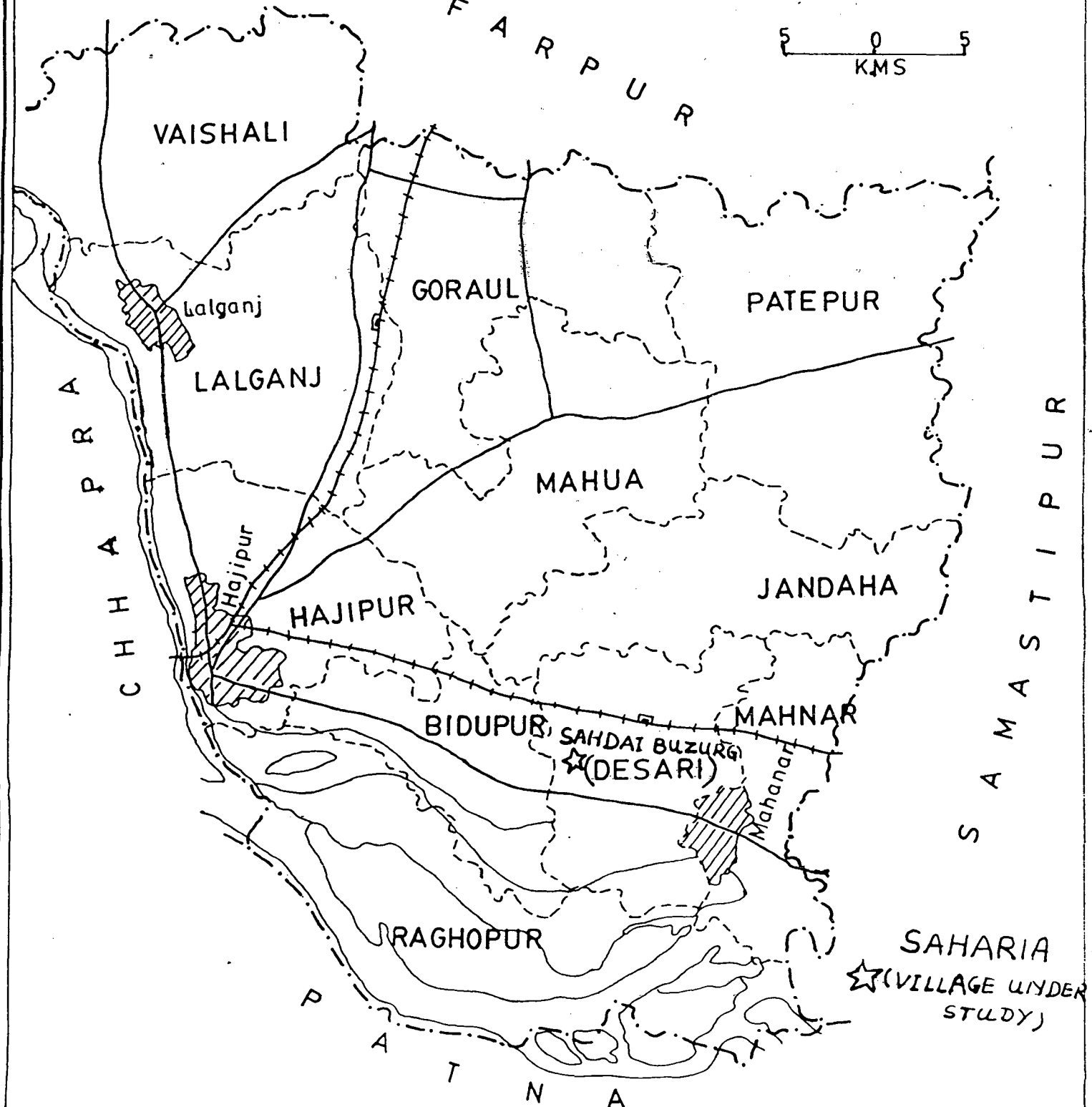
Saharia is a multicasite village. Its population consists mostly of backward castes and scheduled castes. It is 5 kms north to its PHC. It is connected to a small railway station at Sahdei Bujurg by a Kuccha road toward south and to its 3 kms north lies the state road ways. The roadway connects it to its district head quarter at one end

MAP-3.

M U Z A F F A R P U R

DISTRICT VAISHALI

5 0 5
KMS



and Dalsing Sarai to the other. The metre-gauge railway line connects Sahdei- Bujurg to Hajipur on one side and Barauni Junction on the other side. Thus the village remains accessible to Jeep, Rickshaw, Tonga from the nearest railway station as well as roadways.

The village has one small Bania shop to cater the needs of the villagers to some extent. It has one depleted small primary school, too. However in the nearby villages we have more than one institutions - providing education upto high school. Villagers for shopping go to Sahdei or Hajipur. It was learnt from the villagers that till early 1980s they used to go to Dalsingsarai for the treatment of Kala-azar as they knew that some doctors there had the expertise in the diagnosis and treatment of the disease.

The population of this village is Four thousand one hundred and twenty five. It mainly consists of Yadavas, Kurmis (Koiris), Pasis (Toddy-Tappers) and Paswans. There are 3 houses of muslim community, which consists of about 25 persons. Muslim people have Youths who work and stay outside the village mostly. They have the occupation of leather/hide selling. Majority of the people are dependent on agriculture. Yadavs are the ones who own land and they have substantial social and political dominance in the village. Persons of other communities are either farmers or

agriculture labourers. Many of these people go to other villages or nearby towns to earn their livelihood. There are three peons and two lower division clerks who work in the district administrative offices. Most of the people of the village like other villages of the state are illiterate.

There exists a cluster of villages around it. These villages are situated at the radius of 1 to 5 kms. In the nearby village like Chakjamal, it is the Kurmis who are dominant; in Mazrohi it the yadavs, in Shekhopur; it is again the Kurmis, Chaenpur has a more diversified high castes including Brahmins, Kayastha, and Bania community. As a whole this Panchayat of Wajidpur is dominated by the Yadavas. The nearby Panchayat is dominated by the Rajputs. These Panchayats are a part of Hajipur reserved parliamentary constituency and Mahnar assembly constituency. Co-dominance of yadavas and Rajputs is evident when one looks at the list of MLAs who have represented this assembly constituency since 1952.

Dushads, or Paswans are substantially high in population than those other castes. They are poor, illiterate and eke out their living through daily wages in agricultural activities, plying rickshaw and similar nature of occupation.

2.4 Problems of Data Collection

There have been many problems in the collection of data for the study. Some of them are as under.

Incompleteness of Data

Many of the data at the centre, state and district levels were inadequately recorded. Even if some of them were recorded, now some of them are either missing or cannot be traced. Incompleteness of data is aided by the poor quality of record keeping. Furthermore there is a lack of details of information.

Reliability of the Data

As many of the cases of Kala-azar do not visit the governmental health institutions, many of them remain unregistered. Thus the statistics of KA remain underreported. Furthermore, reliability of data related to KA control activities remain doubtful as some of the recorded cases might not have taken place at all. This was confirmed in course of the cross-checking of the data.

Poor Quality of Record Keeping

Even the data pertaining to the period of as late as 1977 is not traceable because of the very poor quality of

record keeping in the District Malaria Office and PHC. The records of CS office suffers a similar fate.

Shortcomings in the analysis of Data

In these records there was no analysis of raw data. Specifications like Age-Sex distribution of the disease and socio-economic conditions of patients are also missing.

Notification

KA is not a notifiable disease and since its resurgence remains unreported at many instances.

2.5 Literature Survey

It was Benjamin D. Paul (1955), who lucidly spelt out various linkages between health and culture of a community. Later on Steven Polger presented a comprehensive review of then available literature tracing relationship between health and culture of a community. After sometime other scholars updated and presented studies on these aspects. It has been of interests to academicians and scholars who worked in such fields with specific reference to Indian society.

It is not out of place to mention that the interest in village studies in Indian anthropology and Indian Sociology was advocated profoundly by Srinivas. At this juncture scholars emphasized the need to carry out studies at a micro-level and link it up to those at macro-level. Unfortunately with regard to health there studies lack firstly holistic and multidisciplinary perspectives, and are biased in favour of theoretical propositions propounded by Western Countries, which have social, cultural, political and economic settings, quite different from the Indian one.

Now coming to a few particular studies as specific to the one that of Hassan (1967), which had been carried out in a village of Uttar Pradesh is worth-mentioning. It highlights many of the relationship between health and culture of a community together with some social imperatives. Unfortunately, it does not shed off value judgements such as that, Western medicine remains superior to other medicines and people from rural areas does not accept it as provided by the health services systems. These limitation are similar to those of Mckim Marriot (1955), Morris Carstains (1955) and even to those of Djufelt al Lindberg.

Review works of Anita Minocha (1972), Karna (1976)

provide an evidence of inadequacy in efforts made by the anthropologists in developing the required framework relevant to the studies in the field of health behaviour research. A review of ICSSR mentions that very little progress has been made in order to develop an adequate conceptual framework in this field through all these years.

No doubt, with the concept of 'Health Culture' (Banerji 1982), as developed and propagated since 1961, by the scientists working on Tuberculosis problem of India brought a significant change in the perspectives of social scientists who were working with socio-cultural insights in health fields. In addition to this, concept of 'felt-need' has equally contributed in the development and rigour of health behaviour research in India. Studies of 19 villages, spread over 8 states in the country has brought forward by the propounder of this concept himself and a few of his research students are worth-mentioning. He had identified four integral factors of health behaviour in order to understand the sub-culture or Health Culture of a community. These four factors relates to:

- a) entire spectrum of health problems
- b) cultural perceptions and interpretation of these problems
- c) various curative, preventive, promotive and other health

facilities provided by the state

- d) and other health institutions existing, a part of culture of the community.

As mentioned earlier the author in his studies of 19 villages brings out the factors associated with health problem of these communities and provides insights with respect to the availability and accessibility of the health care delivery institutions. Furthermore, he stresses upon the absence of health problems in the manifestoes of Indian political parties and subsequent negligence.

Study of Sahu (1980) in the similar perspectives mentions a transition in the health behaviour of Oraon Community as a consequence of changes in social settings up influenced by the forces of urbanisation, migration and industrialization in those regions.

It will not be out of place to make a passing reference to the study of Gould (1958), who mentions a cognitive discretion of villagers in selecting the mode and institution for treatment of disease with the availability and accessibility of the health institutions in that particular society, while the study of Vander Veen (1982) with respect to Tuberculosis highlights a few socio-cultural factors influencing the particular mode of behaviour of the patients with respect to the accessible health institution.

Now coming to the specific area of Bihar very few studies have been made available due to the paucity of such studies, presenting some relationship of poverty with the population, while another fascinating study has been brought out by Jayaswal (1985), with respect to the health modernity. Study by Khan et al traces many of the factors which are responsible for under utilization of PHCs and calls for a macro perspective of Health care delivery system of the state.

As mentioned in the previous chapter studies-related to KA in the past have been well-documented in Kala-azar Commission report and a few other related publications (Rf. Chap.I, pp.4).

Some specific studies as carried out by the doctors mention a few general observations related to KA. Later on, some studies have been initiated by RMRI, Patna and their full reports are awaited (Annual Reports 1985 - 1989).

Annual Report of RMRI, Patna for the year 1985-86 mentions about the study which provides some data on the socio-economic status of human population affected by KA. This study has been carried out in one of the highly infested areas. Similar findings have been reported in the Annual Report of 1987-88. Which again emphasises upon the

conjecture, migration of people from the one region to another and development of immunity in population of a particular region, but these studies evidently lack support of data related to refracton and immunology. The series of Annual Report of 1988-89 mention some observations related to the outbreak of KA in Borio block of Sahibganj district. Coming of KA to this region is an enigma in itself. The study points out that there has been no ecological change for the past few years. This observation is in itself a paradox. The depleting conditions of forests due to deforestation, quarry workings in this region has perhaps been overlooked and so much so the Plasmodium Falciparum Control Programme had been under operation till 1988 (An information from the Swasthya Bhawan, Govt. of Bihar, Patna).

Thus, it is but obvious that there is a lack of studies with a view to understand the problem of KA with its re-emergence in the state of Bihar; studies with an emphasis on socio-economic and socio-political context which may reveal a systematic understanding of the problem. In the present study an attempt has been made to understand the problem of KA in this same perspective, which may reveal a systematic understanding of the problem with its present status vis-a-vis the status of Public Health Services system of the state.

CHAPTER - THREE

Presentation of Data

- 3.1 Identification of the problem of KA
at the State level
- 3.2 People's responses to the problem and
the governmental programme for control of
KA (A macro perspective)
- 3.3 Central government's response
- 3.4 State Government's responses
- 3.5 Problem of KA in Vaishali and its responses
- 3.6 PHC at Sahdei Bujurg; data
- 3.7 Village level Data
- 3.8 Data of some relevance

CHAPTER - 3

PRESENTATION OF DATA

Data made available in course of field work has been organised as per the objective of the study under the headings of identification of the problem of KA by the government and the people and peoples responses to the problem in a macro perspective. Data related to Governmental actions has been presented under two headings; as Central Government's actions and as State Government's actions.

Data related to programme implementation has been studied at length in context of Vaishali district and Sahdei Bujurg, PHC and the village Aharia.

In the next stage, as per the requirements of the study, a detailed case study of a severely affected village Saharia has been presented.

Finally, a separate heading has been devoted to present the informations related to the malfunctioning of the governmental institutions in combating the problem and pilferages of insectides and anti-KA drugs.

3.1 Identification of the problem of KA at the state level.

It was perhaps, Dr. Ram Swaroop Agrawal of SKMCH, Muzaffarpur, who identified the coming of Kala-azar back in the state. This information was brought in the Patna Medical Gazette (1968) and was circulated in the 'Branches News' of Indian Medical Association of the subsequent years. Doctors of Patna and Muzaffarpur recalled that by the year 1971 a number of KA cases started knocking at the doors of different health institutions. These patients were mostly of very poor socio-economic strata of the society, they left no stone unturned to get cured, inspite of their inability to pay and bear the expenses, they visited the Patna Medical College Hospital for treatment. By the 1974, a number of reports started coming into the local news papers regarding the unavailability and blackmarketing of anti KA drugs. The problem of Kala-azar and its menace were raised on the floor of the state assembly (BVSSN Question Mach 22, 1976) and the Parliament (Lok Sabha)(LSQ. March 13, 1975). Doctors of Patna and Muzaffarpur who are working on problem of KA recall that by the year 1974, KA started appearing in almost all districts of North Bihar specially in Vaishali, Muzaffarpur, Sitamarhi, Begusarai, Samastipur and Darbhanga districts. As per announcement in the Parliament it was Indian Council of Medical Research (ICMR) which was entrusted with the task of calling a meeting to assess the

problem of Kala-azar (NICD MANUAL Series No. 4-1979). This meeting was presided over by Dr. P.C. Sengupta, who had expressed the possibility of coming of KA way back in 1968, & 1973, and participants included a Dr. L.S.N. Prasad; Dr.C.P. Thakur, then the Director of Health Services, Bihar in addition to NICD Director, and Director Malaria Research Institute respectively. Till then medical 'technocrats' were complacent about the problem, but by the year 1975-'76 a sizeable number of Kala-azar cases from North Bihar, specially from the districts of Vaishali and Muzaffarpur, came to the knowledge of doctors in Patna as well as doctors of Sadar Hospitals. A research institute (Rajendra Memorial Research Institute of Medical Sciences; RMRI) in Patna, which used to carry out researches on tropical medicine and had only 3 to 4 beds for Kala-azar patients, but was flooded with the Kala-azar patients. At least 50-60 inpatients had KA. In 1975, a daily from Patna, published a news feature with the caption 'Bihar Me Kala-azar Mahamari' (Kala-azar epidemic in Bihar) (BVSQ D-241, July 22, 1976) in the month of February. There came an unstarred question in the parliament referring this news headline on March 13, later on May 8, the problem of Kala-azar was again raised in the parliament. By the next March enough heat was generated to attract the attention of government. The problem of KA was raised in the State Assembly through a short notice question

on March 22, 1976. It is evident from these informations that the government had identified the problem of Kala-azar in the State and stated in the house that the problem of KA is in the state since 1974 and the state government had been taking special measures in order to cope up with the situation. A very interesting information has come into notice that the government had earlier stated in the house, that anti-KA drugs was to be imported from Iran. It was informed by a member in course of debate in the house. Nothing more could be traced out regarding this specific information.

By the year 1976 perhaps government had realised the need to assess the problem and took the initiative for a sample survey of three badly affected districts of the state namely, Vaishali, Muzaffarpur and Sitamarhi. This survey was made by NICD from June to September 1976. This survey revealed that 64% of villages were affected with a prevalence rate of 0.20% and maximum number of cases were in the age group of 0-19 years. In subsequent years, a team of officials of the Government of India visited 72 villages of Samastipur in addition to the villages of previously mentioned district. The team reported that 89% (69/72) villages were worst affected with the disease and had a overall prevalence rate of 1.1% and case fatality rate of 6

percent. Another interesting information has come to fore that, Mahnar Block of Vaishali district reported 117 cases and 3 deaths in the year 1975, and 120 cases and 4 deaths due to KA in subsequent years. However, 1977 and 1978 witnessed 851 cases and 12 deaths and 2067 cases at 7 deaths respectively. Figures of 1978 is the highest reported figures till date (NICD MANUAL).

Then came the year 1977, when the country witnessed a change in the political leadership in the country. One of the then ruling party members made a special statement regarding the spreading of Kala-azar in Bihar in the Lok Sabha. In course of the candid statement he exposed the government's inadequacy in dealing with the problem of Kala-azar. He also referred to the fact of underreporting of figures of KA cases and deaths (LS Debates Vo. II pp.204-296, July 29, 1977). Reference to kala-azar problem was mentioned in the House even before this in the form of an unstarred question of the parliament (LS USQ No. 77, June 16, 1977).

It was the time when the government of India and government of Bihar perceived the problem of Kala-azar, and consequently Government of Bihar was asked to implement a Kala-azar control programme in consultation with NICD (NICD MANUAL).

But the problem failed to catch hold of full attention of those in policy formulation and programme implementation, and resultantly, the problem got aggravated by the year 1983 and started raising its ugly head by the year 1985 when it spread across the river Ganga and gripped the districts of south and central Bihar. People's representatives from various platforms raised the voice against the governmental apathy in dealing with the problem when the reported deaths increased substantially in the year 1989 reaching almost 500 from the state of Bihar alone. KA became an issue of political stake in north Bihar, for parliamentary and assembly elections, and for the first time the governor of Bihar mentioned problem while addressing the joint sitting of upper and lower house of the state assembly on March 21, 1990.

3.2 People's responses to the problem and the governmental programme for control of KA (A macro perspective)

Re-emergence of KA in the state caught the whole population unaware. They did not know in the beginning how to cope up with this crisis as it has disappeared for the time being many of the physicans in those remote areas where manifestation of the disease were earliest did not know exactly what do or how to diagnose and treat the disease. The earliest victims of this disease were mainly from rural

poor of the society. They tried their best to utilize the available and accessible health services. Then to other facilities that is why we hear of a few 'Hakims' who were among the firsts who diagnosed the disease. KA problem brought a lucrative sum to these medicine practitioners in the remote areas who claimed to know and possess the required treatment and drugs; it is one of the reasons that helped the phenomena of quackery to flourish. Even after this when the patients kept suffering/dying, the family members turned to modern and specific health institutions like the medical college hospitals and research institutes. In course of a casual conversation with the patients and their family members admitted in these institutions, I learned that many of them had already known the places, where to be treated for this disease, as a few of co-villagers or relatives and friends had informed them about the problem and its treatment and the place where its proper diagnosis was available.

Even in the beginning, as some of the old patients and medical professionals working in these areas recalled that once having known the problem they used to visit the places where they could be treated well. Then the coming of question in the state assembly about the cases and deaths due to 'unique disease' indicates towards the curiosity as well as anxiety the people have for the disease.

Furthermore, raising issue of governmental inadequacy in providing anti-KA drugs since 1974 indicates a supportive confirmation of people's awareness to the problem. In course of informal chatting with some of peoples selected randomly, I was surprised to know many a misconceptions about the disease of KA, as it is thought to be a kind of cancer.

Thus, at the state level many people raised the voice against the problem of KA from different platforms like writing in newspaper, raising questions in assembly and council and staging demonstration against governments inability to contain the disease. Informing and presenting memorandums to the concerned authorities like sub-divisional magistrates, District Magistrates and different ministers and their representatives in the legislatureal executives are some of the most common method in this direction.

However, these responses were not intensive in the beginning or early years of resurgence. Such responses were more intensive since the year 1987. There was a big demonstration in Patna in the year 1988, it was led by a former chief minister of Bihar and the then MLAs from worst affected areas. Many demonstrations were held in district and divisional headquarters too. By the year 1989, the death rates in KA increased steadily and it was but obvious

that the responses through such means were more intensive.

It is learnt by looking through the newspaper reports that eminent citizens and professionals started calling up many a press conferences and expressed their views on the problem of KA and inadequancies of control programmes, which attracted the attention of the public at large and the people in the offices in the concerned departments.

Reports of many a voluntary organizations working on the problem of KA is one of the most commendable step in this direction. These voluntary organizations include, voluntary health Association of India, (VHAI). Some specific voluntary organizations like Kaala-azar Unmoolan Morcha (KA Eradiction Front) in Muzaffarpur, and Vaishali district is also worth mentioning. KAUM of Vaishali and Muzaffarpur demonstrated in protest against the problem of KA in their respective district headquarters for the availability of the facilities for treatment, and exert pressure on the administration to take more effective measures to control and eradicate the problem. KAUM of Muzaffarpur formed a panel of doctors who volunteered to diagnose and treat patients free of costs. In the year 1989, this organization treated 31 such patients. They conducted some surveys in the villages to get to know real

situations in the form of first hand experience and carried some health education campaigns through direct contact or by distributing pamphlets especially designed for this purpose; while KAUM of Vaishali district have been instrumental in organizing dharna in the premises of district administration, which called for effective implementation of KA control programme, and at times it raised the issue of compensation to those who died due to KA on the ground that the state has been unable to provide the protection of life from this dreaded disease, and demanded adequate health services in the rural areas. These organizations have been exposing the inadequacy of health services system in addition to the other related local issues.

In the month of December there were a General elections. The local candidates contesting for Parliament promised their people that once they come in power they would make every efforts to Cradicate the disease. These information were collected through personal interviews from the office bearers of there organisations. The MPs representing Hajipur and Mujaffarpur Parliamentary constituencies are presently Cabinet ministers and people are very much hopeful that now something concrete will definitely come through and this draeeded disease will be over for ever.

3.3 Central government's responses:

One of the earliest actions which came in response to the problem was after raising the problem of kala-azar on the floor of parliament. The Government of India directed NICD to carry out research activities on different facets of the problems of KA and took advisory role only. In the year 1976, NICD carried a sample survey in the state, followed by another survey from the Government of India team in the year 1977 (NICD MANUAL). In the same year central government realised the need to start a programme to control the menace of this disease and advised the state government to execute an organized control measures with respect to this problem in consultation with NICD for planning and guidance. Then the pharmaceutical companies had stopped manufacture of anti-KA drugs; these companies were asked to manufacture the life-saving essential drugs.

Till now the central government has been providing insecticides to the state to carry out spray activities in the affected areas, and the office of the NICD took supervisory and advisory role to carry out KA control activities including active search, planning insecticidal spray activities, and to evaluate and pursue research activities in the fields of epidemiology, entomology, vector control and other associated disciplines.

The first initiative made by NICD was to set up a special unit in Patna, under epidemiology division to investigate the possible cause of reappearance of KA as well as other aspects of epidemiology and control of the disease in 1976. This unit undertaken studies for detection of a probable 'zoonotic reservoir' of India Kala-azar. Till today it remains to be investigated whether this unit contributed anything worth in this direction. This unit has been conducting training courses since 1979 in Kala-azar for medical officers of the state in collaboration with the directorate of health services of the state of Bihar. By the year a total 721 medical officers and 5 technicians were trained under its programme.

Another important measure taken by the Central government in order to carry out special research activities in the field of Kala-azar was that of taking over of Rajendra Memorial Research Institute (RMRI) of Medical Sciences of Patna by ICMR in the year 1984. This research institute has been pursuing different projects to know more about the problem of KA in a number of disciplines like that of epidemiology, immunology, diagnosis, treatment, entomology and so on.

There is an information that some specific

research activities were also conducted with specific reference to the problem like the Indian Institute of Chemical Biology, Calcutta. KA research activities are pursued in School of Tropical Medicines (STM) Calcutta. RMRI and STM have been carrying out specific research activity on this problem. These two institutes have in-patients facilities.

Another important event was that of the setting up of a 'Group of experts' to suggest ways and means to control the problem of KA in 1985. This committee gave its recommendations in 1986 which included a detailed control programme to be carried out on the 50:50 sharing basis in its economic burden. This committee provided a blueprint of control programme which includes manpower distribution, organization setup and operational aspects of the programme (Dr. Harcharan Singh Committee Report).

It is evident that at present, Bihar remains the worst affected state and the government of Bihar has been expressing its inability to bear economic burden of the detailed programme so no fullfledged programme as per the recommendations have been implemented. But the Central Government has been sharing 50% of the expenditure on KA activities in the state till now.

Besides these activities, Central Government has

been sponsoring various meetings, seminars and symposiums on the problems of Kala-azar in Patna, Delhi and Calcutta from time to time. One of the such meetings known as Inter State meeting on Kala-azar took place in Patna in January 1988. This meeting discussed thoroughly about the control measures against KA to be adopted and also finalised the needed course of action to be taken (Govt. of Bihar; Status Report on KA, 1988), but it still remains unimplemented. Of course there has always been a partial implementation since the resurgence of KA partially due to lack of determination and other difficulties.

In the recent months specially February-March, KA infested areas have been visited by four control level teams of experts which included teams of AIIMS, NICD, NMEP, and a joint team of Government of India, Ministry of Health and Family Welfare and Maulana Azad Medical College, Delhi. This act of centre is perceived as a 'populist activity' by many of the concerned and informed section of the society.

Table - 5
KALA-AZAR DDT Spray Operations (1980-81 to 1989-90.
Percentage coverage against the target in Bihar

S.No.	Financial Year	Round	Population	House	Rooms	Varanda	Cattle sheds	Month of spray operation	No. of Distt. covered
1.	1980-81	I; not on time	100	100	100	x	x	June'80-March'81	15
2.	1981-82	Provision for only one round	Data incomplete					Feb-82-Marh83	17
3.	1982-83								
4.	1983-84								
5.	1984-85								
6.	1985-86	I II Data Not available	97	x	97	x	88	x	19
7.	1986-87	I only	92.19	97.34	96.65	97.62	96.58	Aug.85-March'81	19
8.	1987-88	I II partial	95.5 94.74	92.97 94.38	93.63 95.26	97.79 95.82	95.51 95.06	Apr.87-Aug.87 Jul.87-Sept.87	21 13
9.	1988-89	I II partial	64.99 96.93	97.43 97.42	98.59 97.36	97.5 97.17	97.94 98.22	July.88-Oct.88 Jan.89-Feb.89	25 09
10.	1989-90	I	64.7	95.99	96.34	96.72	97.95		24

Source: Chief Malaria Office, Bihar; Patna.

Table - 6
Kala-azar Incidence in Vaishali from 1977-89.

S.No.	Year	Incidence	Deaths
1.	1977	6337	182
2.	1978	9885	8
3.	1979	4249	0
4.	1980	1522	0
5.	1981	716	0
6.	1982	391	0
7.	1983	232	8
8.	1984	242	1
9.	1985	208	0
10.	1986	175	0
11.	1987	290	1
12.	1988	394	0
13.	1989	3047	175
14.	1990 (Jan.)	205	1

Source: Office of the Chief Malaria Officer, Patna, Bihar
C.S.Office, Vaishali, Hajipur.

Table - 7

PHC were KA incidences and deaths in Vaishali From 1982-1989

S.No.	Name of the PHC	1982		1983		1984		1985		1986		1987		1988		1989	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1.	Desari/ Sahdei Bujurg	18	0	21	0	30	0	35	0	16	0	14	0	29	0	447	48
2.	Bidupur	13	0	16	0	11	0	4	0	4	0	16	0	12	0	304	48
3.	Patepur	05	0	8	0	7	0	4	0	10	0	9	0	63	0	319	35
4.	Mahua	07	0	6	0	15	0	12	0	5	0	78	0	23	0	550	24
5.	Jandana	109	0	39	0	33	0	57	0	30	0	7	0	60	0	409	11
6.	Lalganj	109	0	100	0	12	0	50	0	7	0	34	0	80	0	355	2
7.	Gorul	51	0	23	0	21	0	10	0	10	0	3	0	56	0	52	2
8.	Raghopur	3	0	29	0	17	0	14	0	6	0	4	0	4	0	22	1
9.	Mahnar	23	0	20	0	11	0	19	0	17	0	24	0	13	0	182	1
10.	Vaishali	13	0	8	0	20	0	9	0	19	0	104	0	49	0	127	0
11.	Hajipur	5	0	6	0	6	0	8	0	5	0	2	0	2	0	39	0
12.	Sadar Hospital, Hajipur	356	0	276	0	243	0	204	0	127	0	290	0	371	0	3047	175

Source: District Malaria Office, Vaishali, Hajipur.

Table - 8

Monthwise breakups of KA cases at deahs in Vaishali for the year 1989

From January 1989 to December 1989

S.No	Name of the PHC	January	February	March	April	May	June	July	August	September	October	November	December	Total													
1.	Hajipur	-	-	-	-	-	4	7	4	3	-	18	3	39													
2.	Vidupur	16	-	37	42	-	13	2	5	47	1	-	19	132													
3.	Mehnar	-	8	3	-	10	1	14	35	29	1	33	-	49													
4.	Jandaha	-	-	-	-	-	51	-	38	64	167	9	50	1													
5.	Goraul	-	-	-	-	195	24	21	32	119	16	90	8	64													
6.	Sahdei	3	17	4	7	49	34	21	45	31	67	2	147	12													
7.	Lalganj	-	6	-	-	34	7	44	9	74	30	1	14	134													
8.	Vaishaki	-	-	31	9	-	-	-	16	14	-	-	-	57													
9.	Goraul	1	-	-	-	2	-	-	30	2	1	10	1	-													
10.	Patepur	-	6	5	3	7	9	12	24	28	150	31	52	1													
11.	Raghopur	-	-	-	1	5	5	2	3	1	4	1	1	-													
12.	Dist.Hosp.- Hajipur	-	-	-	-	-	-	-	49	40	166	3	-	255													
Total		20	0	37	0	80	0	62	0	302	0	135	13	123	5	332	32	441	39	929	75	215	3	371	8	3047	175

Source: C.S. Office, Hajipur, Vaishali.

Table - 9
Age and Sex wise Kala-azar cases in
Sahdei Bujurg PHC in the year 1989

S.No.	Age Group	Male	Female	Total
1.	0 - 4	8	17	25
2.	5 - 9	57	54	111
3.	10 - 14	64	54	118
4.	15 & above	141	59	200
Total		270	184	454

Source: PHC, Sahdei Bujurg,
D.M.O. Office, Hajipur, Vaishali.

3.4 State Government's actions:

There is an acute lack of information about few earlier responses of the Bihar government to the problem of KA, whatever information could be collected indicates that the Bihar Government has not taken any concrete steps for the control measures. Till the coming of directives from the central government in July 1977, that the State Government must execute the organised control measures by August 1977, there was acute shortage of anti KA drugs, as the pharmaceutical companies had stopped manufacturing them. The state government in consultation with the Central government asked some companies to produce the anti-KA drugs. The State government asked one of its research institutes, RMRI to carry out research activities on KA in detail and help the government to fight the problem of KA. An organised Kala-azar control programme in the beginning included activities of indoor DDT spraying for two rounds annually, in its first round 40-70 per cent of villages in the districts of Vaishali, Muzaffarpur, Samastipur and Sitamarhi were covered. In the month of November 1977, an active search of KA cases were undertaken in assistance with NICD, in all the 31 districts by domiciliary visits of health services staff to every house. Second round spray could not be taken due to late coming of budgetary

sanctions. Similar has been the fates of planned second round of DDT in the financial year 1978-79, 1979-80. In the year 1980-81 there was no insecticidal spray operation of KA in those infested areas in time. The reason given by the authorities who had to carry out these activities is that they could not get financial package in time to perform the same. However, later in the year 1981-82, there was provision for only one round of spray, and this was carried out in Dec. 1981, when the KA vectors have less population. Later on for the three consecutive financial years 1982-83, 1983-84, 1984-85, there was no fund sanctioned for Kala-azar spray and annual searches of cases. In the subsequent years 1985-86 two rounds of DDT coverage was given in highly infested population of (5.68 million); while in the year 1986-87 one round of DDT coverage was given for 10.48 million population. In continuation with spray activities it remains necessary to mention that in the year 1987-88 there was one round spray with partial second round and the year 1989 had only one round of spray. It is but obvious that the number of cases and deaths are higher in the year 1989 than those of year 1987 and 1978. This has been presented in a Table - 5, with the percentage coverage of DDT spray in different years.

There is an interesting observation made regarding the supply of the second line KA drug (Pentamidine

isoltionate known as Pentamidine/Lomodine). In the early years the drug Lomodine was being imported from France by the Government of India and distributed by NICD. This drug was in an erratic supply. Till the early 1980s the French drug was being imported while later on British drug was being also imported and came into use through WHO. There were some hitch at the higher levels, thus, the drug was in short supply in the state and cases of KA spread in all sections of rural people by them. There came an unfortunate situation for the year 1988, when the government of Bihar could not procure second line anti-KA drugs through NICD, there was lots of public demand from different platforms and the State Government procured these drugs by direct import (Budget Speech by CM, 1989-90). No further information could be collected in this regard. Only information related to this issue which could be collected was that after this episode the directorate of NMEP was entrusted to the work of 2nd line drug distribution. Specialists have been raising the issues that the number of cases unresponsive to first line anti-KA drug has been increasing due to various reasons like that of primary resistance of parasites, under treatment and other invisible cause. The Government of Bihar claims that the sufficient amount of this drug has been available, but the public outcry claims contrary to this assurance.

vaishali district is also worth mentioning. It was there organizations which had demonstrated in their respective district headquarters for the availability of the facilities for treatment, and exert pressure on the government to take more effective measures to control and eradicate the problem. KAUM of Muzaffarpur formed a panel of doctors who volunteered to diagnose and treat patients free of costs. In the year 1989, this organization treated 31 such patients. They conducted some surveys in the villages to get to know real situations in the form of first hand experience and com some health education compaigns through direct contact or by distributing pamphlets especially designed for this purpose; while KAUM of Vaishali district have been instrumental in organizing dharna in the premises of district administration, which called for effective implementation of KA control programme, and at times it raised the issue of compansation to these whso died due to KA on the ground that the staate has been unable to provide the protection of life from this dre aded disease, and demanded adequate health services in the rural areas. These organizations have been exposing the inadequacy of health services system in addition to the other related local issues.

In the month of December there was a General election. The loca candidates contesting for the seat in

the rank of Deputy Director and two of Asst. Directors, presently headed by the Chief Malaria Officer of the state who is assisted by the two assistant directors one on Epidemiology and the other in Statistics.

Furthermore, the state government through its plan and programme directives mentions following measures to be adopted for control of KA. It includes residual insecticide spray, provision of anti KA drugs and health education to population. The found realities indicates towards inadequacy of such activities (GOB, Status Report on KA 1988).

It is a worth mentioning information, that realising the gravity of problem that the state government ordered in 1985 all its medical hospitals to operate special KA wards, but till the 1988 only PMCH complied with also directive and in the year 1989 Muzaffarpur, Darbhanga and Nalanda medical college hospitals followed the same.

Another information which has come to fore is related with the financing of health services and particularly to the problem of KA.

In the year 1977, Government of Bihar passed a Bill in the State Assembly levying health surcharge on land revenue in order to raise finance for the epidemic

conditions of the state. Detailed informations regarding this budgetary provisions could not be collected (BVS Debates Part-II, Vol II, No. 1-8, pp.30).

Available informations pertaining to KA control activities mentions following amount sanctioned.

Financial year	Amount sanctioned by the State Govt.
1985-86	Rs. 33,72,000
1986-87	Rs. 33,31,090
1987-88	Rs. 64,64,590
1988-89	Rs. 1,22,96,800

Till date the expenditure on KA comes under non-planned expenditure and therefore, financial package to deal with this problem takes a long time to be sanctioned, consequently for each year there is always a certain unnecessary delay in the programme implementation. As per the recommendations of the Group of Experts on KA, 50% of the finance is to be contributed by the State Government, the state government has been constantly apprising the inability to comply with the provision to the central government but to no avail, the programme gets its partial financial requirement, thereby the rationale for partial programme.

3.5 Problem of Kala-azar in Vaishali and its responses

It has already been mentioned that the problem of KA started resurging since 1971. It recorded the maximum number of cases and deaths due to Kala-azar in the year 1977. The year 1989 records the maximum number of deaths (175) due to Kala-azar. There are eleven PHCs, since 1977 shown that all these PHCs have remained affected. In the year 1989, Sahdei Bujurg PHC registered maximum number of deaths in the district and second largest number of cases 444. It is pertinent to observe that, the cases of Vaishali were raised more than any other districts in the parliament since the inception of KA control unit in Bihar. People of this district demonstrated before the district administration and in the state capital. Detailed records of cases are not available since 1977, but the records of 1982 onwards were available in the office of district malaria office that took the statistics. This has been presented in Table nos. 7, 8 and 9.

In accordance with the available records of 1989 it was realised that the maximum number of cases were of the age group of 0-14 years about 55.9% compared to other age groups. There are six blocks (PHCs) which reported more than 300 cases of KA, while Sahdei Bujurg is followed by Patepur and Mahua with 35 & 24 deaths respectively. It is

needless to say that the authenticity of data from the government records about KA remains to the subject of verification. People at district level responded through different institutions as mentioned earlier, while the governmental responses need to be discussed in more details as per the objective of my study.

District level KA control Programme is carried out through the district health organization which includes the office of Civil Surgeon of district Sadar Hospital and district Malaria Office. The treatment of cases, diagnosis at case detection activity remains under the purview of civil surgeon while that of insecticidal spray activity is with the malaria officer. However, the surveillance and monitoring system lies in the purview of both these offices.

District Health Organization

Civil Surgeon
Treatment with 2nd line drug

PHC
Treatment with 1st line
anti-KA drug

Addl PHCs

District Malaria Officer

Malaria Inspectors of
PHCs and Malaria work
of PHCs

Spray Activities
diagnosis, treatment,
case detection, feed back

State, CMO

Hence there lies the problem of accountability as the responsibility is not clearly defined in the organisational network.

The distribution of drugs, diagnosis, treatment lies with the office of Civil Surgeon, while the responsibilities of carrying out spray activities remains with the office of Malaria Officer under the supervision of the Civil Surgeon office. As there has been only two active search conducted in the district once in the year 1977 and the another in the year 1989. Thus there has been lots of in determining the priority of spray and treatment facilities. the district hospital is supposed to carry out the 'bone marrow test' for parasiteological confirmation and the lab technician have been given special training through NICD unit, but till date no such test have been carried out in the district hospital. The treatment schedule for second line drug is taken in the district hospital and there is a directive from the state government to give priority to the patients at KA for the provision of beds in the hospital. It is the office of the Civil Surgeon which controls distribution of the first line drug SAG to PHCs and Addl. PHCs.

In 1989 active search activity was undertaken at the instance of District Administration, as many people

raised enough dissatisfaction against the problem and apathy of health authorities. It is worth mentioning that till the active search, there was no official report of details due to KA from Mahua PHC of the district, but the fact remained that atleast 20 people had died by then, which incurred the wrath of local community against the local health administrator. Further more, in order to pacify the situation, health and general administration took up spraying activity, which was not technically beneficial, as it is during the monsoon period, there is enough of rain which washes out the residual insecticide and so much so sandfly population remains mostly in large phase.

The offices of malaria as well as that of Civil Surgeon is supposed to provide 'feed back' to the Chief Malaria Officer of the state on the problems of Kala-azar. It was also learnt in the course of exploration that the PHC officials at many instances do not comply with the directives of CMO and CS.

3.6 PHC at Sahdei Bujurg; data

Table No. 7 and 8 give, the highest number of deaths due to KA in the year 1989 from this PHC. It contributed the second largest number of incidence of KA cases. This PHC was earlier in Desari as evident from the

table, it has shifted to present location in the year 1984. Now Desari as evident from the table, it has shifted to present location in the year 1984. Now Desari has an additional PHC. Specific epidemiological data could not be collected as records of this PHC were missing. However, data revealing specific age- and sexwise distribution for incidence were collected from the DMO office of Vaishali. It has been presented in the Table No. 9.

Further data collected through a structured interview schedule reveals that the setting up of an PHC in the present location was determined on certain political pull and push. During interview it was noted that, some local leaders from the study village Saharia have been quite instrumental in setting up the PHC at the present location. Leaving such informations, and knowing the existing setup of the PHC it was noted that there were six medical officers employed in the PHC and out of these six, two are given special charge of KA programme, at two temporary KA Centres operating in two different villages in order to cope up with the problem. These centres get supply of SAG, one of the interesting information, being that the patients were issued the vials of SAG and they were supposed to take injections regularly by anyone whom they found fit. The rationale given for this type of action was that the people were

complaining that instead of SAG, the vials contain distilled water which were being injected to the patients. that is why patients were not able to get cured. Consequently, the district administration issued directive to follow such process. It is an imperative to know that at the PHC level, The diagnosis of KA is made on the basis of 'aldehyde test' which is not a confirmatory test and that is why people used to visit the medical officer in their private clinic as PHC lab-technicians did not carry more specific tests for the diagnosis of the disease and used to treat them with the drugs of the PHC, by enrolling them in PHC and charges were made for the service. While talking to the M.O I/C of the PHC he expressed the inability to conduct regular search activities due to the lack of basic infrastructure and financial constrains as all the travelling allowance were included under the head of family welfare programme. Malaria inspector who is supposed to supervise the activity of spray and surveillance are deputed for 2-3 PHCs. These two reasons hinders workings of Basic Health Workers. The PHC had four BHW (Malaria) and 2 BHW (Minima) even then no regular material slide collection or KA aldehyde collection were taken. About the role of health educator it was learnt that he still remains attached with the family planning activities only and conducts works for the same.

It is useless to reiterate the fact that the PHC officials have to achieve certain targets in the Family Welfare programmes as their promotion and increments are based on performance in this programme. They are forced to cope up with the official directive of achieving the target in Family Welfare activities at the cost of the KA problem.

Regarding the opinion of the local residents about the PHC, it was mentioned by the villagers that the doctors do not provide required service to the patients, and at times they used to extort money from the villagers for their second grade service, while the officials of the PHC refuted the charge giving the explanation that since doctors usually do not comply with the dictates of the local influential people and therefore earn bad names and gets defamed..

3.7 Village level data

The village Saharia has a population of 4125 as per the records of the nearest PHC. There were 80 cases of Kalazer Jan-July 1989, while by the month of December it reached 267 and resulted in 30 deaths. There was a pertinent information that cases of KA as reported were detected through active search method at the instance of district administration. By September enough water has flown over the heads of the people and the people raised the voice when the PHC record of a near by block reported that no death had

occurred while in actual there were 20 deaths from that block. In course of interview with a lower official at the district Malaria office informed that the records of 1989 were made and appropriated after this active search. The second pertinent information from the village was that before the PHC officials would have prepared the list of deaths due to KA, the villagers of these PHC had already prepared such list which included larger number. After cross checking these lists, the PHC officials gave a different version that in that very period, whosoever died (irrespective of the specific disease) were enlisted by these villagers as one of the patients who died due to fall from a mango tree was also mentioned in the list. This information aroused some curiosity to know more about such data and in this connection enquired from the Local PHC officials about the reality of the name of a fifty years old woman in villagers list. The officials of PHC confirmed as their list was based on the informations elicited from the members of families of these dead persons and confirmation of death due to KA was purely based on their informations only, and absence of few names as mentioned in the villager's list was attributed to unsatisfactory informations elicited by their family members.

There was a rumour that the bereaved family

members of KA cases would be given some compensation by the government. This fact became more evident, when one of the villager Manu paswan, who sat for a hunger strike before the district administration for compensation and demand for adequate health care facilities in those areas under the banner of KAUM, Vashali in the March 1990.

The sanitary and environmental conditions of the village as mentioned in the previous chapter are indication of the fact of conducive environment for breeding of sandfly. In general it appears that the man-fly contact ratio must be very high, as these people relax in the Varanda and Bathans (cow sheds) while and they sleep in such places during the nights of summer. Men usually remain half naked and so is the case of children while the dress pattern of women folk subscribes for full coverage of the body by sari, same remains true for young girls.

Now coming back to specific problem of KA, a youth of 18 years, studying in 10th class in a nearby high school informed that he was the second patient of KA in the village in early 1981. The first person to be the victim of KA was an old man of over fifty years. They were cured by 1982. These people were treated at Dalsingsarai, a town in Samastipur district. Thus, some people were aware of KA in the village since 1980. They knew the names of anti KA

drugs like Dibanate and stibanate and a few diagnostic tests for agglutination tests and bone marrow tests. They had a notion that KA is due to the biting of a special mosquito, which bites only in the night. They expressed the ignorance about the shape and size of the insect. Secondly, they had the perception that KA comes with high fever, cold and severe body aches. In the course of the disease people lose appetite and becomes weak, When it becomes chronic. Indian medicine does not work and it is cured only by Pentamidine as they called it 'Videshi Sui'. It was of interest to know in the course of study that the persons were aware of their co-villagers who had either died due to KA or were under treatment. Almost everyone knew some of the patients of nearby houses. Some of them had informations for places of treatment like Agam Kuan Hospital (RMRI); PMCH, Dr.C.P. Thaker Dr.T.K.Jha Muzafferpur and so on. While they mentioned that they do not take early refuse to such centres because of their inability to meet the expenses. But the exigency of he situation forces to meet such expenditure by taking loans or selling their land and ornaments.

About KA control activities, they replied in plain and simple terms that these exist only on paper. When one of them was indicated towards the date and months of DDT spray written on the wall they said that these activities take

place occasionally which is not true to a great extent. Scribbled Table on the wall showed that on three occasions the spray have been done. But this was not true on the thatched roof houses of some of the socially degraded caste people.

It was of interest to note that these villagers never had prior information about spray operation whenever it was to be made. Secondly they complained that spray works are taken inside their houses as at times these workers write down on the walls and gets forged signature from someone else; as the provision exists that work completion would be entered by neighbour or so.

It was of interest to talk to one of the spray worker as my visit to the village co-incided when the spray activity was in progress. While talking to him, he tried to refute these charges as levelled against them, but later on he partly confirmed such charges. Some day I had an opportunity to find some of the houses and many of the Bathans were not sprayed in the interior of village and a few of the houses did not show the inscription of the tables. Unfortunately I could not meet their field incharge, who happens to be the malaria inspector of that PHC.

Episode of supply of spurious first line anti-KA

drug as already mentioned in previous headings were repeated in while interviewing some who had participated in demonstration related to the issues of KA problem.

Data related with the village power structure and dynamism of socio-political forces operating in the village and region has already been mentioned while describing the village setting. (Ref. Chap. II PP. 36)

It was a revealing information to know that in the last parliamentary elections, the elected MP had made two promises in his local manifesto one of these being the Eradication of KA from the region.

Case Study No. 1.

Bikku Paswan, a 55 year old agricultural landless labourer experienced four deaths due to KA in his family. He had a family of 12 members. The wrath of KA fell first on his wife around 52 year old. For the first few weeks she was kept under home treatment with a hope that she had problems due to her old age and cold season. But by the month of February in year 1988, she was brought under the treatment with a visiting quack and was informed that she suffered due to KA.

Bikku brought wife to local PHC, but to no avail

as he was informed that it would require some amount of money to be paid in lieu of service as he was advised to go under treatment by some private doctor. There was no anti-KA drug available in the PHC. Having made the requests and agreed to pay for the service she was brought under treatment with one of the Medical officer of the PHC. She was still under the treatment, when their daughter started showing similar symptoms. She was a married woman of 30 years and had two children. By this time Bikku had enough of miseries and his wife passed away. Afraid of the previous experience, he brought his daughter to Hajipur. There she was under treatment and while she was recuperating and still under treatment, coming of rainy season aggravated the problem. This season called for employment and they were unable to earn as they could not spare the time and money. In order to cope up with the exigency, she was brought home and followed the advice.

Once, she felt cured, the treatment was stopped for the time being, but by then her another sister was caught under the web of disease in the month of September. This daughter had her husband's home near Patori and they had come to know that certain doctor in that area was able to cure the disease so she was taken to that place. '

In the meantime condition of elder sister started

showing deterioration are yet brute blow of KA axe had fallen by that time ten year old boy in the family. The limited accessibility to health institution, the boy was kept under the treatment with local doctors and the sister was brought to Hajipur, where she succumbed to KA in the beginning of 1989.

Scared of death, poor father tried to save his son so the boy was brought to Patna, where he was asked to go for the second line drug (Videsi Sui) as the case had become unresponsive to 'first line drug' and the availability of Pentamidine was beyond their reach. They tried to cope up with the situation, but he could not save his son and finally his second daughter too.

In course of case taking, the old man narrated the story with emotional overtones and arraigned about the horrible experiences inaccessibility of health institutions.

He expressed the sorry affair of local PHC and sadar Hospital. His case confirmed those findings as mentioned earlier. Now he is still under debt trap as he has to pay back all those from whom he had borrowed during he crisis.

Case of his neighbour and his brother remain under distress as presently two members of his family are

undergoing treatment with PHC Doctor.

Case study No. 2

Manu paswan, a man of 24 years, father of two children, earns his living by selling tobacco leaves (Khaini) in the locality, weekly market and at the Bus stop. He lost his eight year old son in Feburay 1990 when he was under treatment with local PHC Doctor. The PHC reported the death due to KA to CS. This incident was brought into the notice of district administration and then the DM directed CS for fresh investigation and the report got altered from the place and was reported as 'exposure' and dehydration. Then came a demonstration and Dharna before the DM office and he sat for a hunger strike. The KAUM of vaishali was instrumental in organising this activity, this activity was highlighted by the local press. These persons demanded for adequate health facilities to combat this problem and compensation to the victims of KA. But then came some administrative activity and few routine explanaton were taken from the concerned institutions and some public relations activity was established by the concerned officals.

His hope still lingers in optimism for his participation in dharna and hunger strike vis-a-vis a

disenchanted opinion of health care delivery system.. He recalls that had he acted in accordance with advice of his neighbours and went to Patna or Calcutta, he could have saved his son, and he explains his inability to afford such a costly affair.

In course of case taking, when enquired about why did he make such a delayed decision of visiting the PHC, he recalls that these doctors used to charge higher than those who visit the places, furthermore, many of the patients had been cured by one of such visiting 'doctor'. He recalls that the same visiting doctor would have been able to save his son, but unfortunately at that very time he did not possess that 'Videsi Sui' (Pentamidine). Experiences of Manu is not much different from those narrated by other affected co-villagers.

Case study NO. 3

The story of the family of Dhamesh Ray is not much different from that of his co-villagers who suffered due to KA. He is a peasant of Yadav community. He holds more than ten acres of land and has some cattle. His house has Khaprail (tiles) roofs and walls are semi-plastered. He has a verandah which is adjacent to his bath. His wife suffered from KA by July 1988 and when she was under treatment with a

able to establish a good rapport.

In an interview, it was learnt from the officials that the post of chief entomologist remains vacant in spite of various recommendations since last five years. Thus, the entomological wing remains a defunct unit.

From another source, it was collected that the post of Chief Malaria officer is a sort of political post in the health services organisation as he draws and disburses about 8-10 crore rupees per year from the state exchequer with sufficient autonomy. Their actions and orders are guided more by their political loyalties rather than actual priority and rationale. Furthermore, he has been given an additional charge to look after the KA control activities together with Malaria and Japanese Encephalitis, and consequently, unable to cope up with the executive formalities due to paucity of time. This was substantiated by the informant by citing three instances of lapse of funds allocated for anti-KA activities.

In course of interview with some of the evaluation officers, it was revealed that they had many a times reported about the inadequate and faulty spray operations to higher concerned authorities, but no follow-up has been undertaken.

While talking to one of the concerned anti-KA programme officers, it was revealed that rivalry between DMO and CS brings improper implementation of the programme.

Regarding the pilferage of DDT and anti-KA drugs information provides a strong drawback in the whole of the health services system. Stealing of DDT takes place from almost all the stages starting from the state to the field operation levels and are held in the black market.

Pilferage of second line anti-KA drugs speaks the naked reality of HC existing set-up. Firstly, the original drug is stolen by the health officials themselves by falsifying the stock registers systematically from the levels of Chief Malaria office to that of CS office at the district headquarter.

The system of empty vials of pentamidine to be returned to the office of CMO and it takes a long procedure and gives enough scope for the pilferages of such vials. These vials in turn are filled with spurious drugs and sold in the blackmarket. However, till date no such cases has been recorded in the police but despite the fact that such a view has been confirmed by the officials and concerned people.

In the sequence of lack of adequate manpower to control the health problem, it remains worth mentioning that

the present director of health services of the system holds two posts one of the directors, and other in Ranchi Medical College. It was quite surprising to know that many posts in the directorate of health remain vacant, as very few civil surgeons like to accept the promotion of coming to the headquarter. It was learnt in course of discussion with an ex-director of health services that the so called promotion from Civil Surgeon to Assist Art Directors or is a type of shunted presting as the post of civil surgeon has lots of power and perks while the post in the directorate lacks similar privileges.

While talking to one of ex-course planner of NICD, Patna unit regarding the problem of KA and its training programme, it was revealed that when the medical officers from the affected PHCs and district invited for the training in KA treatment remain mostly absent from the training venue and are found busy in the governeemnt secretariat offices pursuing officials for their transfers and solving their own problems.

While, it is stark reality to know till date there had been no training programme for paramedicos, while the preventive aspect of KA lie under the perview of these officers of the affected regions.

One of the most striking information as provided by one of the Ex-ministers of the previous government regarding the problem of KA, was that the level of consciousness about the disease among the people of Bihar was quite low (for their health problems), and that is why there have been very few protest demonstrations, and protests^{used} as political weapons.

CHAPTER - FOUR

Discussion

- 4.1 People's responses
- 4.2 Administrative at political actions
- 4.3 Financial constrains
- 4.4 Organisational flaws
- 4.5 Politics in the problem of KA

CHAPTER - 4

DISCUSSION

The data presented in the previous chapter is discussed with subheadings with specific reference to the objectives of the study.

4.1 People's Responses:

The village, Saharia saw its first case of KA resurgence in the year 1980. It was to an old man of about 50 years, then came the case of a boy of 7th standard in the subsequent year, these patients belonged to the category of small farmer family. These persons took early measures to the exigency of crisis and knocked at the doors of locally available health institutions, then to the known/informed source of treatment in a local town Dalsingsarai in Samastipur district. It is not that the district headquarter, Hajipur could not have sufficed their requirement instead convenience to travel to the place and information guided their choice (Ref. pp_37)

By the end of 1985 a few more cases of KA steadily appeared and took devastating role in the year 1987, when many of the villagers got gripped under its tentacles and

which tantamounted to its horrible manifestation in the year 1989 killing almost 50 of the villagers. This is what recalls my key informants and many of the co-informants.

The disease being insidious in nature gave little opportunity to cope with crisis through the available institutions. It was an imperative to look beyond the available institutions including PHC. Some of the people like previous ones went out to places while the socially-degraded ones and under privileged took to the available institutions due to lack of funds for such 'contigent expenditures'. At this juncture quacks(RMPs) by their propaganda compounded with unavailability of anti-KA drugs in the market made more money than anything else. Furthermore, they who went to governmental institutions, which remained paralysed due to strikes by different grades of employee in the state health care delivery system were forced to visit the doctors in private.

This situation was not restricted the conditions of Saharia, instead it remained as it was for other areas of the state too. This is what recalls a senior doctor in Patna.

Thus, it is not out of place to mention the argument of Roy et al.(1984) that the rural well offs have

more 'life chances' than the fellow poor Co-villagers inspite of similar life conditions. It gets further elaborated when one looks into the conditions of the villagers with reference to the triad of human host, environment and the causative agent affects equally to the villagers due to similar life patterns.

It remains a pertinent observation that the cultural system of village did not possess the coping mechanism of the said problem of KA in the community. Thus it required a search for new institution with the coming of problem and subsequent perception and cognition of the same. It is but obvious that the mentioned phenomena of quackery developed as a consequence of failures and inadequacy of governmental health institutions of rural areas aggravated by the problem of KA. Rise of such a phenomena indicates towards the 'unmet felt needs' of the villagers as a consequence of malfunctioning and maldistribution of health servies in the affected areas with the specific problem of KA and health problems in general . The reasons for the underutilization of the PHC are similar to what had already been brought out by Khan etal(1987). It remains but obvious that the unavailability of drugs and unresponsive behaviour of the people in the institution are commonly cited reasons by the affected people.

The notion, perception and cognition of the problem in the people's mind about KA is evident that they did not ask for provisions of curative facilities of the disease, instead preventive aspects are also looked by these people. Some of the political actions as taken against the problem is an indication in this direction. In the country many a rhetorics are made by each government, specially in favour of the poor and deprived sections of the society. Thus, the call for demonstration and other political activities by these people indicates in favour of the confirmation of political rights in the context of KA problem. Similar activities at different level of administration substantiate the evidence. It remains worth mentioning the dharnas by these people in the premises of district administration of Vaishali in favour of demand for compensation to the family members of those who died due to KA.

Response to such demands in a welfare state can not be overlooked and there comes the consequent manipulation by the persons in authorities by swinging into action to appease the agitated masses. Responses like claims proclaimed by persons in authorities that they have achieved what could have been performed through various information/disinformation; In the special context to KA, spraying of insecticides, availability of drugs and so on

from various plat forms like that of weekly briefings to the press, from the floors of the parliament and state assembly are a few examples of such activities.

4.2 Administrative and political actions

Taking the thread from the previous paragraphs and tracing the sequence of actions as presented in the previous chapter it calls to analyse the activities of 'soft state of Myrdal (1968)' in the total perspectives. It is evident from the data from the previous pages that each; action by the governmental authorities were taken in response to the people's outlay then to assessed need. A few glancing examples including setting up of a few special Kala-azar centres in addition to available PHCs, spraying of insecticides n rainy reasons when the futtility of operation is evident due to lower population of vectors and disadvantages due to rain.

Inspite of the assessed need of the society with specific reference to the problem, specially that by 'Group of experts(1986) the programme for KA control remains under partial implementation.

As referred in the previous subneading the spray operations of insecticides in response to exigencies of the political pressure deviates from the real issues of the

problem and gives a temporary appeasement to the people, while suffering remains.

There has been setting up of many a committees in order to assess the problems in order and to know the ways to deal with the problem. But the recommendations of such committees remain lying in some corner of the health Department and remains unimplemented or partially implemented due to various known and unknown reasons.

Role of some non-governmental organisations in combating the problem of KA has been negligible. A few of organisation which came into operation started functioning when the problem became severe. The roles of these organisations got further vitiated as some of the people got in prominence and tried to encash there in the elections as that of KAUM in Vaishali, a vis-a-vis excessive politicisation hampered the real cause, as in the case of KAUM of Muzaffarpur. Other voluntary organisations saw the activity of KA not suited to their organization as there has lack of endowments by the government. This is what some of the people of other socio-political organisation told me. Furthermore, no other welfare activities was found under the operation as that of programmes like centrally sponsored Rural sanitation programme or that of Accelerated Rural Water Supply Programmes, though the co-ordinating agency,

Council for Advancement of People's action and Rural Technology has a Branch in the district headquarter, Hajipur.

4.3 FINANCIAL CONSTRAINS:

The data (Ref.pp.69) provides some informations regarding the provisons of the financial packages in different years. These provisons have been inadequate as compared to the assessed need.

Furthermore the provisons for health sector has been in the general budget of the state has tapered off from about 8.0 percent in 1950s to about 2 percent in the 1980s (Mathew 1989). Distribution of this amount gets vitiated in order to satiate the needs of various interest groups.

Different types of pilferages as that of insecticides and drugs further aggravates the situation. Such activities are due to the rampant corruption and nepotism found in the administration of the state this is what has been brought into media from time to time.

The control activities for the problem of KA gets further vitiated due to 'split-financing' pattern as the chances of pilferages increases due to prevalence of

corruption at different levels of administration. Furthermore, due to inefficiency of the system there occurs many a lapses of funds for the same purpose.

4.4 ORGANISATIONAL FLAWS :

The part unit of the Directorate of National Malaria Eradication Programme performing KA control activities remains highly unorganised. It has not been integrated with the general health services system. The dual organisation brings more of inadequacy than to efficiency of the operations.

Data (Ref.pp.72) indicates towards the division of responsibility without much authority to the malaria department at the district level administration. It calls for a fresh integration in order to deal effectively the problem of KA.

Due to the division in the nature of control activities the accountability remains absent from the authorities. This is what felt by many of officials in the concerned departments.

4.5 POLITICS IN THE PROBLEM OF KA:

Inspite of reference made by a few of research scientists that there was an urgent need to train the

medical manpower in order to cope up with the possible resurgence of the disease (Sengupta 1968, 1973). There are many such examples which indicates toward the apathetic and insensitive attitude of the political leadership towards such problems of rural populatiron, be it that of Malariac Pattanayak(1980) or Tuberculosis (Banerji 1985).

Leaving aside for a moment, research should had been done particularly 'grey areas' of the nature of the disease with respect to various disciplines and possibility of looking for some relationship with ecological conditions of the regions and that of entomological conditions specially with rreferene to vector the issues when KA has virtually disappeared from the country. There was a possibility of a benign alteration in the ecolnogical conditions against the vector which could have provided more clues and choices in dealing with the situation. It is more important to know what is being performed in the post resourgence period.

Establishing a special unit for KA research in Patna by NICD, and entrusting RMRI for research activities by the state government and taking over of RMRI by ICMR are some of the glaring examples of health planner's post-facto and technocentric actions with respect to the problem.

The problem does not end here instead it makes a pertinent issue that inspite of governmental acceptance of spread of KA to four more district of the state within a period of four months (March 16, 1988 to Aug 8, 1988), the government neither accepted the reality and gravity of the situataion nor called for the measures to solve epidemic conditions (VHAI1989).

No doubt, the policy planning gets influenced by captured attention of the media due to some reasons there by monopolizes the funds as in the case of J.E. (Peters etal 1982).

The problem of AIDS, have some more dimensions than the 'diseaes of poverty'. Monopolizatiron of funds serves some needs of vested interest groups of people involved in policy planning (Banerji 1987).

In the history of India Health Services system, the delivery system has never met the 'felt need' of the people, it has always been the people who knocked at the, doors of health institutions to get due response (Banerji 1977, 1986, 1989).

But the inadequacy of infrastructural development of health services system in the country and the state particularly Bihar callls to meet the unmet felt needs of the society.

The very inadequacy of the health Services system, particularly for the rural masses has an explanation for its lopsided development in favour of sophisticated urban based hospitals and other health institutions. This kind of development of health services system caters to the needs of particular interest groups in the society. Adoption of 'technocentric' approaches in dealing with the various health problems satiates needs of these interest groups. This unjust order by taking the sides of the mystified technology rather the people.

The development of Health services system of a country is determined by its ecological, social political and economic condition of society. (Banerji 1974, '77, '85, '86)). This assertion remains valid for the Indian context and particularly that of Bihar.

In the Indian society there are various pressure and interest groups. These groups exert substantial pulls and pressures on the policy decisions. These pulls and pressures are attributed to the presence of diverse elements of dominant coalition of the Indian democracy (Morre 1966, Bardhan 1984). The democratic machine of Indian politics remain responsive to various interest groups at different levels in the system. It is these pressure groups who have been responsible for the tilt in the developmenta

activities in their favour, particularly that of Health services system. To substantiate this. (Illich,1971) presents his analysis that the capitalist mode of production and the market economy has created a peculiar social condition in which the dominant section of the society have cornered the resources in their favour including the development of Health Services System and the control of diseases in the society. To perpetuate this the medical profession and health services system have not questioned this unjust order by taking the sides of mystified technology rather the people. The long awaited vision of 'Social Physician' (Bhore 1946) remains yet to be brought into reality.

There has been an emergence of new political force in the Indian political system which has been able to bring the issue of KA in the notice of the ruling partners, subsequently in the policy decision, where for the first time since its resurgence has been mentioned the Draft paper of 8th five year plan of the 1990-1995.

The vitiation in the health programme also comes through the very political process of the state as health is simultaneously a part of state and concurrent list of the Union of India. (Basu, 1987). There remains something to be demarcate precisely the areas of activities, when the problem identified as an 'epidemic' it comes comes under the

perview of central government. This is precisely the the reason for delay in acceptance of KA as epidemic.

Further more the socio-political forces operating at the state level produces some impediments. in the development proceesses and case of development of Health services system is no exception to it. The state of Bihar where politics is greatly controlled by the ruling castes(Verma 1987) makes tilt at many a times in order to satiate vested interest groups.

The Health sevices systems are a part and parcel of general administration at the implementation stage. The district administration is guided by various local forces operating in the disrict instead of rationality and directives of the state. (Brara 1985).

Thus, the control programmes/activities gets some alterations in its implementation phases due to prevalent socio-political and politico-enonomic forces operating at the levels.

CHAPTER - FIVE

Summary and Conclusion.

CHAPTER - V

SUMMARY AND CONCLUSION

The findings of the present explorative study indicates that the problem of KA caught the study population unaware and unprepared and gave a severe jolt. It is not that the problem occurred first to this village, instead the problem has been persisting in the state and the district as well for atleast for he last.

There has been quite a delay in the identification of the problem at the state level. It took almost 5-6 years to the government to accept the presence of problem of Kala-azar, and the organised control measures for KA was brought into operation (Aug. 1977). It has been the people who knocked at the doors of the helath institutions, But inadequacy and malfunctioning of these institutions forced the people to solely depend on the private institutions and practitioners who virtually swallowed the mustered meagre resources of the suffering masses.

The problem got aggravated due to the socio-political and economic forces of the society which has culminated into the lopsided development of Health Services System. It contributes to the inadequacy and maldistribution of the health care delivery system and

development of other infra-structural facilities with specific reference to the problem of KA. These inadequacies compounded with the poverty of these people led the rise of phenomenon of quackery during the epidemic of KA.

It further brings to fore that the KA control activities under operation has been brought in response to the 'storming of legislation' by these people than to the 'felt need' of the people. Meaning thereby the KA control operations were forced upon the policy planners who had overlooked the welfare of these rural population at different junctures including the programme implementation.

The KA Control activities, under operation suffers due to a lack of variety of reasons including infrastructural inadequacies, financial constrains, bureaucratic disorganisations and administrative malfunctioning in dealing with the leakages in the 'delivery pipeline' hence a consequent failure of Public Health systems. This can be further inter-related to the inadequacies of Health Systems in itself in the state of Bihar. As evident from the number of epidemics occurring in a series at different intervals in the state of Bihar due to infrastructural inadequacies compounded by the paucity of resources in terms of finance and manpower are sufficient data to substantiate the failure of the system.

There is an evident lack of 'political will' in solving the KA in rural areas. In spite of the felt and assessed impacts of resurgence of KA for the last 12 years its expenditure remains under the heading of non-planned expenditure and no separate policy or programme has been spelt out to combat the menace of the problem which could be in consonance with the locally assessed local 'felt needs'.

This exploration calls for a further study in broader dimensions together with more of insights from the different disciplines of social sciences in the existing social, political and economic set up of the society. This may require more of maturity in understanding the problem and interpreting the same in the existing socio-cultural realities, which may provide few more clues to look into the 'grey areas' of the problem.

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<u>Sl. No.</u>	<u>Name of the Newspaper</u>	<u>Station</u>	<u>Dated</u>
1.	The Aaj	Patna	April 20, 1989
2.	The Aaj	Patna	Sept. 13, 1989
3.	The Anugamini	Hajipur	Dec. 28, 1989
4.	-do-	-do-	Dec. 29, 1989
5.	-do-	-do-	Dec. 31, 1989
6.	-do-	-do-	Jan. 10, 1990
7.	-do-	-do-	Jan. 12, 1990
8.	-do-	-do-	Jan. 17, 1990
9.	-do-	-do-	Jan. 30, 1990
10.	-do-	-do-	Feb. 04, 1990
11.	-do-	-do-	Feb. 08, 1990
12.	-do-	-do-	Feb. 23, 1990
13.	The Aryabrat	Patna	Nov. 10, 1974
14.	The Financial Express	Delhi	June 13, 1988
15.	The Hindustan	Patna	May 06, 1989
16.	-do-	-do-	May 18, 1989
17.	-do-	-do-	May 26, 1989
18.	-do-	-do-	Sept. 10, 1989
19.	The Hindu	Madras	Aug. 12, 1988
20.	The Hindustan Times	Patna	March 21, 1987
21.	-do-	N. Delhi	May 09, 1987
22.	-do-	-do-	March 10, 1988
23.	-do-	Patna	Aug. 11, 1988
24.	-do-	-do-	Aug. 30, 1988
25.	-do-	-do-	Aug. 31, 1988
26.	-do-	N. Delhi	Dec. 03, 1988
27.	-do-	Patna	Dec. 16, 1988
28.	-do-	-do-	Feb. 26, 1989
29.	-do-	-do-	March 02, 1989
30.	-do-	-do-	March 18, 1989

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<u>Sl. No.</u>	<u>Name of the Newspaper</u>	<u>Station</u>	<u>Dated</u>
31.	The Hindustan Times	N. Delhi	April 02, 1989
32.	-do-	Patna	April 30, 1989
33.	-do-	-do-	May 17, 1989
34.	-do-	-do-	May 23, 1989
35.	-do-	-do-	May 27, 1989
36.	-do-	-do-	May 29, 1989
37.	-do-	-do-	May 31, 1989
38.	-do-	-do-	June 30, 1989
39.	-do-	-do-	July 03, 1989
40.	-do-	N. Delhi	Aug. 07, 1989
41.	-do-	-do-	Aug. 26, 1989
42.	-do-	-do-	July 12, 1990
43.	The Indian Express	Bombay	April 16, 1987
44.	-do-	-do-	March 10, 1988
45.	-do-	-do-	Aug. 01, 1988
46.	-do-	N. Delhi	Aug. 12, 1988
47.	-do-	-do-	Oct. 14, 1988
48.	-do-	-do-	July 06, 1989
49.	-do-	-do-	Aug. 03, 1989
50.	The Indian Nation	Patna	Sep. 21, 1974
51.	-do-	-do-	Dec. 14, 1974
52.	The Nav Bharat Times	-do-	May 19, 1989
53.	-do-	-do-	Sept. 08, 1989
54.	-do-	-do-	June 30, 1990
55.	The Ranchi Express	Ranchi	April 20, 1989
56.	The Statesman	N. Delhi	April 13, 1987
57.	-do-	-do-	Aug. 12, 1988
58.	-do-	-do-	Aug. 21, 1989
59.	The Telegraph	Calcutta	Oct. 18, 1987
60.	-do-	-do-	Sept. 21, 1989

<u>Sl. No.</u>	<u>Name of the Newspaper</u>	<u>Station</u>	<u>Dated</u>
61.	The Times of India	N. Delhi	April 19, 1988
62.	-do-	-do-	Oct. 26, 1988
63.	-do-	Patna	May 03, 1989
64.	-do-	-do-	July 16, 1989
65.	-do-	-do-	May 27, 1990
66.	-do-	Patna	July 02, 1990
67.	-do-	N. Delhi	July 12, 1990

APPENDIX

TENTATIVE INTERVIEW SCHEDULE FOR DISTRICT LEVEL INFORMANTS

1. What is the existing set up district health organization?
2. What is the history of KA in the district?
3. Year and month were break ups of incidence and deaths due to KA in the district. (District health Authorities)
4. What is the role of district health organization in solving the problem of KA?
5. Do you conduct any survey at any point of time to assess the problem of KA?
6. Can you give some informations from these survey reports?
7. Can you tell me about the Co-relationship of social perception to the problem and your own technical assessment in terms of
 - a) magnitude of the problem?
 - b) Facilities available and accessible?
8. Where does the policy and programme fails?
9. Can you give any information about PKDL cases?
10. Any specific comments, if you have?

TENTATIVE INTERVIEW SCHEDULE FOR THE PHC LEVEL INFORMANTS

1. What is the existing set up of the PHC?
2. What is the role of PHC in combating the menace of KA?
3. What your records speak for KA in the block?
4. What is the role of Health Educator with respect to KA?
5. Did you achieve anything extraordinary in combating the problem of KA in your block?
6. What is your opinion about the people with respect to KA?
7. Why don't people come for treatment of KA to PHC?(if, the case remains unreported)

TENTATIVE INTERVIEW SCHEDULE FOR THE COMMUNITY INFORMANTS

1. Name : Age: Sex: No. of family members
2. Housing type:
3. Occupation :
4. Literate/illiterate
5. Facilities Available in the community School/PHC/Hospital/
Private practitioner/Medicine shop
6. Existing situation of health facilities:
7. General health behaviour (if there exists any :
conspicuous information)
8. Individual's worldview of KA (Notion, perception, cause,

symptoms and treatment of the diseases).

9. Has any one of the family member ever suffered this disease in your family?

10. What was the consequence?

11. How and when did you know that it was KA?

12. What did you do to get cured from it from this disease?

i) Which health institutions did you visit?

ii) How much did you avail the state medical facilities?

iii) Did you experience anything extraordinary in the whole process?

14. Case history report in detail.

15. Did you make any collective effort to solve the problem with reference to relieving

a) Sanitation.

b) Representaton made to the govt authorities to provide the facilities.

c) Representation to youuur representatives(like, M.P., MLA etc.)

16. What role did your representatives played for your cause?

17. What has been the role of government programmes for your cause?

18. What is your opinion about the role of PHC in combating

the problem of KA.

19. What is your perception about the policy and programme in relation to KA?

20. What is your opinion about the voluntary organizations and private practitioners with respect to KA problem?

21. Can you give any information about the last epidemic?

22. What is the situation of malaria and filaria in your community?

कालाजार उन्मूलन मोर्चा

कार्यालय : उत्तर बिहार, वाणिज्य मण्डल भवन

छोटी सरैयागंज, जवाहर लाल रोड, मुजफ्फरपुर - ४२१०१ फोन नं० - ५४२५

बिहार में कालाजार का प्रकोप

बिहार के उत्तरी हिस्से में कालाजार का प्रकोप बढ़ रहा है। यह एक खतरनाक रोग है, जो अक्सर गंभीर रूप में प्रकट होता है। लगभग तीन हजार लोग काल के गाल में पड़े चुके हैं। इस हालत में हमारा कर्तव्य होता है कि हम एकजुट होकर इन पीड़ित लोगों की प्राणरक्षा में लग जायें।

-: प्रतीक के तहत के कार्यालय

इसी उद्देश्य से कालाजार उन्मूलन मोर्चा का गठन किया गया है। यह एक स्वयंसेवी संस्था है। इसके साथ इस शहर के कई डॉक्टरों की मदद से काम किया जा रहा है।

आपकी मदद से काम कर सकता है।

- 1 अगर आपकी जानकारी में इस रोग से पीड़ित कोई व्यक्ति हो तो उन्हें मुजफ्फरपुर मोर्चे के कार्यालय में भेजने की कृपा करें।
- 2 उल्लिखित कार्यालय में उनकी डॉक्टरों की मदद होगी।
- 3 जाँच के पश्चात यदि कालाजार होने का सन्देह हुआ तो रोगी को एक हफ्ता काई दिसा अस्पताल में भेजा जाएगा।
- 4 इस हफ्ते काई के सरीरों की पूर्ण चिकित्सकीय परीक्षाएँ एवं पैथोलॉजिकल जाँच (जिसमें स्टीनिक बचर तथा बोन मेरी टेस्ट भी शामिल है) के लिए मुफ्त डॉक्टर के पास भेजा जायगा जहाँ उनकी मुफ्त जाँच होगी।
- 5 जाँच की रिपोर्ट पर मोर्चे के सहयोगी डॉक्टर अपनी राय देंगे तथा यदि सम्भव हुआ तो कुछ दवा का भी प्रबन्ध करेंगे।

मोर्चे के कार्यालय में भी कुछ दवा उपलब्ध हो सकती है। जिन्हे कम से कम मूल्य पर खरीदा जा सकता है।

मोर्चे के कार्यालय में भी कुछ दवा उपलब्ध हो सकती है। जिन्हे कम से कम मूल्य पर खरीदा जा सकता है।