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**T.B. SURVEY AMONG CHENCHUS
OF NALLAMALAI FOREST AREA.**

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CHAPTER - I

INTRODUCTION

For centuries, it has been believed that tuberculosis is hereditary and runs in the family and due to this belief, the patients carried a stigma and they were scared to disclose this disease to the community.

In 1882, Robert Koch, * an eminent German Scientist discovered the "Tubercle Bacilli", a micro-organism, responsible for the disease tuberculosis. This discovery completely wiped out all the age old beliefs with regard to tuberculosis.

Tuberculosis does not respect age, sex or socio-economic status of its victims. The tubercle bacilli primarily attacks the lungs, although almost all organs in the body can be involved. The patient who is suffering from tuberculosis of lungs, spreads the infection. When this patient coughs or sneezes, without covering his mouth, tiny particles of sputum which carry the tubercle bacilli, are expelled. These tubercle bacilli remain suspended in the air for a long period. When a healthy person in the vicinity inhales these particles, the tubercle bacilli makes entry into his lungs and thus the disease infects. The other source of transmission of this disease is by exchange of smoking, and feeding or kissing of the child by the mother etc.,

* Source: The Tuberculosis Association of India, New Delhi.

Symptoms: In the early stages, the symptoms of lung tuberculosis are very vague and mild.

- 1) Loss of weight,
- 2) Patient looks tired and exhausted,
- 3) Loss of appetite,
- 4) Not desirous to work,
- 5) Suffering from mild fever with persistent cough.

If the above symptoms persist for 2 - 4 weeks, the patient should go to the nearest hospital immediately for check-up.

DIAGNOSIS: The diagnosis of lung tuberculosis is based mainly on examination of the sputum of the patient and x-ray examination of his chest. Another diagnostic tool is the tuberculin test which is more applicable in the case of children.

TREATMENT: The discovery of powerful drugs like Rifampicin, Isoniazid, Streptomycin and Pyridoxine etc., effective in treating tuberculosis, constitute a milestone and one of the major medical advances of the century.

Further, the patients do not have to stay in hospitals and sanatoria, and there is no need for extra-nutritious diet or special foods or complete bed rest. They can be treated at home itself.

TUBERCULOSIS IN CHILDREN: In a big country like India, with a large number of TB patients living in crowded and congested localities in both urban and rural areas, the risk of infection is immense and starts as soon as the child is born. They need to be given a special care by immunising them with BCG vaccination. BCG vaccination at early age of life, provides a high level of protection against tuberculosis.

NATIONAL TUBERCULOSIS CONTROL PROGRAMME: The Government of India, the State Government and voluntary organisations together have been fighting a relentless battle against tuberculosis right from the year 1962 when the National Tuberculosis Control Programme (NTP) was launched. In order to make the programme more effective and to take the services nearer to the doorsteps of the people, the village health worker - one worker per village or a 1,000 population - are expected to identify chest symptomatics in the village and refer them for sputum examination. Further, health workers visit every village periodically. The health workers are also responsible for motivating the patients to ensure regularity in treatment. They also vaccinate the new borns with BCG and carry out health education in the community.

The main objective of the T.B. Control Programme are as follows:

- a) Early detection of cases of tuberculosis, confirmation of the diagnosis and arranging regular treatment - through programmed mass screening and treatment activities.
- b) Identifying drop out cases for achieving uninterrupted treatment of cases and thus reducing the foci of infection to prevent spread in the community.
- c) Ensuring universal immunization coverage of all infants with BCG immunization, with the assistance of local voluntary helpers in the community under the UIP.
- d) Ensuring adequate supply and distribution of Anti-TB drugs in identified places for effective domiciliary treatment or treatments at the PHC/Sub-centre of the case.
- e) Referral of active and advanced cases for inpatient treatment in the identified institutions.

TUBERCULOSIS IN INDIA: It is estimated that nearly 4 lakh persons die of tuberculosis in India every year. Out of the estimated 10 million patients nearly one fourth i.e., about 2.2 to 2.5 million are likely to be infectious. The prevalence rate (per 1000 population) is same both in rural and urban areas.

Studies conducted by the National Tuberculosis Institute, have shown that 61% of infectious cases have reported to doctors of modern medicine either in Government or Private sector and only 14% have reported to a specialised tuberculosis institution. This behaviour norm of the population has thrown a big responsibility on all General practitioners who constitute the biggest and most important segment of the medical profession and are often close to the patients.

Earlier in 1982, an attempt has been made to know the prevalence of T.B. in Tribal areas of Bhadrachalam division, Khammam District, Andhra Pradesh, by conducting a major survey. This survey is limited only to chest symptomatic tests performed on door to door basis by para medical staff i.e., the mobile x-ray units etc; In this study, out of 1.5 lakh people surveyed, 12.5% of TB cases were detected.

According to the report of commission for Scheduled Castes and Scheduled Tribes (1960), tuberculosis is very common among the tribes of Madhya Pradesh, Bihar and certain areas of Bengal and Assam. About 10 - 15% of the patients attending hospitals for T.B. treatment, were tribals. As the tribals visit the hospitals only in advanced stages, the reported cases are few compared to the actual incidence, and the danger of spreading the disease is very high. Tuberculosis was said to be on the rise in many tribal areas.

Mass B.C.G. Vaccination was introduced in tribal areas of Andhra Pradesh, but in practice it has become very difficult to take these services to the remote tribal areas which is one of the reasons for high incidence of T.B. in Mallamalai forest areas. So far, no systematic survey with regard to the T.B. has been taken up in the Chenchu area. The present study is an attempt to assess the prevalence of T.B. among the Chenchus in Mallamalai forest area with the help of Medical & Health Department personnel.

CHAPTER - II

AIMS AND OBJECTIVES OF THE STUDY

The main aim of the study is to find out the nature and prevalence of tuberculosis among Chenchus. The objectives are as follows:

- 1) To assess the prevalence of T.B. among Chenchus.
- 2) To assess the communicable aspects of T.B. in the context of prevailing sanitation and preventive measures.
- 3) To study the attitude of Chenchus towards modern medicine and treatment of T.B.
- 4) To assess the impact of B. I. . Vaccination programme on the Chenchus in the sample villages.

METHODOLOGY: This study is intended to be a rapid appraisal of the prevalence of T.B. among the Chenchus and it is proposed to take up a survey among the Chenchus of Mallamalai Forest Area. The villages were selected on random sampling. About 10 percent of families of Chenchus inhabiting the villages, were examined on purposive sampling with the help of Medical Officer concerned and detected cases were taken up for conducting case studies with a view to establish causes of the disease, nature of treatment undergone, stage of disease, parts affected and treatment required.

Secondary data was collected from the concerned Medical Officer and the Medical Officer attached to the Tuberculosis eradication programme, regarding the prevalence and nature of preventive and curative measures taken up for combating T.B.

AIM AND THE PEOPLE

Of 55 scheduled tribes of India present, whose population is 41,99,481 according to 1991 census (6.31% of tribals to the state's total population of 66.5 millions), 8 tribal groups were recognised as Primitive Tribal Groups (PTG's) by Government of India. The extremely backward tribal groups are identified as PTG's basing on their pre-agricultural stage of economy, low literacy, largely subsisting on food gathering and hunting. The Chenochu tribe was recognised as PTG in 1975. The remaining 7 PTG's are Kolam, Kondha Bedy, Kondha Savara, Gadaba, Khond, Porja and Thoti. The Chenochus are inhabiting 6 districts namely Mahabubnagar, Prakasam, Kurnool, Guntur, Nalgonda and Rangn Reddy. The district-wise number of Chenochu villages/hamlets is given in Annexure-I.

The Chenochus, traditionally a food gathering tribe, are predominantly found living in Nallamalai hills which spreads over Kurnool, Prakasam and Mahabubnagar districts. As these hills are abundant with flora and fauna, the Chenochus are subsisting on food gathering and hunting of wild animals.

The Chenochus are divided into 4 endogenous sub-divisions.

- i) Adavi Chenochus: They are traditionally forest dwellers, and hence the name 'Adavi Chenochus'.
- ii) Deva Chenochus: They are engaged as temple servants.
- iii) Bontha Chenochus: They named after 'Bontha' meaning a piece made up of an old cloth and rags tied around the waist of women folk. These Bontha Chenochus make household articles, ladders etc., with bamboo.
- iv) Kridhma Chenochus. They are nomadic mendicants, mainly subsist on begging. They are also called as Jazari Chenochus.

Of these 4 groups, only Adavi Chenchus and Devr. Chenchus constituting more than 60% of the total Chenchu population found in IEDA area while the remaining two groups namely Bontha Chenchus and Erishia Janchus account 40% to total Chenchu population, are spread over in plain areas.

The Social structure, clan organisation, customs and traditions of Adavi Chenchus and Devr. Chenchus are identical and inter-group marriages are socially accepted.

The important pilgrim centres like Brissalla, Chennandi and Ahobila of Kurnool District are situated in traditional habitats of Chenchus, and the Chenchus are assigned with special roles in these temple rituals.

FAMILY: Most of the Chenchu families are nuclear type. One of the characteristic feature of the Chenchu society is establishing a separate family by son, immediately after his marriage. Child marriages are very common among the Chenchus. The average size of a Chenchu household is 4.62 when compared to 5 persons among other tribal groups of the state.

HOUSING PATTERNS: Most of the Chenchus live in small conical shaped huts. However, rectangular, oblong and square type houses also exist. The Chenchus share their residence along with their goat, sheep and cattle by keeping them inside the house. Thus the Chenchu houses looks dirty and unclean and due to this, the Chenchus suffer from scabies and other skin diseases.

SETTLEMENT PATTERNS: The Chenchu settlement patterns are called as 'Chenchugudams' or 'Pantas'. These gudams are spread all over the Mallanalai hills. These habitats are exclusively inhabited by Chenchus. However, the Chenchus in the lower plateau of Annapurna and bordering areas of Guntur and Prakasam districts, live in symbiosis with the plains people. Jambadas also live with the Chenchus in some gudams.

ECONOMY: The Chenchus mostly depend on forest sources till today. M.F.P. Collection like gum, soapnuts, myrcabalams, adda leaves and honey etc., provide a source of livelihood. They sell the M.F.P. in G.C.C. sales depots and in turn purchase their daily requirements. Chenchus are adept in honey collection. Another important source of livelihood to the Chenchus of road side Chenchugudem is firewood selling.

The Forest Department provides employment opportunity to the Chenchus in bamboo cutting and construction works, teak plantations, nurseries etc., The Chenchus are also engaged as agricultural labourers.

The food gathering and semi-nomadic Chenchus are slowly taking up agriculture and domestication of cattle and utilising the special schemes provided by the Government for their development. Simultaneously irrigation wells, supply of plough bullocks, agricultural implements, oil engines, electrical motors etc; are also provided by I.T.D.A. and D.I.D.A's to settle the Chenchus in agriculture.

FOOD HABITS: Chenchus acquire food by gathering in the forest and through agriculture labour and domestication of animals. Forest plays a vital role in influencing the dietary patterns of the Chenchus throughout the year, and it comes to their rescue especially during the lean periods.

The most important food items that are consumed by the Chenchus are roots and tubers, leafy vegetables, vegetables, fruits, seeds & nuts, mushrooms, flesh foods and the agricultural foods like Jowar, Bajra and rice etc.

ROOTS AND TUBERS: The roots and tubers plays a vital role in Chenchu diet and their consumption varies seasonally. Chenchu adda, a variety of wild yam is consumed in large quantities.

Elavaragadda, Kaluvagadda, Tamaragadda, Chamagadda, Boddigadda, Chandagadda etc; are also consumed by the Chenchu depending on their availability in different seasons.

LEAFY VEGETABLES: During rainy season, Chenchus depend on leafy vegetables of wild varieties like Palakura, Ganga bailukura, Chenchalakura, Gongura, Thotakura, Perantalakura, Tiyyakura etc. They also eat leaves of lotus, water lily besides tender bamboo shoots, nakkeru, tamarind, and Moringa oteifera (Mulaga) However, the consumption of leafy vegetables is less due to their non-availability in summer season.

VEGETABLES: Chenchus collect wild brinjals and bitter gourd from the forest for consumption. Besides these, pumpkin, ridge gourd and wild beans are also being consumed by Chenchus. Wood apples and green tamarind are used in Chutney and curry preparations.

FRUITS: Innumerable varieties of fruits are consumed by the Chenchus and among them Kale Pandlu, Chitimiti Pandlu, Jana Pandlu, Konda regu, Dondapandlu, Parikipandlu, Palapandlu, are some of the important fruits eaten by them. During scarcity, the unripe fruit of seethaphal is cooked and eaten. The fruits of Ippa and sarapappu are also eaten.

SEEDS AND NUTS: Several seeds and nuts are consumed by the Chenchus, of which 'Madapu' seed is the most important one. These are roasted and eaten. Moha seeds are eaten as well as for extraction of oil. Tamarind seeds are roasted, powdered and used in the preparation of gruel during the lean periods. The other seeds eaten by them are Kasaginjal, Bamboo seeds and Gottepappu.

MUSHROOMS: Several varieties of mushrooms sprout in the forest at the onset of monsoon, but many of them are poisonous. The Chenchu eat 'Commu Kokku' (growing on bamboo bushes) and 'Mamidi Kokku' (growing on roots of mango tree). They are consumed by roasting with chilly powder.

FLESH FOODS: Chenchus hunt a variety of birds and animals like rabbits, Jungle cats, field rats, wildbear, squirrels, Peacocks, Jungle fowls, Iguana etc; with the help of bow and arrow. They collect wild variety of ants known as "Pedda Chaemalu" from the ant-hills, which are roasted and eaten. During the onset of rains, certain insects called "Usurlu", are collected by placing a small lamp with a net at the entrance of ant-hills. They are roasted and eaten which is a delicious food for them. Fishing is practised with the help of reed traps. Tortoise and crabs are also eaten by the Chenchus.

FOODS OBTAINED THROUGH AGRICULTURE: The contribution of agriculture is very less to the Chenchu diet, as only a limited number of house holds practice it. They grow crops like Jowar, Ragi, Variga, Italian millet, Sama, Bajra and pulses like horsegram and cow pea.

SEASONAL VARIATION: The foodhabits of Chenchus are primarily dependent on the availability of various food items from the forest. But for the last two decades, employment on wage basis in bamboo cutting and plantation, road construction and the extension activities of Girijan Co-operative Corporation Limited have brought changes in their foodhabits. Hence, the seasonal variations in the Chenchu diet is partly attributed to the Forest Department and its employment potential.

Summer season is a period aplenty for the Chenchus. Minor Forest Produce, fruits and gainful employment sources are available during the period. The usual menu consists of Jowar, Rice, Chilly, Chutney, Tamarind, Mohwa flower, Mango chutney and Mohwa Liquor. Animals which come to quench their thirst at the water sources, are hunted. The drying up of ponds provide good source of fish in certain pentas. But this season is particularly scarce in the matter of leafy vegetables and milk products. Tender Tamarind and Bamboo shoots are the only Leafy Vegetables being consumed by the Chenchus in this season.

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At the time of onset of rains, the chances of getting employment is reduced and the quantity of cereals which are to be purchased, are decreased in their diet. A majority of Chenchus virtually starve in this period. Large ^{quantities} of leaves are simply cooked with water and then eaten. Roots and tubers are very scarce in this period. Some seasonal fruits are available. Due to scarcity, the Chenchus eat several unusual fruits and roots during this period.

From October, Jowar harvesting season commences and Jowar is consumed along with cooked vegetables which gradually decreases after this season. Roots and tubers form their staple food in that period. From January, bamboo cutting operations begins and Ragi is also harvested. With the increase of forest labour, the consumption of Rice and Jowar also gradually increased.

Small game provides flesh food to Chenchus occasionally in all seasons.

ANALYSIS

This study was conducted with the help of medical personnel in 3 districts namely Mahaboobnagar, Kurnool and Prakasham, covering 18 villages i.e., 7 villages in Mahaboobnagar 6 villages in Kurnool and 5 villages in Prakasham. The list of villages with their population covered for this survey is given in Annexure-II. About 149 households with a population of 677 were covered, and among them 349 were males while the remaining 328 were females. The average sex ratio is 940 females per 1000 males.

Out of 677 persons (149 households) covered in the study, 30 persons were found to be suffering from T.B. at various stages of infestation. More number of T.B. cases (20%) were found in Jangam Reddi palli of Mahaboobnagar district, followed by 13.33% in Chintala of Prakasham district and the same percentage of cases were found in Mahanandi and Nagaluty villages of Kurnool district. It is found that, out of the 18 surveyed villages, the T.B. cases were found in only 10 villages. Details of the village-wise households covered and number of T.B. cases found are given in Annexure-III.

Out of the 677 persons, 108 persons are not susceptible to T.B. as they are below 5 years and above 60 years of age who are generally non-susceptible to the T.B. The details are given in Annexure-IV.

DEMOGRAPHY: Nearly 47% of the population are dependents ~~if we consider the population~~ (below 14 years of age and above 60 years.) It is almost equal among males and females. This shows that nearly half of the population are dependents i.e. non-earners. The population is very young, typical of P.T.G's experiencing high fertility, high infant and child mortality and lower life

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expectancy rates. This conclusion is drawn from the Annexure-IV because nearly 48% of the population is in between the age groups of 15 and 60 years in both sexes. The population appears to be static between 15-40 years and a sudden fall is observed afterwards. The fall in percentage of population between 0-14 years indicates high child mortality and the fall after 40 years due to higher death rate. Almost equal percentage of old aged are found both in males and females.

As per the survey no single T.B. case was found among the children below 5 years of age. Only one case was found for a person who is above 60 years (3.33%). About 20.22%, 16.60% and 13.30% cases were found in the age groups of 35-39, 40-44 and 30-34 respectively. Out of these 30 cases, 87% are males and 13% are females. Details are given in Annexure-V.

TABLE-I

PREVALENCE OF T.B. ACCORDING TO SEX AMONG TRIBAL POPULATION

		MALE		FEMALE		TOTAL	
No		affected	%	No	affected %	No.	affected
Tribal	349	20	5.73	328	10	3.05	677 36
						4.43	
		<u>Sex Ratio:</u>		Males		Females	
				1000		946	

Out of the population surveyed 30 cases were found suffering from T.B. Among them 5.73% males and 3.05% females were affected with T.B. - Altogether 4.43% of the population were suffering from T.B. T.B. is found to be 5.18% if susceptible population is also taken into consideration i.e., Children below 5 years of age and adults above 60 years of age.

It is more than the Andhra Pradesh's average prevalence rate of 1.8 to 2.5% and also to average All India's Prevalence rate of 2.0%.

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TABLE-IIPREVALANCE OF T.B. IN VARIOUS AGE GROUPS:

Age Group	Males			Females		
	No.	affected with T.P.	%	No	affected with T.B.	%
0-10	110	1	0.91	119	2	1.68
11-20	77	-	-	51	2	3.92
21-30	50	2	4.00	59	1	1.69
31-40	56	8	14.29	52	2	3.85
41-50	25	7	28.00	27	1	3.70
51-60	20	2	10.00	11	1	0.09
60 +	11	-	-	9	1	11.11
TOTAL:	349	20	5.73	328	10	3.05

More number of T.B. cases were found among the males in the age groups of 31-40 and 41-50. Out of the 20 identified T.B. cases found among males 15 cases are in the higher age groups only. A very few cases are found in the age groups 0-10, 11-20 and 60 + and their percentage is 8.65. It is evident that, out of the 10 females sufferers 50% of them among are found below the age of 30 years.

TABLE-IIIPREVALENCE OF T.B. AND HOUSE HOLD SANITATION

Type of House Hold	No.	Affected	%	Type of House hold	No affected	%
With sepearte Kitchen	59	7	11.86	Without separate Kitchen	90	25.53
Well ventila- ted.	65	9	13.85	Poorly ventilated	84	25
Clean surround- ing.	81	8	9.88	Un-clean surround- ings.	68	32.35

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House holds with separate Kitchens, good ventilation and clean surroundings have a low percentage of affected persons with T.B. compared to the persons living in the houses without separate kitchen, poor ventilation and unclean surroundings. This shows that T.B. is more prevalent in households with uncleaned sanitary conditions. This uncleanness may be attributed for keeping up of the cattle, sheep and goats within their houses. Due to poor ventilation, the smoke accumulates within the houses which ultimately causes the respiratory diseases such as pulmonary tuberculosis and bronchitis etc; This may cut short the supply of oxygen to lungs and heart which will ultimately weaken the resisting capacity of the body to combat with the bacteria i.e., tubercle bacilli. Hence, the Chenchus are more susceptible to T.B. Another curative factor is methane gas production which will weaken the pulmonary system.

The prevalence of T.B. is slightly higher among family members of consanguineous marriages compared to families of non-consanguineous marriages. This may be due to close inbreeding among relatives in the case of families constituted of consanguineous marriages who are less resistant to the disease. Not so much difference is observed with regard to prevalence of T.B. among both the nuclear and Joint families. (This observation was made during the study)

TABLE-IV
PREVALENCE OF T.B. AMONG EARNERS AND NON-EARNERS

	No.	Affected	%
EARNING MEMBERS	428	26	6.07
NON-EARNING MEMBERS	249	4	1.61

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It is evident from the above table, that majority of the persons affected with T.B. are earners only. This may be attributed to the habit of drinking and smoking. They had been habituated for these in order to relieve from the pains caused due to hardships in agricultural labour etc; When the earning member has been hospitalised for T.B. treatment, the family income ultimately decreases. This results in the consumption of inadequate quantities of food. This malnutrition leads to susceptibility to T.B. to other family members. Here it is interesting to note that improvised economy is adversely affecting the health of not only the earner but also other family members.

TABLE-V
PREVALENCE OF T.B. AMONG LITERATES AND ILLITERATES

	No	Affected	%
LITERATES	206	9	4.37
ILLITERATES	471	21	4.46
TOTAL	677	30	4.43

The aforementioned table reveals that 70% of the affected members are illiterates. This prevalence is more than 2 times higher than the literates. This clearly shows that education plays a vital role in personal hygiene and preventive measures.

TABLE-VI
PREVALENCE OF T.B. AMONG SMOKERS AND NON-SMOKERS

	MALES			FEMALES			TOTAL		
	No	Affected	%	No affected	%	No affected	%		
SMOKERS	258	20	7.75	196	4.08	454	6.17		
NON-SMOKERS	91	-	-	132	1.51	223	0.96		

Contd.

Of the 30 affected persons, 28 are smokers and 2 are non-smokers. This clearly reveals that habit of smoking aggravates the disease by weakening the lungs and consequently making the smokers more prone to infection caused by Bacteria. 8 female smokers got affected with T.B. where as two female non-smoker children below the age group of 10 years also found suffering from T.B. This may be attributed to the inhalation of the smoke, while helping their mother's in the Kitchen.

B.C.G. VACCINATION PROGRAMME:

Due to fear of after-effects of BCG vaccination, most of the children in the Chenchu area are not utilising the Universal Immunisation Programme (UIP) like BCG, DPT etc., This is one of the reasons for the higher number of T.B. cases among the Chenchus in Nallamalai forest area.

TABLE-VII

ATTITUDE OF THE CHENCHUS TOWARDS MODERN MEDICINE

Total No. of House Holds	Once visited the Hospital	%	Twice visited the hospital	%	Not visited Hospital	%
149	76	51.01	41	27.52	32	21.47

It is noticed from the study that out of 149 households surveyed, 21.47% had never visited the hospitals because the tribals feel shy to converse to the strangers due to fear of inferior complexity and that's why most of the tribals who are suffering with diseases are not visiting the hospitals. They are of the opinion that proper treatment is not given to them for the simple reason that as if they had been very lowly placed in the society. This assumption had led the Chenchus not to visit the hospitals and instead they prefer to take treatment from the quack doctors and native traditional doctors and the

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innocent Chenchus fall prey to the quack doctors as they were not qualified doctors to prescribe exact treatment for the disease. As they are living in the vicinities of forest, self care is carried out by themselves for treatment of certain diseases, by use of medicinal plants available in the forests. They opined that proper treatment is not available in Govt. hospitals due to non-availability of medicines and doctors. Generally tribal perceptions of disease and medicine are in terms of curative only but not on preventive care. Due to high incidence of morbidity and remoteness of villages, the net work of health service provision allocated for tribal areas under the state's 5 - tier system is more intensive than in the plains.

Even today the Chenchus do not have faith or belief in the modern medicines. They attribute small-pox, Chicken pox, Cholera etc; to the wrath of God or Goddess. In spite of good number of medical institutions in Prakasam and Mahabubnagar districts, the Chenchus are not utilising the medical services. The list of existing medical institutions were listed in the Annexure-VI. There are altogether 5 civil hospitals exist in the project area which are situated at Amarabad, Achampet and Lingala of Mahabubnagar district, Atmakur of Kurnool district and Macherla of Guntur district. Besides these, 10 Primary Health Centres 2 mobile medical units, 3 Ayurvedic dispensaries and one homeo dispensary are in the project area. Each medical institution covers on an average of 159 Sq. Kms.

Every year the State Government releases an amount of Rs.5 lakhs to the Chenchu I.T.D.A. for medical purposes under impact money. In turn, the I.T.D.A. releases the money to the concerned district Officer for the development of Chenchus. This money is intended to spent on general medical camps

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especially tuberculosis and for purchase of medicines etc;

Besides this, the G.C.C. is also operating the medical units to provide medical facilities under the impact money to the Chenchus living in interior villiages by appointing RMP doctor and Aaya.

Inspite of so many medical and health facilities provided for the good health of the Chenchus, their attitude towards modern medicine almost remain unchanged till now and not achieved the expected goal interms of health care of the Chenchus.

SUMMARY FINDINGS:

In Integrated Tribal Development Agency exclusively for the socio-economic development of Chenchus, was established in 1975 with its head quarters at Hyderabad and later it has been shifted to Saisailam in 1988. This project covers an area of 3,500 Sq. Kms.

Majority of the Chenchus live in conical shaped, thatched huts with poor ventilation facilities. The survey revealed that prevalence of T.B. is high in households without proper ventilation and separate kitchens. They believe that the smoke from the hearth protects the roof from white ants, The Chenchus are against the construction of Chimneys and using of smokeless chulhas. Another reason attributed for this is as most of the Chenchus are poor and cannot afford warm clothes during winter, They construct their houses without windows to keep them warm during the winter. This ultimately leads them more susceptible to T.B. Now, the I.T.D.A. is constructing the semi-pucca houses with well-ventilation and separate kitchens, in some of the villages under housing schemes.

Further, the Chenchus are keeping up their domestic animals like cattle, sheep and goat within their houses to protect from the tigers as most of the Chenchus are living in the core area of Tiger Project. This leads to uncleanness of the houses and produce certain toxic gases like methane which is affecting their lungs and other parts. This may be one of the reasons for more susceptibility to T.B. to the Chenchus. Most of the Chenchus use detergent soaps both for bathing and washing. They used to take bath twice or thrice a week and wear the clothes used by other members of the family. They wash their clothes only at the time of bathing. Generally, they take bath in

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the ponds, streams and borewells. In a nutshell, due to illiteracy and poverty, their personal hygiene is very poor.

Almost all the Chenchus are habituated to drinking and smoking. Generally, they smoke cigars and beedies. They exchange the lighted cigars with other members of the family and friends, without having any idea of salival contamination. Further, indiscriminate spitting in and around the house by T.B. patients enhances the chances of polluting food, water and air with infectious germs. These practices offer large scope for spreading the T.B. to other family members living in the vicinity.

Another causative factor for depletion of natural resistance to combat the tubercle bacilli is their insufficient and imbalanced diets during the lean periods. They waste most of their earnings for smoking and drinking only which deny them of nutritious food. Further, most of the Chenchus do not consume milk due to beliefs that it is a sin to deprive the calf of its share of milk from the mother.

In the study area, no traditional medicinal man has come across in the Chenchu villages who are known for treatment of illnesses with native medicines or herbal medicines. When the disease is chronic, then the sufferer is visiting the hospital to take the modern medicines that too only to suppress the unbearable pains arising due to the severity of the disease. This tendency is found in some cases only while the remaining are still suffering without consulting doctors (case studies were given in the annexure No-VI)

The common ailments occurred among the community are respiratory tract diseases like bronchitis, pneumonia, stomach ache, malaria, viral fevers and chest pains etc; if a person suffering from pains of chest and stomach, in order to get relieved from the pain, tamarind seed or *Caesalpinia buldac*

Contd.,

seed (locally called as Gachha Kayi) is heated and immediately applied at the place of pain, so as to leave a scar at that place. It is the belief, that the Chenchus feel that the amount of pain due to chest and stomach aches will be lesser than the pain arises after applying of either of the heated seeds. By that way the sufferer forget the earlier pains and feels got relaxed temporarily. The research team from T.C.R. & T.I., Hyderabad had enquired some persons who had previously suffered with chest and stomach pains and applied the above mentioned practice. Most of them had expressed their staunch belief in this type of self treatment. One T.B. camp was organised at Yerragonda palem 4 years back. They identified some patients and treatment was also given. But subsequently there is no follow up action by / ^{the} medical personnel whenever they visit the chenchu gudams, the patient will be in / ^{forest} and so there is a missing link. Again the disease will not subside and on the other hand it will spread to others. The very purpose of medical camp is a failure here due to lack of proper understanding between chenchu and the medical staff.

Although the economy of the Chenchus has increased, reflection on health and nutrition angle is very less and negligible. The following reasons can be drawn up for the above conclusion.

Although the economy has increased as daily labourer through forest department, M.F.P. collection and various schemes by G.C.C. like S.A.O. loans, the amount thus derived is being spent on the purchase of liquor and other cosmetic items and purchase of clothes etc; Besides this, there is free supply of 25 Kgs of rice and 2 Kgs of ^{family} dal to the / school going child. But this has negative aspect, in the sense that this rice is being sold at the delivery point in order to spare that amount for purchase of fancy items etc.

SUGGESTIONS

1. Most of the Primary Health Centres in the Project area are not well equipped with the required facilities for the treatment of T.B. As most of the Chenchus are living at far off places, they cannot afford to spend amounts beyond their capacities towards travelling and treatment purposes. Further some of the Chenchus got disgusted with the treatment meted out at the hospitals.
2. The PHC's may be adequately supplied with sufficient drugs and equipment for treatment T.B. cases. When a T.B. patient admitted to the P.H.C. for treatment, he and his attendant should be given diet at free of cost so that the patient can stay at the hospital itself until the end of the course. If the sufferer is the head of the family, other non-earning members of the family may also be provided certain amount for their sustenance.
3. Due to lack of knowledge, the T.B. patients are discontinuing the treatment after sometime thus making the tubercle bacilli infest again. In order to overcome this problem, steps may be taken to supply medicines at the door steps for the follow-up action. The personnel of the mobile medical units (M.U) should be made responsible for the early detection of the disease and followup treatment. The multipurpose health workers/ANM's may also be made to inspect periodically to see the patients to take the drugs regularly without discontinuing in the middle of the course. The tribals should be educated in the field of health by conducting health camps especially for the diseases like T.B. and Malaria.
4. Most of the tribals are not availing immunisation schemes like BCG vaccination etc; with fear of after effects. In view of the high prevalence of T.B. the BCG vaccination may be made compulsory to all the new born children. This is to be

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successfully implemented through video films and wall posters revealing the causes of the disease and its after effects to the Chenchus, so as to make them aware of the health programmes.

5. Majority of the Chenchus are not visiting the hospitals for the treatment due to shyness and inferior complexity. This notion can be removed from their minds by organising community based health camps along with medical personnel of that area.

6. The socio-cultural practices coupled with unhygienic conditions in tribal areas are obviously a cause for the rapid spread of this highly infectious disease. In order to overcome this, a comprehensive T.B. eradication programme has to be made to control further spread of T.B. and afford relief on proper treatment to the afflicted.

7. Steps should be taken to stop drinking & smoking which are normally aggravating this disease. In order to ease from the aggravations of disease the Chenchus have to be educated by organising the community oriented health camps nearer their habitats.

8. Educated Chenchus may be appointed for a cluster of villages, by giving training in T.B. control programmes so that he will effectively work as a liaison worker between Medical Personnel and the patients in symptomatic diagnosis of the disease, for treatment, and for follow up action i.e., uninterrupted treatment.

9. The Health camps especially T.B. are to be organised periodically at various focal points not only for diagnosis but also for follow up actions.

10. Mass campaign programme is to be organised, so as to make Chenchus aware of the health problems.

11. The Chenchus, who practice Herbal Medicine or Aurvedic Medicine for T.B. may be encouraged by giving financial assistance and other required facilities.

More MM units may be established in Chenchu area rather than PHC's and sub-centres, for reaching Medical services to interior areas. A central point is to be fixed where there is G.C.C. D.R. Depot and a particular date is to be fixed by the M.M. units so that, the Chenchus will visit this depot not only for treatment but also for selling their products or Minor Forest Produce.

ANNEXURE-IDISTRICT-WISE NUMBER OF CHENCHU VILLAGES/HAMLETS IN ITD.. AREA

S.No.	Name of the District	No. of Villages/Hamlets
1.	Mahabubnagar	96
2.	Prakasham	55
3.	Kurnool	27
4.	Guntur	42
5.	Nalgonda	16
6.	Ranga Reddy	33
TOTAL		269

Source:- ITDA, PIG (Chenchus), Sundarata, Kurnool District,
Andhra Pradesh (1990-91).

ANNEXURE - II

District wise Number of Villages covered and the population
Coverage during the Survey

Sl. No.	Name of the Village	District	Males	Females	Total
1.	Lopapur	Mahabubnagar	4	11	15
2.	Farhabad	"	6	4	10
3.	Jangamreddy Pally	"	12	14	26
4.	Veelaram Colony	"	10	13	23
5.	Himalkale	"	7	7	14
6.	Ramour	"	-	8	16
7.	Hsimilla	"	25	15	40
8.	Chinna Arutla	Prakasham	9	14	23
9.	Chintala	"	51	44	95
10.	Korraprolu	"	17	18	37
11.	Narripalem	"	72	63	135
12.	Pedda Arutla	"	10	9	19
13.	Madugula	Kurnool	6	13	19
14.	Mahanandi	"	13	16	29
15.	Nagaluty	"	6	8	14
16.	Nemallakunta	"	34	31	65
17.	Panyam	"	47	34	81
18.	SunSipenta	"	10	6	16
Total		43	347	323	677

ANNEXURE - IIIVILLAGE WISE NUMBER OF HOUSE HOLDS COVERED AND NUMBER OF T.B. CASES FOUND

Sl. No.	Village	Number of House holds covered in the Village	Number of T.B. Cases found
1.	Appapur	3	1 (3.33)
2.	Farhabad	3	-
3.	Janganreddi Pally	5	6 (20.00)
4.	Macheram Colony	5	2 (6.76)
5.	Medimelkala	3	-
6.	Rampur	4	-
7.	Udimilla	12	1 (3.33)
8.	Chinna Arutla	6	-
9.	Chintala	21	4 (13.33)
10.	Korraprolu	7	3 (10.00)
11.	Marripalem	28	3 (10.00)
12.	Pedda Arutla	3	-
13.	Madugula	4	-
14.	Mahanandi	8	4 (13.33)
15.	Nagalutty	5	4 (13.33)
16.	Nemilla kunte	12	-
17.	Panyam	16	-
18.	Sundipenta	4	2 (6.67)
Total		149	30 (100.00)

ANNEXURE - IVSTATEMENT SHOWING AGE - GROUP WISE MALES AND FEMALES IN
CHENCHU AREA'S.

Age Group	Males	Females	Total
0-4	41 (11.75)	47 (14.33)	88 (13.00)
5-9	69 (19.77)	72 (21.95)	141 (20.83)
10-14	50 (14.33)	32 (9.76)	82 (12.11)
15-19	27 (7.74)	19 (5.79)	46 (6.79)
20-24	22 (6.30)	28 (8.53)	50 (7.38)
25-29	28 (8.02)	31 (9.45)	58 (8.71)
30-34	25 (7.15)	29 (8.84)	54 (7.98)
35-39	31 (8.88)	23 (7.01)	54 (7.98)
40-44	13 (3.72)	14 (4.28)	27 (3.99)
45-49	12 (3.44)	13 (3.96)	25 (3.69)
50-54	15 (4.30)	7 (2.13)	22 (3.25)
55-59	5 (1.43)	4 (1.23)	9 (1.33)
60+	11 (3.15)	9 (2.74)	20 (2.96)
Total	349 (100.00)	328 (100.00)	677 (100.00)

Sex - Ratio = 940 Females
for 1000 Males.

ANNEXURE - V

STATEMENT SHOWING THE AGE - GROUPS - WHITE C.T.P.
PATIENTS IN CHAMPAI AREA.

Age Group	Males	Females	Total
0-4	-	2 (20.00)	2 (10.00)
5-9	1 (5.0)	2 (20.00)	2 (6.67)
10-14	-	-	-
15-19	-	-	-
20-24	-	1 (10.00)	3 (10.00)
25-29	2 (10.0)	1 (10.00)	4 (13.33)
30-34	3 (15.00)	1 (10.00)	6 (20.00)
35-39	5 (25.00)	-	5 (16.67)
40-44	5 (25.00)	1 (10.00)	3 (10.00)
45-49	2 (10.00)	1 (10.00)	3 (10.00)
50-54	2 (10.00)	-	-
55-59	-	1 (10.00)	1 (3.33)
60+	-	-	-
Total	20 (66.66)	10 (33.33)	30

Medical Institutions in the I.T.D.A. areas:

The following are the Hospitals, Primary Health Centres/Mobile Medical Units functioning in the I.T.D.A. areas.

Sl. No.	District	Head	Location of the hospital
1.	<u>Mahaboobnagar:</u>	Amrabad	1. Govt. Civil Hospital Amrabad
			2. Primary Health Centre, Pedra
			3. Primary Health Centre, Mannenoor
			4. Mobile Medical unit, Mannanor,
			5. Govt. Ayurvedi Dispensary, Mannenoor,
		Achampet	6. Govt. Civil Hospital, Achampet,
			7. Primary Health Centre, Siddapur
		Balmoor	8. Primary Health Centre, Balmoor,
			9. Govt. Ayurvedi Dispensary, Koadragula.
		Lingal	10. Govt. Civil Hospital, Lingal,
			11. Primary Upunuthala,
			12. Health Centre, Ambatpalli.
		Pedda Dornala	13. Chenchu Mobile Medical unit, P.Dornala,
2.	<u>Prakasam:</u>		14. Primary Health Centre, P.Dornala,
		Yerragonda palem	15. Upgraded Primary Health Centre, Yerragondapalem
			16. Govt. Homeopathi Dispensary, Veersabhapuram.
		Pallalacheruvu	17. Primary Health Centre, Pallalacheruvu.
		Atmakur	18. Health Unit, Kottalacheruvu
			19. Govt. Civil Hospital, Atmakur.
3.	<u>Kurnool:</u>		20. Govt. Civil Hospital, Macharla
			21. Primary Health Centre, Macharla
4.	<u>Guntur:</u>		22. Govt. Ayurvedic Dispensary,

CASE STUDY-I:

An old man by name Mekale Veeranna (55 years) of Maddimadugu Village of Mahaboobnagar district, got burnt his right leg when he was sleeping by the side of the hearth. Inspite of the treatment given by the G.C.C. sponsored R.M.P. Doctor, the pains due to burning sensation did not get suppressed. He was advised to go to PHC, Pedra for further treatment. As (his Village is far interiorly situated, his son is reluctant to take his father to Pedra due to lack of conveyance facilities, The research team from TOR & TI., Hyderabad, had persuaded the patient to go to Pedra by arranging a Vehicle. The Doctor has treated the wounds and the patient felt relaxed from the pains. If the patient left untreated, there is a danger of removal of his leg due to gangrene.

This shows that the Chenchus are not interested to go to hospitals situated at far away places for treatment due to lack of conveyance facilities and poverty.

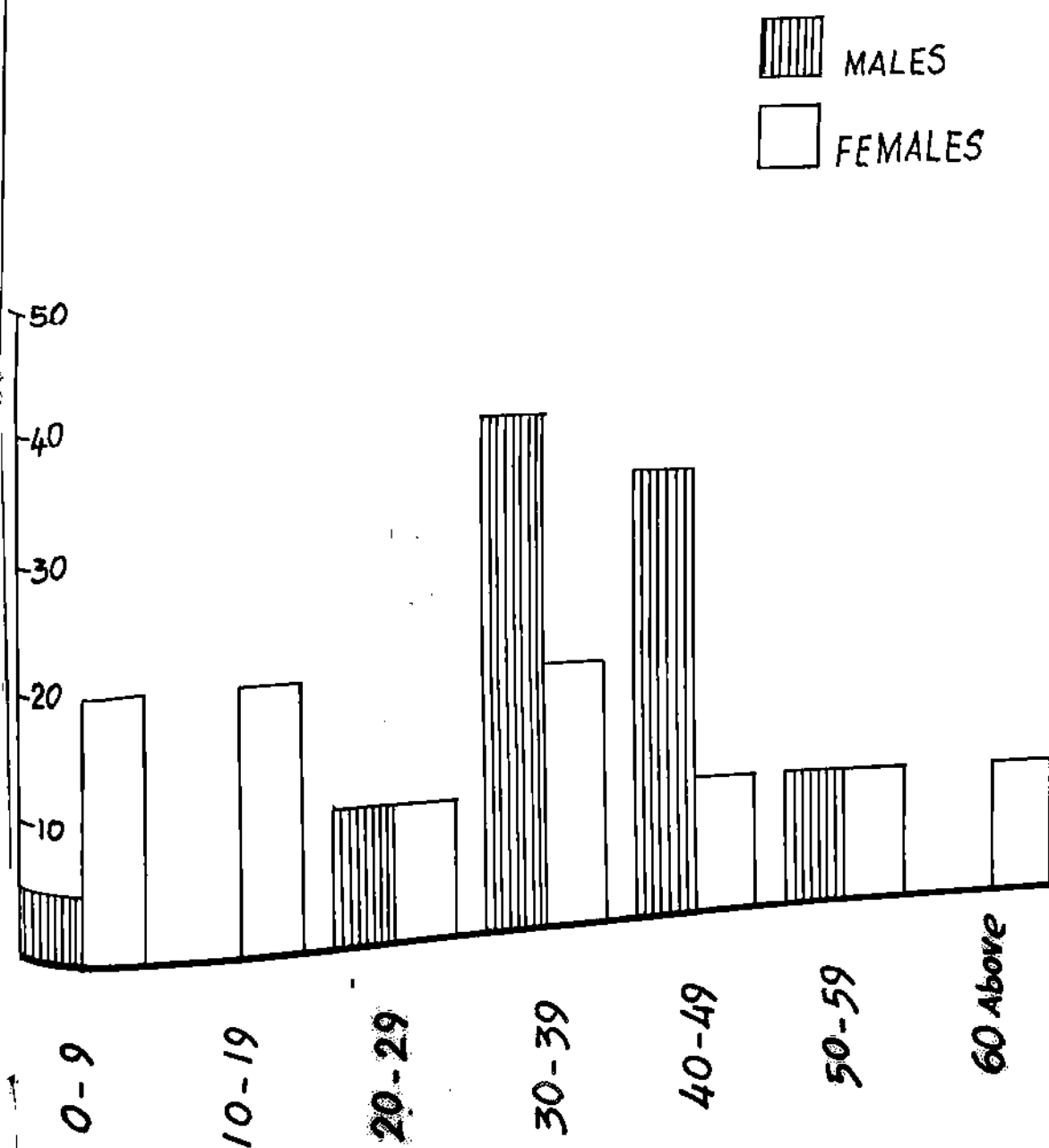
CASE STUDY-II:

One woman named Bhuneni, Sukkanna, (40 years) of Hallakunta Village, Prakasham district, was bitten by the dog near her right eye, and no one to take her to the hospital situated at Dornala for treatment. She is also unwilling to go to hospital with simple reason that due to her absense at the house, no one is to look after her family as she is the only earning member by selling firewood etc; Further her husband is not fetching any income for the family maintenance and he is always in intoxication mood. The research team from TCR & TI., Hyderabad, had persuaded her to go to Dornala Hospital. After first aid treatment she was sent back to her village by providing a vehicle. The M.M.Unit doctor was advised to have a close watch on this poor woman till she is free from that wound.

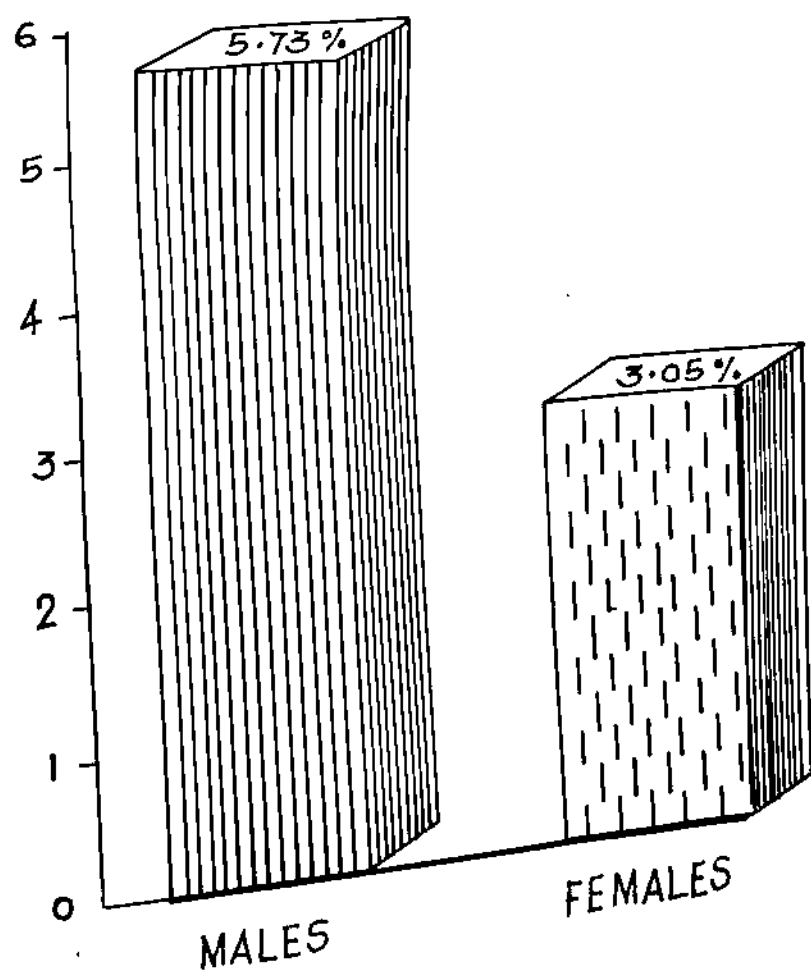
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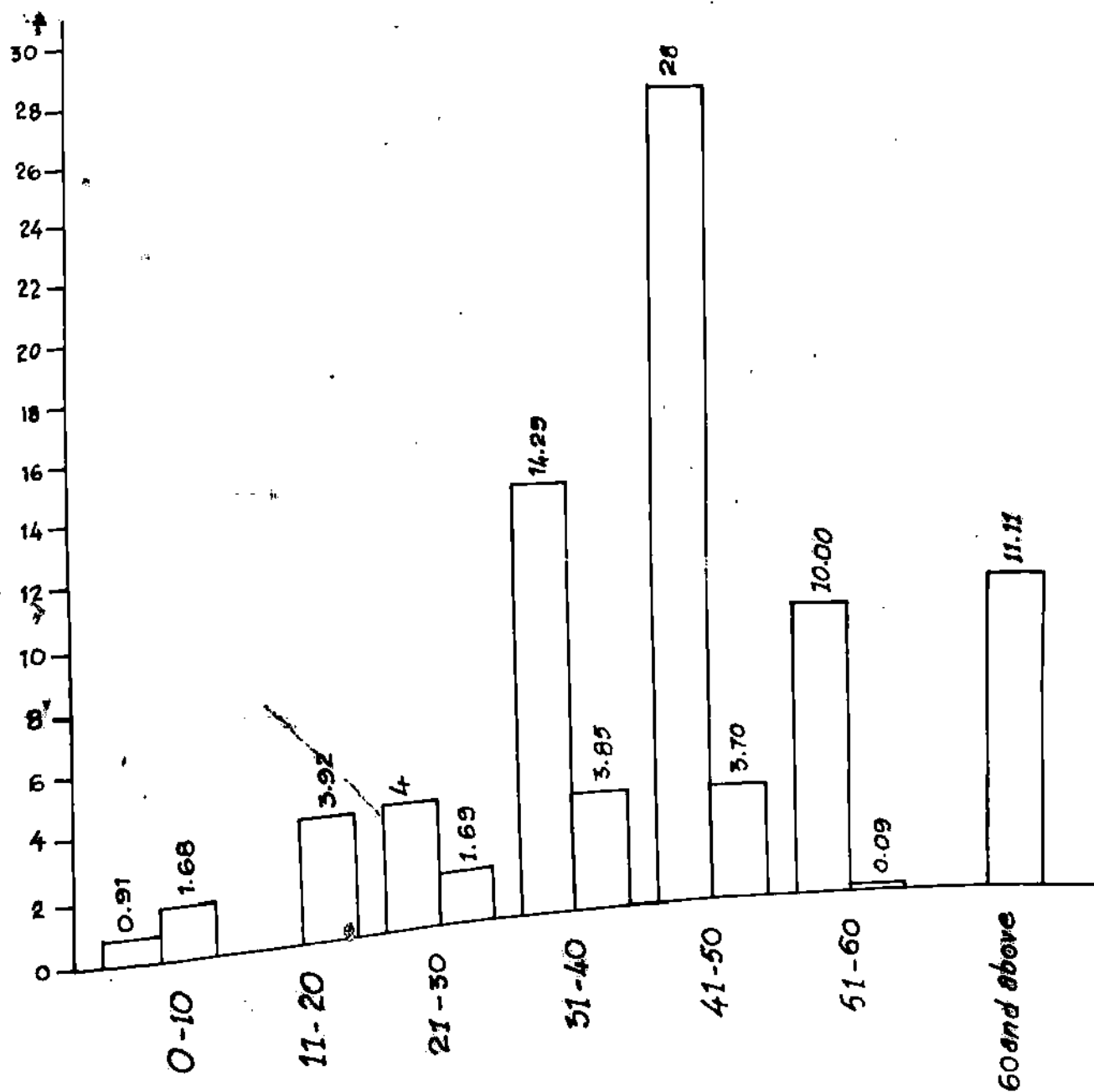
AGE GROUP WISE NUMBER OF T.B PATIENTS
AMONG CHENCHUS IN STUDY AREA.



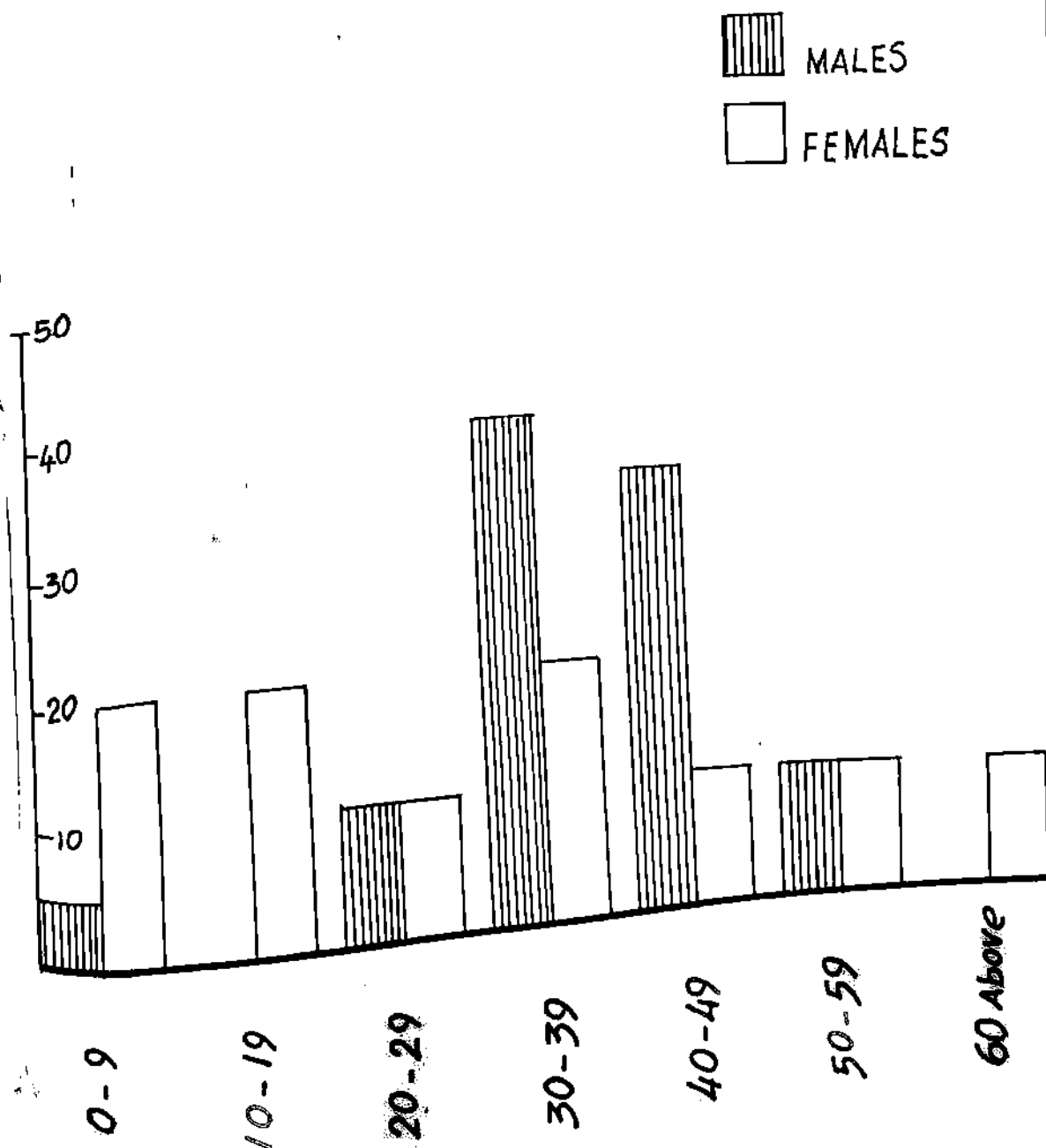
*Prevalence Of T.B. Among
Tribal Population.*



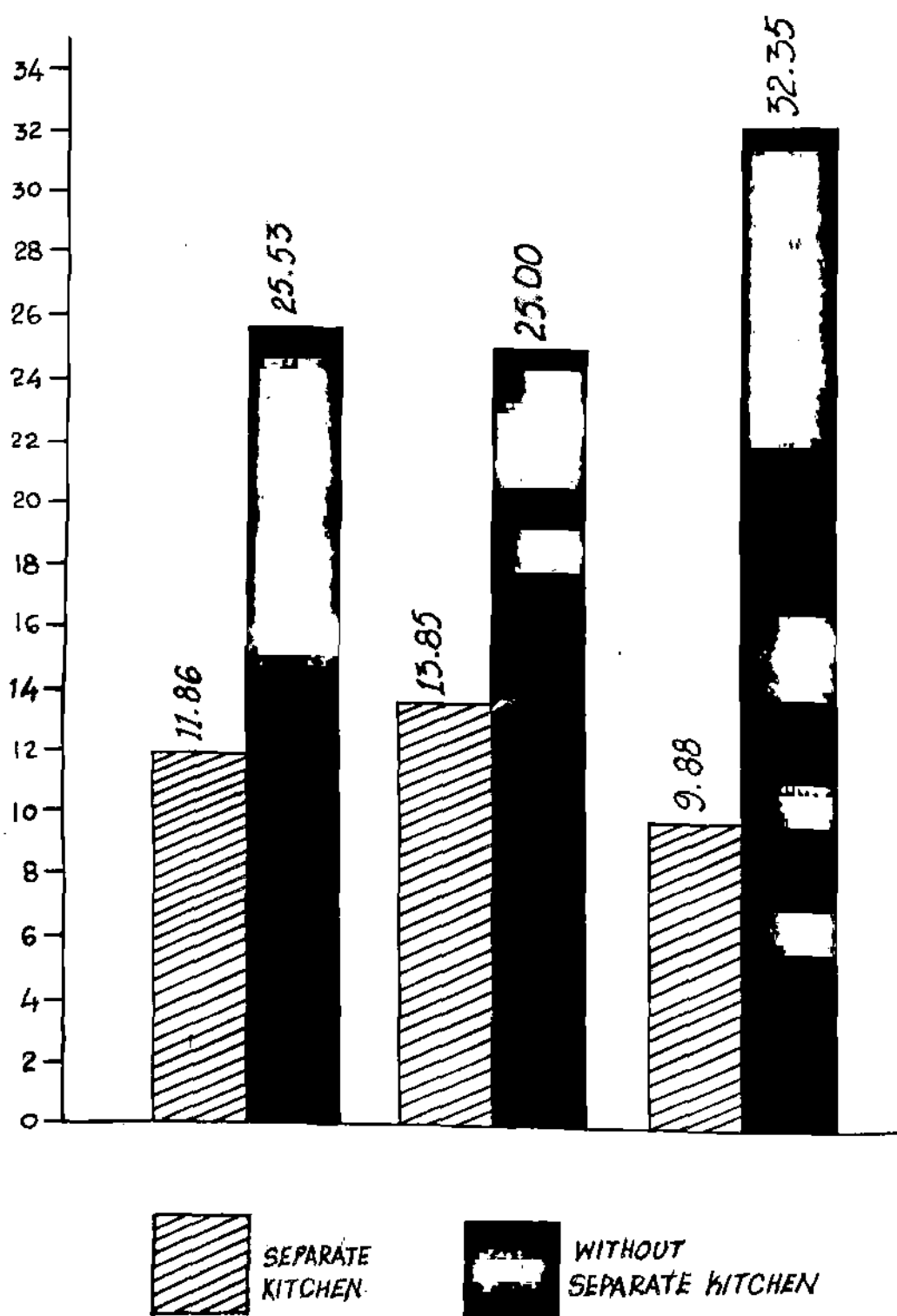
*Prevalance of T.B.
In Various Age Groups*



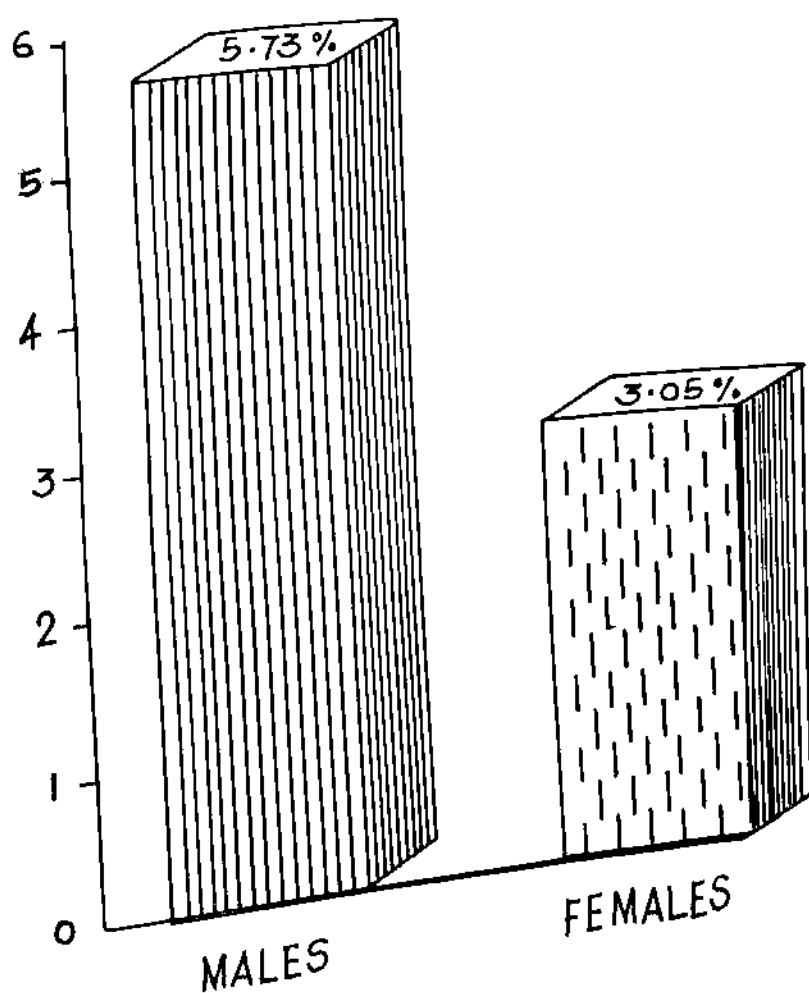
AGE GROUP WISE NUMBER OF T.B PATIENTS
AMONG CHENCHUS IN STUDY AREA.



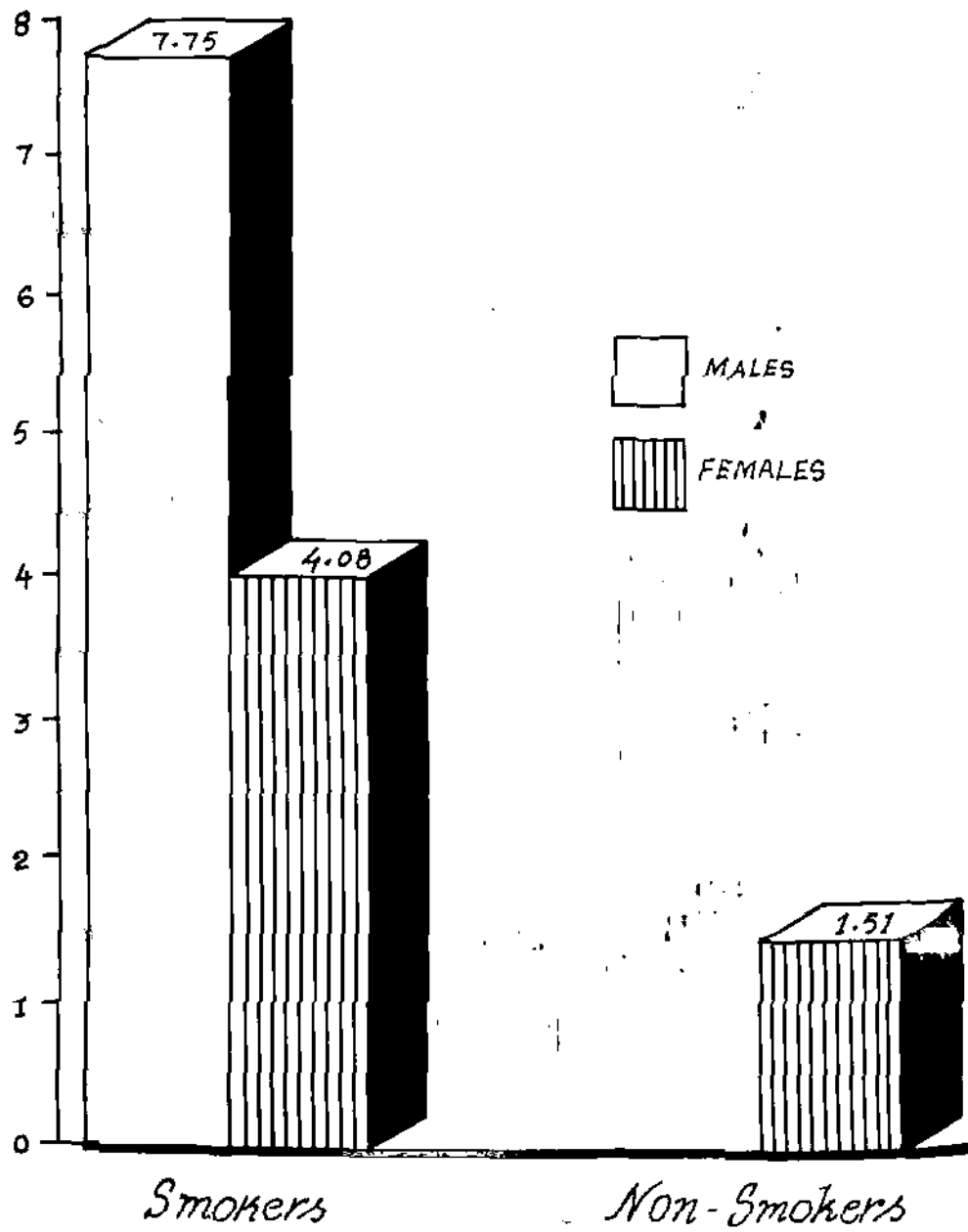
Prevalance Of T.B. and Household Sanitation



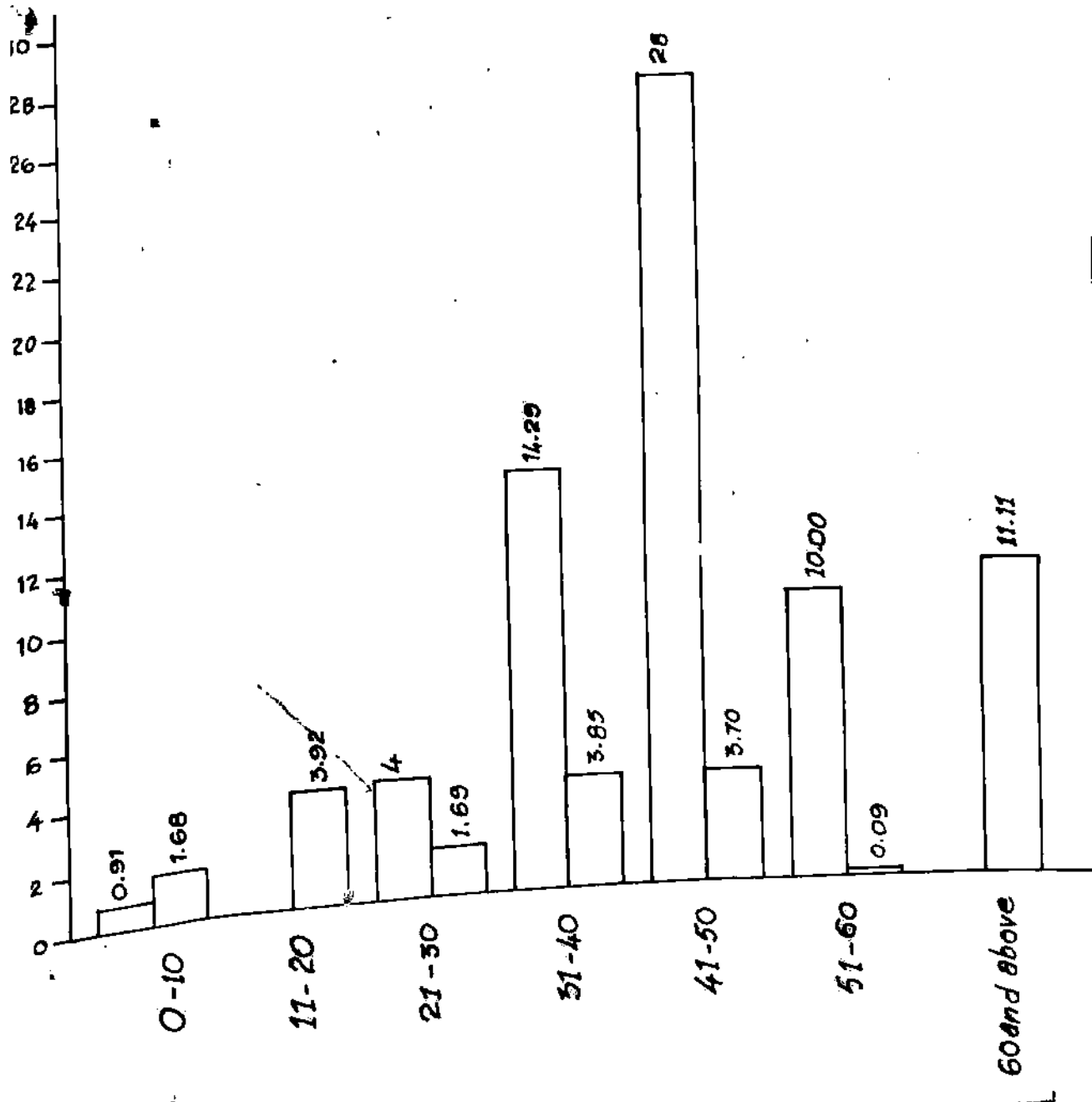
*Prevalence Of T.B. Among
Tribal Population.*



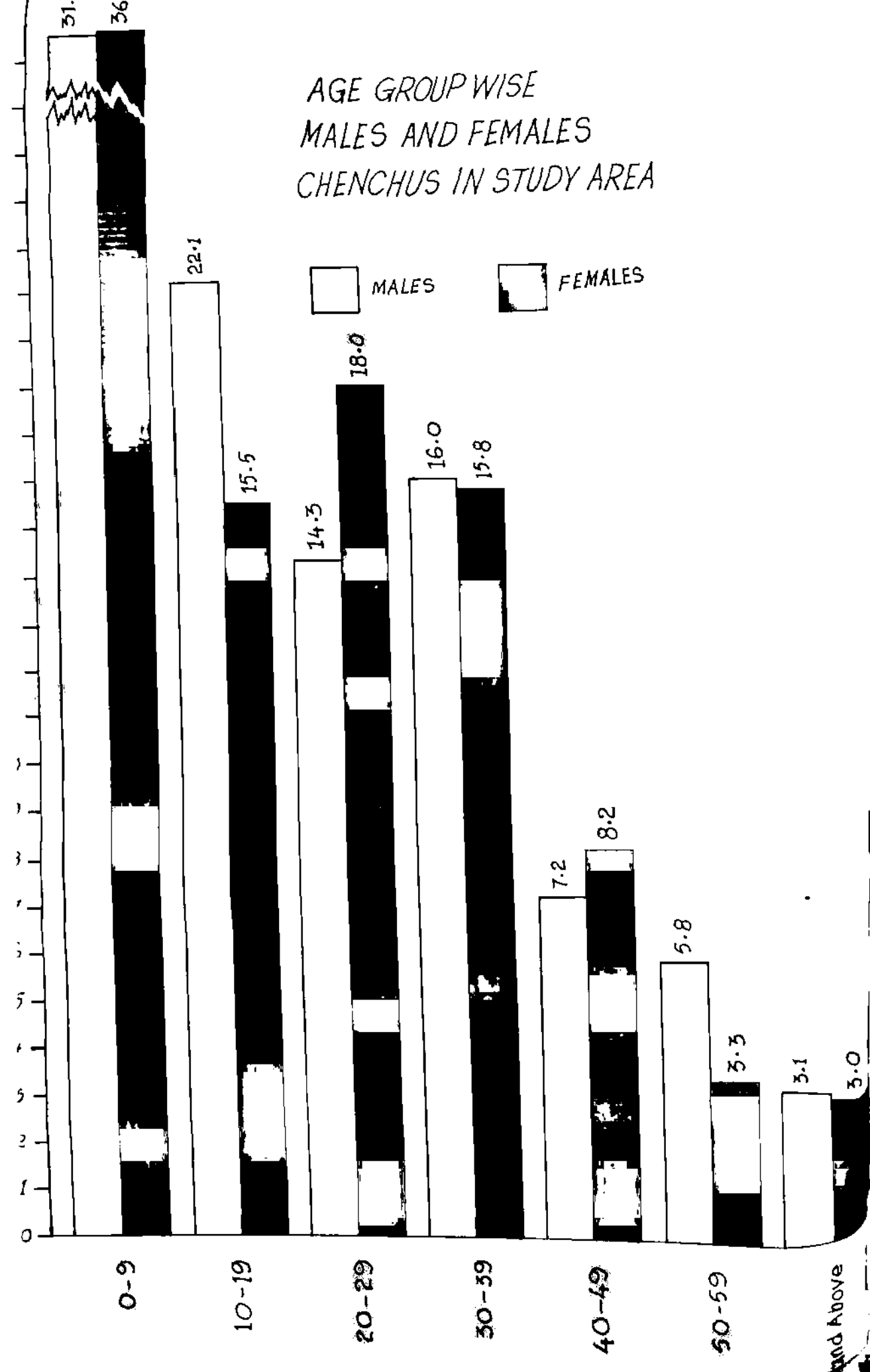
PREVALANCE OF T.B.
AMONG SMOKERS AND NON-SMOKERS



*Prevalance of T.B.
In Various Age Groups*



AGE GROUP WISE MALES AND FEMALES CHENCHUS IN STUDY AREA



AGE GROUP WISE
MALES AND FEMALES
CHENCHUS IN STUDY AREA

