



SOCIO ECONOMIC AND HEALTH CONDITION OF WOMEN WORKERS IN RUBBER PLANTATIONS IN KANYAKUMARI DISTRICT

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ABSTRACT

This study aimed to investigate the socio economic and health condition among women workers in rubber plantation in Kanyakumari district. Descriptive research design was used in this study. This study is mainly based on the primary data collected from the various Rubber plantations women workers in the district and the secondary data from the related literatures. Primary data is generated from the respondents by contacting them personally using the interview schedule. The samples were selected from various Rubber Plantation women workers in Kanyakumari district. For the purpose of selecting the sample for the study convenience sampling used this study. 110 female rubber plantation employees would make up the sample. The findings of this study on working hazards and health issues among rubber farmers could be used to develop a program in order to reduce their health problem and eliminate the hazards. Occupational health officer should address the health problems among rubber farmers and provide them the support they need.

Key Words: Rubber Plantation, Health Problems, Working Hazards

INTRODUCTION

Rubber farmers are agricultural workers who play an essential role in the Indian economy and labour market. They are considered as informal sector-workers as they have a low job security, low income, no access to a range of social benefits, and fewer possibilities to participate in formal education and training programs [1]. The National Statistical Office Report (2012) specified that the most common unsafe work environments involve the

presence of hazardous chemicals, heavy machinery, and tools which are used by informal sector workers [2], in which rubber farmers are of no exemption. The southern region of India does have a substantial amount of commercial rubber growing. However, rubber farmers have experienced many hazardous exposures at work. They have faced physical hazards including inadequate light when tapping rubber trees at night. Such an inadequate light can cause visual strain and discomfort [3]. They are also prone to chemical contamination such as ammonia, sodium sulfite, formic acid, acetic acid, and herbicides [4]. These chemicals are harmful to workers' health, specifically to their skin and respiratory function [5,6]. In addition, several biological hazards such as vicious animal and mosquitoes are usually found [3,7,8] in the humid areas of rubber plantations. With regard to psychosocial hazards, rubber farmers may also experience anxiety, distress, or stress due to their working conditions. In other words, competition for work time per day, high job demand, characteristics of working hazards, and fluctuations of rubber prices in news broadcasts affect rubber farmers' health [4,9]. Rubber farming is also a physically demanding occupation. In fact, most rubber farmers are also exposed to ergonomic hazards since their job entails repetitive body movements with the elbow, shoulders, wrist, neck, back, waist, and knees, as well as substantial lifting, walking and the use of manual equipment that affects musculoskeletal health [7,10,11]. Moreover, critical injuries or accidents at work may occur during the rubber working process. For example, using working tools, such as a tapping knife, can cause cutting wounds when rubber farmers whetted the tapping knife or tapped a rubber tree. Small iron gutters used to make a track for the latex to drip into the latex cup may also cause accidents or injury to rubber farmers. Lastly, hands and fingers are frequently cut with the tapping knife or small iron gutter [3,8]. Generally, the hazards in the rubber farmer's working process can adversely affect their health either acute or chronic. This condition, either injury and illness, can lead to enormous costs. However, the incidence and the prevalence of occupational diseases or work-related diseases among rubber farmers are underreported [12]. Thus, rubber farmers entail the plan of screening, prevention, surveillance, and health care services. The information about potential working hazards and rubber farmers' health problems will be used to propose projects or policies with regard to their occupational health. Even though several studies were conducted relating to rubber farmer's health condition, only a few studies have focused on physical, biological, and psychological factors that could potentially affect their health. Therefore, this study aims to examine the socio economic and health condition among women workers in rubber plantation

in Kanyakumari district as well as to determine the relationship between working hazards and health problems among rubber farmers in Kanyakumari district.

STATEMENT OF THE PROBLEM

The living condition in the rubber plantation is entirely different from olden days. The Statistical Office Report (2012) specified that the most common unsafe work environments involve the presence of hazardous chemicals, heavy machinery, and tools which are used by informal sector workers. The hazards in the rubber farmer's working process can adversely affect their health either acute or chronic. Here, researcher examines the living and health problems of rubber plantation women labours in Kanyakumari district. This study analyses the socio economic condition of women labours as well as to determine the working hazards and health problems among rubber farmers in Kanyakumari district and also to find out the occupational accident/injured faced by the women workers in rubber plantation.

REVIEW OF LITERATURE

- ❖ **Abdul Rafeeqe (2021)** In his article entitled "A Study on the Socio Economic Conditions of Rubber Tapping Employees in Palakkad District". In the study he analysed the socio economic conditions of the rubber tapping employees, to study the welfare facilities and level of satisfaction of rubber tapping employees. Methodology of the study, Descriptive research design was used in this study. This study is mainly based on the primary data collected from the various tea plantations in the district and the secondary data from the related literatures. Primary data is generated from the respondents by contacting them personally using the interview schedule. Area for data collection was Palakkad district. Finally, he concludes that generation after generation the labours are working in the Rubber Tapping, the workers are not considered as skilled workers because the work done is mostly manual. Though there are so many problems which made hindrances in the development of Rubber tapping sector.
- ❖ **Pimpisa Saksornmuang (2018)** the article entitled "Working Hazards and Health Problems among Rubber Farmers in Thailand" This study aimed to investigate the working hazards and health problems among rubber farmers in the southern part of Thailand. A cross-sectional survey questionnaire was employed to identify the workers' working hazards and health problems,

workers' postures, and the measurement of the intensity of light, lung function, and eye vision. Results indicated that 45.5 % of the rubber farmers were exposed to a chemical substance, 87 % were exposed to a scorpion, and 27.6 % had a high job strain. Furthermore, 43.8 % of the rubber farmers had a high ergonomic risk when collecting the rubber latex. However, the intensity of the headlamp had met the standard. Findings also revealed some common health problems among rubber farmers. These were musculoskeletal disorders (87.7 %), depression symptoms (15.7 %), and hand eczema (8.9 %). Additionally, nearly half of the Thai rubber farmers had an accident at work (45.1 %), while 22 % reported to have bitten by a poisonous animal. Lastly, 78.4 % of the rubber farmers had a low level of visual requirement and half of them had an abnormal lung function (57.2 %). These findings suggest a need for work process modifications to prevent health hazard in Thai rubber farmers.

OBJECTIVES OF THE STUDY

- To find out the socio-economic status of the respondents
- To identify the working hazards and health conditions of women workers in rubber plantation.
- To find out the Occupational accident/Injured faced by the women workers in rubber plantation.

RESEARCH METHODOLOGY

Descriptive research design was used in this study. This study is mainly based on the primary data collected from the various Rubber plantations women workers in the district and the secondary data from the related literatures. Primary data is generated from the respondents by contacting them personally using the interview schedule. Data on certain general aspects of this study were collected from available secondary sources like census reports, printed books, published articles and internet. The samples were selected from various Rubber Plantation women workers in Kanyakumari district. For the purpose of selecting the sample for the study convenience sampling used this study. 110 female rubber plantation employees would make up the sample. The researcher selected interview as the method of data collection, considering the possibility of illiterate respondents and also considering the necessity of getting detailed reliable information. The researcher selected

interview schedule as the tool for data collection. The schedule was designed such that the required data for the achievement of the study should be easily obtained. The Interview schedule consists of face sheet containing name of research topic, personal data of the respondents. It also contains questions specifying the living condition of the respondents. Area for data collection was Kanyakumari district. After the data collection, the data were coded, edited and tabulated. Analysis of data was done by using appropriate statistical technique. Simple percentage method and Chi-square tests were used for data analysis.

LIMITATIONS OF THE STUDY

- The researcher conducted the study and data collection was done within a short period
- Due to the limited period of time to ascertain the information the dependents could not be collected easily.
- The study was purely based on the primary data i.e. information given by the workers, hence some information may be biased.

RESULTS AND DISCUSSION

SOCIO-ECONOMIC CONDITION OF WOMEN WORKERS IN RUBBER PLANTATION

TABLE 1

S.No.	Personal variables	No. of respondents	Percentage
1	Age (Years)		
	Below 18	4	4
	19 – 25	16	16
	26-35	39	43
	36-50	47	52
	Above 50	4	4
2	Educational status	No. of respondents	Percentage
	Illiterate	12	12
	Literate	43	47
	Primary	45	50
	High School	10	10
3	Monthly income (in Rs.)	No. of respondents	Percentage
	Below Rs.8000	8	8.
	Rs.8001 - Rs.10000	47	52
	Rs.10001 – Rs.12000	55	61

	Above Rs. 12000	0	0
5	Year of Experience	No. of respondents	Percentage
	Below 3	18	18
	4 – 9	59	65
	10- 14	31	34
	15- 20	2	2
	Total	110	100

6	Types of accommodation	No. of respondents	Percentage
	Own house	77	85
	Rented House	21	23
	Estate house	12	12
	Others	0	0
7	Latrine facilities	No. of respondents	Percentage
	Private	75	83
	Public	6	6.0
	No facilities	29	32
8	Water facilities	No. of respondents	Percentage
	Tap	43	47
	Well	67	74
	River	0	0
	Total	110	100

Source: Primary Data

Out of 110 respondents, 4 % of respondents are in the age group of below 18, 16 % of respondents are in the age group of 19 - 25, 43 % of respondents are in the age group of 26 – 35, 52 % of respondents are in the age group of 36 – 50 and 4 % of respondents are in the age group of above 50. It is found that majority of the respondents (52%) are in the age group of 36 – 50.

It could be observed from the above table, 12 % are illiterate, 47 % respondents are literate, 50 % of respondents got primary school education and only 10% of respondents experienced high school level.

Out of 110 respondents, 8% of respondents opined that their monthly income is below Rs.8000, 52 % of respondents yearned money between Rs.8001 and Rs.10000 and 61 % of respondents said that they got Rs.10001-12000. Majority of the respondents are Income category between Rs. 10001 – 12000.

Out of 110 respondents, 18 % of respondents declared that they have below 3 years of experience, 65 % of the respondents have 4- 9 years of experience in Rubber Plantation, 34 % of respondents have 10 -14 years of experience, 2 % of respondents have 15 – 20 years of experience. Above table shows that majority of the respondents (65 %) have 4- 9 of experience.

Out of 110 respondents, 85% of respondents live in their own house, 23% of respondents reside in rented house and 12 % respondents dwell in estate. Majority of the respondents have own house (85%).

Above table shows that 83% of respondents are using private latrine facilities and 6% respondents are using public latrine. From the above table it is found that majority of respondents (83%) have good latrine facilities.

47% of respondents depend on Tap water and 74% of respondents are using well water. Most of the workers (74%) depend on Well water.

WORKING HAZARDS OF WOMEN WORKERS IN RUBBER PLANTATION

TABLE 2

S.NO	WORKING HAZARDS	LOW RISK	MODERATE RISK
1	Chemical Hazards:		
	Liquid Ammonia	72 (79%)	38(42%)
	Acid	82 (90%)	28(31%)
	Herbicide	85 (94%)	25(28%)

2	Biological Hazards:		
	Mosquitoes	32 (35%)	78 (86%)
	Scorpions or centipedes	65 (72%)	45 (50%)
	Snake	70(77%)	40 (44%)
	Bees and Wasp	69(72%)	41(45%)

Source: Primary Data

Chemical hazards

Seventy-nine percent of them used liquid ammonia as latex anti-coagulant, while only Eighty-two percent of them used acid as a latex coagulant when making rubber sheets. Ninety-four used herbicides. Most of the chemical users had a low-risk level.

Biological hazards

All rubber farmers experienced mosquitoes when they worked. According to biological hazards risk, most rubber farmers (86 %) who faced with mosquitoes were at a moderate risk. 72 % who found scorpions or centipedes were at a low risk. More than half of them (77 %) who found snakes were at a low risk. While 72 % of rubber farmers who reported to have faced with bees or wasps or hornets were at low risk

HEALTH CONDITIONS OF WOMEN WORKERS IN RUBBER PLANTATION

TABLE 3

S.NO	HEALTH CONDITION	FREQUENCY	PERCENTAGE
1	Musculoskeletal Problem		
	-Neck pain	23	21
	-Lower back ache	12	11
	-Knee Pain	17	15
2	Respiratory Problems	9	8
3	Dermatological problem	35	32
4	Ophthalmological Problem	6	5
			4

5	Vector borne disease	4	4
6	Worm infestations	4	0
7	Snake bites	0	

Source: Primary Data

Musculoskeletal disorders were the most commonly reported health problems by the workers such as neck pain, lower back ache and knee joint problems (n=52; 47%) followed by respiratory problems (n=9; 8%), dermatological problems (n=35; 32%) and ophthalmological problems (n=6; 5%) in the last year. A few cases of vector borne diseases and worm infestations were also reported.

TABLE 4

OCCUPATIONAL ACCIDENT AND INJURY

S.NO	OCCUPATIONAL ACCIDENT AND INJURY	FREQUENCY	PERCENTAGE
1	Head/Face	7	6
2	Body	5	4
3	Hand/Finger	64	58
4	Leg	25	23
5	Foot	9	8
TOTAL		110	100

Source: Primary Data

Majority of the occupational accidents for women workers is Hands or fingers were frequently injured (58 %) while 23 % of them had injuries at legs.

TABLE 5

PERSONAL VARIABLE AND LEVEL OF SATISFACTION OF WOMEN WORKERS IN KANYAKUMARI DISTRICT

S.No.	PERSONAL VARIABLE	Chi-Square	P Value	Accepted/Rejected
1	Age	3.174	.010	R
2	Educational qualification	3.357	.007	R

3	Monthly income	3.843	.003	R
4	Experience	2.622	.028	R
5	Accommodation	2.550	.031	R

Source: Primary Data

It is noted from the above table that the ‘P’ value is less than 0.05 the above hypothesis is rejected. i.e. there is a highly significant association between the level of satisfaction of women workers and the respondents selected socio-economic variables. It may be inferred that there is relationship between Age, Educational qualification, Monthly income, Experience and Accommodation and level of satisfaction. It may be concluded that preference of a particular satisfaction of employees is related to the selected socio-economic variables of the present study.

FINDINGS

- It is found that majority of the respondents (52%) are in the age group of 36 – 50.
- 50 % of respondents got primary school education.
- Majority of the respondents are Income category between Rs. 10001 – 12000.
- Majority of the respondents (65 %) have 4- 9 of experience.
- Majority of the respondents have own house (85%).
- It is found that majority of respondents (83%) have good latrine facilities.
- Most of the workers (74%) depend on Well water.
- Most of the chemical users had a low-risk level.
- According to biological hazards risk, most rubber farmers (86 %) who faced with mosquitoes were at a moderate risk.
- Musculoskeletal disorders were the most commonly reported health problems by the workers such as neck pain, lower back ache and knee joint problems.
- Occupational accidents for women workers is Hands or fingers were frequently injured (58 %).
- There is a highly significant association between the level of satisfaction of women workers and the respondents selected socio-economic variables.

SUGGESTIONS

- Management should try to implement the use of organic manures and pesticides.
- Management should give proper training on new machineries.
- Providing basic education to employees, so that they become aware about the schemes and facilities about the schemes for them.
- Adequate training should be provided to women workers.
- There should be proper guidelines for recruitment process working hours and for health hazards.

CONCLUSION

Rubber farmers play an essential role in Kanyakumari District. The social and economic developments in the village level are mainly due to the Rubber plantation which provide job opportunities to the poor people in the village to a greater extent. The standard of life is different in a plantation when compared to other jobs. However, their working environment poses a threat to their health. The findings of this study on working hazards and health issues among rubber farmers could be used to develop a program in order to reduce their health problem and eliminate the hazards. Occupational health officer should address the health problems among rubber farmers and provide them the support they need. This action could be implemented with a rubber farmer's participation in occupational health programs.

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