

Morbidity Pattern, Utilization of Healthcare Services and Health Seeking Behavior of Men from Tribal Community

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ABSTRACT

Background: Tribal people suffer from diseases due to ignorance and lack of knowledge. *Malayali*, is one of the primitive tribes in India living in Jawadhi Hills which is spread over Vellore and Thiruvannamalai districts of Tamilnadu.

Objectives: This study was aimed to assess the morbidity pattern, utilization of healthcare services, and health seeking behavior of men from tribal community.

Methodology: A Cross-Sectional, Quantitative study design was used. The study was carried out in the villages Jawadhi Hills. The population and sample were men from the tribal communities. A multistage cluster sampling was used to sample 200 participants. Interview technique using a questionnaire was utilized for data collection. Physical assessments and blood investigations were done on all the participants.

Results: Findings showed that majority of them 91(45.5%) had acute illnesses and 30(15%) had chronic illness and utilization of health services was better in them. Acute illnesses were Upper Respiratory Tract Infection (URI) fever and headache. Chronic Illnesses were Hypertension, Myalgia, Gastritis, CVA, Heart Diseases, Bronchial Asthma and Tuberculosis. Nearly half of them, 53% took treatment from PHC, 21.2% from private health facility, 12.1% took native treatment 7.5% from higher Government health facility and only 1.5% took Over the Counter (OTC) medications. Health care services were fully utilized by 65(32.6%) men, 123(61.8%) partially utilized and 11(5.5%) never utilized. Significant association was found between education and duration of chronic illness. Significant association was found between selected socio demographic variables, morbidity pattern and utilization of health care services.

Conclusion: Most of them had some form of illness for which health care was not sought appropriately. They were ignorant about the health services available in the public and private facilities. Health care was inaccessible to most of them due to difficult geographic terrain.

Keywords: Morbidity pattern, utilization of health care services, Health seeking behavior, Men from tribal community.

CHAPTER-I INTRODUCTION

India is a country of diverse culture. Indian society is vast and complex as it is the land of multiple religions, communities and culture. One such is tribal community. A tribe is a social dimension of a traditional society composed of households connected with a common culture and they are a group of people with common ancestry and live in their own enclosed society.

Over 104 million tribal people live in India, spread across 705 tribes and they account for 8.6% of the country's population (MOHFW 2018). The tribal population groups of India are known to be the autochthonous people of the land. Tribal people are often referred to as **Adivasi, Vanyajati, Vanvasi, Pahari, Adimjati, Malayali** etc. The concept of tribe emerged in India as the British invaded our land. Gradually, the concept of reservation emerged and through that emerged the idea of scheduled tribe in independent India (Basu 2000).

Nearly seven decades after independence, the tribal people still suffer from the inequity in health and healthcare compared to others. Article 342 of the Indian Constitution defines 'Scheduled Tribes' as the 'Tribes or Tribal Communities or parts of or groups within tribal communities which the President of India may specify the public notification' (MOHFW 2018)

In India, 427 groups have been recognised as scheduled tribes. These tribal groups inhabit widely in varying ecological and geo-climatic conditions (hilly, forest, desert, etc.) in different concentration throughout the country with different cultural and socioeconomic backgrounds. Due to their remote and isolated living, tribal groups are difficult to reach. Numerous media reports show that the tribal population continues to suffer from lack of infrastructure, development facilities and other social welfare services (Basu 2000).

In Tamilnadu, as per 2011 census, the total Scheduled Tribe (ST) population is 7,94,697 among which 4,01,068 are Men and 3,93,629 are women (Census India 2011). The literacy rate of tribal population of India, as per 2011 census is 56.9%, among which Men are 66.8%; women are 46.9% (MOSPI 2011). The literacy gap between the general population and scheduled tribes is 14.03%. Only 2.6% of households in ST population are covered by a health scheme or health insurance. Nearly 44% of ST population is facing problem in accessing health facility or medical advice due to difficult geographical location. Around 35.8% face problems due to unavailability of essential drugs. Only 20% of ST Men have comprehensive knowledge about HIV/AIDS (MTA 2013).

There is bewildering variation in population size of the scheduled tribes, ranging from 31% Jarwas of Andaman and Nicobar Islands to more than 7 million Bhils of Rajasthan, Madhya Pradesh, Maharashtra and Gujarat (1981 Census). The highest number of tribes is represented by the State of Orissa (62%) and the lowest of Sikkim (2%). The largest tribal population around 15.4 million reside in Madhya Pradesh (Basu 2000).

A study conducted by Begum et al., (2017) on the tribe 'Malayali' in Jawadhi Hills in Tamilnadu revealed that 10.8% of women had utilized Maternal Healthcare facilities. This is something sickening to hear and has to be dealt very seriously as far as the utilization of healthcare by tribal population. There are no specific healthcare services for Men in general unlike women, who are provided healthcare through the Government health system such as Reproductive healthcare services, though utilization varies with the communities.

A study conducted by Sajith et al., (2011) on Men who were 'Beedi Rollers' by occupation, from an urban population in Vellore District of Tamilnadu showed that 82% had some type of health related problems in

the past 6 months, 25% had worse health status and 52% bother about their current health status. 77% were on regular treatment for chronic illnesses, 38% had respiratory problems. Majority of them (43%) had utilized Over the Counter medication for minor ailments. They had unhealthy lifestyle activities in which 80% never did exercise, 48% took alcoholic beverages, and 33% smoked more than 20 cigarettes per day. Among them, majority (78%) had complaints of musculoskeletal, eye, gastrointestinal, respiratory problems. An overall of 66% with some or the illness had curative health seeking behavior.

Divakar et al., (2012) conducted a study on a tribal community in a forest range called Gundlupet, in Mysore District of Karnataka, found that 47% of them had one or many illnesses and 27% suffered from more than one illness in the past 12 months. Illnesses like nutritional deficiencies, skin infections, diarrhea, and dental problems were the most common health problems found in that tribal community.

Data from the Community Health Programme by JSS (Jan Swasthya Sahyog) conducted in Tribal Communities in Central India like **Behmani, Semariya, Shivtari** reported that among Particularly Vulnerable Tribal Groups (PVTG), the most commonly prevailing diseases in the year of 2000-13 were Tuberculosis, Rheumatic Heart Disease, Diabetes, Illnesses requiring major surgery, cancer, sickle cell disease, leprosy and epilepsy.

A study done by Ranjani et al., (2015) among Gypsy population, which is also a vulnerable population showed 75% of them had at least one chronic or acute illness, among which 65% had sought medical treatment. 33% of them had Non-communicable diseases, 23% had minor illnesses like cough and cold, 9% had diarrhea, 20% had bodily aches and pain, 5% had skin problems, and 9% had worm infestation. Obesity was found in 18% of adults and 51% of them were at risk of developing Diabetes Mellitus. Private health facility was utilized by 51% of them.

Health is a pre-requisite for Human Development and is essentially concerned with the well being of common man. The Human Development Index of India in 2020 is 0.640 (UNDP 2020). The UNDP Human Development Index (HDI) comprises of three components i.e. Health, Education and Income generating capacity. Health is a function, not only of medical care, but also of the overall integrated development of society - cultural, economic, educational, social and political aspects. The health status of a society is intimately related to its value system, philosophical and cultural traditions, and social, economic and political organisation. Each of these aspects has a deep influence on health, which in turn influences all these aspects. Hence, it is not possible to raise the health status and quality of life of people unless such efforts are integrated with the wider effort to bring about overall transformation of a society. The health problems need special attention in the context of tribal communities of India. Available research studies point out that the tribal population has distinctive health problems which are mainly governed by their habitat, difficult terrains and ecologically variable niches. The health, nutrition and medico-genetic problems of diverse tribal groups have been found to be unique and present a formidable challenge for which appropriate solutions have to be found out by planning and evolving relevant research studies (Basu 2000).

There is a major gap between the privileged and underprivileged as far as Healthcare is concerned. The effort taken by the Government and Non Governmental Organizations (NGO) in order to bridge the gap between the tribal population and healthcare so far is appreciable. Tribal population in India suffer from disproportionate burden of both communicable as well as non-communicable diseases (Jain et al., 2015). Not many studies have been done on Men from Tribal communities. Therefore, it is evident that the tribal population is a vulnerable group, among which Men need to be concentrated. The researcher is interested in knowing the existing morbidity pattern and the response to sickness by the Men in a particular tribal

population called ‘Malayali’ in Jawadhi Hills, situated in Vellore and Tiruvannamalai districts of Tamilnadu, South India.

BACKGROUND INFORMATION

The health problems need special attention in the context of tribal communities of India. Primitive tribal groups of India have special health problems and genetic abnormalities like sickle cell anemia, G-6-PD, Red Cell Enzyme deficiency and Sexually Transmitted Diseases. (Report for ST and SC 1986)

Insanitary conditions, ignorance, lack of personal hygiene and health education are the main factors responsible for their ill health. Basu (2000) conducted a study on Dimensions of Tribal Health in India enlisted that (a) endemic diseases like malaria, introduced from outside or otherwise like tuberculosis, influenza, dysentery, high infant mortality and malnutrition; (b) venereal diseases, induced abortion, inbreeding, addiction to opium, custom of eating tubers of **Dioscorea** (may cause sterility as they contain substances used in oral contraception) and (c) disturbed sex ratio leading to shortage of women. Diet taken by the tribal population was grossly deficient in calcium, vitamin A, vitamin C, riboflavin and animal protein.

The health and nutritional problems of the vast tribal population of India are as varied as the tribal groups themselves who present a bewildering diversity and variety in their socio-economic, socio-cultural and ecological settings. Nutritional anemia is a major problem for women in India and more, so in the rural and tribal belt. This is particularly serious in view of the fact that both rural and tribal women have heavy workload and anemia had profound effect on psychological and physical health.

Malayali (Mala-Hills, Yali-Rulers) is one of the primitive tribes in India living in Jawadhi Hills and Kalrayan Hills of Tamil Nadu. Jawadhi Hills is spread over Vellore and Thiruvannamalai districts of Tamilnadu. Around 60,000 populations live in Jawadhi Hills. Out of this, 98% are from tribal communities and 2% are from other castes, predominantly Dalits and Vanniyars. The hill is around 2315-3000 feet above sea level. There are 11 panchayats and 284 hamlets within the radius of 150 sq. KM (Rosario 2012) The researcher personally had been to this tribal area and found that the health facilities were inadequate. Comparatively there were greater demands for healthcare facilities as well as healthcare personnel in these areas. People of Tribal community suffer from diseases due to ignorance and lack of knowledge regarding diseases and its management. The available health facilities are not up to the mark. People of Tribal community find it very difficult to access these health centers due to improper road facilities due to difficult geographic terrain. This pushes them to a situation to seek help either from a local magician or an unqualified medical practitioner. Many of them believed that an injection at that time of sickness would cure them. This eventually led them to seek untrained health practitioner in their community, which sometimes worsened the situation.

There are only three Primary Health Centres in the entire Jawadhi Hills, which are located in Jamunamarathur, Peenjamanthai and Nammiyambut. There are two Health Sub Centres like Pallathur and Puliur. These health facilities lack infrastructure and man power. Apart from these, few private clinics are functioning in Jamunamarathur area of the Jawadhi Hills.

The Community Health and Development (CHAD) of Christian Medical College (CMC), Vellore has taken efforts to provide healthcare facility to this population by offering a clinic service in Veerapanur. As per the census of the Veerapanur Tribal Clinic, an average of 30 patients attend the clinic for medical care, among which most of them were women and children. Very few Men seek medical care. The mobile

health team visits around 50 villages a month, in which most of the time women made use of these facilities. Very few Men with chronic illnesses like Hypertension utilized this facility.

Men from Tribal communities of Jawadhi Hills are with the health deviant behavior such as substance abuse like tobacco and alcohol. They are at high risk for developing diabetes mellitus, hypertension, cardiac problems, cancer and other diseases.

The researcher is conscious about the prevailing health problems and challenges in the tribal community. Hence, the researcher is determined to know the existing morbidity pattern, utilization of healthcare services of Men from tribal community and their response to sickness. This is the primary reason in designing the study to assess the Morbidity Pattern, Utilization of Healthcare Services and Health Seeking Behavior of Men from tribal community residing in Jawadhi Hills.

SIGNIFICANCE/NEED FOR THE STUDY

People of the tribal community are characterized by poverty, superstition and ignorance, thus leading to inability to access necessary healthcare due to several other reasons. It is a known fact that they are a vulnerable group nearing extinction in the country. It is the responsibility of the health system to reach out to such communities to provide health services to a greater extent possible.

The existence of quacks (unqualified/untrained personnel in handling medicines) is becoming a threat in Jawadhi Hills which leads to health complications (sometimes death). It is also found that home deliveries handled by 'Untrained Dhais' leads to Maternal Mortality and Infant Mortality (Ramesh 2014).

A study on the Health Seeking Behavior of the tribal people in Bangladesh was carried out by Rahman (2012) concluded that tribal people seek medical care at an advanced stage of illness, when the patient almost becomes bedridden. He further stated that, the existing health system is too little to meet the present health demands of a growing tribal population. He suggested that new health centres need to be established and adequate health personnel must be available for healthcare services for tribals.

Jain (2015) has conducted a study on pattern of illnesses among tribal communities in Central India where the Community Health programme was in operation in seven districts of Chhatisgarh. He stated that illnesses like cancers, infections (acute and chronic), non-communicable diseases, maternal and child health problems, nutrition deficiency diseases, diseases due to poor access such as neglected trauma, and those due to animal bites were seen in these tribal population. When looked for numbers of selected communicable and non-communicable diseases in one calendar year of 2013 at the referral centre, patients with severe hypertension, tuberculosis, cancer and diabetes mellitus were found in substantial numbers.

A study conducted by Bhattarai et al., (2015) on 'Health Seeking Behavior and Utilization of Healthcare services in the Village Development Committees of Ilam District of Nepal' revealed that tribal people still use traditional healers' service. The Government health facility utilization is low as compared to private healthcare facility. The people living in that place were having the concept that modern health centers were costly when compared to the traditional healing system. People who could afford automobile travel utilized private health centers for treatment. Among them, 37% were found to have chronic disease and 14% had acute illness. Chronic diseases were more common among the higher age group whereas acute illnesses were common among lower age group. The most common chronic diseases were endocrine diseases (56.6%), psychiatric problems (18.6%) and gastrointestinal problems. Respiratory illness (75.6%) was highest among acute illness. Almost 19% were utilizing the service of traditional healers in the region and almost 80% sought the service of private medical service. The distance from their residence to the nearest healthcare facility was less than 30 minutes in 80% of the respondents. The commonest means of

transportation was by foot (71.3%) followed by public transport (20.7%). Almost 86% of respondents preferred to visit hospital in case of emergency.

Rushender et al., (2017) conducted a study on 'Effective Utilization of Health facilities in a PHC in a rural area of Cuddalore District of Tamilnadu, revealed that among 560 households, only 45.40% and 58.80% of the patient's households with acute and chronic illness had utilized the services at PHC respectively. 81.65% of the ANC mothers had utilized the PHC, 77.98% for TT immunization, 75.24% for delivery, 75.76% for postnatal care, and 79% for immunizing their children. If this could be the status of utilization of healthcare facilities in a state like Tamilnadu, where health facilities are predominantly good, definitely tribal population may not be utilizing to the full extent.

The article on Health status of primitive tribes of Orissa, published in the ICMR bulletin in October 2003 highlighted that communicable and non-communicable disease profile in the tribal communities of Orissa prevented their socio-economic development. Among these were communities who still depended on hunting and food gathering as primary source of livelihood. The wide spread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary conditions, poor maternal and child health services, ineffective coverage of health and nutritional services, etc. has been found, as possible contributing factors of dismal health condition prevailing amongst the primitive tribal communities. Many of the infectious and parasitic diseases can be prevented with timely intervention, health awareness and IEC activities. In spite of the tremendous advancement in the field of preventive and curative medicine, the healthcare delivery services in these primitive tribal people are still poor and need to be strengthened in order to achieve the goal of 'Health for all' in the country (ICMR 2003).

The health seeking behavior of tribal and general population varies. Tribal people are prone to seek the assistance of untrained practitioners, as they are available in their own communities and relatively cheap as far as financial expenditure is concerned. Eventually, such an approach will lead to complications and life threatening situations. Not all them believed in Allopathic treatment. Many primitive tribal people consider disease as the 'Karma', a punishment by the supernatural powers, which again leads them to visit a magician to get rid of it.

The Tribal Health program at Jawadhi Hills, Vellore district commenced in the year of 1980, which is an initiative by the Community Health and Development programme (CHAD) of Christian Medical College, Vellore. The tribal populations of Jawadhi Hills still have poor access to healthcare and other basic amenities due to the difficult geographic terrain and lack of Health Professionals willing to work in the hilly region.

At this juncture, the exact health status of Men from Tribal Community is not evident. It is just like the 'tip of the ice-berg' when getting to know the real health issues in Men from Tribal Community. This study will enable us in knowing the morbidity pattern, utilization of healthcare services with regard to male population. Since Men are the bread winners of a family, their health must be taken into consideration. Naturally Men do take their health lightly. Men from tribal communities are into substance abuse, which is a social problem. In this scenario it is good to know their response to illness and utilization of the existing health facilities.

A Nurse-run clinic organized by CHAD in the Kaniyambadi Block of Vellore District is able to provide healthcare continuously to people with various morbid conditions within their village. This study will inspire the Community Health Nurses to come up with such initiatives for the tribal population; thereby the health of the tribal community can be sustained. This study will also lay a base for many other interventional studies as far as tribal health is concerned.

The researcher being a Community Health Nurse strives to explore the morbidity pattern of the tribal community, which would enable many other health programs to be initiated in the near future. Thus, the health professionals will be aware of the greater need for health services in a tribal population as such. The researcher believes and hopes that this study will inspire many other Community Health Workers to venture out so as to uplift the downtrodden.

STATEMENT OF THE PROBLEM

A cross-sectional study to assess the Morbidity Pattern, Utilization of healthcare services and Health Seeking Behavior of Men from tribal community residing in Jawadhi Hills

OBJECTIVES

1. To assess the existing morbidity pattern among the Men from the tribal community of Jawadhi Hills
2. To measure the utilization of healthcare services by the Men from tribal community
3. To determine the health seeking behavior of Men from tribal community
4. To find the association between their morbidity pattern and selected demographic variables
5. To find the association between morbidity pattern, utilization of healthcare services and health seeking behavior
6. To identify the factors influencing the healthcare utilization by the Men among tribal community

HYPOTHESIS

H1: There is a significant association between the morbidity pattern, utilization of healthcare services and health seeking behavior of the Men from tribal community.

H2: There is a significant association between the selected demographic variables and the morbidity pattern of the Men from tribal community.

OPERATIONAL DEFINITION

Morbidity

It refers to all the acute and chronic, major and minor illnesses or diseases or sicknesses as perceived and reported by the Men belonging to the tribal community which is enquired, assessed and interpreted by the researcher and also verified from the health records if available during the period of study

Morbidity Pattern

It refers to the way in which the diseases are prevalent in the selected tribal community

- **Perceived Morbidity Pattern**

It refers to all the illnesses or sicknesses perceived by the Men who belong to tribal community and also verbalized on enquiry during the period of data collection

- **Acute illness**

It refers to all the illnesses that were reported to be present within a month of duration

- **Chronic Illness**

It refers to all the illnesses that were reported to be present for more than 6 months of duration

- **Minor Illness**

It refers to the acute illnesses like fever, cold, cough, dental caries, skin problems, eye infections, eye pain, diarrhea, respiratory tract infections, worm infestation, abdominal pain, ear pain, aches and pain from which they can recover soon.

- **Major Illness**

It refers to diseases like hypertension, diabetes mellitus, bronchial asthma, tuberculosis, arthritis, epilepsy, stroke, cancer, cardiac problems

UTILIZATION OF HEALTHCARE

Action taken by Men from tribal community, in order to utilize the available healthcare facility in and out of their geographic location.

Fully utilized healthcare:

Refers to those who have fully made use of available health care services available in private or public health institutions for health maintenance by regular check up, continuous follow up, taking appropriate actions to prevent complications and complete adherence to treatment regimen

Partially utilized healthcare:

Refers to those who irregularly make use of the health care services available in public or private institutions for health maintenance and adherence to treatment regimen

Not utilized healthcare:

Refers to those never made use of the health care facilities available in and out of their geographic location

Health Seeking Behavior

Health seeking behavior refers to the abilities to maintain good health and being aware of health problems or illness or any form of sickness and taking measure to utilize the health care facilities and modify lifestyles and refrain from unhealthy behavior.

Men from Tribal community

Refers to Men who are between the age group of 30-59 years, living in selected areas of Jawadhi Hills and who are classified under Scheduled Tribe (ST) in Ration Card by the Government authority.

Tribal Population

People residing in Jawadhi Hills during the study period and who belong to the clan of 'Malayali' tribe

Selected Socio-demographic Variables

This includes variables such as age, marital status, religion, education, occupation, income, diet, smoking habit, alcohol consumption, chewing habit and snuff usage

ASSUMPTION

1. People of the tribal community are the most underprivileged and underserved population
2. Health care is poorly accessed by the people of the tribal community due to difficult geographic terrain
3. People belonging to the tribal community can have poor health status and health seeking behavior
4. Men utilize health care services only when they are very sick

PROJECTED OUTCOMES

This study will help in knowing the existing morbidity pattern, utilization of health care services and describe the health seeking behavior of Men from tribal community in Jawadhi Hills. The study will also help in knowing the reasons for not utilizing the health care facilities available in the tribal community. This study will enable the community health nurses to plan for health promotional activities in order to modify their health deviant behavior and lead a healthy life by utilizing the health care facility as required. This study will help the health care team in 'Team based approach' so as to provide health services to men from tribal communities. This study will strengthen the existing health care facility and also help the

community health nursing department to organize and plan for regular home based care for the tribal people of Jawadhi Hills

CHAPTER-II REVIEW OF LITERATURE

This chapter deals with the Review of Literature and conceptual framework of the study. Review of Literature is the written summary of the state of existing knowledge on research problem (Polit et al 2008). This chapter highlights and reviews the data on the issue of socio-economic factors, morbidity pattern and health seeking behavior of the tribal community. The findings of the researches done in the past helped in selecting the research methodology for the study. The Review of Literature is an important step in the development of research which helps in the identification, scrutiny and summary of written materials that contain information relevant to the topic.

This chapter will be dealt under the following headings.

- A. Geographical location of the tribal population
- B. Socio demography of the Tribal Population
- C. Health status of the Tribal population in India
- D. Health Seeking Behavior and Health Care Utilization
- E. The prevalence of health problems and perception in health and illness.

A. Geographical Location of the Tribal population

The **Jawadhi Hills** (also called Jawadhu Hills) are an extension of the Eastern Ghats spread across parts of Vellore and Tiruvannamalai districts in the northern part of the state of Tamil Nadu in south-eastern India. This range separates Vellore and Tiruvannamalai districts. Vellore district lies on the north-western side and Tiruvannamalai district lies on the south-eastern side of this range. The towns of Tirupattur, Vaniyambadi and Ambur are located on the north-western side and the towns of Chengam and Polur of Tiruvannamalai district are located on the south eastern side. Hence, some of the villages are geographically located in Vellore District and others in Tiruvannamalai District. Apart from the terrain, this division faces lot of challenges for the villagers to utilize the healthcare services. Jawadhi Hills consists of bluish grey granite with peaks averaging 3,600 to 3,800 feet (1,100 to 1,150 meters) in length situated with an elevation of 792 meters above mean sea level (Javadi Hills, Wikipedia, 2020).

B. Socio Demography of the Tribal population

In the Jawadhi Hills, Jamunamarathur is connected by road from Vellore, Amirthi and Alangayam. There are regular bus services from Vellore, Tirupattur and Vaniyambadi. There are no proper roads to the interior villages. The forest department officials are not allowing to lay the panchayat roads because land comes under the forest department control.

There are two primary Health Centres and seven Health Sub centres and few private clinics in the Jamunamarathur area. There is one health centre by Community Health Department of CMC providing health services.

There are 34 panchayat Primary Schools, three Government Tribal Residential Middle Schools, one Government Tribal High School and one Government Residential Girls Hostel and two private schools in Jawadhi Hills block.

The overall health, literacy and development indicators across age groups are poor as compared to those living in the plains. This is primarily due to poor healthcare infrastructure, limited health services, low literacy, lack of quality education and lack of local employment.

The Jawadhi Hills is sparsely populated. The majority of the inhabitants are ‘Malayali’ tribe people, though other castes are also present. The people of this particular area are known as ‘Malayali’ meaning “people of the hills”. They seek health care only when very sick, leading to higher morbidity and a lower life expectancy. The overall health, literacy and development indicators across age groups are poor, as compared to those living in the plains. This is primarily due to poor healthcare infra-structure, limited health services, low literacy, lack of quality education, and lack of local employment opportunities, dependence on subsistence farming, migratory labor, and poor relationship with the administrative structure. They grow a variety of trees on their land, along with sandal wood and red sanders. Hence, this region is called ‘Jawadhu’ meaning, ‘smell of sandal’. People of this region grow ‘Samai’ which is the significant millet of this region. They grow both fruit bearing trees, medicinal plants and also sandal wood trees, though at present the sandal wood trees are rare.

C. Health Status of Tribal Population in India

The problem of lower health status among the tribal population is global. In India, the tribal people form a heterogenous group with a huge diversity but the one commonality is that they have poorer health indicators, greater burden of morbidity and mortality and very limited access to healthcare services. According to 2016, Lancet publication, the life expectancy at birth for ST population in India is 63.9 years as against 67 years for the general population. The tribal population faces a triple burden of diseases such as malnutrition, communicable diseases and non-communicable diseases viz cancer, hypertension and diabetes along with burden of mental illnesses especially the addiction. The National Sample Survey Office (NSSO) data shows that while 40% reported of communicable diseases, 10% suffer from non-communicable diseases, 5% men and 9% women with hypertension, 18% with respiratory illnesses, 5% with mental/neurological problems and 10% with musculoskeletal conditions. According to the National Family Health Survey-3(NFHS), 72% of tribal men in the 15-54 years age group were using tobacco as compared to 56% non-tribal men, above half of them consume some form of alcohol whereas 30% non ST men consume alcohol. In Tamilnadu 17.8% of the men had hypertension among the tribal population (Tribal Health in India, 2017).

A study on Education and Health Status of Scheduled Tribes in Andhra Pradesh (A.P) was conducted by Kumar et al., (2014) based on the secondary data collected from the published documents, such as Five Year Plan documents of both India and AP, Statistical abstract of India and A.P. Records of Tribal Welfare Department. It revealed that Medical institutions were made available in nine places to provide medical facilities to tribes in ITDA (Integrated Tribal Development Agency) of Andhra Pradesh. Nearly 17 lakh people were living in ITDA area and 244 Primary Health Centers were serving these people on an average of one PHC for 7000 tribal population.

Divakar et al., (2012) conducted a study on the Morbidity pattern in tribal and non-tribal population in the Gundlupet forest range, situated in Mysore District of Karnataka. The study participants were people above the age of five years. It revealed that 47.5% suffered once from one or more illness and 27.24% suffered from more than one illness during the last 12 months. Average number of episodes suffered per ill person was 2.2%. Major sicknesses reported at the time of survey were nutritional deficiencies (14.6%), skin infections (12.78%), diarrheal disorders (12.2%) followed by dental disorders (10.9%). About 50% of non-tribal population suffered once from one or more illness and 16.6% had suffered from more than one illness during the last 12 months. Average number of episodes suffered per ill person was 1.6%. The sicknesses reported among non-tribal population were respiratory infections (12.7%), nutritional deficiencies (12.5%), diarrheal disorders (10.2%) and dental disorders (5.2%).

D. Health Seeking Behavior and Healthcare Utilization

There is a huge gap in the health infrastructure and resource in tribal areas due to serious geographical and socio-economic challenges (RHS, 2017). Access to health services becomes difficult as the roads are poor or restricted. Poor availability of health personnel, lack of adequate equipment, language and social barriers, waiting time at health centers and poverty also add to problems of healthcare access.

Nearly 50% of the out-patient visits by tribal people are to public hospitals and more than two third of the inpatient hospitalization is in Government health facilities and thus they depend on public healthcare (Tribal Health Report, 2017). This signals that there is a need to strengthen the public health system to be staffed with qualified and sensitive health functionaries.

A study on Health and Health seeking behavior conducted by Pradhan (2013) among the tribal population in Sundargarh district of Odisha in Chandrapur village, located near the Balang Community Health Centre (CHC). Though the health facility was close by, people still believed in black magic and preferred local unqualified health worker for treatment than allopathic treatment. As per one of the CHC staff, people from that region mostly believed in black magic as well as medical treatment, people gave first preference to local unqualified and 'Gunia' (a priest who indulges in healing). During the field visit, it was found that, most of the villagers were not accessing the modern health care system. Dependency on unqualified health worker and local medicine man was very high. This study revealed that a change has been observed in relating to access to health care facilities. Around 34.2% households revealed that they were visiting government doctors/hospitals during any illness. Around 29.5% households were relying on unqualified health practitioner. Still 18.5% households were visiting 'Gunia' for all kinds of diseases. If the situation worsens, they might visit the village medicine man. Though the village medicine men were losing importance due to the impact of modern medicine, around 13.7% household revealed that they were still visiting the village medicine men for any disease. The tribal people visiting private clinic was very less. Due to low economic status only 4.1 % households revealed that

they were visiting private clinic. Those who were visiting private clinics mentioned that if the disease became severe, they preferred visiting private clinic.

Patil et al., (2016) conducted a study on Health seeking behavior and its determinants among attendees of Urban Health Center, Dharavi, Mumbai. This cross sectional study was conducted among 400 attendees by Systematic Random Sampling from January to August 2015. The study revealed that the mean age was 36.44 years, more than three-fourth were married. The attendees were predominantly Muslims and belonged to low socio economic class. Though they had to purchase medicines from outside, almost all relied on the Government health facility for healthcare. According to their perceptions about their own health, only 34% of them thought of their own health status. More than three-fourth of them preferred Government health facility in case of major illness.

Mahapatro et al., (2000) conducted a study on Health Seeking Behavior in a Tribal population among six tribal villages of Nabrangpur District of Odisha. The villages selected were based on the accessibility of health services and other facilities. Bhattara was the most predominant tribal population among these villages. All the six villages were situated closely, yet lacked transportation. A total of 621 Bhattara women from 473 households were studied. It revealed that for any kind of illness, they used home remedy on priority basis. It was also observed that tribal women were not against the use of modern allopathic treatment in spite of the prevalence of the extensive use of traditional treatment. Though their work output reduced significantly during their illness, they were not used to take bed rest, unless they were seriously

ill. They believed that measles (gundi) and chickenpox (maa), occurred due to the wrath of the Goddess (thakurani).

Rahman et al., (2012) conducted a study on Healthcare Seeking Behavior among the Tribal People of Bangladesh. This study aimed at exploring the context, reasons, and choices in patterns of healthcare-seeking behavior to present the obstacles and challenges faced in accessing healthcare provision in the tribal areas. Participatory tools and techniques, including focus-group discussions, in-depth interviews, and participant-observations, were used involving 218 men, women, adolescent boys, and girls belonging to nine different tribal communities in six districts. The following were the four main findings which emerged from the study, viz (a) Traditional healers were still very popular among the tribal population in Bangladesh (b) Perceptions of the quality and manner of treatment and communication could override costs when it comes to provider-preference (c) Gender and age played a role in making decisions in households in relation to health matters and treatment-seeking behavior and (d) Distinct differences existed among the tribal people concerning their knowledge on health, awareness, and treatment-seeking behavior. The finding challenges the present healthcare delivery system that has largely been based on the needs and priorities of the plain land population.

E. The prevalence of health problems and perception of health and illness.

Raj et al., (2019) conducted a study on Health Status and Health Seeking Behavior of Oraon female adolescents in Jharkhand. Oraon is the second largest tribal group in Jharkhand, consisting of 20% of total Scheduled Tribe (ST) population. The confined geographical location, unique socio-cultural settings, and inadequate healthcare facilities, were the various factors responsible for creating vulnerability in terms of health. The health status of Oraons was highly influenced by their perception of health and ill-health which was shaped by their culture. They relied heavily on traditional healers (Bhagat) for cure for illness. Such reliance was shaped by the cultural practices of the community. Hence, culture played an important role as a social determinant of health, affecting health status and health seeking behavior of Oraon female adolescents.

Gopinath et al., (2018) conducted a community based cross-sectional study in a tribal area of Puthurnadu in Jawadhi Hills. A total of 316 children participated in the study. It revealed that the overall prevalence of under nutrition was 26.9% in which severely under nourished were 9.2%, the overall prevalence of stunting was 55.4% in which severely stunted children were 23.4% and the overall prevalence of wasting was 10.4% in which severely wasted were 1.9% respectively. Male children were found to be more malnourished than Female children. Children from joint family were more prone to get malnourished than children from the Nuclear families. The overall prevalence of stunting was higher (55.4%) which was greater than the cut-off point stated by the World Health Organization (WHO).

Sathiyarayanan et al., (2019) conducted a cross-sectional study among the tribal population of Jawadhi Hills. It revealed that majority (82.2%) of them in the age group of 31 to 60 years were illiterate, 18.9% were underweight, 8.8% were overweight or obese, 10.3% of them were smokers and alcoholic. Based on the RBS value, 3.8% were diabetic, overall prevalence of hypertension was found to be 16.7%.

CONCLUSION

The Literature Review helped the investigator to know about the current health status of the tribal population, prevalence of health problems, health seeking behavior and healthcare utilization. It also helped the investigator to prepare the instrument and methodology for the study. Tribal healthcare is a major challenge for the Government as well as non-government organizations. There is a need to

strengthen the health program which will empower the men from tribal area to improve their health status and utilization of healthcare facility.

CHAPTER-III METHODOLOGY

Research Design:

A Cross-Sectional Quantitative study design was chosen for this study to assess the morbidity pattern, utilization of healthcare services and health seeking behavior of Men from tribal community.

Setting of study:

The study was done among the tribal population of Jawadhi Hills. This area is spread over Vellore and Tiruvannamalai districts of Tamilnadu. This is a hilly area which covers 1664 Sq.Km and situated in the Eastern Ghats with approximately 60,000 populations. People residing in these areas are called 'Malayali' or 'the people of the hills'. At present the community health department of CMC, Vellore provides health services to 50,000 population in seven panchayats situated in Tiruvannamali district. They are Kovilur, Kanamalai, Nammiyambut, Veerappanur and Kuttakarai and three Panchayats in Vellore Districts are Palampet, Peenjamanthai and Jarthankollai. The program offers mobile clinic services once a month to 50 villages belonging to 7 panchayats under the Tamilnadu Health System Project- a collaborative healthcare services with the State Government. The health team consists of doctors, nurses and social workers. In the mobile clinic, pregnant women are registered and assessed. Morbidity patients are also treated and advised regarding lifestyle modifications. Health education is provided and those in need of higher medical care are referred to Veerappanur Clinic, CHAD, PHC, CMC or Government Vellore Medical College and Hospital (GVMCH) as per their convenience.

Apart from this, there are three PHCs in Jawadhi Hills. They are situated in Nammiyambut, Peenjamandai and Jamunamarathur. These PHCs provide 24x7 delivery services and conducts antenatal clinic every week on Tuesdays. The study area is served by seven Health Sub Centres. One Accredited Social Health Activist (ASHA) is posted to 3-4 villages in order to motivate the villagers and ensure utilization of health services. Most of these villages are inaccessible by road. The main road link is available for few of the villages. Government town bus facility is available twice a day to main villages such as Jamunamarathur. Many of the villagers have to walk nearly 10 kms to reach the PHC as they live in the midst of the jungle. Some of the villagers use motorbike for transportation. The 108 ambulance can reach to major villages with proper road facility.

Population: Men from tribal community in Jawadhi hills

Sample: Men from tribal community in Jawadhi Hills who fulfill the inclusion criteria

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1. Men from tribal community in the selected area who willfully give consent to participate in the study
2. Men in the age group of 30-59 years from the tribal community
3. Men who are the permanent resident of Jawadhi Hills

Exclusion Criteria

1. Men from the tribal community who are unable to communicate adequately for data collection
2. Men who donot belong to the tribal clan of Jawadhi Hills

Sample Size:

Sample size was calculated based on the following study

A study on Morbidity pattern and health seeking behavior of Gypsy community by Ranjani et al., (2018) reported a health seeking behavior of 65%. A 60% Health seeking behavior was assumed for this study. Thus to detect this 60% with 95% CI and 10% precision a sample of 100 subjects was needed. A Multistage cluster sampling is chosen, considering a design effect of 2.0, a sample of 200 subjects was needed for this study.

Formula: $N = Deff*(4*P*Q/D*D)$

P=60, Q=40, D=10, Deff=2.0

N=200

Hence, it was decided that 200 Men will be enrolled for the study.

Method of Sample Selection:

The investigator obtained the details of total number of villages and the available population from the Community Health Department. Two panchayats of Jawadhi Hills were chosen, i.e. Veerapannur and Kovilur from Tiruvannamalai District and 10 villages among each panchayat were selected using the Random Number Generator in the computer. Permission from the Village leader (Ooran) was obtained. The researcher coming across the first 10 Men who fulfilled the inclusion criteria on that particular day, in that particular village were included as study participants. Therefore, 20 villages as 20 clusters were chosen. The Men who gave their consent and who fulfilled the inclusion criteria were chosen for the study.

DATA COLLECTION INSTRUMENT

The instrument (Appendix-I) was prepared by the researcher after systematically reviewing the literature under the guidance of Nursing, Medical and Statistical experts. Interview technique was adopted to assess the details of the family and individual socio demographic details, morbidity pattern, utilization of health care services and health seeking behavior of the individuals.

A physical health assessment format was used to assess the general health status of the individuals. A Biophysical profile format was used to assess the biophysical parameters such as height, weight, BP and blood investigations to assess the blood sugars and hemoglobin using various standards.

The instrument had 6 parts (Appendix-I)

- Section A : Socio Demographic Profile and Family History of Illnesses
- Section B : Survey format on Substance Abuse
- Section C : Questionnaire on utilization of health care services
- Section D : Questionnaire on Morbidity Pattern and Health Seeking Behavior
- Section E : Physical Health Assessment format to assess the morbidity pattern
- Section F : Biophysical and Blood Parameters assessment format

ADMINISTRATION AND SCORING OF THE TOOL

Section-A: Socio Demographic Profile and Family History of Illnesses

The first part of the instrument consisted of demographic details like age, education, religion, monthly income, housing, socioeconomic status and occupation. The data in this section was not scored but was used for descriptive analysis and also to find association with the demographic variables, the morbidity pattern, utilization of health care services and health seeking behavior of the tribal Men. Questions on Family history of illness were interviewed.

Section-B: Survey Format on Substance Abuse

The second part of the instrument consisted of details of substance abuse, frequency, type, quantity and these details were asked using this questionnaire.

Section-C: Questionnaire on Utilization of Healthcare Services

The third section consisted of questions related to utilization of health care services by the Men. The modes of treatment pattern, frequency, treatment preferences, mode of transportation to the health facility, time taken to reach the health facility, etc were obtained.

Section-D: Questionnaire on Morbidity Pattern and Health Seeking Behaviour

The fourth section consisted of structured interview questionnaire with questions to assess the health seeking behavior of Men. The data of this section were noted as given by them. The details obtained were classified as Fully utilized, Partially Utilized and Not utilized as follows.

Fully Utilized Healthcare: Men who had fully made use of available health care services available in private or public health institutions for health maintenance by regular check up, continuous follow up, taking appropriate actions to prevent complications and complete adherence to treatment regimen

Partially Utilized Healthcare: Men who irregularly made use of the health care services available in public or private institutions for health maintenance and adherence to treatment regimen

Not Utilized Healthcare: Men who never made use of the health care facilities available in and out of their geographic location

Section-E: Physical Health Assessment Format

The fifth section consisted of a structured physical assessment format. It consisted of a detailed head to foot examination viz. assessment of skin, eyes, speech, hearing, nostrils, lungs, heart, breast and musculoskeletal assessment. The data in this section was scored as 1 for any problem and 0 for normal.

Section-F: Biophysical and blood parameters assessment format

This section had the biophysical profile and blood parameters assessment format to measure the various biophysical parameters.

- Weight using standardized weighing scale measured in kilograms to the nearest
- Body Mass Index was calculated using Quetelet Index and classified using WHO BMI Classification Criteria (2018) as follows

Body Mass Index (BMI), WHO Criteria 2018	
<i>Underweight</i>	<18.5
<i>Normal</i>	18.5-24.9
<i>Overweight</i>	25-29.9
<i>Obese Class I</i>	30-40
<i>Obese Class II (Morbid obesity)</i>	40.1-50
<i>Obese Class III (Super obese)</i>	>50

- Blood Pressure, using standardized Sphygmomanometer with two readings taken at 30 minutes interval with second reading taken as consideration. Classification of blood pressure for adults based on Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure Volume VII (2003)

Blood Pressure Classification by AHA			
<i>BP Category</i>	<i>Systolic</i>		<i>Diastolic</i>
<i>Normal</i>	<120	<i>and</i>	<80
<i>Elevated</i>	120-129	<i>and</i>	<80

<i>Hypertension Stage I</i>	130-139	or	80-89
<i>Hypertension Stage II</i>	≥140	or	≥90
<i>Hypertension Crisis</i>	>180	and/or	>120

- Capillary Random blood glucose – using Glucometer (contour) was checked with a single prick method after obtaining a written consent from the participant and a GRBS of <180mg/dl was considered as normal
- Hemoglobin: Blood was checked using **HaemoCue Analyzer** with a single prick method after obtaining the written consent from the participants. Hemoglobin values were adjusted based on WHO recommendations for altitude corrections. A value of < 11gms was considered having anemia.

Anemia Classification by ICMR	
Men: >13 gm/dl (13.5-17.5)	
<i>Mild</i>	10-11 gm/dl
<i>Moderate</i>	7-10 gm/dl
<i>Severe</i>	4-7 gm/dl

Validity and Reliability

The content validity was done by experts in the field of Community Medicine, Nursing and Biostatistics. The feasibility and reliability of the methodology and instrument was checked by conducting pilot study.

Pilot Study

Pilot study was done for a period of one week. Pilot study was done to test and refine the instrument in one of the villages (**Athipet of Kovilur Panchayat**) of Jawadhi Hills on 1.10.19 to 3.10.19. A total of 20 Men were selected as participants who fulfilled the inclusion criteria. Informed consent was obtained. The participants were examined and interviewed. Data analysis was done and results were consulted with the experts. The feasibility of the study and the reliability of the data collection instrument were checked.

DATA COLLECTION PROCEDURE

Data collection was done for a period of 6 weeks between 8am – 5pm from Monday to Saturday. Before the commencement of the study, the skills of the researcher for checking GRBS and hemoglobin were verified by the faculty of the Community Health Nursing department.

The data was collected using structured interview. The study was conducted in 2 Panchayats Veerapannur and Kovilur of Jawadhi Hills in Tiruvannamalai District. The panchayats and the villages were chosen by Simple Random method by using a random number generator. The researcher approached the village with the help of the Community Worker from the Don Bosco Tribal Development Society. The leader of the village was approached by the investigator and informed the details about the study.

The researcher chose a house which had a male adult who fulfilled the inclusion criteria. He developed a good rapport with him and the family members and explained the purpose of the study. A written consent was obtained for willingness to participate in the study and finally He was chosen as a study participant. Demographic data of the subject was collected by the researcher. The data regarding the morbidity pattern was collected using a survey format and a questionnaire on the utilization of health care services, health seeking behavior was administered by the researcher by interview method. The researcher performed a thorough physical assessment (with adequate privacy) systematically according to the format developed and blood was tested for Hemoglobin, Blood sugar.

Data Analysis

The collected data were analyzed, tabulated using the Statistical Package for the Social Sciences (SPSS

17.0) for the windows for a period of 2 weeks (6-4-2020 to 18-4-2020). Categorical variables were summarized using counts and percentages. Quantitative variables were summarized using mean and standard deviation or median and IQR. The health seeking behavior and morbidity patterns were presented with 95% CI. The association between demographical variables with Utilization of health care services, Health Seeking Behavior and Morbidity patterns were analyzed using chi-square statistics and Fisher's exact test depending on all counts.

Protection of Human Subjects

Ethical clearance for the conduction of Research study was obtained prior to the Pilot study from the College of Nursing Research Committee. The ethical committee approval for doing invasive procedure and protection of safety rights of the patients was obtained from the Institution Review Board (IRB) of CMC, Vellore as the Men belonged to the tribal community is a special and vulnerable group. Funding for the study was obtained from the Fluid Research Committee and the participants were not charged for the investigations. Interdepartmental permission was obtained to carry out the study. Permission was obtained from CHAD, and the leaders of the villages. A written consent was obtained from the participants stating the willingness to participate in the study after adequate explanation of the study. For illiterate participants the researcher explained the content of consent and thumb impression of the subjects was obtained if only they were willing to participate. Confidentiality of the participants was maintained throughout the conduct of the study. Those who were in need of further diagnosis and treatment were referred to the clinic in Veerapanur/PHC/CHAD hospital/Government Vellore Medical College as per their convenience and the follow up was done by the investigator.

CHAPTER-IV ANALYSIS

This chapter consists of the description of the sample characteristics, analysis and interpretation of data collected from 200 Men belonging to tribal community. The study objectives were to assess the existing morbidity pattern, utilization of healthcare services and the health seeking behavior and also to find association between the morbidity pattern and the health seeking behavior with selected socio demographic variables of the Men belonging to tribal community. The collected data were organized and analyzed using descriptive and inferential statistics with the software SPSS for windows (version 17.0)

The study findings are presented using tables and figures and arranged under the following sections

- Section-A : Socio Demographic Profile and Family History of Illnesses
- Section-B : Substance abuse by the Men from tribal community
- Section-C : Utilization of health care services
- Section-D : Morbidity Pattern and Health Seeking Behavior
- Section-E : Physical Assessment
- Section-F : Biophysical and blood parameters assessment
- Section-G
 - (a) Association between selected socio demographic variables and morbidity pattern
 - (b) Association between morbidity pattern, utilization of health care services and health seeking behavior

SECTION-A: SOCIO DEMOGRAPHIC VARIABLES OF MEN BELONGING TO TRIBAL COMMUNITY

Table-1 Distribution of Men from the selected Panchayats and Villages of Tribal Community

S.No	Panchayat/Village	No. of Men participated
Veerappanur Panchayat		
1	Kuttikollai	10
2	Perumalai	10
3	Valayathukollai	10
4	Theerthanur	9
5	Melmarathur	6
6	Kattukollai	5
Kovilur Panchayat		
7	Kil komutteri	10
8	Melur (Komutteri)	10
9	Erikollai (JMR)	10
10	Pakkumudiyatur	10
11	Chindhalur	10
12	Kil G marathur	10
13	Mattukanur	10
14	Saeramarathur	10
15	Eri Nellimarathur	10
16	Gundalathur	10
17	Thombareddy	10
18	Perungattur	10
19	Poosarikollankottai	7
20	Kovilanur	7
21	Athipet ADC	7
22	Gumpalamarathur	4
23	Kollankottai (Kovilur)	5
Total		200

The **table-1** shows the villages and the panchayats selected for the study and also the number of Men enrolled from each of the villages for the study.

Table-2: Demographic Variables of Men belonging to Tribal Community (N=200)

S. No	Demographic Variables	No.	%
1	Age		
	30-39 years	79	39.5
	40-59 years	121	60.5
2	Education		
	No schooling	94	47.0
	Primary	39	19.5

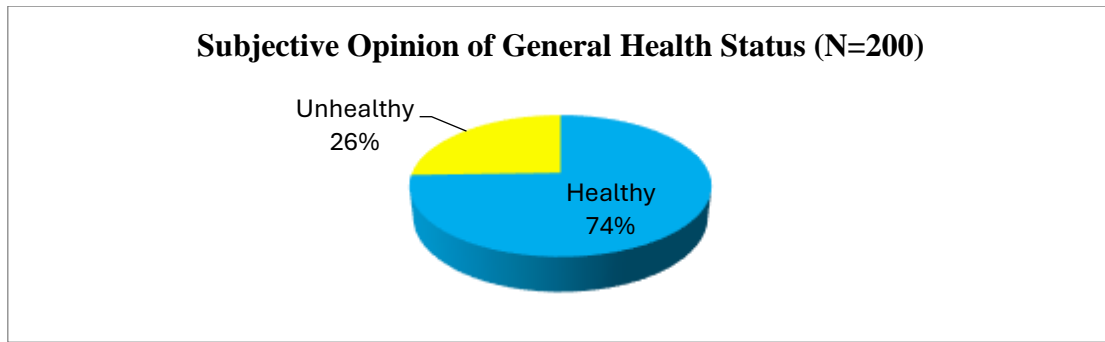
	High School	60	30.0
	Higher Secondary	4	2.0
	Graduate	3	1.5
3	Occupation		
	Skilled	11	5.5
	Unskilled	186	93.0
	Unemployed	2	1.0
	Professional	1	0.5
4	Migration for work		
	Working within Jawadhi Hills	77	38.5
	Working outside Jawadhi Hills	123	61.5
5	Monthly Income in Rupees		
	7008 and above	9	4.5
	3504-7007	18	9.0
	2102-3503	20	10.0
	1051-2101	43	21.5
	Below 1050	106	53.0
	No income	4	2.0
6	Marital Status		
	Married	193	96.5
	Single	7	3.5
7	Type of House		
	Terraced	83	41.5
	Asbestos	79	39.5
	Tinned	10	5.0
	Tiled	7	3.5
	Thatched	21	10.5

Table-2 shows that 79(39.5%) of the Men belong to the age group of 30-39 years (Young adults), 121(60.5%) belong to the age group of 40-59 years (Older adults). The mean age was 43.41 and SD is 8.54. Majority 94(47%) of the Men had no schooling, 39(19.5%) had their Primary Schooling, 60(30%) had their High schooling and only 3(1.5%) had completed their Under Graduation, among them 186(93%) were unskilled laborers, 11(5.5%) were skilled workers, 2(1%) were unemployed.

Majority 106(53%) earned a monthly income of less than Rs. 1050. Few of them 9(4.5%) earned a monthly income of Rs.7008 and above and 4(2%) did not get any income. The mean income is Rs.2243.50, SD is 4221.69.

A majority of them 193(96.5%) were married and only 7(3.5%) were unmarried, majority 83(41.5%) lived in a terraced house and 21(10.5%) lived in a thatched roof house, most of them 123(61.5%) were working outside Jawadhi Hills, 77(38.5%) were working within Jawadhi Hills.

Figure-2: General Health Status of Men from Tribal Community (N=200)



The above **figure-2** shows that 149(74.5%) considered themselves to be healthy whereas 51(25.5%) considered themselves to be unhealthy.

Table-3: Dietary Pattern and Physical Activity of Men from Tribal Community (N=200)

S.No	Details of dietary pattern and physical activity	No.	%
1	Diet Preference		
	Vegetarian	1	0.5
	Non-Vegetarian	199	99.50
2	No. of meals taken per day		
	1 meal	2	1.0
	2 meals	57	28.5
	3 meals	141	70.5
3	Type of physical activity		
	Sedentary	35	17.5
	Moderate	80	40.0
	Heavy	85	42.5

Table-3 shows that 199(99.5%) preferred Non-Vegetarian diet but only 1(0.5%) preferred Vegetarian diet, 141(70.5%) took 3 meals a day and 57(28.5%) took 2 meals a day and among them 85(42.5%) had heavy physical activity, 80(40%) had moderate physical activity and 35(17.5%) had sedentary physical activity.

Table-4: Family History of Illness of the Men from Tribal Community (N=64)

S. No	Family History of Illness	No.	%
1	Diabetes Mellitus	10	15.6
2	Hypertension	32	50.0
3	Cancer	4	6.25
4	Tuberculosis	4	6.25
5	Seizure	1	1.56
6	Other Illness	13	20.3

Table-4 shows that 64(32%) Men have family history of illnesses among them 10(15.6%) have family history of Diabetes Mellitus, 32(50%) have family history of Hypertension, 4(6.25%) have family history of Cancer, 4(6.25%) have family history of Tuberculosis, 1(1.56%) has family history of Seizure disorder and 13(20.3%) have family history of other illnesses like Bronchial Asthma, Cardiac diseases, Renal calculi, etc. Majority 136(68%) Men do not have any family history of illnesses.

SECTION-B: SUBSTANCE ABUSE BY THE MEN FROM TRIBAL COMMUNITY

Table-5: Distribution of Substance Abuse by the Men from Tribal Community (N=172)

S. No	Substance Abuse	No.	%
1	Tobacco	138	80.2
2	Paan Masala	26	15.1
3	Ganja	1	0.5
4	Alcohol	150	87.2

Table-5 shows that a total of 172(86%) Men were into some form of substance abuse. Among them, 138(80.2%) smoked tobacco, 26(15.1%) chewed Paan Masala, 1(0.5%) consumed Ganja occasionally for a duration of 1 year and 150(87.2%) consumed alcohol. Only 28(14%) out of 200 Men were free from substance abuse.

Table-5.1: Details of Tobacco smoking by the Men from Tribal Community (N=138)

S. No	Details of Tobacco smoking	No.	%
Amount consumed per day			
1	¼ pack	1	0.7
2	½ pack	16	11.5
3	1 pack	117	84.7
4	2 packs	3	2.1
5	3 Packs	1	0.7
Duration in Years			
1	<1	1	0.7
2	1-5	33	23.9
3	6-10	28	20.2
4	11-15	9	6.5
5	16-20	23	16.6
6	More than 20	44	31.8

Table 5.1 shows that among the 138 Men, 117(84.7%) smoked 1 pack of beedies, 3(2.1%) smoke 2 packets of beedies and 1(0.7%) smoked 3 packs of beedies per day and one third of them 44(31.8%) had been smoking for more than 20 years and only one (0.7%) had been smoking for less than one year.

Table-5.2 Duration of consumption of Paan Masala by Men from Tribal Community (N=26)

S. No	Duration of consumption in Years	No.	%
1	1-5	14	56.0
2	6-10	9	36.0

3	11-15	1	4.0
4	16-20	1	4.0

Table 5.2 shows that among the 26 Men who consumed Paan Masala, 14(56%) had been taking it for 1-5 years, 9(36%) had been consuming for 6-10 years and 1(4%) had been consuming for 16-20 years.

Table-5.3 Duration of Consumption of Alcohol by Men from Tribal Community (N=150)

S. No	Duration of consumption in Years	No.	%
1	1-5	49	32.6
2	6-10	55	36.6
3	11-15	9	6.0
4	16-20	15	10.0
5	More than 20	22	14.6

Table 5.3 shows that among the 150 Men who consumed alcohol, 55(36.6%) had been consuming for 6-10 years 22(14.6%) had been consuming for more than 20 years and 9(6%) had been consuming for 11-15 years.

SECTION-C: UTILIZATION OF HEALTHCARE SERVICES BY THE MEN FROM TRIBAL COMMUNITY

Table-6: Utilization of Healthcare Services by the Men from Tribal Community (N=200)

S. No	Utilization of Healthcare Services	No.	Prevalence (95% CI)
1	Fully Utilized	65	32.6(26.5, 39.5)
2	Partially Utilized	123	61.8(54.8, 68.3)
3	Not Utilized	11	5.5(3.1, 9.7)

Table-6 shows that majority 32.6%(95% CI: 26.5, 39.5) Men had fully utilized by fully making use of available healthcare services available in private or public health institutions for health maintenance by regular check up, continuous follow up, taking appropriate actions to prevent complications and complete adherence to treatment regimen, 61.8%(95% CI:54.8, 68.3) Men had partially utilized the healthcare services by irregularly making use of the healthcare services available in public or private institutions for health maintenance, adherence to treatment regimen and 5.5%(95% CI:3.1, 9.7) Men had not utilized by never making use of the healthcare facilities available in and out of geographic location.

Table-6.1 Distribution of Utilization of Healthcare Services (N=200)

S. No	Details of utilization of health care services	No.	%
1	Treatment System preferred		
	Traditional/Native	5	2.5
	Modern Medicine	195	97.5

2	Highest health care visited		
	Govt.(Sub Centre/PHC/District Hospital)	163	81.5
	Private	31	15.5
	Never visited	6	3.0
3	Mode of transportation to health facility		
	Foot	78	39.0
	Ambulance	1	0.5
	Public transport	42	21.0
	Motor bike	79	39.5
4	Distance to nearest health facility		
	<30 minutes	147	73.5
	30-60 minutes	30	15.0
	>1 hour	23	11.5
5	Preference in case of emergency		
	Sub Centre	6	3.0
	PHC	194	97.0
6	Free Government Health services		
	Utilized	182	91.0
	Not Utilized	18	9.0
7	Health programme conducted in their village		
	Conducted	128	64.0
	Not conducted	72	36.0
8	Reason for preference to Govt. Health facility		
	Better treatment	62	31.0
	Custom and beliefs	1	0.5
	Financial constraints	81	40.5
	Accessibility	56	28.0
9	Behaviour of healthcare providers		
	Kind and polite	156	78.0
	Hostile/rude	1	0.5
	Satisfactory	43	21.5
10	Attitude of people towards modern medicine		
	Costly	4	22.0
	Facilities not available locally	59	29.5
	Rapid cure	106	53.0
	Doubtful	14	7.0
	No side effects	4	2.0
	No awareness	11	5.5

Table-6.1 shows that only 5(2.5%) preferred native/traditional system of treatment, whereas the rest of the 195(97.5%) preferred Allopathy system of treatment. Majority, 163(81.5%) Men had visited the highest health facility in Govt. Sub-centre, PHC and District Hospital, 31(15.5%) Men had visited the highest health facility in private and 6(3%) never went to any health facility. Majority, 78(39%) of the Men

reached the health facility by foot, 1(0.5%) utilized the ambulance service to reach the health facility, 42(21%) used the public transport to reach the health facility and 79(39.5%) utilized their own motor bikes for transportation. For 147(73.5%) Men, the nearest health facility could be reached within 30 minutes, for 30(15%) Men, it took 30-60 minutes to reach the nearest health facility and for 23(11.5%) Men, it took more than 1 hour to reach the nearest health facility. Majority, 194(97%) Men preferred the PHC in case of emergency and 6(3%) Men preferred the Sub-Centres in case of emergency.

Free Government Health services were utilized by 182(91%) Men, whereas 18(9%) did not utilize the free Government Health services. Better treatment is the reason for preferring Govt. health centre by 62(31%) Men. 81(40.5%) Men preferred Government health centre due to financial constraints and 56(28%) Men prefer the Government health centre due to its accessibility. Majority 182(64%) of them say that Health Programme was conducted in their village, whereas 72(36%) said that health programme was not conducted in their village. Majority, 156(78%) said that the health care providers were kind and polite, 1(0.5%) experienced that they were hostile and rude and 43(21.5%) said that their behaviour was satisfactory, 4(2%) felt that modern medicine is costly, 59(29.5%) say that modern health facilities are not available locally. Majority 106(53%) said that modern medicine gives rapid cure, 14(7%) say that they are doubtful of using allopathic medications and 4(2%) say that they experienced side-effects and 11(5.5%) said that they are not aware of modern medicine.

SECTION-D: MORBIDITY PATTERN AND HEALTH SEEKING BEHAVIOUR

Table-7: Morbidity Pattern of Men from Tribal Community (N=200)

S. No	Morbidity Pattern	No.	%
1	No. of Men who had acute illness	91	45.5
2	No. of Men who had chronic illness	30	15.0

Table-7 shows that 91(45.5%) were suffering from acute illness and 30(15.0%) were suffering from chronic illnesses.

Table-7.1: Acute Illness in Men on Migration (N=200)

S. No	Morbidity	No.	%
1	No. of Men who had acute illness	87	43.5
2	No. of Men acutely ill on migration	4	2.0

Table 7.1 shows that a total of 87(43.5%) Men had some form of acute illness, in which 4(2%) were acutely ill on migration.

Table 7.2: Distribution of Perceived Morbidity Pattern-Acute Illness in Men from Tribal Community (N=97)

S. No	Perceived Morbidities	No.	%
1	Fever	24	24.7
2	Headache	19	19.5
3	Upper Respiratory Tract Infections	52	53.6
4	Diarrhea	1	1.0
5	Gastritis	1	1.0

Table-7.2 shows that 24(24.7%) among 97 Men had fever, 19(19.5%) had headache, 52(53.6%) had Upper Respiratory Tract Infections, 1(1%) had Diarrhea and 1(1%) had gastritis. Out of 97 who had acute illness, 58(59.7%) had sought treatment for their illnesses.

Table-7.3 Distribution of Place of Treatment for Acute Illness by Men from Tribal Community (N=63)

S. No	Place of treatment	No.	%
1	Govt. (PHC/ District Hospital)	25	25.7
2	Private clinic/hospital	15	15.4
5	Self Medication/OTC	23	23.7

Table-7.3 shows that 25(25.7%) of them had taken treatment for acute illness from Government health facility i.e. PHC/District hospital, 15(15.4%) had taken treatment from private health facilities and 23(23.7%) had taken treatment by self medication and Over the Counter.

Table-7.4: Distribution of Chronic Illnesses in Men from Tribal community (N=69)

S. No	Chronic Illnesses	No.	%
1	Hypertension	20	28.9
2	Myalgia	17	24.6
3	Gastritis	7	10.1
4	CVA	5	7.2
5	Heart Diseases	4	5.7
6	Bronchial Asthma	3	4.3
7	Tuberculosis	3	4.3
8	Diabetes Mellitus	2	2.8
9	Psychiatric Disorders	1	1.4
10	Seizure Disorder	1	1.4
11	Appendicitis	1	1.4
12	Renal Calculi	1	1.4
13	COPD	1	1.4
14	Peptic Ulcer	1	1.4
15	Migraine	1	1.4
16	Skin Problems	1	1.4

Table-7.4 shows that 20(28.9%) were suffering from hypertension, 17(24.6%) were suffering from myalgia, 7(10.1%) had gastritis, 5(7.2%) were suffering from CVA, 3(4.3%) were suffering from Bronchial Asthma, 3(4.3%) were suffering from Tuberculosis, 2(2.8%) were suffering from diabetes mellitus. Other illnesses like psychiatric disorder, seizure disorder, appendicitis, renal calculi, COPD, peptic ulcer, migraine, and skin disorders were seen in 8 Men respectively. Those 8 men had at least 1(1.4%) of those other illnesses.

Table-7.5: Treatment taken for Chronic Illnesses by Men from Tribal Community (N=69)

S. No	Treatment for Chronic Illnesses	No.	%
1	No. of Men taken treatment	66	95.6

2 No. of Men not taken treatment 3 4.3

Table-7.5 shows that among the 69 Men who were affected by chronic illness, 66(95.6%) had taken treatment for the same, whereas 3(4.3%) did not take any treatment.

Figure-3: Regularity of treatment for Chronic Illnesses by Men from Tribal Community (N=66)

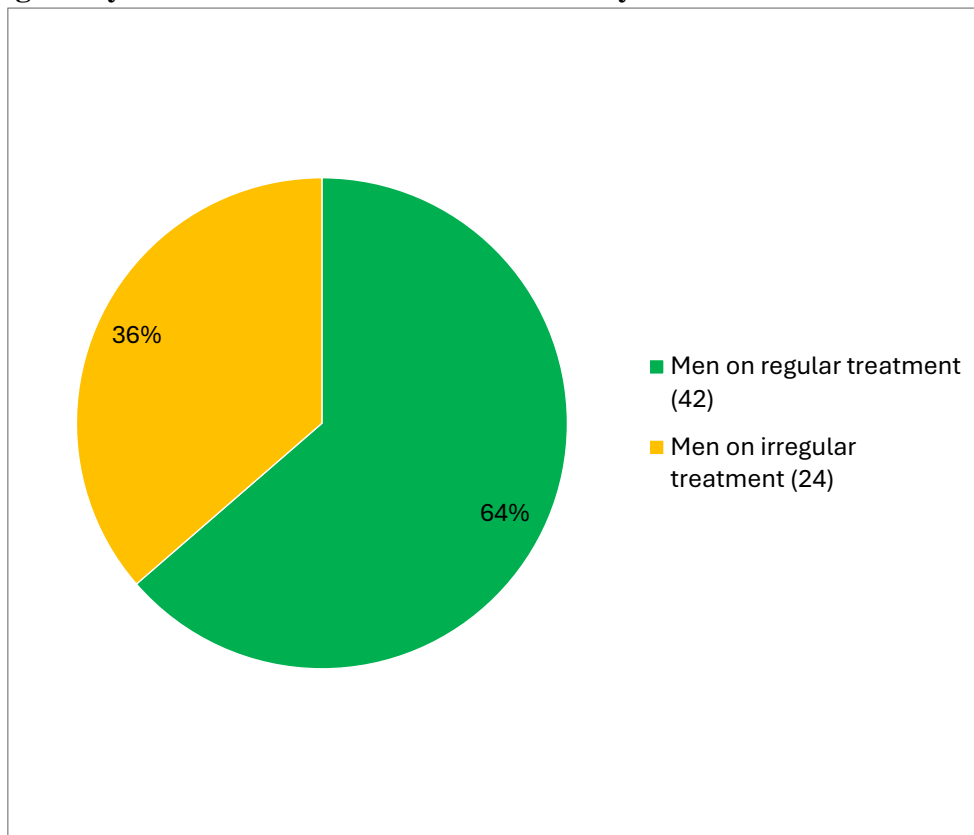


Figure-3 shows that among the 66 Men who had taken treatment for chronic illnesses, 42(63.6%) had taken treatment regularly, whereas 24(36.3%) had irregularly taken treatment for chronic illnesses.

Table-7.6: Distribution of Places of Treatment for Chronic Illnesses by Men from Tribal Community (N=66)

S. No	Place of Treatment for Chronic Illnesses	No.	%
1	Government Hospitals	5	7.5
2	Private Health facility	14	21.2
3	CMC & associated centre	3	4.5
4	Primary Health Centre	35	53.0
5	Native Medicine	8	12.1
6	Over the Counter (OTC)/Pharmacy	1	1.5

Table-7.6 shows that 35(53%) had utilized the PHC, 14(21.2%) had taken treatment from Private clinics and health facilities, 8(12.1%) had taken Native treatment, 5(7.5%) had taken treatment from Government Hospitals, 3(4.5%) had taken treatment from CMC and its associated health facilities like CHAD, Veerapanur Tribal Clinic and Mobile Clinic and only one (1.5%) had taken Over the Counter medications.

Table-7.7: Frequency of visiting Doctor by the Men from Tribal Community (N=200)

S. No	Frequency of visiting Doctor in a month	No.	%
1	Never	47	23.5
2	Once	142	71.0
3	Twice	4	2.0
4	Thrice	7	3.5

Table-7.7 shows that 47(23.5%) never visited a Doctor in a month, 142(71%) visited a Doctor once a month, 4(2%) visited a doctor twice a month and 7(3.5%) visited a doctor thrice in a month.

SECTION-E: PHYSICAL ASSESSMENT OF MEN FROM TRIBAL COMMUNITY

Table-8: Distribution of Physical Assessment findings of Men from Tribal Community (N=200)

S. No	Findings from Physical Assessment	No.	%
1	Skin		
	Icteric	1	0.5
	Pallor	2	1.0
	Skin lesion	18	9.0
	Rashes	1	0.5
2	Eye		
	Squint	1	0.5
	Cataract	2	1.0
	Redness	4	2.0
	Vision-Defective	41	20.5
3	Oral Cavity		
	Dental caries	119	59.5
	Flurosis	157	78.5
	Plaque and Tartar	10	5.0
	Loose tooth	1	0.5
	Halitosis	1	0.5
	Speech-Slurred	3	1.5
4	Neck		
	Lymphadenopathy	1	0.5
	Neck swelling	1	0.5
5	Respiratory system		
	Lung sounds-wheeze	15	7.5
6	Abdomen		
	Distension	2	1.0

	Localized enlargement	2	1.0
7	Extremities		
	Decreased power and weakness	13	6.5
	Dependent for mobility	13	6.5
	Physical deformity	8	4.0

Table-8 shows that 18(9%) had skin lesion, 2(1%) had cataract, 4(2%) had redness of the eye and 41(20.5%) had defective vision. Almost 119(59.5%) had dental caries, 157(78.5%) had flurosis, 10(5%) had plaque and tartar and 3(1.5%) had slurred speech, one each (0.5%) had lymphadenopathy and neck swelling. Few of them 15(7.5) had wheeze, 2(1%) had abdominal distension, 2(1%) had localized enlargement, 13(6.5%) had decreased power and weakness, 13(6.5%) were dependent for their mobility, 8(4%) had physical deformity.

SECTION-F: BIOPHYSICAL AND BLOOD PARAMETERS OF MEN FROM TRIBAL COMMUNITY

Table-9: Distribution of Body Mass Index (BMI) of Men from Tribal Community (N=200)

S. No	Findings from Biophysical and Blood parameters	No.	%
1	Body Mass Index (BMI)		
	Underweight (<18.4)	44	22.0
	Normal (18.5-22.9)	111	55.5
	Overweight (23-24.9)	21	10.5
	Obese (>25)	24	12.0
2	BMI comparison with age in years (Underweight) N=44		
	30-40	14	31.8
	41-50	14	31.8
	51-59	16	36.3
3	BMI comparison with age in years (Overweight) N=21		
	30-40	9	42.8
	41-50	6	28.5
	51-59	6	28.5
4	BMI comparison with age in years (Obese)		
	30-40	11	45.8
	41-50	10	41.6
	51-59	3	12.5

Table-9 shows that 44(22%) were in underweight category, 111(55.5%) were having normal weight, 21(10.5%) were in overweight category and 24(12%) Men were obese. Among those who were in the underweight category, 14(31.8%) belonged to the 30-40 years of age, 14(31.8%) belonged to 41-50 years of age, 16(36.3%) belonged to 51-59 years of age. Among those who were in the overweight category, 9(42.8%) belonged to the 30-40 age group, 6(28.5%) belonged to the 41-50 age group, 6(28.5%) belonged to the 51-59 age group. Among those who were in the obese category, 11(45.8%) belonged to the 30-40 age group, 10(41.6%) belonged to the 41-50 age group, 3(12.5%) belonged to the 51-59 age group.

Table-10: Distribution of Biophysical and Blood Parameters of the Men from Tribal Community (N=200)

S. No	Findings from Biophysical and Blood parameters	No.	%
1	Blood Pressure (Systole in mmHg)		
	Normal (<120)	117	58.5
	Pre-hypertension (120-139)	36	18.0
	Stage 1Hypertension (140-159)	28	14.0
	Stage2 Hypertension (≥ 160)	19	9.5
	Blood Pressure (Diastole in mmHg)		
	Normal (And<80)	45	22.5
	Pre-hypertension (or 80-90)	86	43.0
	Stage 1Hypertension (or 90-99)	42	21.0
	Stage2 Hypertension (or ≥ 100)	27	12.0
2	Blood Glucose (mg/dL)		
	Hypoglycemia (<80)	3	1.5
	Normal (80-140)	166	83.0
	Pre-Diabetic (140-180)	21	10.5
	Hyperglycemia (>180)	10	5.0
3	Hemoglobin (gm %)		
	Normal (>13)	74	37.0
	Mild Anaemia(10-12)	82	41.0
	Moderate Anaemia(7-10)	38	19.0
	Severe Anaemia(4-7)	6	3.0

Table-10 shows that 117(58.5%) Men had normal systolic blood pressure, 36(18%) had pre-hypertension, 28(14%) had stage-1 hypertension and 19(9.5%) had stage-2 hypertension as far as systolic blood pressure is concerned. Among them 45(22.5%) had normal diastolic blood pressure, 86(43%) had pre-hypertension, 42(21%) had stage-1 hypertension, 27(12%) had stage-2 hypertension as far as diastolic blood pressure is concerned. Majority of them 166(83%) had normal blood glucose level, 21(10.5%) had pre-diabetes, 10(5%) had hyperglycemia and 3(1.5%) had hypoglycemic. Less than half, 74(37%) had normal hemoglobin level, 82(41%) had mild anemia, 38(19%) had moderate anemia and 6(3%) had severe anemia.

SECTION-G (a)

ASSOCIATION BETWEEN SELECTED SOCIO DEMOGRAPHIC VARIABLES AND MORBIDITY PATTERN

Table-11: Association between the selected Socio Demographic Variables and Presence of Acute Illness in the Men from Tribal Community

S.No	Demographic Variables	No.	Acute Illness				P value
			Present		Absent		
			No.	%	No.	%	
1	Age in years						

	<50	151	69	75.82	82	75.23	0.922
	>50	49	22	24.18	27	24.77	
2	Education						
	No schooling	94	47	43.12	47	43.12	0.376
	Primary/High School	99	42	46.15	57	52.29	
	Higher Secondary/Degree	7	2	2.20	5	4.59	
3	Occupation						
	Not working	3	2	2.20	1	0.92	0.745
	Unskilled	193	87	95.60	106	97.25	
	Skilled	4	2	2.20	2	1.83	
4	Monthly Income in Rupees						
	<5000	190	84	92.31	106	97.25	0.110
	>5000	10	7	7.69	3	2.75	
5	General Health Status						
	Healthy	149	65	71.43	84	77.06	0.363
	Unhealthy	51	26	28.57	25	22.94	
6	Type of housing						
	Terraced/Tiled	90	39	42.86	51	46.75	0.578
	Thatched/Asbestos/Tinned	110	52	57.14	58	53.21	

Table-11 reveals that there is no association between any socio demographic variables and presence of acute illness in Men living in tribal communities of Jawadhi Hills.

Table-12: Association between selected Socio Demographic Variables and Duration of Acute Illness of the Men from Tribal Community

S.No	Demographic Variables	No.	Duration of Acute Illness				P value
			<1 year		>1 year		
			No.	%	No.	%	
1	Age in years						
	<50	151	130	75.14	21	77.78	0.767
	>50	49	43	24.86	6	22.22	
2	Education						
	No schooling	94	80	46.24	14	51.85	0.852
	Primary/High School	99	87	50.29	12	44.44	
	Higher Secondary/Degree	7	6	3.47	1	3.70	
3	Occupation						
	Not working	3	1	0.58	2	7.41	0.019*
	Unskilled	193	169	97.69	24	88.89	
	Skilled	4	3	1.73	1	3.70	
4	Monthly Income in Rupees						
	<5000	190	167	96.53	23	85.19	0.012*
	>5000	10	6	3.47	4	14.81	
5	General Health Status						

	Healthy	149	129	74.57	20	74.07	0.956
	Unhealthy	51	44	25.43	7	25.93	
6	Type of housing						
	Terraced/Tiled	90	81	46.82	9	33.33	0.190
	Thatched/Asbestos/Tinned	110	92	53.18	18	66.67	

Table-12 reveals that occupation and income had strong association with the duration of acute illness in the Men living in tribal communities of Jawadhi Hills.

Table-13: Association between selected Socio Demographic Variables and Chronic Illness present in the Men from Tribal Community

S.No	Demographic Variables	No.	Chronic Illness				P value
			Present		Absent		
			No.	%	No.	%	
1	Age in years						
	<50	151	15	50.0	136	80.0	<0.001*
	>50	49	15	50.0	34	20.0	
2	Education						
	No schooling	99	14	46.67	85	50.0	0.586
	Primary/High School	92	14	46.67	80	45.88	
	Higher Secondary/Degree	7	2	6.67	5	2.94	
3	Occupation						
	Not working	3	0	0.0	3	1.76	0.656
	Unskilled	193	29	96.67	164	96.47	
	Skilled	4	1	3.33	9	5.29	
4	Monthly Income in Rupees						
	<5000	190	29	96.67	161	94.71	0.650
	>5000	10	1	3.33	9	5.29	
5	General Health Status						
	Healthy	149	14	46.67	135	79.41	<0.001*
	Unhealthy	51	16	53.33	35	20.59	
6	Type of housing						
	Terraced/Tiled	90	15	50.0	75	44.12	0.550
	Thatched/Asbestos/Tinned	110	15	50.0	95	55.88	

Table-13 reveals that age has strong association with the presence of chronic illness in the Men living in tribal communities of Jawadhi Hills.

Table-14: Association between selected Socio Demographic Variables and Duration of Chronic Illness of the Men from Tribal Community

S.No	Demographic Variables	No.	Duration of Chronic Illness				P value
			<5 years		>5 years		
			No.	%	No.	%	
1	Age in years						

	<50	15	13	50.0	2	50.0	>0.99	
	>50	15	13	50.0	2	50.0		
2	Education							0.007*
	No schooling	14	12	46.15	2	50.0		
	Primary/High School	14	14	53.85	0	0.0		
	Higher Secondary/Degree	2	0	0.0	2	50.0		
3	Occupation							>0.99
	Unskilled	29	25	96.15	4	100.0		
	Skilled	1	1	3.85	0	0.0		
4	Monthly Income in Rupees							>0.99
	<5000	29	25	96.15	4	100.0		
	>5000	1	1	3.85	0	0.0		
5	General Health Status							0.602
	Healthy	14	13	50.0	1	25.0		
	Unhealthy	16	13	50.0	3	75.0		
6	Type of housing							0.598
	Terraced/Tiled	15	12	46.15	3	75.0		
	Thatched/Asbestos/Tinned	15	14	53.85	1	25.0		

Table-14 reveals that education has strong association with the duration of chronic illness in the Men living in tribal communities of Jawadhi Hills.

Table-15: Association between selected Socio Demographic Variable and Place of Treatment for Acute Illness of the Men from Tribal Community

S.No	Demographic Variables	No. of Men with acute Illness	No. of Men not treated for acute illness		Place of treatment for acute illness				P value
			No.	%	PHC/Govt		Private		
					No.	%	No.	%	
1	Age in years								
	<50	70	25	73.53	18	78.26	27	77.14	0.903
	>50	22	9	26.47	5	21.74	8	22.86	
2	Education								
	No schooling	48	13	38.24	15	65.22	20	57.14	0.096
	Primary/High School	42	19	55.88	8	34.74	15	42.86	
	Higher Secondary/Degree	2	2	5.88	0	0.0	0	0.0	
	Professional	2	0	0	0	0.0	2	5.71	
3	Occupation								
	Not working	2	1	2.94	1	4.35	0	0.0	0.587
	Unskilled	88	32	94.12	21	91.30	35	100.0	
	Skilled	2	1	2.94	1	4.35	0	0.0	
4	Monthly Income in Rupees								

	<5000	85	32	94.12	20	86.96	33	94.29	0.525
	>5000	7	2	5.88	3	13.04	2	5.71	
5	General Health Status								
	Healthy	66	27	79.41	14	60.87	25	71.43	0.312
	Unhealthy	26	7	20.59	9	39.13	10	28.57	
6	Type of housing								
	Terraced/Tiled	39	11	32.35	11	47.83	17	48.57	0.328
	Thatched/Asbestos/Tinned	53	23	67.65	12	52.17	18	51.43	

Table-15 reveals that there is no association between socio demographic variables and place of treatment for acute illness in the Men from tribal community of Jawadhi Hills.

SECTION-G (b)

ASSOCIATION BETWEEN MORBIDITY PATTERN, UTILIZATION OF HEALTH CARE SERVICES AND HEALTH SEEKING BEHAVIOR

Table-16: Association between selected Socio Demographic Variables, Treatment for Chronic Illness and Utilization of Healthcare Services of the Men from Tribal Community

S.No	Demographic Variables	No.	Place of utilization of healthcare services				P value
			PHC/Govt		Private		
			No.	%	No.	%	
1	Age in years						0.462
	<50	15	7	41.18	8	61.54	
	>50	15	10	58.82	5	38.46	
2	Education						0.448
	No schooling	14	6	35.25	8	61.54	
	Primary/High School	14	10	58.82	4	30.77	
	Higher Secondary/Degree	2	1	5.88	1	7.69	
3	Occupation						>0.99
	Unskilled	29	16	94.12	13	100.0	
	Skilled	1	1	5.88	0	0.0	
4	Monthly Income in Rupees						>0.99
	<5000	29	16	94.12	13	100.0	
	>5000	1	1	5.88	0	0.0	
5	General Health Status						0.713
	Healthy	14	7	41.18	7	53.85	
	Unhealthy	16	10	58.82	6	46.15	
6	Type of housing						>0.99
	Terraced/Tiled	15	9	52.94	6	46.15	
	Thatched/Asbestos/Tinned	15	8	47.06	7	53.85	

Table-16 reveals that there is no association between any socio demographic variables with utilization of healthcare services by the Men from tribal community in Jawadhi Hills.

Table-17: Association between selected Socio Demographic Variables, Morbidity Pattern and Utilization of Healthcare Services of Men from Tribal Community of Jawadhi Hills

S.No	Demographic Variables	No.	Utilization of Healthcare services						P value
			Fully Utilized		Partially Utilized		Not Utilized		
			No.	%	No.	%	No.	%	
1	Acute Illness	91	27	41.54	61	49.59	3	27.27	0.258
2	Chronic Illness	30	16	24.62	14	11.38	0	0.0	0.019*
3	Age in years								
	<50	150	45	69.23	99	80.49	6	54.55	0.060
	>50	49	20	30.77	24	19.51	5	45.45	
4	Education								
	No schooling	94	31	47.69	56	45.53	7	63.64	0.580
	Primary/High School	98	33	50.77	61	49.59	4	36.36	
	Higher Secondary/Degree	7	1	1.54	6	4.88	0	0.0	
5	Occupation								
	Not working	3	1	1.54	1	0.81	1	9.09	0.129
	Unskilled	192	64	98.46	118	95.93	10	90.91	
	Skilled	4	0	0.0	4	3.5	0	0.0	
6	Income in rupees								
	<5000	189	62	95.38	117	95.12	10	90.91	0.815
	>5000	10	3	4.62	6	4.88	1	9.09	
7	General Health Status								
	Healthy	148	38	58.46	104	84.55	6	54.55	<0.001*
	Unhealthy	51	27	41.54	19	15.45	5	45.45	
8	Type of housing								
	Terraced/Tiled	90	32	49.23	52	42.28	6	54.55	0.538
	Thatched/Asbestos/Tinned	109	33	50.77	71	57.72	5	45.45	

Table-17 reveals that there is a strong association between the selected socio demographic variables such as general health status, morbidity pattern and utilization of health care services.

CHAPTER-V DISCUSSION

In today's globalized and inter-connected world, India's population including those belonging to scheduled tribes (ST) is undergoing demographic, socio-economic and health transformation. According to the 2011 census, the tribal population in India was 104 million, constituting 8.6 per cent of country's population, up from 8.2 per cent in 2001 census. Belonging to 705 different ethnic groups, they are scattered across 30 States and Union Territories of India, and having diverse cultural and life practices. The tribal population primarily inhabits rural and remote areas and is among the most vulnerable and marginalized section of the society. Moreover, they lag behind all other social groups in various social, health and developmental indicators.

Narain (2019) stated that in 2011, 40.6% tribal people were below the poverty line and the proportion among the rest was 20.5%. In the health sector, the key indicators among tribes remain very poor. According to the National Family Health Survey 4 (NFHS-4) (2015-2016), the under-5 mortality among the tribal population was 57.2 per 1000 live births compared to 38.5 among others, and the Infant Mortality Rate (IMR) was 44.4 per 1000 live births. A child born to a ST family in India had 19% higher risk of dying in the neonatal period and 45% greater risk of dying in the post-neonatal period compared with other social classes.

The aim of the study was to assess the morbidity pattern, health seeking behaviour and utilization of health care services of the Men from tribal community. The study was designed to provide the first valid and reliable estimate of the details about the morbidity pattern, health seeking behaviour and utilization of health care services of the Men from tribal community. The study was done in the Tribal areas of Veerapanur and Kovilur panchayats of Jawadhi Hills. A total of 200 Men participated in the study. All of them fulfilled the inclusion criteria and gave their written informed consent to participate in the study. The study was conducted for a period of six weeks. Multistage cluster sampling method was chosen to select the participants for the study. The data was collected using a survey format prepared by the investigator. Physical examination and blood investigations for blood parameters were done after getting approval from IRB along with the informed consent by the Men belonging to tribal communities.

DEMOGRAPHIC VARIABLES

In the present study, the descriptive analysis of the demographic variables revealed that the mean age of Men participated in the study was 43.4 years. The majority 121(60.5%) of the population was between the age group of 40 to 59 years, which is the productive age group. Similar finding was seen in the study conducted by Sathiyarayanan et al., (2019) in Jawadhi Hills of Puthurnadu, Tirupattur District, 82.2% were in the age group of 31 to 50 years.

Education

Lack of formal education was found among the adults and inability to read and write is always expressed with shame and embarrassment. In the present study, it was found that majority 94(47%) of them were illiterate, 39(19.5%) had primary education, 60(30%) had done high schooling, 4(2%) had finished their higher secondary education and only 3(1.5%) were graduates. The Men from tribal community expressed their views that education was not accessible to them in their prime age. Due to poverty and lack of support from family members, they were not able to pursue education. Very few schools were available in their region. Reaching those schools demanded a dangerous journey by feet in the jungles and rough terrains. They also believed that continuing their ancestor's work in farming brought them livelihood. Few of them who had strived to complete higher secondary education, were not able to proceed further due to various constraints, for which they regret. Not going to school regularly, dropping out from school was commonly found in these Men. In this era of Science and Technology, these Men had found the need for education for their children. Similar finding was seen in the study conducted by Sathiyarayanan et al., (2019) in Jawadhi Hills of Puthurnadu, Tirupattur District, 82.2% were illiterates. The members of the community had realized the importance of education for their children and had started utilizing the education facility in their area.

Occupation

Though the primary occupation of the Men belonging to tribal community is farming, 186(93%) were unskilled labourers who were farmers, masons, bar benders, shepherds and coolies. Only 11(5.5%) were

skilled workers like post masters, field workers, drivers and cable operators, 2(1%) were unemployed and among the 200 Men studied, only one (0.5%) was a Professional and worked as a School Teacher in Forest Department School of Jawadhi Hills. Almost all of them inherited cultivable lands from their ancestors. Men who were able to find a job outside their village, managed to still cultivate and, Men who were illiterate had no other choice than farming and livestock breeding.

Marital Status

Marital status also influences the health status of Men. Among the 200 Men from the tribal community, 193(96.5%) were married and only 7(3.5%) were single. According to the 2011 Census, the married population constitutes 44.7% of the total Scheduled Tribe's population (Census, 2011).

Type of Housing

As far as the housing of Men from tribal community is concerned, 83(41.5%) lived in terraced house. Most of them were built by the Government under the Indira Awas Yojana (IAY) and Pradhan Mantri Awas Yojana (PMAY). Majority 79(39.5%) lived in Asbestos roofed house, 10(5%) lived in Tinned roof house, 7(3.5%) lived in Tiled roof house and 21(10.5%) lived in Thatched roof house. According to the 2011 Census, about 38 million households had concrete roof on their house, nearly 63 million had tiled roof and another 53 million had 'Grass' thatch, etc, as the material for the roof (Census 2011).

Migration

Though agriculture is the backbone of the Indian subcontinent, traditional farming practices are at a verge of becoming extinct. Lack of sufficient rainfall due to climatic/seasonal changes, lack of sufficient manual labour and rapid urbanization leads to people migrating to far flung places in search of a livelihood. Among the 200 Men from tribal community, 77(38.5%) were migrant labourers and 123(61.5%) were non-migrant labourers. It is estimated that, in the last decade, about 3.5 million tribal people had left agriculture and agriculture-related activities to enter the informal labour market. Displacement and enforced migration have also led to an increasing number of Scheduled Tribes working as contractual labourers in the construction industry and domestic work in major cities. Currently, one of every two tribal households relied on manual labour for survival (Press Information Bureau 2018)

General Health Status

The self awareness of health is the key indicator for the overall health status of the community. Among the 200 Men from tribal community, 149(74.5%) considered themselves to be healthy, whereas 51(25.5%) considered themselves to be unhealthy. The most common diseases seen among them were respiratory tract infections and diarrheal disorders. Similar findings was found in a study conducted by Bala et al., (2009) stated that every year 21% of children suffer with at least two bouts of diarrhoea and 22% suffer from at least two attacks of respiratory infections in their lifetime. Tribal population accounts for 25% of all malaria cases occurring in India. Intestinal Helminthiasis is widely prevalent among tribal children (up to 50% in Orissa and 75% in MP). Skin infections such as tinea and scabies are seen among tribals due to poor personal hygiene. Sexually transmitted diseases are relatively more common (7.2% prevalence of syphilis among Kolli hills tribals of Tamil Nadu). The prevalence of tuberculosis is high, especially in Orissa. Sick cell trait prevalence varies from 0.5% to 45%, disease prevalence is around 10%. It is mostly seen among the tribals of central and southern India, not reported in North-East.

Dietary Pattern

Food intake was considered to be more quantitative than considering the quality or the nutritional value of the same. Among the 200 Men from tribal community of Jawadhi Hills, 199(99.5%) of them were Non-vegetarians and only one (0.5%) was a Vegetarian, of them 57(28.5%) consumed just 2 meals a day,

whereas 2(1%) Men consumed only one meal per day. Out of 200 Men 35(17.5%) Men had a sedentary lifestyle, 80(40%) worked moderately and 85(42.5%) performed a heavy manual labour which was similar in a study conducted by Qamra et al., (2009) on the food consumption pattern of the Bhil tribe of the Dhar district of Madhya Pradesh also noted that food was eaten only twice a day normally by most of them.

Substance Abuse

Poverty and unhealthy lifestyle leads to many unhealthy habits, which leads to fatal situations of the human life. Substance abuse is predominantly seen among the Men from tribal communities of Jawadhi Hills, where 172(86%) were into some form of addiction, among them 138(80.2%) smoked tobacco, 26(15.1%) consumed Paan masala, 1(0.5%) consumed Ganja and 150(87.2%) consumed alcohol.

Among the Men who smoked tobacco, 44(31.85%) had smoked for more than 20 years, 117(84.7%) had smoked at least 1 packet a day. Among the Men who consumed Paan masala, 14(56%) had consumed for a period of 1-5 years. Among the 200 Men, 50(25%) Men never had the habit of alcohol consumption and 150(75%) Men had the habit of alcohol consumption. Out of 150 Men who consumed alcohol, 55(36.6%) had consumed for 6-10 years and 22(14.6%) had consumed for more than 20 years. Chaturvedi et al., (2016) conducted a study on substance abuse among 3421 people belonging to the tribal population in the North-East India found that 942 Men smoked tobacco, 885 Men consumed alcohol and 191 Men consumed opium (Ganja), in which 551 Men consumed tobacco and alcohol, 150 Men consumed tobacco and opium, 93 Men consumed alcohol and opium and 79 Men consumed tobacco, alcohol and opium.

MORBIDITY PATTERN

The first objective of the study was to assess the existing morbidity pattern among the Men from the tribal community of Jawadhi Hills

According to WHO (1948), Health is a state of physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity. Men belonging to tribal community of Jawadhi Hills have strong and distinctive cultural beliefs related to health and illness. The cultural, social and personal factors that influence the morbidity in the population are poor hygiene, unclean environment and self, improper lifestyle, prejudices about health care and vaccination and also poor knowledge on health. So it was considered to study the pattern of such illness prevalent in this group. The morbidity pattern of the Men belonging to tribal community was assessed using a structured survey format and questionnaire comprising of details like acute and chronic illness and the details of the illness. The physical status was assessed using a health assessment format and a biophysical assessment format. Self-reported illnesses of the Men belonging to tribal community are presented in this chapter.

Family History of Illness

Among the 200 Men from tribal communities of Jawadhi Hills, 10(5.0%) had family history of diabetes mellitus, 32(16.0%) had hypertension, one (0.5%) had bronchial asthma, one (0.5%) had cardiac illness, 4(2.0%) had cancer and 16(8.0%) had family history of other illnesses like seizure disorder and tuberculosis. A study conducted by Radhakrishnan et al., (2015) among 535 people from 25 tribal villages of Yercaud Hills in Salem District of Tamilnadu, stated that 124 Men had family history of hypertension.

Acute Illnesses

Acute illnesses were found in 91(45.5%) of them, among which 4(2%) were acutely ill while on migration, of those who had acute illness 52(53.6%) had URI, 19(19.5%) had headache and 24(24.7%) had fever.

Chronic Illness

Chronic illnesses were found in 30(15%) Men, among them 20(28.9%) had hypertension, 17(24.6%) had myalgia, 7(10.1%) had gastritis, 5(7.2%) had CVA, 4(5.7%) had heart disease, 3(4.3%) had bronchial asthma, 3(4.3%) had tuberculosis and 2(2.8%) had diabetes mellitus. A study conducted in a tribal population in Pudur Nadu in Tirupattur District by Sathiyarayanan et al., (2019) found that overall prevalence of hypertension was 16.7% and diabetes was 3.8%.

Findings of Physical Assessment

The investigator carried out physical examination on all 200 Men and they cooperated well. On assessment of skin, 18(9%) had skin lesions. Vision defects were seen in 41(20.5%) Men. Oral examination revealed that 119(59.5%) had dental caries, 157(78.5%) had flurosis. Among the Men examined, 15(7.5%) had wheezing and Musculoskeletal examination showed 13(6.5%) of them having some form of physical defect which made them dependent for their mobility. Divakar et al., (2012) conducted a study in 18 tribal hamlets of Gundlupet region of Mysore in Karnataka and found that 47.52% suffered from one or other type of illness and 27.24% had more than one illness in the last 12 months of their study, 14.68% had nutritional disorders, 12.7% had skin infections 12.5% had diarrhoeal disorders and 10.9% had dental problems.

Obesity

Obesity was found in 24(12%) Men, among them 11(45.8%) belonged to the age group of 30 to 40 years, 21(10.5%) were in the overweight category and 44(22%) were in the overweight category, among them 16(36.3%) belonged to the age group of 51-59 years. A study conducted in a tribal population in Pudur Nadu in Tirupattur District by Sathiyarayanan et al., (2019) found that 18.9% were underweight, 8.8% were overweight and obese.

Hypertension

Normal Blood Pressure was found in 117(58.5%) Men, 36(18%) had Pre-Hypertension, 28(14%) had Stage-1 Hypertension and 19(9.5%) had Stage-2 Hypertension. There was a significant relation between Men having high blood pressure and alcohol intake. 29 Men with history of alcohol intake for not less than 5 years had high blood pressure, among them 3(10.3%) Men had Hypertension Crisis (Systole \geq 180 mmHg) and 26(89.6%) had Stage-2 Hypertension (Systole \geq 140 mmHg).

Similar finding was seen in a study conducted on a tribal population in Pudur Nadu in Tirupattur District by Sathiyarayanan et al., (2019), revealed that 10.2% had Stage-1 hypertension, 6.5% had Stage-2 hypertension and the overall prevalence of Pre-hypertension was 34.9%. The Systolic Blood Pressure (SBP) \geq 140 mmHg was seen in 8.4% people and SBP \geq 160 mmHg was seen in 4.8% people of that region. It was also found that people who smoked, had diabetes (1.9%) and hypertension (19.4%). Likewise people who were obese also had diabetes (6%) and hypertension (23.8%).

Diabetes

Random Blood Glucose (RBS) was found to be in the normal range for 166(83%) Men, 3(1.5%) had hypoglycaemia, 21(10.5%) were pre-diabetic and 10(5%) were hyperglycaemic. Sathiyarayanan et al., (2019) found that 3.8% were diabetic and 9.3% were pre-diabetic in a tribal population of Pudur Nadu in Tirupattur District of Tamilnadu.

Anemia

Mild anaemia was seen among 82(41%) Men from tribal community, 38(19%) had moderate anaemia and 6(3%) had severe anaemia.

Based on the findings 57(28.5%) Men were referred to the nearest health facility i.e. Veerapanur Clinic and PHC in Jamunamarathur. The reasons for referral were high blood pressure, high blood sugars, chest

pain, fever, thyroid swelling, low blood sugars and skin infection, among which only 3(5.2%) visited the health facility in Veerapanur Clinic till the end of data collection period. The list of participants who did not attend the health facility was handed over to the Community Health Nurses and the Health Workers to follow them for further treatment.

UTILIZATION OF HEALTH CARE SERVICES

The second objective was to the utilization of health care services by the Men from tribal community Health care services had been fully utilized by 65(32.6%) Men, 123(61.8%) had partially utilized health care services and 11(5.5%) had not utilized health care services neither from government nor private facilities. Traditional and Native treatment were utilized by 8(26.6%) Men. They sought traditional healers and native medicine centres for problems like CVA (50%), Musculoskeletal Disorders (37.5%) and Skin infections (12.5%). They believed that Traditional treatment like Pigeon blood meal and other traditionally prepared herbal decoctions were effective in treating chronic illnesses like CVA. Most of them preferred taking this treatment from a place called Palamaner in Chittoor District of Andhra Pradesh. Nearly 40.5% preferred Government health facility due to financial constraints, 28% expressed that accessibility to Government health facility was better than other health facilities, 31% told that Government health facilities provided better treatment, so they preferred Government health facility.

The 52nd round of the National Sample Survey Organization (NSSO, 1995) showed that only 20% of the tribal population had availed Government health services. The ICMR study showed that only 11% of the tribal population with morbidity had availed Government health services in the past. The Tribal Health Initiatives by the Tamil Nadu Health Systems Project (TNHSP) mentioned that about 42% of the male tribal population were benefitted by their initiatives to improve their health status, 46% of the tribal population had availed the Government implemented mobile outreach health care services through TNHSP (“Documentation and Dissemination of Best Practice” n.d.)

HEALTH SEEKING BEHAVIOUR

The third objective was to determine the health seeking behaviour of Men from tribal community of Jawadhi Hills

Only 3(4.3%) among the 30 Men did not take treatment for chronic illness. As far as the regularity of treatment is concerned, 42(63.6%) took treatment regularly and 24(36.3%) took treatment irregularly. Nearly half of them, 35(53%) took treatment from PHC, 14(21.2%) private health facility, 8(12.1%) took native treatment, 5(7.5%) from higher Government health facility, like District Hospitals and only one (1.5%) took Over the Counter (OTC) medications. For acute illnesses, 25 Men sought OTC medications, 12(48%) for URI, 4(16%) for fever, 4(16%) for headache, 2(8%) for musculoskeletal problems, 2(8%) for gastritis and one (4%) for diarrhoea. Raushan et al., (2018) conducted a cross-sectional study to assess the morbidity and treatment seeking behaviour among Scheduled Tribes in India stated that 64% had sought the private clinics and hospitals for health care and 27% had sought Government health facilities for health care.

The fourth objective was to find the association between their morbidity pattern and selected demographic variables

In the present study, age had strong association ($P < 0.001$) with the presence of chronic illness in the Men living in tribal community of Jawadhi Hills. It was also found that education had strong association ($P = 0.007$) with the duration of chronic illness. There was no association between any other socio

demographic variables and the presence of acute illness in them. Occupation ($P=0.019$) and monthly income ($P=0.012$) had strong association with the duration of acute illness. There was no association between socio demographic variables and place of treatment for acute illness in them. There was no other significant association with type of housing, marital status and migration for work. Factors like primary education, living conditions and knowledge related to preventing illness could play a vital role in preventing such illnesses. Unhealthy lifestyle like substance abuse also contributed to their ill health. The Men from tribal community had a feeling that there was no need for medical aid for minor ailments like a common cold or a cough, as it subsides by itself. Home remedies practised by their ancestors are still practised and sometimes ignored by them.

Kumar et al., (2017) conducted a study on Hypertension in Tribal adults in Mandla District of Madhya Pradesh stated that age had strong association ($P<0.001$) with hypertension and alcohol consumption had strong association ($P=0.0050$) with hypertension. The association of Hypertension with BMI and tobacco consumption was not significant in the study participants.

The fifth objective was to find the association between morbidity pattern, utilization of healthcare services and health seeking behaviour

The present study revealed that there was no association between any socio demographic variables with utilization of healthcare services by the Men of tribal community. Chronic illness and subjective opinion about general health status had a strong association ($P<0.001$) between the selected socio demographic variables, morbidity pattern and utilization of health care services. Rushender et al (2017) conducted a study on effective utilization of healthcare services provided by PHCs and CHCs in rural Tamilnadu stated that only 45.40% and 58.80% of the patient's households with acute and chronic illness had utilized the services at PHC. It was also observed that 70% of the respondents preferred the PHC while 30% preferred other health care sources for health care. They also found that education and distance to health facility had strong association ($P 0.001$) with utilization of healthcare services for chronic illness.

Bhattarai et al., (2015) conducted a study on health seeking behaviour and utilization of healthcare services in Ilam district of Nepal found that one fifth of the populations were found to be seeking traditional healers' service and 80% of them whom had utilized modern treatment system were relying on private treatment facility for treatment of their sickness. People felt modern health services were costly. Similarly people suffering from chronic illness, having health facility more than 30 minutes to reach, and using stretcher or walking as means of transportation were using government health centres more compared to private services. Distance to nearest health facility, mode of transportation and chronic disease status were found to be associated with the highest health centre visited.

Pradhan (2013) conducted a study among the tribal population of Sundargarh district of Odisha stated that 34.2% utilized Government health facility, 29.5% went to quacks for medical aid, 13.7% went to the Village medicine Men and only 4.1% took treatment from private health facility and 55% of them were satisfied with the existing medical facilities and services. The earning member in the family was preferred to be treated for illness by 18%. And 21 out of 50 illiterate people went to a quack and 3 out of 18 illiterate people went to a Government Doctor.

The sixth objective was to identify the factors influencing the health care utilization by the Men among tribal community

The villages in Jawadhi Hills are situated in remote, rough geographical terrain, accessibility to healthcare is an issue. Due to lack of public transportation, Men found it difficult to find a proper healthcare facility. Those villages, which are in a close radius to the Primary Health Centre had better access, thus healthcare

utilization was far better among those Men compared to others. Most of the villages, which were surveyed by the investigator, took almost one hour to reach the health facility. Most of them made a difficult journey by foot through the jungles to access health care, whereas many used motorbikes for transportation. Financial constraint was the main reason for choosing Government health facility and 91% among those in need had utilized them. Similar findings are seen in the study conducted by Kumar et al., (2017) among the tribal communities in the Mandla district of Madhya Pradesh on Hypertension, stated that costs and accessibility were the important factors on sources of treatment. High costs were reported concerning the purchase of medicines for severe illnesses and emergency care at the hospital level. Rahman et al., (2012) found that transport costs, travel time, and distances formed the important barriers to healthcare-seeking for tribal members who had to cover long distances and rugged terrain without regular transport opportunities to reach allopathic healthcare providers which are usually located in the urban or semi-urban areas of the hill districts. Hence the investigator found out the various factors like financial constraints, lack of transportation and health beliefs hindering the utilization of healthcare services among Men from tribal community.

CONCLUSION

The present study findings gave us an insight into the demographic details, lifestyle of the Men from Tribal Community, dietary pattern, health deviant behaviour viz smoking, alcohol consumption, chewing and snuffing, their existing morbidity pattern, utilization of health care services and the health seeking behaviour. The common health problems and the chronic diseases were mainly due to their poor knowledge and lack of awareness towards healthy lifestyle and also inaccessibility to healthcare facility. This study also revealed the need for intense health care, creation of health awareness and education on the prevention of chronic and acute illnesses and also the need for providing and strengthening the healthcare infrastructure within reach.

CHAPTER-VI

SUMMARY AND RECOMMENDATIONS

This chapter gives a brief account on the outcome of the study, implications for nursing practice, recommendations, suggestions for further research and conclusion. A cross sectional study design was used to determine the morbidity pattern, utilization of healthcare services and health seeking behaviour of the Men from tribal community. The objectives of the study were to assess the existing morbidity pattern among the men belonging to the tribal community, to measure the utilization of health care services by the Men from tribal community, to determine the health seeking behaviour of the men from tribal community, to find the association between their morbidity pattern and selected demographic variables of the Men from tribal community and to find the association between morbidity pattern, utilization of healthcare services and health seeking behaviour of Men from tribal community, to identify the factors influencing the health care utilization by the men among tribal community

The study was conducted for a period of 6 weeks. The samples were chosen by multistage cluster sampling method which consisted of 200 men from the panchayats of Veerapanur and Kovilur in the Jawadhu Hills Block of Tiruvannamalai District of Tamilnadu. A Questionnaire was used to interview the men to collect information regarding socio demographic data and a structured physical assessment with biophysical profile format was used to check the health status of the men. The conceptual framework used in this study is based on the Andersen and Newman Framework of Health Services Utilization (1995).

Descriptive statistics such as frequency, percentages, mean and inferential statistics like chi square were used to analyse and interpret the findings.

Major findings of the study

- Majority of the study population, 121(60.5%) belonged to the age group of 40-59 years in their late adulthood with overall mean age being 43.42 and SD being 8.54
- Almost half of the study population, 94(47%) had no schooling and only 3(1.5%) were graduates.
- Majority of them, 186(93%) were unskilled workers viz farmers, masons, barbenders, shepherds, coolies and sanitary workers and only 2(1%) were unemployed.
- More than half of them, 123(61.5%) were working outside the Jawadhi Hills.
- Half of them, 106(53%) earned a monthly income of Rs. 1050 and 4(2%) had no income.
- Majority of them, 193(96.5%) were married.
- Among them 83(41.5%) lived in terraced house and 21(10.5%) lived in thatched roof house.
- Most of them, 199(99.5%) were non-vegetarians and 57(28.5%) ate only two meals a day and only 2(1%) ate only one meal a day.
- As far as physical activity is concerned, 85(42.5%) were into heavy manual labour and 80(40%) worked moderately.
- Few of them, 64(32%) had family history of illnesses among which, had 32(50%) hypertension, 10(15.6%) had diabetes mellitus, 4(6.25%) had cancer and 4(6.25%) had tuberculosis.

Substance abuse

- A majority of them, 172(86%) had substance abuse such as tobacco, paan masala, ganja and alcohol.
- Alcohol was consumed by 150(87.2%) men, among them 55(36.6%) consumed for 6-10 years and 49(32.6%) consumed for 1-5 years.
- Tobacco was used by 138(80.2%) men, where 117(84.7%) smoked at least one pack a day and 16(11.5%) smoked half a pack a day, among the smokers, 44(31.8%) smoked for more than 20 years and 33(23.9%) smoked for 1-5 years.
- Paan Masala was consumed by 26(15.1%) men, 14(56%) of them consumed for 1-5 years.

Morbidity Pattern

- Majority of them 149(74.5%) perceived themselves healthy and 51(25.5%) perceived that they were unhealthy.
- Acute illness was seen in 91(45.5%) of them and 30(15%) had chronic illness and utilization of health services were better in them.
- Upper Respiratory Tract Infection (URI) was present in 52(53.6%), 24(24.7%) had fever and 19(19.5%) had headache.
- Among those with chronic illness, 20(28.9%) had Hypertension, 17(24.6%) had myalgia, 7(10.1%) had gastritis, 5(7.2%) had CVA, 4(5.7%) had heart disease, 3(4.3%) had bronchial asthma and 3(4.3%) had tuberculosis.

Physical Assessment

- On assessment of skin, 18(9%) had skin lesions and 2(1%) had pallor
- Vision defects were seen in 41(20.5%) men
- Oral examination revealed 119(59.5%) had dental carries and 157(78.5%) had flurosis
- 15 (7.5%) had wheeze
- Musculoskeletal examination showed 13(6.5%) were dependent for mobility

- Obesity was found in 24(12%) men. Among them 11(45.8%) belonged to the age group of 30-40 years. 21(10.5%) of them were in the overweight category and 44(22%) were in the underweight category. Among them 16(36.3%) belonged to the age group of 51-59 years
- Normal Blood Pressure was found in 117(58.5%) men, 36(18%) had pre-hypertension, 28(14%) had stage-1 hypertension and 19(9.5%) had stage-2 hypertension.
- Random blood glucose was found to be in the normal range for 166(83%) men, 3(1.5%) had hypoglycaemia, 21(10.5%) were pre-diabetic and 10(5%) were hyperglycaemic.
- Mild anaemia was seen among 82(41%), 38(19%) had moderate anaemia and 6(3%) had severe anaemia.

Health Seeking Behaviour

- Only 3(4.3%) among the 69 men did not take treatment for chronic illness.
- As far as regularity of treatment is concerned, 42(63.6%) took treatment regularly and 24(36.3%) took treatment irregularly.
- Half of them, 35(53%) took treatment from PHC, 14(21.2%) private health facility, 8(12.1%) took native treatment, 5(7.5%) from higher Govt health facility, like District Hospitals and only 1(1.5%) took Over the Counter (OTC) medications.

Utilization of Healthcare services

- Nearly 172(71%) visited doctor once a month and 47(23.5%) never visited a doctor once a month.
- Health care services were fully utilized by 65(32.6%) men, 123(61.8%) partially utilized health care services and 11(5.5%) never utilized health care services.
- Significant association was found between age and subjective opinion of general health status.
- Significant association was found between education and duration of chronic illness.
- Significant association was found between occupation and duration of acute illness.
- Significant association was found between monthly income and duration of acute illness.
- Significant association was found between selected socio demographic variables, morbidity pattern and utilization of health care services.

LIMITATIONS

1. Health problems were perceived and self-reported by individuals.
2. Investigator was not able to follow up all the participants who were referred whether they had sought a health care facility
3. Details of diseases were verbalized from one's memory and recall. Not everyone had health information document with them. Hence there can be chances for the information to be inaccurate.
4. Investigator was able to assess the health status of the participants only one time.
5. Investigator found that there were some individuals not available during the period of data collection due to migration for work.

NURSING IMPLICATIONS

This study brought an indepth understanding about the morbidity pattern, utilization of healthcare services and health seeking behaviour of the men from tribal community of Jawadhi Hills. Community health nurses have a major role in the delivery of health care for such population. Community health nurses can conduct special camps and regular health programs keeping in mind the different diseases and deficiencies

the tribal population is vulnerable to. Primordial prevention can be undertaken by doing regular health screening and health checkups. Health education programmes can be organized to create awareness on health, hygiene, healthy habits and harmful effects of substance use, environmental sanitation and life style modification. Community health nurses and the nursing students can be sensitized on the importance of caring for a vulnerable, special and needy population like the tribals.

IMPLICATIONS FOR NURSING PRACTICE

- The findings of the study will pave way for community health nurses to conduct special health camps, create awareness on the prevalent diseases and importance of prevention.
- The findings will help the community health nurses to be motivated to help the people belonging to tribal community to get all the services provided through government health schemes.
- Training can be given for identified volunteers, ASHA workers and youth on the care of minor ailments, first aid and also skills in giving health education which will sensitize them on the need for health care and the importance of good health seeking behaviour for healthy living.

IMPLICATIONS FOR NURSING EDUCATION

The study findings and the review of literature shows that tribal population is devoid of health services and nowhere considered as any special group of care in the health system.

- Nursing students can be motivated and taken to the tribal communities for field visit to be sensitized on the need for care of such vulnerable population.
- Nursing curriculum can include care of health problems associated with the tribal and geographically remote areas.
- Nursing students can be trained to be culturally competent to provide care to this vulnerable population.
- Projects and surveys can be conducted in the tribal hamlets to help students to learn the socio cultural issues and health infirmities faced by the tribal population.

IMPLICATIONS FOR NURSING RESEARCH

The study findings showed that there are many more areas that can be studied in the tribal population. This poses a great challenge for young nursing researchers to do qualitative and quantitative studies in aspects of education, social problems like gender discrimination, alcoholism, smoking, dietary habits, genetic disorders and other health problems of youngsters, adults and elderly

RECOMMENDATIONS

- Mobile clinics need to be conducted by various community health teams in all the villages of all panchayats, including those in difficult geographic terrain.
- Substance abuse services needs to be extended and widened to every village.
- Community volunteers can be sensitized, motivated and trained to identify illnesses, refer for further management of illness and if possible perform first aid in case of emergency.
- Community Health workers can collaborate with other voluntary health agencies and provide health services.

- Public private partnership model and community participation model can be utilized in delivery of health care services.
- Youngsters can be involved in health education programmes in creating awareness.

SUGGESTION FOR FURTHER STUDY

- Since hypertension and musculoskeletal problems were predominant among them, further studies can be done
- A study can be done on women to evaluate their morbidity pattern
- A comparative study can be done between the tribal and non-tribal men
- A study can be done to assess the effectiveness of public/private run health programmes in the tribal region

CONCLUSION

This study revealed the morbidity pattern, utilization of health care services and health seeking behaviour of men from tribal community in Jawadhi hills. Most of them had some form of illness for which health care was not sought appropriately. They were ignorant about the services available in the public as well as private health facilities. For many of them from remote villages, health care was inaccessible due to difficult geographic terrain. Public transportation was inadequate, so many of them had to make a treacherous journey through the jungles by foot. Due to financial constraints, they feared visiting a doctor for health problems. Community health nurses can strengthen the health services for this underprivileged population emphasizing on the promotional activities and offer health care services to prevent diseases.

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