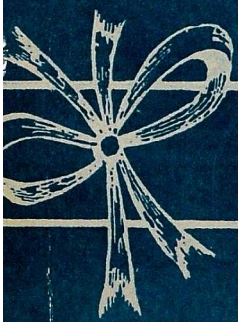
HEALTH STATUS OF TODAS IN NILGIRIS

T.S. NATARAJAN



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HEALTH STATUS OF TODAS IN NILGIRIS

AN APPRAISAL

by

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PREFACE

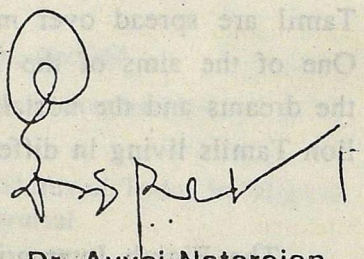
The Tamil University is a child of the Fifth World Tamil Conference conducted at Madurai in the year 1981. It was established on the 15th of September in the same year at Thanjavur. During the past thirteen years, it has established itself as a Centre for Tamil research the world over. Native speakers of Tamil are spread over more than seventy countries. One of the aims of the Tamil University is to fulfil the dreams and the nostalgic longings of the 130 million Tamils living in different parts of the world.

The Eighth International Conference seminar of Tamil Studies is scheduled to be conducted in the Tamil University Thanjavur, during January 1-5, 1995. The Government of Tamil Nadu has generously made financial allocations for various useful academic activities in the University, as well as for substantial civic improvements for the town as a

whole, of permanent value and utility. One such is the creation of revolving fund in the Tamil University to the tune of Rupees 10 lakhs. This is to be utiiised for bringing out a number of publications needed by the Tamil people all over the world.

A number of manuscripts, all of them products of research by scholars and academics, have been waiting for the propitious time to see the light of day in the form of a printed book. The book in your hand is one such publication intended for the delectation of the general Tamil reader, and for use and reference by the Tamil cognoscenti.

I hope readers may find this book useful in the related field.



Dr. Avvai Natarajan

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T.S. Natarajan

THE TODAS - HISTORICAL BACKGROUND

Tribes are an integral part of the Indian Civilisation. They have contributed to the development and continuity of this great and ancient civilisation. We must be proud of them. The Beauty, harmonious relationship with man and nature and vitality are some of the rare qualities they possess. Their sensory powers are sharp. They have extraordinary knowledge of their surroundings and a sense to make appropriate use of them. They have abilities to produce excellent objects by their hands. Ther pattern of life is near socialistic. These people have the tenacity to resist change which is far more difficult than to change and in the process have preserved history for us.

According to the 1971 census the population of tribes in India was 380 lakhs and in Tamil Nadu 3.12 lakhs. The scheduled tribe population of Tamil Nadu as per 1981 census has increased to 5.20 lakhs. There are 36 Scheduled Tribes in Tamil Nadu out of which the Government have so far been able to identify 6 primitive tribal communities and further revisions are under consideration. Their problems are acute and complicated, thereby warranting urgent and special efforts to tackle them.

Anthropologicaly some of the tribals of Tamil Nadu have attracted national and international interest. There are pockets of tribal concentration which possess all the

characteristics of the tribal areas. A large number of them still live in primitive condition.

The Nilgiri hills were inhabited by the Todas, Badagas, Kotas, Kurumbas, Irulars and Kattunayakans and Paniyans before the advent of the British into the area. These communities were linked with each other in an exchange relationship. But they lived in their habitat, with their own mode of living, occupation and language. The Todas were the pastoral community and depended on their dairy products and led an exclusive life on the higher altitude of the hills. The Badagas were the agriculturists, who grew food crops and occupied the lands on a slightly lower altitude, suitable for cultivation. The Kotas were the master craftsmen, living in almost the same altitude with that of the Badagas producing agricultural implements, pottery and jewellery for themselves as well as for others in the hills, besides being the musicians for the Badagas and Todas during their ceremonies. The Kurumbas and Irulars occupied the middle and lower belts of the hills and subsisted on food gathering, hunting and shifting cultivation and exchanged goods and services. The Todas supplied dairy products to the Badagas, Kotas and occasionally to Irulars, in return for the agricultural produce and tributes from the Kotas and Badagas. The Kurumba was the official sorcerer for all the three tribes and served as guards for the Badaga village. The Kattunayakans, Mullu Kurumbas and Paniyans lived in the Wynad area leading an exclusive life depending on the natural resources available around them.

Thus each community preferred to settle in habitats which involved relative advantages of location both in relation to their need from the natural resources and their native skills. They were living in harmony with nature and neighbouring communities until the arrival of the Badagas

from Mysore who had to expand their habitation due to the necessity of their larger population which was also eventually normalised. At that time these communities were not competing with each other as the life supporting resource base was in abundance. The natural life-supporting resource base was gradually disturbed with the arrival of the Britishers into the hills with their colonial control and production system with the vested interest of developing the hills as health resorts for the European military pensioners and invalids. The exchange relationship started breaking down and a new order of mutual exploitation began to take place. The inflow of the people from the plains increased, consequent on the laying of roads to the hills. The non-natives of the hills came to the hills with commercial motives by which those who were the only inhabitants of the hills became minorities and marginal, forming 4.01% of the total population in the hills, as per the 1981 census. Most of the tribes resorted to the defence mechanism of withdrawal. But the Todas reacted to the alien intrusion both to their advantages and the inherent disadvantages also, (Natarajan, 1985).

The settlements of the Todas in Nilgiri are widely scattered and picturesquely situated in the midst of even green surroundings. They have continued to attract the attention of Social Scientists from the early European period till today. The literature concerning their culture, though extensive, archaeological and comparative data are lacking and is lost in antiquity. The evidences available for inquiry are from the records of the Todas in the past, which are scanty and mostly from the Westerners; traditions preserved by them, which are often reported by them than consistantly observed; and evidence derived from the comparative study of physical and psychic characters, language, beliefs and institutions, which are again of the

ingenious speculations with contradictions from one inference to that of the others (Nambiar 1961).

The Todas were a purely pastoral tribe who lived on the product of their herds of buffaloes and gifts of grain called gudu from the other tribes, as they claimed to be the original inhabitants of the hills and lords of the soil. They are described to "dwell in lazy, Arcadian fashion in little scattered groups of quaint waggon-roofed huts, always most picturesquely situated; are much taller and fairer than the general run of the inhabitants of South India; in dress, appearance and language differ widely from their neighbours; have attractively dignified and fearless manners when conversing with Europeans; and practice unusual customs, such as polyandry, infanticide and buffallo sacrifice at their funerals". They are further described as "tall, well-proportioned, dolichocephalic and fairer than the people of the plains. The men are extremely hairsute and the women wear have long side-locks which they curl with great care on a round stick and smear with butter. The men are strong, agile, untiring, intelligent, possessed of an absolute belief in their own superiority over the surrounding races, grave and dignified and yet cheerful and well-disposed. The women are far less intelligent, often handsome and sometimes of frail morals" (Frnacis 1961). While the above description is true to some extent, the present day situation has changed dramatically and needs to be reviewed objectively in the present context of social change and their contact and interaction with the mainstream population. These attributes have resulted in their arousing deep interest in the early European explorers who declared their Roman noses and flowing robes to be the survivals of the Roman colony, others attributing their Jewish cast of countenance to the proof of the remnants of the lost tribes of the Hebrews; and yet another writer attempted to demonstrate that they were the relics of the ancient

Scnthan invaders who, drived from place to place by the hostility of the dwellers of the plains, had at length taken refuge on the Nilgiris which was eventually criticised as baseless even during that time (Francies, 1908).

Being a pastoral tribe, the Todas live in isolated places of 3-6 kms. between one and the other. These places are called 'Mandhai'- herd or cattle pen. Most of the munds nestle on the edge of a 'Shola' and a few of them on the extreme edge of the plateau. The proximity of the munds to the sholas provided an additional charm besides their functional value to their culture. The sholas strangely resemble one another and look like a miniature forest with trees not high and great in size, but their branches are gnarled and moss-grown. Shrubs, wreathed with wild jasmines, dog-roses, and other flowering plants are grown here.

None other than the Todas have been counted so many times from mere speculation of 179 in 1812 by key followed by Ward in 1821, Hough in 1825, Buch in 1838, Ouchterlony in 1847, Grigly in 1856 and W.E. Marshall in 1870 which are tabulated by Nambiar in the special report on Todas as part of the 1961 census operations which has brought to light differential annual rate of increase and decrease which caused concern among those who were studying this community which will be discussed later. However, it is evident that the figures showed a falling trend from 1866 to 1881 and again from 1901 to 1927 and the general population of Todas either declined or the rate of increase was far less, which had led to a series of investigations on the demographic features such as the sex-ratio, sterility and pregnancy wastage which was extensively examined by this report which again will be discussed in comparison with the current study. The first ever health survey among Todas was conducted by the King Institute,

Guindy under the leadership Dr. S.R. Pandit, Asst. Surgeon as the officer in charge of the medical unit in 1927 which specifically concentrated on the causes and consequences of the differential fertility trends. It was generally viewed by the medical unit that the chief cause of sterility among Todas was the veneral disease. It was further confirmed by laboratory examinations that 49% of the total examined were serum positive. 53% of the cases examined suffered from Gonorrhoea. In 1957, the mobile medical unit repeated the test and found 1.76 blood specimens out of the 3.30 collected were positive (53.33%). As a result of this disease caused by the multiplicity of complex cultural practices of sexual life from childhood onwards Sexually Tramsmitted Diseases have become a regular feature. The repetition of the VDRL was done two times by the Institute of Veneriology, Madras in 1978 and in 1987. Unfortunately the findings of the study are not readily available nor seem to have been published as there was no response to the request for the supply of the information due to the changes in the directorship of the Institute. Attempts was made to collect the data from the Institute to fill up the gaps in the incidence processes of the prevalence of the STD among Todas. Similarly, Dr. K.M. Belle, the then Civil Assistant Surgeon of the Government Headquarters hospital had done a study on the incidence of STD among Todas as part of his M.D., degree programme during the seventies which also is not readily available to present the continuity of the STD prevalence trend.

Since some of the earlier European explorers, particularly Prince Peter from Greece speculated that the Todas might have been the survivals of the Roman colony, the Romans had one common problem of hard of hearing caused due to the thickening of the auditory nerve - clinically called 'otosclerosis' which was about 12% among the Romans. During the middle sixties, Dr. Yash Kapoor from

the Christian Medical College, Velllore, is reported to have carried out a study on this problem among the Todas and it is learnt that the prevalence of Otoscelorosis was about 18%. The publication of this study also is not readily available. This condition cannot be interpreted that the Todas are the survivals of Roman colony or they are of Roman origin in the absence of comparative studies of this condition among the contemporary tribes of Nilgiris living in high altitude. The findings of the current study also do not have corroborative data which were drawn from the hospital records that this condition or their early symptoms are reported in the O.P.D. and I.P.D. registers. Perhaps this is an area of further exploration for medical anthropological studies with interdisciplinary approach.

RATIONALE, OBJECTIVES AND METHODOLOGY OF THE STUDY

It is evident from the foregoing, summation of the data available on the health status of the Todas that no comprehensive community health study were carried out except that of the one by Nambiar as a special study on the demographic profile and documented in a special volume of the 1961 census. One of the objectives of the primary health care is to provide services to the whole population of any area without discrimination (WHO/UNICEF 1978). Availability of a system of health care does not mean that the services are adequate in all respects (Bryant 1971). Often there is a gap between the need perceived by the service providers and those perceived by the community. Awareness of the health

ervices and their accessibility will determine the level of ıse of such systems (Suser and Watson 1971). Therefore, Health care planning requires the knowledge on the :xisting community health problems, methodologies ıdopted in health care activities and the extent of :ommunity involvement in such activities through leader-ship and partnership with due consideration and appreciation of the community's local health culture.

In order to identify the social diagnosis of the health situation of the Todas, the study was undertaken with the following objectives:

1. To describe the Toda's concept of health and disease.

2. To describe the sociodemographic profile of the Todas.

3. To identify the morbidity and mortality patterns of the Todas.

4. To assess the major environmental sanitation problems which influence the health status of the Todas.

5. To assess the utilization pattern of the Health Services by the community.

6. To identify the factors responsible for changes in health behaviour.

Methodology

The Toda settlements are widely scattered in Nilgiris due to historical and cultural reasons. Being a pastoral tribe they had large herds of buffaloes which require

pastoral lands. They had the practice of seasonal migration from one area to another for fresh pastoral lands. The seasonal migration has ceased to exist and they are now settled in about 60 settlements most of which are in Udhagamandalam taluk, one in Coonoor taluk and five in Kotagiri taluk, Table - 1. There are three settlements occupied by converted Christian Todas among the 60.

Therefore, the selection of sample settlements for the study was carefully done taking into consideration the varying distance from the District and Taluk health care delivery systems, representation of the three taluks and the converted Christian Todas. Fourteen settlements were selected as sample which are shown in Table - 2.

Two schedules were used for data collection. One is the Household Health Survey schedule for administering to each household for eliciting demographic data, immunization status, environmental conditions, diseases present, anthropometry etc. (Annexure 'A'). The second schedule is for eliciting general information concerning health and related information for the settlements as a whole (Annexure 'B').

The concept of health is so abstract and varied to different groups and the understanding about the health care delivery system is so complex, that it was realised that total dependence on the survey method would be undesirable and secondary data from the Government and voluntary Health Agencies were collected to supplement the primary data collection. The limitation of subjectivity in responses to health related questions from the people were made good by objective data from secondary sources and anthropometirc measurements of the members in the household and blood pressure measurements of both men and women over fortyfive years of age.

TABLE:1 Toda Settlements Talukwise with Revenue Village

S.No.	Name of the Settlement	Name of the Revenue Village	Taluk
1.	Manjakal Mund	Ooty town	Ootacamund
2.	Kunditho Mund	"	"
3.	Kishar Mund	"	"
4.	School Mund	"	"
5.	Marli Mund	"	"
6.	Kari Mund	Nanjanadu	"
7.	Kadi Mund	"	"
8.	Theetukore Mund	"	"
9.	Kaggod Mund	"	"
10.	Talpatteri Mund	"	"
11.	Pagallkod Mund	"	"
12.	Tho Mund	"	"
13.	Kulkadi Mund	"	"
14.	Yemmakai Mund	"	"
15.	Nedigod Mund	"	"
16.	Yeppakod Mund	"	"
17.	Thiogore Mund	"	"
18.	Mekkod Mund	"	"
19.	Perukadiyar Mund	"	"
20.	Kunjukod Mund	"	"
21.	Aganad Mund	"	"
22.	Anekal Mund	"	"
23.	Ponnepal Mund	"	"
24.	Nathaneri Mund	"	"
25.	Uemund	"	"
26.	Nirgasi Mund	"	"
27.	Kallakorai Mund	"	"
28.	Malavathi Mund	"	"
29.	Attukore Mund	"	"

S.No.	Name of the Settlement	Name of the Revenue Village	Taluk
30.	Pey Mund	Nanjanadu	Ootacamund
31.	Kavakkadu Mund	,,	,,
32.	Kengod Mund	,,	,,
33.	Osa Mund	,,	,,
34.	Anakkuruthukuli Mund	Sholur	,,
35.	Nariguli Mund	,,	,,
36.	Thavittukore Mund	,,	,,
37.	Padankod Mund	,,	,,
38.	Tharnad Mund	,,	,,
39.	Thuvalkod Mund	,,	,,
40.	Melkoda Mund	,,	,,
41.	Pathar Mund	,,	,,
42.	Kambuthukki Mund	Hullathi	,,
43.	Karikuli Mund	,,	,,
44.	Muthinad Mund	,,	,,
45.	Denad Mund	,,	,,
46.	Pengula Mund	,,	,,
47.	Bigkapathi Mund	Kukkal	,,
48.	Bettu Mund	Kagguchi	,,
49.	Mulli Mund	Mulligoor	,,
50.	Kabadi Mund	,,	,,
51.	Bettud Mund	,,	,,
52.	Onne Mund	,,	,,
53.	Kannagi Mund	,,	,,
54.	Karikad Mund	,,	,,
55.	Kodanad Mund	Kodanad	Kotagiri
56.	Bedukkal Mund	,,	,,
57.	Pankod Mund	,,	,,
58.	Koduthoni Mund	,,	,,
59.	Nervin Mund	,,	,,
60.	Nedi Mund	Hullical	Coonoor

The above list is the official list from the office of the Dt. Adidravidar Welfare. It is likely that some of the settlements listed above may not be inhabited by any households. An inventory of the current occupied settlements is desirable. Some of the settlements have more than one name, the original name that the Todas have used from time immemorial, the modified name given by the enumerators and officials and the one used for convenience depending on the location. One such example is 'Melkhas Mund' which was usually called 'Garden Mund' due to its location adjacent to the Botanical Garden, and listed in the official records as 'Manjakkal Mund'.

TABLE:2 List of Sample Settlements by Distance to District and Taluk Head Quarters

Sl. No.	Name of the Munds	Taluk	Distance(Km)		No. of H.H.	Population
			Dist	Taluk		
1.	Melkhas (Garden Mund)	Ooty	1	1	13	71
2.	Minikishola Mund (Akkeri / Ishkyar)	Ooty	3	3	4	16
3.	Marlimund	Ooty	5	5	4	24
4.	Tharnad Mund	Ooty	17	16	7	55
5.	Thulkodmund	Ooty	14	14	7	24
6.	Mulli Mund	Ooty	23	23	5	23
7.	Thabbakod Mund	Ooty	23	23	2	13
8.	Nedi Mund	Coonoor	24	12	4	30

Sl. No.	Name of the MUNDS	Taluk	Distance(Km) Dist	Taluk	No. of H.H.	Population
9.	Bankod Mund	K.Giri	46	16	4	18
10.	Bedukal Mund	K.Giri	46	16	2	13
11.	Bigbed Mund		33	30	5	24
12.	Thee Mund (C.C.T)	Ooty	8	8	2	13
13.	Poo Mund (C.C.T)	Ooty	6	6	4	16
14.	Thoga Mund (C.C.T)	Ooty	61/2	61/2	4	18
			Total		67	358

GENERAL CONCEPTS OF HEALTH AND THE TODAS' CONCEPTS

The health concepts and practices of most people in the world today continue the tradition evolved since antiquity. Ideas about the ways that body process are thrown off balance by the improper consumption of hot or cold foods or the way that envy, fear, and other strong emotions that generate poisonous substances by disturbing the body's equilibrium are based upon humoral theories that were first elaborated in the classic texts of medical science several thousand years ago.

Folk - curers throughout the world practice humoral medicine, but in Asia alone educated physicians continue

its learned traditions. Asian medical systems thus provide fascinating opportunities both to observe directly practices that continue ancient scientific modes of thought and to analyze the historical processes that mediate their relationship to modern science and technology.

The three main streams of learned medical practice and theory that originated in the Chinese South Asian and Mediterranean civilizations "great traditions medicine". The teaching of Galen about the 4 humors may have been suggested by ideas current in little communities of simple people becoming but not yet civilized. The "great medical traditions" is that they maintained their judiondal characters although they were in contact each other. The system was called unani bearing Greek medicine is still practiced under that name in India & Sri Lanka. The South Asain system was called Ayurveda, medicinal knowledge of life or longevity.

Besides resembling each other in the organization of practice, the great traditions of medicine were formulated from generic physiological and cosmological concepts. All of them were humoral theories four humors in Mediterranean tradition (yellow bile, black bile, phlegm and gas) three humors in Asian traditions (Kapha, Pitha and Vayu, usually translated as phlegm, bile and wind) and 6 humors in Chinese medicine, the chii or preuna which were held in the sway of Yang and Yin). The humors were alignments of opposing qualities, hot-cold, wet-dry, heavy-light, strong-weak, active-sluggish and so on. The equilibrium caused illness whatever be the number of humors. Equilibrium was regulated by season, food consumption and other activities. Diagnosis required skill in observing and correlating physical symptoms and environment. Thereby they utilized physical manipulations modification of patients' diet and surroundings and humorous medications.

Finally "great tradition" medicine conceived human anatomy and physiology to be intimately bound to other physical systems. The concept rationalised the relation of men to their environment by weltering preventive and curative medical efforts to maintain or to restore cosmic equilibrium. Mixed with new knowledge, humoral theories and practices continued to be taught through the 19th century and remnants of humoral theory survive in research to the present day.

The institutional network for teaching, research and publication expanded, around the world and became more efficient. But the great advances in therapeutic effectiveness have become the hallmark of cosmopolitan medicine and the germ theory of diseases and new surgical techniques were not initiated until the late 19th century followed by the 20th century progress in chemotherapy. These advances, by radically increasing the consequences of medical learning for social welfare, have accelerated the professionalization processes that are creative throughout the world medical system based upon a standardised code of conduct for physicians.

In human affairs concepts never simply name and describe things without implying or recommending evaluations of them. In fact medical systems are pluralistic structure of different kinds of practitioners and institutional names.

Diseases of one kind or another have always afflicted man. Indeed, given the nature of life and the nature of disease is but an expression of man's dynamic relationship with his environment. And even as there has always been sickness, accident, deformity and anxiety to trouble man, so too has there been an organised purposeful response by society to such threats. In all human groups, no matter

how small or technologically primitive there exists a body of belief about the nature of disease its causation and cure and its relations to other aspects of group life. There also exists therapeutic and preventive practices many of which are empirically efficacious by standards of modern medicine although often not for the reasons advanced by folk belief.

The Greeks were not alone in viewing disease as a manifestation of disharmony in man's overall relation to the universe "Health" is rarely if ever, a narrowly restricted concept having its aim only in the wellbeing of the individual body.

Historical Perspectives

A look at the past: Many circumstances and events of the past help to explain some present day problems and trends that otherwise might be puzzling, sometimes short-sighted individuals criticize past and present public health practices in terms of numerous difficulties have been encountered in the field of public health or because progress seems to be slow. It merely points out that sound planning for the future is best accomplished by honest evaluation and understanding of the past and present.

Primitive Societies

Little is known about the prehistoric origins of either personal or community hygiene. Certain amount of group and community hygienic sense is usually derived from experience with survival. Practice is sometimes based on superstition rather than sanitary concepts. Almost all primitive people recognize the existence of disease and

engage in forms of voodoo or tribal dancing (psychosomatic medicine) temporary banishment (isolation and quarantine) or smoke and noise (fumigation) to drive away the evil spirits of disease.

Classical Cultures

Archaeological evidence and other records show that Minoans 3000 - 1430 BC. and Myceneans 1430 - 1150 BC built drainage systems, water closets and water flushing systems. Egyptians of about 1000 BC were the healthiest of all civilized people. They had a considerable sense of personal cleanliness, possessed numerous pharmaceutic preparations and constructed earth closets & public drainge pipes. The Hebrews extended the Egyptian hygienic thought and formulated in deviations about 1500 BC. What is probably the world's first written hygienic document. It dealt with a wide variety of personal and community responsibilities, including cleanliness of the body, protection against the spread of contagious diseases, isolation of lepers, disinfection of dwellings after illness, sanitation of campusites, disposal of excreta and refuse, protection of water and food supplies and the hygiene of maternity".

The Athenian civilisation era 1000 - 400 BC. is of interest for two reasons. It was there that personal hygiene was developed to a degree never previously approached. Much concern was given to personal cleanliness, exercise and dietetics in addition to environmental sanitation.

The Roman components succeeded the Athenian is well-known for its administrative and engineering achievements. At its zenith, it had registration of citizens and slaves, for a periodic census.

Middle Ages

During the 18th & 19th centuries changes were occurring; among them were the development of nationalism, imperialism and industrialization with this tragic and degrading concomitants. Public health went unrecognized in a legal sense in England until 1837. Improvements rapidly followed. Advances in sanitation and hygiene began. The seeds of sanitary and social reform spread rapidly to other large urban centres of England. Certain public health problems were recognized early by the British Government in their colonies under their control including India in general including that of the Nilgiris in particular after the discovery of Nilgiris in 1819 by John Sullivan who initiated the developmental process including health.

The Todas' concept of health, disease and curing patterns had dramatically changed after the exploration of the Nilgiri hills by the Britishers and subsequently the series of health and medical interventions which are narrated in detail in the subsequent parts of the report. Prior to their dependence on modern medical care system, the Toda's concept of health was as vague as it was in the primitive societies. A short list of health and disease-related English words was made as shown in Table-3 to elicit the Toda dialect for that particular word. It was found that many of the elder Todas had to scratch their heads to find an equivalent term for health. According to them health is a state of physical wellbeing' 'absence of disease or illness', and 'ability to perform normal day-to-day activities'. When they were asked to amplify the concept further, they narrated their traditional practice of lifting rough round-shaped stones of varying sizes upto the shoulder which is an indication of their strength. It appears from the conversation with the elders that health and strength are related terms or synonymous. Disease is recognised by presence

of discomfort in the body or an acute pain in specific parts of the body or the whole body. They suffix the word 'pesk' to the particular part of the body where 'pask' (pain) of varying degrees exist. Disease in the modern terminologies are used for discomfort of various types caused by a pathogenic organism.

Sickness and illness are the words commonly used by different communities including the Toda's. Being sick is a serious matter for the Toda's both in the earlier times and modern times. Recognition of sickness depend on the severity of the pain that persists. Absence of pain and discomfort does not bother the Todas much in earlier times as well as now. The concept of prevention in the modern sense with scientific preventive measures seems to be unknown to the Todas, but they too have the concept of hot and cold foods that causes some discomforts in the body. In earlier times the Todas attributed sickness to misfortune either caused by sorcery of others from their own community to that of the contemporary tribes particularly the kurumbas and they had their own medicine-men, priests, etc. to alleviate the sickness or misfortunes which is amplified by Francis in his book "The Nilgiris" as follows:

"Besides the priests at the dairies, and quite separated from them, the Todas have prophets, magicians and medicine-men. The prophets, or diviners, are supposed to be each inspired by certain definite gods and they utter their prophecies (usually working in pairs) during a fit of frenzy and in a language not their own, such as Malayalam. They are consulted in cases of sickness among the Todas or their buffaloes or in the event of other difficulties or misadventures.

The power of sorcery is declared to belong to certain families and to be inherited. The average Toda knows little of it, and is most anxious to discover more. The diviners frequently declare that such and such a misfortune is due to the magic practised by such and such a known sorcerer, and the latter is then propitiated by the victim or his relations and induced by sorcerers to remove the spell. One method of laying a spell is to, wrap them in a bit of cloth, pronounce a curse over this bundle, and hide it secretly in the thatch of the enemy's house. Sometimes a bone or a lime is buried in a shola near the intended victim's hand. Toda sorcerers dreaded by the Badagas as much as by their fellow tribesmen, and this is believed to be one reason why the Badagas still continue to pay the Todas the gudu or tribute of grain referred to on p.270 below. About ten years ago the Badagas of Najanad killed a Toda sorcerer because they believed him to have caused the death of one of their children. On the other hand the Todas are excessively afraid of the necromancy of the Kurumbas.

Belief in the evil eye and in the bad effects of words of praise is as prevalent as in other castes, and to remove the malign influence certain definite methods are practised by the medicinemen. Stomach-ache so caused is cured, for example, by rubbing the affected spot, putting salt on a corner of the patient's mantle, stroking this with a thorn of solanum indicum and then throwing the thorn and some of the salt into fire to the accompaniment of incantations. Again, if a buffalo is lost she can be preserved from harm until she is found by taking three stones secretly at night to the front of the dairy or hut to which she belongs, uttering a spell over them and hiding them in the thatch".

The above statement concerning the disease curing patterns of Todas have fast disappeared and the present day Toda depends more on the modern medical care facilities

as evidenced by the present study in terms of the health and medical services utilisation.

However, the influence of either traditional or modern systems of medicine is conditioned to a very great extent by the way they are seen by the recipients and how they fit to the older systems. Another factor is the presence of atmosphere suitable to the customs and traditions of the community to which they are accustomed or a link person who will take care on a personal level with concern and commitment. India more than any other culture in the world is characterised by pluralism which extends to health and healing too. Nilgiri district contains a wide variety healers starting from the Government and private doctors and a range of other perons like the herbal doctors, bone-setters, priests, saints and 'Registered Medical Practitioners' from the varying systems of medicines. The Todas have no inhibitions or reservations in seeking the modern medical care facilities either by Government or the private medical practitioners. Further, they adapt the delivery systems particularly the Government Hospital and the Kolikarai Hospital of the Nilgiris Adivasi Association to their convenience by ignoring the hospital norms. They do not hesitate to visit the patients any time in groups and asserting their rights for 'proper care' with the help of committed and concerned people from their own community, out of which one is the pioneer in joining the mobile medical unit for the tribes as Head Nurse who later withdraws to a higher level of being informal and influential leader of tribal welfare and another who continues towards in the mobile medical unit as pharmacist. These persons serve as 'Value-infusers' in the community concerning not only on health-related matters but also on other matters of their development. Two incidence processes are presented in the annexure, in the report.

TABLE:3 Health Related Toda Words

Concept / Condition	Toda word
Health	Odtesh vani
Strength	Tattum or Thochn
Blood	Poh
Flum	Kerl
Flatulence	Vayu
Disease	Peshk
Pain	Posch
Ulcer	Punny
Body	Seeffm
Head	Mud
Trunk	Nejagudi
Hip	Pem
Leg	Kol
Knee	Meg Muf
Ear	Kitti
Nose	Mittut
Eye	Kannu
Scabies	Sori
Malaria	Sori
Mental disorder	Mulveladchi
Cold (Comman cold)	Kwarschi
Fever	Sari
Rigour	Avotch
Cold (cool)	Kovaladch
Smallpox	Periamma, Sikkamma
Personal	Hygine Suddam
Birth	Peitch
Puberty	Ethodu Vodch
Death	Dedre
Hot	Pesh

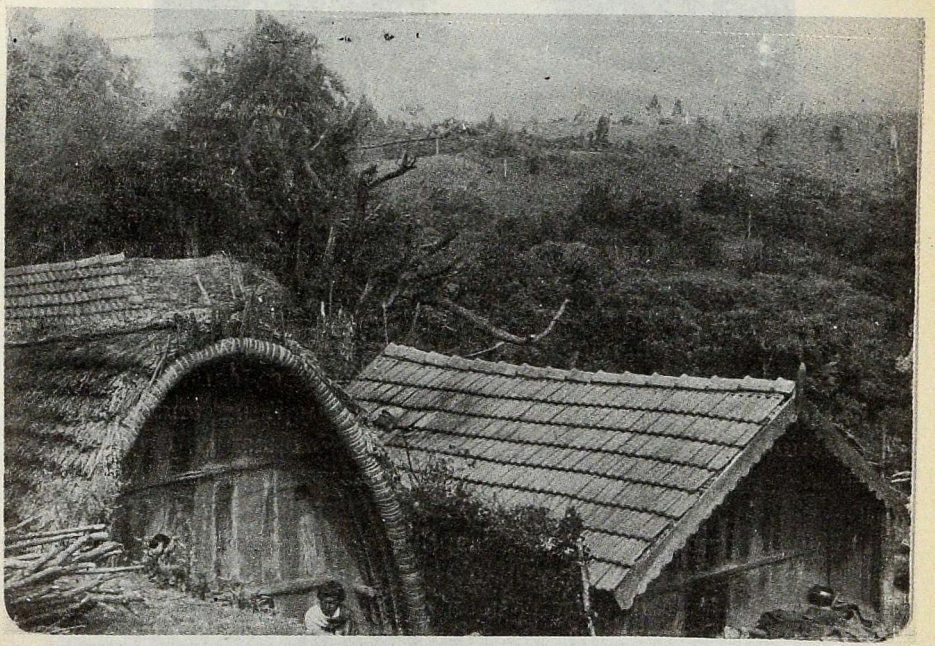

Photo - 1
Toda House - Traditional and Transitional

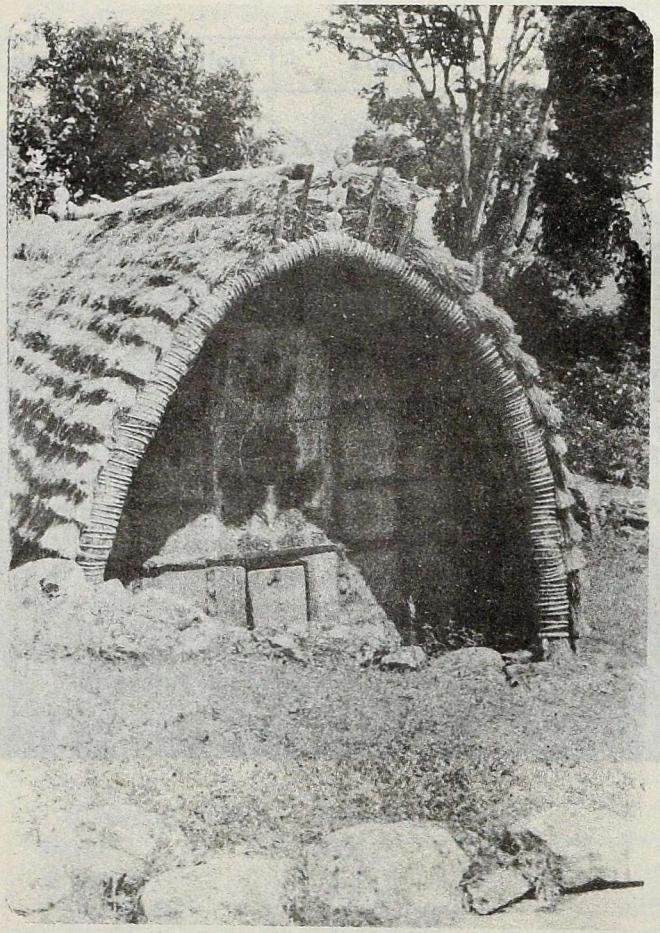

Photo - 2
The Toda Temple - Diary Where the Sacred Buffalo Milk Used to be Processed by the Priest

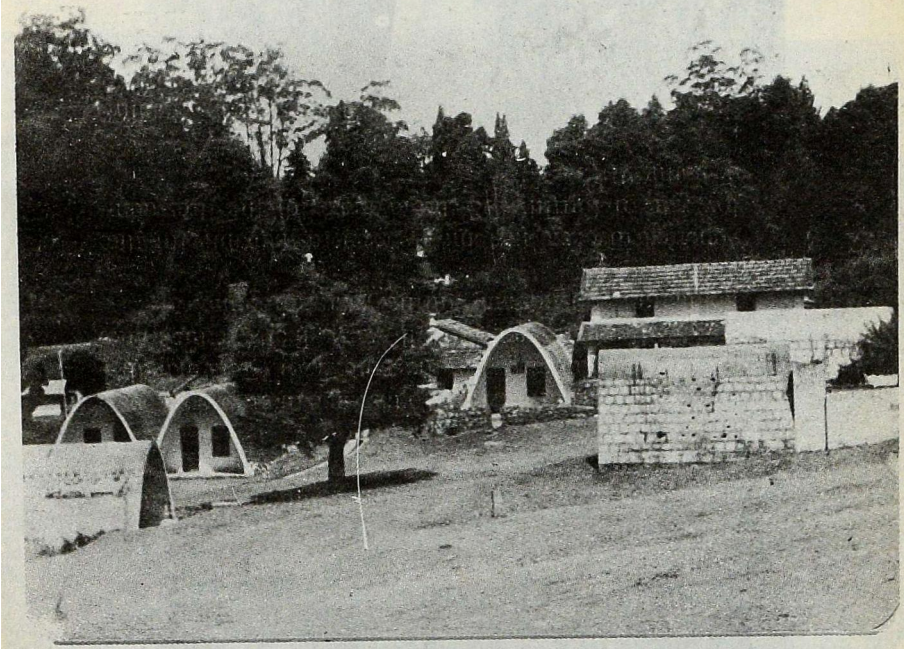

Photo - 3
Traditional Structures with Modern Materials

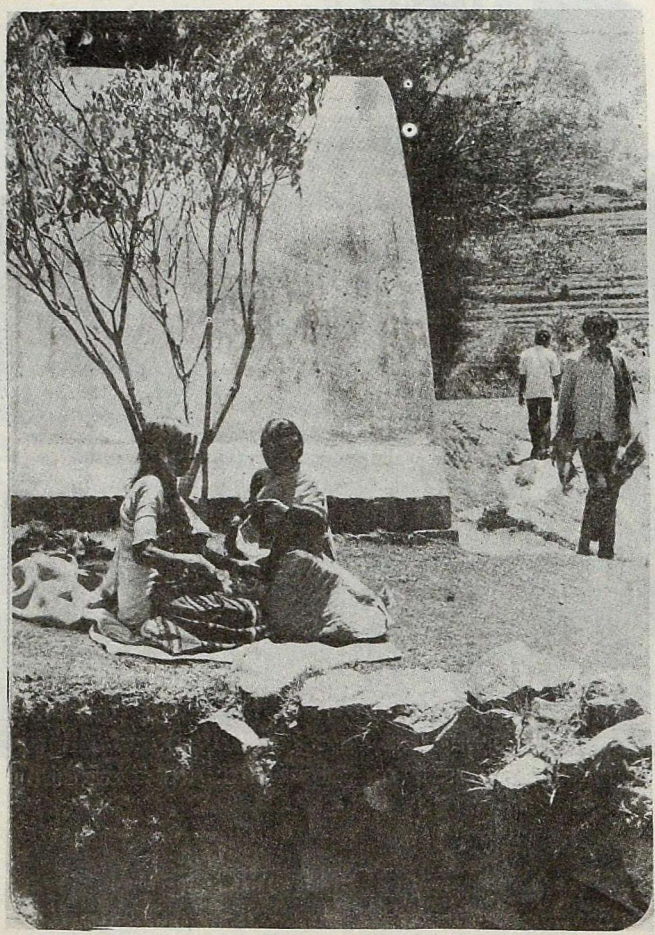

Photo - 4
Traditional Structures with Modern Materials

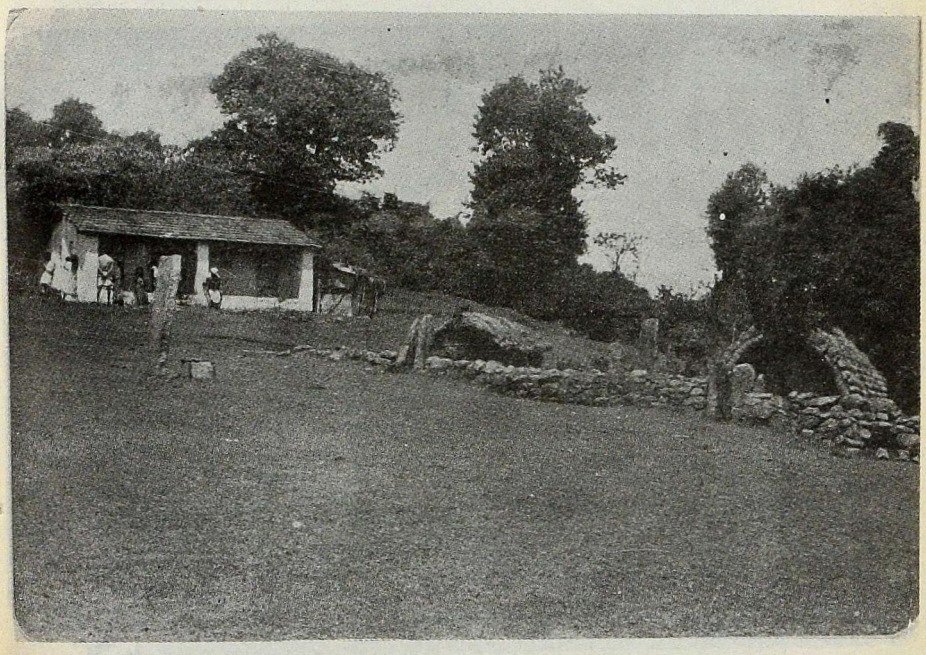

Photo - 5
Traditional Structures with Modern Materials

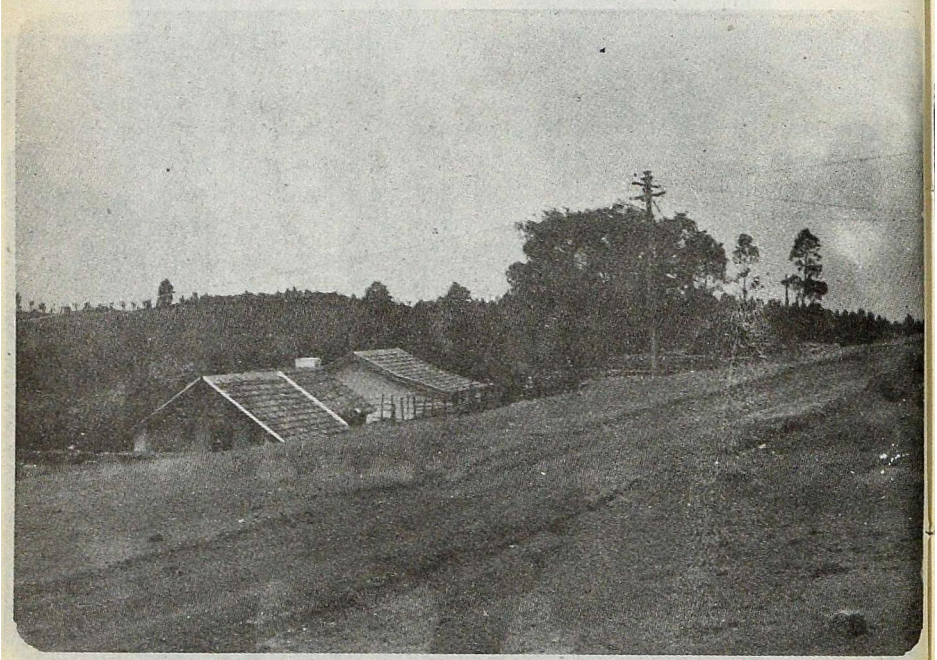

Photo - 6

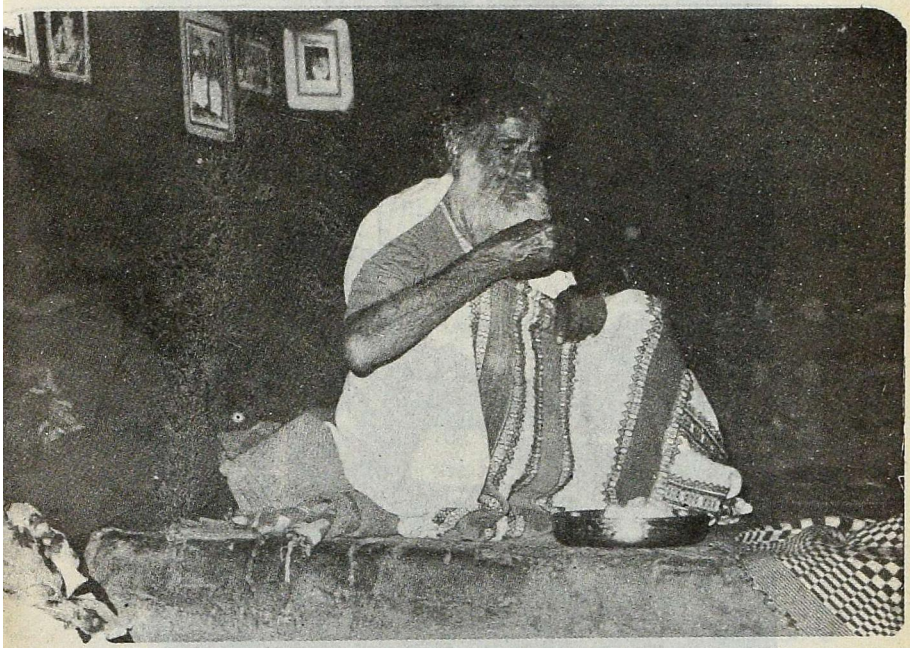

Photo - 7

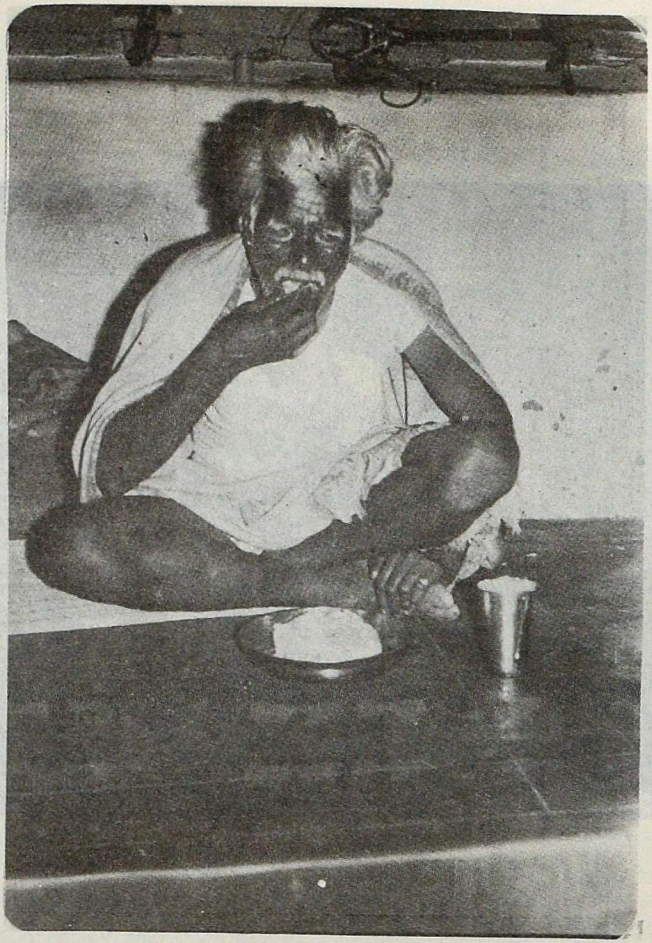

Photo - 8

AN OVERVIEW OF THE HEALTH STATUS OF TODAS AND HEALTH CARE DELIVERY SYSTEMS DEVELOPMENT

The health status of Todas before the exploration of the Europeans is practically less known with authentic data. The documentation of the Nilgiris in general including the general health of the hills began after the developmental process undertaken by John Sullivan, the Collector of Coimbatore from 1819 onwards.

During the great famine period of 1877 there was a total casuality of 80 people in the Hills which might include the Todas also. In the same year there were a total casuality of 80 people in the Hills which might include the Todas also. In the same year there were a total deaths of 327 due to small pox. During 1903 plague reached the hills and took a total of 191 deaths. It includes during 1904 to 1906 with a lesser deaths of 78. But the correct number of deaths among the Todas due to the above epidemic disease has not been taken. During 1921 there was an epidemic of influenza followed by the epidemic of relapsing fever which took a heavy death toll among the Todas causing 1.44% and 1.52 percent respectively in their population decline.

The Health care Delivery for Todas was initiated exclusively in response to the concerns expressed from various corners both by Indians and foreigners. The

Government sponsored a special medical unit to examine the causes of decline among the Toda population. The findings and recommendations narrate the developments and the landmarks in the Health care Delivery system for Todas which are reproduced here below from Nambiar's special report on Todas:

Conclusions Reached by the Medical Unit

1. The incidence of venereal disease, especially of syphilis and gonorrhoea is very high. 49% of the population is syphilitic as diagnosed serologically and the percentage of gonorrhoeal infection in adults is about the same.

2. The loose morals of the Todas and their social customs are favourable for the spread of venereal disease. If unchecked, it will very likely reduce the population considerably in the years to come.

3. Venereal disease has chiefly been responsible for the low rate of fertility-5.8 the average for the Presidency being 9.12.

4. Since 1901, the population has been steadily declinning. Though the epidemics of influenza and relapsing fever have been responsible for the decline in very recent times, the other chief causes are the low rate of fertility, and the high rate of infant mortality. The latter is nearly 400 per thousand.

5. There has been a tendency during the last six years for the population to remain stationary.

6. Contact with civilization for a century has not improved the condition of the Todas much. They are now poorer than they were before and their education has not materially advanced. In marked contrast to these are the Badagas, their neighbours whose economic condition has improved, and the population has doubled during the last fifty years.

7. Of the baneful customs of the Todas, female infanticide has diminished considerably now, if it has not ceased altogether.

Polyandry has decreased, but is still largely prevalent".

Recommendations made by the Medical Unit

"The Todas have for a long time been considered objects of curiosity, because they held fast to their primitive ways and customs. Visitors to the hills look on them more as museum specimens than as ordinary human beings. So long as the Todas continue to be so, and do not keep up with the civilization with which they have come in contact, they are bound to die out, as has happened in the case of the Bushmen, some Red Indians and other primitive tribes. The best way of improving the condition of the Todas is to civilize them. They must be educated, and it is the spread of education that will make them realize the evils of their society and help at their removal. The Todas are very unwilling to attend schools and to encourage them liberal stipends or a meal at school could be given. As the Toda munds are scattered, the chief difficulty with schools will be their location, and, unless, they are within easy reach of the boys and a sufficiently attractive bait, as recommended

above, is held out, they may not become popular and may share the fate of some of the schools that were started before.

The Todas are by profession graziers and they must be taught to improve their stock by scientific breeding, etc., so that the quantity and quality of milk yielded may be bettered. At present the Todas think more of the number than of the quality of their buffaloes.

The Toda Welfare Committee has encouraged the Toda to take to agriculture as a side occupation. If he takes to it earnestly and is helped with money to bring his land into cultivation, the question of relieving the poverty of the Toda will, to a large extent, be solved.

It is known that Toda women are very unwilling to work as labourers in the fields or on the plantations. The ideal occupation for the women would be a home industry like weaving and spinning. Though the district is not a cotton-growing one, cotton is plentiful in the adjoining district of Coimbatore.

The above are suggestions for ameliorating the poverty of the Todas. As regards diseases, treatment of venereal disease demands attention first. Treatment could either be given at a dispensary or at the door of the Todas by house to house visits. Though there are certain advantages in the latter, the former is preferable, as treatment will be more thorough, the patients more thoroughly examined and kept under better observation. It is therefore recommended that an outpatient dispensary with the necessary equipment be started at a central place accessible from the various scattered munds. The staff could consist of a subassistant surgeon, a male attendant, a trained nurse and

if required, a sweeper. The nurse should have experience of midwifery work.

As the munds are scattered through two taluks, it is difficult to locate a site for the dispensary which is both central and easy of access from the different munds. Susikandi on the Pykara Road is probably the best for locating the dispensary as it is in the midst of the greater number of Toda munds.

The chief difficulty that is to be anticipated is that the Todas, who fight shy of hospitals and dispensaries, may not take as much advantage of a dispensary as they could and persuasion may be necessary. The Missionaries, particularly Miss. Ling, have been giving in a limited way some medical relief to the Todas, besides working in other directions for their uplift, and have earned their confidence. If they are prepared to conduct the dispensary on a Government grant, such an arrangement is to be preferred.

The trained nurse, who should also be midwife, should be available for conducting cases of delivery. If a Toda nurse is available, she should be preferred".

Comments of the Director, King Institute, Guindy

"I think that the most significant facts of the reports are that the Todas suffer from:

(a) Venereal diseases that are easily spread by their bad social customs.

(b) a low fertility rate

(c) a high mortality in women at child-birth and a high infant mortality and

(d) poverty.

1. at least 28 percent of all individuals men, women and children have active syphilis as judged by the proportion giving a strong or moderate Wassermann reaction and that there is evidence of the disease in about 50 percent of the whole population;

2. at least 50 percent of adult men have gonorrhoeal infection and probably more than 50 percent of the women are similarly infected.

(a) Existing in these proportions the two diseases cannot fail to cause sterility and diminish fertility to a very great extent. Gonococcal infections are probably more responsible for this than syphilis, for one of the chief effects of these infections is to cause sterility by inflammatory blocking of the oviducts in women.

(b) Thus the existence of these two diseases is sufficient to explain the second condition of lack of fertility.

(c) More direct evidence of a high death rate in child-birth is needed, but it is rather significant that the only two deaths that occurred during the visit of the Unit were in women from child-birth. Indirect evidence is given by the drop in the relative numbers of women at child bearing ages compared with the men in the following table:

Population of Todas as Counted by the Special Medical Unit in 1927

Age Group	Males	Females
0 - 4	18	22
5 - 9	22	23
10 - 19	66	41
20 - 29	75	54
30 - 39	67	40
40 - 49	34	29
50 - 59	28	26
60 & above	23	14
Total	333	249
Total Population	582	

That is, if we assume that this drop is not due to female infanticide practised twenty or more years ago. If, as I strongly suspect, an unusually high child-birth mortality exists, then here is a moderately easily preventable cause of death at the most important age for reproduction.

The conditions of ignorance that bring about a high mortality of women in child-birth usually also produce as here, a high infant mortality. This is not so easily prevented as the death of the women themselves; but still some deaths could be prevented by good midwifery and attention in the first few days of life.

(d) The conditions of poverty and the social customs of the Todas have been well described by Dr. Pandit, so that we can see how these assist the spread of the disease. The problem will be solved when the Todas cease to remain Todas

except in name by becoming converted to a religion with more advanced ideas of morality and of the necessity for work. In additiion to those suggested, an economic palliative would be the employment of Todas in a large dairy and their subsequent education into the habit of work.

I agree that medical help is needed, particularly to cure syphilis. It will be difficult to do much for gonorrhoea. I would stress the importance of the women getting the attention of a good midwife".

The Surgeon-General examined the question in detail and observed that;

"The most striking feature of the report is the comparison of the Todas with the Badagas. The latter are industrious, sober and educated. They have more than doubled in population in the last fifty years. I give below a table showing the number of years taken by certain population to double the number. It will be seen the Bedagas head the list, a striking testimony to the salubrity of the Nilgiris Climate.

Races	Population in millions	Annual increase per thousand	Annual increase in millions	No. of years to double
Europeans	650	12.0	7.80	58
Americans	60	8.0	0.48	87
Indians, Arabs and Central Asians	420	2.5	1.05	278
Mongolians	510	3.0	1.53	232
Negroes	110	5.0	0.55	139

In direct contrast the Todas are lazy and thriftless, avoid education and cling to primitive customs. The community is apparently becoming smaller. The irresistible conclusion is that eduction and the adoption of industries will bring health and numerical strength to the Todas".

It is a pity the contrast in the report between the Badagas and Todas ends with this general statement. The conclusions would have carried greater weight had the figures for fertility and venereal incidence been extended to the Badagas.

The fertility rate is given as 5.8 (excluding abortions and still-births). This is a comparatively high rate for a primitive race, especially as on less than 20 percent of the women are said to be baren. Barrenness or sterility is quite common among primitive races and I attach a few extracts showing the fertility rate among primitive tribes in other parts of the world.

Spencer and Gilless state that among the Native Tribes of Central Australia the number of children rarely exceeds four and is generally two or three. Murdoch writes of the female Eskimos that few have had more than two children and many are childless.

Nansen says that the pure breed Greenlanders are not prolific. '3 to 4 children to each marriage is the general rule'.

The crow Tribe of American Indians have small families under four children in each. The women of the Nootka tribe rarely have more than two or three children. Among the Chinools barrenness is common, the birth of twins rare and families do not usually exceed two children.

The evidences seem to point to a lower degree of fecundity among the lower races than among the civilised races.

The only conclusion to be drawn from the figures given in the report is that the fecundity is slow and fertility of Toda women is fairly high.

The report also stresses the fact that the rate of increase in population of the Todas is slow, and that during the past 25 years there has been an actual increase of Eastern population which is slow, and that in India the population is only doubled after some 300 years.

A study of the census tables for the past three decades in India will also show that at certain periods there has been a marked diminution in population for certain sections. That is normal fertility is more than counter balanced by excessive mortaily from epidemics. During the present decade some 15 percent of the Toda population are said to have died of relapsing fever. This loss from one disease alone which occured during a short period of time in the decade is greater than the natural increase in population over a whole decade for a healthy European population. This short epidemic of relapsing fever is sufficient to account for the decrease during the present decade.

Between 1901 and the present day, India as a whole, has suffered severely and unprecedentedly from plague and influenza, but more figures relating to mortality are forthcoming. The great influenza epidemic was in 1918 and it is striking that the chief fall in the Toda population (from 748 to 640) occurred during the decade 1911 and 1921. I

differ from the writer of the report in one respect and I am inclined to think that the main cause of the recent fall in the population of Todas is to be found in epidemics. Relapsing fever is a disease of dirt, and can be eliminated by ordinary cleanliness.

In discussing the prevalence of other diseases the writer lays great stress on the incidence of venereal diseases. The incidence is high, but is it higher than in other communities? It would have been of great interest to compare the incidence among Badagas.

Colonel Bradfield investigated the incidence of Venereal Diseases among patients in the general wards, that is among patients who presented on clinical symptoms of the diseases. He considered a strong positive Wasserman reaction as evidence of syphilis, and for comparisio it is necessary to take only the strong positive among the Todas.

Colonel Bradfield examined 672 individuals none of whom had active signs of syphilis. The writer of the report examined 226 Todas most of whom had clinical signs. In Colonel Bradfield's series 27 percent were positive; among the Todas the positive percentage was 21. I do not wish the inference to be drawn that the incidence of syphilis in the general population is greater than it is among the Todas. This is obviously not so. An investigation among the prisoners in Trichinopoly and Alipuram jails has shown that the incidence in the former though high (12 percent) is lower than among the Todas and in the latter is very low.

All that can be said is that a high incidence of syphilis is not confined to the Toda community. In gonorrhoea Colonel Bradfield examined the urethra was mas-

saged, in others there was no massage. The gonococcus was found in 20 percent. Among the Todas, 165 males were examined, about half gave a history of gonorrthral discharge at the time. All males wre subjected to urethral massage. The gonorrhoea was found in 30 percent. Returning to Colonel Bradfield's figures, the examination of 420 random patients from Madras City showed a percentage of 28 with gonorrhoea. The incidence of syphilis and gonorrhoea among the Todas is certainly higher than it is among certain sections of the population in Madras City.

The report suggests a dispensary should be established with the main objet of treating the sufferers from syphilis. I may say at one that the decision cannot rest on medical grounds. The medical aspect is that an effort should be made to cure and prevent all diseases. This is at present financially impossible. So the funds available must be spent to the best advantage of the majority. It is clear that a dispensary for the sole use of some 600 persons cannot come into the picture now. The decision must be based on ethnological grounds entirely on this I cannot give an opinion. The cost of a dispensary will be:-

Staff paid from Establishment	Rs.
Sub-Assistant Surgeon ..	136
Class V-Expensive locality allowance ..	25
Conveyance allowance ..	30

One attendant ..	12
Class V allowance ..	2
Conveyance allowance ..	20

Rs. 250 per mensum or Rs. 3360 per annum

Contingencies

Contract contingencies .. including pay of a sweeper on Rs.12 ..	250

	Rs.	
Non Contract Contingencies		
Supplies and services- Special Medicines ..	1250	
Other medicines ..	500	
Diet ..	500	
Other Hospital necessaries ..	500	
		------- 3000
Total		6360

I have put in diet because the treatment of syphilis does not consist merely in the administration of drugs.

The drugs used are dangerous and symptoms of intolerance are sometimes exhibited. A course of arsenical treatment consists of about seven weekly injections. Two, three or more courses separated by intervals, are sometimes required. When arsenic is administered, it is advisable to prepare the patient before the weekly injection, and to insist on some after-treatment for about 12 hours. The after-treatment consists mainly in rest, avoidance fro alcohol and hot milk to drink. In the case of soldiers, admission to hospital for 24 hours is insisted on.

I therefore think the dispensary should have a few special huts in its vicinity in which patients under treatment could stay for about 24 hours".

The Government reviewed the proposal and rejected the idea with the observation that "there was no justifi cation for the expenditure of Rs. 6,500/- a year on the establishment of a dispensary for a population under 600 especially as there was no guarantee that the Toda would make use of an institution situated at some distance from their munds". The present study reveals how the Todas have optimally used the medical and health care facilities. But the reason for this trend has its own history where there had been a continuous interaction between the providers and receivers systems which after lacks in the medicare system as a whole.

During the King Institute's investigation into the causes of Toda population decline and their proposal to start a dispensary, a Ladies Auxiliary of Toda Welfare Committee was constituted with Miss. C.F. Ling, the Superintendent of the Church of England Zenana Mission of the Nilgiri. The committee thought of employing a Toda woman after formal training in nursing which did not

materialise. However, a fully trained nurse midwife was appointed to cater to the Toda health needs in 1.8.1927. From 1929 onwards the District Board of Nilgiris started providing financial assistance to meet the salary of the nurse midwife and purchase of medicines for the treatment of veneral disease in the maternity and child welfare centre. The centre had its own ups and downs with the withdrawal of Government sanction for continuance of the centre and the municipal council's ban on the use of the ambulance beyond Municipal limits. The Government partially provided financial assistance to the Government hospitals honorary venereologist to visit two venereal disease clinics in 1933-34 for a brief period. In 1948-49 Ari. A.V. Thaker Bapa of the Bhartiya Adimjati Sevah Sangh and Prince Petre of Greece an anthropologist sent representation to Government pleading for medical facilities for the eradication of veneral diseases among Todas to prevent their extinction. The Government liberally considered the proposal and responded with a better approach by sanctioning a Mobile Medical Unit with a Civil Assistant Surgeon, a compounder, a midwife and a driver in 1951. Miss. D.B. Piljain, a Toda convert with extensive training first in nursing in the Christian Medical College Hospital, Vellore, secondly underwent sister Tutor course in the college of Nursing, New Delhi followed by further training in nursing at Queen's Institute London and Bristol, was appointed as Head Nurse in the Mobile Medical Unit in 1955. The Mobile Medical Unit started functioning with the concentration on the venereal diseases control, Malaria control and treatment for minor ailments. A Maternity Child Health Centre was also opened at Nirgash Mund on the Gudalur-Mysore road in the same year with Pandit Jawaharlal Nehru's, late Prime Minister of India's donation with the active participation of the Servants of India Society. A Separate Toda ward for females was opened ir the District Head quarter's Hospital subsequently.

POPULATION CHARACTERISTICS

Trends

The Todas were enumerated at various times beginning with the very rough estimate by Key in 1812 to be 179. Ward in 1821 estimated 140 men and 82 women. Though in 1825 found that there were 190 men and 136 women. In 1838 Birch had estimated them to be 294 men and 184 women and at the same time writes that the total number is computed to be about 800. In 1847 Ouchterlony reported their number to be 337, consisting of 173 males and 164 females. In 1856, Grigg estimated the population to be 794. The Census of 1866 was considered to be an accurate record of Toda population and it was reported that from 1856 to 1866 the Toda population had doubled. William E. Marshall estimated 407 males and 306 females in the year 1870. The 1871 census report, though conflicting, reports 405 males and 288 females. The 1881 census reports 382 males and 293 females showing a decrease in the population. Again in the 1891 census had returned them with 424 males and 312 females. The 1901 census was carefully done exclusively to enumerate the Todas prior to the general enumeration that had returned them with 451 males and 354 females. Special enumeration was carried out to count the Todas prior to the general enumeration of the 1911 census which reports a total of 748, 383 males and 293 females and 72 were called out from the general enumeration schedules. The 1921 census reports 360 males and 280 females showing a sharp decline and is attributed to the influenza epidemic in 1918-19 and omission of the converted christian Toda enumeration. In 1927, Dr. Pandit, the officer in charge who was commissioned by the King Institute, Guindy to investigate the causes of the declining trend in the Toda population carried

out a special census of the population and reported 333 males and 249 females totaling 582, again another decline attributed to the epidemic of relaping fever which had caused the death of 95 Todas according to the Health Committee of the District Board.

Due to the difficulties experienced in the preceding census enumerations special care was taken in the 1931 census enumeration to avoid under or over enumeration that had returned 340 males and 257 females totalling to 597. Prince Petre, an anthropologist from Greece, took personal interest in the study of Todas and conducted a personal survey of the population in 1939 and reported a total of 518 Toda. He repeated the survey in 1949 and reported 484 Todas. According to the 1941 census there were 342 males and 288 females. The 1951 census reports 426 males and 453 females which was an unusual increase attributed to the medical intervention to control the unusual higher incidence of syphilis among Todas that had caused grave concern both from within the community, particularly, better informed converted christian Todas. It was also contended that there could have been a gross under-enumeraion despite the precautions taken during the 1931 census, and the 1941 census. P.K. Nambiar in his special report on Todas had reported that number of discrepancies based on the review of the data available from the taluk office. It is noteworthy that it is only in 1961 a special volume was brought out on Todas with elaborate details of the Todas in the year 1961, according to which there were 409 males and 353 females in the special report and 375 males and 339 females in the general report. P.K. Nambiar in his special report on Toda admits the possibility of errors in census reports and contends that the 1961 census is more authentic due to the special efforts undertaken. According to 1971 census report the Toda population is shown as 495 males 435 females totalling to 930 which is

again an unusual rise. P.K. Nambiar in his special report present a compact picture of the population in a table showing the annual rate of increase or decrease from 1812 onwards. The estimated Toda population for the year 1981 is quoted differently in different official reports but the 1981 census reports, 434 males and 440 females. The population statistics present a Kalidascopic picture over a period of time which is presented in Table. 4.

TABLE: 4 Population Trend since 1812 and Possible Attributes

(Adapted from 1961 special census Report on Todas)

Year	Males	Females	Total	Annual rate of increased / decreased	Reported Attributes
1812	N.A.	N.A.	179	-	
1821	140	82	222	+ 2.66%	
1825	190	136	326	+ 11.71%	
1838	294	184	478	+ 3.59%	
1847	173	164	337	- 3.28%	Female infanticide reported to have practiced.
1856	185	131	316	- 0.69%	
1866	N.A.	N.A.	704	+ 12.28%	
1870	407	306	713	+ 0.32%	
1871	405	288	693	- 2.81%	
1881	382	293	675	- 0.26%	
1891	424	312	736	+ 0.90%	
1901	451	354	805	+ 0.94%	
1902	419	317	736	- 8.57%	

Year	Males	Females	Total	Annual rate of increased / decreased	Reported Attributes
1911	426	322	748	+ 0.18%	
1921	360	280	640	- 1.44%	Epidemic of influenza
1927	333	249	582	- 1.51%	Epidemic of Relaping fever and Medical intervention to control syphilis.
1931	340	257	597	+ 0.64%	
1939	N.A.	N.A.	518	N.R.	
1941	342	288	630	+ 0.55%	
1949	N.A.	N.A.	484	N.R.	
1951	373	316	689	+ 0.94%	Mobile Medical Unit was commissioned
1961	375	339	714	+ 0.36%	
1971	495	435	930	+ 1.62%	
1980 (Estimated)[1]	645	555	1200	+ 3.22%	
1984 (Estimated)[2]	N.A.	N.A.	1600	+ 8.35% N.R.	

N.A. Not Available
N.R. Not Reliable

1. Estimated by District Collectorate for the project Report on Todas.

2. Estimated by the District Collectorate for the Parliamentary committee on Scheduled Castes and Scheduled Tribes.

. The enumeration prior to 1866 were far below the mark and the records since 1866 had been fairly correct according to P.K. Nambiar with the exception of Prince Petre's figures of 1939 and 1949. Further, the figures show a declining population trend from 1866 to 1881 and again from 1901 to 1927. Increasing trend is shown from 1891 to 1901, again a marked decline 1902 followed by marginal decline from 1921 to 1927. Since then the trend is increasing. The reason for the increasing trend from 1881 to 1901 cannot be attributed any particular cause as there was no major health or medical intervention. Perhaps, this may be due to the improvement in the enumeration techniques. The increasing trend from 1931 might partially be attributed to the major medical intervention to control syphilis among the Todas by the King Institute, Guindy, Madras. The trend is maintained since 1951 possibly due to the extension of the Health Agencies, particularly the Nilgiri Adivasi Welfare Association (NAWA). The present study supports this view with adequate data that reveals the higher health services utilisation by Todas than the rest of the rural India which will be discussed later. The spurt of increasing trend in 1971 and the subsequent increases in the estimated population of 1980 and 1984 raises doubts about the validity of the estimates as the present study indicates an amazingly higher proportion of eligible couples for family planning adopting female sterilizaiton for beyond the general population which is discussed later. In any case, an objective enumeration is an urgent need and is feasible now with the settlements that are now static with the ceasation of seasonal migration and the availability of authentic man power available with the Tribal research centre, at Udhagamandalam and elsewhere

as the 1971 census data is unbelievable, particularly their presence in Salem District (present Dharmapuri District) in large numbers (208), and unusually lesser in Nilgiri District.

Sex Ratio

The Toda sex ratio present an erratic difference from 1821 onwards as seen in table 5 which was attributed to the female infanticide which is the story of the past. However, the consistant phenamena althrough in the male excess to females as could be seen in Tables 5 and 6 from 1821 to 1960. The variation in sex ratio swings from 5.2% (1847) to 41.42% (1821). However, from 1941 onwards the variation has been fairly steady around 5.2% up to 1961, and it jumps to 12.12% in 1971. It has further declined to 6.48% as per the present study, as shown in Tables 7, 8, and 9 while the total population represent the male excess over females, it is interesting to note that there is an unusual female excess to males in the age groups of 10-14, 20-24, 24-29, 35-39, 40-44 which belong to the reproductive age group. If we take the younger age group of the present study it is quite likely that the Toda population will balance the sex-ratio in the course of time. There cannot be a single reason for this favourable trend but certainly cannot rule out the positive role played by the health interventions by the Government from 1927 onwards and the Toda's utilization of the health care delivery system facilities extensively as evidenced by the present study which is discussed in the subsequent part of the report.

The data collected by the Animal Husbandry Department, quoted by Antony Walker, show an unusual difference in the sex ratio by 10.9% with female

preponderance over the males which grossly contradicts with the estimated population figures in general and the sex ratio of female excess over males. The confusion over the Toda population figures in the current decade appears to be more severe than the rest of the earlier periods which calls for a fresh appraisal.

TABLE: 5 Sex Ratio of Todas at Various Periods

(Census of India 1961)

Year	Male	Female	Sex Ratio
1821	140	82	586
1825	190	136	716
1838	294	184	626
1847	173	164	948
1856	185	131	708
1870	407	306	752
1871	405	288	711
1881	382	293	767
1891	424	312	736
1901	451	354	785
1902	419	317	757
1911	426	322	756
1921	360	280	778
1927	333	249	748
1931	340	257	756
1941	342	288	842
1951	373	316	847
1960	409	353	863

TABLE: 6 Age Gradewise Sex Ratio as on 15.5.1960

(Census Report 1961)

Age Grade	Males	Females	Sex Ratio
0 - 4	58	50	862
5 - 7	33	37	1121
8 - 12	19	20	1053
13 - 17	10	13	1300
18 - 22	17	28	1647
23 - 27	18	23	1278
28 - 32	22	34	1545
33 - 37	19	13	684
38 - 42	34	14	412
43 - 47	17	16	941
48 - 52	24	15	625
53 +	51	27	529
All cases	322	290	901

TABLE:7. Settlementwise Age Gradewise population by sex (Present Study)

S.No.	Settlement	0-4		5-9		10-14		15-19		20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59		60+		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1.	MELKHAS MUND	2	4	5	9	3	6	6	1	2	2				2	2	2		2	2	3	2	2	1	1	4	1	71
2.	MINIKISHOLA MUND	3				1				1	2	1	2	1				1			1			1			2	16
3.	MARLI MUND	3		3		2		4	2	1	1		1		2	1	1					2	1					24
4.	THARNAD MUND		5	5	4	2	4	5	3	6	2	2	1						3	4	1	1	1		1	4	1	55
5.	THULKOD MUND	2	1	1	1	2	1	2	1	2	2	2	1		1		1					1			3			24
6.	MULLI MUND	1	1	2	3	1	2					1	2	1	1					1	1			1	1	3	1	23
7.	THRAKOD MUND			1		1	2	2	1	1						1	1		1	1						1		13
8.	NEDI MUND	1	3	2	2		4	2	3		3	2	1	1	1		1			2	1					1		30
9.	BANKOD MUND	4			1	1	1	1	2		2	1		1							1		1			1	1	18
10.	BEDUKAL MUND	3	1		1	1			1			1	1	1	1								1			1		13
11.	BIGBED MUND	2	1	4	2	2	1	1			2	3	3	1						1						1		24
12.	THEE MUND	2								2	2	1	1								2			1		1		13
13.	POO MUND		1	4	1	1	2						2	2	1	1											1	16
14.	THOGA MUND	1	2	1		1		2	2		2	1	1	1			2			1				1				18
	TOTAL	24	19	28	24	18	23	25	16	15	20			11	9	5	8	1	6	12	10	6	6	5	6	17	7	358

TABLE: 8 Number of Females to Males - Age Grade Sex Ratio (Present Study)

Age Grade	Male	Female	Sex Ratio
0 - 4	24	19	--
5 - 9	28	24	--
10 - 14	18	23	--
15 - 19	25	16	--
20 - 24	15	20	--
25 - 29	18	19	--
30 - 34	11	9	--
35 - 39	5	8	--
40 - 44	1	6	--
45 - 49	12	10	--
50 - 54	6	6	--
55 - 59	5	6	--
60 +	17	7	--
Total	185	173	935.14

TABLE: 9 Age Gradewise Population by Sex and Percentage of Difference (Present Study)

Age Grade	Males	Females	Total	Percentage of Females to Males
0 - 4	24	19	43	79.16
5 - 9	28	24	52	85.71
10 - 14	18	23	41	127.77
15 - 19	25	16	41	64.00
20 - 24	15	20	36	133.33
25 - 29	18	19	37	105.55
30 - 34	11	9	20	81-81
35 - 39	5	8	13	160.00
40 - 44	1	6	7	600.00
45 - 49	12	10	22	83.00
50 - 54	6	6	12	100.00
55 - 59	5	6	11	120.00
60 +	17	7	24	41.17
Total	185	173	358	93.51

TABLE:10 Settlementwise Marital Status

S.No.	Settlement	Single	Married	Widowed	Divorced
1.	MELKHS MUND	33	31	7	--
2.	MINIKISHOLA MUND	4	10	2	--
3.	MARLI MUND	13	10	1	--
4.	THARNAD MUND	30	21	4	--
5.	THULKOD MUND	10	10	3	1
6.	MULLI MUND	10	11	2	--
7.	TABAKOD MUND	10	3	--	--
8.	NEDI MUND	16	12	2	--
9.	BANKOD MUND	9	6	3	--
10.	BEDUKAL MUND	6	6	-	1
11.	BIGBED MUND	10	13	1	--
12.	THEE MUND	6	7	--	--
13.	POO MUND	9	6	1	--
14.	THOGA MUND	10	8	--	--
	Total - 358	176	154	26	2

The above table of the present study shows 49.16% are single, 43.01% married that suggests the age at marriage is increasing in general of both the sexes. The 7.26% of widowned status appears to be on the higher side than the rest of the population groups. Tribewise marital status comparative studies may through more light on the attributes for this.

Anthropometry

The term anthropometry means the measurement of the human body and also connots the various methods of employed in measurement. The most commonly employed anthropometric measurements in nutrition and health surveys are weight, height, sitting height, skin-fold, the chest circumferences measurements. These measurements are used as an index of nutritional status. Such an appraisal would be of practical importance since the collection of accurate anthropometric data in time connecting particularly where large groups of population have to be covered and widely scattered like the Toda population. Therefore, with the limitations of time, instruments available and the manpower available for this measurement only the height, weight, arm circumferences of both male and females and chest circumference of all males and only females below 15 years of age were collected in collaboration with the Physical Anthropologist of the Centre.

These measurements were used traditionally to differentiate static measurements between populations and compare them with standard or normal expected measurements. These measurements in the present study was undertaken with the limited scope of assessing the overall nutritional and health status of the sample population studied. While such measurements could be used to

identify the correlations between different body builders and diseases, this study do not attempt on this direction as the inferences would be erroneous without an inter-disciplinary approach. It is limited to only correlates between the heights and the standard weight to identify any gross deficiencies in sample population. Table No.11 Presents the mean height of the different age/grade population. The mean height of the males comes to 167.68 c.m. and for the females it is 156.35 c.m. According to Martimis Range Variation for males and females, the Toda male and females comes under the clarification of upper medium height while they are medium height according to Schmidt Range Variation. In any case, the description of Todas by Francis in 1908 as "tall" is not true as per the data from the present study. The study reveals that the present Todas, both males or females fall under the category of either upper-medium or medium in height which is in tune with the main-stream population. On raising more doubt of inference based on the small sample size. But as described earlier, the sample settlements were carefully selected and sample population studied works out to about 35 percent of the total estimated population of Todas in Nilgiri district.

The Todas being a pastoral tribe continue to be vegetarians and no non-vegetarian preparations are made in the houses with the exception of consuming non-vegetarian food in the city hotels occasionally. The consumption of buffalo milk, butter and butter-milk is comparatively higher than the rest of the communities as each family continue to have their herd of buffaloes though the number has drastically reduced. Their diet has a substantial amount of higher protein and fat content from the buffalo milk products. Francis description of Todas in the beginning of the century as "tall well-proportioned and dolicho cephalic . . . ." might have been due to the high protein diet they

were consuming. One would naturally assume that they would be carrying extra weight. Table 12 presents the mean weight of according to age gradewise which makes that other were reconed standard height and weight for children have been worked out by the Indian council of medical research. There are other sources also who have worked out this combination with minor variations. The ICMR standard tables are recognised as authentic when the weight of the children of both sexes and adults of both sexes show uniform under-weight from 1.1 kg to 4.9 kg for male children and 2.1 to 3.2 female children; 9.63 kg for adult males and 4.11 for adult females. The exact equivalent to height to weight for adults in the present study were brought to the nearest numbers by .5 to 1.0 the ICMR standard. But still. the adults of both saves shown under weight. This phenomenon of underweight is not as much alarming as overweight which batters the arteries plunders the heart, predisposes to diabetes and pounds away at the weight baring joints so that "a fat man wobbles where a thin man runs" The uniform underweight may be due to a variety of causes associated with the development change process.

The chest circumferences by age grade wise is presented in Table. 13. Standard measures are not available readily for all age/grades. However, the ICMR has, conducted a study in 1957 and norms of various anthroporматic measurements for Indian infants and children. When the data of the present study is compared with the standards for children under 14 years of age it is found that the boys fall short of by .59 cm and the girls by 2.cms. This also is not alarming as the range of shortage is marginal and falls in tune with the height and weight.

Table.14 presents th mean arm circumferences for the different age grades. As there is no standard measure-

ment available for comparison the data is resented as it is. A simple 'bangle test' is used in the Integrated Child Development Scheme areas to assess the nutritional status of children under 5. The arm circumferences of children under five in the study area do not show any gross nutritional deficiency or protein malnutrition among the children.

TABLE:11 Age Gradewise Anthropometry by Sex-Height

Age Grade	Height	
	Male	Female
0 - 4	88.6	85.5
5 - 9	113.8	117.7
10 - 14	138.25	130.1
15 - 19	159.4	152.6
20 - 24	161.8	154.8
25 - 29	168.1	154.6
30 - 34	169.5	156.8
35 - 39	170.0	153.3
40 - 44	171.4	158.3
45 - 49	164.0	155.7
50 - 54	163.0	154.95
55 - 59	170.2	159.2
60+	165.3	158.0
Mean Height Adults (25 - 60+)	167.8	156.35

TABLE:12 Age Gradewise Anthropometry by Sex-Weight

Age Grade	Weight Male	Weight Female	Standard Male	Standard Female
0-4	12.7	11.5	13.8	13.6
5-9	19.4	20.4	24.3	23.6
10-14	29.4	27.4	N.A	N.A
15-19	42.9	42.9	N.A	N.A
20-24	48.9	45.8	N.A	N.A
25-29	52.8	45.0	N.A	N.A
30-34	57.1	48.4	N.A	N.A
35-39	61.0	46.2	N.A	N.A
40-44	62	44.9	N.A	N.A
45-49	50.0	47.33	N.A	N.A
50-54	48.8	42.3	N.A	N.A
55-59	62.3	44.8	N.A	N.A
60+	52.61	47.4	N.A	N.A
Mean Weight Adults (25 - 60+)			55.86	45.79

N.A. Not Available

TABLE:13 Age Gradewise Anthropometry by Sex-Chest Chestcircumferences

Age Grade	Male	Female
0 - 4	52.95	50.18
5 - 9	59.78	56.25
10 - 14	65.21	62.88
15 - 19	73.13	71.4
20 - 24	77.06	--
25 - 29	81.82	--
30 - 34	84.93	--
35 - 39	84.2	--
40 - 44	89.7	--
45 - 49	80.44	--
50 - 54	79.8	--
55 - 59	89.06	--
60 +	81.39	--

Mean for Boys (0-14) : 59.31

Mean for Girls (0.14) : 58.43

ICMR Standard:

Means for Boys: 59.9 (0-14) Range: 43.3 to 76.5

Mean for Girls: 58.43 (0-14) Range: 42.3 to 73.8

TABLE:14 Age Gradewise Anthropometry by Sex - Arm Circumferences

Age Grade	Male	Female
0 - 4	15.5	14.39
5 - 9	16.35	15.81
10 - 14	18.54	19.37
15 - 19	21.87	22.28
20 - 24	22.96	22.46
25 - 29	24.35	22.8
30 - 34	25.28	23.32
35 - 39	26.18	22.48
40 - 44	22.48	22.77
45 - 49	23.42	22.67
50 - 54	23.55	21.38
55 - 59	25.8	22.11
60 +	22.95	23.38

Photo - 9
Toda Young Couple

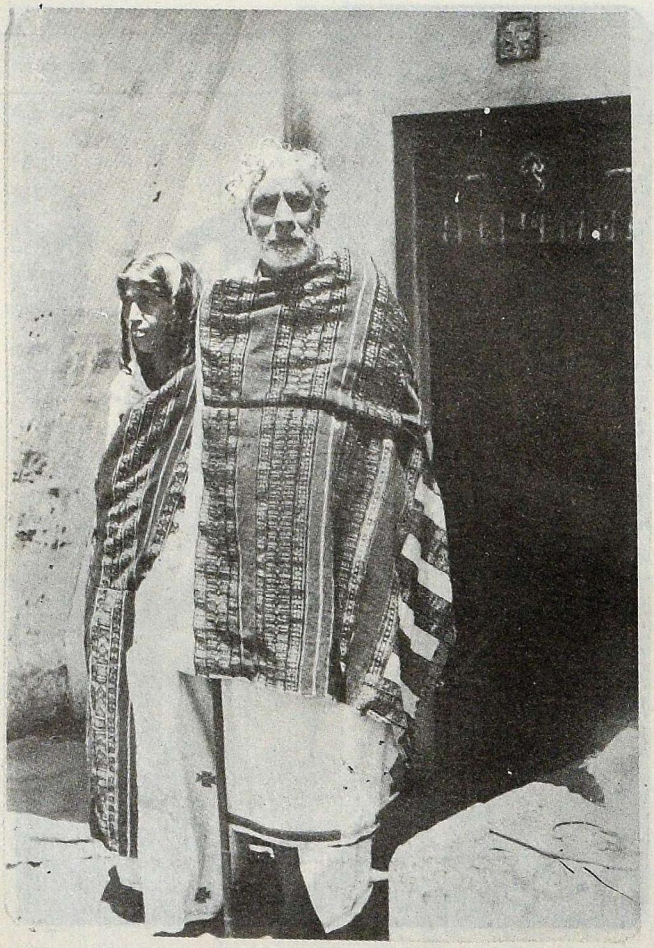

Photo - 10
Toda Elderly Couple

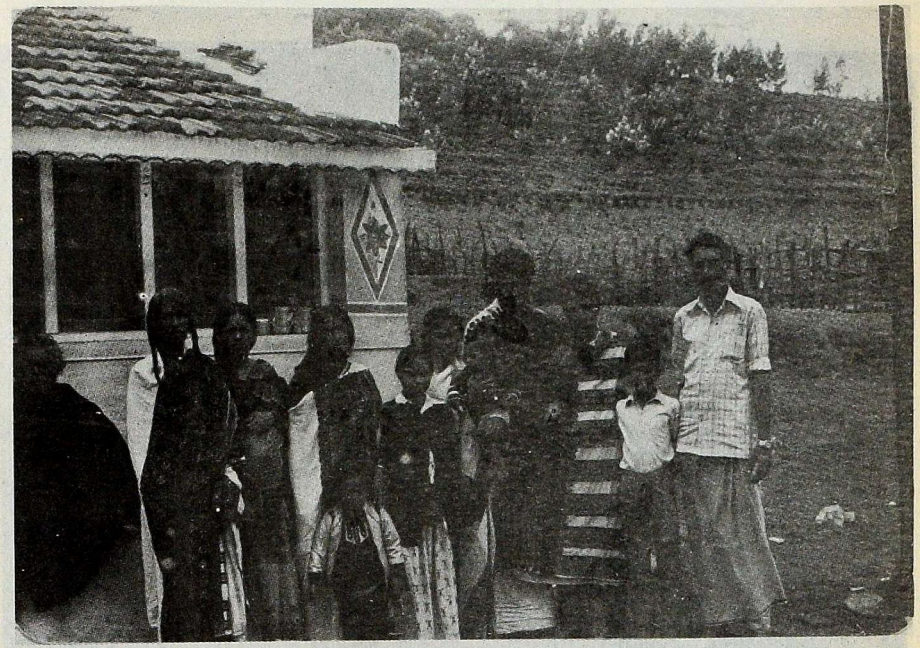

Photo - 11
A Joint Family of Toda

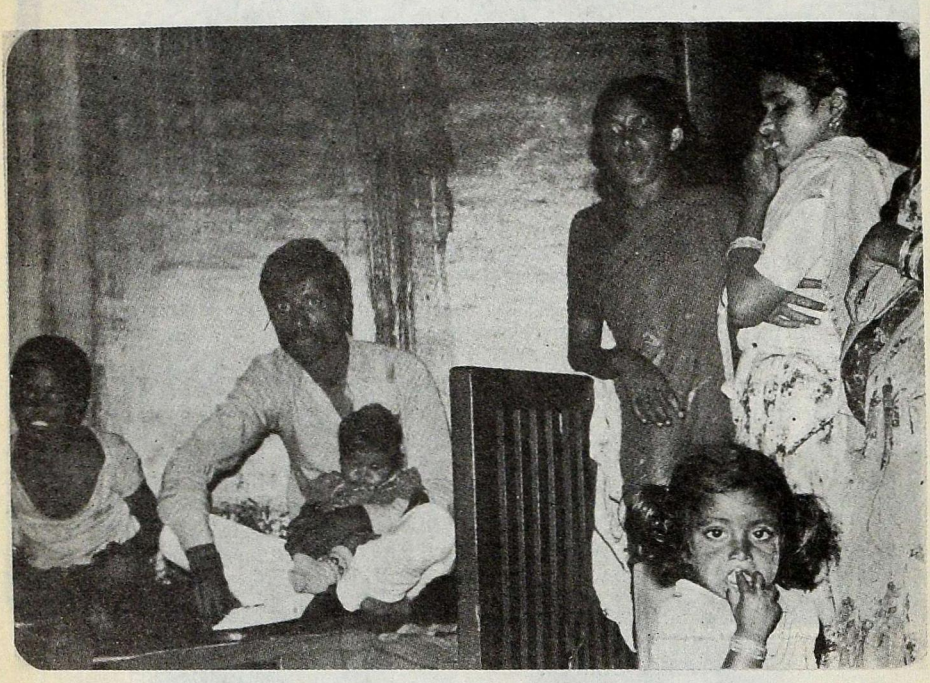

Photo - 12
A Nuclear Family of Toda

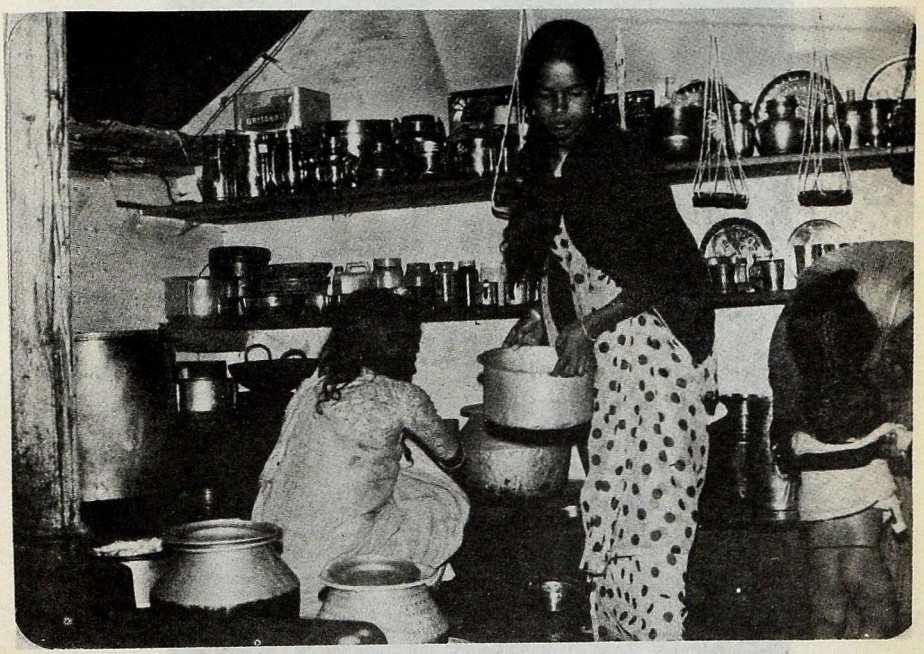

Photo - 13
Interior of a Modern House with Utensils

Photo - 14

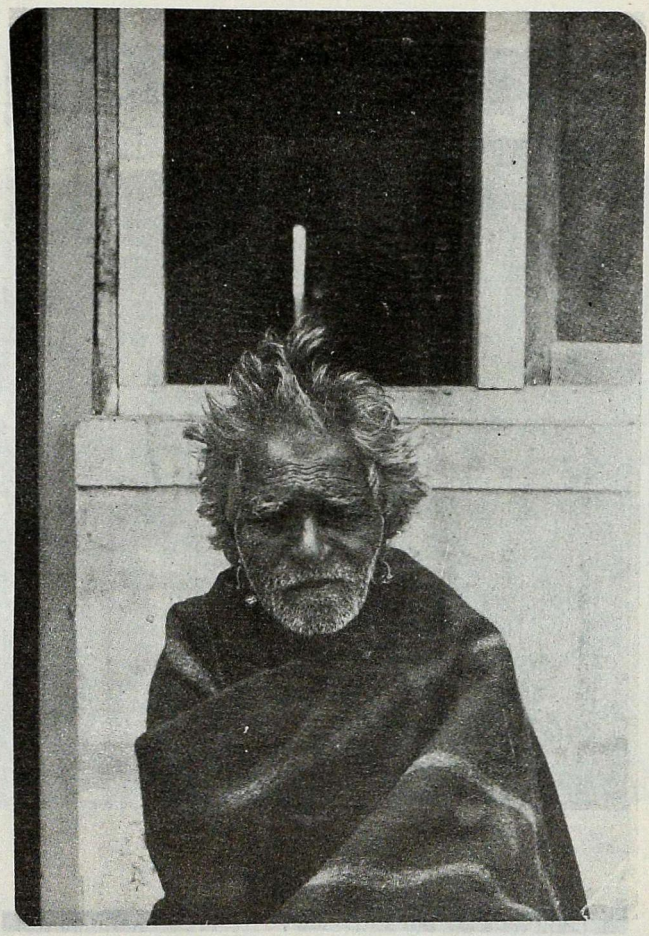

Photo - 15

Photo - 16
Senior Citizens of Toda (cntd.)

Photo - 17
Converted Toda Christian Families

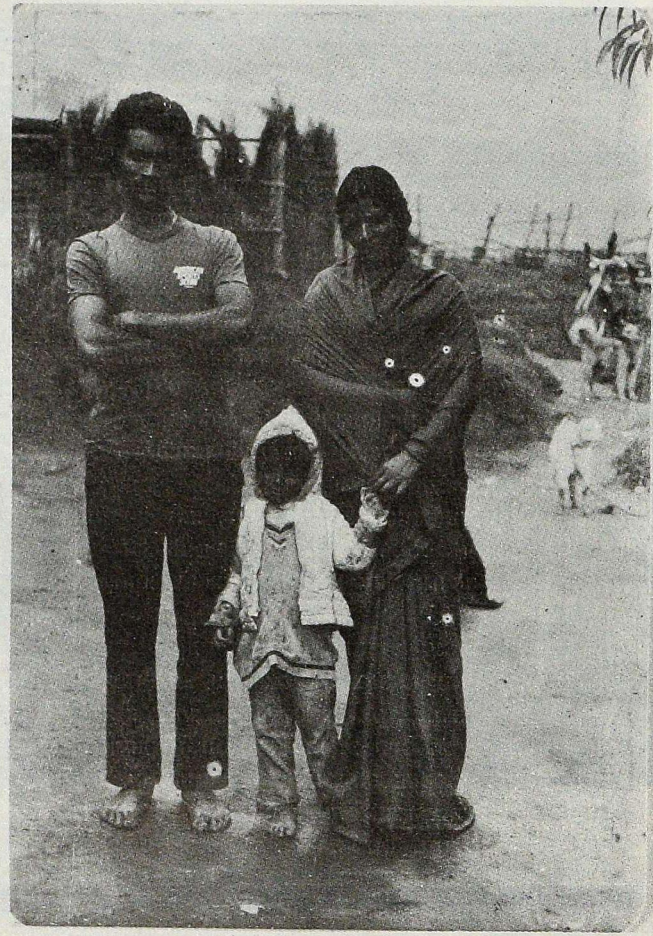

Photo - 18
Converted Toda Christian Families

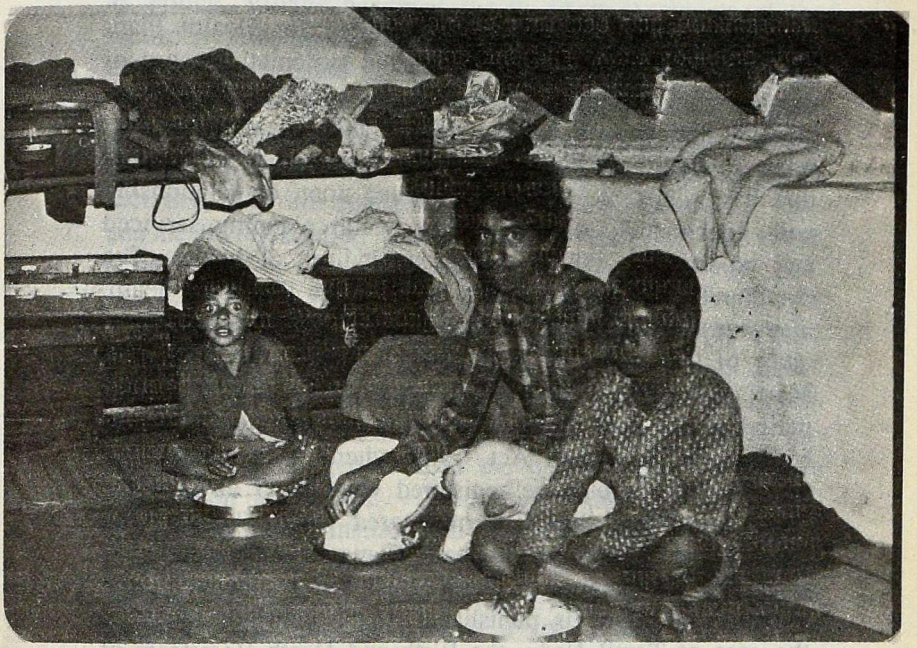

Photo - 19
Young Toda Children

MORTALITY AND MORBIDITY ANALYSIS

Mortality Pattern

One of the essential data required for Health Planning and Health Administration is the systematic record of demographic situation and health status of the population. "Health Statistics is a specialised branch of statistics that relate to the application of numerical method to all matters that have direct or indirect influence upon or relationship with health and are required for health planning serviced and reporting". Of the numerous indices of health of a community, the essential data required are the birth, death, marriages and morbidity statistics. Recognising the importance of the aspect of public health, the Birth, Death and Marriage Registration Act was passed during the British period in the year, 1896 which was incorporated is to the Madras Public Health Act, 1939 where it is compulsory that the Birth should be registered with in 15 days of the event and Death should be registered within 7 days with the designated Birth and Death Registrar of the government, by the parents or the nearest kin respectively, the violation of which is punishable in the court of law. In the case of Tamil Nadu, the Birth and Death Registrars of the Municipal areas are the Health Inspectors of the municipality, Executive Officers of the Town Panchayats and the Village Munciff or Karnam who are now redesignated as Village Officers. (VO), Despite this legislation, it was observed by the Health Survey and Development Committee, popularly called the Bhore Committee in 1946 observed that there were three main defects in the system.

They were

1. incompleteness in the recording of the events,
2. inaccuracy in the cause of death, and
3. faulty in the periphery (villages by illiterate)

Chowkidar or by the lowest grades of local body employees, registration by agencies other than health such as Police, Village headman (as in Madras). transit of the recorded vital statistics through a series of stages before they reach the state Directorate of Health Service". What was observed in 1946 in true to a great extent even now. One of the study carried out by the Gandhigram Institute of Rural Health and Family Planning in 1959 revealed the fact that the birth registration was deficient by about 60% and death registration was deficient by about 40% in Rural areas.

The Todas birth and death registration system which is in vogue with the state system is not far from the above study in the case of death and exceptional in the case of births as the later in the institutional set up where the institutions are obliged to feed the birth information to the registration authorities. The present study reveals an exceptionally higher institutional deliveries which is discussed elsewhere in the report. In the case of deaths, the responsibility lies with the individuals except the government hospital. Mortality analysis is a good index to assertain the health status of a population and identify the effectiveness of the health services and initiate improvement after the causes are analysed. Unfortunately, this data is not available from official records except two cases where the death hand occurred prior and after to the current study period which is reported as case studies for the purpose of community health vigilance.

Under the circumstances explained above it is very difficult to workout and present the mortality pattern for

Todas accurately without the enumeration of the whole population which is less than 1000. However, from the data of the present study which is fairly representative, there is one death reported during the period 1987 - 88, with all details by the household members. It is a female death aged around 35 years. She had long history of abdominal pain for which she had taken treatment both from Government Hospital and private nursing homes. At the terminal stage, she was admitted in one of the leading nursing homes of the Ooty city and diagnosed to be tertiaty stage of cervical cancer, and died in the Hospital. Other than this one death, no adult deaths were reported from any of the 14 sample settlements. Death ceremony among Todas of Nilgiris is elaborate with near 100% attendance of all Todas from the district. They keep the body up to 2 to 3 days for all the people to come. Enquiries from elders revealed that there had been only deaths during the financial year 1987- 88. Deaths have occurred during calendar year 1988 which is after the present study period, out of which one male, 85 years old from one of the sample settlement due to both Tuberculosis and hypertension, one male 30 years old died in the hospital due to bleeding of the abdomen and another male 28 years old due to homicide. In any case, both from the present study as well as from information from reliable sources the crude death rate of Todas is far less than the main steam population and country which is 12 to 14. The causes of the four deaths are interesting from the public health and development point of view. The one death due to Tuberculosis and hypertension had occurred in the older age does not mean that the incidence of Tuberculosis is higher among Todas while it is the other way round which is discussed subsequently. The one death due to homicide is certainly a rare phenomena as violence among Todas has never been experienced according to informed sources. The homicide is still under investigation, as such, no possible inference

could be made. The two deaths in the hospital in the younger age group, one male and one female appear to come closer to the Ivon Illich's concept of 'Clinical Iatragenesis' in his book "Medical Nemesis" where he writes "Increasing and irrepairable damage accompanies present industrial expansion in all sectors. In Medicine the damage appear as iatragenesis. Iatragenesis is clinical when pain, sickness and health result from medical care; it is social when health policies reinforce an industrial organization which generates ill-health; it is structural when medically sponsored behaviour and delutions restricts the vital autonomy of people by undermining their competence in growing up, caring for each other and aging or when medical intervention disables personal responses to pain, disability, impairment, anguish and death".

The crude death rate in the present study works out to 8.37 (per 1000 population) consisting of one female death and two infant deaths of a male and a female is certainly below the crude death rate for Tamil Nadu and India. While this is a heart warning situation on the face value, the two infant deaths out of the total live births in the present study, which works out to an infant mortality rate of 250 (per 1000 live birth) which is certainly on the higher side compared to that of Tamil Nadu rate of 64 (1970), present a disheartening situation since infant mortality is one of the sensitive idices of the health status of a community. Infant mortality is considered as a sensitive indicator as the factors involved in the problem reflects the environmental sanitation, maternal and child health service delivery system and a complex socio-cultural factors. The infant mortality rate in the present study may be dismissed on the grounds of inadequate sample size and other statistical and methodological reasons. But it is worth analysing it in the light of the ensuing data concerning the health services utilization pattern, immunizaiton coverage pattern

and environmental sanitation status of the study. The infant mortality rate can be divided into an early neonatal mortality and postneonatal motrality. A higher early neonatal mortality rate suggests inadequate access to health care delivery system whereas a higher postneonatal mortality rate indicates the presence of environmental problems in the home and settlement and lack of access to child care services. The two infant deaths, one male which comes under post neonatal mortality and another female comes under early neonatal mortality. Both the deliveries were Institutional deliveries, it was further reported that both the death were from the same settlement and that they were normal deliveries and both had normal birth weight. The cause of death for both the cases were accute respiratory infections (ARI). These deaths speak both of the poor environmental sanitation both at home and access to child care services. The distance of this settlement to the District Headquarters Hospital or the private practitioners is 17 k.m. The distance from the settlement to the bus route with less frequency of public transport facility is 1 k.m. and bus route with more frequency of public transport facility is 5 k.ms. Here the access factor has contributed and added with the poor environmental condition in the home. ARI does not set in abruptly, It goes through general respiratory condition like common cold, nasal congestion, inflammation of the throat etc. If medical intervention is initiated at the earliest symptoms at the home care itself, the progression of the condition could be slowed down. Lack of knowledge about the primary prevention coupled with the child rearing practices aggravate the situation. The health and medical care delivery system do not encourage self care and the primary care at the village level is not available though envisaged in National health policy through the community Health Volunteer Scheme, wherein every settlement will have a trained Male and Female volunteer selected from the com-

munity for a variety of primary public health activities including primary medical care. Unfortunately, the Government of Tamil Nadu rejected the scheme and introduced a mobile medical service with qualified doctor. The success of this scheme is dependent on the availability of the doctor, roadworthyness of the vehicle and a lot of logistics constraints. Further, conditions like ARI occurs not necessarily during the mobile medical units visit days. The community Health Volunteer scheme fits in favourably more for such communities who are thinly scattered in small settlements with inadequate or poor environmental conditions. The presence of a trained person from within the community goes a long way in the primary prevention function of Public Health.

Morbidity Pattern

Morbidity pattern represents the incidence of disease pattern in a community. The disease pattern also speaks of the stage of health development in a society and also the overall socio-economic conditions. The developed countries show lesser or no preventable diseases and communicable diseases and more of man made diseases like accidents., cardiovascular diseases, mental illness etc. whereas, the developing countries present most of the mass of preventable diseases. Widespread preventable diseases unquestionably serves as a barriar to progress in any direction, be it economic, social or political. A population that is chronically ill understandably has less productivity. Widespread disease also serves as an effective barrier to the development of agricultural lands and natural resources. The level of health in India as a whole till recently had been consistantly low due to a large amount of preventable morbidity. These in turn are due to lack of proper environmental sanitation, lack of adequate medical care or inade-

quacies in the service delivery system and preventive health services to all members of the community, irrespective of their ability to pay, ignorance of the community on essential primary prevention and inadequate nutrition both in quality and quantity. These conditions are also aggravated by socio-cultural practices of the specific communities.

The collection of morbidity data is not done as part of the vital statistics data collection and therefore is not available. The meaning of sickness and health depends upon the cultural values of the community and therefore subject to changes with changes in the cultural patterns and values in a particular community. In developed society sickness is not regarded as merely the results of gross pathological lesions due to infections, to signs, degenerative processes or accidents or such clinical conditions but directed by laboratory tests. It includes many conditions which are due basically to abnormal physiological states related to stress and strain, to abnormal behaviour resulting from pathological changes and even more remotely to the phenomena exhibited when people regard themselves as ill or when they present symptoms in order to escape from unpleasant situations.

The response to sickness vary significantly according to the cultural pattern and economic conditions. Seal described three such type of responses.

i. illness for which the service of a doctor is not sought.
ii. illness attended by medical practitioners of any systems of medicine.
iii. illness for which hospital service is sought.

Morbidity data for Todas was collected in the sample settlements through the Household Health Survey

Schedule. Illness of the first type mentioned above were never reported.

Illnesses for which they sought the help of the doctor or got in to hospitals were not reported fully and they could only remember vaguely the symptoms. Reliability of such data will lead to erroneous conclusions. Therefore, objective and reliable data on morbidity can be obtained only from the hospital admissions of both outpatient department (OPD) and the inpatient admissions (IPD). The district headquarters hospitals treats out patients not only Todas exclusively but the general population also. The OPD register do not indicate the community name in the register. Since there is a separate Toda (Tribal) Ward for women with four beds, most of the cases admitted are maternity cases and emergency cases. The other source is over a dozen private medical practitioners in the City whose recording system is not provided for various reasons for scrutiny or study nor the specific community name is noted. Therefore, the only two reliable data source to identify the morbidity pattern of Todas are the Govt Mobile Medical Unit's OPD Register for 1986-87, the OPD Register and IPD Registers of the Nilgiri Adivasi Welfare Association's Kolikarai Hospital. The morbidity data is presented in the following table No. 15, 16, 17 and 18. Table No. 15 is the morbidity pattern analyssed from the Register of the Government Mobile Medical Unit for Tribals. The mean episodes per visit shows a very low prevalence of the various conditions listed. The one condition which comes to about 3.00 per visit is the diseases related to the Respiratory System which again is less than that of the general population. This is further confirmed in Tables 16, 17 and 18 which represents the mobidity pattern from Kolikarai Hospital of the Nilgiri Adivasi Association which is meant exclusively for the Tribes of Nilgiri District. It is seen both from the Inpatient Registers and

Out-patient Registers that the prevalence of the various diseases for the Todas is consistantly low than the rest of the tribes and the main-stream population. No alarming diseases prevalence pattern is present as per the data presented. Sethuraman & Reddy's analysis of the Nilgiri District Hospital's admissions for the general population highlights the prevalence of Acute Gastro Enterities (7.01 per 1000), Respiratory Infection (5.29 per 1000), Enteric Fever (3 per 1000) and unspecified rate of Gastritis.

* Tables follows

TABLE:15 Morbidity Pattern of Toda Munds as per the Government mobile-Medical Unit for the tribals Out-patient Register

Sl. No. / Diagnosis \ No. of Visits / Settlements	Mean Episode Per Visit	GOVERNA SHOLA 3	NIRKASHI SCHOOL 4	PAGALKOD MUND 2	Muthinad Mund Thala Kunda 6	AVILANCHI 1	BETTU MUND 2	KOMBI THUKI MUND 1	KANYA MUND 2	MANJAKAL 1	PYKARA 1	THARNAD 5	HULLIGAL 2
1. UPPER RESPIRATORY INF. (URI)	1.1	1	15	1	6		2		4		2	2	
2. LOWER RESPIRATORY Inf. (LRI)	2.16	13	6	6	12		9	9				7	3
3. ASTHMA	0.31											1	
4. BRONCHITIS	0.2	3	2										1
5. URICARIA	0.2	1	2		3								
6. SCABIES/IMPEDTIGO	0.83	1	1	2	1	1	9		1			7	2
7. INJURY	0.16			2		1	7	1				1	
8. ULCER	0.3		4		2			1				2	
9. ANGULAR STOMATITIS	0.6	1	8	3	2						1	2	1
10. PEPTIC ULCER	0.23		2		1						2	2	
11. GASTRITIS	0.33	3		3	2				1			1	
12. ABDOMINAL COLIC	0.16	1	3										1
13. WORM INFESTATION	0.63	2	14		1	1							1
14. DYSENTRY	0.16	1	3			1							

Sl. No.	Diagnosis / Settlements / No. of Visits	Mean Episode Per Visit	GOVERNA SHOLA 3	NIRKASHI SCHOOL 4	PAGALKOD MUND 2	Muthinad Mund Thala Kundah 6	AVILANCHI 1	BETTU MUND 2	KOMBI THUKI MUND 1	KANYA MUND 2	MANJAKAL 1	PYKARA 1	THARNAD 5	HULLIGAL 2
15.	ANEMIA	1.3		11	1	2		4	3	1			4	13
16.	ARTHIRITIS	0.03					1							
17.	MYALGIA	0.8	9	2	1	4	3	4						1
18.	GENERAL DEBILITY	0.2	4	1			1							
19.	HYPERTENSION	0.2		1										
20.	NEURITIS	Nil												
21.	DYSMENNOREA	0.16		5										
22.	LEUCORRHEA	0.06							2					
23.	URETHERITIS	Nil												
24.	HERNIA	Nil												
25.	PYXERIA OF UNKNOWN ORIGION (POO)	0.61	7	2	1	4	1		2			1		1
26.	CATARACT	0.03	1											
27.	HEADACHE	0.3	5	2			1						3	
28.	ASOM (OTITIS MEDIA)	0.6	2	7			1						1	7
29.	FOREIGN BODY	0.03	1											
30.	CHEST PAIN	Nil												

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KOLIKARAI HOSPITAL

TABLE: 16 Morbidity Pattern - Toda

Systemwise Disease	No. of Admissions
Respiratory System	
Upper Respiratory Infection	5
Alimentary System	
Gasteritis	2
Circulatory System	
Anemia	1
Gynaec And Antenatal	
Pregnancy	4
ENT	
Pyrexia of unknown origin	1
Skin	
Impetigo	4
Locomotor	
Myalgia	1
Total Admissions	18

1986-87

TABLE:17: Morbidity Pattern - All Tribes

	KO	IR	PN	KU	MK	T
RESPIRATORY SYSTEM						
UPPER RESPIRATORY INFECTION	1	2	2		1	5
LOWER RESPIRATORY INFECTION		17		3		
PNEUMONIA		3	1	1		
PULMONARY TUBERCULOSIS		27	2	7		
ALIMENTARY SYSTEM						
HEPATITIS		6		1		
GASTRITIS		4		2		2
ACUTE GASTRO ENTERITIS		11				
PEPTIC ULCER		5				
WORM INFESTATION		2				
COLITIS		2				
DYSENTRY		5		1		
DYSPEPSIA		1				
CIRCULATORY SYSTEM						
GANGRENE		1				
SICKLE CELL ANEMIA		1				
ANEMIA		33	3	7		1
EYE						
CATARACT		5		2		
GYNAEC AND ANTE NATAL						
PREGNANCY		8	2	1		4
LEUCORRHEA		5				

	KO	IR	PN	KU	MK	T
VESICULO VAGINAL FISTULA		1				
ENT						
OTITIS		2		2		
PYREXIA OF UNKNOWN ORIGIN		20	4	9		1
MENINGITIS		1				
SKIN						
ABSCESS		5	2	1		
ECZEMA		4				
IMPETIGO		6		1		4
DERMATITIS		9				
SCALD		3				
CYST		1				
DOG BITE		1				
SNAKE BITE		1				
INJURY		14	2	1		
URINARY INFECTION		13				
GONORRHEA		1		1		
PARAPHYMOSIS		1				
LOCOMOTOR						
HEMIPLEGIA	1	1				
MYALGIA		6	1	1	1	1
THROMBO. ANGITIS OBLITERANS		1				
HYSTERIA		2		1		
FOREIGN BODY		2				
VITAMN DEFICIENCY		5				
MALNUTRITION		4				
POLY NEURITIS		18	2	3		
POISION OPIUM		1				

KO - Kota, IR - Irular, PN - Panian,
KU - Kurumba, MK - Mullu Kurmba, T - Toda

TABLE:18 Morbidity Pattern (3 months) from Tribewise OPD of Kolikarai Hospital (86-87)

	APRIL			MAY			JUNE		
	IR	T	K	IR	T	K	IR	T	K
1. RESPIRATORY SYSTEM									
UPPER RESPIRATORY INFECTION	17			22			33		
LOWER RESPIRATORY INFECTION	5	1		1					
PLEURAL EFFUSION	1		1						
RHINITIS	1								
BRONCHITIS	5			4					
PNEUMONIA	1								
PULMONARY TUBERCULOSIS	3		1						
2. CADIO VASCULAR SYSTEM									
ANEMIA 1	43			46			37		
3. ALIMENTARY SYSTEM									
GIOSSITIS/GINGIVITIS	2			11			3		
GASTRITIS	8			9			7		
PEPTIC ULCER	1			3			2		
HEPATITIS				4			1		
STOMATITIS	3			3			-		
DYSPEPSIA	3			4			-		
CONSTIPATION	1			-			-		
APPENDICITIS	1			-			-		
ABDOMINAL PAIN	2			3		1	-		
WORM INFESTATION	6			17			3		
ACUTE GASTO - ENTERITIS	22			33			26		
4. EAR NOSE THROAT									
THROAT PAIN			1						
SINUSITIS	1		2						
TONSILLITIS	1								
EAR PAIN	1								

	APRIL			MAY			JUNE		
	IR	T	K	IR	T	K	IR	T	K
5. DENTAL									
DENTAL PAIN	2						1		
6. MUSCULO SKELETAL SYSTEM									
ARTHIRITIS	6		1	2					
ARTHRALGIA	1			1					
SPRAIN							1		
JOINT PAIN	1			2			1		
MYALGIA	8		1	15			13		
7. SKIN									
ALLERGY	3			2			4		
ECZEMA	5			4			2		
PRURITIS	5			1			3		
SCABIES/IMPETIGO	5			5			8		
ABSCESS	2			1			-		
CHRONIC WOUND	1			-			5		
INSECT BITE	1			2			2		
ABDONIMAL WALL CYST							1		
WART							1		
ULCER	3			5			11		
ALLERGIC DERMATITIS	1						1		
FUNGAL INFECTION			1	5			1		
8. EYE									
PTYREGIUM 1 ACCO	1						1		
CATARACT							2		
HEADACHE									
9. VITAMIN DEFICIENCY									
NIGHT BLINDNESS	1			2					
NEURITIS	3		1	3			8		
POLY NEURITIS	1								
MARASMUS				1					
MAL NUTRITION							1		

	APRIL			MAY			JUNE		
	IR	T	K	IR	T	K	IR	T	K
10. GYNAEC									
MENORRHAGIA	1			2					
LEUCORRHEA	3			2			2		
DYSMENORRHEA				1					
MASTITIS	1			2					
11. PYREXIA OF UNKNOWN ORIGIN									
RHEUMATIC	16		1	41			60		
FEVER	10		1						
12. URINARY SYSTEM									
NEPHRITIS									
URINARY INFECTION	3			5			7		
13. MISCELLANEOUS									
INJURY	5			8			11		
CORROSIVE POISON	1								
OPIUM ADDICTION		1							
SNAKE BITE	1						1		
MIGRANE	1								
NYD GIDDINESS							1		

IR. Irular
K. Kota
T. Toda

Special Note on Tuberculosis Among Todas

Tuberculosis in India poses a serious public health problem due to pausity of reliable statistics besides the absence of any specific drugs during the pre-independence period. After the independence extensive tuberculin testing carried out in different parts of India in connection with mass BCG campaign and sporadic x-ray surveys provided a fairly reliable morbidity picture in the country. The various T.B. survey conducted in the country reveals that nearly 1.8 to 2% of the population is suffering from active pulmonary tuberculosis and nearly 1/2 of these are sputum positive. It was estimated that there will be nearly 8 million would be infections. It was further estimated that there would be atleast 500,000 deaths per year due to tuberculosis. The Government of India, though constrained with the paucity of resources is committed to the control of tuberculosis with in the shortest possible time with atleast 5 standard treatment regimens which suits both hospital based and domicillary treatment through the District Tuberculosis organisation with a team of medical and paramedical workers to control and monitor the programme implementation by the Primary Health Centres. There is a technological break through in the treatment of the disease with high potency bactericidal drugs in combination with the conventional drugs called Short Course Chemotheraphy which are implemented in 18 selected districts of the country including Tamil Nadu in Chengalput district on experimental basis.

According to a study carried out in 1964 in ten States and three Union territories in India, it revealed that tuberculosis is highly endemic in Tamil Nadu besides Uttar Pradesh, Andhra Pradesh, Kerala, Madhya Pradesh and Karnataka.

Tuberculosis among Todas was unknown in the early part of the century and no studies and investigations have reported the prevalence of tuberculosis. During the pioneering work of Dr. Narasiman from 1940s he had recognised the high prevalence of tuberculosis among the Nilgiri tribes which had caught the attention of the press and latter to the notice of the Government. But no authentic data on the exact tribewise prevalence rate was presented. The Government of Tamil Nadu conducted a survey in 1977 among the Kotas of Nilgiris and in 1981 similar survey was conducted among the Todas (Table 19, 20) 564 Todas were screened at the District Tuberculosis control Unit with x-ray and sputum examinations. The result of the screening of Todas in 1981 is presented in table. It is found that two females and one male were diagnosed as tuberculosis cases. The one male was in the age group of 21-30 and one female in the age-group of 21-30 and the other in 1-10 age-group. The incidence rate works out to be 0.53% as against the country's prevalency rate of 1.82% From the above data it appears that the tuberculosis is not alarming among the Todas. But it must be noted that the screening was not done on the whole population of the community. Letters were sent out to all the Todas with an appeal to report to the District Tuberculosis centre for screening with the assurance of payment for the transport charges and other free screening and treatment facilities. It is heartwarming that 564 Todas turned out for screening on a written appeal by the District Tuberculosis Centre. Almost more than 50% of the Todas, both male and females of all age-groups had turned up. It is likely that the remaining Todas might not have received the Communication or might have ignored or sought relief from private medical practitioners. In any case the prevalence of tuberculosis among Todas is not alarming based on the data of the District Tuberculosis Organisation and also from the data of the present study, where there is

one female tuberculosis patient undergoing domiciliary treatment. Though the incidence of tuberculosis is not alarming among Todas there is no justification for complacency as the contact of Todas with the main-stream population where the prevalence is about 20 per 1000, and is increasing day by day. Since this is a small group of population fairly settled down in 59 MUNDS the early detection of tuberculosis in the total population and consequent intervention of domiciliary treatment either with the conventional treatment regimen or the Short Course Chemotheraphy as a special case will be of a welcome move.

TABLE: 19 Incidence of T.B. Among Todas

Survey Conducted by the District Tuberculosin Officer During 1981

Age Group	Male	T.B.	Female	T.B.	Percentage
0 - 1	7	-	5	-	-
1 - 10	44	-	41	1	-
11 - 20	75	-	84	-	-
21 - 30	55	1	63	1	-
31 - 40	28	-	37	-	-
41 - 50	22	-	43	-	-
51 - 60	24	-	14	-	-
61 - 70	10	-	4	-	-
71 +	7	-	1	-	-
Total	272	1	292	2	0.53%

TABLE: 20. Incidence of T.B. Among Kotas and Todas During 1977 and 1981 Respectively

Source : District Tuberculosis Office

Age Group	Kotas (1977)				Thodas (1981)			
	X-rays taken		Defected		X-rays taken		Defected	
	Male	Female	Male	Female	Male	Female	Male	Female
0- 1	1	-	-	-	7	5	-	-
1-10	102	119	3	1	44	41	-	-
11-20	111	100	-	-	75	84	-	-
21-30	62	89	-	-	55	63	1	1
31-40	46	70	-	2	28	37	-	-
41-50	63	50	2	1	22	43	-	-
51-60	34	21	2	-	24	14	-	-
61-70	9	2	-	-	10	4	-	-
70+	1	-	-	-	7	1	-	-
Total	429	451	7	4	275	292	1	2

Blood Pressure

Blood is pumped around the body under pressure by the heart. In normal people, blood pressure varies about an average figure at different times of the day and with different circumstances. In the developed world, blood pressure has been found to rise with increasing age. The first - it may be about 120mm. Hg in a normal person - is the pressure at which the blood is pumped out of the heart and the second, which varies around 80 mm of Hg is the resting pressure between pulses when the heart is filling up ready for the next squeeze. They are known as systolic and diastolic pressures. Hypertension is a major, world wide health problem, a typically asymptomatic disease that frequently leads to CVD and death.

High blood pressure is important because it is statistically associated with reduced life expectancy and serious illness. It can lead to a failure of fine blood vessels in suspectible organs such as the kidneys, eyes and brain through simple mechanical damage. The higher the blood pressure the serious will be the reaction, Hypertension is an ideal case for mass medication because it is very difficult to make a decision about the cut-off point between hypertension and acceptable blood pressure. There can be no clear cut level about which different people will in unequivocal agreement. The response of our body and minds to work, the environment on life situations has developed through out our evolution to tell us something perhaps vital about what is happening to us.

The body's answer to many assaults of modern living, smoking, high salt diet, sedentary life style which is reported to be in the case of Todas and certain commonly used drugs will increase B.P. Hurry, worry and angry emotion have much to do with hypertension in man. In

most cases, B.P falls when stress levels fall. For many hypertensions, a simple sleeping and resting, regimen designed to prevent chronic exhaustion is enough to prevent the condition from recurring.

Even such limited measures as weight loss and reduction of sodium intake can be remarkably effective, allowing at least 85% of border line hypertensions to achieve normal B.P. The treatment of high blood pressure is a good example of such a controversial area. Individuals whose B.P. is considered to be dangerously high, 35%. of the middle aged adults suffer from above-average B.P. are therefore at risk of early death. Hypertension is twice as common among overweight people as among the under weight. Except for the small no. of people for whom the cause of hypertension can be eliminated, the disease has to were brought and kept under control through the use of drugs. Treatment of hypertension is a life long undertaking. High B.P. a symptom of underlying problems, which often causes the patient no discomfort, was subtly eleuded to the status of disease requiring medication.

Therefore recording the B.P. of the middle aged people over 45 during the household survey was undertaken with the following limitations 10% of patients could be undiscovered hypertensives. Casual B.P. measurement represents a sound strategy. About 20% of the population can be classified as hypertensives, but repeated measurement show more than 1/2 have fluctuating B.P. or labile hypertension. Height may affect 15-20% of all adults. 15-20% of the population risk death from CV diseases unless constantly treated with drugs. Often the first symption of CVD is often sudden on set with chestpain, perspiration and or vomiting.

TABLE:21. Age Grade (over 45) wise Blood Pressure by Sex. Minimum and Maximum:

Age grade	Total		Range of B.P.	
	Male	Female	Male	Female
45-49	12	10	90/120 to 100/140	90/120 to 90/130
50-54	6	6	90/120 to 100/150	80/110 to 90/130
55-59	5	6	90/120 to 100/160	80/100 to 90/130
60-64	4	2	90/140 to 100/190	90/120 to 100/180
65-69	2	2	90/140 to 120/200	90/120 to 100/180
70-74	3	1	90/140 to 100/200	90/120
75-79	5	1	100/140 to 120/230	90/130
80-84	2	1	90/140 to 110/190	90/140
85-89	1	-	110/190	- -

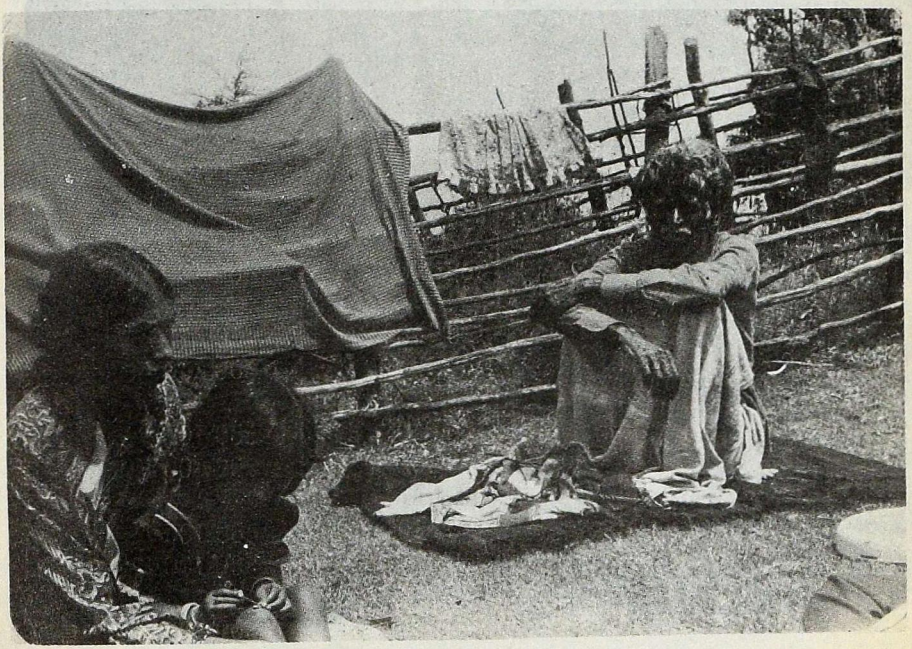

Photo - 20
Young and the Old

Photo - 21
Using Snuff- powder on Gums of the Mouth

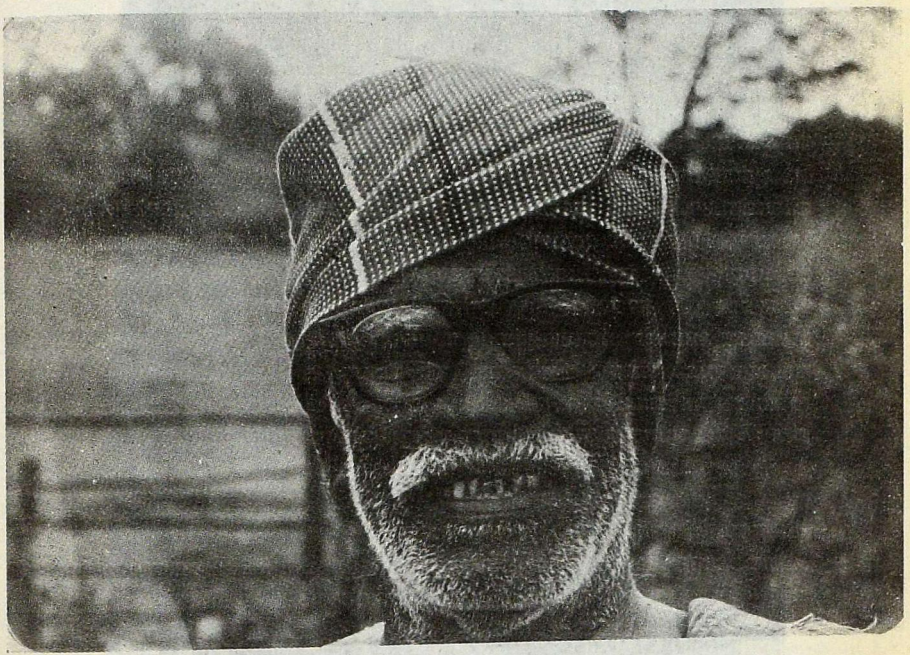

Photo - 22
Gingivities (Spongy gums resulting to loss of Teeth)

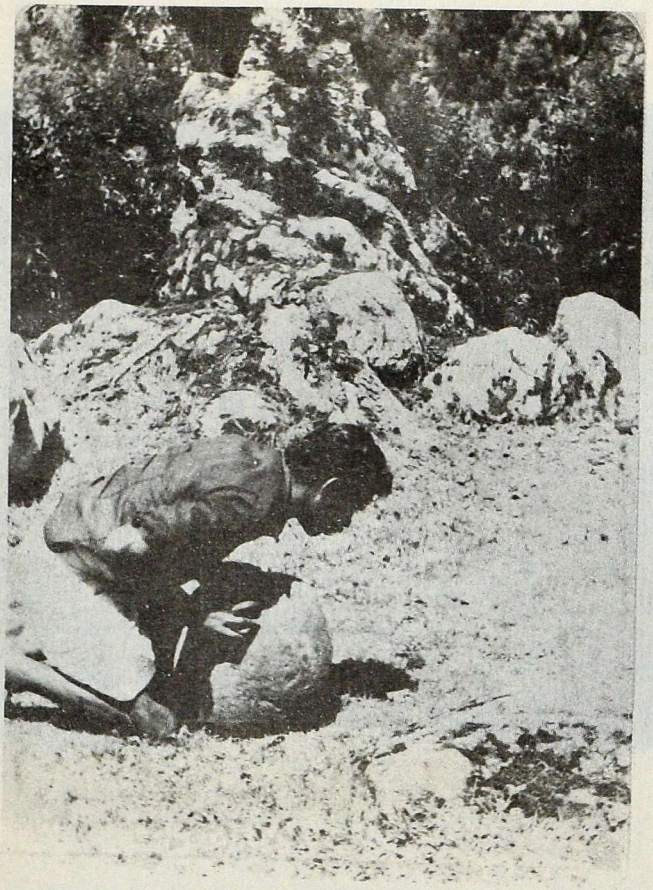

Photo - 23
Test of Strength in Sequence

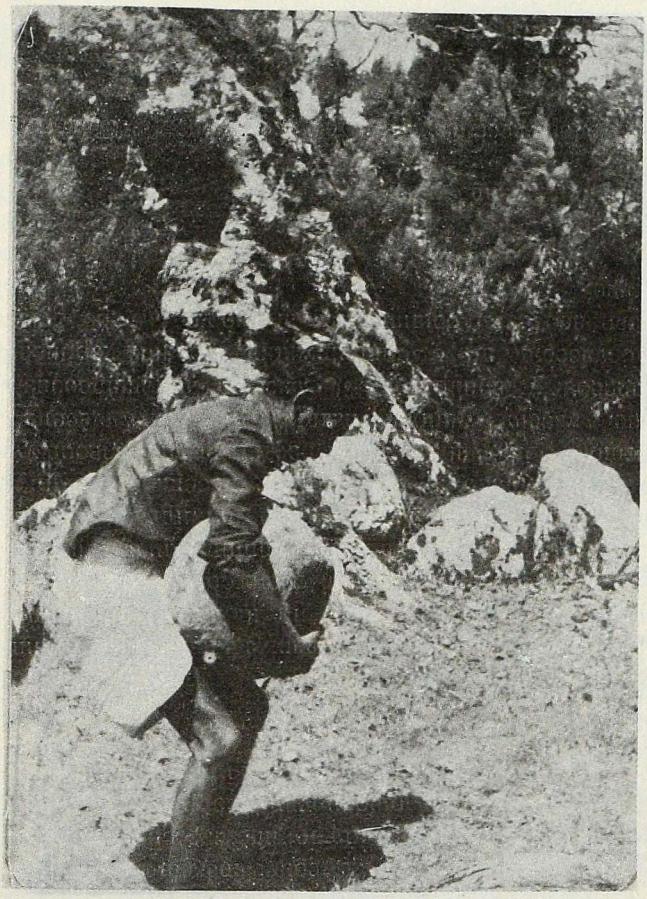

Photo - 24
Test of Strength in Sequence

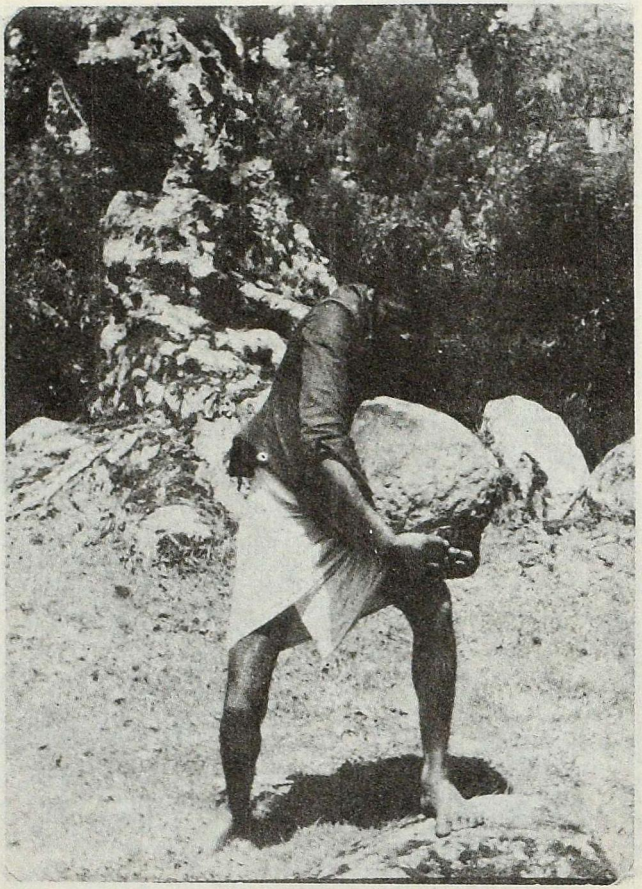

Photo - 25
Test of Strength in Sequence

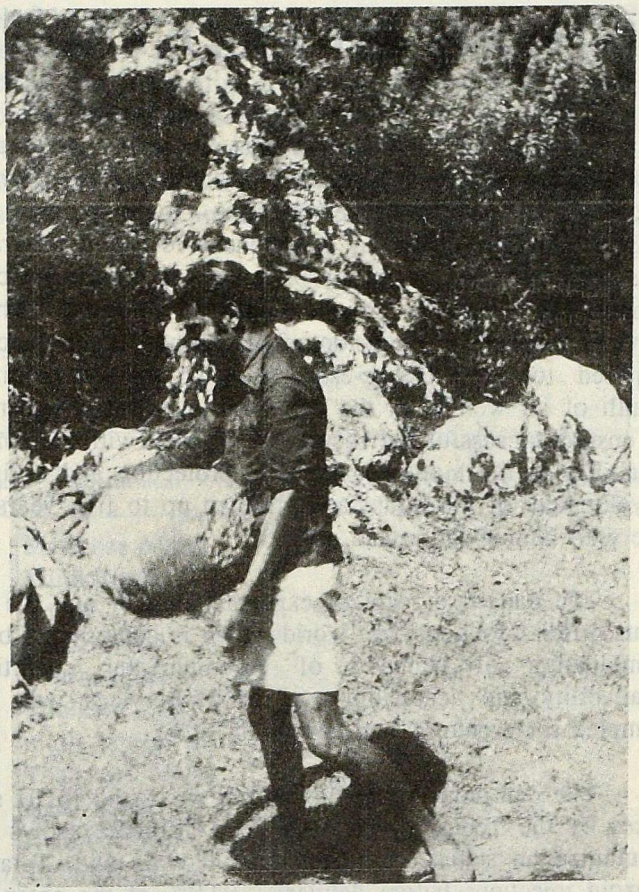

Photo - 26
Test of Strength in Sequence

MATERNAL AND CHILD HEALTH

Maternal and child health was recognized early as a development resource. Mothers and children received high priority in the health services planning. It was evident that without parallel support by comprehensive health programmes with emphasis on family planning any significant contribution to economic growth would be difficult. These services entails the provision of all forms of approaches required to promote, re-establish and preserve optimal health of all women in the community, during pregnancy, to ensure successful delivery of pregnancy with minimum disability to the mother and health protection and optimal development of the infant and children up to five years of age with immunization and care.

The pattern of care of expectant mother and the infants differ throughout the world which is conditioned by a combination of standard of environmental condition, availability and accessibility of MCH services with the complex socio-cultural and economic forces.

The data concerning the utilization of the MCH services by the Todas is heartwarming. Table.22 shows the immunization status of the pregnant women with Tetanus Toxoid injections before delivery. 92.9% of the antenatal mothers in the sample settlements had taken this service, which is far higher utilization pattern from the rest of the population in rural India. Table.23 presents the settlementwise deliveries by type of attendance. 90.38% of the deliveries were institutional deliveries either in Government Hospitals or Private Nursing Homes by almost equal

percentages which is very encouraging trend towards the Toda's Maternal and Child Health conciousness and utilization pattern which again higher than the rural India. Table.24 presents the settlementwise pattern of sterilization acceptance. It is amazining to note the near total acceptance of the Toda eligible couples, particularly the women who had undergone tubectomy operation, despite the directives of the Government of India to exercise restraint on motivation of tribes for sterilization due to the fact that these communities are already small in number.

TABLE: 22 Settlementwise Tetanus Toxoid Immunization Status

S.No.	Settlement	No. of Deliveries	T.T. Immunization	Percentage
1.	Melikhas Mund	10	10	-
2.	Minikishola mund	4	4	-
3.	Marli Mund	4	4	-
4.	Tharnad Mund	6	6	-
5.	Thulkod Mund	3	3	-
6.	mulli Mund	3	3	-
7.	Thabadod Mund	1	1	-
8.	Nedi Mund	5	4	-
9.	Bankod Mund	4	4	-
10.	Bedukal Mund	4	4	-
11.	Bigbed Mund	4	3	-
12.	Thee Mund	2	-	-
13.	Poo Mund	3	3	-
14.	Thoga Mund	3	3	-
	Total	56	52	92.9%

TABLE:23. Settlementswise Deliveries by Type of Attendance

(5 years)

S.No.	Settlement	No. of Deliveries	Home		Institutional	
			TBA	ANM	Govt.	Private
1.	Melikhas mund	10	-	-	6	4
2.	Minikishola mund	4	-	-	2	2
3.	Marli Mund	4	-	-	-	4
4.	Tharnad mund	6	-	-	4	2
5.	Thulkod Mund	3	1	-	2	-
6.	Mulli Mund	3	-	-	3	-
7.	Thabakod mund	1	-	1	-	-
8.	Nedi Mund	5	1	2	2	-
9.	Bankod Mund	4	-	-	2	2
10.	Bedukal Mund	4	-	-	-	4
11.	Bigbed Mund	4	1	1	2	-
12.	Thee Mund	2	2	-	-	-
13.	Poo Mund	3	-	-	-	3
14.	Thoga Mund	3	-	-	-	3
	Total	56	5	4	23	24
					44.23%	46.15%
						90.38%

TBA : Traditional Birth Attendants
ANM : Auxiliary Nurse Midwife

TABLE:24. Settlementwise eligible Couples for F.P. and Sterilisation Acceptance

S.No.	Settlement	E.C.	Vasectomy	Tuluctomy
1.	Melkahsh Mund	12 (7)	N.A.	5
2.	Minikishola mund	5 (-)	N.A.	-
3.	Marli Mund	5 (2)	N.A.	2
4.	Tharnad Mund	9 (3)	N.A.	2
5.	Mulli Mund	3 (2)	N.A.	2
6.	Thabakod mund	3 (1)	N.A.	1
7.	Nedi Mund	9 (4)	N.A.	3
8.	Bankod Mund	5 (2)	N.A.	1
9.	Bedukal Mund	3	N.A.	1
10.	Bigbed Mund	5 (1)	N.A.	2
11.	Thee Mund	3 (-)	N.A.	-
12.	Poo Mund	3 (2)	N.A.	2
13.	Thoga Mund	7 (3)	N.A.	3
14.	Thulkod Mund	3 (2)	N.A.	2

Number in paranthesis are eligible couples for steriliziation

Immunization Status

According to World Health Organization's technical circular, Immunization programmes, if properly performed, constitute one of the best and cheapest investments in the health of the community. Against some specific infections, e.g., tuberculosis, diphtheria, whooping cough and polio, immunization is the only effective measure that will ensure a high degree of protection for the susceptible community, which is composed predominantly of young children with the exception of small pox which had been eradicated.

Immunization Schedules

These should be so organized that the maximum degree of protection is given in the minimum number of visits and with the minimum degree of reaction. There are advantages, immologically and administratively, in combining several specific antigens in the mixture, e.g., diphtheria and tetanus toxoids with pertussis vaccine, the triple DPT vaccine. Other antigens may be given simultaneously with killed vaccines without hazards, e.g., DPT vaccine subcutaneously, smallpox or BCG vaccine intracutaneously and polio vaccine orally. Immunization schedules applicable to urban and rural communities are shown in the Schedules shown.

Optimum Age and Interval of Dosess

Most vaccines, with the exception of BCG and small pox vaccine, are best given in the age-group of three to nine months. The optimal interval between doses is two or three months, not one month, as is commonly believed. Killed injectable antigens, e.g., DPT vaccine, give a better response if adsorbed into an adjacent, such as aluminium phosphate. Two doses of an alua containing vaccine given

at two to three month intervals will give about the same protection as three doses of an ordinary saline vaccine.

Storage of Vaccine

Most vaccines lose potency with age, particularly if exposed to heat or light. Mixed killed vaccines, e.g., DPT Vaccine, should be stored in a refrigerator and reconstituted only before use on the same day.

Administration of the Vaccine

Killed vaccines, e.g. DPT, are given with a sterile syringes and needle into the deep subcutaneous tissue of the upper arm, leg or buttock. In mass caused gas, as injector gun may be used. Vaccines may be given by qualified nurses or by specially trained auxiliary staff for small pox and BCG, midwives or public health inspectors among others, after proper training in sterlization procedures and in the techniques of administration of the vaccine, such as the use of the bifurcated needle for smallpox vaccinations. A minor degree of illness is not a contra-indication to the administration of a vaccine.

Planning and Evaluation of the Immunization Programme

It is important to know enough about the natural history of the preventable infection, particularly age distribution and severity of attack of the clinical disease, incidence of latent infections and specific etiological agent or agents, in order to assess the likely impact of effective immunization on morbidity and mortality in the community, the best age for prophylactic immunization, and the efficiency of the vaccination programme.

Implementation of the Programme

The effective control of any communicable disease by vaccination requires that at least 80% of the susceptible age groups of all sections of the community should be protected. The health administrator responsible for the programme must have the qualities of leadership and resourcefulness. He must use all available personnel as members of the immunization teams and must obtain the goodwill and cooperation of the community by carrying out acceptable methods of health education.

Immunization Schedules

A. Immunization Schedule for Urban Areas

Age	Vaccination
0-1 month	BCG and smallpox vaccinations1
3-4 months	DPT (preferably alum-adsorbed); oral polio vaccine (first doses) (Smallpox Vaccination, if not given at 0-1 month)
5-6 months	DPT; oral polio vaccine (second doses)2 (BCG Vaccination, if not given at 0-1 month)
2 years	Booster DPT and oral polio vaccine
5-6 years	Typhoid vaccine (one dose)3 + Booster tetanus toxoid (combined) BCG revaccination Smallpox revaccination

11-12 years (Primary school leaving)	Smallpox revaccination Booster tetanus toxoid + typhoid Vaccine (Combined)

1. To attain the goal of smallpox eradication, a country must ensure that primary protection is given to 90-100% of its population and that 90-100% are protected by revaccination within a period of three to four years; this high level of immunity is obtained by vaccinating all newborns and is maintained by revaccinating at least all children at the age of school entry and school-leaving.

2. Note that the interval between the first and second doses of DPT vaccine should be not less than two months in order to obtain the MAXIMUM response and to ensure that a third dose will not be needed.

   Oral polio vaccine is best given between three and six months of age, when there is probably little chance of interference by other enteroviruses or by mother's milk. In South-East Asia countries, polio immunization is recommended only for individual protection, not yet for mass application.

3. It is assumed that typhoid fever is an endemic infection in South-East Asia countries, so that one dose of typhoid vaccine may boos a naturally acquired immunity. The combined T.A.B. vaccine should not be used.

4. If there is evidence from confirmed cases of clinical infection or Schick test surveys that diphtheria is occurring (or may occur) among school Children,

both diphtheria and tetanus toxoids may be combined with the typhoid vaccine.

B. Immunization Schedule for Rural Areas

Age	Vaccination
0-1 month	BCG and smallpox vaccinations1
3-4 months	DPT (preferably alum-adsorbed)2 (first dose) Smallpox Vaccination, if not given at 0-1 month)
5-6 months	DPT (Second dose) (ECG Vaccination, if not given at 0-1 month)
5-6 years (School entry)	Typhoid Vaccine (one dose) + booster tetanus toxoid (combined). Smallpox revaccination BCG revaccination
11-12 years (Primary school leaving)	Booster tetanus toxoid + typhoid Vaccine (Combined) Smallpox revaccination

1. To attain the goal of smallpox eradication, a country must ensure that primary protection is given to 90-100% of its population and that 90-100% are protected by revaccination within a period of three to four years; this high level of immunity is obtained by vaccinating all newborns and is maintained by revaccinating at least all school children at the age of school leaving.

2. If there is evidence of cases of paralytic poliomyelitis among young children in rural communities, the procedure recommended in Schedule A for infants aged three to six monhs should be followed.

With the above backdrop, the present study indicates again an amazingly high proportion of Toda children immunized as shown in Table.25 . The utilization of Maternal and Child Health services by Toda, perhaps serve as a model for the rest of the country.

* Tables follows

TABLE:25 Settlementwise Immunization Status (5 Years)

S.No.	Settlement	No. 0-5	BCG	DPT	POLIO	MEASLES
1.	Melkhas Mund	10	10	10	10	8
2.	Minikishola mund	4	N.A.	4	4	4
3.	Marli Mund	4	N.A.	4	4	4
4.	Tharnad Mund	6	N.A.	6	6	4
5.	Thulkod Mund	3	N.A.	3	3	3
6.	Mulli Mund	3	N.A.	3	3	-
7.	Thabakod Mund	1	N.A.	-	-	-
8.	Nedi Mund	5	N.A.	3	-	-
9.	Bankod Mund	4	N.A.	2	2	2
10.	Bedukal Mund	4	N.A.	4	2	2
11.	Bigbed Mund	4	N.A.	2	2	2
12.	Thee Mund	2	N.A.	2	2	2
13.	Poo Mund	3	3	3	3	1
14.	Thoga Mund	3	3	3	3	3
	Total	56		49	44	35

ENVIRONMENTAL SANITATION

Environmental Sanitation is the control of all the factors in the human's physical environment which exercises or may exercise a deleterious effect on his physical development, health and survival. In particular, this refers to the

i. methods of disposal of human excreta, sewage and community solid wastes to ensure safety from fly, mosquito and other insect breeding which affect the people in turn as carriers of germs and diseases.

ii. Provision or availability of adequate and safe water supply for internal consumption and other uses.

iii. housing to ensure that adequate space is available and fewer opportunities of direct transmission of diseases especially respiratory infections and encourage health care habits in the occupants.

iv. food supplies including milk that are safe from contamination.

v. personal habits of cleanliness that are related to diseases.

vi. atmosphere conditions to ensure that the external atmosphere is free from deleterious elements and that the internal conditions of workplaces, cattle shed are suitable for healthful conditions.

vii. the general environment adjacent to the settlement which may have deleterious effects for safe living like factories, workshops etc. that may produce polluting elements into the

atmosphere access of the houses with proper lighting etc.

Diseases that are primarily due to lack of proper environmental sanitation are:

i. infection commonly acquired by alimentary route, especially the enteric group such as dysenteries, epidemic diarrhoeas, cholera, non-pulmonary tuberculosis and helminthic infestations.

ii. infections commonly acquired by the respiratory route, especially pulmonary tuberculosis, pneumococcal infections and many virus infections, the association of which may, at times, be associated with housing conditions.

iii. infections commonly acquired by surface contamination, especially trachoma, opthalmia, which are particularly associated with certain housing conditions over-crowding and lack of public appreciation of sanitation and other infections such as hookworm, ascariansis, amebiasis etc.

iv. infections transmitted through the agency of an alternative or intermediate host such as mosquitoes that causes Malaria, filariasis epidemic typus etc.

With this background, the environmental sanitation aspects of the Todas could be seen from the following tables. Table-26 shows that 82.5% of the Todas in the sample live in transformed pucca houses while only 8.95% each live in the traditional and transformed houses. This presents a welcome trend and is certainly better than the rest of rural India. Table-27 presents the access of the sample community to drinking water supply by type and

distance. Here again, the maximum distance for only one settlement is less than 75 metres, 8 out of 14 settlements have access to it in less than 50 metres and the remaining settlements have it with in 10 metres which is a heartwarming situation than the rest of the population in general. The protection of the drinking water source from contamination is far from the satisfactory level and the feasible proposition is the education of the community to protect the water source by their own efforts and to inculcate the habit of boiling the drinking water before consumption. Table-28 shows that except one settlement the rest have the electricity facility for both domestic and agricultural purposes. Table-30 represents the age-old practice of using open field for defecation which is responsible for helminthic and alimentary tract infection. On this front the environmental sanitation situation of the Todas is no way different from the rest of rural India.

Table/s follows

TABLE: 26 Settlementwise Types of Houses

Name of Settlement	No. of House -hold	Tradi tional	Transi tional	Trans- form
1. Melkahsh Mund	13	-	-	13
2. Minikishola Mund	4	-	-	4
3. Marli Mund	4	-	-	4
4. Tharnad Mund	7	-	-	7
5. Thulkod Mund	7	2	2	3
6. Mulli Mund	5	2	2	1
7. Thabakod Mund	2	-	-	2
8. Nedi Mund	4	-	-	4
9. Bankod Mund	4	-	-	4
10. Bedkal Mund	2	-	-	2
11. Bigbed Mund	5	2	2	1
12. Thee Mund	2	-	-	2
13. Poo Mund	4	-	-	4
14. Thoga Mund	4	-	-	4
Total	67	6 (8.95%)	6 (8.95%)	55 (82.05%)

TABLE:27. Settlementwise Distance of Households to Drinking Water Source by Type of Supply

S.No.	Name Of Settlement	No. of House-holds	< 30 Mtrs.	< 50 Mtrs.	< 75 Mtrs.
1.	Melkash Mund	13	T.T.(P)		
2.	Minikishola mund	4		T.T.(U.P.)	
3.	Marli Mund	4	T.T.(U.P.)		
4.	Tharnadmund	7			St. U.P.
5.	Thulkod Mund	7		I.W.(U.P.)	
6.	Mulli Mund	5	T.T.(U.P)		
7.	Thabakod Mund	2		ST.(U.P.)	
8.	Nedi Mund	4		T.T.(U.P.)	
9.	Bankod Mund	4		T.T.(U.P.)	
10.	Bedkal Mund	2		T.T.(U.P.)	
11.	Bigbed Mund	5		ST.(U.P.)	
12.	Thee Mund	2	I.W.(U.P.)		
13.	Poo Mund	4		ST. (U.P.)	
14.	Thoga Mund	4		ST.(U.P.)	

T.T.(P) - Tank + Tap - (Protected)
T.T.(U.P.) - Tank + Tap - (Unprotected)
ST. - Stream.

TABLE:28. Settlementwise Electricity Facilities

S.NO.	NAME OF SETTLEMENT	HOUSE	STREET	AGRI-FIELD
1.	Melkash Mund	Yes	Yes	Yes
2.	Minikishola mund	Yes	Yes	Yes
3.	Marli Mund	Yes	Yes	Yes
4.	Tharnad Mund	Yes	Yes	Yes
5.	Thulkod Mund	No	Yes	Yes
6.	Mulli Mund	No	Yes	Yes
7.	Tabakod Mund	Yes	Yes	Yes
8.	Nedi Mund	Yes	Yes	Yes
9.	Bankod Mund	Yes	Yes	Yes
10.	Bedkal Mund	Yes	Yes	Yes
11.	Bikbeth Mund	No	No	Yes
12.	Thee Mund	Yes	Yes	Yes
13.	Poo Mund	Yes	Yes	Yes
14.	Thoga Mund	Yes	Yes	Yes

TABLE:29. Distance from Settlements to Bus Route

S.No.	Settlement	Distance
1.	Melikhas Mund	1/2 K.M.
2.	Minikishola	75 METRES
3.	Marli Mund	15 METRES
4.	Tharnad Mund	1 K.M.
5.	Thulkod Mund	2 K.MS.
6.	Mulli Mund	1/2 K.M.
7.	Thabadod Mund	100 METRES
8.	Nedi Mund	2 K.Ms.
9.	Bankod Mund	0 KM.
10.	Bedukal Mund	0 KM.
11.	Bigbed Mund	5 K.M.
12.	Thee Mund	1 K.M.
13.	Poo Mund	1.1/2 K.M.
14.	Thoga Mund	100 METRES.

TABLE: 30. Settlementwise Type of Human Excreta Disposal

S.No.	Name of Settlement	Type of Disposal
1.	Melicash Mund	Sanitary Latrine Provided to some houses but not used.
2.	Minikishola mund	Open air
3.	Marli Mund	Open air
4.	Thamad Mund	Open air
5.	Thulkod Mund	Open air
6.	Mulli Mund	Open air
7.	Tabakod Mund	Sanitary Latrine available - Not all use
8.	Nedi Mund	Open air
9.	Bankod Mund	Open air
10.	Bedkal Mund	Open air
11.	Bigbet Mund	Open air
12.	Thee Mund	Sanitary Latrine used
13.	Poo Mund	Sanitary Latrine used
14.	Thoga Mund	Sanitary Latrine used

SUMMARY AND CONCLUSION

The health status of Todas during the late 19th century and early 20th century presented a grim picture with the wide spread epidemic diseases, sexually transmitted diseases, particularly sphilis and gonorrhoea which had caused sterility among the Toda women that had contributed to the erratic population trends with disproportionate sex ratio between male and female. The Todas have attracted that attention of both the Britishers who first began their exploration of Nilgiris and a number of anthropomegist and related social scientists. This is evident from John Sulivan who discovered Ootacamund pleading with British Government to exempt the Todas from paying tax to the Government on the ground that they were the lords of the soil.

It is Prince Peter, the anthropologist from Grece who raised an alarm of their extinetion due to the prevalence of sexually transmitted diseases (STD) along with the local missionaries. The concern expressed about the health status of Todas grew to the extent of Government directing the King Institute, Guindy to investigate the status of the Toda health with particular reference to their declining population trend.

Dr.Pandit, the Medical Officer incharge of the investigation confirmed the fact that the decline was primarily due to higher rate of sterility among women caused by syphilis which was attributed to polyandry practised by the Todas. The King Institute Guindy in their final report to the Governments elaborated extensively the health status of Todas with particular reference to the prevalence of STD and recommended the establishment of a dispensary for controlling the disease. After the study of the King

Institute, Guindy by Dr. Pandit in 1927, which was extensively and exclusively to determine the causes for Toda population decline, no exclusive indepth study on health status of todas was done despite a number of publications from different disciplines have studied the community on different dimensions. Therefore, it was proposed to conduct an exclusive study on the health status of Todas with the objectives of taking an inventory of their current health status in a comprehensive manner to cover both the changes that have taken place in Toda's concept of health, their current health status and also to reiterate the measures undertaken by the Government Health Care Delivery System supplemented by the Voluntary Health Agencies and the impact these efforts have made on the Toda population. Fourteen settlements were selected as sample for this study, taking into consideration the geographical distribution of the population, accessability to health care delivery systems representation of the converted christian Toda.

The data was collected from 14 settlements numbering 67 Households with a total population of 358 with the help of a Household Health Survey Schedule and a Community Health Survey schedule, Due to subjectivity and abstractness of the very concept of health the analysis took into consideration the secondary data from the hospital records of the Healthcare Delivery Systems.

The findings of the study is hereby summarised as follows:

The "Todas" concept of health has developed along with the primitive concept of health which attributed the cause of the illness is both external from sourcery and witchcraft to caused by supernatural powers; internal, caused by the relative inequilibrium, created the consumption of unbalanced cold and hot food to that of the body

systems; inability to cope up with the external environment. An analysis of the Toda equivalent health related terminologies indicate that there is no specific term for health. But there are reasons attributed for illness, discomfort and inability to perform normally. It appears that Toda's concept of health is one of strength and ability to function normally without any discomfort.

The population characteristics that had presented a kalidoscopic picture with subnormal sex ratio of male preponderance over females has slowly levelled and showed a balancing trend up to 1961 during which time the census data is fairly accurate. The findings of the present study also confirms the trend. 1971 census data is unbelievable and estimates of 1980 by the District Collectorate are rather guestimates as the discrepancy in the data are far and wide. The one official enumeration of the Animal Husbandry Department in 1975 appears to be authentic and for the first time the Toda population sex ratio has changed to female preponderance over males. The overall population structure in the current study does not reveal any uniqueness or peculiarity of the Todas and it falls in tune with the National figures of sex ratio.

The availability and assessability of health care delivery system is to a great extent, at the more than satisfactory level more due to the development work of roads and public transport facilities than to the actual availability of the services which is within 5 kms to the subcentre of Government Health Care Delivery System and 10 to 15 kms to the health services, either Government or Private.

Though the environmental sanitation situation in most of the settlements is in no way better than the rest of rural

India, they continue to present a grim picture of insanitary disposal of human excreta by open air defecation and several sources of garbage dumps, swamp by buffalo pens etc. which are breeding places for flies and mosquitos. There is reasonable and adequate availability of drinking water supply with varying degrees of their protection from contamination.

The availability of electricity for domestic consumption, and community facility and agriculture purposes is much better than the rest of the rural Tamil Nadu. The access of bus route from the settlement range from 1 km distance to about 5 kms which facilitates the community to go for health or medical care any time during the day with the availability of an excellent public transport system network. The Anthropometric measurements of height, weight, chest circumferences and arm circumferences in the sample population studied reveal a moderate shortage from the standards developed by the Indian Council of Medical Research but there is no alarming malnutrition and protein deficiency noticed in the sample population.

The above back-drop is reflected in the mortality and morbility pattern of Todas. Despite the limited authentic data available on mortality for Todas as a whole due to inadequate recording system, the present study reveals a far less mortality rate which is certainly lower than the mortality rate of the general population. The interesting phenomena is the lowest crude death rate which is heart warming while the infant mortality rate though it is only 2 in number in the present study works out to 248 per 1000 live births that is on the higher side than the Tamil Nadu and Indian rate of infant mortality. The causes of death

both infant as well as the crude death certainly reflects that the mortality pattern has switched away from the primitive socities pattern to that of the developing society as the data presented for the death occurred during the study period and the deaths that have occurred in the hospital earlier to the study period and later to the study period confirms the pattern of development associated diseases and deaths.

The morbidity pattern elicited with the hospital in patient and outpatient record is in no way very different form the morbidity pattern of the rest of the main stream population. The changes in the morbidity pattern from the available records and from the data of the current study can be attributed to several factors from that of the provision of health care delivery system by Government and Voluntary Health Agencies, besides, a number of private medical practitioner in the Ooty town, Coonoor, Kothagiri and Gudalore Taluks to that of the changes in the life-styles of the Todas which is changing fast and in par with the main-stream population. Eventhough the data reveal a reduced prevalence rate, as far as the morbidity is concerned which may be due to their resorting to the private medical practitioners from whom the data could not be obtained for various reasons. The absolute absence of the prevalence of STD among the Todas either from the Government Mobile Medical Unit for the Tribes of Nilgiris and the Nilgiri Adivasi Welfare Association Hospital records is rather surprising and may lead to the conclusion that STD is eradicated in the community. It is quite likely, that they may be resorting to the private medical practitioners for such ailments, as the disease has it's usual social stigma preferred to be kept confidential between the doctor and the patient. In any case, the prevalence of the diseases reveal that their rates are certainly lower than that of main stream population. The alarming health status present during the early part of the century has switched

over to normal and usual mortality pattern which is not of any grave concern. However, looking into the mortality pattern the community has indications of its development which has its own side effects reflected on the life style. Concern over the incidence of cancer during the period is expressed by the 'value infusers' of the community. The addiction pattern of the Todas, though is not very unique for them, than the rest of the population is not in the desirable direction. There is abundant scope for reducing the addiction pattern particularly to alcohol, poppy seed decoction and the use of snuff powder in the gums, call for attention by appropriate educational intervention which may not have immediate impact on the adult group, but efforts directed on the younger age group will certainly have potential effects in the periods ahead.

To sum up, the health status of the Todas certainly has switched over towards the positive direction which is attributed not only due to the availability, accessibility and acceptability of the community health and medicare facilities, but also due to a intricate interventions tried which is rather an ideal intraction pattern in community medicine which is illustrated as incidence precases to support the above between with the 'three arms' of the 'community vigilance' by community 'value infuser' system, Health care delivery system and treatment receiver systems. Conventionally the 'provider system' has tended to view the 'patient' and 'treatment' provider interactions as purely a bilateral phenomenon. Further, it had erred in considering the 'third arm', the 'value infusers' adjunct which calls for dealings independent of medical care programmes. The 'value infuser' component was never recognised as a critical and powerful medium, for reaching effective medicare to the patient system.

The following Incidence Processes are briefly presented to illustrate the preceding point of the 'third arm' in the optimization of health services utilization and the community vigilance over the system. The data on those two incidences are sketchy due to the inaccessibility of hospital records, because of the case's controversial nature and hence obtained through secondary sources.

INCIDENCE No. 1

During 1987, a Toda woman in the age-group of 30-35 was admitted in the Government Head Quarters Hospital for Acute Gastro Enteritis (AGE). Soon after admission into the hospital she was put on drips with Saline Glucose. It is said that the patient collapsed few minutes after the drips were administered. On hearing the news, Mrs. Evam Piljen Wiedemann, the most respected tribal leader who used to attend to the routine emergencies and problems of the tribes of Nilgiris went to the hospital to see and attend to the bereavement of the relatives and facilitate the formalities of taking the body for cremation, enquired about the cause of death as a routine. Being a trained and experienced Public Health Nurse, she suspected the cause of death as there was a rumour about the quality of the Saline Glucose, and immediately reported the episode to the appropriate authorities for investigation. It was further reported that the authorities took prompt action to order official enquiry into the cause of death. It is said that the saline Glucose was sub-standard and was not purchased in accordance with the formalities laid by the authorities and that the Officer concerned was placed under suspension for the above reasons.

INCIDENCE No. 2

During 1989, a Toda young man was admitted into

the hospital with semi-consciousness, the name village etc. improperly recorded as no Toda had accompanied him during admission. During the process of treatment, the patient died and as there was no claimants of the body, it was sent to the mortuary. The hospital authorities suspected later that the body could be a Toda, reported to Mrs. Evam Piljen Wiedamann that they suspected that one of her community youth was seriously ill. On hearing the news, she rushed to the hospital and was informed that the patient had died and the body was transferred to the mortuary. She was furious on hearing the news that the body was transferred to the mortuary as against the belief-systems of the Todas concerning death and the mis-information passed on to her that the patient was dying. On examination of the body she suspected that the patient should have died long before their reporting. She reported the matter to the local authorities and sent telegraphic messages to the higher authorities at Madras and announced that she will perform a 'Dharna' in front of the hospital as a protest against the negligence of the doctors in saving the life of the Toda and their disrespect to the Toda belief-system over death, that soul will not rest in peace if the body is not taken back to the residence and sending it to the mortuary was an insult to the community. The next day over hundreds of women and men went on procession in the town and reached the hospital and roused the local press and public. The local daily in Tamil had published the event in their paper (Annexure - 'C').

of Todas

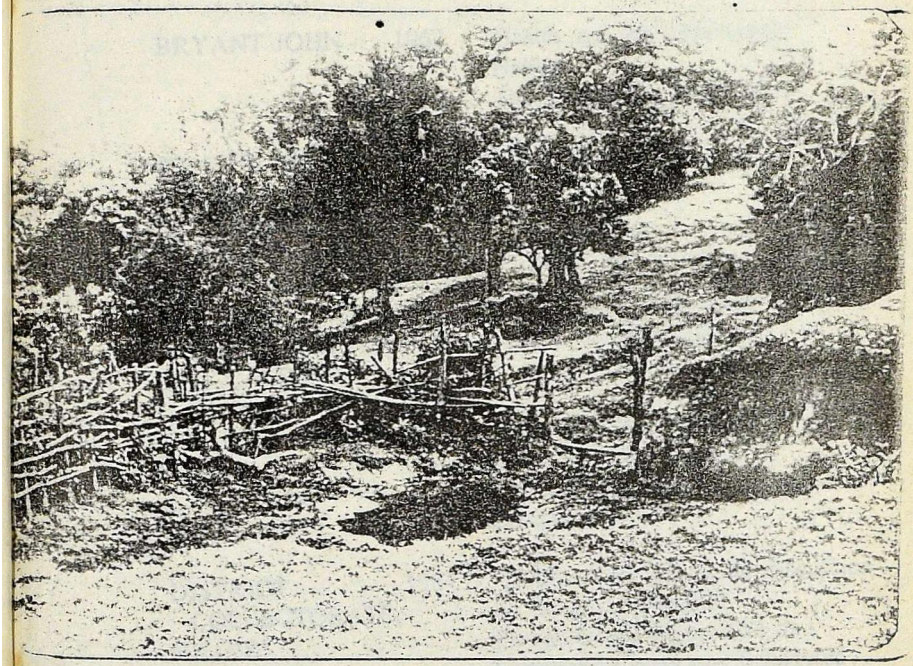

Photo - 27
Fly-breeding Buffalo Pen (UNDI)

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Health Status of Todas

Household Health Survey Schedule

Scheduled No. . . . . Date of Survey . . . . . Settlement . . . . . .

Name of the head of household . . . . . .

Clan . . . . . .

Taluk . . . . . Rev. Village . . . . . Annual income of the family . . . . . .

		Educational Status							Immunization						Incidence of Disease					Anthropometric				
Sl. No.	Name of the house hold members	Rclationship	Age	Sex	Maritial Status s/m/w/d	Highest Std of School	Read and Write	Occupation	DT P I II III	BCG	TT	Polio	Measles	CD	NCD	Others	Type of Medical Treatment Availed	Physical/mental Handicap	Additchions	Height	Weight	AC	CC
	Vital Events (during last 12 months)																						

Type of house : Traditional/Transitional/Transformed

Drainage for the House: Open/Closed/No.drainage

Own House/Rented House :

Method of sullage Disposal: Soakpit/kitchen garden/ Cess Pool, Street drain / Open stagnation.

Electrified Yes / No

No. of Living rooms

Light: Adequate/Inadequate

Disposal of Refuse from the House:

Method of Disposal (Specify) . . . .

Ventilation : Floor space . . . . .sq.ft

Window space . . . . sq.ft

Open space . . . . . sq.ft

Disposal of Human Waste:

Open air/Community Latrine/ Dry earth latrine.

Source of Water Supply

a. For Drinking purposes: 1. Stream

2. Public Well / Tap: Distance:

3. Other Sources: Specify . . . . . .

Protected Yes/No

If no, is there space for latrine construction Yes/No

If yes, Willingness to construct latrine: Yes/No

4. In case of well, type of well: Closed Well/ Open well/Protected well

Presence of Buffalo Pen : Yes/No

If yes, its condition and maintenance:

Disposal of solid waste (Specify methods)

5. Method of storing water in the house: . . . .

b. For other purposes (Specify source)

ANNEXURE - B

COMMUNITY HEALTH SURVEY SCHEDULE

I. General

Name of the Settlement: Tribe:
Name of the Panchayat/Municipality: . . . . . .
Name of the Panchayat Union . . . . . .
Taluk Revenue Village . . . . . .
Police Station -
Location and Distance . . . . . .
Post/Telegraph Office -
Location and Distance . . . . . .
Telephone Facilities
(existing/no) Distance . . . . . .
Fire Station -
Location and Distance . . . . . .

2. Physiographic & Meteriological Data

Rainfall (annual) . . . . . cms.

3. Transport Facilities

i. Approach road all whether / mud road Roads inside . . . . . .
ii. Means of public transport available:
Bus: Nearest Bus Stand
Rail: Nearest Rly Stn. Distance . . . . . .

iii. Nearest Town . . . . . Distance . . . . . .
iv. Number of persons going to town with details regarding purpose, frequency,etc.,
v. Frequency of buses connecting the nearest town?
Every 5 mts/10 mts/15 mts/ 20 mts/ 30 mts/ 45 mts/ 1 hr.

4. Communication

i. Newspapers - Circulation - No. . . . . .
ii. Weeklies . . . . . Circulation-No. . . . . .

4.1. How do people usually get information in the area:

Media	Most people	Some people	Very few people
Indigenous media (drum beating)			
Word of mouth:			
Leaders:			
Newspapers:			
Radio:			
Films:			
Govt. workers:			
Others-specify:			

4.2. Of the above sources, which are more used for getting or sending information in the order of priority and type of information

Media	Type of information

4.3. No. of radio sets: . . . Tape recorders: . . . TVs: . . .

4.4. Details of usuage of community radio programmes:
i. Programmes people generally listen?
ii. Number of people listening?
iii. Where people generally discuss the programmes they had heard:

4.5. What languages are spoken:

4.6. Common dialects used pertaining to health + Medical needs. (list as much as you come across while moving with the community).

Dialect	Meaning/Name

4.7. Common meeting places and gossip centres

Common meeting places	Nature of topics discussed	who usually meet	Specific time/day when gathering swells

5.1. Political parties:

i. Persons belonging to different political parties:
1.
2.
3.
4.

ii. Relationship between the different political parties:
1. very hostile
2. hostile
3. cordial

5.2. Social, Cultural and Other Institution and Activities:

i. 1. Reading room
2. Library
3. Community hall
4. Place of worship

ii. Other common buildings used for socio-cultural purposes:

	Bajan
Frequency	Drama
and number	Dance
of persons	Other popular entertainments
attending	Special festivals

iii. What are the indigenous talents?

5.3. Innovators: (Any person in the village who has introduced or adopted any new method in the field of agriculture, public health or in other fields may be enquired and recorded with their names and the innovation made by them in detail).

List of innovators/early adoptors:

Agricultural practices	Health practices	Others

5.4. What are the felt needs of the community (as perceived by them) in the order of priority.

1.
2.
3.
4.

5.5. What are the health needs of the community? (as perceived by them)

6. Medical and Public Health Facilities:
Name of the medical and public health institutions with distance from the settlement.

7. List of private medical practitioners approached:

8. Nearest medical and public health institutions may be noted with distance.

9. Facilities available for special services:

	Name of the institution	Distance
X-Ray		
Laboratory		
Maternity		
E.N.T.		
Skin clinic		
Others		

10. Disposal of Dead"
Facilities provided for Cremation and Burial:

Cremation			Burial		
No	Location	Area	No	Location	Area

11. Shandy days - Location

12. Places of Public Resort:

13. Fairs and festivals:

14. Give a note on the national programmes functioning in the area.

டாக்டர் கவனகுறைவால் நோயாளி சாவு?

ஆதிவாசி ஆண்—பெண்கள் உண்ணாவிரதம்!

ஊட்டி அரசு மருத்துவமனை முன்!

ஊட்டி, [illegible] டாக்டர் கவன குறைவால் நோயாளி [illegible] செத்ததை தொடர்ந்து ஊட்டி அரசினர் மருத்துவ மனை முன் ஆதிவாசி ஆண்-, பெண்கள் உண்ணாவிரதம் இருந்தனர்.

ஊட்டி அருகில் உள்ள [illegible] பகுதியைச் சேர்ந்தவர் மணி குட்டன். இவருடைய மகன் போற்றிரி குட்டன் (வயது 2[illegible])

கடந்த 1[illegible]-ந் தேதி இவர், உடல் நிலை சரியில்லை என்று சொல்லி ஊட்டி அரசு மருத்துவ மனையில் சிகிச்சைக்காக சேர்ந்தார். டாக்டர்களும் அவரை பரிசோதனை செய்து மருத்துவ மனையில் சிகிச்சை பெற அனுமதித்தனர்.

மரணம்

கடந்த 22-ந் தேதி அவர் மருத்துவ மனையில் மரணம் அடைந்துவிட்டார்.

உண்ணாவிரதம்

மருத்துவ மனையில் சரியான முறையில் சிகிச்சை அளிக்காததால் வாலிபர் போற்றிரி குட்டன் மரணம் அடைந்தார் என்று குற்றம் சாட்டி ஊட்டியிலுள்ள மலைவாசி இனத்தைச் சேர்ந்த தோடர்கள் அரசினர் மருத்துவ மனைமுன் நேற்று (திங்கட்கிழமை) ஒருநாள் அடையாள உண்ணாவிரதம் இருந்தனர். உண்ணாவிரத போராட்டத்துக்கு தமிழ்நாடு [illegible] உறுப்பினரும், ஆதிவாசிகள் பிரிவு [illegible] செயலாளருமான தோடர் இன தலைவியுமான பிங்ஜின் தலைமை வகித்தார். 37 பெண்கள் உள்பட 52 பேர் கலந்து கொண்டனர்.

பேட்டி

உண்ணாவிரதம் போராட்டம் பற்றி தோடர் இன தலைவி பிங்ஜின் கூறியதாவது:—

வாலிபர் போற்றிரி குட்டன் உடல் நிலை சரியில்லாததால் ஊட்டி அரசினர் மருத்துவ மனைக்கு வந்தார். டாக்டர்கள் அவரை பரிசோதித்து பார்த்த பிறகு தான் சிகிச்சைக்கு அனுமதித்துள்ளனர். வாலிபர் பெயரை போற்றிரி குட்டன் என்பதற்கு பதில் [illegible] குட்டன் என்றும் தவறான பெயர் [illegible] மருத்துவ மனை பதிவேட்டில் பதிவு செய்துள்ளனர்.

போலீசில் தகவல்

கடந்த 2[illegible]-ந் தேதி [illegible] அன்று அரசு மருத்துவ மனையில் இருந்து எனக்கு போன் செய்தனர். உங்கள் இன வாலிபர் ஒருவர் உயிருக்கு ஆபத்தான நிலையில் இருக்கிறார். அவருக்கு உறவினர்கள் யாரும் இருப்பதாக தெரியவில்லை. உடனடியாக வந்து அவரை எடுத்து செல்லுங்கள் என்று போலீசில் பேசினார்கள். உடனடியாக நான் அரசு மருத்துவ மனை சென்று பார்த்தேன். வாலிபர் போற்றிரி குட்டன் இல்லை. [illegible] இவர் பிணமாக கிடந்தார். சரியான முறையில் சிகிச்சை அளிக்கப்படாததால் அவர் மரணம் அடைந்திருக்கிறார் என்று தெரிகிறது.

இழிவு படுத்தும் செயல்

மேலும் எங்கள் இனத்தைச் சேர்ந்தவர்கள் யாராவது மருத்துவ மனையில் மரணம் அடைந்து விட்டால் அவருடைய உடலை [illegible] போட மாட்டார்கள். அப்படி [illegible] பிணத்தைப் போட்டால் [illegible] என்று எங்கள் இனத்தவர்களிடம் ஒரு நம்பிக்கை உள்ளது. ஆனால் அந்த நம்பிக்கையை வாலிபர் போற்றிரி [illegible] இழிவு படுத்தியதாக உள்ளது.

நிதி ஒதுக்கீடு

மத்திய — மாநில அரசுகள் ஆதிவாசி மக்கள் முன்னேற்றத்துக்காக ஏராளமாக நிதி ஒதுக்கீ செய்து செய்து வருகிறார்கள். சுகாதார வசதிக்கும், மருத்துவ வசதிக்கும் அதிக அளவு செலவு செய்யப்படுகிறது.

ஊட்டி அரசினர் மருத்துவ மனையிலும் ஆதிவாசி மக்களுக்காக தனி பிரிவு செயல்பட்டு வருகிறது. அந்த பிரிவில் டாக்டர்களும் நர்சுகளும் [illegible] அப்படி இருந்தும் அரசினர் மருத்துவ மனையில் வாலிபர் போற்றிரி குட்டனுக்கு சரியான முறையில் சிகிச்சை அளிக்கப்படவில்லை, மரணம் அடைந்து விட்டார்.

யார் காரணம்?

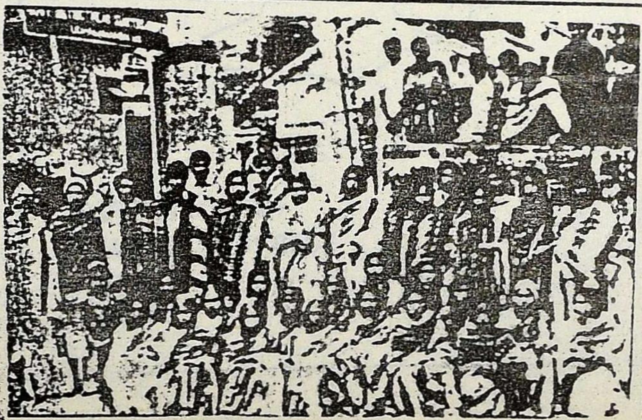
[illegible] கவன குறைவான சிகிச்சைக்கு யார் காரணம் என்பதை மருத்துவமனை அதிகாரி கண்டு பிடித்து தெரிவிக்க வேண்டும். மரணம் அடைந்ததும் வாலிபர் உடலை மருத்துவ மனை ஆம்புலன்ஸ் [illegible] அனுப்ப வைக்கவில்லை. இதற்கு விளக்கம் அளிக்க வேண்டும்.

கவர்னருக்கு மனு

இந்த பிரச்சினை சம்பந்தமாக கவர்னர் [illegible] மாநில சுகாதார துறை செயலாளர் - இயக்குனர் நீலகிரி மாவட்ட கலெக்டர், போலீஸ் சூப்பிரண்டு மாவட்ட [illegible] ஆகியோருக்கு புகார் மனுக்கள் அனுப்பப்பட்டு உள்ளது. இந்த பிரச்சினைக்கு உடனடியாக தீர்வு காண படாவிட்டால், மேற்கொண்டு நடவடிக்கை எடுப்பது பற்றி ஆலோசிக்கப்படும்.

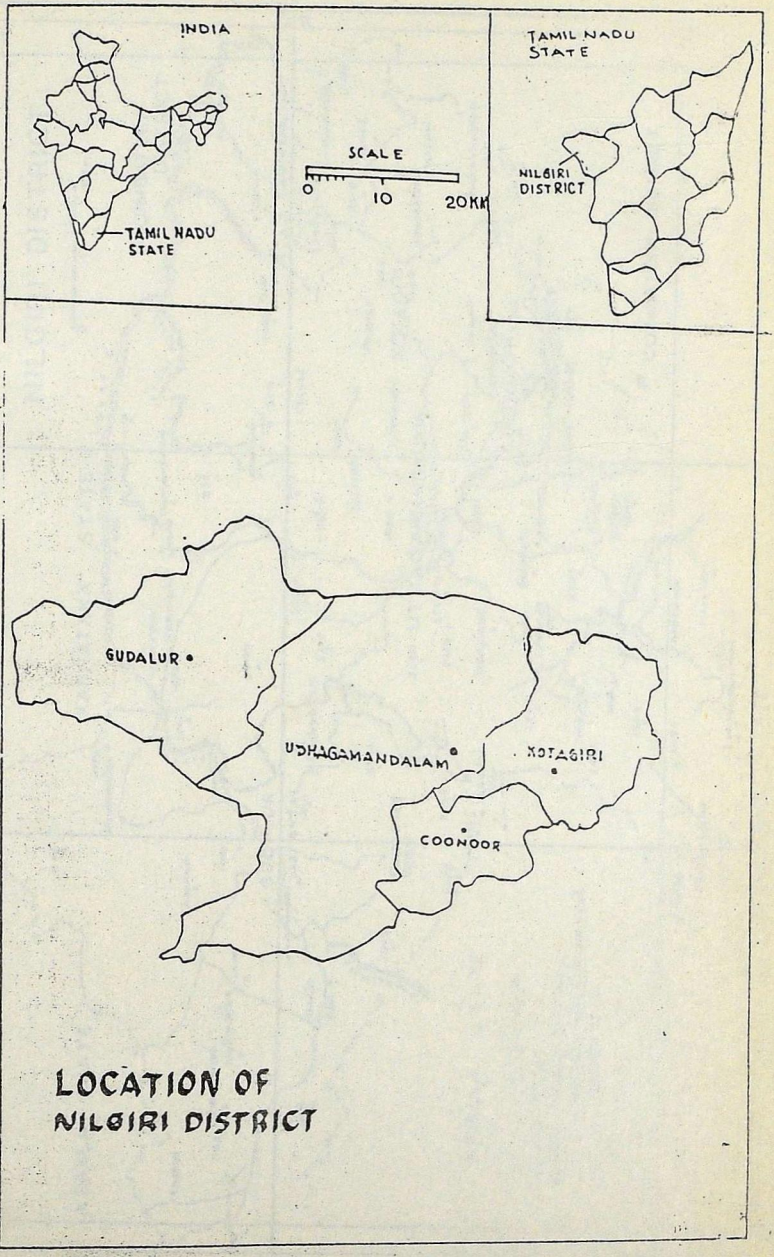
இவ்வாறு அவர் கூறினார்.

தினகரன்

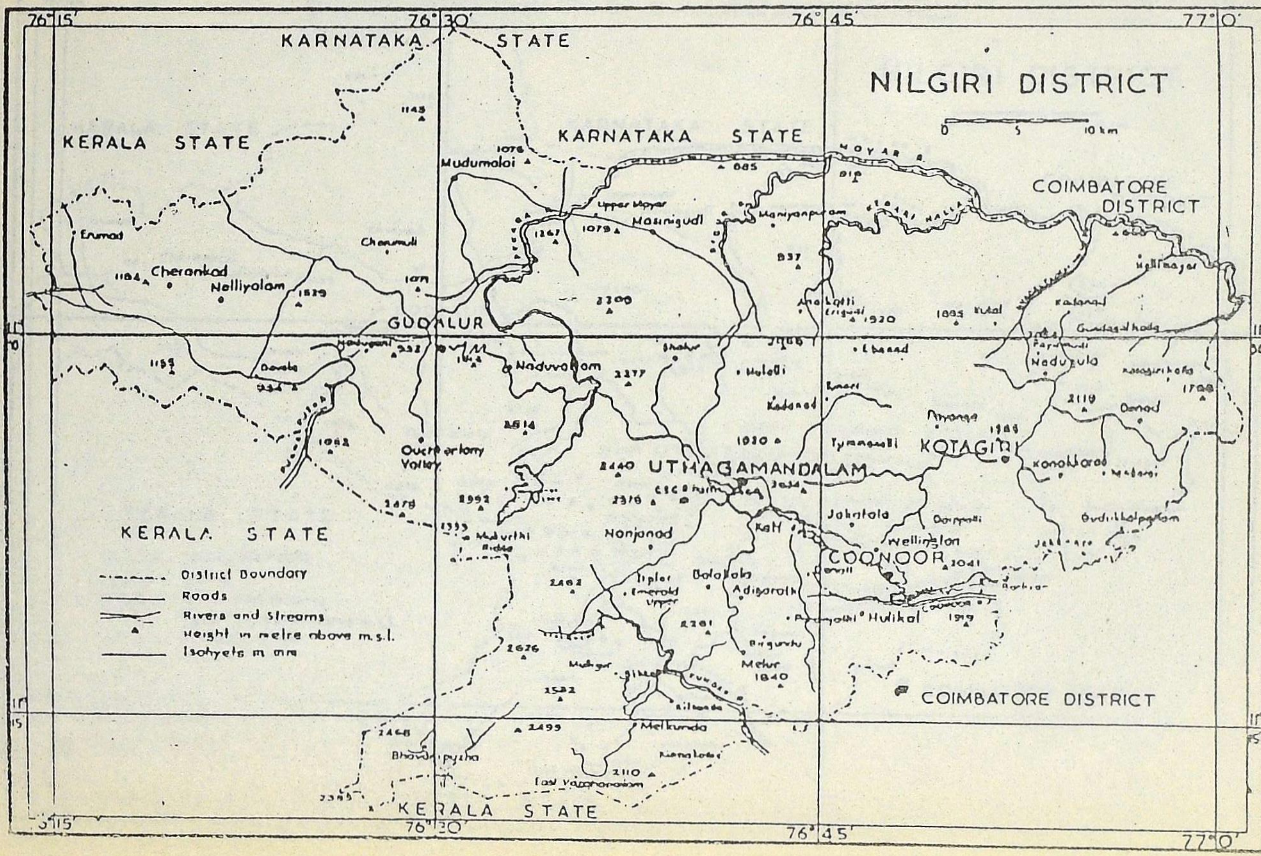


டாக்டர்களின் கவன குறைவான சிகிச்சையால் மரணம் அடைந்ததாக குற்றம் சாட்டி ஊட்டி அரசினர் மருத்துவமனை முன் ஆதிவாசி பெண்கள் உண்ணாவிரதம் இருந்தனர். படத்தில் தோடர் இன பெண்கள் தலைவி பிங்ஜின் உள்ளார்.

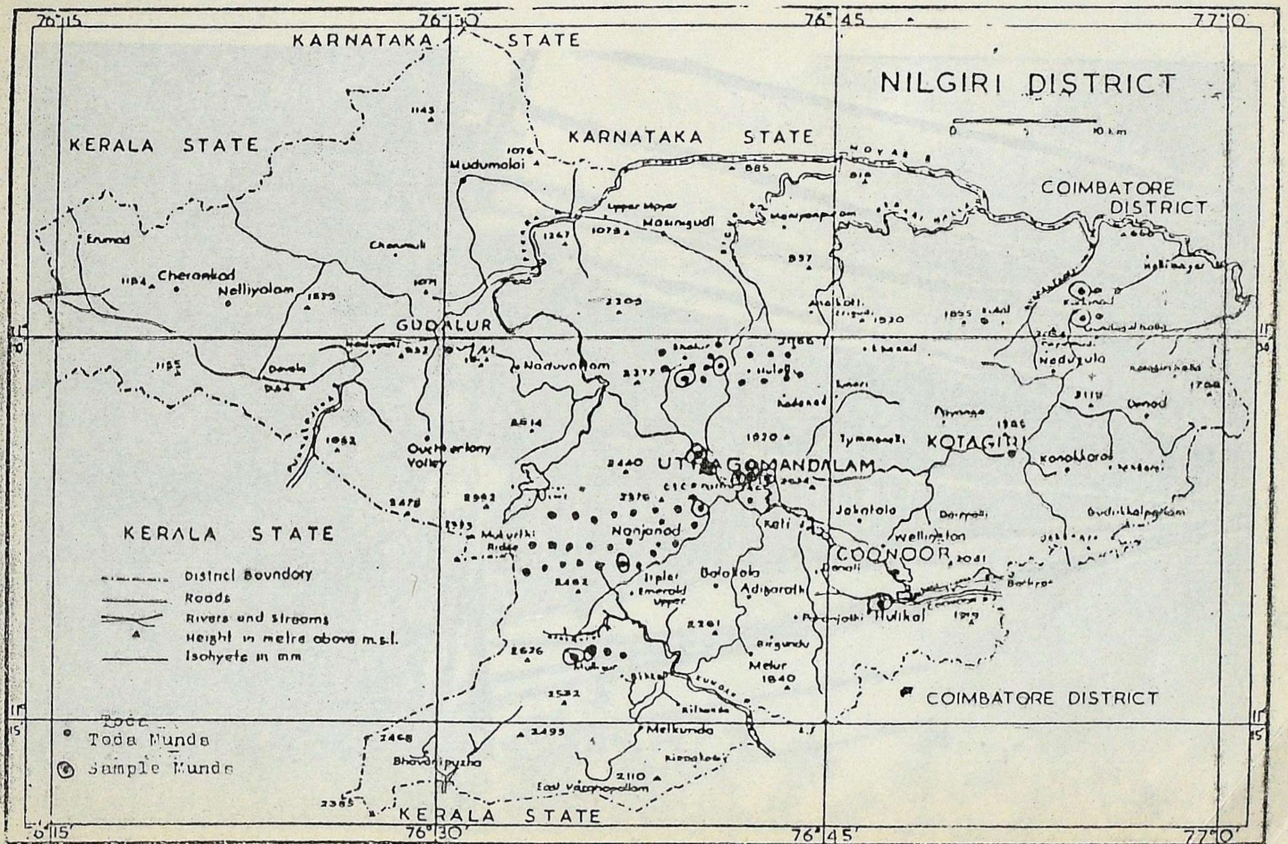
(போட்டோ: வில்லன் ஸ்டுடியோ, ஊட்டி)



LOCATION OF
NILGIRI DISTRICT



NILGIRI DISTRICT
0 5 10 km
KARNATAKA STATE
KARNATAKA STATE
KERALA STATE
KERALA STATE
KERALA STATE
COIMBATORE DISTRICT
COIMBATORE DISTRICT
MOYAR R.
Mudumalai
Masinigudi
Upper Moyar
Cherankad
Nelliyalam
Erumad
GUDALUR
Naduvattam
Devala
Ouchterlony Valley
UTHAGAMANDALAM
KOTAGIRI
COONOOR
Wellington
Jakatala
Nanjanad
Kaiti
Hulikal
Melur
Adigaratti
Naduhatti
Mukurthi Ridge
Melkunda
Bhavani puzha
East Varaharaiam
Kalapatti
Kannerimukku
Kattabettu
District Boundary
Roads
Rivers and Streams
Height in metre above m.s.l.
Isohyets in mm
76°15'
76°30'
76°45'
77°0'


NILGIRI DISTRICT
KARNATAKA STATE
KARNATAKA STATE
KERALA STATE
KERALA STATE
KERALA STATE
COIMBATORE DISTRICT
COIMBATORE DISTRICT
GUDALUR
KOTAGIRI
COONOOR
Mudumalai
Cherankod
Nelliyalam
Naduvattam
Ouchterlony Valley
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Nedugula
Hulikal
Melur
Melkunda
Bhavanipuzha
76°15'
76°30'
76°45'
77°0'
District Boundary
Roads
Rivers and Streams
Height in metre above m.s.l.
Isohyets in mm
Toda Munds
Sample Munds