

Study report
on
**Labour Conditions and Health among Tea
Plantation Workers of Kerala**
An Exploratory Study



Kerala Institute of Labour and Employment (KILE)

Government of Kerala



Labour Conditions and Health among Tea Plantation Workers of Kerala

An Exploratory Study

**KERALA INSTITUTE OF LABOUR AND EMPLOYMENT
GOVERNMENT OF KERALA
2022**



Copyright @ 2022
Government of Kerala
Thiruvananthapuram

Published by
Kerala Institute of Labour and Employment (KILE)
Thiruvananthapuram

Suggested citation

Kerala Institute of Labour and Employment (KILE), 2022. "Labour Conditions and Health among Tea Plantation Workers of Kerala: An Exploratory Study". Kerala Institute of Labour and Employment (KILE), Government of Kerala, Thiruvananthapuram.

Printed in Thiruvananthapuram

All rights reserved. Reproduction and dissemination of the material in this publication is authorized without any prior permission provided the source is fully acknowledged. The findings of this report do not imply the expression of any opinion whatsoever on the part of the Kerala Institute of Labour and Employment.

Kerala Institute of Labour and Employment (KILE)
4th floor, Thozhil Bhavan,
Vikas Bhavan.P.O, Thiruvananthapuram -695033.
E-mail: kiletvm@gmail.com
Ph: 0471 2309012, 2307742
Fax: 2308947

STUDY TEAM

Kerala Institute of Labour and Employment, Thiruvananthapuram

Research Officer:

Research Assistant:

Field Investigators

Data Entry Operators

Consultant: Dr G.K.Mini

Technical Advisory Committee

LIST OF CONTRIBUTORS

FORWARD

PREFACE

ACKNOWLEDGEMENT

EXECUTIVE SUMMARY

CONTENTS

Preface.....

Acknowledgements.....

Executive Summary

Contents

List of Tables

List of Figures

1. Introduction.....16

2. Labour Conditions and Health.....37

3. Perceptions and Attitudes: A Qualitative Exploration.....104

4. Discussions.....114

5. Policy recommendations128

References.....130

Appendices136

Appendix 1: Questionnaire

Appendix 2.A. In-depth interview schedule for tea plantation labourers

Appendix 2.B. In-depth interview schedule for trade union leaders

Appendix 2.C. In-depth interview schedule for policy makers, academicians, policy analysts and other state/national level experts in labour

Appendix 3. List of Field Workers

Appendix 4. List of tea plantations surveyed

LIST OF TABLES

Table No.	Table Title
1.1	Area under cultivation and production of Tea in Kerala
1.2	Tea production in Kerala-Production, consumption, export and auction price.
1.3	Average daily earnings of other agriculture workers' vs tea workers
1.4	Area Under Tea Cultivation
2.1	Education and gender distribution
2.2	Marital status of the respondents.
2.3	Number of members in the family
2.4	Monthly salary and gender
2.5	Job status and gender
2.6	Work experience of the respondents
2.7	Type of job and gender
2.8	Work routine in tea plantations
2.9	Workers responses to various questions on employment situations
2.10	Gender wise distribution of working positions
2.11	Gender wise distribution of place of work
2.12	Distribution of personal protectives by the plantation owner with gender wise distribution
2.13	Toilet facilities available in plantation
2.14	Drainage facility
2.15	Workers response to canteen facilities available in their plantations
2.16	Gender wise distribution of handling chemicals and pesticides
2.17	Personal protectives for handling chemicals and pesticides
2.18	Prevention of exposure to chemicals and pesticides
2.19	Wage and payment structure with gender distribution
2.20	Housing facilities -General details
2.21	Plantation home details
2.22	Amenities
2.23	Gender wise distribution of main modes of conveyance to workplace
2.24	Source of drinking water
2.25	Workers response on drinking water facility available
2.26	Details on attack by wild animals
2.27	Attack by wild animals based on age groups
2.28	Attack by wild animals based on gender
2.29	Details of debt situation of workers with gender distribution
2.30	Allowances/benefits/schemes received by the respondents with gender distribution
2.31	Trade unions, issues at workplace and grievance redressal mechanisms

	with gender distribution
2.32	Nutrient food intake by workers
2.33	Gender wise distribution of nutrient food intake
2.34	Evaluation of health condition by workers age wise
2.35	Injuries and accidents at workplace during the past year with gender wise distribution
2.36	Prevalence of diseases and treatment pattern among labourers
2.37	Work-related stress
2.38	Medical Facilities available in plantation /plantation hospital
2.39	Medical facilities available outside plantation
2.40	Facilities provided in crèches
2.41	Educational facilities in plantation

LIST OF FIGURES

Figure no	Figure name
1.1	Tea growing regions in India
2.1	Gender distribution of respondents
2.2	Age distribution of respondents
2.3	Educational status of respondents
2.4	Monthly salary of workers
2.5	Ration card details
2.6	Job status of workers
2.7	Type of job
2.8	Common working positions adopted by workers
2.9	Place of work of respondents
2.10	Toilet facility available in plantation
2.11	Canteen facility in plantation
2.12	Handle chemicals and pesticides
2.13	Personal protectives for handling chemicals and pesticides
2.14	Receive wages regularly
2.15	Own a house
2.16	Own land /property
2.17	Mode of conveyance to workplace
2.18	Recreational facility in plantation
2.19	Attack by wild animals in plantation
2.20	Salary and debt status of workers
2.21	Health insurance coverage
2.22	Health insurance coverage by gender
2.23	Satisfied with benefits and allowances
2.24	Trade union membership
2.25	Trade union membership by gender
2.26	General health routine
2.27	Type of exercise done
2.28	Health status of workers
2.29	Gender wise evaluation of health conditions
2.30	Physical discomfort
2.31	Physical discomfort-gender wise
2.32	Physical discomforts faced by workers in past one year
2.33	Physical discomfort-gender wise
2.34	Treatment done
2.35	Treatment seeking based on gender
2.36	Type of health facility treatment done
2.37	Recommended treatments
2.38	Disease condition cured
2.39	Prevalence and treatment of diseases among workers
2.40	Availability of hospital and free treatment facility in plantations.
2.41	Type of healthcare facility -Treatment seeking in presence and absence of plantation hospital

2.42	Treatment in private hospitals and reimbursement in external health facilities
2.43	Financial sources for medical expenses
2.44	Barriers in healthcare seeking
2.45	Barriers in seeking healthcare -category
2.46	Workers' evaluation of current healthcare system
2.47	Creche facility available in plantation

1. INTRODUCTION

1.1. BACKGROUND

Tea, the most popular beverage next to water is consumed by two-thirds of the world's population. The history of tea spreads across multiple cultures over the span of thousands of years. Discovered in China and rooted deeply within the substrata of Chinese commerce and culture, there is a long history of the transmission of tea drinking culture and trade to countries around the world. Tea which is made from the processed leaf of *Camellia sinensis* is now consumed worldwide as green, black, or Oolong tea. [Indian Tea Association].

More than 36 countries spread over all the continents except North America with a wide range of agro-climatic conditions between 42'N (Georgia) and 35'S latitude (Argentina) grow tea. The global tea production and consumption during 2019 was 6150 million kg and around 5859 million kg respectively. Major tea producing and exporting countries are China, India, Kenya, and Sri Lanka and they account for 80% of world production and 74% of world tea exports. [Tea Board of India- 66th Annual Report 2019-2020]. China ranks first in tea production in the world contributing to 44.7 percent of the total world production [International Tea Committee]

The birth of the Indian tea industry was marked by the discovery of an indigenous tea plant in Assam in 1823 by Robert Bruce. Thus, the credit for creating India's vast tea empire goes to the British, who discovered tea in India and with their sustained effort of tea production, started cultivating and consuming it in enormous quantities from the early 1800s. Even though to compete with the Chinese monopoly on the tea trade, the introduction of tea production and consumption by the British led to the birth of

the Indian tea industry. The second half of the 19th century witnessed a phenomenal expansion in the Indian tea industry. By the year 1900, an area of 211,443 hectares had been put to cultivation with the produce of 89.5 million kilograms leading to the gradual domination of Indian tea in the World market. [Indian Tea Association]

Indian Tea Scenario

Current trends

The tea industry in India is the second-largest employer in the organized sector after the Indian railways. It provides direct employment of 1.27 million workers out of which 50 per cent are women. As per the 66th Annual Report, Tea Board of India (2019-2020), tea is cultivated in 15 states of which Assam, West Bengal, Tamil Nadu and Kerala are the major tea growing states. They account for 98% of the total production in the country. World's finest teas like Darjeeling, Assam, Sikkim, Nilgiris and Kangra which are famous for their delicate flavour, strength and brightness are produced in India. With diverse agro-climatic conditions, India produces medley of teas suited to different tastes and preferences of consumers. The characteristics of each region are distinct, which sets them apart from one another in many different ways.

Of the total production, India accounts for three fourth domestic consumption of tea. The growing demand for tea for its aroma and quality is majorly driving the Indian tea industry. Tea found in India is categorized into 3 types namely Assam tea (highest cultivation), Darjeeling tea (Superior quality tea) and Nilgiris tea (subtle and gentle flavours). [Indian Chamber of Commerce]

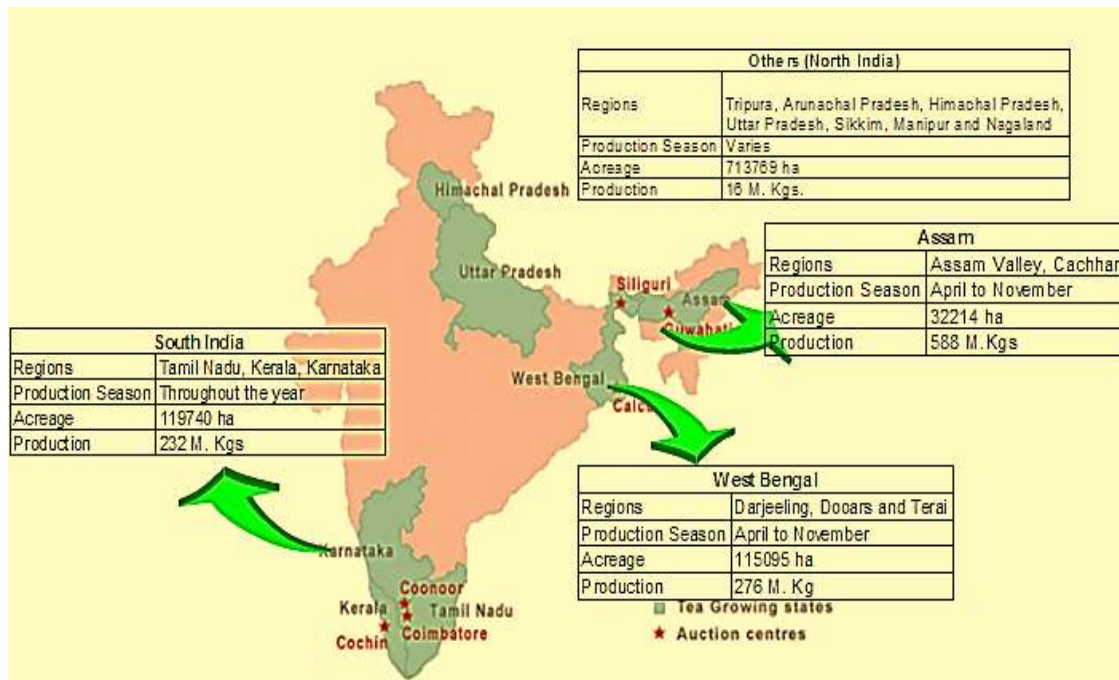


Figure 1.1-Tea growing regions in India. Adapted from -Indian Tea Association –'About Tea'

India is the second largest producer of tea in the world. Indian tea achieved its highest ever tea production during 2019-20 at 1360.81 million Kg with an increase of 10.77 million Kg over 2018-19 due to better climatic conditions that prevailed in major tea growing areas in North India. Tea production has recorded an increase of 40.8 per cent over the past ten years. The domestic export in 2019-20 was placed at 240.02 million kg which was lower by 14.48 million kg compared to 2018- 19 while the unit value increased from ₹216.38 per kg in 2018-19 to ₹226.14 per kg [Tea Board of India]. The total realisation of tea export in 2019-20 was ₹5427.78 crore which is lower by 1.3 per cent over 2018-19. The first five months of 2020 showed a decline in total quantity exported and in value terms. [Government of Kerala, 2020]

Even though per capita consumption of tea is lower in India as compared to other countries, due to its population the tea consumption in India accounts for 19% of the global consumption. Almost 81% of the total production is consumed within the country. This distinct position is in sharp contrast with other tea producing countries, particularly Kenya and Sri Lanka which hardly have any strong domestic demand and hence they are able to export most of their production. India consumes around 21 per cent of total world consumption which is around 80 per cent of tea produced in India. [Tea Board of India]

Kerala tea scenario

History

Tea cultivation in Kerala started in 1832 and it rose up to a commercial scale during the 1840s. The earliest record of commercial planting in Kerala was in Peerumedu during 1875. The development of Kannan Devan Hills by James Finlay and Co. in 1878 with tea as an exclusive crop is a landmark in the history of tea planting in this part of the country. Soon, tea cultivation caught up in Wayanad and by 1889 planting was taken up on a large scale in the district. Later the tea cultivation expanded to a vast area of the state. [United Planters Association of Southern India Tea Research Foundation]

More than a million people are employed in the tea plantations, including immigrants and their descendants. Ancestors of the tea plantation workers in Kerala's tea plantations were not natives of the state, but migrants from Tamil Nadu and other adjacent states. A majority of the workers in the plantation sector are women. This is because these plantations have a long history of being associated with colonialism.

During the colonial period, the plantations were located in isolated places and were sparsely populated. As a result, families were employed rather than individuals, and women were incorporated into the work. Kerala has the largest percentage of female employees 61.51 per cent in tea plantations, followed by 57.3 per cent in Tamil Nadu and 57.1 per cent in West Bengal. [UPASI, 2019]

Legislations

The Plantation Labour Act, 1951 of India has been considered as one of the most comprehensive pieces of labour welfare legislations. It contains several provisions for the uplift of plantation workers related to housing conditions, health and hygiene, education and social welfare. It, therefore, had a great deal of potential for improving the working and living conditions of plantation labour. The Act envisages the employers to provide the workers with housing, medical facilities, sickness and maternity benefits and other forms of social security measures. There were provisions for the educational facility for the worker's children, drinking water, conservancy, canteens, crèches and recreational facilities for the benefit of the tea plantation workers and their families in and around the workplaces in the tea estates. This act is implemented through the concerned State Governments for which separate rules have been framed by them. In 2016, the Government of Kerala intended to amend the Plantation Labour Rules of 1959 to Kerala Plantation Labour (Amendment) Rules 2016. This amendment paved the way for restrictions on employing women and adolescent workers in hazardous occupations and hazardous chemicals in the plantations. This amendment also directed to the appointment of a controller of chemicals in the plantations. [Plantations Labour Act 1951&Kerala Plantation Labour (Amendment) Rules 2016]

Despite being considered an organized sector with all such legislative measures in existence, several reports over the years have suggested that tea plantation labourers are still marginalised and vulnerable. Their problems of low wages and poor working conditions remain unaddressed and overlooked. The history of plantation labour in India and elsewhere in the world, during colonial times, has been marked by a range of exploitative practices including coercion, bonded labour and slavery. Although this situation has considerably changed in many parts of the world, many studies reports that the situation of tea plantation labourers in India has not changed significantly from the deeply entrenched colonial structure. According to the Plantation Labour Act, the employers are responsible to ensure that the workers receive benefits related to housing and social welfare in-kind. Several reports suggest that despite the stipulation to provide the workers with basic services over and above the wages, most estates do not provide even the basic amenities to the workers and even when services are provided, they are mostly namesake with no regard for the quality of lives of the workers. This has in turn legitimized exploitative labour relations and lower wages for plantation labourers, as their lives are almost entirely controlled by the plantations, as reported from many parts of the country. The need to cut down production costs has led to a rise in contractual labour, aligning with the general pattern of change in the labour situation of the country leading to informalization, declining unionization and weakening collective bargaining power. The apparent crisis in the tea sector has led to the plantation owners even demanding for lowering of wages and the removal of the social welfare provisions in the Plantation Labour Act of 1951. [Bhowmik,2003; Kumar,2018; Lama,2018; Rajbangshi et al.,2020]

India being one of the most labour-intensive countries of the world, has finally taken a leap of faith and codified existing 29 national-level labour laws into main 4 codes. This is supposed to be a bold and progressive move given that several labour laws were almost 70-80 years old and enacted largely in the industrial era. The Four Labour codes will be The Code on Wages, 2019, The Industrial Relations Code, 2020, The Occupational Safety, Health and Working Conditions Code, 2020 and The Code on Social Security, 2020. Thus, Plantation Labour Act, 1951 have been subsumed into Labour Code on Occupational, Safety, Health and Working Conditions, 2020. The Code on Social Security 2020 envisages plantation owners to enroll its workers as member of ESIC (Employees State Insurance Corporation). The ESIC provides multiple benefits like sickness benefits, unemployment allowance, maternity benefit etc. besides medical benefits to its members. These labour codes once in action is expected to bring a change in the lives of plantation workers in the days ahead. [Union Ministry of labour and employment, 2020]

Kerala tea sector -Current trends

Plantation crops are high value commercial crops of great economic importance and play a vital role in the Indian economy, in view of their export and employment generation potential and capacity for poverty alleviation, particularly in the rural sector. With more than a million permanent workers, the tea plantation industry is the largest in the formal private sector in the country. Each of the four plantation crops of South India has its distinct characteristics and economic problems. Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 7.12 lakh hectares, accounting for 27.5 per cent of the total cropped area in the State. Kerala's share in the national

production of rubber is 74.9 per cent, cardamom 89.7 per cent, coffee 21.87 per cent, and tea 4.35 per cent in the year 2019-20. [Govt of Kerala, 2019-20]

The tea plantations in the state have been a major player in the plantation sector, offering livelihood to a significant number of workers. It has been helping income generation, foreign exchange earnings and employment generation. The tea cultivation in Kerala State is mainly confined to Idukki, Wayanad, Kollam, Thiruvananthapuram, Trissur, Malappuram and Palakkad districts. In Kerala, a substantial part of tea producing areas are located in Idukki District. Out of the aforesaid districts, Idukki and Wayanad districts shares almost 85 to 90% of the total tea production in Kerala. Congenial climate and the suitability of soil are the main reasons for such concentration.

SL NO	DISTRICT	Area (Ha)	Production(Tonnes)
1	Thiruvananthapuram	913	50
2	Kollam	574	100
3	Idukki	25508	43310
4	Thrissur	530	1770
5	Palakkad	788	2170
6	Wayanad	7558	11860
	TOTAL	35871	59260

Table 1.1-Area under cultivation and production of Tea in Kerala (2019-20)

Source: - Agricultural statistics 2019-20

According to the agricultural statistics report of Kerala (2019-20), tea is cultivated in 35871 hectares in the state, the greatest share of area under cultivation being in

Idukki district (71.11%; 25,508 hectares). This shows an 18 % increase from the 2015-16 statistics, when the overall area under cultivation was only 30,205 hectares. Despite this sharp rise in area under cultivation, this is still slightly lesser than the area in 2001-02 period (36899 hectares) The tea production has also shown a ten percent decline during this period (66.09 million kilograms in 2001-02 to 59.26 million kilograms in 2019-20) [Table 1]

According to the Economic Review of Kerala State Planning Board (2020), Kerala accounted for 4.35 per cent of the total domestic production of tea in the country in 2019-20. The area under tea declined by 1.65 per cent in 2019-20 to 35871 hectares compared to 2018-19. The production of tea in the State declined by 2.46 per cent at 59.26 million kg compared to 2018-2019. According to the 2018 baseline survey by the Tea Board of India, there are about 93 big tea growers and 8497 small tea growers in Kerala making a total of 8590 tea growers all over the state.

Table 1.2-Tea production in Kerala-Production, consumption, export and auction price

Year	Production			Consumption (In M kg)	Exports		Cochin Auction Price (₹/kg)
	India (In M kg)	Kerala (in M kg)	% of Kerala		India (In M kg)	Percentage of Production	
2010-11	966.4	66.8	6.91	NA	222	22.97	67.69
2011-12	1115.7	61.5	5.51	NA	215.4	19.31	70.03
2012-13	1126.3	63.0	5.59	NA	201.1	17.85	87.55
2013-14	1200.0	62.8	5.23	NA	219.1	18.26	99.17
2014-15	1207.3	65.17	5.4	932	201.2	16.66	93.35
2015-16	1191.1	57.89	4.87	951	217.7	18.27	81.67
2016-17	1250.49	61.51	4.97	973	227.63	18.2	NA
2017-18	1325.05	62.23	4.69	1066	256.57	19.36	NA
2018-19	1350.04	60.76	4.5	1090	254.5	18.85	NA
2019-20	1360.81	59.26	4.35	1116	240.02	17.63	NA

NA: not available, M kg=million kilogram, Source: Association of Planters of Kerala, Tea Board. Source: Economic Review 2020, Kerala State Planning Board

It is seen from table 2; that tea production in Kerala in the year 2010-11 was 966.4 million Kg in India while it was 66.8 million Kg in Kerala which is about 7 per cent of the all India production. But in 2015-16 the all India production of tea was 1191.10 million Kg with the Kerala's contribution of 57.89 million Kg. This is about 4.9 per cent of the total tea production in India. It is revealed that the contribution of Kerala on the total tea production has been continuously decreasing over a period of 20 years from 2010 to 2020 from 7 per cent to 4.3 per cent. Like this we can see a fluctuating trend of price realisation of tea in the auction conducted at Cochin. In 2013-14 it has been recorded a price realisation rate of Rs.99.17 per Kg whereas the trend has been declined to Rs.93.35 per Kg during 2014-15 and Rs.81.67 per Kg during 2015-16. Both the trend of production as well as price realisation of tea are not in favour of the industry in Kerala.[Economic Review 2020, Kerala State Planning Board]

Employment

One of the advantages of plantations is that it provides employment opportunities to a large number of people sustainably. With more than a million permanent workers, the tea plantation industry is the largest in the formal private sector in the country. Among the plantations, tea is the most labour intensive. Tea plantation has the highest labour intensity with 2.28 persons employed per day per hectare, when compared to 0.30 persons per day per hectare in coffee plantation. As per the Indian Labour Bureau Statistics of 2011, Kerala employed close to 40,000 labourers in approximately over 85 tea plantations. Now it is estimated that there are about 10 lakhs persons employed in tea plantations in India. Out of these, 70,000 persons are

employed in Kerala. Idukki district ranks first with 50,000 employees followed by 10,000 employees in Wayanad tea plantations.

Major areas of concern in Indian tea industry

Globalization, trade liberalization, free import of tea, and interplay of various global and local factors led to the restructuring of the Indian tea industry. Low-productivity of workers, increasing social costs of production and fall in tea prices are some of the reasons given by the plantation managements for the overall crisis. In India since the year 2000, this crisis has been manifested through the closure and abandonment of tea estates mainly in the states of West Bengal and Kerala. During the long crisis period between 1999 and 2007 the financially weaker gardens that were poorly managed were closed and abandoned.

As per Indian Chamber of Commerce, the main problem that the Indian tea industry is now facing is over production. The domestic and international demand is not sufficient to absorb the entire production of tea in India. China produces a large volume of black tea, which they do not consume domestically. Hence, China is now trying to push sell this entire volume of excess black tea. This could pose a threat to Indian tea exports. Six-digit codification of tea is posing another threat to Indian export, because after some value addition, India no longer remains the country of origin. The new product re-enters Indian market, after some minor value addition. Presence of large number of unorganized small scale tea producers is another factor. Tea tourism is yet unexplored. Pan India e-auction introduced from 2016 to connect all auction centres – has several issues of concern especially regarding the risks being created in the system with inadequate scrutiny of digital signatures on delivery

orders, brokers inability to reconcile tax invoices due to inadequate data and myriad other issues. [Indian Chamber of Commerce]

Crisis in the Tea industry of Kerala

Crisis in the domestic and international trade market along with the high cost of production, low productivity, low strength of competitiveness in the international market and low price realisation and the high pressure of trade unions put the Kerala tea industry in crisis. It was seen that the plantation workers were the first victims of the tea industry crisis in Kerala, with subsequent loss of pay which ultimately aggravated the socio-economic problems and vulnerabilities of the population thereby pulling them down to even more insecure living and working conditions. [Kumar, 2018]

(I) Labour, Employment Situations and living conditions in tea plantations

The plantation sector plays a significant role in the agriculture economy of Kerala, particularly tea plantations with a significant historic setting right from the colonial period. In the development of these plantations, the plantation workers did play a crucial role as the production and productivity of tea plantations heavily depended on the performance of the workers employed therein. Basic amenities of life such as food, water, air, and shelter are considered to be the minimum requirements for any rightful human life but elements like health and educational facilities and other social security provisions are very essential for a dignified and civilized life. The human right issues faced by marginalised groups like tea plantation workers profoundly differs from others as they have been suffering from severe exploitation since the

introduction of plantations in colonial era with generations of low standard of living and vicious circle of poverty which made them accustomed to a miserable life and even the ideology of access to human rights remained meaningless for them. Moreover, these populations carry certain distinctive physiological, social, economic, cultural, and religious traits which distinguish them from the rest of the mainstream people. Therefore, a discussion on the issue of labour, employment, work, living and health conditions of the tea plantation workers becomes critical in identifying the conditions and sensitive issues prevailing in the sector so as to suggest viable remedies with a view to evolve a holistic perspective in improving the life conditions of the workers and their families.

Literature review is being done taking into consideration the historical setting of tea plantation, labour and employment circumstances, salary, debt, labour policy and welfare measures, labour unions, living circumstances, socioeconomic conditions health status and availability of health-care assistance in plantations and problems faced by the tea plantation workers.

(i) Historical perspective

Historically, plantations were a product of colonialism. Various methods were sought to recruit workers to plantations in those days like coercion, brute force and packages of assured facilities which never came real. Usurping of forest tracts, impose of government land revenues, famine and natural calamities accelerated the pauperisation of tribals and peasants and the very development of plantations. Worsening living conditions drove people from the plains up the hills and these migrants could easily be taken as resident captive labour. "Ill- fed, ill -housed and ill-treated the workers even died like rats." [Ravi Raman,1986] As labourers were from

faraway places it resulted in the permanent settlement of workers with their family leading to availability of cheap labour as the whole family including women and children worked on the plantations at the wage determined by the planters. The migration of family also ensured that labour could be reproduced which in turn would ease the problem of further recruitment in the future [Kanchan & Bhowmik, 1999]. All these combined to have a determining influence on the plantation labour market.

(ii) Income and poverty

In a study done in tea plantations of Kerala, 97% of the workers had income less than Rs5000/month [Priyadarshan S, 2019] which is similar to another study done in 2014[Savitha et.al, 2014] In both cases, workers reported that the amount of money they earned was inadequate to cover household expenses. As per occupational wage survey done by Labour Bureau in 2017(Table 3) tea plantation workers earn the lowest daily earnings compared to other plantation and agricultural sectors. In Kerala, the annual average debt among the families of tea plantation workers was found to be Rs.20000. Taking loans from private money lenders were common among the families of plantation workers. During the last ten years, burden from debt increased for 80 % of the workers in the tea plantations. [Kumar,2018]

Table 1. 3-Average daily earnings of other agriculture workers' vs tea workers

Industry	Average Daily Earnings (Rs.)			Ratio of Tea Wages to Wages of Other Sectors
	Men	Women	Overall	
1. Cotton textile	381	314	364	0.42
2. Woollen textile	460	380	457	0.34
3. Silk textile	500	525	503	0.31
4. Synthetic textile	425	253	409	0.38
5. Jute textile	422	260	412	0.37
6. Textile garment	358	318	341	0.45
7. Coffee plantations	298	280	288	0.54
8. Rubber plantations	449	410	431	0.36
9. Tea plantations	159	151	154	1.00
10. Tea processing	206	208	206	0.75

Source: Labour Bureau, Occupational Wage Survey, VII Round (2017), Government of India.

Source-Labour Bureau, Government of India-2017

A study titled 'Wages and Tea industry' reported that analyzing the wage rate of tea plantation workers since 1976, the north east region shows depressed wages compared with southern region. The initial narrow gap in wage rate between the regions of tea plantation has subsequently widened and the difference is almost double in south India when compared with northeast India. Colonial legacy, lack of implementation of labour laws (like Plantation Labour act 1951 & Minimum Wages Act 1948, etc.), large number of female tea workers, lack of mobility of tea labour due to non-availability of alternative job opportunities, inelastic labour demand and supply, crisis in tea industry due to stiff competition and decline in auction prices in real terms are the main causes behind poor wages in tea industry as a whole. [Subhashri Sarkar et,al, 2019]

A 2017 study reported that tea estate workers are among the poorest paid in Kerala at Rs 321 a day, compared to casual wage workers who earn between Rs400-700 a day. The gender statistics, 2017-18 published by Department of Economics and Statistics shows that male employees earn higher average salary than females in almost all employment categories. This disparity is high among the workers in plantation sectors too. In 2019, the Plantations Labour Committee increased the wage by rupees 53 per day consequent to the flood in 2018 in Kerala. As per the new wage agreement, the daily wages of tea workers have been increased to ₹380.38 from ₹328.38. This increase in the basic salary, coupled with other statutory benefits, which result in a total daily wage of ₹600 that is not sufficient for their living as they are devoid of most of the social security benefits for being placed in the APL category on account of the plantations being considered as an organized sector.

The tea plantation workers are at the lowest rung of the organizational hierarchy, surviving at subsistence wages in difficult working conditions, doing delicate work of plucking and manufacturing tea while still being considered as unskilled workers. They are also highly dependent on plantations for food, drinking water, housing, education and healthcare [Lama ,2018]. At the same time, most of the tea plantation companies claim that they provide housing, medical care, education, electricity, firewood, road, playground, communication and banking facilities to their employees (Kumar S,2018)

(iii) Socio economic and working conditions

In a study conducted on the socio-economic and working conditions of small tea plantation workers in the Nilgiris more than half of the workers were illiterate, and four-fifths of the workers were migrants. Nearly half of the plantation workers

belonged to the age group between 31 to 45 years and 70 percent of them were married. Three-fourth of the plantation workers had a nuclear family system. More than three fourth of the workers were females and were discriminated as they received very poor wages as compared with male counter parts. The study concluded that the living standard of the tea estate workers were very miserable; economically and socially backward and deprived from the modern social life. Most of the tea estate workers being illiterate had no ideas regarding various labour welfare and other social security schemes which are implemented by the Government. They were not provided proper sanitation in which women were the biggest victims, water facilities were far away from the working place and workers were not given permanent status so as to escape from union fights.[Hemasrikumar et.al, 2019]

A qualitative study conducted among the women workers from three plantations of Jorhat district of Assam to explore the social determinants of health reported that poverty and poor working conditions along with the lower social status accorded to women by the communities, hindered the ability of women to improve their economic situation. Poor living conditions including the quality of housing and sanitation along with inadequate access to ration, health care services and social support also affected their health. [Rajbangshi etal,2020] A series of starvation deaths have been reported among the plantation workers of Darjeeling and Dooars in West Bengal, since early 2000. It has been reported that between 2000 and 2015 over 1400 people have died in this region, indicating that despite the international reputation of Darjeeling tea, the workers who toil in the plantations live and work in abysmal circumstances. [Vijayabaskar M etal, 2019]

A study which compared the socio-economic condition of tea plantation workers and non-tea plantation workers in North India found that there was huge difference on all socio economic indicators. The tea plantation workers and their family suffered more and were far behind non-tea plantation workers. Illiteracy among the plantation workers affected them badly as they were unaware of their rights, and their poor socio-economic conditions dragged them into a vicious circle of poverty.

[Ansari S & Sheereen Z, 2016]

(iv) Land and housing

There are evidences that many families of plantation workers are stuck to the estate and the low-paying job for one reason alone – they don't want to become homeless. A survey conducted in Kerala in 2019 by the Labour Department found that 32,591 families working in the plantation sector in Kerala do not own a house or possess land. All of these people live in 'layams' or line houses provided by the company that owns the estate. Once they retire at the age of 58, the worker and the family have to vacate their three-room dingy house. Immediately after retiring, the workers should vacate the homes and they may not be able to afford to rent a home with the little savings that they have. But for the workers, most of whom migrated from Tamil Nadu generations back, there is nowhere else to go. This forces the younger generation to take up their parents' job so that they continue to have a place to live. The present generation of youngsters are well-educated, with most of them having a degree. They wish for better living conditions. The only problem they face is not having a home of their own for their family. If there's anything holding the youth back, it's only the issue of housing," [The News Minute, 2020]

(v) Living conditions

Reports from Munnar-Nilgiris tea plantations reveal that tea plantation workers always endured hard labour with poor pay. They work for long hours, toiling under rain and sun, to earn a meagre living. The labourers who are mainly women also complain of many health issues as they have to carry huge loads of tea leaves in a basket on their back, by tying it to their stomachs. Most of the tea plantation workers reside within the estates. However, the homes provided to them are usually in dilapidated condition without renovation for more than a decade. The homes also do not have toilets. The workers also simultaneously face man-animal conflict and monsoon just adds to the woes as trees get uprooted along with landslides. The homes allotted by tea estate owners are mostly near forest areas or places surrounded by water, making life difficult for the occupants. The workers admitted that the mishaps continue but the government only provides them temporary compensation and most of them are forced to continue their lives in the same estates.

[The News Minute, 2020]

In recent years, unpredictable rain and weather conditions have led to so many landslides in South Indian tea estates which largely went unreported. On the night of August 6 2020, a landslide crushed four rows of living quarters of tea plantation workers in Pettimudi village in Kerala's Idukki district, killing 70 people. The death toll, heaviest-ever inflicted by a landslide, pointed to the dangerous living conditions of tea workers in line houses, or 'layams', in landslide-prone zones of the Western Ghats. [Indian Express, 2020]

“Addressing the human cost of Assam Tea”-a study conducted by Oxfam in 2019 reports extremely low wages, lack of promotion mechanisms for workers; some had been working for 15–20 years on the same pay grade and bondage-like conditions with no alternative livelihood options. There is a growing tendency to employ temporary workers on estates, as they are not eligible for Plantation Labour Act mandated benefits or provident fund provisions. The loss of their job means they are no longer eligible for the housing that comes with the job, so the families not only lose their wage earner, but also become homeless. It was reported that workers were provided substandard housing. The lack of adequate space within their housing is a major problem, causing particular challenges for women and girls within the family, who lack privacy. Inadequate occupational health and safety provisions, major gaps in access to healthcare, lack of access to clean water, excessive working hours and lack of access to education and childcare were the critical issues faced by them. It is predominantly women who carry out the labour-intensive job of harvesting tea. This is because women’s hands are perceived as being better suited to plucking the delicate tea leaves for processing. Yet the concentration of women in these low-paid jobs; their low levels of literacy, education and union representation; and their high levels of dependence on employers, psychological stress and domestic violence are strong markers of gender discrimination. The lack of hygiene facilities in the fields, as well as water shortages at home (for washing menstrual cloths), pose health hazards for women. As a result, many stay at home when menstruating, thus losing out on earnings. Anaemia is a leading contributor to maternal deaths in Assam’s tea estates, with 363 maternal deaths per 100,000 live births in 2017 compared with 174 for the rest of India. The existing conditions perpetuates the vicious circle of under-education, exploitation and lack of capacity to stand up for their rights. Several

reports show that living and working conditions of workers especially women can be related to Assam study, in almost all tea plantations across India. [OXFAM,2019]

(vi) Job satisfaction

In a study done on the job satisfaction among tea plantation women workers in Wayanad district, majority of the respondents faced social and psychological problems in their work place mainly because of temporary work, social exploitation and poverty. Most of the women workers were illiterate and ignorant about the government rules and regulations for working conditions. They were also unaware about market conditions as well as ups and downs in their wage rates. Since they were unorganized, they were totally helpless in pursuit of their common interest. [Abdul Rafeeqe et.al, 2020]

(vii) Labour unions and labour policy

Indian tea workers' wages are set by tripartite negotiations involving tea companies, government and trade unions, yet they remain an ongoing topic of contention and protest. Most Indian trade unions are affiliated with political parties; while this increases their potential influence, it undermines confidence in their commitment to addressing workers' issues. The research highlighted that even though trade union fees are deducted from workers' wages, most workers are unaware of the role of trade unions. Further, there is evidence that women who form most of the lowest paid sector of the workforce are not well represented by worker's unions. Although trade unions do publicly lobby for wage and other improvements, with some measure of success, they are often unable to bring about significant change due to the financial challenges facing the tea industry [OXFAM,2019]

In a study done in Kerala among tea plantation workers, more than half of the respondents were temporary workers and only 17% had permanent job status. Majority of the workers agreed that they were not provided proper training for developing their skills. About three fourth of the workers had trade union membership. The trade union membership in any way was not associated with knowledge about the trade union act or labour laws or existing labour welfare schemes. [Priyadarshan, 2019]

(viii) Problems faced by tea plantation workers

An exploratory study done in Wayanad district ranked the major eight problems faced by tea plantation women workers. The problems in order of ranking were (1) low wages (2) workplace away from place of stay (3) less freedom in work (4) health problems (5) low status job (6) Inadequate fringe benefits (7) long distance to workplace and (8) lack of conveyance. [Abdul Rafeeqe etal, 2021]

In a study on the problems faced by the tribal tea labourers in the Nilgiris district, 76.7 percent of the tribal tea workers admitted that they were not let to go home before the work time completes even though their homes were in the dense forest premises. Around 12.5 percent of the labourers mentioned that there were no safety measures in their tea estates.;74.2 percent of labourers stated that the safety measures where up to a little extent. Around 69 percent of the labourers opined that slavery systems still prevailed in their estates in some cases. [Raja et. al, 2017]

(II) Health conditions of tea plantation labourers

From the colonial times the tea planters exploited the labourers in many ways. In the eyes of the European planters, the labourers were a 'beast in a menagerie' (Singh et

al, 2006). However, even after 75 years of independence, the dilemma of the labourers of the tea plantations of India has hardly changed. The ineffective union of the tea workers in this liberalized and globalized economy resulted in lowering of their bargaining power with the planters. Thus, the economic wellbeing of the labourers has scarcely upgraded, which further worsened their health as well as social status. Weakening of health condition would push the workers further back in other facets.

There is substantial amount of research on the health of tea plantation workers. However, not many studies are available on health condition and health awareness of tea plantation labourers of Kerala with an objective to provide some policy suggestions. Therefore, a discussion on the existing literature on health status and conditions of the tea plantation workers becomes an exercise in identifying the critical issues prevailing in the sector nationally with a view to evolve a holistic perspective on the health of the workers; so as to formulate sensible policies addressing key issues pertaining to health and wellbeing of this population.

(i) General Health status

Sivaram (1988), in his book 'A Handbook on Family Health and Welfare in Plantation' throws light on the working conditions of plantations in different parts of the world. Plantations in most of the countries have a history of long suffering from an almost complete lack of medical and sanitation facilities and the plantation sector in India is not an exception. The author mentions that the availability of water and sewage facilities has a direct bearing on the health status of the worker. But these facilities

are not adequate in many of the plantations. Apart from this, wide range of illiteracy and low level of health awareness are common which results in poor health status of workers.

A study on the health afflictions of tea plantation workers in Nilgiris found that the five major health afflictions were continuous cough/dry cough, low blood pressure/high blood pressure, neck pain/shoulder pain, respiratory and skin problems. The critical fact revealed in the study was that workers irrespective of age and sex were not willing to visit doctor or hospital in case of minor infirmities like fever, headache or stomach problem. When they became incapacitated and unable to do any work, then it concerned as a disease for them. The workers were ignorant and not conscious about personal hygiene and sanitation practices. [Gayathri P et al,2019]. A 2014 study found poor working condition of women tea labourers of Kerala and lack of awareness of the medical facilities which had to be provided by the management. [Hariharan and Siva Kumar, 2014]

An intensive study which highlighted on health problems and nutritional status of tea plantation workers of Assam found high frequency of under-nutrition and infectious diseases among the tea plantation workers. Poor socioeconomic condition and unhygienic living conditions make the tea garden population vulnerable to various communicable diseases and malnutrition. The study highlighted prevalence of under-nutrition among children (59.9%), thinness among adults, worm infections (65.4%), skin infection, tuberculosis, back pain and micronutrient deficiency disorders like anaemia were high among the tea garden labourers. The study also revealed positive impact of individual's education on health and nutrition. [Medhi et al, 2006]

Hypertension is a major health problem in India. A study which explored hypertension and its risk factors in tea garden workers of Assam found the prevalence of hypertension was 60%. Consumption of alcohol, intake of extra salt in food and beverages, and habit of taking tobacco were found to be the potential risk factors for hypertension among workers. Gender-specific and age-stratified analysis showed the association of increased risk of hypertension with intake of tobacco in women only, while consumption of locally prepared alcohol was an important risk factor for hypertension in both men and women. [Hazarika et al, 2006]

A case study which examined health condition and challenges faced by tea plantation workers of Assam revealed that most of the labourers suffered from continuous health problems such as fever, cough, anaemia, hypertension, skin problems, gastric problems, body pain, etc. They observed lack of proper identification and treatment of diseases in the plantations. A large number of labour families suffered due to lack of safe drinking water and calorie deficiency. These labourers were ignorant and not conscious about personal hygiene and sanitation practices. Child mortality was also observed but the causes were not known to the labourers. [Dukhabandhu et al, 2010]

(ii) Health and hygiene conditions of female tea plantation workers

Women play a vital role in the overall development of family, society, state as well as country. Women workers are the major labour source in various tea gardens in India. Many of them are working only for their day to day survival. There is evidence that

women in tea plantations in India face many major health issues when compared to males.

In a study done among women workers of three tea gardens in Bangladesh, it was observed that the female tea workers were more likely affected by a variety of diseases like skin problems, diarrhoeal diseases, hypertension and gastric problems in comparison with their male counterparts. Significant percentages (76%) of female labourers did not get an opportunity to take foods during working hour. Around 86% revealed that they did not reach proper nutritional facilities due to lack of knowledge and economic insolvency. The study showed that health services of tea estates were not satisfactory. Highest 65% disclosed that they were using water from river, canal, lake for cooking proposes. A noteworthy portion (78%) of female tea workers did not wash their hands before eating or after toilet. More than half of the women admitted that the birth of child took place at home revealing that safe maternity and childbirth was not satisfactory there. Only 26% were the owners of latrines; Around 92% of female tea workers used cloths for menstruation, while only 8% were using napkin. [Chowdhury etal, 2018]

A case study from sub- Himalayan regions of West Bengal describes that woman workers face more socio-economic and health problems than male workers related to bad working conditions and sanitation measures in the tea gardens. The major health problems faced by them were poor health, maternal mortality, epidemics, diseases, alcoholism and problems related to chewing tobacco. [Sarkar etal, 2016]

(iii) Mental health status

Individual's psychosocial functioning has an impact on the work efficiency. In a study done on the mental health status of tea workers in Anamalai, Tamil Nadu, the prevalence of probable mental health illness was found to be 12.8% which is in comparison with prevalence among the general population. Workers who screened positive for suspected mental illness were found to have availed significantly more days of leave in the previous year. [Ashwini et al, 2017]

(iv) Occupational health

The Joint International Labour Organization (ILO)/ World Health Organization (WHO) Committee on Occupational Health, 1995 stated "Occupational Health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations, the prevention among workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological equipment, and, the adaptation of work to man and of each man to his job" .

Workers in the tea plantation industry are exposed to a variety of occupational health and safety hazards. Inhaling tea dust causes both acute and chronic respiratory symptoms; accidents occur due to unsafe practices adopted by the tea plantation sector. Various factors that can create conditions for diseases include climate, fauna, population density, living conditions, eating habits, standards of hygiene, education levels, occupational training, working conditions, technological developments, and

quality of and access to health services. The tea plantation workers are not properly trained to prevent any contingency situation and are unaware of the type of risks involved in their working environment. In an industry like tea which is labour intensive, where the workers are illiterate, unskilled and malnourished; alongside striving for enhanced productivity, safety and health of workers also need to be given more priority.

A study on occupational health hazards in tea plantation workers of three districts- Idukki, Wayanad and Palakkad in Kerala reported that majority of tea plantation workers were females and were illiterate. Most of the workers had smoking habit (43%) and alcohol drinking (42%). The workers were affected by mechanized hazards such as injuries (53%) and cuts(32%);biological hazards such as insect bites (41.33%) ,snake bites(35.56%),animal attacks(14.22%) and fungal infections (8.89%).Moreover they were exposed to chemical hazards such as skin diseases(49%),allergy problems(34%)and gastrointestinal problems(16%).The workers also faced psychosocial issues like job stress(39%), work instability(28%), poor working condition(20%) and poor quality of work(13%).Majority of the workers in the tea estate were permanent employees and were provided basic amenities by the management . Yet few of them who were working on contract basis were not provided any amenities as the permanent workers. [Govindankutty et al, 2018]

(v) Healthcare utilization and health seeking behaviour

In a mixed method study to examine the healthcare utilisation among tea garden workers in Assam, it was reported that several factors influence the utilization of healthcare services like (1)Accessibility and affordability of healthcare services (2)

Severity of illness (3) Availability of quick fix remedies (4) Presence of barriers in healthcare utilization like poverty, occupational barriers, superstitious belief, lack of health referral services, unavailability of doctors and medicines in tea garden hospitals, difficulties in patient physician communication and poor support from the employers. Greater utilisation of government healthcare facilities (67%) was found compared to private facilities (4%) by the workers, primarily due to the higher cost of medical treatment in the private sector and poor household income of the workers. Therefore, this study called for attention to policy makers towards greater investment in the public health sector and tea garden hospitals to make healthcare more affordable and accessible for them. There was a higher tendency towards utilization of allopathy treatment among the workers (77%) compared to AYUSH [Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa and Homoeopathy] systems of medicine. (0.7%). Additionally, nearly 51% of the workers had visited quacks/folk/traditional healers for treatment owing to illiteracy, poor income and less treatment cost. More than half of the workers had health insurance, of which three fourth of them did not use it previously. Surprising, 16% did not even know whether they were covered under any type of health insurance schemes mainly due to lack of education and awareness. [Rajput et al, 2021]

A study on maternal health care services utilization in tea gardens of Darjeeling, explored a multitude of barriers inhibiting maternal healthcare services utilisation among the women tea garden workers ranging from lack of awareness, lack of husband's education, long distance to healthcare facilities, financial constraints, long

distance to healthcare facilities, excessive waiting times, past experience with poor quality care and poor behaviours of health professionals. [Bhattacharjee et al,2013]

Agitations among tea workers in Kerala

In September, 2015, around 5000 women tea plantation labourers, from a large tea estate in Munnar, Kerala, initiated an agitation demanding rise in wages and bonuses. They called themselves “Pombalai Orumai” or the women’s collective. The immediate provocation for the strike was the declaration of a massive reduction in bonus (from 20% to 10%) by the management citing a decline in profits. However, the women refused to accept this reasoning and brought the plantations to a standstill for over a month and half after which the managements agreed to a 30% hike in wages. A study which analysed the nature of this strike using interview transcripts from a community radio program describes the characteristics of their working and living conditions. The women labourers worked for 12 hours, plucking leaves and carrying heavy loads up and down steep slopes for a meagre daily wage of Rs.232/-. The study also highlighted the huge gender wage gap, because men worked for 5 hours, cutting weeds, chopping branches and spraying fertilizers and pesticides for the same pay. It also reported that tea plantation employees were paid one of the lowest wages at that time in the state, much less than the casual labourers who earned a daily wage between Rs.400 and Rs.700. The workers lived in one-room barracks called “line rooms”, which were provided by the employers. Their living conditions were abysmal and none of them owned any land of their own. The struggle also reminded that even within the laudable Kerala model of social development, the conditions of the Dalit communities do not reflect the much-applauded social welfare indicators of the state. [Kamath et al, 2017]

A report submitted to Kerala Institute of Labour and Employment in 2018, which examined the impact of the crisis in the tea plantation industry on the plantation workers, reported that the workers were facing numerous socio-economic challenges due to low income, debt and a gap in income and expenditure. The crisis also affected their family life because they were not allowed appropriate housing facilities. Lack of electricity connection, difficulty in accessing educational facilities for their children, shopping facilities, firewood and poor communication facilities were also reported by the workers. It was reported that some of the companies were not paying salaries and bonuses regularly.

COVID-19 challenges on tea sector in Kerala

The challenges to the tea sector on account of COVID-19 were direct economic loss due to loss of crop, restriction on the movement of workers leading to shortage of workforce for cultivation especially plucking, delay in streamlining the supply chain, non-availability of money for estate operations including payment of wages, accumulation of unsold tea in the warehouses, exports not taking place and transport to and from most ports was not functioning as supply chain was disrupted. [Kerala State Planning Board ,2020]

2.Tea Plantation Workers in Kerala-Basic information and General statistics

Area and coverage of tea plantations in Kerala

Tea cultivation in Kerala is spread over Thiruvananthapuram, Kollam, Thrissur, Palakkad, Idukki and Wayanad districts. The total area covered under tea plantation is 44,541.44 hectares. Idukki and Wayanad are the two

DISTRICT	Number of tea estates	Area of plantation (hectare)
----------	-----------------------	------------------------------

major tea producing regions by way of total acreage under tea cultivation. Idukki is the most important district with 76% of the total acreage of Kerala under tea plantations. The main tea growing areas of Idukki are in Munnar, Vandanmedu and Peerumedu regions. Wayanad accounts for about 14 % concentrated in Mananthavady and Kalpetta; other than areas under multi plantations like Palakkad-Nenmara and Nedumangadu-Thiruvananthapuram, Kollam-Pathanapuram and Thrissur-Aluva.

District wise distribution of tea estates in Kerala with area under cultivation: -

Thiruvananthapuram	3	1130
Kollam	2	422.65
Thrissur	1	521.66
Palakkad	4	2398.73
Idukki	63	33940.49
Wayanad	23	6127.91
TOTAL		44541.44

Job status of workers in tea plantations in Kerala

There are a total of 35428 workers in plantation sector in Kerala comprising 28805 permanent workers and 6613 temporary workers. Majority of workers have a permanent job status.

Job status of workers in tea plantations in Kerala

District	Permanent	Temporary	Total (district wise)
Thiruvananthapuram	128	-	128
Kollam	173	38	211
Thrissur	557	195	752
Palakkad	861	560	1421
Idukki	22706	5201	27907
Wayanad	4390	619	5009

Total	28805	6613	35428
-------	-------	------	-------

Gender wise distribution of employees in tea plantations in Kerala

There are about 20156 females and 15272 males working in tea plantations in Kerala pointing to female dominance in this sector.

Gender wise distribution of employees in tea plantations in Kerala

District	Females	Males
Thiruvananthapuram	110	18
Kollam	128	83
Thrissur	389	363
Palakkad	762	659

Idukki	15661	12246
Wayanad	3106	1903
Total	20156	15272

Gender wise distribution of job status

District	Gender			
	Male		Female	
	Permanent	Temporary	Permanent	Temporary
Thiruvananthapuram	18	-	110	-
Kollam	61	22	112	16
Thrissur	246	117	311	78
Palakkad	336	323	525	237
Idukki	9758	2488	12948	2713
Wayanad	1620	283	2770	336
Total	12039	3233	16776	3380

Layams in tea estates

There are two to more than 5 housed layams in the tea estates.

Details of Layams in tea estates

District	No of estates	No of layams			
		2 house	3 house	4 house	≥ 5 house

Thiruvananthapuram	3	-	-	-	-
Kollam	2	-	-	8	6 Rooms- 42 7 rooms-1 8 rooms- 1 10 rooms -2
Thrissur	1	-	1	21	13 layams with 10 Houses 22 layams with 8 Houses 48 layams with 6 Houses
Palakkad	4	-	101	33	86
Idukki	63	-	1029	1115	791
Wayanad	23	47	250	64	277 Individual houses for each and every family-90 houses

Inhabitants in layams

District	Employees	Dependents	Children<14 years	Post retirement employees residing in layams
Thiruvananthapuram	128	--	-	30
Kollam	328	127	45	76
Thrissur	684	1581	-	41

Palakkad	1401	1811	250	80
Idukki	18363	29664	5231	3655
Wayanad	2111	3747	609	349

Childcare facilities

Creche inside plantations

District	Availability of creche facility
Thiruvananthapuram	-
Kollam	2
Thrissur	1
Palakkad	4
Idukki	114
Wayanad	9

Educational Facilities inside tea plantations

District	No of tea estates	School-Type			School level			
		Government	Management	Others	LP	UP	HS	HSS
Thiruvananthapuram	3	2	-		-	2	-	-

Kollam	2	-	--	-	-	-	-	-
Thrissur	1	-	-	-	-	-	-	-
Palakkad	4	1	1	3	3	-	-	-
Idukki	63	9	56	-	1048	297	75	198
Wayanad	23	6	-	-	7	4	2	1

Educational Facilities inside tea plantations

Distance to nearest school facility ranged from 1 to 10 km

Availability of ration facilities

There are a total of 12606 BPL and 2477 APL card holders in the tea plantations.

Ration card details

District	BPL card holders	APL card holders
Thiruvananthapuram	110	573
Kollam	-	-
Thrissur	297	54
Palakkad	263	17

Idukki	10550	1260
Wayanad	1386	573
TOTAL	12606	2477

Health Insurance coverage

RSBY/ Ayushman Bharath Yojana based Insurance card

District	Number of beneficiaries
Thiruvananthapuram	110
Kollam	-
Thrissur	-
Palakkad	107
Idukki	11178
Wayanad	758
TOTAL	12153

Hospital facilities in tea plantations

Hospital facilities inside tea plantations

District	Type of health facility			
	Dispensary	Hospital	Garden hospital	Group hospital

Thiruvananthapuram	1	-	-	-
Kollam	-	-	-	-
Thrissur	-	-	-	-
Palakkad	3	-	-	-
Idukki	53	28	13	12
Wayanad	24	2	3	1

Welfare schemes

Welfare of workers and benefits

District	No of estates	Benefits received per estate		
		Service of welfare officer	Financial assistance during COVID period	Other funding
Thiruvananthapuram	3	-	3	Plantation workers relief committee for closed estate
Kollam	2	-	2	-
Thrissur	1	1	1	-
Palakkad	4	3	4	-
Idukki	63	31	63	Flood relief fund in 3 estates Labour welfare fund in 5 estates
Wayanad	23	9	23	3

Migrant workers in tea plantations in Kerala

District wise distribution of interstate migrant workers in Kerala tea plantations

District	Number of migrant workers
----------	---------------------------

Thiruvananthapuram	-
Kollam	-
Thrissur	114
Palakkad	487
Idukki	3957
Wayanad	487

A total of 5045 interstate migrants work in tea plantations of Kerala, concentrated in four districts Thrissur, Palakkad, Idukki and Wayanad. Majority of the migrant labourers work in Idukki district.

Significance of the study

Information on a variety of aspects of labour and employment is necessary for making appropriate labour policies by understanding the aspects of labour safety, health, welfare, social security of labour, enforcement of labour laws, education, working, living and socio economic conditions of the workers for whom the policies are made for. The liberalised economy combined with acceleration in economic growth has caused structural changes in the job market. It therefore calls for capturing the data on labour and employment more comprehensively in the post-reform period for targeted and appropriate interventions.

This study was conducted to generate updated knowledge and empirical evidence on the working conditions and health status of tea plantation workers. It is expected that the findings will pave way for identifying key issues so as to implement appropriate responses to ensure that tea plantation workers fully enjoy fundamental rights at work, decent, productive and safe working conditions, fair remuneration and a healthy life without discrimination based on ethnicity, gender, social origin or other grounds. It cannot be denied that development of the tea industry is also strongly linked to the well-being of tea plantation workers. Hence focussing on this aspect of wellbeing of the workers will in turn lead to the economic development of the tea plantations with greater benefit for all those involved. It is quite shocking to note that despite the existence of labour welfare and security legislations, the basic inalienable rights of the workers are frequently being violated. The effectiveness of the statutory provisions as well as their implementation is often questioned. In this context, the present study tries to appraise the current benefits of the workers in the tea plantation sector, identify the shortfalls, and make suggestions to revamp the

system for bringing positive policy outcomes for the workers. In the light of the critical evaluation of the statutory provisions in this area and their implementation, the present study attempts to review the prevailing benefits of the workers in tea plantations and make policy suggestions to remodel them according to the needs of the working class.

Although there has not been a comprehensive assessment of the labour conditions and occupational health among the tea plantation workers of the state, the available literature and reports suggest that the labour circumstances do have an impact on the access to social determinants of health and consequently on their health. We have conceptualized this state wide mixed-methods study to explore the labour circumstances and health status among tea plantation workers in Kerala.

Outcome

The findings of the study would help to better understand the conditions of labourers working in the tea plantations of Kerala and lead to specific policy recommendations to improve their employment, working and living conditions, health and access to health care. The major outcomes are data pertaining to the socio-demographic background, employment characteristics, working and living conditions, health concerns, health care seeking behaviour, barriers to accessing health care of tea plantation workers of the state in addition to the current policy context and welfare initiatives undertaken for them.

1.2. Methodology

The present study used both qualitative and quantitative data. Primary data was collected using structured interview schedule and in-depth interviews. The quantitative data was collected from the workers in various tea estates in the selected districts in Kerala using structured interview schedules.

Study design: This sequential exploratory mixed-methods study was conducted among workers in tea plantations in Kerala.

Study setting: The study was conducted in the year 2021 in six districts; Idukki, Wayanad, Palakkad, Kollam, Thrissur and Thiruvananthapuram, where majority of the tea plantation in the state are located (Table *).

Study population: The study was primarily conducted among tea plantation workers of selected districts in Kerala. However, information pertaining to the policy aspects of the tea plantation, its history, current crisis, challenges faced by the workers related to their work, health concerns and barriers to health care access and utilization were also collected from a diverse range of stakeholders, including policy makers, academicians, policy analysts and other state level experts in labour; trade union leaders and tea plantation labourers.

Sample: A cross sectional study was conducted among tea plantation workers in Kerala. There was a total of nearly 32, 000 tea plantation workers (Table *). Considering the constraint of time and resources and the COVID-19 situation, we surveyed a total of 1035 workers from the selected five districts. Details of socio-demographic characteristics, employment details, working conditions, wage regularity and structure, living conditions, debt situation, details of policies, benefits and welfare schemes for the workers, trade unions and grievance redressal

mechanisms, health status and health care utilization, and child care and school facilities were collected and analysed.

Table 1.4 Area Under Tea Cultivation (2017-18)

SI No	District	Area (Ha)
1	Thiruvananthapuram	962
2	Kollam	606
3	Idukki	21970
4	Thrissur	530
5	Palakkad	831
6	Wayanad	5306
Total		30205

Source; Agricultural statistics 2017-18

Twenty in-depth interviews were conducted among workers, trade union leaders, bureaucrats, academicians, and political leaders [Political leaders=2, district and state level trade union leaders=4, Academicians=2, Bureaucrats=2, & Workers=10]. A detailed scoping review of the pertinent literature and documents around the employment and labour conditions and health of workers of tea plantations of the state was conducted and the themes have informed the tool and this report in each of the concerned sections.

Ethical considerations: Ethical clearance was obtained from the institutional ethics committee of the host institution, the Kerala Institute of Labour and Employment (KILE), the Government of Kerala. The project strictly followed all the ethical guidelines throughout the course of this research. Written/oral informed consent was sought from all the participants.

Training -Training was given to the field investigators in all selected districts. The main objective of the training was to give an overview of the project to the field

investigators, familiarise the interview and ensure quality data collection. During the training, the importance of ethical considerations was highlighted. The training aimed to get essential knowledge on management and provided the field investigators with the guidelines of field-level monitoring. Mock interviews were conducted by the field investigators during the training program. The main concepts covered in training were project mission, project planning, and monitoring, handling participants, getting consent from the participants, and ethical considerations during the fieldwork.

1.3. Structure of the report

This report has been organized into four major sections:

In the first section, we have detailed the background of tea scenario in the context of India and Kerala. Information of employment, major areas of concern in Indian tea industry, Crisis in the Tea industry of Kerala, labour, employment situations and living conditions in tea plantations, historical perspective, income and poverty, socio economic and working conditions, land and housing, living conditions, job satisfaction, labour unions and labour policy, problems faced by tea plantation workers, health conditions of tea plantation labourers, general health status, health and hygiene conditions of female tea plantation workers, mental health status, occupational health, healthcare utilization and health seeking behaviour, agitations among tea workers and COVID-19 challenges on tea sector in Kerala. With the above background, we stated the objective of the present study.

In the second section, we presented labour conditions and health based on the results of the quantitative survey mainly in eleven main areas [1) socio-demographic characteristics, 2) employment details, 3) working conditions, 4) wage regularity and

structure, 5) living conditions, 6) debt situation, 7) details of policies, benefits and welfare schemes for the workers, 8) trade unions and grievance redressal mechanisms, 9) health status and health care utilization, and 10) Barriers to accessing health care serviced, & 11) child care and school facilities].

In the third section, we discussed the findings from the in-depth interviews mainly in the areas of migration, deprivation, landlessness and lack of belonging, permanent to temporary employment, labour and employment circumstances of study participants and health and health care access. This is followed by a discussion section and policy recommendations as the fourth section.

2. LABOUR CONDITIONS AND HEALTH

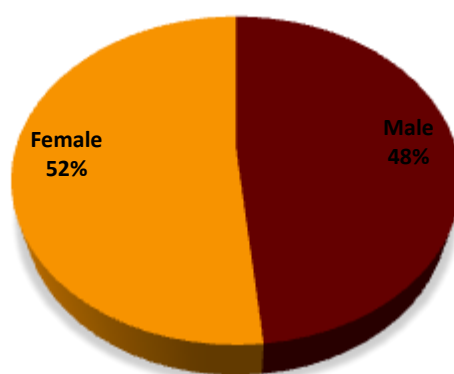
Findings from the Survey

This chapter describes the results of the quantitative survey. The data analysis was carried out by keeping the objectives of the study in background. The survey was conducted among 1035 tea plantation workers. The proportion of male participants was 48.4%. The mean age of study population was 47 years \pm 8 (range: 22-75).

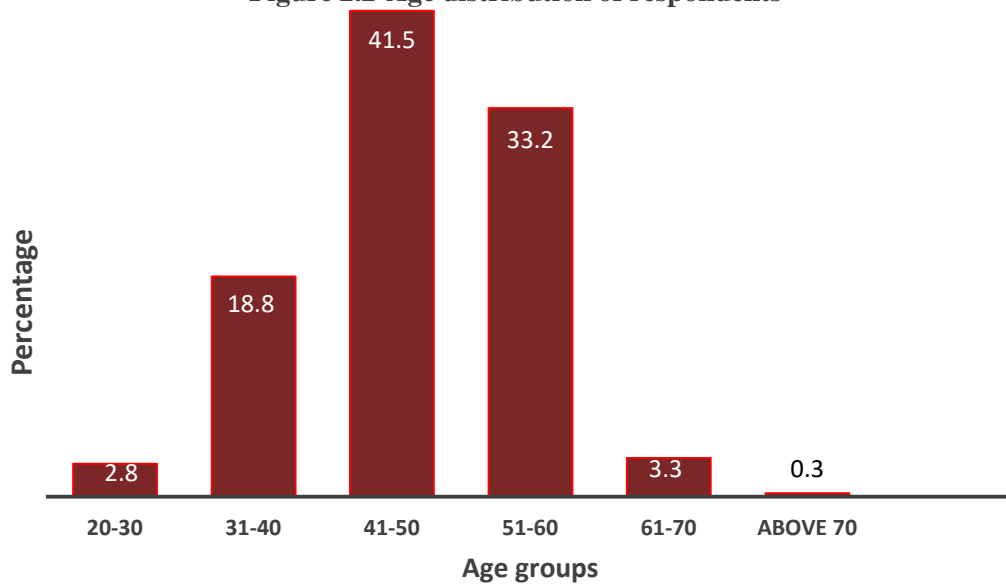
2.1. Socio-demographic characteristics

More than half of the workers were females (51.6%) and about 48.4% of those working in tea plantations were males (Figure 2.1).

Figure 2.1-Gender distribution of respondents



The mean age of the respondents was 47.41 years (SD: \pm 8.1). Highest proportion (41.5%) of the labourers were in the age group 41-50 years. About 33.2% belonged to 51-60 age group, while 18.8% belonged to 31-40 years. A small proportion of workers belonged to 20-30 years (2.8%) and 61-70 years (3.3%). Very few of the workers were above 70 years (0.3%) of age.

Figure 2.2-Age distribution of respondents

The educational status of the labourers is presented in Figure 2.3. Around 30% of the labourers had acquired high school, 24.2% had completed upper primary education, and 21.5 % had primary education. About 10% were illiterate and another 10 % were literate. Very few had gone to higher secondary (4.2%) and degree level (1%).

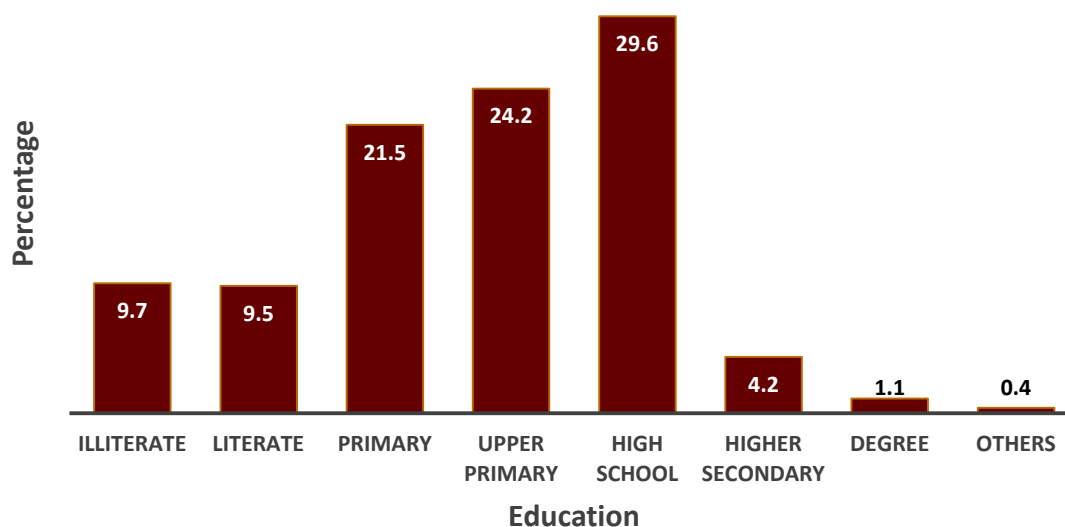
Figure 2.3 :-Educational status of respondents

Table 2.1 depicts the association of gender and educational status. Females (13.9%) were found to be more illiterate compared to males (5.2%). Males had higher educational levels compared to females.

Table 2.1- Education and gender distribution [(percentage)]

Educational status	Males	Females
Illiterate	5.2	13.9
Literate	7.0	11.8
Primary	20.8	22.3
Upper Primary	25.0	23.4
High school	34.9	24.5
Higher secondary	5.0	3.4
Degree	1.4	0.7

Majority of the labourers (89.7%) were currently married and about 5.7% were widows/widower. About 2.6% were unmarried, very few were divorced (1%) and living separately (1.1%) Table 1.2 depicts marital status of respondents.

Table 2.2-Marital status of the respondents.

Marital Status	Percentage
Married	89.7
Unmarried	2.6
Widow/Widower	5.7
Divorced	1.0
Live separately	1.1

Around 10% of the workers had one to two members living in the family. More than half of the families had three to four members while 33% had five to six members at home. About 2.3 % had 7-8member family and very few had more than 8 members (0.3%) (Table 2.3)

Table 2.3-Number of members in the family

Number of family members	Percentage
1-2	10.6
3-4	53.4
5-6	33.3
7-8	2.3
>8	0.3

The monthly salary of the workers is shown in figure 1.4. More than three fourth of the workers had a monthly salary of Rs 5000-10000, while 13% of them were drawing a monthly salary below 5000. About 5.7% had a monthly salary of 10001-20000 while very few with a salary 20001-30000 (0.5%) and above 30000 (0.6%). Few workers (3%) were not ready to disclose their salary status.

Figure 2.4 -Monthly salary of workers

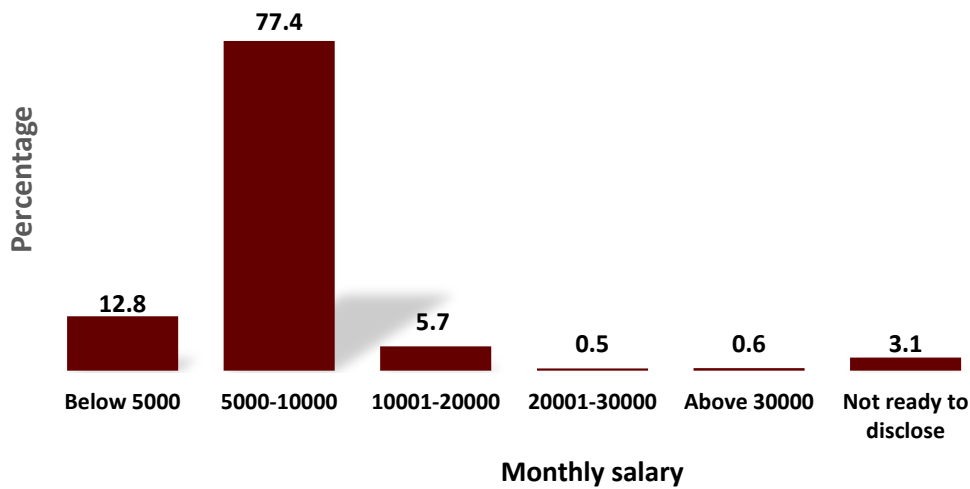


Table 1.4 shows gender wise distribution of monthly salary. More females (14.6) belonged to low salary group (below 5000) compared to males (10.8). Similarly, a higher percentage of males (7.6%) belonged to comparatively higher income group (10001-20000) as opposed to females (3.9%).

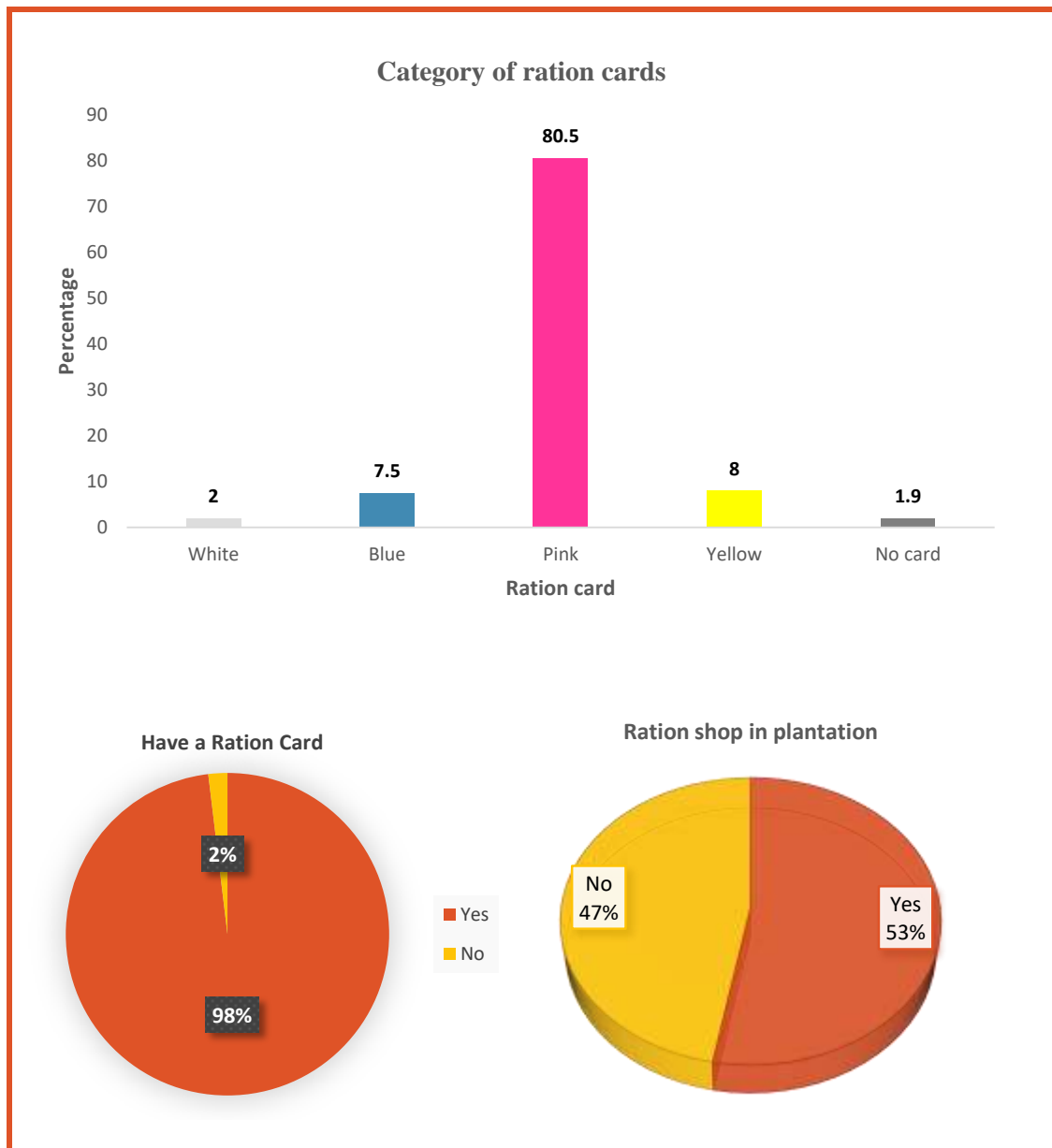
Table 2.4- Monthly salary and gender [(percentage)]

Monthly salary	Males	Females
Below 5000	10.8	14.6

5000-10000	77.6	77.2
10001-20000	7.6	3.9
20001-30000	0.6	0.4
Above 30000	1.0	0.2
Not ready to disclose	2.4	3.7

The poverty status was measured based on the colour of ration cards. The workers with pink or yellow cards were categorized as being below the poverty line (BPL), while those with white or blue cards were defined as being above the poverty line (APL). About 98% had a ration card while only 2% were not with a ration card of their own. Around 53% reported having a ration shop in their tea plantation. Around 80.5% of the respondents reported having pink colour ration cards, and 8% had yellow cards and 7.5% had blue colour ration cards. Only a few (2%) possessed white cards. Around 89% of the respondents had BPL cards. (Figure 1.5)

Figure2. 5 -Ration card details



II Employment characteristics

Job status:

Majority (91%) of the workers had a permanent job status while 8.5% were temporary workers, and rest on agreement basis (0.2%) and others (0.3%) (Figure 2.1)

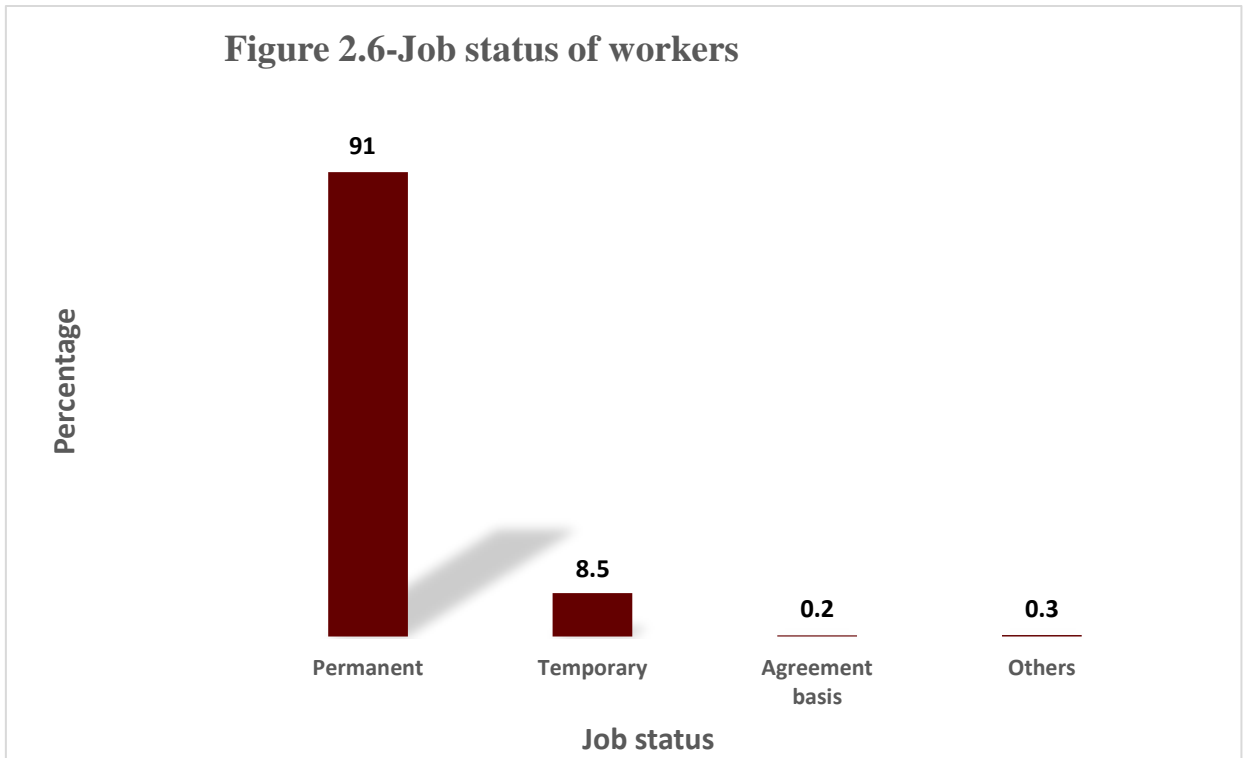


Table 2.1 details the gender wise distribution of job status. The distribution of males and females in permanent, temporary and agreement basis is shown in table 2.1

Table 2.5 -Job status and gender [percentage]

Job status	Men	Women	Total

Permanent	90.0	91.9	91.0
Temporary	9.4	7.7	8.5
Agreement basis/others	0.6	0.4	0.5
Total	48	52	100.0

Work experience

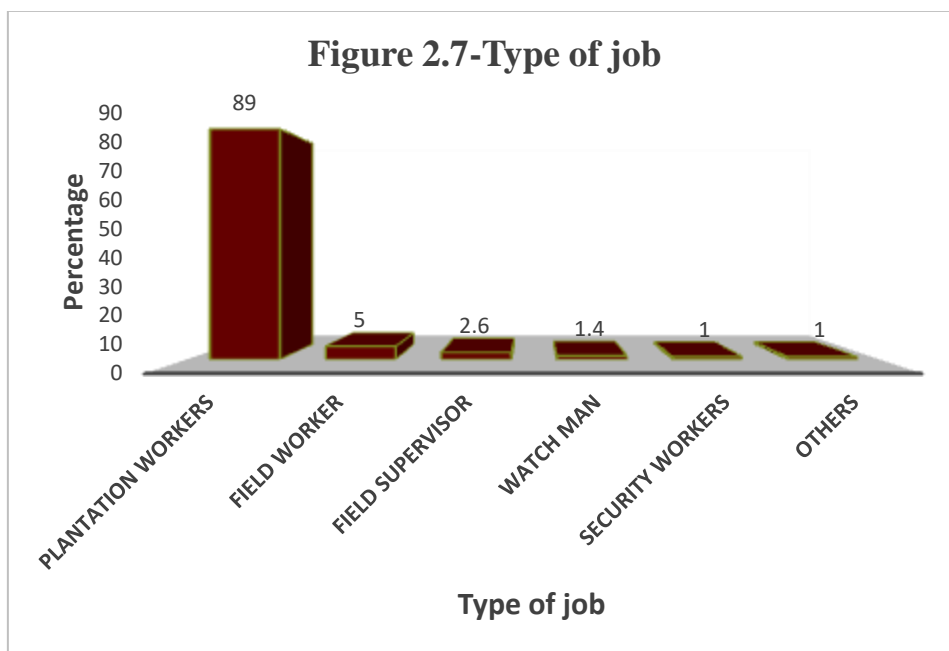
Majority of the workers (33.8%) had a work experience of 21-30 years while 26% had an experience of 11-20 years. Around 17% of them were working for almost 31-40 years. While 14.5% were working for 5-10 years, around 7.6% had a work experience of less than five years. (Table 2.2)

Table 2.6-Work experience of the respondents

Work experience(years)	Percentage
<5	7.6
5-10	14.5
11-20	26.0
21-30	33.8
31-40	17.0
>40	1.1

Type of job

Majority of the respondents of the study were plantation workers (89%). Around five percent of them were field workers. Other six percent was constituted by field supervisors, watchmen, security workers and other jobs. (Figure 2.2)



Majority of females were plantation workers (97.4%), compared to males (80%). More males worked as field workers and supervisors as opposed to females. (Refer table 2.3)

Table 2.7 -Type of job and gender [percentage]

Type of job	Men	Women	Total
Plantation workers	80.0	97.4	89.0
Field worker	9.4	0.9	5.0
Field supervisor	4.6	0.7	2.6
Watchman	2.8	0.2	1.4
Security workers	1.4	0.6	1.0
Others	1.8	0.2	1.0
Total	48	52	100

Work routine

Majority of the respondents worked for six days a week (80.8%) and seven to eight hours per day (94.8%) [Table 2.4]. Majority of the workers (91.8%) responded that they got a leave once in every six days after work.

Table 2.8-Work routine in tea plantations

Category	Percentage
Days of Work in a week	
Below 5 days	8.1
5 days	10.9
6 days	80.8
7 days	0.2
Hours of Work	
<5 hours	0.6
5-6 hours	3.4
7-8 hours	94.8
>8 hours	1.3

Other employment characteristics

The workers' responses on the various employment situations are recorded in table 2.5. Around 10% of the workers did extra duty during holidays. About 62.9 % of them got normal wage for that day, 26.6% of them got double wages and 10.5 % didn't get any wage. It was reported that 15% of the workers did continuous duty for more than ten days without rest. Majority of the workers (97.5%) were given one holiday per week and were provided breaks in between work hours (97.8%) and 95.1% reported that they make use of all break times provided in the jobsite. Others (5%) used break times for completing the work and collecting sticks for cooking. Majority (80.2%) admitted that they get more break time in necessary and needy situations. Nevertheless, more than half of the participants (52.9%) opined that they felt the need for more break times. About 47.6% reported they got flexible timing or shift in work if facing any health issues. Around 17.3 % of the respondents ever faced

accidents or mishaps while at job. These accidents were mainly attack from bees, wasps or wild insects (29.1%), fractures (24.6%), hands trapped in machines and subsequent finger loss (16.8%) wounds (10.1%), snakebite (5.6%) and attack from wild animals (10.6%). Majority of the respondents who faced accidents sought treatment in company hospital (48%), while 44.7% in government hospital and 4.5% in private hospital. The expenses for such accidents at workplace were borne by the companies in case of more than half of the accident victims (56.4%) while 25.7% themselves, 8.9% out of borrowings and 7.8% got free treatment. The workers' responses on various employment situations with gender wise categorization are recorded in table 2.5

Table 2.9-Workers responses to various questions on employment situations: -
Questions

	Total	Men	Women
Have you done extra job during holidays	10.1	12.6	7.9
Have you done continuous duty for more than ten days without rest	15.0	17.6	12.5
Are you given one holiday per week	97.5	97.5	97.5
Are you given break in between work hours	97.8	97.6	97.9
Do you make use of all break times provided in the job site	95.1	94.2	95.9
Do you get more break time in necessary situations	80.2	81.4	79.0
Did you ever feel the need for more break times	52.9	47.9	57.5
Have you ever faced any accidents or mishaps while in job	17.3	17.0	17.6
Do you get flexible timing or shift in work if facing any health issues	47.6	47.9	47.4

Compared to women, men did extra job during holidays, done continuous duty for more than ten days without rest. Women felt the need for more break times than men

Common working positions adopted by the workers

Majority of the workers reported their common work positions as standing (93.8%) while others reported walking (46.6%) and walking (45.3%) as their common work positions. Other work positions included sitting on the floor (2.4%) and sitting on chairs and benches (1.4%) (Figure 2.3)

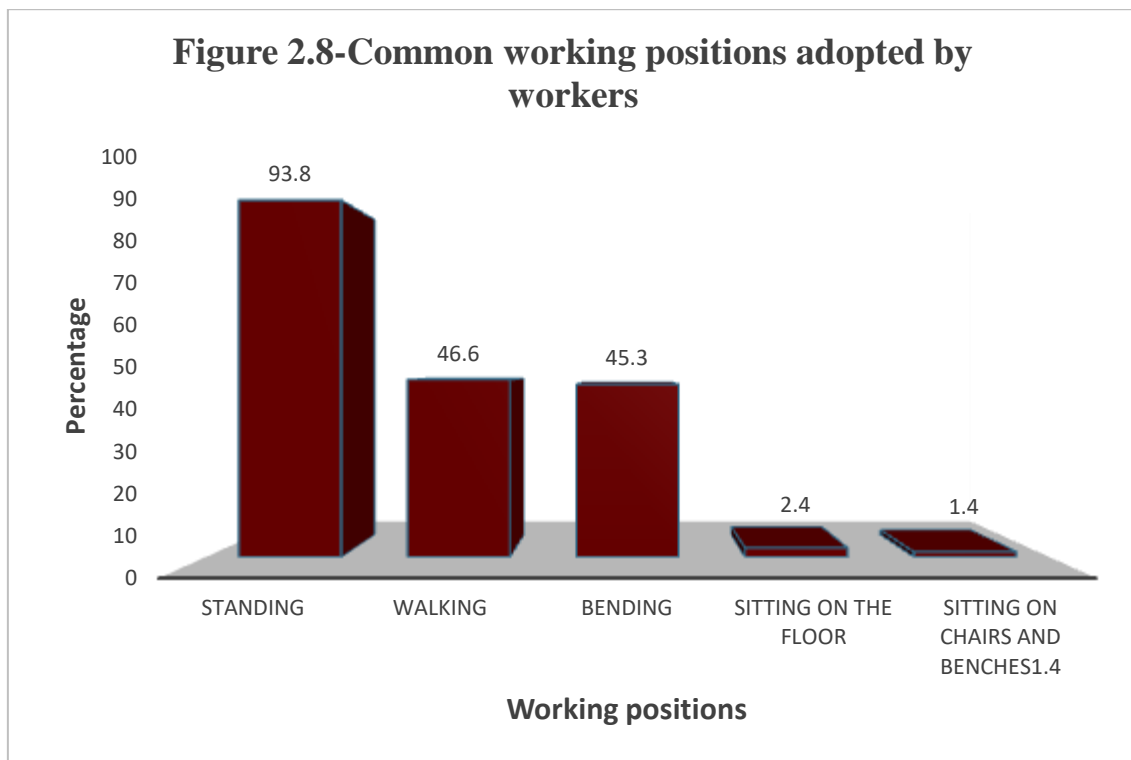


Table 2.8 details the working positions based on gender. Majority of women (97.6) work in standing positions compared to males. More than half of men and less than half of women resort to bending positions. Other working postures in relation to gender can be referred from table 2.6

Table 2.10-Gender wise distribution of working positions. [(Percentage)]

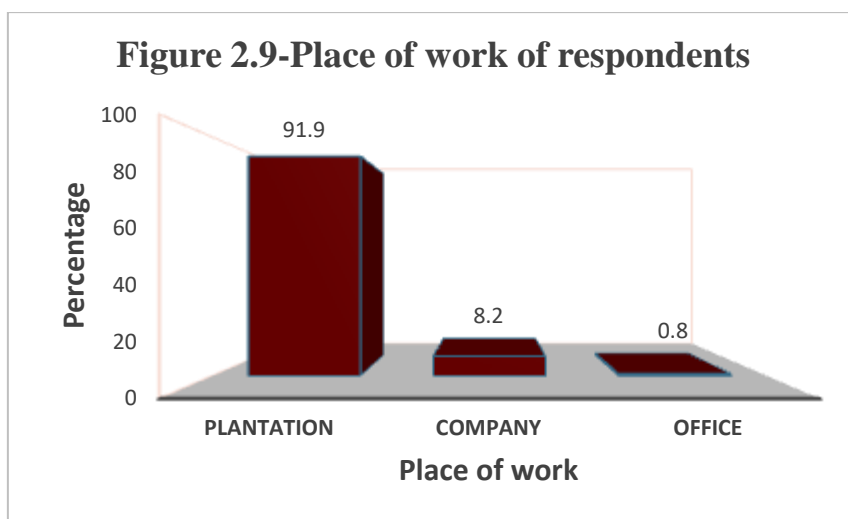
Working position	Total	Men	Women
Standing	93.8	89.8	97.6
Walking	46.6	47.3	45.9
Bending	45.3	51.3	39.7
Sitting on the floor	2.4	3.0	1.9
Sitting on chairs and benches	1.4	2.2	0.7

Multiple option allowed

III Workingconditions

Place of work

Majority of the respondents worked in the plantations (91.9%) while 8.2% worked in company and 0.8% in office (Figure 3.1)



Majority of women were working in plantations (94.9%). More men worked in company (12.6%) compared to women (4.1%). None of the women worked in offices (Refer table 3.1)

Table 2.11 Gender wise distribution of place of work. (%)

Place of work	Men	Women	Total
Plantation	88.6	94.9	91.9
Company	12.6	4.1	8.2
Office	1.6	0.0	0.8

Distribution of personal protectives by the plantation owner

Around 84% of the workers were provided a blanket. But other protectives provided were comparatively less like umbrella (11.3%), raincoat (16.2%) and hat (8.8). For about 70.7% workers these protectives were provided once in a year while for 12.9% it took more than a year and 5% got it replaced once damaged only. Around 11.3 % of the workers didn't respond to the question on frequency of distribution. Table 3.2 shows distribution of personal protectives along with gender wise categorization. Overall personal protectives were provided more to men compared to women as detailed in table 3.2

Table 2.12- Distribution of personal protectives by the plantation owner with gender wise distribution (%)

Item	Men	Women	Total
Blanket	81.0	86.7	84.0
Umbrella	11.6	11.0	11.3
Rain coat	25.3	7.7	16.2
Cap/Hat	11.8	6.0	8.8
Frequency of distribution			
Once in a year	68.7	72.7	70.7
More than one year	13.6	12.2	12.9
When it damages	6.6	3.7	5.1
No response	11.2	11.4	11.3

Toilet facility

Majority of the workers (93%) did not have a toilet facility inside the plantation. (figure 3.2)

Figure 3.2-Toilet facility available in plantation



Figure 2.10

Condition of the toilets available in the plantation

Table 3.3 describes the condition of the plantation toilets available for seven percent of the workers. In the plantations where toilet facility was available, around one third had dirty water logged inside or outside. More than three fourth of the toilets were fully enclosed and at least had a door, but almost 9% of them were not indicated whether for males or females. About 5% of the toilets were not provided with a door while 13% had a door and a lock in it. Also more than three fourth of the toilets had enough water facility while more than one third had no external water source in case of nonavailability of water inside the toilet.

Table 2.13- Toilet facilities available in plantation

Condition of the toilet	Percentage
Dirty water logging inside or outside the toilet	29.4
Toilet completely enclosed	85.3
Toilet structure	
With door only	80
No door	5
Door and lock	13
Separate male -female indication outside the toilets /Separate toilets for males and females	8.8
Water availability ensured inside the toilets	83.8
Provision for external water source if water not available inside the toilets	42.6

Drainage facility was available in about 54.2% of the plantations and regular cleaning was done in about 31.3% of them; while in more than half, cleaning was done only sometimes and 12.6 % of the drainages were not cleaned at all. Details are given in table 3.4

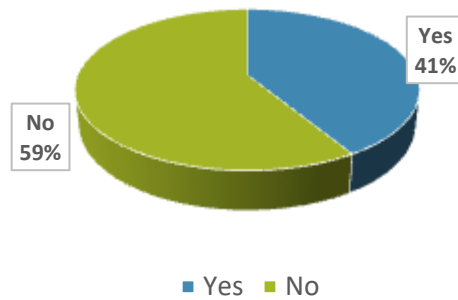
Table 2.14- Drainage facility

Drainage facility	Percentage
Proper drainage system available in the plantation for sewage and contaminated water	54.2
Cleaning of drainage system done	
Regularly	31.3
Sometimes	56.0
Never	12.6

Canteen facility

More than half of the respondents (59%) did not have a canteen facility in their plantation while 41% had a canteen in their workplace. (Figure 3.3)

Figure 2.11-Canteen facility in plantation



About 41.3% of workers had a canteen facility in the plantation. Their responses to available canteen facilities are presented in table 3.4. More than half of the workers with canteen facilities opined that they got enough foods from their canteen but they admitted that price index of food items was not displayed clearly there (36.3%). Food available in canteen was found to be cheaper compared to outside shops for more than half of the respondents. (57.1%) (Refer Table 3.5)

Table 2.15-Workers response to canteen facilities available in their plantations.

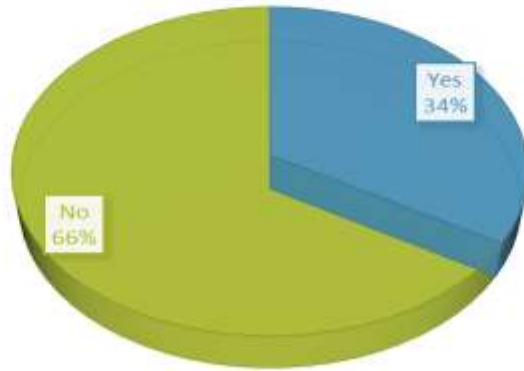
Canteen facility	Response (%)	
	Yes	No
Get enough foods from the canteen	61.8	38.2
The price index of food items displayed clearly in the canteen	36.3	63.7
Food available in canteen is cheaper compared to outside shops	57.1	42.9

Handling chemicals and pesticides

About 34% of the workers handled chemicals and pesticides in the plantations. (figure 3.4)

Figure 3.4-Handle chemicals and pesticides

Figure 2.12



About 70 percent of males handled chemicals and pesticides while none of the females were handling chemicals and pesticides. (table 3.6)

Table 2.16-Genderwise distribution of handling chemicals and pesticides (%)

Sex	Handling chemicals and pesticides		
	Yes	No	Total
Men	69.5	30.5	100.0
Women	0.0	100.0	100.0
Total	34.0	66.0	100.0

Figure 3.5 shows worker's response on the provision of protective equipments by the plantation owners to male workers who handle chemicals and pesticides. About 52.6% of the male workers were provided with boots, 30.2 % with goggles,23.7% with gloves,22.7% with hat,21.4% with masks and 14.6% with hat.

Figure 2.13-Personal protectives for handling chemicals and pesticides

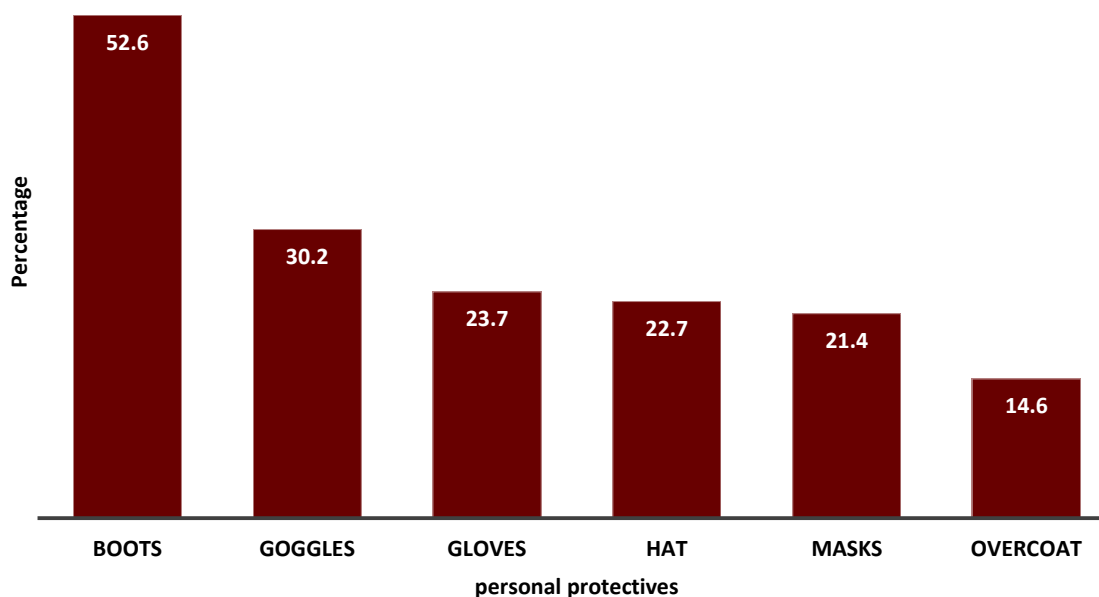


Table 2.17- Personal protectives for handling chemicals and pesticides among men

Personal protectives	%
Gloves	48.9
Masks	44.1
Boots	52.6
Overcoat	30.1
Goggles	30.2
Hat	22.7

Table 3.8 shows responses of the workers on the methods adopted to prevent exposure while handling chemicals and pesticides. Only less than half of the workers were provided trainings on safe usage of chemicals and pesticides (37.6%). More

than half of the workers were not given awareness classes on hazards due to chemical and pesticide exposure (67.0%). Around 42% did not immediately change clothes, wash hands/legs/bath after handling chemicals and pesticides. Majority of the workers did not have facilities to change clothes, wash hands/legs/bath after handling chemicals and pesticides at the workplace (73.9%). Nevertheless, more than three fourth of the workers were supervised at the time of handling chemicals and pesticides at the workplace (87.1%).

Table 2.18- Prevention of exposure to chemicals and pesticides

Methods adopted	Response	
	Yes	No
Trainings on safe usage of chemicals and pesticides provided	37.6	62.4
Awareness classes on hazards due to chemical and pesticide exposure provided	33.0	67.0
Immediately change clothes, wash hands/legs/bath after handling chemicals and pesticides	58.0	42.0
Facilities to change clothes, wash hands/legs/bath after handling chemicals and pesticides at the workplace	26.1	73.9
Supervision available at the time of handling chemicals and pesticides at the workplace	87.1	12.9

IV. Wage Regularity and Structure

Majority of the workers (88%) received wages regularly (Figure 4.1)

Figure 2.14 -Receive wages regularly

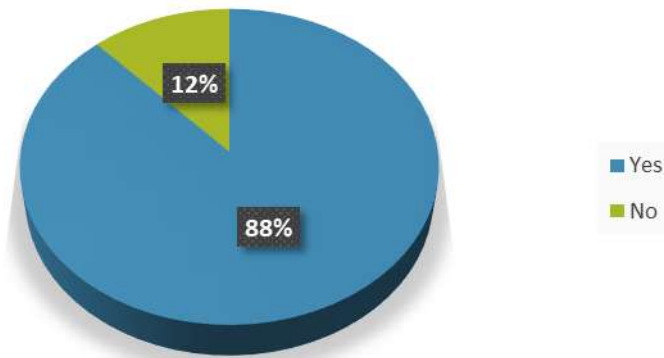


Table 4.1 shows wage and payment structure of workers. Majority of the workers (84.4%) get paid monthly, mainly through bank (74.9%). Few were paid weekly (9.4%), biweekly (3.7%) and daily (0.5%). Although majority were paid through bank (74.9%), other modes of payment were direct (24.3%), online (0.8%) and other means (0.1%). Lack of attendance was reported as the major reason for salary deduction (75.8%). Other reasons were reduced working hours (28.2%), low productivity (24.2%), deduction for PF/pension/insurance (31.5%) and others 1.8% (electricity charge, society loan). More than three fourth of the workers reported, they got more pay for more work done (79.0%) and there was provision for paid leave (78.0%) More than half (56.3%) opined that there was no daily allowance provision for temporary workers, while 10.5 % were unaware of any such allowance and about 33% reported provision of daily allowance to temporary workers. Only about 6.3% of the workers' wages were deducted owing to COVID-19.

When analyzing the gender determinants of wage and payment structure, commentative findings include; even though lack of attendance is the major cause for

salary reduction for both men and women workers, low productivity can be considered as a critical factor for salary reduction for females compared to males. More pay for more work and provision for paid leave was higher for males when compared to females (Table 4.1)

Table-2.19-Wage and payment structure with gender distribution (%)

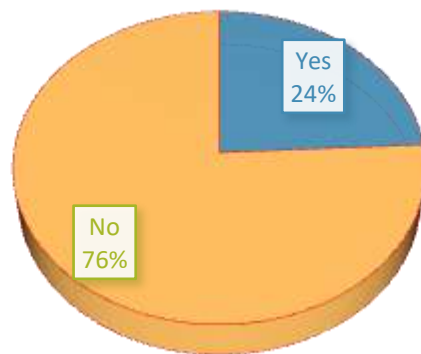
Wage and payment structure	Males	Females	Total Percentage
Frequency of wage distribution			
Daily	0.8	0.2	0.5
Weekly	11.0	7.9	9.4
Biweekly	4.8	2.6	3.7
Monthly	79.4	89.1	84.4
Others	4.0	0.2	2.0
Mode of payment of wage			
Directly	24.2	24.3	24.3
Bank	74.9	74.9	74.9
Online	0.8	0.7	0.8
Others	0.2	0.0	0.1
Reasons for normal salary deduction			
Lack of attendance	74.5	77.2	75.8
Reduced working hours	25.5	30.7	28.2
Low productivity	18.0	30.0	24.2
Deduction for PF/Pension/Insurance	28.3	34.5	31.5
Others (electricity charge, society loan)	1.2	2.4	1.8

More pay for more work	82.2	76.0	79.0
Deduction in wage owing to COVID-19	7.0	5.6	6.3
Provision for paid leave	80.2	75.8	78.0
Daily allowance for temporary workers	31.9	34.3	33.1

V LIVING CONDITIONS

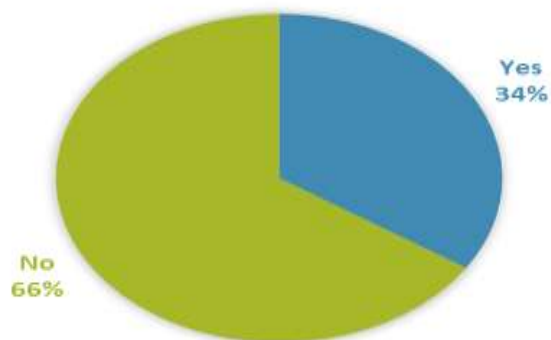
More than three fourth of the workers (76%) did not have a house of their own (figure 5.1).

Figure 2.15 -Own a house



More than half of the workers (66%) did not have a land or property of their own (figure 5.2)

Figure 2.16 Own a land/property



Housing facilities of workers are detailed in Table 5.1. Majority of the workers (83.1%) were living inside the plantation, while 16.9% had a staying facility outside the plantation which was either plantation arranged (12.6%), but majority arranged by self (67.4 %) and others (20%). Half of the workers (50.4%) had two rooms while 13.8% had a single room and 32% had more than three rooms in their staying facility. More than half had a nuclear type family with 3-4 members (53.4%), while 33% had 5-6 members in the family. Around 10% of the families had one to two members. Workers were living in the same place for about 1-2 generations (57.9%); 3-4 generations (39.2%) and 5-6 generations (2.9%).

Table 2.20-Housing facilities -General details

Details of housing	Percentage
Number of rooms in house	
No room	3.8
1 room	13.8
2 rooms	50.4
≥3 rooms	32.0
Number of members in the family	
1-2	10.6
3-4	53.4
5-6	33.3
7-8	2.3
>8	0.3
Number of generations since living in the same place	
1-2	57.9
3-4	39.2
5-6	2.9
Staying facility (house) near plantation	74.8
Staying facility (house) inside plantation	83.1

More than three fourth of the workers were living inside the plantation. The workers' responses on the details of the plantation homes are given in table 5.2. Majority of the workers (74.8%) reported that their housing facility had adequate cleanliness. Only 4.1% of them pay rent for the house. Timely repair and maintenance was not done in about 45.2% of the houses. Around 78.8% had adequate drinking water facility available. Adequate toilet facilities were provided in about 74% of the homes. Only 17.7 % had domestic animals at home. More than three fourth of the homes were maintained with proper drainage system (79.0%). About 22.7 % of the workers shared their accommodation with other co-workers.

Table 2.21-Plantation home details

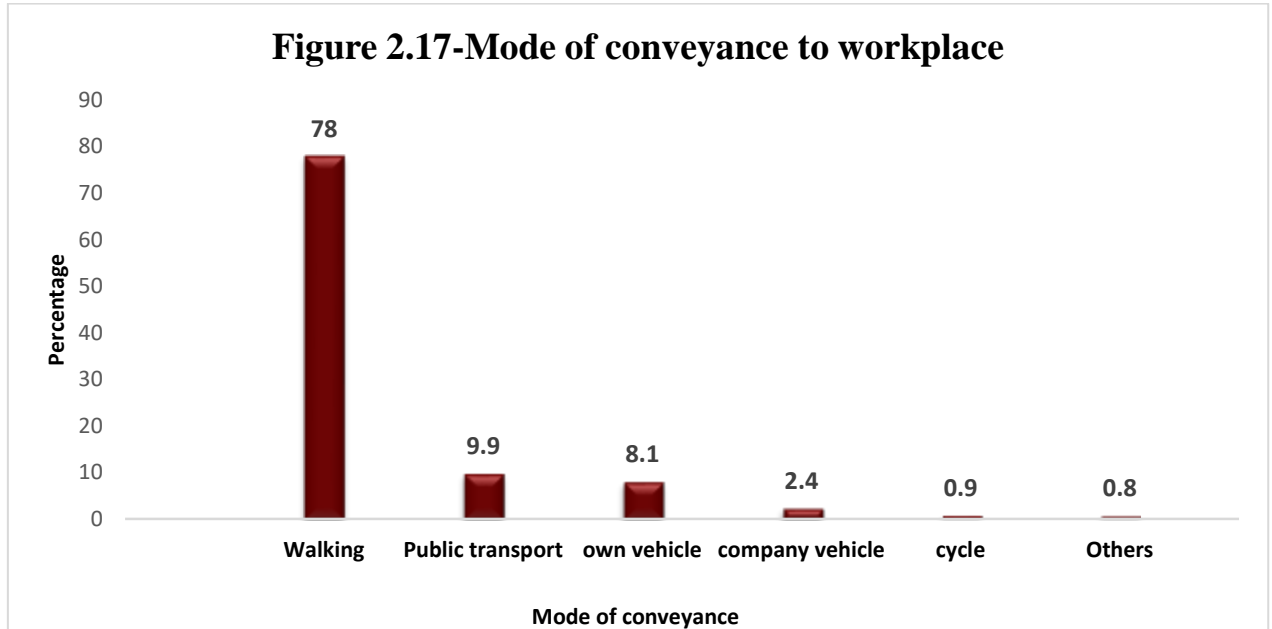
Plantation homes-details	Response	
	Yes	No
Housing facility possess adequate cleanliness	74.8	25.2
Pay rent for the house to live in	4.1	95.9
Timely repair/maintenance of house done	54.8	45.2
Availability of adequate drinking water	78.8	21.2
Availability of adequate toilet facilities	74.0	26.0
Have cattle /domestic animals at home	17.7	82.3
Proper drainage system	79.0	21.0
Share accommodation with other workers	22.7	77.3

The amenities available in workers's homes are shown in table 5.3. Majority of the workers had a television set at home (84.8%), fan (61.6%), refrigerator (17.0%), mixer grinder (83.7%) and washing machine (5.1%). Three fourth of the homes were provided with a gas connection (74.8%)

Table 2.22 Amenities

Amenities	Percentage
Television	84.8
Fan	61.6
Refrigerator	17.0
Gas connection	74.8
Mixer grinder	83.7
Washing machine	5.1

Mode of conveyance to workplace is shown in figure 5.3. Majority of the workers (78%) reached their work place by walking while 9.9 % used public transport,8.1% had own vehicle ,2.4% used company vehicle and very few used cycles (0.9%)



Gender wise distribution shows walking as the main mode of conveyance for both males and females. However, females (10.5%) used public transport more than males (9.2%). Males (9.6%) used own vehicle more than females (6.7) (table 5.4)

Table 2.23-Genderwise distribution of main modes of conveyance to workplace (%)

Mode of conveyance	Males	Females
Walking	75.8	80.0
Public transport	9.2	10.5
Own vehicle	9.6	6.7
Company vehicle	3.4	1.5

Drinking water facility

Majority of the workers used water from public pipe (46.3%), while almost one third used water from wells and one fourth used stored water from tanks. (Table 5.5)

Table 2.24-Source of drinking water

Source of drinking water	Percentage
Well	31.8
Public pipe	46.3
Tank water	25.8

The workers's response on available drinking water facility is detailed in table 5.6. Majority of the workers got enough safe water for drinking. (89.2%). About 88.8% of the tank water users were aware whether tank for water storage was properly cleaned and maintained. About 71.8 % knew whether water sources like wells and ponds were disinfected. Majority stored drinking water in containers (82.3%). More than three fourth of them (78.3%) used stored water within 24 hours while 21.7% used stored water after 24 hours also.

Table 2.25-Workers response on drinking water facility available

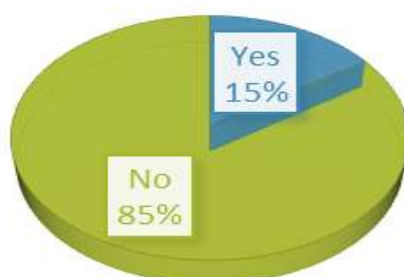
Drinking water facility	Response (%)	
	Yes	No
Get enough safe drinking water	89.2	10.8
Know whether tank for water storage is properly cleaned/maintained(if using tank water)	88.8	11.2
Know whether water sources like wells and ponds are disinfected	71.8	28.2
Store drinking water in containers	82.3	17.7
Use stored water within 24 hours	78.3	21.7
Use stored water more than 24 hours	21.7	78.3

Recreational facility

Only about 15% of the workers had any kind of recreational facility available in plantation while majority (85%) did not have any such facility. (figure 5.4)

Figure 2.18

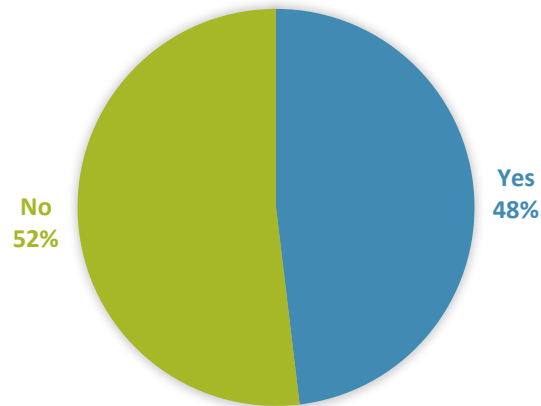
-Recreational facility in plantation



Attack by wild animals

Nearly half of the workers reported that there exists attack by wild animals in the plantation. (figure 5.5). The workers's responses are shown in table 5.6

Figure 2.19-Attack by wild animals in the plantation



About 6.8% of the workers were attacked by wild animals and 27.1% knew people who have been under such attack. (table 5.7)

Table 2.26-Details on attack by wild animals (%)

Attack by wild animals	Response	
	Yes	No
Have you ever been attacked by wild animals	6.8	93.2
Do you know anyone being attacked by wild animals in your or nearby plantations	27.1	72.9

Respondents in the age group 31-40 were more aware (50.3%)of attack of wild animals in the plantation. The workers in the age group 61-70 faced more attack by

wild animals (11.8%) and they knew (50%) people who were attacked by wild animals (table 5.8)

Table 2.27-Attack by wild animals based on age groups (%)

Attack by wild animals	Age group					
	20-30	31-40	41-50	51-60	61-70	>70
Aware that attack by wild animals exists in plantations	48.3	50.3	47.0	47.1	61.8	33.3
Ever been attacked by wild animals	3.4	4.1	7.4	7.3	11.8	0.0
Know anyone being attacked by wild animals	3.4	25.1	28.4	26.5	50.0	0.0

Females were more aware of animal attacks in plantation (50.2%) compared to males (45.9%) and they knew people who were attacked by wild animals (29.0%) compared to males (25.0%). Males were subjected to more wild animal attack (7.8%) as opposed to females (5.8%) [Table 5.9]

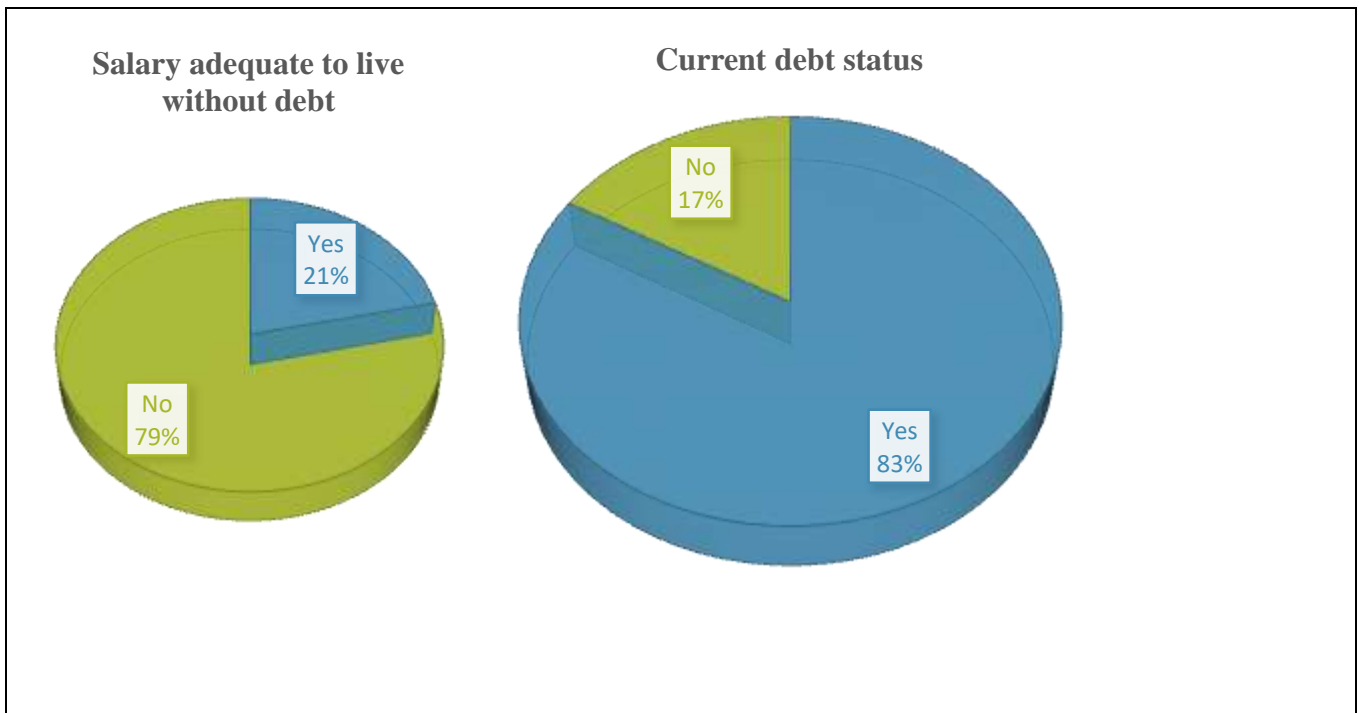
Table 2.28- Attack by wild animals based on gender (%)

Attack by wild animals	Males	Females
Aware that attack by wild animals exists in plantations	45.9	50.2
Ever been attacked by wild animals	7.8	5.8
Know anyone being attacked by wild animals	25.0	29.0

VI Debtsituation

Majority of the workers (79%) opined that their salary was not adequate to live without debt. Around 83% of the workers were under debt during the survey.

Figure 2.20 Salary and Debt status of workers



The debt situation of workers is detailed in table 6.1. Banks (57.1%) were found to be the main source of debt. Other sources of debt were found to be money lenders (18.2%), employer (6.4%), friends (21.3%), Kudumbasree (38.7%), microfinance institutions (15.1%), cooperative societies (18.8%), labour cooperative collective (4.1%) etc. Majority of the workers (93.9%) were paying interest for loans mainly for the purpose of education (40.9%), treatment (38.2%), housing (30.4%) and vehicle (10.3%). Other reasons (19%) for taking loans were weddings in the family, business and agriculture purposes and to meet house expenses due to low income. Very small proportion of workers had income from other sources like property, land or cattle

(12.9%); running small business activities (2.5%) like agriculture, Kudumbasree shops, stitching, driving etc. Only 20% of them had some form of investment. (Refer table 6.1). Investments were in the form of fixed deposit (26.9%), temporary deposit (16.3%), gold (39.9%), land (28.8%), chitty (22.1%) etc. The workers remarked that the small income they got from other activities created small changes in life so as to move on with less difficulties.

Table 2.29 Details of debt situation of workers with gender distribution (%)

Variables	Men	Women	Total
Currently under debt	83.2	83.7	83.0
Source of debt			
Bank	59.1	55.2	57.1
Moneylender	21.0	15.5	18.2
Employer	8.6	4.3	6.4
Friends	25.0	17.8	21.3
Kudumbasree	33.3	43.8	38.7
Other self-help groups	9.8	5.8	7.7
Labour cooperative collective	4.6	3.6	4.1
Microfinance Institutions	17.0	13.3	15.1
Local Self Government Institutions	4.6	2.1	3.3
Cooperative Societies	25.3	12.7	18.8
Pay interest for loans	93.0	94.6	93.9
Purpose for loan			
Housing	30.9	30.0	30.4
Vehicle	12.7	8.1	10.3

Education	46.3	35.8	40.9
Treatment	43.9	32.9	38.2
Others	18.0	19.9	19.0
Running micro business/small business activities	3.6	1.5	2.5
Income from property/land/cattle	14.8	11.2	12.9
Investments	23.6	16.9	20.1
Type of investments			
Fixed deposit	28.0	25.6	26.9
Temporary deposit	15.3	17.8	16.3
Gold	35.6	45.6	39.9
Land	31.4	25.6	28.8
Chitty	28.0	14.4	22.1
Others	1.7	2.2	1.9

When considering the gender wise distribution of debt status of workers, banks were the main source of debt for both males and females. Other main source of debt for males were friends (25.0%), cooperative societies (25.3%), moneylenders (21.0%); while for females reported as Kudumbasree (43.8%). More than ninety percent of males and females paid interest for loans. About 43.9% of males and 32.9% of females took loans for treatment. About 3.6% of males and 1.5% of females had small business activities. More males got income from property/land/cattle (14.8%)

compared to females (11.2%). Comparatively males (23.6%) had more investments than females (16.9%) [Table 6.1]

VII Policies, benefits and welfare schemes for the workers

The allowances, benefits and schemes received by the respondents are detailed in Table 7.1. Various benefits received were family allowance but only for 45.4% workers, travel allowance to 39.7%, free ration only to less than half of the workers (43.2%). About 65.3% had free housing, compensatory leave was given to 27.3% while medical leave to 60.8%. Under social security schemes provident fund was provided for more than three fourth (83.6%) of the workers, gratuity to 63.5%, and pension to 69.8% of workers. About 18.1% of the workers were part of labour insurance schemes. Free healthcare was provided only to 29%, maternity benefits to 17.2% and childcare services to 18.2%. About 3.4% were under treatment for cancer/kidney disease/heart disease, of which 31.4% of them received special treatment allowance within one year. Only 1.1% were differently abled. Few (20%) received special educational allowance for children of plantation workers. About 39.1% had received medical allowance, of which 23% received it in the week of rejoining along with first salary while 15% got it after a long time while rest at other times.

Table 2.30 Allowances/benefits/schemes received by the respondents with gender distribution (%)

Variables	Men	Women	Total
Allowances/benefits			
Dearness-allowance/Family-allowance	42.3	48.3	45.4
Travel allowance	32.5	46.4	39.7
Free ration	47.5	39.1	43.2

Free housing	63.5	67.0	65.3
Compensatory leave/Earned leave	19.6	34.6	27.3
Medical leave	65.3	56.6	60.8
Others	2.0	1.9	1.9
Social security schemes			
Provident Fund	86.8	80.5	83.6
Gratuity	71.1	56.4	63.5
Pension	73.1	66.7	69.8
Compensation/Labour Insurance Schemes	17.6	18.5	18.1
Free healthcare	26.5	31.3	29.0
Other health insurance plans	18.0	11.8	14.8
Maternity benefits	-	33.5	17.2
Child care services	13.0	23.0	18.2
Under treatment for cancer/kidney disease/heart disease	4.0	2.8	3.4
If so, received special treatment allowance for plantation workers within one year	15.0	53.3	31.4
Differently abled person	1.0	1.1	1.1
Received special educational allowance for children of plantation workers	22.8	17.4	20.0
Received medical allowance	38.3	39.9	39.1
Time of receiving allowance			
On the week of rejoining along with first salary			23.1
After a long time	23.8	22.5	15.1
	13.0	17.0	

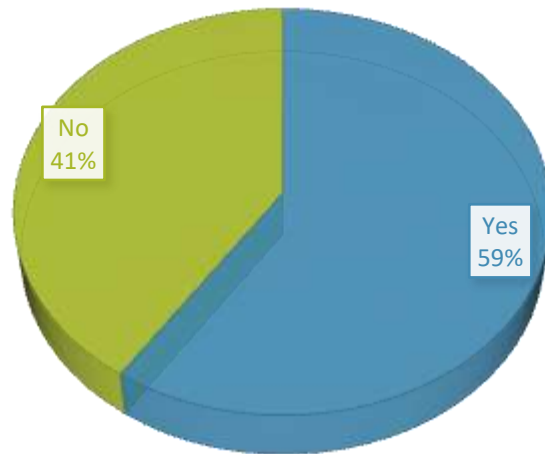
When considering the gender distribution of allowances and benefits, comparatively higher proportion of men received free ration, medical leave, provident fund, gratuity and pension than females; while females received comparatively higher proportion of family allowance, travel allowance, free housing, earned leave, labour insurance

schemes and free healthcare compared to males. About 33.5% and 23% of females received maternity benefits and child care services respectively. About 22.8% of males and 17.4% of females received special educational allowance for children of plantation workers. [Table 7.1]

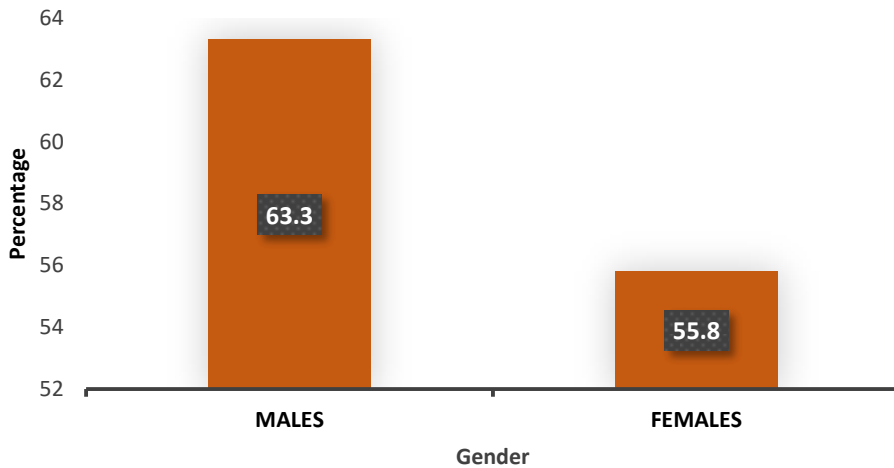
Health insurance coverage

About 59% of workers had health insurance coverage, but 41% of the workers were not covered under any health insurance scheme. About eighty-four percent of the insured workers were covered under Ayushman Bharat or Arogya Keralam scheme. (figure 7.1)

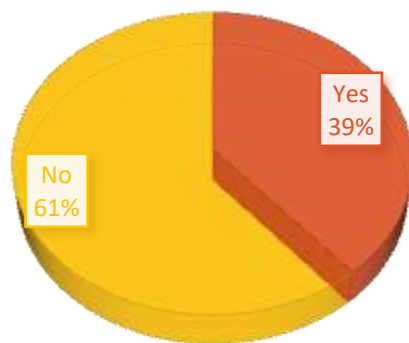
Figure 2.21 Health insurance coverage



Males (63.3%) had a higher health insurance coverage compared to females (55.8%) [figure 7.2]

Figure 2.22-Health insurance coverage by gender

Only about 39% of the workers were satisfied with the received allowances and benefits. (Refer figure 7.3)

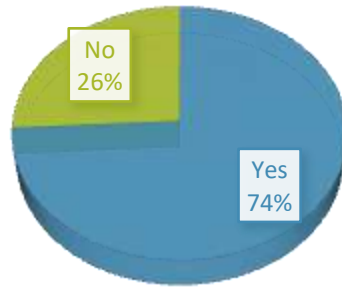
Figure 2.23-Satisfied with benefits and allowances

Workers reported that wages and allowances they received were not enough to satisfy even their basic needs. Most of them were not satisfied with the housing and other facilities given to them. As per the survey they expected better and regular wages and allowances, improved medical facility, educational scholarships for their children, a playground for their kids, good housing and drinking water.

VIII Trade unions and grievance redressal mechanisms

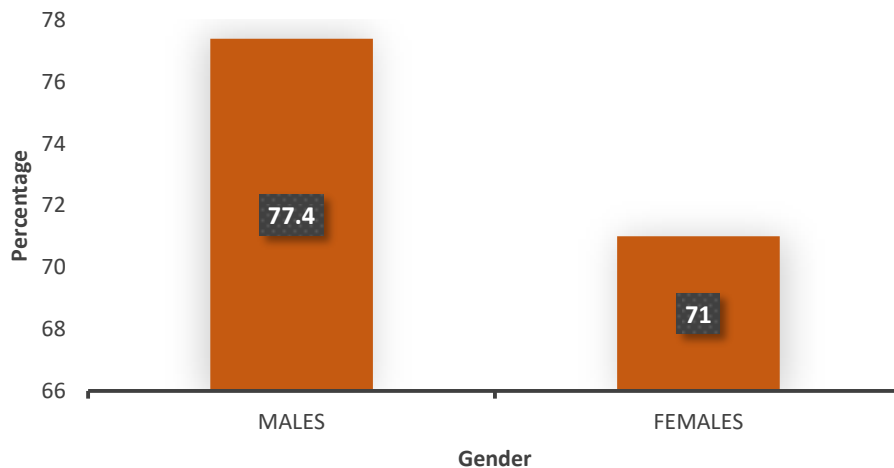
Nearly three fourth of the workers had a trade union membership. (figure 8.1)

Figure 2.24 Trade union membership



About 77.4% of males and 71% of females had trade union membership. (figure 8.2)

Figure 2.25-Trade union membership by gender



Issues at workplace and grievance redressal mechanisms

Late payment of wages was the major issue faced at workplace. (36.4%). Other problems were denial of wages (2.8%), denial of leave (3%), demand to continue work despite illness (1.8%) verbal abuse (8.2%), physical abuse (0.6%), sexual abuse (0.2%), humiliation (4.3%) and arguments (0.3%). More than half of the workers (68.3%) discussed workplace issues at labour union level and had facilities to solve employment disputes at workplace (57.9%). About 44.3 % recognized the presence

of organization/ systems at district or state level to solve workplace disputes. Internal committee at workplace for redressal of sexual harassment/abuse complaints were active in only less than one fourth of the plantations (23.2%), while 1.4% of workers reported sexual abuse/harassment attempts at workplace. About 8.4% of workers ever approached plantation inspectors or labour officers. The issues faced at workplace, trade unions, grievance and redressal systems in plantations are detailed in table 8.1 along with gender distribution.

Table 2.31- Trade unions, issues at workplace and grievance redressal mechanisms with gender distribution (%)

Variables	Males	Females	Total
Labour union leader	18.4	5.8	11.9
Issues faced at workplace within a year			
Late payment of wages	40.5	32.6	36.4
Denial of wages	3.2	2.4	2.8
Denial of leave	3.6	2.4	3.0
Demand to continue work despite illness	1.8	1.9	1.8
Verbal abuse	9.8	6.7	8.2
Physical abuse	0.6	0.6	0.6
Sexual abuse	0.4	-	0.2

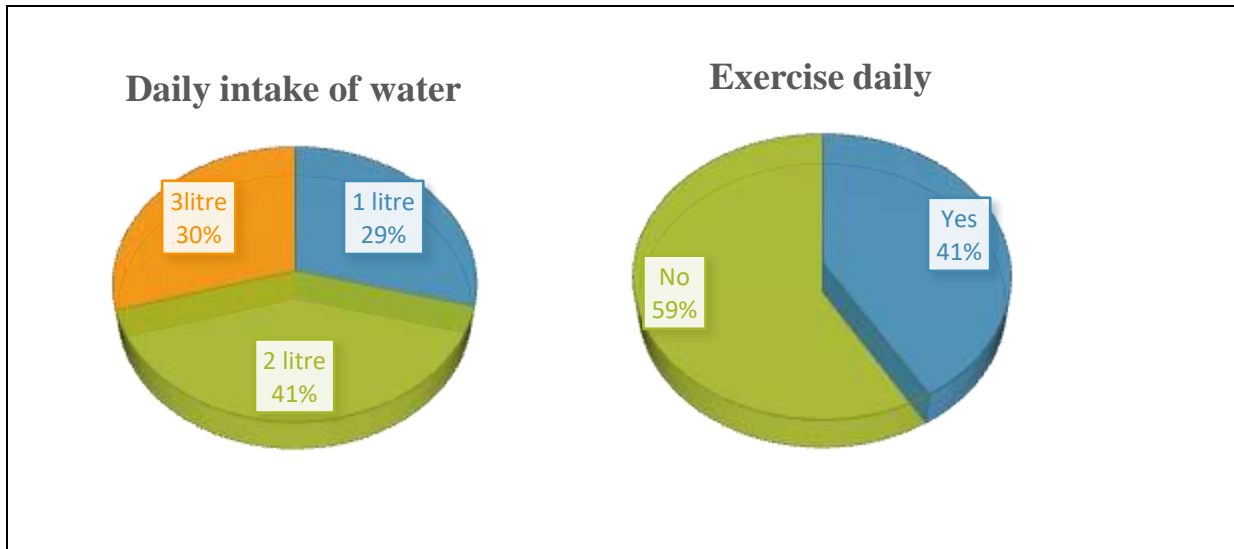
Humiliation	6.8	2.1	4.3
Arguments	0.4	0.2	0.3
Grievance and redressal at tea plantations			
Discuss workplace issues at Labour union level	74.5	62.5	68.3
Facilities /Provisions to solve employment disputes at workplace	58.7	57.1	57.9
Any organization/ systems at district or state level to solve workplace disputes	43.9	44.8	44.3
Internal committee at workplace for redressal of sexual harassment/abuse complaints	20.0	26.2	23.2
Sexual abuse/harassment attempts at workplace	2.0	0.7	1.4
Ever approached plantation inspectors or Labour officers	8.8	8.1	8.4

Late payment of wages was reported more by males (40.5%) than females (32.6%). About 74.5% of males and 62.5% of females discuss workplace issues at labour union level. Sexual abuse attempts were reported by about 0.7% of females. [Table 8.1]

IX. Health Status and Health Care Utilization

General health routine of workers is described in terms of daily water intake, regular exercises and nutrient intake. Majority of the workers did not have the habit of regular exercise (59%) (Refer figure 9.1)

Figure 2.26-General health routine: -



Among people who exercised, majority resorted walking (96.7%) while others did running (9.8%), cycling (0.9%) and yoga (1.4%) (Refer figure 9.2 for details)

Figure 2.27-Type of exercise done

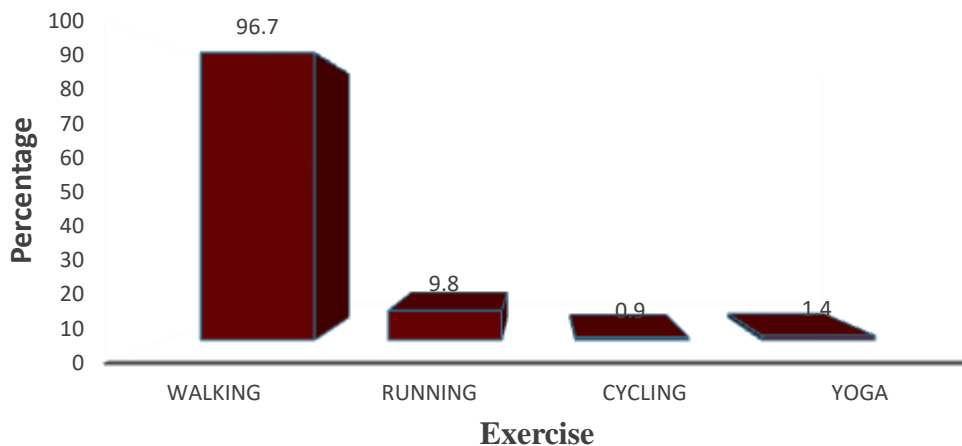


Table 9.1 gives a view on nutrient intake by workers on a weekly basis. The highest servings include 1-2 servings of fruit per week (48%), daily vegetable intake (62.4%), 1-2 servings of meat/fish/egg (53.2%). Majority do not consume essential foods regularly.

Table 2.32-Nutrient food intake by workers (%)

Servings (Days/week)	Fruits	Vegetables	Meat/Fish/egg
nil	5.0	1.0	4.0
1-2	48.0	15.2	53.2
3-4	18.0	16.0	26.4
≥ 5	8.4	62.4	11.0

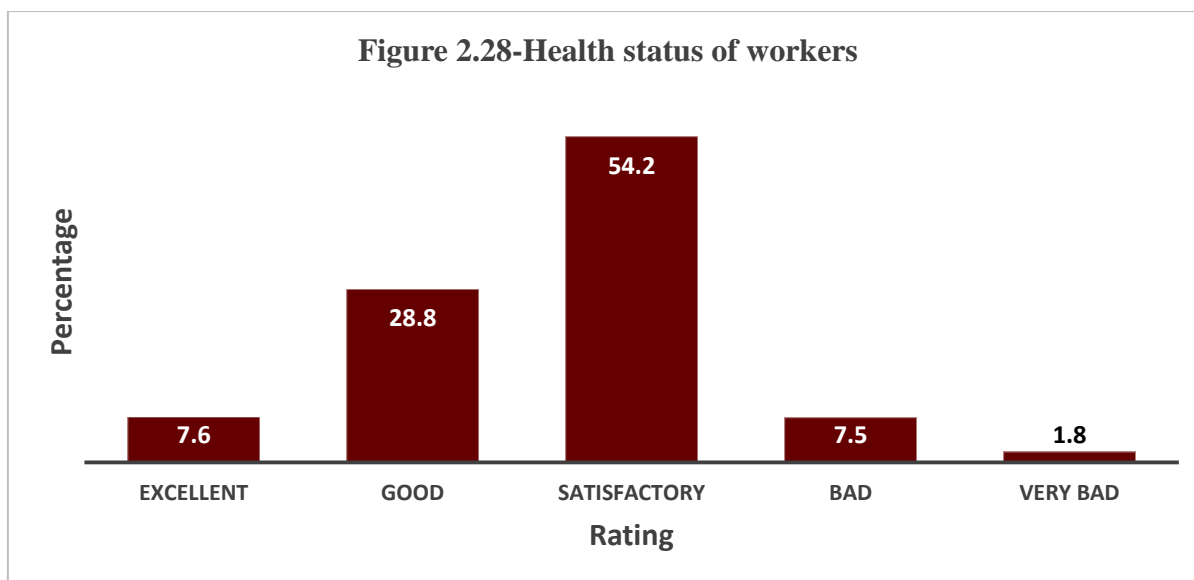
More than half of males and females had five or more servings of vegetables per week, but intake was found to be comparatively less in females than males. Overall protein and fruits intake was found to be low both in males and females.

Servings (Days/week)	Males			Females		
	Fruits	Vegetables	Meat/Fish/egg	Fruits	Vegetables	Meat/Fish/egg
nil	2.2	0.0	0.2	1.7	0.2	0.2
1-2	45.3	15.0	55.7	31.3	15.6	51.1
3-4	17.4	14.0	24.6	18.7	17.9	28.3
≥5	7.4	64.5	9.4	9.6	60.7	12.7

Table 2.33-Gender wise distribution of nutrient food intake

Evaluation of health condition by workers

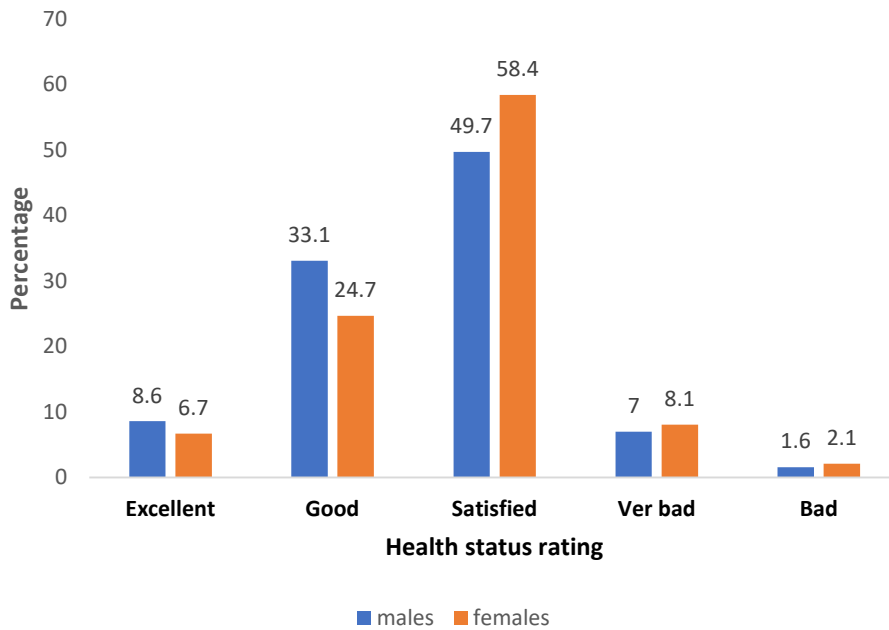
About 54.2% workers rated their health status to be just satisfactory. Only 28.8% perceived their health status to be good and very few as excellent (7.6%).



Majority of respondents in the age group of 20-30 years reported their health condition to be good, while majority in higher age groups reported it as satisfactory (table 9.3)

Table 2.34- Evaluation of health condition by workers age wise (%)

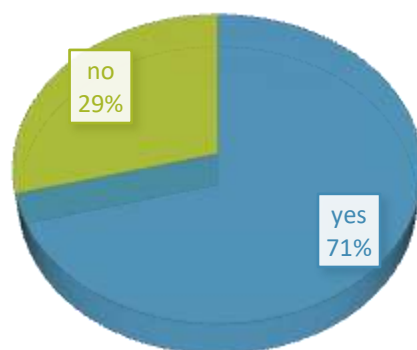
Age group	Excellent	Good	Satisfactory	Bad	Very bad
20-30	17.2	55.2	20.7	3.4	3.4
31-40	9.7	40.0	45.1	4.6	0.5
41-50	8.8	30.5	51.6	7.0	2.1
51-60	4.7	19.5	64.2	9.3	2.3
61-70	2.9	17.6	64.7	14.7	0.0
>70	0.0	0.0	66.7	33.3	0.0

Figure 2.29 Genderwise evaluation of health condition

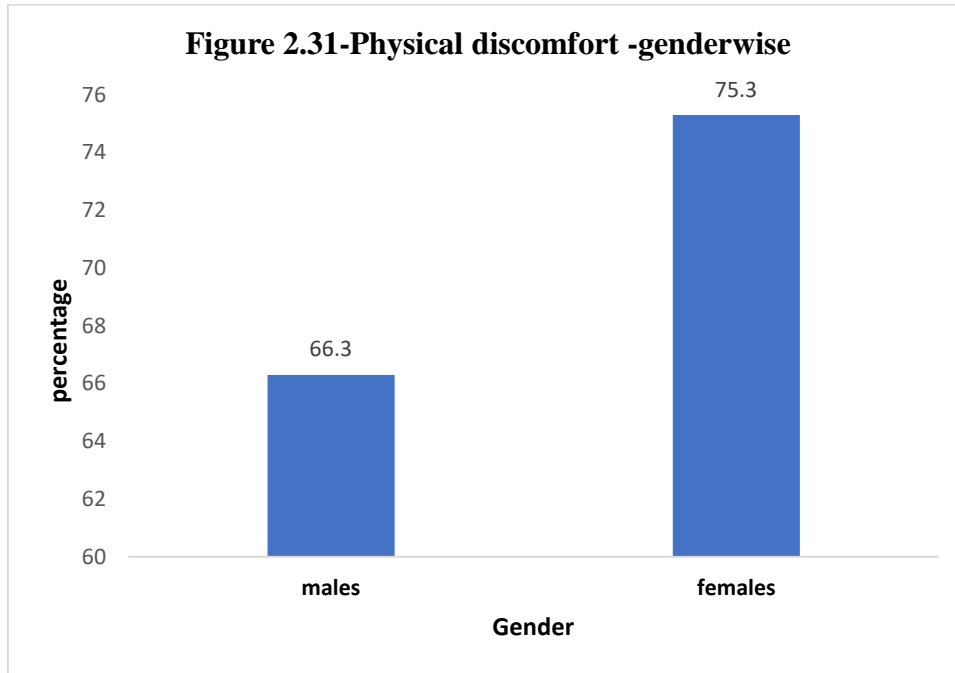
Compared to females, higher proportion of men rated their health condition as excellent and good, but majority of both males and females evaluated their health condition to be satisfactory (figure 9.4)

Physical discomforts/ailments faced by workers

Majority of the workers faced some kind of physical ailments in the past one year (71%) (figure 9.5)

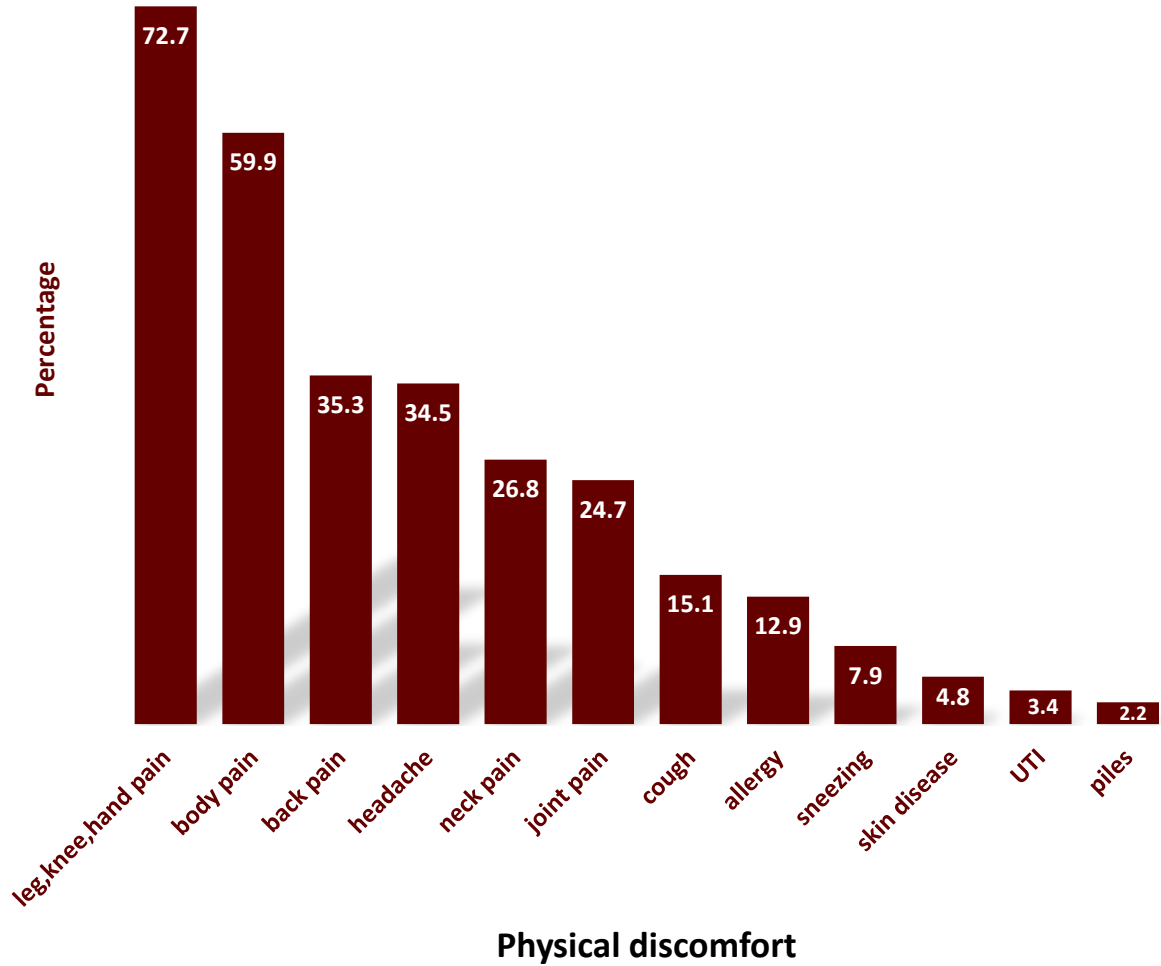
Figure 2.30-Physical discomfort

Three fourth of females faced physical discomfort compared to males; where 66% of males had some sort of physical ailments in the past one year.

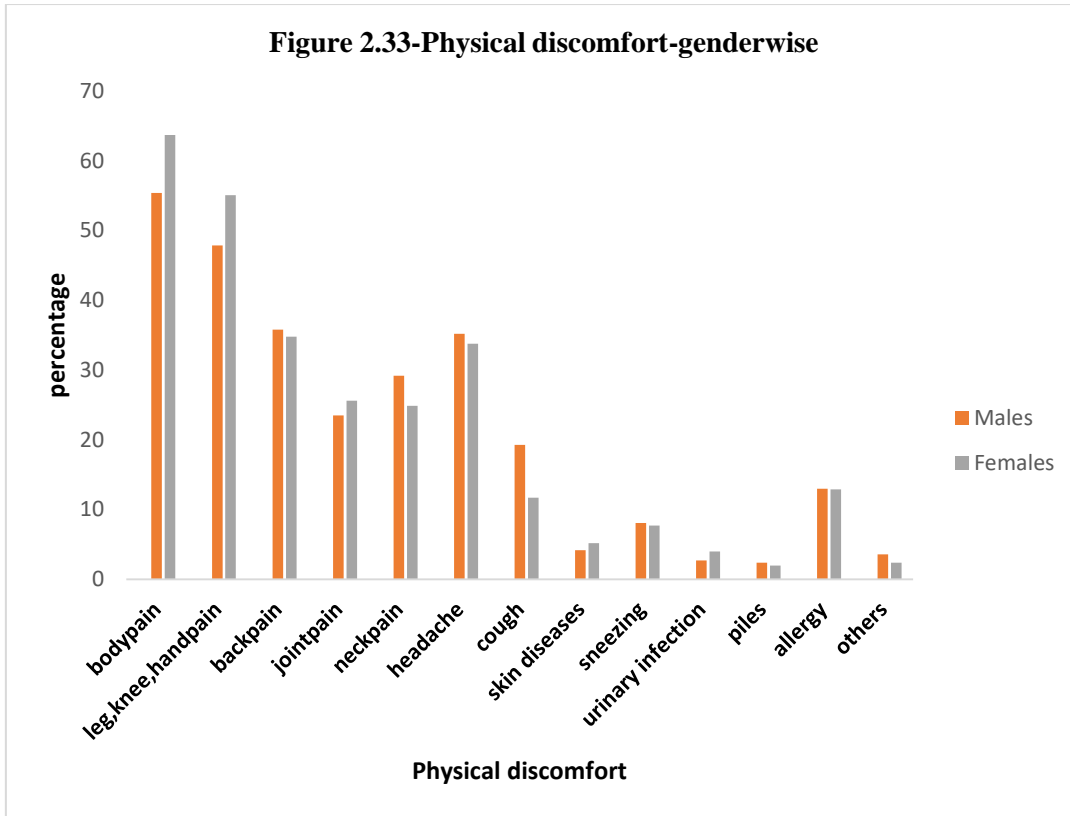


Various physical discomforts faced by workers within the past one year are depicted in figure 9.7. Majority of the workers faced musculoskeletal pain. Various ailments in the order of prevalence were leg/knee/hand pain (72.7%), body pain (59.9%), back pain (35.3%), headache (34.5%), neck pain (26.8%) joint pain (24.7%) cough (15.1%) allergy (12.9%) sneezing (7.9%) skin diseases (4.8%), UTI 3.4%), piles (2.2%) etc.

Figure 2.32-Physical discomforts faced by workers in past one year.

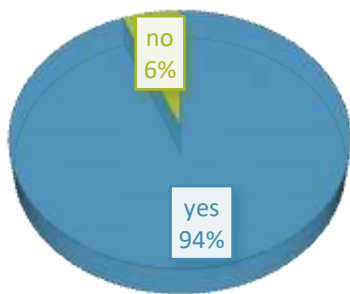


Musculoskeletal pain, skin diseases and urinary infection were reported to be comparatively higher in females; while neck pain, headache, cough etc. were found to be higher in males. (Figure 9.8)

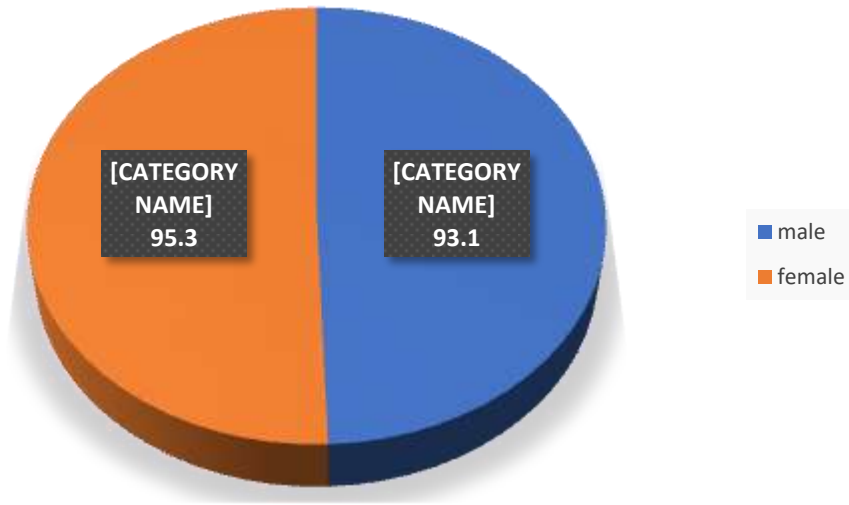


Majority of the workers sought care and did treatment for the ailments. (94%) (figure 9.9)

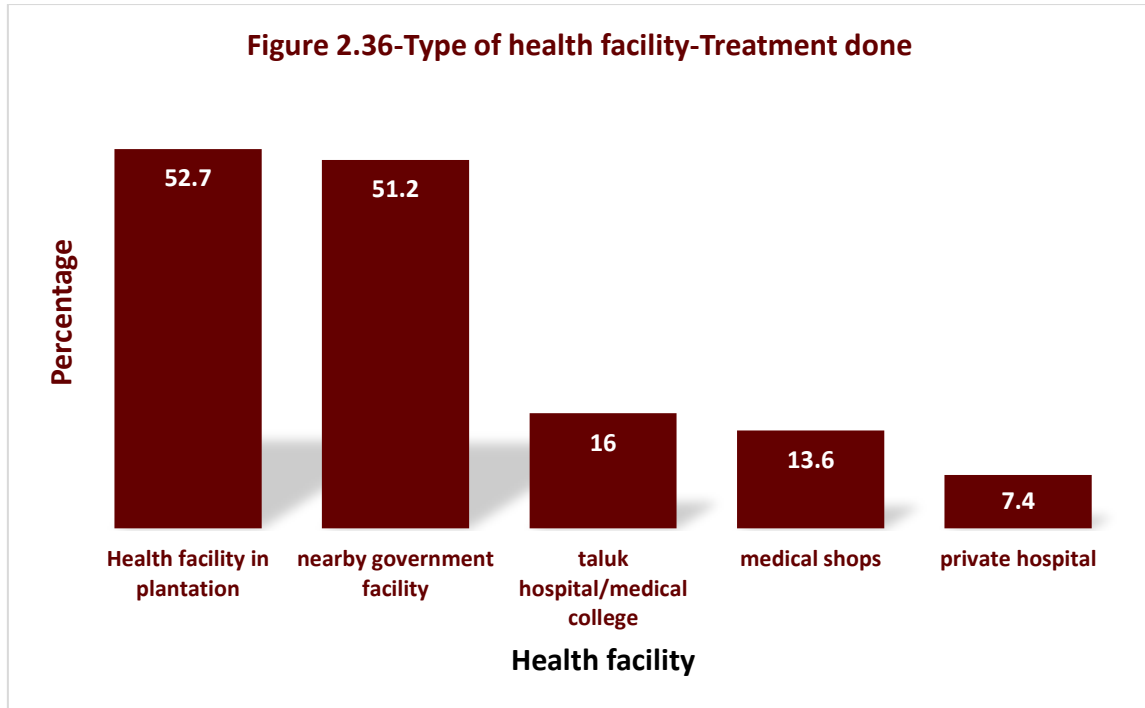
Figure 2.34-Treatment done



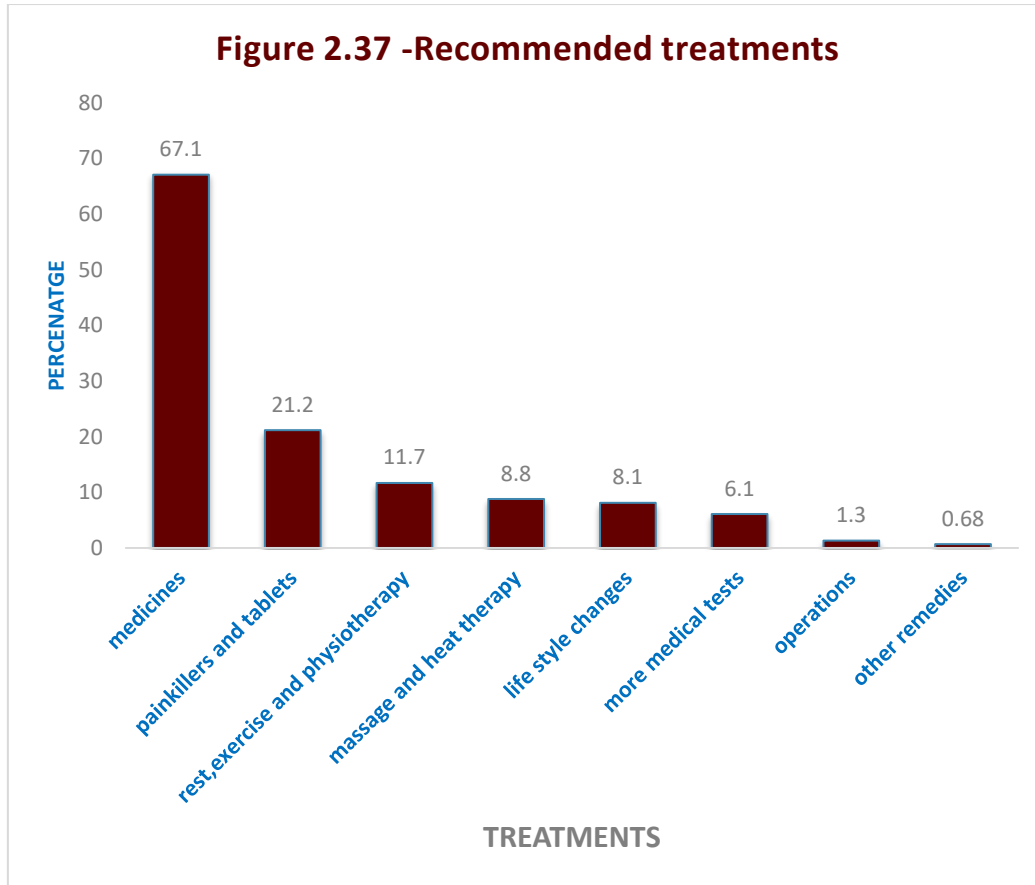
Ninety-five percent of females and ninety- three percent of males seek treatment for ailments

Figure 2.35 Treatment seeking based on gender

Majority of the workers did treatment in plantation hospital (52.7%) and nearby government facility (51.2%). Treatment was also done in taluk hospital/medical colleges (16%) and private hospitals (7.4%). About 13.6 % just went to medical shops and used medicines from there. Figure 9.11 details the health care facilities where treatment was carried out.

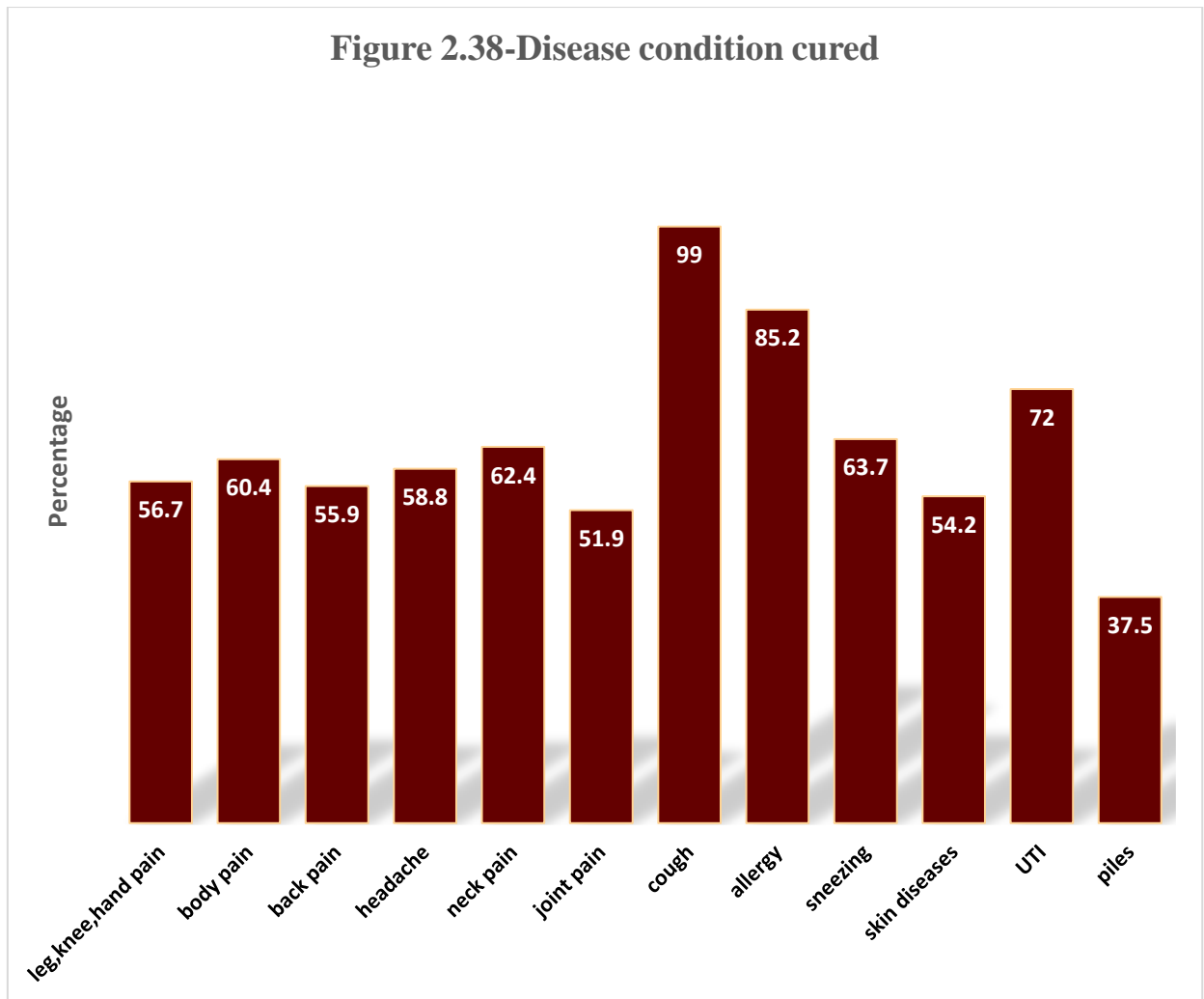


The recommended treatments for ailments are shown in figure 9.12. Different treatments recommended ranged from massage and heat therapy to surgical interventions. Various treatments provided were majorly medicines (67.1%), painkillers and tablets (21.2%), rest exercise and physiotherapy (11.7%) advised life style changes (8.1%), massage and heat therapy (8.8%) more medical tests (6.1%) and suggested operations (1.3%) A few workers resorted other remedies also.



The details of disease condition cured are shown in figure 9.13. A high proportion of workers with cough got relief after treatment (99%). Other disease cure rates include leg/knee/hand pain (56.7%), body pain (60.4%), back pain (55.9%), headache (58.8%), neck pain (62.4%), joint pain (51.9%), allergy (85.2%) sneezing (63.7%) skin diseases (54.2%), UTI (72%), piles (37.5%)

Figure 2.38-Disease condition cured



Injuries and accidents at workplace

About 8.2% of workers sustained injuries and faced accidents during the past year. Less than half of them (47%) got financial aid /medical allowance for the treatments done. Three fourth (75.2%) of them received timely treatments, mainly in plantation hospitals (71.8%). Medical allowance and financial aids were provided for less than half of them (47.1%) (table 9.4)

Table 2.35. Injuries and accidents at workplace during the past year with gender wise distribution (%)

Variables	Men	Women	Total
Injuries or accidents at work within past one year	5.2	11.0	8.2
Timely treatment received	31.2	68.8	75.2
Place of treatment			
Hospital in workplace	53.8	46.2	71.8
Hospital outside workplace	58.2	41.8	54.6
Medical allowance/Financial aid	38.5	50.8	47.1

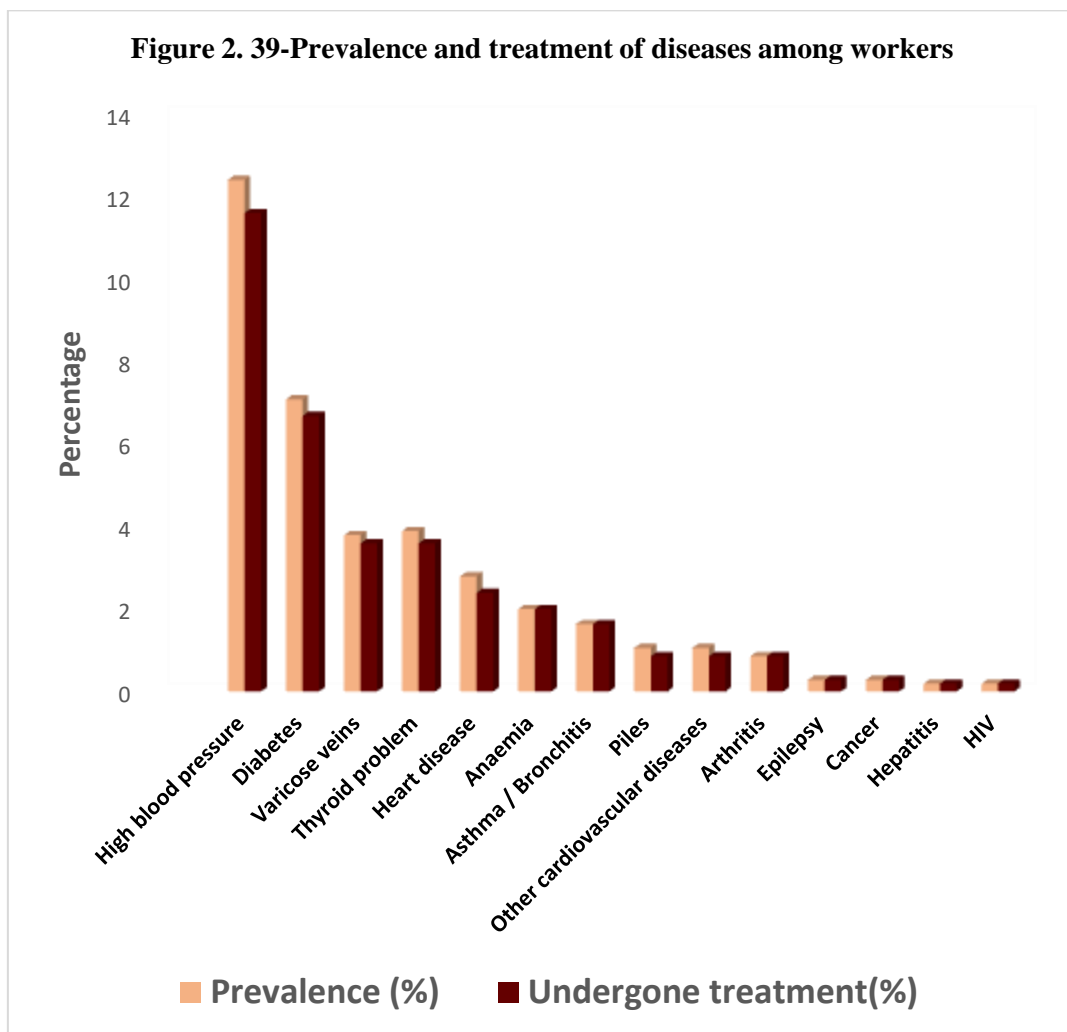
Prevalence of diseases among labourers

Major prevalent diseases among workers were non-communicable diseases like hypertension (12.4%) and diabetes (7.1%). Majority of the workers have undergone treatment for their disease conditions. In the order of prevalence, disease conditions of the workers were high blood pressure (12.4%), diabetes (7.1%), varicose veins (3.8%), thyroid problems (3.9%) heart diseases (2.8%) anaemia (2%) bronchitis (1.64%) piles (1.06%) other cardiovascular diseases (1.05%) arthritis (0.86%) epilepsy (0.29%) cancer (0.28%) hepatitis (0.19%) and HIV (0.18%). The details are depicted in table 9.5 and presented as figure 9.14.

Table 2.36 :-Prevalence of diseases and treatment pattern among labourers

Diseases	Prevalence (%)	Undergone treatment (%)
Tuberculosis	0.28	100.0
Hepatitis	0.19	100.0
Heartdisease	2.8	86.2
Highbloodpressure	12.4	93.7
Diabetes	7.1	94.5
Anaemia	2.0	100.0
Asthma/Bronchitis	1.64	100.0
Thyroidproblem	3.9	92.6
Piles	1.06	81.8
Varicoseveins	3.8	95.0
Epilepsy	0.29	100.0
Cancer	0.28	100.0
HIV	0.18	100.0
Othercardiovasculardiseases	1.05	81.8
Arthritis	0.86	100.0

Figure 2. 39-Prevalence and treatment of diseases among workers



Work-related stress

About 13.6% of the workers were always stressed at work, while 53.5% were never stressed and about 32.9% were sometimes stressed at work. Only 23% had a work life balance maintained regularly, while 67% felt work and life to be balanced at times while for 9.9% of the workers, work and life was never felt to be balanced. About 18.8 % felt lack of interest in work in past two weeks. (Table 9.6)

Table 2.37-Work-related stress

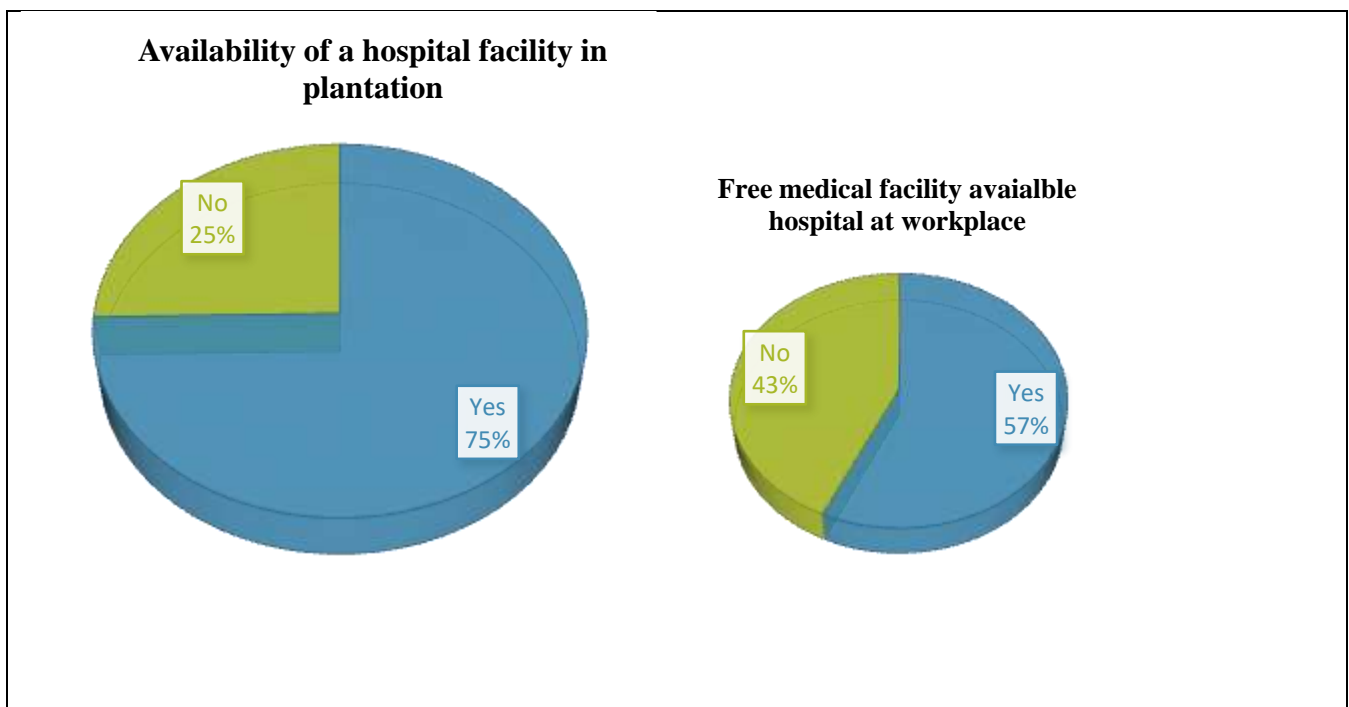
Variables	Percentage		
Lack of interest in work and feeling unhappy in past two weeks	18.8		
Stress faced and work life balance	Always	Sometimes	Never
Stress at work	13.6	32.9	53.5
Work life balance	23.0	67.1	9.9

X Barrierstoaccessinghealthcareservices

Availabilityof hospitalfacilitywithintheplantation

Three fourth of the workers had a hospital facility available in their plantation and about 57 % of the workers got a free hospital facility in the plantation (figure 10.1)

Figure 2.40 Availability of hospital and free treatment facility in plantations



Facilities available in plantation hospital.

Table 10.1 details the available facilities in plantation hospital. Almost half of the plantations (49%) had availability of services by doctors and nurses always; while for about other half (46.5%) services were available sometimes. A small percent (4.3%) reported these services were never available to them. About 88.5% had enough medicines and tablets. A first aid box or cupboard was available in about 58% of the plantations while other 42% were not provided any first aid cupboard or box. Only

one third of the workers got free medical checkups at workplace. Essential medicines and equipments were available in about 58% of the health facilities and yearly visits by government doctors in about 40% of the facilities.

Table 2.38 Medical Facilities available in plantation /plantation hospital

Facilities	Percentage
Availability of services of doctors and nurses Always Sometimes Never	49.0 46.5 4.3
Enough medicines and tablets available	88.5
First aid box/cupboard fixed in plantation	58.1
Essential medicines/accessories available in first aid box	86.0
Free medical checkup at workplace	34.5
Government recommended medicines and equipments in dispensary and hospital	58.0
Yearly visit of DMO/appointed assistant surgeons in plantation dispensary and hospital	40.4

DMO: district medical officer

Medical facilities available outside plantation

An external medical facility was available for about 92% of the workers. Majority of them arranged their own mode of conveyance to reach these facilities (34.4%) while others by walking (33.8) and for about 23.8%, transportation was provided by management. Only for about 22.1% of the workers to and fro transportation from plantation to external health facility was freely available. For more than half of them (63.2%) transportation was available but not provided free. About 14.7 % of the

workers had no such facility available. Free ambulance services were available for half of the respondents while for 21.4% service was available but not free and for about 28.4% no such services were available. Antenatal care available to pregnant women were checkup (21.6%), medicines (72.0%), scanning (52.9%) and X-ray (51.6%). Postnatal care was available to about 51.7% of the respondents. Inpatient treatment was available in about 65 % of the external health facilities with free food, medicine and care when admitted (52.5%). Healthcare personnel available in these facilities were specialists (79.5%), pharmacist (83.7%) nurse (93.1%) midwife (61.8%), nursing assistant (71.6%). Majority of the health facilities (94.1%) had adequate water availability. Availability of other provisions were female (69.0%) and male wards (67.9%), maternity room (53.9%), family planning center (54.9%) infectious disease ward (63.9%), OP with waiting facility (73.0%) observation room (73.0%), dispensary (84.5%), private consultation rooms (66.2%) general stores (67.5%) and canteen (50.6%). Immunization facility was available in 77.9% of the facilities, free medicines were provided in 80% and free birth certification facility was available in 48.2 % centers. In about 64.3% facilities mini operation theatres were available. (Refer table 10.2)

Table 2.39-Medical facilities available outside plantation

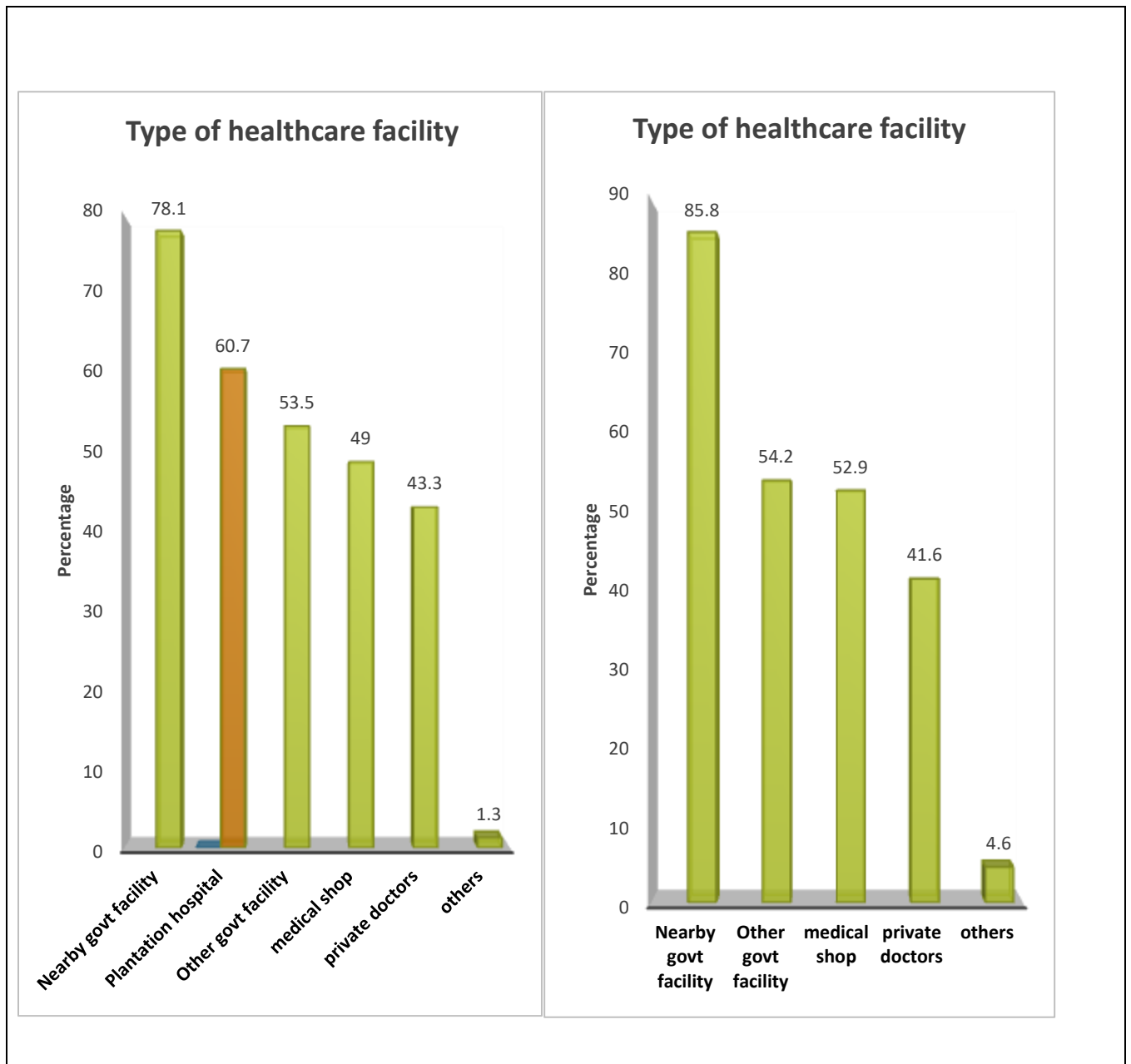
Facilities	Percentage
Availability of medical facility outside plantation	92.0
Distance to nearest PHC from plantation (if no hospital facility in plantation)	
1 km	18.3
1-8 km	45.0
>8 km	36.6

Mode of conveyance to outside health facility	
Walking	33.8
Transport by plantation management	23.8
Own vehicle/ Arranged by self	34.4
Others	8.0
To and fro transportation from plantation to external health facility	
Available and free	22.1
Available but not free	63.2
Not available	14.7
Ambulance service when in need	
Available and free	50.1
Available but not free	21.4
Not available	28.4
Availability of antenatal facilities for pregnant women	
Check up	21.6
Medicines	72.0
Scanning	52.9
X ray	51.6
Postnatal care	51.7
Availability of inpatient treatment	65.0
Free food, medicine and care when admitted	52.5
Healthcare personnel available	
Specialists	79.5
Pharmacist	83.7
Nurse	93.1
Midwife	61.8
Nursing assistant	71.6
Adequate water availability	94.1
Male ward	67.9
Female ward	69.0
Maternity room	53.9
Family planning center	54.9
Infectious diseases ward	63.9
OP with waiting facility	73.0

Observation room	73.0
Vaccination/Immunization facility	77.9
Free medicines	80.0
Counselling /health education on pregnancy/delivery	59.3
Free birth certification facility	48.2
Mini operation theatre	64.3
Dispensary	84.5
Consultation/examination room(with privacy)	66.2
General stores	67.5
Canteen	50.6

PHC: primary health centre

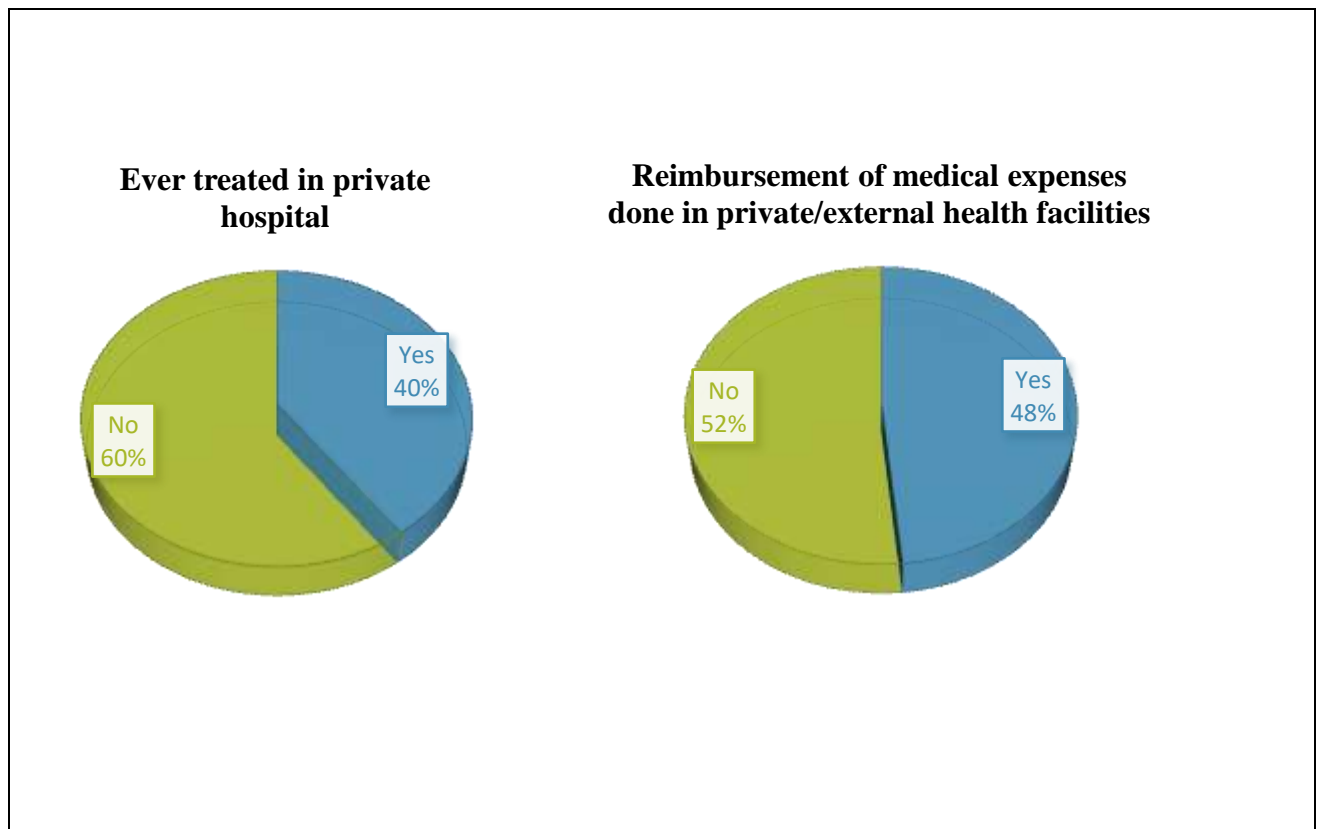
Figure 2.41-Type of healthcare facility -Treatment seeking in presence and absence of plantation hospital



More than three fourth of the workers utilized healthcare services from nearby government facility (78.1%) and about 60.7% from plantation hospital. In the absence of a hospital in plantation, majority seek treatment in nearby government facility (85.8%). More than half of the workers utilized other government facilities like taluk hospitals and medical colleges. About half of the workers approached medical shops and others went to private doctors. A few resorted other treatment modalities. Details are shown in figure 10.2. (Refer figure 10.2)

About 40% of the workers ever seek treatment in private hospital. More than half of the workers (52%) were not reimbursed or refunded from management for medical expenses in external health facilities (where treatment was done due to lack of facilities in plantation hospitals) (Figure 10.3)

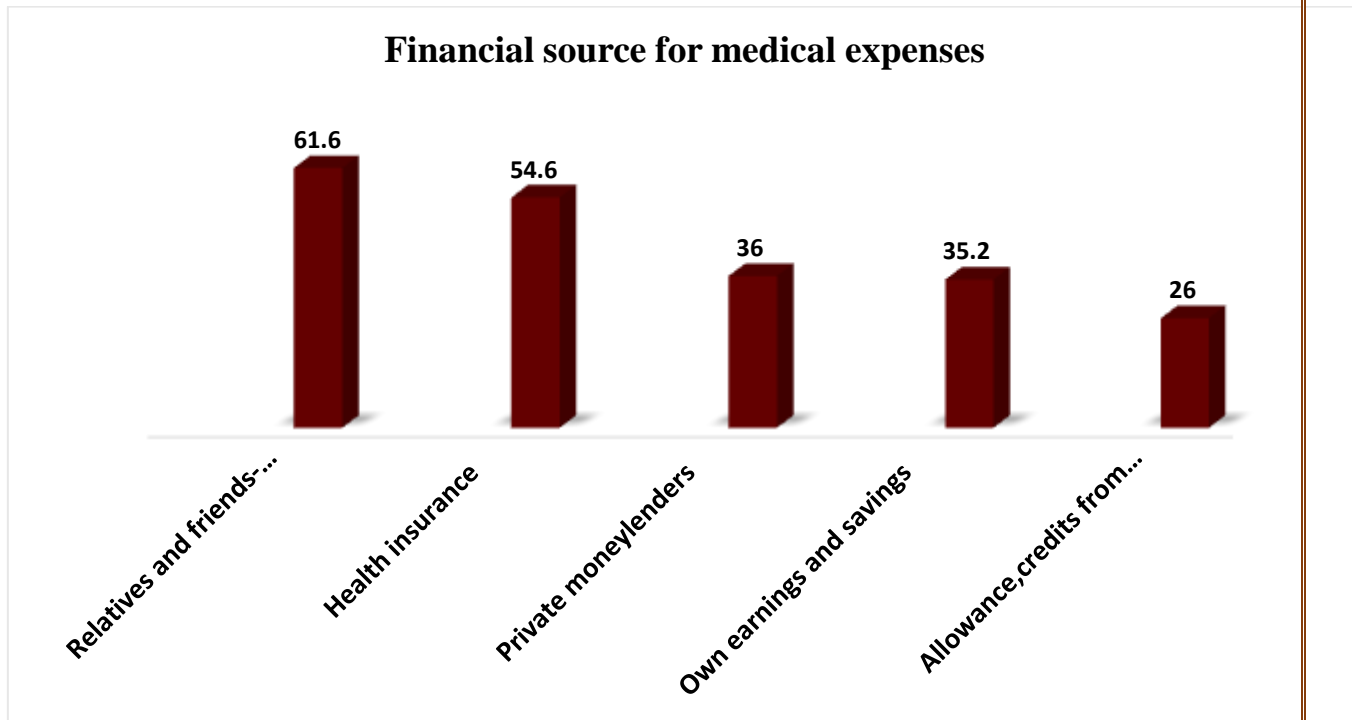
Figure 2.42 Treatment in private hospitals and reimbursement in external health facilities



Workers reported out of pocket expenditure was mainly for blood tests, some medicines, lab, scanning and x-ray. Figure 10.4 shows the financial sources for medical expenses. Majority of the workers (61.6%) used borrowed money from relatives and friends, while 54.6% used health insurance, 36% from private money

lenders. About 35% used own savings while 26 % got allowances or credits from management. (Refer figure 10.4)

Figure 2.43-Financial sources for medical expenses

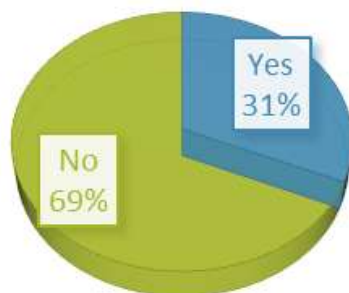


Barriers in seeking healthcare

About 31% of the workers felt that there exist barriers for seeking healthcare. (figure 10.5)

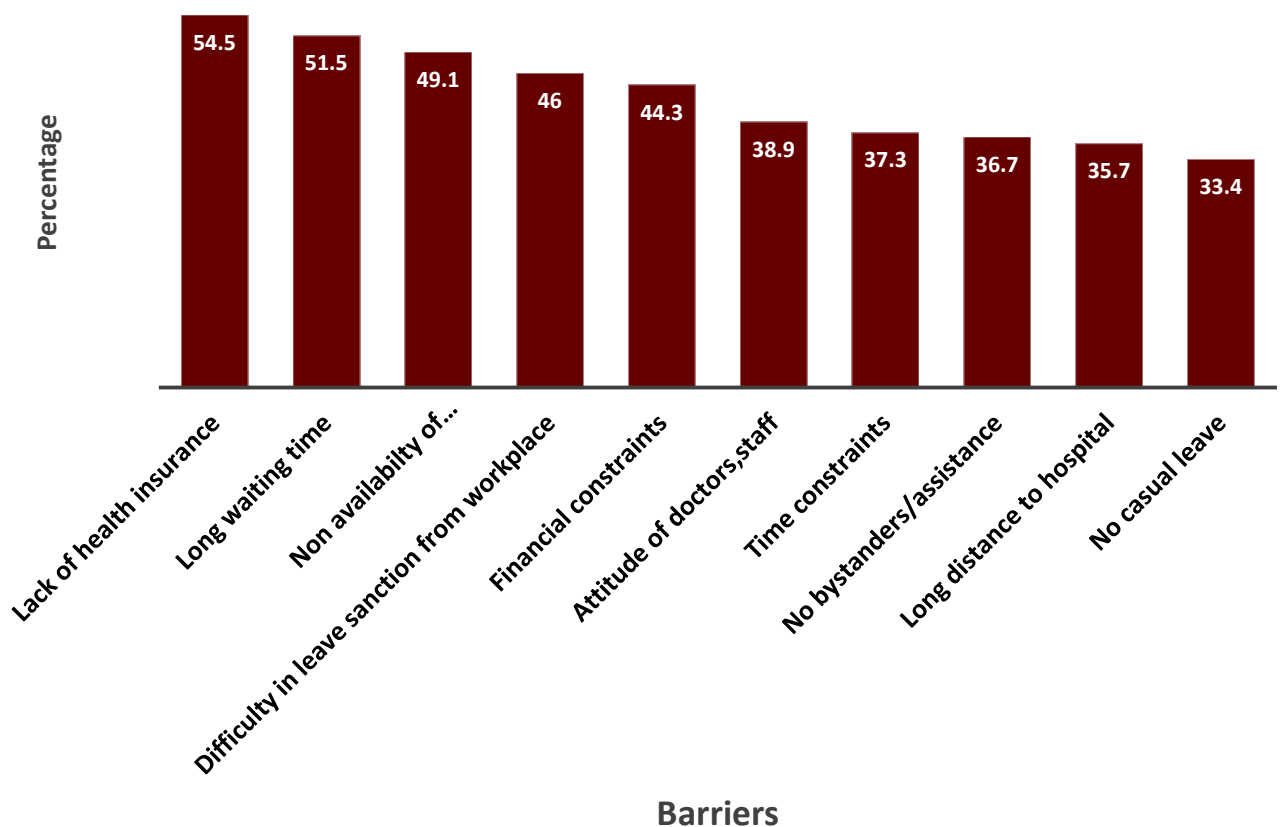
Figure 2.44

Barriers in healthcare seeking



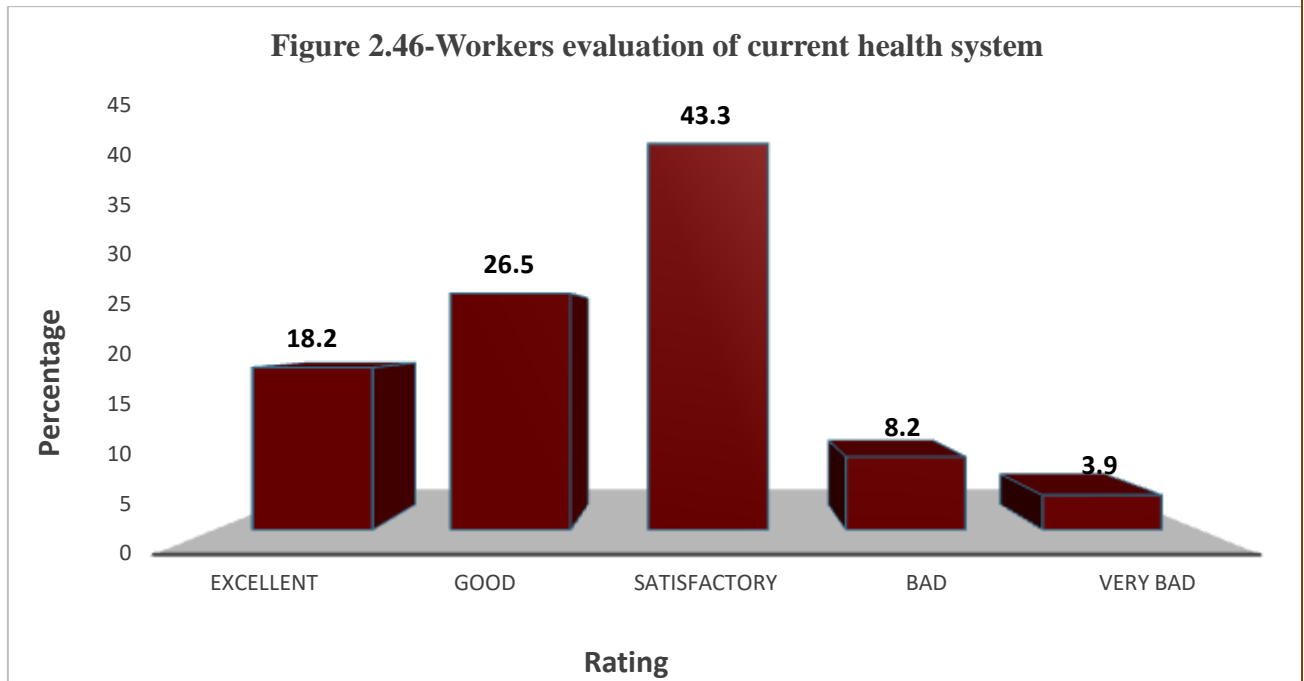
The perceived health seeking barriers are shown in figure 10.6. More than half of the workers (54.5%) felt lack of health insurance as a major barrier in seeking healthcare. Other perceived barriers were long waiting time (51.5%), nonavailability of doctors, medicines and equipments (49.1%), difficulty in leave sanction from workplace (46%), financial constraints (44.3%), attitude of doctors and staff (38.9%) time constraints (37.3%), lack of bystanders (36.7%), long distance to hospitals (35.7%) and no casual leave (33.4%) (Refer figure 10.6)

Figure 2.45 -Barriers in seeking healthcare



Evaluation of current healthcare system

Majority of the workers found the present healthcare system to be satisfactory (43.3%) while only 18.2 % felt as excellent, and 26.5% good. Few found the system to be bad (8.2%)and very bad (3.9%)



XI Child care and school facilities

Availability of crèche/kindergarten in the workplace

About 43% of the workers reported having a crèche in their plantation, while more than half of the workers (57%) had no crèche facility. (fig 11.1)

Figure 2.47



Facilities provided in plantation crèches

Table 11.1 details the facilities provided in crèches. More than three fourth of the crèches were easily accessible for mothers. More than half of the crèches (65.2%) had adequate furniture for children, almost three fourth had cradle for toddlers. Half of the clinics had an open playground area for older children. Service of trained nanny was available in more than half of the clinics. About 58% of the crèches worked with a single staff while 27% had two staffs. Majority of the crèches had toilet facility (86%), breastfeeding facility for mothers (67.1%) and about three fourth operated in

a safe building. About 60.6% of the crèches did free supply of milk/milk powder and nutrients. Since crèches were available in only 43% of the plantations, more than half of the workers didn't get any facilities provided by the crèches.

Table 2.40 Facilities provided in crèches.

Facility in crèche	Percentage
Crèche is easily accessible for mothers	89.1
Furniture suitable for children	65.2
Cradle for children under 2 years	73.5
Open playground area with a safety fence for older children	49.3
Service of trained nanny/other staff	67.1
Washroom/toilet facilities	86.0
Breastfeeding facility for mothers	67.1
Free supply of milk/milk powder, nutrients	60.6
Operating in safe building	74.4

Availability of school and education facilities in plantation

The educational facilities available in plantation are depicted in table 11.2. About 31.5% of the workers had a primary education facility, 40.3% had a school in their plantation; leaving more than half of the workers without these facilities. Nearby schools were almost one to eight km away from plantation as informed by the workers. About 30.1% of the workers were paying fees for educational facilities.

Table 2.41 Educational facilities in plantation

Education facility	Percentage
Primary education facility for six to twelve year children	31.5
School in plantation	40.3
Pay fees for educational facilities	30.1

3. PERCEPTIONS AND ATTITUDES

A QUALITATIVE EXPLORATION

The findings from the in-depth interviews mainly in the areas of migration, deprivation, landlessness and lack of belonging, permanent to temporary employment, labour and employment circumstances of study participants and health and health care access are discussed in this section.

3.1. Migration, deprivation, landlessness and lack of belonging

There was a general consensus among the respondents that migration has been a strong driver behind the consolidation of a labour force in the tea plantation sector of the state. Several of the participants traced the origins of their association with the sector from more than two hundred years ago, when their ancestors migrated from Tamil Nadu to the plantations for work. Many could trace these beginnings to about three or even four generations ago and opined that the abject poverty and lack of other means for survival had forced their ancestors to migrate to tea plantations of Kerala, which were then mostly funded by British capital. Such histories are more common among the workers in the tea plantations of Idukki and Wayanad. Although many agreed that caste background was indirectly linked to the work, since most of all who had migrated in search of employment and better prospects belonged to backward social sections, only a minority voice among the workers felt that caste continued to play a role in determining their socio-economic status. The dominant voice among the respondents identified that the deprivation experienced by them cut across such caste barriers and had more to do with the neglected situation of the sector and the precarious work that it entailed. However, many of the trade union leaders, academicians and political activists emphatically raised the persisting role of caste in the sustained neglect of the sector by the state. They opined that the

predominance of members from backward and Dalit backgrounds had a significant bearing on the low priority accorded to the problems of the workers.

Another common reason for migration is marriage and is a common route among women workers to join as laborers. This type of migration is mostly interred or intra-district type when women marry tea plantation laborers, moved to houses which are assigned to workers and then join the sector for work. There is a strong pattern of intergenerational transfer of work in this sector, which is also characterized by a strong dependence among families to plantation work for survival. The present generation of workers however, reiterated their strong desire to ensure that the cycle of work stops with them so that their children are free to pursue other options professionally and personally. A dominant voice among the workers expressed the angst of being tied down to the plantations for generations due to the work, albeit without any true sense of belonging. A strong reason for the lack of belonging is driven by the poor socio-economic circumstances. Many earned just enough to meet the bare necessities of existence and that excluded many essential services such as health care, land of their own, house of their own, children's education, their weddings and so on. In short, the sector gave them just enough to survive, but not enough to aspire or strive for any kind of upward social and/or economic mobility, essentially trapping them in their present circumstances. The fact that many of the workers whose ancestors had migrated as early as during the nineteenth century continued to work in the sector without owning any land or assets of their own was raised as a reflection of how the sector served as a medium for structural exploitation. The workers lived in dwellings provided by the plantations which they had to vacate as soon as they retired from the work. Those members who had no

other sources of income and whose lives and livelihoods are exclusively tied to this work, were either in heavy debt in order to fulfill the needs of their families that may include a house of their own or continued to be landless and homeless, by the time they retired. These desperate circumstances forced families to practically “sacrifice” one or more members of their younger generation to the sector as they had to enlist themselves as plantation laborers. Some of these new enlisters were even reasonably educated, but were forced to take up this employment for the sake of their families and thus were denied the opportunity to explore better prospects in life.

Despite concerns about their poor wages, hardships, deprivations and poor quality of life, the dominant voices among the laborers and the trade unions expressed the need for the sector to thrive and overcome the crisis that has affected it since the past decade or so. This perception was even more consolidated by the Covid-19 pandemic and the state-imposed restrictions as part of control measures. There was a strong consensus among the workers that while the lockdowns and restrictions created major crisis in the unorganized sector and wreaked havoc in the lives of laborers, the plantation industry managed to keep itself afloat, thus saving thousands of workers from impoverishment. The pandemic seems to have reinforced the conviction of the workers regarding their dependence on the plantation sector for survival, especially considering the loss of jobs and unemployment that has occurred in various labour sectors.

3.2. Permanent to temporary – a potentially problematic shift

The workers who were permanent and registered were being provided living accommodation by the plantation managements until they retired. They could continue residing there if another family member took over from them as an

employee in the plantation, after their retirement. If not, they had to vacate the house within six months of retirement. In addition to the dread of being homeless after retirement, most workers lamented their lack of roots in the form of a piece of land or a house they could consider their own despite a lifetime of hard work. The dominant voice among the workers indicated their gratitude for the accommodation despite the fact that there were many concerns which included unavailability of piped water supply, water shortage due to narrow gauge pipes, poor sanitation, poor maintenance of buildings, and small congested houses which did not have enough space to accommodate their large families which mostly included children and old parents. There have been instances of accidents reported due to poorly maintained houses, termites being a key issue affecting the wood in the doors, windows and roof. The managements are responsible to ensure that the houses are periodically maintained. However, the workers and union leaders observed that they intervened only after there has been any repeated requests for repair from the workers, even after which many times they either do not respond or delay their response forcing the laborers to address these maintenance issues on their own. The trade unions played a major role in intervening in such issues on behalf of the workers and ensuring that the workers' genuine needs and requirements are met. However, a dominant voice among the workers did raise significant concerns about the declining power of trade unions in actively intervening in such matters on behalf of the workers.

A small but significant proportion of workers are now temporary employees, many of them inter-state migrants, who are either not provided any accommodation or allowed group accommodation. This means that several of the workers would stay together in small congested rooms or halls and they would not be able to relocate

their families. Many of the respondents opined that many of the managements now showed clear preference to hire temporary laborers to work in the plantations and to reduce the proportion of permanent employees as the temporary workers posed a more “economical” option. The temporary workers did not have any of the entitlements that the permanent workers had, at least on paper, which included accommodation, pension, gratuity, provident fund, maternity leave and benefits, child care facilities, routine health care and so on. Since they were not registered in any trade unions, the internal migrant laborers especially from Bengal, Bihar and Jharkhand could not organize themselves and engage in any kind of collective bargaining with the managements. Many of the trade union leaders viewed this as a potentially problematic shift in the labor traditions of the sector and consequently on workers’ rights.

3.3. Labour and employment circumstances of study participants

There was general agreement among all the stakeholders that the work in the plantation sector was long and hard and the present wages were neither adequately remunerating them for the work they put in, nor, was sufficient for them to lead a decent life. While the work of both men and women were hard, there were clear gender divisions in labor. While the men were largely employed to clear the forests, prune the weeds and spray insecticides on the tea plants, women were predominantly engaged in plucking the tea leaves. While the former involved strenuous physical labour in potentially unsafe circumstances, the latter involved long hours of work with potential risks. The male workers had to carry heavy cylinders of insecticides on their shoulders and climb up the hills spraying the insecticides and clear the areas making them sufficiently safe for women laborers to

pluck the tea leaves. They were also engaged in supervisory work and in the security departments. Women laborers did the actual work of plucking the tender tea leaves ready for processing. Most workers worked for more than nine hours a day and their gendered responsibilities as home makers ensured that many of them worked more than twelve hours. For instance, a woman worker who has to join work in a tea plantation at 8 in the morning would have to start her day as early as 4 AM to prepare food for herself and the rest of the family members. If the plantation that she is assigned on a particular day is located far away from her home, then the day would perhaps have to start even earlier to accommodate for the travelling time. The workers used public transportation system for travelling to work. This included additional expenditure and also placed pressure on the workers' time as in many of the high range plantations, buses were few and infrequent, which meant that they had to accommodate their schedule around bus timings too. The work of both men and women had risks such as physical and chemical injuries, allergic reactions and attacks by insects and/or reptiles. However, the necessary personal protective equipment such as face masks, gloves and boots were provided only for men, despite reports of injuries, allergic reactions and insect/snake bites among both during work. Another major discriminatory practice in the sector is the difference in determination of wages. Although men have risky and strenuous work, their work hours are usually considerably lesser than women. They are paid a specific amount as wages regardless of the hours they invest, while women are paid based on the weight of tea leaves they manage to pluck. During difficult weather and/or off season, if they could not manage to accumulate a certain quantity of plucked tea leaves, their wages are deducted. If they manage to pluck more, they are remunerated a minimum amount in the range of a rupee for every additional kilogram of tea leaves they manage to pluck. Many

women respondents thought that this was indeed a discriminatory practice and that they should be paid for the hours they invest and that the quantity of tea leaves plucked should not be a consideration in the matter of wages.

The role of trade unions in the plantation sector emerged as a crucial theme and the respondents reiterated that while trade unions always were and continue to add to their strength through stewarding their efforts of collective bargaining, both their influence on workers and managements and the trust that the workers had placed on them have seen a definite decline over the past two decades. One of the reasons raised for this decline was the speculation of unethical alliances between trade union leaders and plantation managements. A dominant voice among the respondents raised and trusted the rumors that many trade union leaders have been receiving pay offs in the form of money and illegal ownership of government land as a trade-off for maintaining a softer stand on issues related to workers' welfare. However, the trade union leaders had a different position on this. While they agreed to the declining strength, they attributed it to the reducing labour strength as a whole in the sector and the rise in temporary laborers. While many of them maintained that trade unions and unionism will always have its merits, they agreed that their relevance has declined compared to before.

The respondents acknowledged that the wages are regular and the deductions for loss of work days or work hours are well documented. However, a major concern among workers that over the past decade several of the workers who have retired have not received their benefits and that many died practically penniless and destitute despite a lifetime of strenuous physical labour. Many retired workers who have not been given benefits continue to reside within the plantations. Some of these

plantations have shut down and the workers are engaged in manual labour for daily wages to make ends meet. The monthly pension given to the workers after retirement is too little for subsistence and so many of the workers continue to be employed in the factories as temporary laborers or engage in manual labour outside the plantations for daily wages.

3.4. Health and health care access

The workers perceived an overall decline in their health which they believed to be associated with their occupation both directly and indirectly. Some of these health issues such as repeated injuries, falls, body pain, back pain, neck shoulder and leg pain, allergies, skin lesions and itching and insect bites are closely associated with work. However, there was a dominant voice among the workers that their community is facing a rising occurrence in cancers of various kinds, especially women, and many of them attributed this to their constant exposure to insecticides and pesticides. Many women faced genito-urinary infections and they attributed this to long working hours and lack of toilet facilities at the work place. The breaks between work hours are brief and available toilets are usually quite far off from they work and this also causes them to reduce their water and food intake. Many women workers complained of tiredness and malaise which they attributed to their inability to maintain their mealtimes due to their work schedule. As the day starts early, many of the women skip breakfast to avoid being late. Most women have their first meal at ten or eleven in the morning during their first break in the form of a black tea or coffee with sugar. Many older women responded that ever since their children started attending schools and colleges, they have reduced their consumption of fruits and vegetables to save money for their education related expenses. The high cost of

essential food items such as legumes, milk, fruit, vegetables, eggs, fish and meat and its juxtaposition with the ever steady wages have been raised by many respondents. Many of the respondents have been diagnosed with several chronic conditions like diabetes and/or hypertension in the past, but have not really gone back for a checkup and hence is unaware of its present status.

Access to health care has been raised as a serious concern by the workers and this has also been one of their major demands. The plantation sector has been excluded from ESI benefits and one of the reasons is the fact that many plantations have had their own hospitals for a long time. However, both workers, trade unions and other policy actors raised the issue of poor infrastructure, facilities and lack of qualified health personnel in many of these hospitals. They were functioning in a namesake manner with just a couple of auxiliary health personnel who may not even be qualified. The only responsibility of this staff member is mostly providing the workers with free basic medicines such as antipyretics, anti-inflammatory analgesics and referrals to government health facilities in other situations. The workers and trade unions pointed out that over the past few years, the managements have taken a particularly rigid and indifferent and heartless stand on referrals and reimbursements. The respondents cited several situations where the plantation hospitals tried their level best to avoid referrals to external facilities even when the workers were in need of urgent specialized care and asked the workers to rest while trying to manage situations using their limited knowhow, essentially harming the workers. If the workers finally seek health care outside, the managements refuse reimbursement citing that referral was not necessary and that the worker sought external healthcare of his/her own accord and hence the expenses cannot be

reimbursed. Thus, health care expenses for tertiary care for the worker himself/herself or a family member has been reported a major cause of debt. It also forms a major reason for disagreement between the trade unions and managements in many plantations. Even when they reimburse bills, they either do it partially or delay it inordinately, so that the worker is forced to take debts to meet the expenditure. Even in rare situations where the managements eventually reimburse the bills, the workers point out that they still incur expenses of indirect costs of loss of wages, transportation costs and food.

In-depth interviews with trade union leaders

Impact of government measures to reduce the tea plantation crisis. (Background: - Kerala plantation employment sector is facing numerous crisis. In this situation government initiated many measures like cancellation of plantation tax, freezing agricultural income tax etc.)

Abolition of plantation tax and freezing of agricultural income tax are matters that the government already decided four years ago; but not implemented yet. A bill has been introduced in the Assembly and has not yet been passed. The concerned departments have no interest in implementing the government's decision. The Government and forest department gave leased land to plant rubber, tea, cashew and cardamom with the good aim of raising and producing cash crops. Yet this purpose and good intention is unknown at the bureaucracy level. Based on the official level reports, revenue department stopped the lease renewal, stating that all government lands occupied illegally by plantation owners should be seized. These extreme anti-plantation measures created a situation where plantation owners are unable to take loans or improve their crops. The government needs to look whether the land was given for a purpose and whether it fulfils that purpose.

Issues affecting the tea plantation sector (Background: high-value production, Low competitive strength in global market, low price realization and labour union pressure etc. for the closure of tea plantation units in the state)

Import liberalization as part of globalization has led to the decline in the price of tea which was exported at a good price. Crisis was worsened as Russian market was lost after the collapse of USSR. The owners of the tea plantations were not from Kerala and they took away all the profits during the good times. They have not invested to improve the quantity and quality. Progress cannot be made with old tea plants and factories. Success can only be achieved by breeding highly productive plants and modernizing factories with new technological excellence. It is not due to the pressure of labour unions, but the reason why the owners abandoned the plantation was the realization that it was more profitable if plantation was not operated. It is interesting to note that Karintharuvi estate of Malankara Plantation in Idukki district which borrowed money even during the crisis to increase the quantity and quality of plantation is operating profitably. The central and state governments should find a market to produce and export good tea in the global market. Considering that tea is a daily commodity of the people in the domestic market, the governments should purchase better tea from the auction centers and supply it to the people through the public distribution network. Ration shops should be used for this purpose. Also the corruptions related to distribution of Sabari tea through Maveli stores should be checked upon.

Crises affected work and life of tea plantation workers in the state

The crisis made plantation work less attractive. Children of plantation labourers are reluctant to do the same work. They are focussed on getting jobs outside so that they can support their parents once they relieve from plantation work. As the plantation industry is going through a crisis situation many labourers in spite of completing their service period continue in the line houses or layams due to difficulty in getting gratuity amount from the plantation owners. The workers are living in dilapidated line houses or layams built by the British, in very bad conditions without access to toilets, bathrooms, kitchens, clean water and better treatment as per the plantation labour act. In the year 2022 in Kerala, the only workers who live in such bad conditions are the plantation workers. Law mandated safety standards are not followed while using pesticides which lead to lung diseases in workers. Women workers who resort to shear plucking develops shoulder pain after age 45. As tea leaf plucking earns more profit, most women diligently resort to that work, but gets exhausted after crossing 50 years.

Rights are protected in the way it means –Is it making sense in this crisis situation: -

Some plantation owners are waiting for labourers strike so as to close down the plantation. Denial of rights protection in the sense, salary arrears, non-payment of gratuity, bonus problem, problems of medical treatment, dependent appointment problems etc exists in the plantations. Thus the workers face many serious problems, who are still on strike, that can be said a passive strike. The

workers strike for four or five days, followed by a meeting of labour department officials or police officials which ends by signing an agreement with the owner to resolve the issues within a few days which never finds a light. Strike again, negotiate again, agree again, this is the situation. If Krishnan Nair Commission report is implemented quickly and the current decisions taken by the government are implemented the labour problems can be resolved.

Role of trade unions in protecting the rights and powers of tea plantation workers: -

The plantation labour act was brought about as a result of previous struggle of the trade unions. However, today's strike is against violating the PLA. The central government now formulated 29 laws and four labour codes. Thus PLA itself became irrelevant. The law exists only on account that the Kerala government didn't formulate rules for that acts. All this is instigated by the employers to violate the law. All these lead to a continuous ongoing strike to negotiate an agreement. Finally, unions try to win favourable judgements by bringing cases against breach of contract in tribunals and in courts. Again the cycle continues as companies go to high court and supreme court to try to set aside the judgement and the unions are forced to file a case against it. Trade Unions have been using their organizing power to preserve the atmosphere of peace as much as possible considering the crisis affecting the industry which has arisen in recent times.

The concessions, allowances and other benefits currently available to plantation workers are sufficiently supportive to protect and assist their rights or if not can the situation be improved.

No concessions are currently available on working plantations. There are no allowances and other notable benefits. In a 12 -day hunger march from Elapara to Thiruvananthapuram, the unions came together to raise the issue of closed plantations. Following this the Kerala government has formed plantation relief committees with the representatives of the labour unions of the closed plantations and the heads of related departments of occupational health, education, electricity and drinking water under the chairmanship of district collector. As per the recommendation of those committees, the relief work is being done with the funds provided by the government which is a great solace for the workers there. Yet, there are many more plantations in Idukki, Wayanad and Kollam districts which are equally closed and the workers are not getting enough support; thus the unfortunate situation continues.

The relevance of trade unions in securing workers' rights in context of the general agreement that plantation sector is suffering huge economic losses.

The loss in the plantation sector is due to central government policies. In addition to the drastic increase in the prices of chemical fertilizers and pesticides; the increase in the price of electricity leads to high cost of production. Thus huge differences in selling price and cost of production

occurs. Due to continuous activities and pressure of trade unions, life goes on somehow in the closed plantations. The wage increase in the last four years is only 52 rupees which is unacceptable. In today's situation, the relevance of trade union activities is more in plantation sector.

Suggestions to improve working and living conditions of workers: -

Interventions needed to increase exports together with modernizing plantations and increase production capacity. Measures to recognize plantation sector as an industry and formation of plantation directorate should be executed at the earliest. Utilize the potential of intercropping without changing the structure of plantations. Utilize farm tourism and other tourism opportunities. Bring necessary amendments in law in this regard. Speed up the steps taken by the government to solve housing problem of plantation workers.

Health condition of plantation workers and measures to improve:

The majority of plantation workers suffer from multiple diseases, most of which are occupational diseases as their work has an impact on their health and well-being. According to the plantation labour act, the management of the plantations in Kerala had to ensure health care. For that, there were dispensaries in small plantations, state hospitals in large plantations, and group hospitals that provided treatment in large companies with many estates. Workers received better treatment in private hospitals, but after the 1990s, these systems gradually collapsed and the money set aside for treatment in the plantation budget gradually decreased. The number of doctors and nurses has drastically decreased and finally shifted to government and private hospital

referrals and the mode of reimbursement of medical expenses has changed and if before full expenses were paid, now it has changed to nominal. The government should intervene and do what can be done with the plan funds provided to the local self-government bodies. Health, health care and welfare could be improved by including projects in three-tier panchayats. The plantation sector should be brought under ESI and the management should function more effectively in this regard.

Suggested solutions to overcome the crisis –ministerial level

There is a crisis in this sector due to falling prices. Many workers have lost their jobs due to land reform and environmental protection. The crisis in this sector can be reduced to some extent if plantation tax and income tax are reduced. The government has given permission for inter-cropping, fruits and fruit trees in the plantation area. The owners of the plantation have decided to rebuild the existing premises by solving the inadequacy of facilities and cleanliness. Actions have been taken to provide permanent housing to the workers and provide housing under the Life Scheme. The production needs to be further increased and the activities need to be done targeting the global market for tea and coffee. Efforts can be made to overcome the crisis by developing organic production and improving quality. The situation in Kerala is that the management and labour union are working in harmony. In the Nava Kerala project, consideration has been given for the upliftment of the plantation sector. If we consider the wage situation in the state, the wage in the plantation sector is low. The managements are willing to increase the

wages even in the midst of crisis. Unions are trying to find a solution to meet the living needs of the workers due to the decrease in wages. As in the case of POABS Company, it is possible to bring changes in other plantations. Hospitals can be sanctioned under Plantation Labour Act. Treatment facilities exist in plantations in some places like Munnar. Plantation workers can also be included in ESI. The decision of this has to be decided by the central government. The managements have taken a favourable stand to provide health care by giving management share. Decisions need to be taken considering all these circumstances.

4. DISCUSSION AND POLICY RECOMMENDATIONS

Tea plantations play a significant role in the arena of our national economy. Being a labour oriented industry, where workers control the productivity of this sector the working, living and health conditions of tea plantation labourers becomes pivotal. The findings and outcomes of this study therefore becomes relevant as it depicted the lives of workers who are the representatives of more than a million breadwinners of the country. The present study thereupon aimed to bring out the living conditions and health profile among tea plantation workers of Kerala. National and local studies done hitherto on working and living conditions of tea plantation workers show that they have been appalling right from the time the industry began in the mid-19th century to the present.

4.1. Sociodemographic characteristics

The sociodemographic characteristics of the respondents in this study correlates with findings of similar previous studies done in tea plantations pointing to the fact that the fundamental attributes of workers are indistinguishable anytime, anywhere. Majority of the workers were females, middle aged, having maximum attainment of a high school or upper primary education, BPL ration card holders with a monthly salary just enough for basic sustenance, akin to tea workers anywhere in India.

4.2. Employment characteristics

Employment characteristics were explored by analysing job status, work experience, type of job, work routine and various working postures adopted by the respondents of the study. The quantitative analysis showed majority of the workers had a permanent job status but the workers opined that many of the managements now show clear preference to hire internal migrant labourers on temporary basis especially from Bengal, Bihar and Jharkhand as they seem to be a more economical option, free from the hassles of law enforced entitlements and collective bargaining. Similar reports from states like Assam confirms that that there is a growing tendency to employ temporary workers on estates, as they are not eligible for Plantation Labour Act (PLA)-mandated benefits or provident fund provisions. Majority of the labourers were living and working in the plantations for almost 20 to 30 years and a greater portion of them even up to 40 years. Thus, their lives and living were intertwined with the ups and downs of the plantation, completely dependent on plantation management for basic life needs like water, food, housing, sanitation, health, education and employment. This actually created a system of subjugation in the workforce who were deeply rooted inter-generationally into the plantation environment. The voices of workers depicted in this study is testimony to the imprints of migration, caste discrimination and slavery left in their minds and in some form or the other cast shadow in their lives and their future generations. Majority of the workers in this study worked for six days a week, eight to nine hours per day mainly resorting to standing work postures. They opined the need for more break times and flexible timings or shift in work particularly when faced with health issues which were not addressed adequately. A very small proportion of the workers also remarked that they were not provided any wages if they were asked to work on holidays.

4.3. Working conditions

Place of work, distribution of personal protectives, sanitation and drainage facilities, canteen provisions, situation on handling chemicals and pesticides were analyzed to bring about working conditions of the respondents in the study. The respondents worked majorly in the plantation gardens, and a few worked in offices and company of the plantation. Blanket was the only personal protective equipment provided to a greater portion of workers. It was also reported that necessary personal protective equipment such as face masks, gloves and boots were provided only for men, despite reports of injuries, allergic reactions and insect or snake bites among both males and females during work. The most disturbing finding was that more than ninety percent of the workers were not provided a toilet facility and if available it was not maintained properly. Seemingly, a separate toilet for males and females was a question out of the box in such conditions. Many women faced genito-urinary infections and they attributed this to long working hours and lack of toilet facilities at the work place. Women workers mainly being in reproductive age group, and their basic necessity to maintain menstrual hygiene during period days were therefore largely left unnoticed or neglected. When the basic provision of a separate toilet facility with sufficient water could have eased their condition, no steps in this regard were taken. The breaks between work hours were brief and available toilets being quite far off from where they work, this also persuaded them to reduce their water and food intake. Drainage facility was poor and not well maintained. Majority had no canteen facilities available in their plantation. Many women workers complained of tiredness and malaise which they attributed to their inability to maintain their

mealtimes due to their work schedule. Availability of a proper and affordable canteen facility in their workplace could have eased this difficulty.

4.4. Occupational exposures

Even though one third of the workers handled pesticides and chemicals, standardized steps were not taken to prevent exposure to these chemicals and pesticides. About thirty percent of them were not provided even gloves and a good proportion with no masks, boots, overcoat, goggles and hat. Only less than half of the workers were provided trainings on safe usage of chemicals and pesticides. More than half of the workers were not given awareness classes on hazards due to chemical and pesticide exposure. Many did not immediately change clothes, wash hands/legs/bath after handling chemicals and pesticides. Majority of the workers did not have facilities to change clothes, wash hands/legs/bath after handling chemicals and pesticides at the workplace. Nevertheless, it is applaudable that more than three fourth of the workers were supervised at the time of handling chemicals and pesticides at the workplace. Occupational exposures to chemicals and pesticides is a matter of concern which needs to be addressed and no worker should be left behind. A rising occurrence in cancers of various kinds among the worker community was attributed by many to their constant exposure to insecticides and pesticides. Similarly, in another study a number of workers in Assam reported birth defects and other illnesses that they believed were caused by pesticides.

4.5. Wage regularity and structure

When studying about the wage regularity and structure, it was found that majority of the workers got wages regularly and got more pay for more work. Lack of attendance was found to be the major reason for salary deduction, pointing to the fact that workers were obliged to continue their work even in unforeseen situations or ill health, if they were to get their proper salary. There was general agreement among all the stakeholders that the work in the plantation sector despite being long and hard, the present wages were not adequately remunerating them to lead a decent life. Women were predominantly engaged in plucking the tea leaves which involved long hours of work with potential risks ,while men were largely employed to clear the forests, prune the weeds and spray insecticides which involved strenuous physical labour in potentially unsafe circumstances. Although men have risky and strenuous work, their work hours are usually considerably lesser than women and are paid a specific amount as wages regardless of the hours they invest, while women are paid based on the weight of tea leaves, they managed to pluck. These gender divisions of labour and payment of wages were viewed as discriminatory practices by the women workers. This is in par with other studies which concluded that women bear the heaviest burden of systemic inequality, as they are concentrated in the lowest paid plucking roles and also shoulder most of the unpaid domestic care work. (Oxfam,2019)

4.5. Living conditions

In this study, living conditions of workers were analyzed using ownership of house and land, and available housing, drinking water and recreational facilities. Safety in the workplace and housing facilities were also studied with concerns of wild animal attacks. Nearly half of the workers reported that there exists attack by wild animals

in the plantation and there were a small proportion of victims of animal attack in this study.

4.7. Housing facilities

A critical finding was that more than three fourth of the workers did not have a house of their own and more than half of the workers did not own a land or property. Majority lived in mostly two roomed plantation owned homes with three to four-member family. In line with these findings several studies have found lack of adequate space within their housing causing particular challenges for women and girls within the family, who lack privacy. About three fourth of the houses were reported to have adequate cleanliness, drinking water, drainage and adequate toilet. Yet the workers expressed many concerns which included unavailability of piped water supply, water shortage due to narrow gauge pipes, poor sanitation, poor maintenance of buildings, and small congested houses which did not have enough space to accommodate their large families which mostly included children and old parents. There have been instances of accidents reported due to poorly maintained houses, for which the management either do not respond or delay their response forcing the labourers to address these maintenance issues themselves. Nevertheless, nearly half of the homes were not timely repaired or maintained. The PLA requires management to provide housing of a certain standard to all workers employed for more than six months, and to rectify with the least possible delay any defects in the condition of a house which make it dangerous to the health and safety of the

worker. However other studies too have confirmed that many workers reported either receiving no help at all from management in improving their housing, or delays of up to years in carrying out repairs. Yet some amenities like television sets, gas connection and mixer grinder were reported to be available in about three fourth of these homes. However, only about fifteen percent of the workers had any kind of recreational facility available in plantation.

4.8. Ownership of housing and related issues

More than three fourth of the workers opined that their salary was not adequate to live without debt and majority of the workers were under debt during the survey. Most of the workers were paying interest for loans mainly for the purpose of education, treatment, housing and vehicle and less than one fourth had some form of investment. The workers lived in dwellings provided by the plantations which they had to vacate as soon as they retired from the work. Those members who had no other sources of income and in heavy debt continue to be landless and homeless even at the time of retirement. These hopeless circumstances forced one or more members of the younger generation to enlist themselves as plantation labourers. These findings from the present study correlates with other reports as immediately after retiring, the workers should vacate the homes and they may not be able to rent a home with the little savings they have. This forces the younger generation to take up their parents' job so that they continue to have a place to stay. The present generation of youngsters are reasonably educated with many of them having a degree. They wish for better living conditions. The only problem which holds them back to seek better prospects in their lives is not having a home of their own for their family as other reports testifies. This major and critical issue is also underpinned during the present

study. A relatively small proportion of workers remarked that the small income they got from other activities like agriculture, cattle, stitching, driving etc. created small changes in life so as to move on with less difficulties. This clearly substantiates how provision of financial aids and other small sources of income can change the lives of these workers for the better.

4.9. Policies, benefits and welfare schemes

Policies, benefits and welfare schemes available for workers were also studied. Findings indicate that family allowances, travel allowances and free ration were available to only less than half of the worker population. It is worth to note that more than half of the workers had free housing facility. Under social security schemes provident fund was provided for more than three fourth of the workers while gratuity and pension to more than half of workers. Less than one fourth of the workers were part of labour insurance schemes. Free healthcare and maternity benefits were provided only to about one fourth of the workers while childcare services and educational allowance for children to very less than one fourth of them. These indicate that policies, benefits and welfare schemes are available for a considerable proportion of workers only in legislations and papers. Only when benefits and welfare policies reach every worker toiling for their bread and butter, the real purpose of policies and welfare schemes makes realistic changes in the community.

4.10. Childcare facilities

Since crèches were available in only forty-three percent of the plantations, more than half of the workers in this study didn't get any facilities provided by the crèches. This

systemic under-provision of education and nutrition is a denial of children's basic rights and contributes to a vicious cycle of vulnerability.

4.11. Other issues pertaining to allowances and satisfaction with received benefits

About three percent of the workers were under treatment for cancer/kidney disease/heart disease, of which about one third only received special treatment allowance within one year. A critical finding in the study was even though fifty-nine percent of workers had health insurance coverage, rest of the workers were not covered under any health insurance scheme. This clearly obscures the popularized concept of Universal Health coverage where individuals and communities receive the health services, they need without suffering financial hardships. Only about one third of the workers were satisfied with the received allowances and benefits. Workers reported that wages and allowances they received were not enough to satisfy even their basic needs. Most of them were not satisfied with the housing and other facilities given to them. As per the survey, they expected better and regular wages and allowances, improved medical facility, educational scholarships for their children, a playground for their kids, good housing and drinking water.

4.12. Trade unions and grievance redressal mechanisms

Nearly three fourth of the workers had a trade union membership. Late payment of wages was the major issue faced at workplace followed by denial of wages, denial of leave, demand to continue work despite illness, verbal abuse, physical abuse, humiliation, arguments and sexual abuse. More than half of the workers discussed workplace issues at labour union level and had facilities to solve employment

disputes at workplace. Though trade unions support in their efforts of collective bargaining, the trust that the workers had on these trade unions declined over the past two decades owing to the speculation of unethical alliances between trade union leaders and plantation managements while the trade union leaders attributed it to the reducing labour strength and the rise in temporary labourers. Several other researches in tea plantations in India have highlighted that most Indian trade unions are affiliated with political parties; while this increases their potential influence, it undermines confidence in their commitment to addressing workers' issues and even though trade union fees are deducted from workers' wages, most workers are unaware of the role of trade unions.

Less than half of the workers recognized the presence of systems at district or state level to solve workplace disputes. Internal committee at workplace for redressal of sexual harassment and abuse complaints were active in only one third of the plantations while only around two percent of workers reported sexual abuse and harassment attempts at workplace. About eight percent of workers ever approached plantation inspectors or labour officers. Even though reported proportions are small, the life and dignity of each worker is of utmost importance and hence systems have to be absolute when dealing with such issues at workplace.

4.13. Health profile and health status

When evaluating the health profile and health status of workers' majority do not consume essential foods regularly. Women reported reduced consumption of fruits and vegetables to save money for their education related expenses of their children. The rising cost of essential food items and its contrast with the ever steady wages

were the concerns of workers in the study. Less than one third only perceived their health status to be good and for more than half it was just satisfactory and majority of the workers faced some kind of physical ailments in the past one year particularly musculoskeletal pain, headache, cough, allergy, sneezing, skin diseases UTI, piles etc. The workers perceived an overall decline in their health which they believed to be associated with their occupation both directly and indirectly.

4.14. Health seeking behaviour

Majority of the workers did treatment in plantation hospital and nearby government facility. Only a very small proportion seek treatment from private sector and even some resorted medical shops. This also indicates greater utilisation of government healthcare facilities compared to private facilities by the workers, primarily due to the higher cost of medical treatment in the private sector and poor household income of the workers. The study found that less than half of workers who sustained injuries and faced accidents during the past year got financial aid or medical allowance for the treatments done. Yet three fourth of them reported to receive timely treatments, mainly in plantation hospitals.

4.15. Prevalence of disease conditions

Major prevalent diseases among workers were non-communicable diseases like hypertension (12%)and diabetes (7%). In a 2021 study done in Assam,47.3% and 15.3% of the tea garden workers reported to have non-communicable and communicable diseases respectively, who may require regular visits to a healthcare facility. Majority of the workers who were diagnosed have undergone treatment for their disease conditions. In the order of prevalence, disease conditions of the workers

were high blood pressure, diabetes varicose veins, thyroid problems, heart diseases, anaemia, bronchitis, piles other cardiovascular diseases arthritis epilepsy cancer hepatitis and HIV. In contrast to the above findings from quantitative analysis many of the respondents who were interviewed admitted that even though they have been diagnosed with several chronic conditions like diabetes or hypertension in the past, but have not really gone back for a checkup and hence is unaware of its present status. Less than one third of the workers were always stressed at work, while one third was sometimes stressed at work. More than half felt work and life to be balanced at times only.

4.16. Plantation hospitals and health facilities

Three fourth of the workers had a hospital facility available in their plantation and about half of the workers got a free hospital facility in the plantation. Almost half of the plantations had availability of services by doctors and nurses always; while for about other half services were available sometimes only. Majority had enough medicines and tablets as found from the analysis. A first aid box or cupboard was available in about only half of the plantations Only one third of the workers got free medical checkups at workplace. Essential medicines and equipments were available in about half of the health facilities and yearly visits by government doctors in about less than half of the facilities. These statistics show that availability of healthcare facilities is not satisfactory when considering the living and working conditions of these workers.

4.17. Access to health care

Access to health care has been raised as a critical issue by the workers. The plantation sector is excluded from ESI benefits as many plantations have their own hospitals for a long time. It is an undeniable fact that poor infrastructure, facilities and lack of qualified health personnel are predominant in many of these hospitals. Some of these facilities are for namesake mostly providing the workers with free basic medicines such as antipyretics, anti-inflammatory analgesics and referrals to government health facilities in other situations. An external medical facility was available for more than ninety percent of the workers. Majority of them arranged their own mode of conveyance to reach these facilities. In some cases, it was reported that even in emergency situations referrals were purposely prolonged and if care was sought in outside healthcare facilities the expenses were not reimbursed and if done it will be either partially or delay it unnecessarily. Thus, health care expenses for tertiary care for the worker or a family member has been reported a major cause of debt along with added expenses of indirect costs of loss of wages, transportation costs and food.

4.18. Barriers in seeking healthcare

More than three fourth of the workers utilized healthcare services from nearby government facility and about more than half from plantation hospital. In the absence of a hospital in plantation, majority seek treatment in nearby government facility. More than half of the workers felt lack of health insurance as a major barrier in seeking healthcare. Other perceived barriers were long waiting time, nonavailability of doctors, medicines and equipments, difficulty in leave sanction from workplace, financial constraints, attitude of doctors and staff, time constraints, lack of bystanders, long distance to hospitals and no casual leave. These barriers do exist in

literature for decades and have remained the same all the while. Less than half of the workers found the present healthcare system to be satisfactory while only far below one fourth felt it as excellent, and one fourth felt it as good. Few found the system to be very bad.

4.19. COVID-19 and plantation sector

Quantitative analysis found ninety- four percent of the workers reported no deduction in their wages owing to COVID 19 pandemic. There was a strong agreement among the workers that while the lockdowns and restrictions created major crisis in many labour sectors, the plantation sector supported them from impoverishment, thus reinforcing their dependence on the plantation sector for survival. Nevertheless, workers are suffering from the same obstinate problems, and continue to remain one of the poorest and marginalized populations in the state.

4.20. Legislations and their impact

The PLA of 1951 provides for the welfare of plantation labour and regulates the working conditions on plantations. In every plantation covered under the Act, medical facilities for the workers and their families are to be made readily available. Also, it provides for the setting up of canteens, crèches, recreational facilities, suitable accommodation and educational facilities for the benefit of plantation workers in and around the work places on the plantation estate. Plantation Labour Act, 1951 have been subsumed into Labour Code on Occupational, Safety, Health and Working Conditions, 2020. The Code on Social Security 2020 envisages plantation owners to enroll its workers as member of ESIC (Employees State Insurance Corporation). The ESIC provides multiple benefits like sickness benefits, unemployment allowance,

maternity benefit etc. besides medical benefits to its members. These labour codes once in action is expected to bring a change in the lives of plantation workers in the days ahead.

This study brings out the spectrum of factors at the individual and structural levels pertaining to sociodemographic and employment characteristics, working and living conditions, childcare services, wage regularity and structure, debt situation, policies, benefits and welfare schemes, trade unions and grievance redressal mechanisms, health status of workers and barriers to accessing healthcare services that workers in tea plantations face. Most of these findings, such as poor wages, working and living conditions, health services, education and poverty in plantations are already known. Several studies have documented the poor conditions of workers in tea plantations. Authorities must acknowledge the unsatisfactory working and living conditions and health facilities of its workers and invest in providing safe and protective working environment as well as improving housing, sanitation and health facilities along with provisions for a decent living. Plantation management should work with trade unions, civil society, producers and the relevant government bodies to address the systemic challenges facing the industry and end the hardships of destitute workers who depend solely on tea plantations for their livelihood.

Policy Recommendations

- Owners of the plantation field should strictly adhere to providing proper working hours and should give timely and equal wages to women and men.

- Lack of clean and proper sanitation facility and availability of nearby toilets is a critical issue in most plantations in which women are the biggest victims. This should be addressed at the earliest.
- Construction of new dwelling houses, maintenance of old *Layams*.
- Health of tea plantation workers is not well coordinated with existing health insurance scheme, resulting to the gap in many health care areas. So, integrating the responsibility of providing healthcare in plantations, transforming existing centers into health and wellness centers under Ayushman Bharat scheme, focusing on widespread preventive and promotive health services, alongside nutrition, as well as emphasis on sanitation, hygiene, and occupational safety should be prioritized.
- Ensuring that women workers have equal role in decision making and is able to work in decent conditions.
- Health insurance coverage should be made absolute covering whole worker community.
- Ensuring that tea estates comply with their legal obligation to provide decent housing, healthcare, and education under the Plantations Labour Act, 1951.
- Ownership of housing and provision of land to destitute workers.
- Greater investment in the public health sector to make healthcare more affordable and accessible, especially for the weaker economic section of the society including the tea garden workers.
- Making tea plantation hospitals well-resourced with adequate facilities.
- Proper referrals from plantation hospitals and timely reimbursement for outside treatments.

- Inter-sectoral coordination among central and state health authorities and tea boards.
- Policies based on contemporary industry realities, living and working conditions of the workers is the need of the hour.
- Providing other livelihood options along with plantation work, microcredits, small business start ups
- Educational facilities should be revamped, promoting higher education to children of plantation workers with support and scholarships
- There is a need for frequent visit to tea gardens to find limitations and difficulties in ensuring decent working environment.
- Take special measures to protect and promote labour rights of workers.

References

- Abdul Rafeeque, A.K;Sumathy ,N.(2020).A Study On The Job Satisfaction Among Tea Plantation Women Workers in Wayanad District. *Journal of University of Shanghai for Science and Technology*,22(11),638-44.
- Abdul Rafeeque,A.K;Sumathy,N.(2021).A study on Problem Faced By the Tea Plantation Women Workers in Wayanad District. *Palarch's Journal of Archaeology Egypt*,18(4),1255-64.
- Ansari, S,Sheereen, Z.(2016).Socio-Economic Condition of Tea Garden Worker in Alipurduar District West Bengal. *Agricultural and Natural Resource Economics eJournal*,6(2),493-503.

- Banerji,S & Willoughby,R.(2019)Oxfam.Addressing the Human Cost of Assam Tea: An agenda for change to respect, protect and fulfil human rights on Assam tea plantations.Available at <https://policy-practice.oxfam.org/resources/addressing-the-human-cost-of-assam-tea-an-agenda-for-change-to-respect-protect-620876/DOI-10.21201/2019.4870> [Accessed4 February 2022]
- Bhattacharjee, S; Datta, S., Saha, J., & Chakraborty, M. (2013). Maternal health care services utilization in tea gardens of Darjeeling, India. *Journal of Basic and Clinical Reproductive Sciences*, 2(2), 77. <https://doi.org/10.4103/2278-960x.118645>
- Bhowmik, S.K.(2003). Productivity and labour standards in tea plantation sector in India:Labour and social issues in plantations in South Asia: role of social dialogue. Geneva: International Labour Office.
- Caro, L.P.(2020). Wages and working conditions in the tea sector: the case of India, Indonesia and Vietnam. Geneva: International Labour Office.
- Chowdhury, N., Ahad, M., Chowdhury, M., Kundu, I., & Islam, T. (2018). Health and Hygiene Condition of Female Tea Workers: A Study in Three Tea Gardens of Sylhet District. *Asian Journal of Agricultural Extension, Economics & Sociology*, 26(1), 1–9. <https://doi.org/10.9734/ajaees/2018/42366>
- Dukhabandhu ,S.et.al. (2011). Health Condition and Health Awareness Among the Tea Garden Laborers: A Case Study of a Tea Garden in Tinsukia District of Assam, *The IUP Journal of Agricultural Economics*, 3(4).
- Economic Review (2020). Chapter 3-Agriculture and Allied Sectors- State Planning Board, Thiruvananthapuram, Kerala. Available at [staehttps://spb.kerala.gov.in/economic-review](https://spb.kerala.gov.in/economic-review). [Accessed 1 February 2022]

- Gayathri, P & Arjunan, R.(2019). Health Afflictions of Tea Plantation Workers in Coonoor,the Nilgiris. *International Journal of Health Science Research*,9(November),85–90.
- Govindankutty, P & Priyadarshan, S.(2018). Safety Measures Taken By The Tea Plantation Workers Of Kerala. *IJSART*;4(4),21.
- Government of Kerala. Agricultural statistics 2019-20. Thiruvananthapuram: DepartmentofEconomicsandStatistics;2020.Availableat<http://www.ecostat.kerala.gov.in/images/pdf/publications/Agriculture/data/2019-20/after220920/agristat2019-20.pdf>.
[Accessed 1 February 2022]
- Hazarika, N. C;Biswas, D; Narain, K et al. (2006).Hypertension and Its Risk Factors in Tea Garden Workers of Assam, Regional Medical Research Centre, North Eastern Region, Indian Council of Medical Research, Dibrugarh, Assam.
[Accessed 1 February 2022]
- Indian chamber of commerce. Tea sector –Available at <https://www.indianchamber.org/sectors/tea/>. [Accessed 1 February 2022]
- India Tea Association-Legends Available at <https://www.indiatea.org/legends>. [Accessed 2 February 2022]
- International tea committee. Annual Bulletin of Statistics. Available at <http://inttea.com>. [Accessed 2 February 2022]
- Kamath, R;Ramanathan,S.(2017).Women tea plantation workers’ strike in Munnar, Kerala: lessons for trade unions in contemporary India. *Critical Asian Studies*,49(4), 1-13.

- Kumar, S. S. (2018). A Study on the Impact of Current Crisis in Tea Industry on the Plantation Workers. Project report submitted to Kerala Institute of Labour and Employment Thiruvananthapuram.
- Lama ,S.D. (2018). After the floods, a way forward for Kerala's tea plantation sector. *The Wire*. Available at: <https://thewire.in/labour/after-the-floods-a-way-forward-for-keralas-teaplantation-sector>. [Accessed 3 February 2022]
- Medhi, G. K; Hazarika ,N. C; Shah ,B & Mahanta ,J. (2006). Study of Health Problems and Nutritional Status of Tea Population of Assam. Regional Medical Research Centre, North Eastern Region, Indian Council of Medical Research, Dibrugarh, Assam, Division of Non-Communicable Diseases, Indian Council of Medical Research, New Delhi. 9.
- Plantation Labour Act.(1951)-Available at <https://labour.gov.in/sites/default/files/The-Plantation-Labour-Act-1951.pdf>. [Accessed 4 February 2022]
- Priyadarsan,S.(2019). Workers Satisfaction on the Facilities Provided By the Tea Plantation Companies–With Special Reference To Kerala State. *Journal of Management*, 6(3), 157–178. <https://doi.org/10.34218/jom.6.3.2019.019>.
- Raja, J.A; Krishnaveni,V.A.(2017). Study on the problems faced by the tribal tea labourers in the Nilgiris District, Tamilnadu, India. *Journal of Advanced Research in Dynamical and Control Systems*,9(13),390–396.
- Rajbangshi, P. R., & Nambiar, D. (2020). “who will stand up for us?” the social determinants of health of women tea plantation workers in India. *International Journal for Equity in Health*, 19(1), 1–11. <https://doi.org/10.1186/s12939-020-1147-3>

- Rajput, S., Hense, S., & Thankappan, K. R. (2021). Healthcare utilisation: a mixed-method study among tea garden workers in Indian context. *Journal of Health Research*. <https://doi.org/10.1108/JHR-02-2021-0101>
- Ravi Raman,K. (1986). Plantation Labour: Revisit Required. *Economic and Political Weekly*, 21(22), 960–962. <http://www.jstor.org/stable/4375740>
- Sarkar;Kanchan;Bhowmik&Sharit Kumar. (1999). Trade Unions and Women Workers in Tea Plantations. *Economic and Political Weekly*, 33 (52), 50-52.
- Sarkar, S., Chowdhury, A., Roy, P., & Chowdhury, M. (2016). Socio-economic status of the tea garden women workers : A case study from Sub- Himalayan regions of West Bengal , India. *International Journal of Applied Research*, 2(November), 681–684.
- Sarkar, S., & Reji, B. (2019). A cup full of woes : wages & tea industry. *Indian Journal of Economics and Development*, 7(2), 1–8.
- Savitha, S.P(2014). A study on the working and living conditions of tea plantation industry workers in Munnar Idukki district Kerala, Department of Commerce. Madurai Kamraj University. Available at <https://shodhganga.inflibnet.ac.in/handle/10603/125595>. [Accessed 2 February 2021]
- Singh ,S .N;Narain ,A ;and Kumar ,P (2006).Socio-Economic and Political Problems of Tea Garden Workers: A Study of Assam .Mittal Publication, New Delhi.[Accessed February 2,2022]
- Srikumar,H & Arthi, R.(2019). Socio-economic and working conditions of tea plantation workers in Manjoor block the Nilgiris. *IOSR Journal Of Humanities And Social Science*, 24(8), 24–31. <https://doi.org/10.9790/0837-2408102431>

- Tea Board of India-66Annual Report 2019-20.Available at <http://www.teaboard.gov.in>. [Accessed 4 February2022]
- The Indian express. September 2020.In Nilgiris, tea workers live in shadow of landslides. Available at <https://indianexpress.com/article/india/in-nilgiris-tea-workers-live-in-shadow-of-landslides-6602132/>[Accessed 4 February2022]
- The News Minute. September 2020. Generation after generation, why Kerala's plantation workers don't have their own homes Available at <https://www.thenewsminute.com/article/generation-after-generation-why-kerala-s-plantation-workers-continue-be-homeless>. [Accessed 4 February2022]
- The News Minute. August 2020.'Modern-day bonded labour': The inhuman work conditions of TN tea estate workers. Available at <https://www.thenewsminute.com/article/modern-day-bonded-labour-inhuman-work-conditions-tn-tea-estate-workers-130659> . [Accessed 4 February2022]
- United Planters Association of Southern India Tea Research Foundation (UPASI) -About Tea-Available at <http://www.upasitearesearch.org/history-2>. [Accessed 5 February2022]
- Vijayabaskar,M;Vishwanathan,P.K.(2019). Emerging vulnerabilities in India's tea plantation economy: a critical engagement with the policy response. Chennai: Madras Institute of Development Studies.
- Xaxa ,V.(2019).Need for restructuring the tea plantation system in India. *Economic andPoliticalWeekly*,54(45).Availableat:<https://www.epw.in/journal/2019/45>

</perspectives/needrestructuring-tea-plantation-system-india.html> [Accessed
4 February2022]

Appendix A

Questionnaire for “A study on Living and Working Conditions of Tea Plantation Workers In Kerala ”

Name of the Field Investigator

DistrictPhone Number.....

DatePlace Category.....

1. Socio-demographic characteristics

1.1 Name of respondent:

1.2 Age in years:

1.3 Gender

- Male
- Female
- Others

1.4 Place of residence:.....

1.5 Caste:.....

1.6 If you belong to a tribal community, could you please name the community if it has a specific name?

1.7 What is your last completed level of education?

1. Uneducated
2. Educated
3. Primary
4. Upper primary
5. High School
- 6 Plus two
7. Degree

8. Others

1.8 Marital status :

- Married
- Unmarried
- Divorced
- Widowed

1.9 How many people are living with you in your living space?

1.10 What is your monthly income??

1.11 Is there a ration store on the estate?

1.12 Do you own a ration card?

Yes No

1.13 Colour of ration card:

- White
- Blue
- Pink
- Yellow

Employment characteristics

2.1 Type of employment:

- Permanent
- Temporary
- Contractual
- Trainee
- Others

2.2 How long have you been working in the industry:

2.3 Type of job (*Only manual labourers are included in the study*):

- Plantation labourer
- Field worker
- Field supervisor
- Watch-Men/Security workers

○ Others (Specify)

2.4 How do you perform your daily tasks for the most part of your working hours? *(Multiple options possible)*

- Standing
- Bending
- Sitting/Squatting on floors
- Sitting on chairs/benches
- Walking
- Others (Specify)

2.5 How many days you work in a week?

2.6 How many hours a day do you work?

2.7 How many days off do you get ?

2.8 Do you have to work overtime on holidays?

2.9 If so, what is the method of payment?

- No special wage
- Normally received daily wage
- Double wages

2.10 Have you ever worked tirelessly without any break in ten days?

2.11 Do you get a day off for a working week ?

2.12 Have you ever worked for more than ten days without taking a break?

2.13 Do you get breaks at work? Yes No

2.14 Whether all breaks are used? Yes No

2.14 a If not why skip breaks?

2.15 Do you get more breaks during the emergency phase?

2.16 Have you ever felt the need for more breaks?

2.17 Did you meet any accidents while working?

Yes no

2.17 a If so, what happened?

2.18 Where did you take the treatment for it?

2.19 How the treatment cost for this was found?

2.20 If you are experiencing any difficulties due to health issues, do you get a shift in job nature?

I. Working conditions

3.1 Where are you routinely stationed as part of your daily tasks?*(Multiple options possible)*

- Plantations
- Factories
- Offices
- Others (specify).....

3.2 Does the garden owner provide the following items?

- Umbrella
- Wool
- Raincoat
- Hat

3.3 How often will these things provide?

- Once in a month
- Once in a year
- When it is unusable

3.4 Are there any toilet facilities in the garden where they work ?

Yes No

3.4 a If so, is there a separate toilet for men and women ?

Yes No

3.5 Is there any stagnant sewage inside or outside the toilet?

Yes No

3.6 Are these toilets completely covered ? Yes No

3.7 Toilets have doors and can be locked?

- There is a door
- No door
- The door also has a lock
- The door is locked

3.8 Are there any signs for men / women outside the toilets?

Yes No

3.9 Are the taps / utensils equipped to ensure adequate water availability in the toilets ? Yes No

3.9 a If not, enough water is stored in containers inside / near the toilet?

Yes No

3.10 Are drains constructed to drain sewage and other contaminants?

Yes No

3.11 Do the drains get clean ? Yes No

- Clean regularly
- Occasionally clean
- Not clean

3.12 Is there a canteen facility in the garden where they work?

Yes No

3.13 Whether the required food items are available from the canteen?

Yes No

3.14 The prices of all the food items in the canteen are displayed in a way that is visible to all? Yes No

3.15 Is the price lower than the shops outside the canteen?

Yes No

3.16 Do you have to deal with chemicals or pesticides as part of the job?

Yes No

3.17 If you have to deal with chemicals, do employers provide the following precautions for your safety?

SL NO		YES	NO
1.	Gloves		
2.	Mask		
3.	Boots		
4.	Outerwear to provide protection		
5.	Hat		
6.	Large glasses		

3.18 Have you received any training in the workplace to understand how to use chemicals and pesticides safely?

Yes No

3.19 Whether the awareness classes have regarding the potential dangers of using such chemicals? Yes No

3.20 Do you change clothes immediately after using pesticides / chemicals and wash your hands or take a shower if necessary?

Yes No

3.21 Are there other facilities available in the workplace for changing clothes, washing hands and bathing immediately after spraying pesticides / chemicals?

Yes No

3.22 Has the owner assigned someone to supervise you during the use of chemicals?

Yes No

3 Wage structure

4.1 Are you paid wages regularly?

Yes No
4.1 a How often are you paid wages?

- Daily
- Weekly
- Fortnightly
- Monthly
- Others

4.2 How are you paid wages?

- Direct
- Bank transfer
- Online
- Others

4.3 How much are you paid as wages in rupees?

4.4 Will you be paid more if you work overtime?

Yes No
4.5 Are deductions made in your wages after COVID 19?

Yes No
4.6 What are the usual reasons for which deductions are usually made from your wages?

- Absence from work
- Lesser time worked
- Lesser output in terms of product generated/area covered
- Deductions for various benefit schemes like PF, pension or insurance.
- Others (specify).....

4.7 Do you get paid leave? Yes No

4.8 Do temporary wage earners receive a daily allowance?

Yes No

5 Living conditions

5.1 Are you living in a space owned by you?

Yes No

5.2 Total number of rooms in your house?

- No rooms
- Single room
- Double rooms
- More than three rooms
- Monthly income in rupees:

5.3 Do they own property?

Yes No

5.4 How many generations have lived here?

5.5 Is your living arrangement close to your work place? Yes No

5.6 Do you have accommodation inside the garden? Yes No

5.7 If not where do you live?

5.8 If you are living in the garden

- Is the living space clean?
- Do you pay rent?
- When it comes to home repairs, is it done properly?
- How many members live in total?
- Does the dwelling get enough drinking water?
- Is there a toilet facility?
- Are there pets?

5.9 Whether the residence is close to the place of work?

Yes No

- How do you commute to work?
 - Walking
 - Cycling
 - Company-arranged transport
 - Public transport

- Own transport
- Others (specify)

5.10 Are there any pets here?

Yes No

5.11 Do you have any of these things at your home?

- Television
- Refrigerator
- Gas connection
- Mixer grinder
- Washing machine
- Others

5.12 The source of their drinking water?

- Well
- Public pipe
- Water collected in the tank

5.13 Do you get the enough drinking water they need ?

Yes No

5.14 Did you know that if the water stored in the tank is used, and it is cleaned properly?

Yes No

5.15 Have knowledge of tank cleaning? Yes No

5.16 Are drinking water wells / other water bodies known to be disinfected?

Yes No

5.17 Is drinking water is stored in containers? Yes No

5.18 If so, how much time will be used?

- Within 24 hours
- More than 24 hours

5.19 Is there any drainage ditches in the house and its surroundings?

5.20 Whether the living space is shared with others in the work place

Yes No

5.22 Do plantation workers have any facilities for recreation? Yes

No

5.23 Are there any wildlife attacks on the garden or residence where they work?

Yes No

5.24 Have they ever been attacked by wildlife? Yes No

5.24 a If so, please explain.....

5.25 Do you know anyone in this or that garden who has been attacked by such wildlife? Yes No

5.25 a Can you describe the experience if you know?

6 Debt situation

6.1 Is it possible to live without debt on the wages received?

6.2 Are you in any kind of debt presently?

Yes No

6.3 How many loans do you have at presently?

6.4 If yes, who do you owe it to?*(Multiple options possible)*

- Bank
- Money lender
- Employer
- Friends/Contacts
- Kudumbashree
- Other Self-help groups
- Workers' collectives
- Micro-financiers
- Local Self Government
- Others (specify)

6.5 Could you tell us, why you needed that loan?

- Home
- Vehicle

- Gratuity
- Pension
- Work men compensation/labour insurance schemes
- Provision of free health care
- Employees' State Insurance Scheme
- Other health insurance schemes
- Maternity benefits
- Child care services
- Others (specify)

7.3 Are you undergoing treatment for cancer / heart disease / Kidney disease?

Yes No

7.3 a Have you received a special hospital relief benefit for plantation workers for your medical expenses during the past one year?

Yes No

7.6 Are you enrolled in any health insurance schemes?

Yes No

7.6 a If yes, which one is it?

- Ayushman Bharat / Karunya health scheme
- ESIS
- Others (specify).....

7.7 Are you satisfied with the concessions, allowances and/or benefits available to you as a plantation laborer?

Yes No

7.7 a If you are not satisfied, could you elaborate on your concerns and how according to you can the situation be improved?

7.8 Have you received any sickness allowance?

Yes no

7.8 a If so, when did you receive?

- With the first payment of the week
- It has been a long time since entered the job
- Others

8 Workers' organization and grievance redressal

8.1 Are you a member of any workers' unions?

Yes No

8.2 For how long have you been a member?

8.3 Are you in any leadership position in these union?

Yes No

8.4 Whether work-related issues are discussed at the organizational level

- Have you faced any of the following during the last one year in the workplace?*(Multiple options possible)*
 - Late payment of wages
 - Denial of wages
 - Denial of leave
 - Asked to continue work even when reported sick
 - Verbal abuse
 - Physical abuse
 - Sexual abuse
 - Humiliation
 - Others (specify).....

8.6 If you have grievances as a worker, do you have any platforms at your workplace to address them?

Yes No

8.7 If you have grievances as a worker, do you have any platforms at the state/district level to address them?

Yes No

8.8 Could you name these platforms?

.....

8.9 Is there any internal complaints committee at the work place to investigate complaints on sexual harassment in the factory?

Yes No

8.10 Whether there are sexual assaults in the gardens?

Yes No

8.11 Does any grievance cell work to make such a complaint?

Yes No

8.12 Who to notify if there is any complaint?

8.13 Will this complaint be resolved soon? Yes No

8.13 a If so, How long will it take to find a solution?

Yes No

8.13 b If not, why?

8.14 Is there any situation where you have to approach the Plantation Inspector / Labor Officer? Yes No

8.14 c If not, why not

Health status

9.1 Approximately how many glasses of / liters of water do you drink daily?

9.2 Do you engage in regular physical activity?

Yes No

9.2 a If yes, what kind of physical activity do you engage in?*(Multiple options possible)*

- Walking
- Running
- Cycling

- Yoga
- Other forms of exercise (specify)

9.3 How many days in a week do you engage in physical activity?

9.4 On an average, how many days a week do you consume:

- Fruits
- Vegetables
- Eggs/meat/fish/pulses/legumes.....

.....

9.5 Do you feel any stress related to your work?

- Always
- Frequently
- Occasionally
- Hardly
- Never

9.6 Do you have trouble finding the work-life balance?

- Always
- Frequently
- Occasionally
- Hardly
- Never

9.7 How do you rate your own health status?

- Excellent
- Good
- Neither good nor poor
- Poor
- Very poor

9.8

Have you experienced any kind of physical discomfort over the past one	Did you seek treatment? Yes/No	Are you under treatment currently? Yes/No	If yes, where are you seeking treatment? <i>(multiple options)</i>	What specific treatments are/were you prescribed? <i>(multiple options)</i>	Has your problem been resolved /is the
--	--------------------------------	---	--	---	--

<i>year?(multiple options possible)</i>			<i>possible)</i> Government facilities nearby Health facilities within work places Other government facilities Private doctors/facilities Medical shops Others (specify)	<i>possible)</i> No treatment Medication Local treatments for relief of pain and other symptoms – massages/heat application Rest Exercise/Physiotherapy Further tests Life style modifications Surgery Others (specify)	condition improving? Yes/No
Body pain					
Leg/hand/knee Pain					
Back pain					
Joint pain					
Neck pain					
Headache					
Cough					
Skin disease					
Sneezing					
Urinary Infection					
Piles					
Allergy					
Other diseases (specify)					

9.9 Did you meet any accidents while working?

Yes no

9.9 a If so, what happened?

9.10 Did you get treatment immediately? Yes no

9.10 a Where did you take the treatment for it?

1) Hospital inside estate

2) Hospital outside estate

9.10 b If no. Why not

9.11 How the treatment cost for this was found

9.11 b If yes, What it is

9.11 b If not, Why

9.12 Is the injury healed?

1) Completely recovered

2) Partially recovered

3) Not recovered

9.13 Common general health concerns

Have you been diagnosed of /under treatment for any of the following conditions over the past one year?	Are you under treatment currently? Yes/No	If yes, where are you seeking treatment?(<i>multiple options possible</i>) Government health facilities nearby Health facilities within work places Private doctors/facili	What specific treatments are/were you prescribed?(<i>multiple options possible</i>) Medications Local treatments for relief of pain and other symptoms Rest Exercise/	Are you under regular monitoring for these conditions? Yes/No	Has your problem been resolved/is the condition improving? Yes/No

		ties Medical shops Others (specify)	Physiothera py Further tests Life style modificatio ns Surgery Others (specify)		
Tuberculosis					
Hepatitis					
Heart disease					
Hypertension					
Diabetes mellitus					
Anaemia					
Asthma/Bronchitis					
Thyroid problem					
Piles					
Varicose problem					
Epilepsy					
Cancer					
HIV					
Cardiovascular disease					
Arthritis					
Others (specify) -----					

9.14 Have you experienced any lack of interest or unhappiness in your work over the past two weeks?

Yes No

- Almost every day
- Never
- Several days

- More than half a day If yes

10. Barriers to access to health care

10.1 Is there a hospital facility in the garden where they work?

Yes No

10.2 If not, how far from here is the primary health center?

- Within a kilometer
- From one kilometer to eight kilometers
- More than eight kilometers

10.3 How to get to these hospitals?

- By Walk
- With the vehicle facility installed in the garden
- With own vehicle facility

10.4 Are the services of doctors / nurses still available in the garden hospitals?

- There is always
- Not always
- Not available from here

10.5 Do you get the required medicines / pills from here?

Yes No

10.6 Have you ever approached private hospitals? Yes No

10.6 a If so, why?

10.7 How far is it if a treatment facility is available outside of estate ?

10.8 Are there checkups, medications, scans, etc. available for pregnant women?

- Checkups
- Drugs
- Scanning
- X Ray facility

- Maternity care

10.9 Whether inpatient treatment is possible in these hospitals?

Yes No

10.9 a If so, do you know how many beds are arranged in hospitals?

10.9 b How many beds if you know?

10.10 Are there any first aid box / cupboard in the garden? Yes No

10.10 a If so, does it have the necessary medicines and accessories?

Yes No

10.11 All the treatment at these hospitals is free? Yes No

10.11 a Or for what purpose do they have to pay?

10.12 Do hospitals have the following doctors and assistants?

- Expert doctor
- Compounder
- Nurse
- Midwife
- Nursing Assistant

10.13 Does the hospital have adequate water supply ? Yes No

10.14 Are the following facilities available in hospitals?

- Men's ward
- Ward for women
- Separate delivery room
- Family Planning Center
- Infectious disease prevention ward with sanitation facilities
- Convenient to wait
- Light operating room
- Dispensary
- Privacy check room
- Public stores
- Kitchens

10.15 Is there free transportation from the garden to the hospital and back?

- Yes
- No
- Transportation is available but not free
- No transportation

10.15 a Is free ambulance facility available when required?

- Yes,
- no
- Ambulance service is free

10.15 a Are there any facilities mentioned in the Op section?

Yes No

- Is there any reserve ward for monitoring and treatment?
Yes No
- Vaccination and injection facility Yes No
- Facility to provide medicines free of cost Yes No
- Obstetrician advice Yes No
- Facility for free public testimonial Yes No
- Do you receive free medication, food, and care when you need inpatient treatment? Yes No

10. 17 whether the food and medication needed for inpatient treatment are provided free of charge? Yes No

10.18 Whether regular medical examinations are performed in the workplace? Yes No

10.19 Is there a hospital where you can get free treatment at your place of work? Yes No

10.20 Whether government-prescribed medicines and equipment are available in dispensaries and hospitals?

Yes No

10.21 Does the District Medical Officer or the Assistant Manager nominated by him visit the dispensaries and other hospitals at least

once a year?

Yes No

10.22 Where is the treatment for most of you and your family's health needs over the past year?

- Workplace health facilities
- Nearby government facilities
- Other government facilities
- Private doctors / facilities
- Medical shops
- Other (explain)

10.23 If there is no hospital facility in the workplace, where have they sought treatment for most of their and their family's health needs in the past year?

- Nearby government facilities
- Other government facilities
- Private doctors / facilities
- Medical shops
- Other (explain)

10.24 Why don't you go to government hospitals (for those who do not use government facilities?)

- There are no government facilities nearby
- Government hospitals have to wait a long time for treatment
- Attitudes / Behavior of Government Hospitals (Including Doctors)
- Government hospitals often do not have doctors facilities / medicines

10.25 If you or your family have an urgent health problem and need to be examined or treated at an outpatient hospital (there is no hospital in the workplace, treatment is not possible there) so do the employers ask you to pay the cost (reimbursement of medical expenses)?

Yes No

10.26 Are there any barriers to getting proper treatment for health problems If yes, what were the major obstacles you faced when you last sought treatment for a health problem (multiple surgeries are possible)

- Financial Limitations (Money)
- Convenience is too far (distance)
- No time to go to the hospital (time)
- No groom in the hospital (help)
- It is difficult to get a leave of absence from work to go to the hospital (work related)
- Factories do not give us paid leave to go to the hospital (work related)
- No medical insurance (lack of financial protection)
- Long waiting(Related to the health system)
- Attitudes or behavior of hospital staff (including doctors)
(Related to the health system)
- Hospitals often do not have doctors or facilities or medicines (related to the health system)
- Other (explain)

10.28 If you have to seek treatment at an outpatient hospital, how do you find the money for inpatient treatment?

- Ayushman Bharat / Karunya has health insurance cover
- Workplace Plans / Allowances / Loans
- Borrow from relatives / friends
- Savings
- Borrow from private lenders

- Others (explain)

10. 29 Do you get a refund for the money you spend on treatment?

Yes No

10.29 a How to evaluate the current health system?

- the best
- The better
- Not good, not bad / not bad
- Bad
- too bad

Crushes

11.1 Do crushes work in this garden? Yes No

11.1 a If so, Crush is a place where moms can easily reach? Yes No

11.2 Crush has furniture suitable for children? Yes No

11.3 Children under the age of two in the crush are having cradle facility? Yes No

11.4 Is there an open area playground with you with a safety fence for adult children in the Crush? Yes No

11.5 Is the service of trained / other staff available at Crush? Yes No

11.6 How many employees are there?

11.7 Does Crush have bathroom / toilet facilities? Yes No

11. 8 Is there a breastfeeding facility for mothers at Crush? Yes No

11.9 Do children get milk / milk powder and other nutrients free of cost? Yes No

11.10 What Crush offers kids for free?

11.11 Do the crushes operate in a safe building? Yes No

11.12 Are their primary education facilities available in gardens with children between the ages of six and twelve? Yes No

11.13 Is there a school in the garden? Yes No

11.13 a Or where is the nearest school?

11.14 How far is the nearest government school?

11.15 Are there any fees for education? Yes No

Appendix 2.A

In-Depth Interviews with trade union leaders

Participant ID:

Date:

Starting time:

Duration:

1. The plantation sector has been reported to have facing a crisis in the state (In 2018, the state government had announced a slew of measures, such as abolishing plantation tax and freezing agricultural income tax, among others to support the crisis-ridden plantation sector). What do you think are the reasons for the concerns affecting the tea plantation sector of the state?
[Context: high cost of production, low strength of competitiveness in the international market and low price realisation and the high pressure of trade unions– some of the often sited reasons for the crisis, closure of tea units and financial crisis reported by the sector in the state]
2. How do you think this crisis has affected the work and life of tea plantation labourers of the state?
3. Do you think that the long history of plantation labour from colonial era, struggles of debt bondage, entrapment and squalor faced by the workers and the social positioning of workers as predominantly Dalit labourers from Tamil Nadu or as internal migrant labourers have any role to play in determining their current situation?
4. What role have the trade unions played or continue to play to ensure the rights, entitlements and protection of tea plantation labourers?
5. Do you believe that the concessions, allowances and other benefits presently available to the plantation labourers are adequately supporting them and protecting their rights? If no, how can this situation be improved?
6. How do you see the situation of women workers in the sector especially in the context of the state-wide stir by Pombalai Orumai and their success?
7. We have heard from many workers that many of them are under debts. How can we avoid workers getting entrapped in bad debts and enhance the availability of better credit facilities?
8. How do you think this situation in the sector and in the lives of labourers can be improved? What suggestions or recommendations do you have for the government and the managements?
9. How do you see the health situation of the tea plantation labourers? Do you think that their work has an impact on their health and well-being? If yes, how?
10. What about their access to health care? Are you satisfied with the present provisions, especially since, plantation labourers do not have access to ESI scheme, like other workers?

11. The more recent regulations from the state government (2015 and 2016) for plantation labourers have several provisions for the welfare of the plantation labourers. For instance, the clause that in emergency health situations when the worker or the family seeks care from outside, the employer has to reimburse the cost of health care (2015). There are also specific guidelines to ensure that the storage and use of chemical fertilizers/pesticides are not harmful to the workers? To what extent are these regulations implemented?
12. How do you think we can improve the health, health care and well-being of workers in the tea plantation sector of the state?

Appendix 2.B.

In-Depth Interviews with trade union leaders

Participant ID:

Date:

Starting time:

Duration:

1. The plantation sector has been reported to have facing a crisis in the state (In 2018, the state government had announced a slew of measures, such as abolishing plantation tax and freezing agricultural income tax, among others to support the crisis-ridden plantation sector). What do you think are the reasons for the concerns affecting the tea plantation sector of the state?
[Context: high cost of production, low strength of competitiveness in the international market and low price realisation and the high pressure of trade unions– some of the often sited reasons for the crisis, closure of tea units and financial crisis reported by the sector in the state]
2. How do you think this crisis has affected the work and life of tea plantation labourers of the state?
3. Do you think that the long history of plantation labour from colonial era, struggles of debt bondage, entrapment and squalor faced by the workers and the social positioning of workers as predominantly Dalit labourers from Tamil Nadu or as internal migrant labourers have any role to play in determining their current situation?
4. What role have the trade unions played or continue to play to ensure the rights, entitlements and protection of tea plantation labourers?
5. Do you believe that the concessions, allowances and other benefits presently available to the plantation labourers are adequately supporting them and protecting their rights? If no, how can this situation be improved?
6. How do you see the situation of women workers in the sector especially in the context of the state-wide stir by Pombalai Orumai and their success?
7. We have heard from many workers that many of them are under debts. How can we avoid workers getting entrapped in bad debts and enhance the availability of better credit facilities?
8. How do you think this situation in the sector and in the lives of labourers can be improved? What suggestions or recommendations do you have for the government and the managements?
9. How do you see the health situation of the tea plantation labourers? Do you think that their work has an impact on their health and well-being? If yes, how?
10. What about their access to health care? Are you satisfied with the present provisions, especially since, plantation labourers do not have access to ESI scheme, like other workers?

11. The more recent regulations from the state government (2015 and 2016) for plantation labourers have several provisions for the welfare of the plantation labourers. For instance, the clause that in emergency health situations when the worker or the family seeks care from outside, the employer has to reimburse the cost of health care (2015). There are also specific guidelines to ensure that the storage and use of chemical fertilizers/pesticides are not harmful to the workers? To what extent are these regulations implemented?
12. How do you think we can improve the health, health care and well-being of workers in the tea plantation sector of the state?

Appendix 2.C.

In-Depth Interviews with policy makers, academicians, policy analysts and other state/national level experts in labour

Participant ID:

Date:

Starting time:

Duration:

1. The plantation sector has been reported to have facing a crisis in the state (in 2018, the state government had announced a slew of measures, such as abolishing plantation tax and freezing agricultural income tax, among others to support the crisis-ridden plantation sector). What do you think are the reasons for the concerns affecting the tea plantation sector of the state?

[Context: high cost of production, low strength of competitiveness in the international market and low price realisation and the high pressure of trade unions – some of the often sited reasons for the crisis, closure of tea units and financial crisis reported by the sector in the state]

2. How do you see the future of these workers in the light of the new labour codes?

[Context: The Plantation Labour Act, 1951 has been subsumed in the new Labour Code on Occupational, Safety, Health and Working Conditions, 2020 and Social Security Code, 2020. According to the Union government, this will provide multiple benefits to the temporarily engaged tea garden workers and other plantation workers.]

3. Do you think the current policies starting with the Plantation Labour Act, 1951 and the Kerala Plantations Labour Rules, 1959 are doing justice to the rights and entitlements of tea plantation labourers in the state?
4. Some of the writings which have examined the labour situation in plantation sector have located the current nature of plantation labour historically, especially that of colonial and post-colonial South India. How do you see this position and how do you relate it to the current working conditions of tea plantation labourers of the state?

[Context: For instance, Global capital and peripheral labour by Dr. Ravi Raman, examines the history of labour within the capitalist world-economy, as they evolved from the mid-19th century the then prevailing local social structure, labour structure and the scheme of disciplining to which the workers were subjected to. The historical novel Red Tea by Dr. Paul Harris Daniel also talks about debt bondage, poor working and living conditions, squalor and entrapment].

5. Do you think the current policies are cognizant about the struggles of plantation labourers as a caste struggle also? Do they need to be?

[Context: The history and struggles of plantation labourers in south India have also been the history and struggles of Dalits in the region. Even today, caste is known to be a defining characteristic of this sector. From that point of view, this then becomes more than just a labour issue? Would you agree? Do you think the current policies are cognizant of this aspect?].

6. The issue of temporary labour and that of contractual labour are concerns for the workers, not just in plantation sector, but also in other traditional sectors. However, we see that informalization of labour is deepening all around. How do you see this situation and what are the implications of such informalization for the future of the sector and the rights and protection of the workers?
7. How do you see the situation of women workers in the sector especially in the context of the state-wide stir by Pombalai Orumai and their success?
8. The health and health care of plantation labourers have also been written about and highlighted in fictional writing (English novel - Red Tea) and cinema (Tamil movie - Paradesi). More recently, the ravages of incessant rains and landslides on their lives and property have grabbed significant attention. All of this highlight their vulnerability. From that context, do you think the policies, concessions, allowances and benefits are adequately protecting these workers or offering them ample support?

[Context: For instance, one of the greatest concerns of plantation labourers is health care, especially because they have been exempted from the ESI scheme for long. Both under the new labour codes by the union government and under the labour department of the state government, there is a move towards making the ESI scheme applicable for plantation workers. However, to the best of our knowledge, this has not yet been brought to implementation. Thus, health care is a major concern for them].

9. A significant proportion of these labourers are those who have Tamil origins or internal migrant labourers. Do you think this aspect is in anyway critical with regard to the policies and welfare measures offered to these workers in Kerala?
10. How do you see the efforts of the state government to address their homelessness through LIFE mission? Poor and unsafe housing and other living conditions have been reported as a major issue among the labourers?

11. What future do you envision for this sector and broadly what remedial strategies would you recommend to allay the crisis and improve the working conditions and living conditions of the tea plantation labourers of the state?

12. At present the plantation labourers of the state are not included under the protection of ESI scheme. However, some of the plantations have in-house health facilities and the newer regulations of the state government for plantation labourers (2015 and 2016) have been cognizant of their health and safety, especially with regard to financial protection for health care and safe handling of chemical fertilizers/pesticides. How far have these been implemented in the factories is being explored by this study. How do you see the health and health care situation of the workers engaged in tea plantation industry of the state? What suggestions or recommendations do you have to ensure that their health and well-being are secured?

Appendix 3.**Name of Field investigator****Thiruvananthapuram**

Aiswarya CT	Devika S
Keerthi T P	Sreelekshmi B L
Athira Murali	Veena V J
Mahima Raj J O	Dhanya S Nair
Aysha Hussain S M	

Kollam

J. Karunya	K. Mariammal
S. Anusuya	V. Stella Rani

Idukki

Preethy.G	Sharmilaraj
Praveena P	Jamuna G
Usha Antony. A	NimmyBinu
Sangeetha.J	Arunkumar M
Santhiya	Premshankar V P
Jenit C	Saritha G
Devi D	Sulekha T S
Vinotha V	Sharath P S
Anushiya H	Kaleshkumar K

Sajimon T M

Jyothis C

Palakkad

Anoop Das

Anoop R

Mujeeb

Manikandan S

Gouthaman R

Vinitha

Wayanad

Shahana Sherin

Nishana P V

Athira Udayan

Sumitha

Srutikrishna

Dhanya S

Abhinand

Nithin Rajendran

Muhammed Ashique

Thrissur

Abiya.Y

Data entry Operators

Aswani S

Rekha

Saranya S

Jithesh V T K

Gayathri M L

Vishnu S

Aryalekshmi S

Appendix 4 : List of factories covered in the study

SL. NO:	NAME OF THE ESTATE
	PEERUMEDU
1	Chandravanam Estate
2	Glenmery Estate
3	Koduvakaranam Estate
4	Ladrum Estate
5	Koliekanam Estate
6	Pullikkanam Estate
7	Tungamullay Estate
8	Mount Estate
9	Moogalar Estate
10	Manjumalai Estate
11	Thengakal Estate
12	Grambi Estate
13	Pasumallai Estate
14	Injikad Estate
15	Chinnar Estate
16	Haileyburia Estate
17	Wallardie Estate
18	Pattumalai Estate
19	M K john & Sons Estate
20	Portland Estate
21	Periya Connimara Estate
22	Manikal Estate
23	Muthumalai Estate
24	Springvalley Estate
25	Karady Goody Estate
26	Lifetime Agroland Ltd.
27	Pasupparai Estate
28	Alampilly Estate
29	Churakulam Estate
30	Ashley Estate
31	Vimalagiri Estate
32	Plakkad Estate
33	Stagbrook Estate
34	Tyford Estate
35	Pensurest Estate
36	Mekkunnam Estate
37	Pullupara Estate
38	Pattumudy Estate
39	Chandravanam estate(Keerikara Division)
	MUNNAR

40	Letchmi Estate
41	Madupatty Estate
42	Guderal Estate
43	Gundumallay Estate
44	Nullathanni Estate
45	Nymakkad Estate
46	Chundavurrai Estate
47	Pullivasal Estate
48	Thalayar Estate
49	Lockhart Estate
	VANDANMEDU
50	Periakanal Estate
51	Harrisons Malayalam Ltd. Upper Surianalle Estate
52	Harrisons Malayalam Ltd. Panniar Estate
53	Ratan Plantation Ltd. Rohit& Pookulam Estate
	KALPETTA
54	Ayisha Plantation
55	Chelot Estate
56	Chembra Estate
57	Chulikka Estate
58	Elston Estate
59	HML Achoor Estate
60	HML Arappatta
61	HML Chundel
62	HML Sentinal Rock Estate
63	HML Thovarimala
64	Kodanad Estate
65	Kurichiyarmal Estate
66	Podar Plantation
67	Poothakolli Estate
68	Thalamala Estate
69	Thalamala Estate
70	Thalamala Estate
71	Thalamala Estate
	MANANTHAVADY
72	Cherakara Estate
73	Talapoya Estate
74	Jessie Estate
75	Tatamala Estate
76	Priyadarshini Tea Estate
77	Waynad Tea Plantation Project,Kerala Forest development corporation Ltd,
78	Ashiyna Greens Estate
79	Raziya Greens Estate
80	Glen leven estate

81	Periya peak Estate
82	A.K.Tea Estate Varayal
	NENMARA (PALAKADU)
83	The Bhawani Tea & Produce Group Estate
84	The Nellyampathy Tea & Produce Company Pvt Ltd, Manalaroo Estate,
85	Poabs Estate
	THIRUVANANTHAPURAM
86	Southern Field Ventures Pvt Ltd. Merchiston Tea Estate
87	Ponmudi Tea Estate
	KOLLAM- PATHANAPURAM
88	Travancore Rubber & Tea Co.LtdAmbanad Estate
	THRISSUR
89	Tata Coffee Ltd. Malakkappara Estate