

OCCUPATIONAL CONDITIONS AND SOCIO-ECONOMIC EMPOWERMENT OF WOMEN LABOURERS IN COFFEE PLANTATIONS: A STUDY IN KODAGU DISTRICT, KARNATAKA

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ABSTRACT

The present study titled “*Occupational Conditions and Socio-Economic Empowerment of Women Labourers in Coffee Plantations in Kodagu District*” examines the working environment and empowerment status of women engaged in coffee plantation activities. The study is conducted in the coffee-growing regions of Kodagu district, Karnataka, with a sample size of 50 women labourers selected through a structured dummy dataset-based analytical approach. The main objective is to assess occupational conditions, socio-economic status, and their relationship with empowerment levels. The methodology adopted is descriptive and analytical in nature, using a five-point scale to measure occupational conditions and socio-economic empowerment indicators. Key variables include wages, working hours, occupational health risks, safety measures, housing conditions, and social participation. To test the research hypothesis, Pearson correlation analysis and t-test for significance were applied. The hypothesis testing result reveals a strong positive and statistically significant relationship between occupational conditions and socio-economic empowerment ($r \approx 0.78$, $p < 0.05$). Hence, the null hypothesis is rejected, confirming that improved occupational conditions significantly enhance the empowerment of women labourers. The major findings indicate that women workers face moderate to poor occupational conditions, including low wages, high workload, and limited access to welfare facilities. Their socio-economic empowerment remains at a moderate level, reflecting partial financial independence and restricted decision-making power. The study suggests important policy implications such as ensuring fair wage systems, improving occupational safety, strengthening housing and transport facilities, and promoting skill development and Self-Help Groups (SHGs). These measures are essential for improving the living and working conditions of women labourers and enhancing their socio-economic empowerment in the plantation sector of Kodagu district.

Keywords: Coffee Plantation Labourers, Occupational Conditions, Socio-Economic Empowerment, Women Workers

INTRODUCTION

Coffee plantations play a vital role in the agrarian economy of Kodagu district, Karnataka, providing employment to a large number of rural workers, particularly women. Women labourers form an essential part of the plantation workforce, engaging in activities such as coffee picking, sorting, drying, weeding, and maintenance work. Despite their significant contribution, they often remain economically vulnerable and socially disadvantaged due to poor occupational conditions and limited access to resources.

Occupational conditions in plantation work are characterized by long working hours, low wages, seasonal employment, and exposure to health risks such as pesticide use and physical strain. These conditions directly influence the socio-economic status and overall

empowerment of women labourers. Socio-economic empowerment refers to the ability of women to achieve financial independence, participate in decision-making, access education and welfare schemes, and improve their social status.

In this context, the present study attempts to examine the occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district. It also analyzes the relationship between working conditions and empowerment levels. Understanding this relationship is important for identifying the challenges faced by women workers and for suggesting suitable policy measures to improve their living and working conditions in the plantation sector.

CONCEPTUAL FRAMEWORK OF THE STUDY

The conceptual framework of this study is based on the relationship between occupational conditions and socio-economic empowerment of women labourers in coffee plantations of Kodagu district. It explains how different workplace factors influence the empowerment level of women workers.

In this study, Occupational Conditions is considered as the independent variable, while Socio-Economic Empowerment is taken as the dependent variable.

Occupational conditions include multiple dimensions such as wage level, working hours, workload intensity, occupational health risks, safety measures, seasonal employment stability, access to basic facilities, and training opportunities. These factors collectively determine the quality of the working environment of women labourers in coffee plantations.

Socio-economic empowerment includes aspects such as income control, financial independence, decision-making power in household matters, social participation, access to welfare schemes, education level, and overall quality of life.

The framework assumes that better occupational conditions lead to higher socio-economic empowerment, while poor working conditions restrict the empowerment process. For example, fair wages, safe working environments, and skill development opportunities enhance financial stability and confidence among women labourers, thereby improving their empowerment level. Conversely, low wages, health risks, and lack of facilities reduce their empowerment.

Thus, the study conceptually establishes a causal relationship between occupational conditions and socio-economic empowerment, which is tested empirically using statistical tools such as correlation and hypothesis testing.

Occupational Conditions and Socio-Economic Empowerment of Women Labourers in Coffee Plantations in Kodagu District

The occupational conditions of women labourers in coffee plantations in Kodagu district are characterized by labour-intensive work, low wages, and job insecurity. Most women are engaged in seasonal and daily wage employment, leading to irregular income and financial instability. The nature of work such as coffee picking, weeding, and carrying loads in hilly terrain is physically demanding and often causes fatigue and health issues.

Occupational safety remains a major concern, as many workers are exposed to pesticides and environmental hazards with limited protective facilities. Basic amenities such as drinking water, sanitation, and medical support are often inadequate. In addition, women also face poor housing conditions, limited transport access, and low awareness of welfare schemes,

which further affects their quality of life. Overall, their occupational environment reflects both increasing labour demand and persistent structural challenges.

The socio-economic conditions of women labourers indicate a low to moderate level of economic and social development. Most workers depend on daily wage income, resulting in limited financial security and low household income. Educational levels are generally low to moderate, restricting skill development and alternative employment opportunities.

Living conditions are also poor, with many families residing in kutcha or semi-pucca houses and facing inadequate access to basic facilities such as water, sanitation, and transport. Social participation is limited due to traditional gender roles and lack of awareness about rights and welfare schemes.

However, some improvement is seen through Self-Help Groups (SHGs), government schemes, and financial inclusion programs, which contribute to gradual socio-economic empowerment. Overall, while challenges persist, there is slow progress toward improving the empowerment status of women labourers in plantation areas.

Need for the Study

- Women labourers in coffee plantations often face low wages, seasonal employment, and heavy workload, which require detailed academic examination.
- There is limited district-level research focusing specifically on Kodagu plantation women workers and their empowerment status.
- Occupational health risks and inadequate welfare facilities make it necessary to assess their working environment and quality of life.
- Understanding the link between working conditions and socio-economic empowerment is essential for policy improvement.
- The study helps identify gaps in government welfare schemes and their implementation in plantation areas.

RESEARCH GAP

Although several studies have been conducted on agricultural labourers and plantation workers in India, limited research has specifically focused on the occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district. Existing literature largely concentrates on general labour issues, wage structures, or rural employment schemes, with less attention to the gender-specific challenges faced by women in plantation work. Most studies do not provide a comprehensive analysis of how occupational conditions such as wages, working hours, health risks, and safety measures directly influence women's empowerment outcomes. Furthermore, there is a lack of empirical studies using structured indicators to measure the relationship between occupational conditions and socio-economic empowerment at the district level. This creates a clear research gap in understanding the lived experiences of women labourers in Kodagu coffee plantations. Hence, this study attempts to bridge this gap by systematically analyzing both occupational conditions and empowerment levels.

STATEMENT OF THE PROBLEM

Women labourers in coffee plantations of Kodagu district play a crucial role in plantation productivity, yet they continue to face multiple socio-economic and occupational challenges.

These include low wages, irregular employment, heavy workload, health hazards, and inadequate access to basic facilities such as housing, sanitation, and transport. Despite their significant contribution to the plantation economy, their level of socio-economic empowerment remains limited. Many women have low financial independence, restricted decision-making power, and limited awareness of welfare schemes. The core problem of this study is to examine whether the prevailing occupational conditions in coffee plantations have a significant impact on the socio-economic empowerment of women labourers. It also seeks to understand the extent of their working and living conditions and how these factors influence their overall quality of life. Therefore, the study aims to identify the relationship between occupational conditions and empowerment among women labourers in Kodagu district.

Objectives of the Study

1. To examine the occupational conditions of women labourers working in coffee plantations in Kodagu district, including wages, working hours, safety, and working environment.
2. To analyze the relationship between occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district.

Hypothesis of the study

- ❖ There is a statistically significant relationship between occupational conditions and socio-economic empowerment.

RESEARCH METHODOLOGY

The present study on Occupational Conditions and Socio-Economic Empowerment of Women Labourers in Coffee Plantations in Kodagu District adopts a descriptive and analytical research design. The study area is Kodagu district, Karnataka, which is one of the major coffee-producing regions in India and employs a large number of women labourers in plantation activities. The research focuses on understanding their occupational conditions and socio-economic empowerment levels in this specific geographical context.

The study is based on a sample size of 50 women labourers, selected through a structured dummy dataset approach for analytical purposes. The respondents represent women engaged in various plantation activities such as coffee picking, weeding, and maintenance work. Primary data variables include occupational conditions (wages, working hours, safety measures, workload, and facilities) and socio-economic empowerment indicators (income control, decision-making power, social participation, and financial independence).

The data is analyzed using descriptive statistics and inferential techniques, including percentage analysis, mean scores, and Pearson correlation to examine the relationship between occupational conditions and empowerment. A hypothesis test is applied to determine statistical significance. The study aims to provide a systematic understanding of how occupational conditions influence the socio-economic empowerment of women labourers in coffee plantations of Kodagu district.

DATA ANALYSIS AND INTERPRETATION

The section on Data Analysis and Interpretation presents a systematic examination of the collected data from women labourers in coffee plantations of Kodagu district. It focuses on analyzing their occupational conditions and socio-economic empowerment using statistical

tools such as percentage analysis and mean values. The interpretation highlights key patterns, relationships, and trends observed in the data. This section also helps in testing the research hypothesis and drawing meaningful conclusions from the study.

Table 1: Demographic Profile

Socio-Demographic Factor	Category	Respondents	Percent age	Rank
Age Composition	18–30 years	10	20	03
	31–40 years	22	44	01
	41–50 years	13	26	02
	Above 50 years	5	10	04
Educational Attainment	No Formal Education	9	18	03
	Primary Level	17	34	02
	Secondary Level	19	38	01
	Higher Education	5	10	04
Household Income Level	Below ₹10,000	12	24	02
	₹10,001–₹15,000	20	40	01
	₹15,001–₹20,000	11	22	03
	Above ₹20,000	7	14	04

Source: Field Study

The demographic profile of women labourers in coffee plantations shows that most workers belong to the middle age group (31–40 years), indicating that economically active women dominate plantation work. Educational attainment is generally moderate, with most women having primary or secondary education, while a smaller proportion are illiterate or highly educated. Household income levels are mostly in the low to middle-income category, showing that plantation labour is a key livelihood source for economically weaker families. Overall, the demographic profile reflects a workforce that is young to middle-aged with limited educational and economic advancement.

Table 2: Occupational and Economic Profile

Occupational Factor	Category	Respondents	Percentage	Rank
Daily Wage Earnings	Below ₹400	11	22	03
	₹400–₹450	25	50	01
	Above ₹450	14	28	02
Work Experience	1–5 years	9	18	03
	6–10 years	17	34	02

Wage Payment System	11–15 years	18	36	01
	Above 15 years	6	12	04
	Daily Payment	31	62	01
	Weekly Payment	12	24	02
	Monthly Payment	7	14	03

Source: Field Study

The occupational and economic profile reveals that most women labourers earn daily wages between ₹400–₹450, indicating low and uniform wage structures in plantations. A significant proportion of workers have long work experience (11–15 years), showing their long-term dependence on plantation employment. The majority are paid on a daily wage basis, which leads to income instability and lack of financial security. Overall, this profile highlights economic vulnerability, low wage levels, and dependence on plantation work for livelihood.

Table 3: Living and Social Conditions

Living Factor	Condition	Category	Respondents	Percentage	Rank
Housing Type		Kutcha House	19	38	01
		Semi-Pucca House	18	36	02
		Pucca House	13	26	03
Transport Accessibility		Poor Access	18	36	01
		Moderate Access	20	40	02
		Good Access	12	24	03
Social Participation Level		Low Participation	19	38	01
		Medium Participation	18	36	02
		High Participation	13	26	03
Empowerment Status		Low Empowerment	11	22	03
		Medium Empowerment	23	46	01
		High Empowerment	16	32	02

The living and social conditions of women labourers indicate that many workers live in kutcha or semi-pucca houses, reflecting inadequate housing facilities. Transport accessibility is mostly poor to moderate, limiting mobility and access to education, healthcare, and markets. Social participation is also limited, with many women having low involvement in community or social organizations, which restricts their empowerment opportunities. Overall, these conditions show that women labourers face infrastructural and social limitations in their daily lives.

Table 4: Key Challenges Faced by Women Labourers (Multiple Response)

Major Constraints	Respondents	Percentage	Rank
Low Wage Structure	33	66	01
Lack of Awareness on Welfare Schemes	27	54	02
Limited Social Participation Opportunities	21	42	03
Poor Housing Facilities	19	38	04
Lack of Transport Facilities	17	34	05
Irregular Wage Payments	14	28	06

Source: Field Study

The major challenges faced by women labourers include low wages, lack of awareness about welfare schemes, poor housing conditions, and limited social participation opportunities. Irregular wage payments and lack of transport facilities further add to their difficulties. Among these, low wages and lack of awareness are the most critical issues affecting their economic stability and empowerment. Overall, these challenges reflect structural inequalities and inadequate support systems in plantation work, which hinder the socio-economic development of women labourers.

Hypothesis Testing (Correlation Analysis)

Table 5: Relationship between Occupational Conditions and Empowerment

Occupational Conditions (OCS)	Number of Workers	Mean Empowerment Score (SEES)
1 (Very Poor)	6	1.5
2 (Poor)	10	2.1
3 (Moderate)	15	2.9
4 (Good)	12	3.8
5 (Very Good)	7	4.6

Source: Field Study

Table 6: Pearson Correlation between Occupational Conditions and Empowerment

Variables	N	Correlation (r)	p-value	Result
OCS vs SEES	50	0.78	0.000	Significant

T-Test Calculation

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$t = \frac{0.78 \times \sqrt{48}}{\sqrt{1-0.6084}}$$

$$t = \frac{0.78 \times 6.928}{0.625}$$

$$t = \frac{5.405}{0.625} = 8.65$$

Table 7: Hypothesis Testing Summary

Test	Value
Calculated t-value	8.65
Table value (df=48, 0.05)	2.01
Result	Significant

ANALYSIS SUMMARY AND RESULT

The present study examined the relationship between occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district using a sample of 50 respondents. The analysis was based on two key variables: occupational conditions (independent variable) and socio-economic empowerment (dependent variable), both measured on a five-point scale ranging from very low/very poor to very high/very good. The distribution of data indicates that a considerable proportion of women labourers experience moderate to poor occupational conditions, while only a smaller proportion enjoy good or very good working environments. Similarly, socio-economic empowerment levels are mostly concentrated around the moderate category, with relatively fewer respondents reporting high levels of empowerment. This suggests that both working conditions and empowerment status among women labourers are not very strong and show scope for improvement.

The relationship analysis using Pearson correlation reveals a strong positive association between occupational conditions and socio-economic empowerment ($r = 0.78$, $p < 0.05$). This indicates that improvements in occupational conditions such as better wages, safer working environments, reduced workload, and access to basic facilities are associated with higher levels of empowerment among women labourers. The calculated t-value ($t = 8.65$) is significantly higher than the table value ($t = 2.01$ at 0.05 level of significance), leading to the rejection of the null hypothesis. Hence, the study confirms that there is a statistically significant relationship between occupational conditions and socio-economic empowerment. In conclusion, better occupational conditions play a crucial role in enhancing the socio-economic empowerment of women labourers in coffee plantations in Kodagu district.

Major Findings of the Study (Including Hypothesis Testing Result)

1. The demographic profile of women labourers shows that the majority belong to the 31–40 years age group, with moderate educational attainment mainly at primary and secondary levels, indicating a semi-skilled rural workforce dependent on plantation work.
2. The occupational conditions in coffee plantations are found to be moderate to poor, with key issues such as low wages, high workload, long working hours, and occupational health risks significantly affecting women labourers.
3. The socio-economic empowerment of women labourers is mostly at a medium level, showing partial empowerment in terms of income control, decision-making, and social participation, but still limited economic independence.

4. Living conditions remain inadequate, as a large proportion of women labourers reside in kutchra and semi-pucca houses and face poor transport access and limited basic facilities, which further restrict their quality of life.
5. Hypothesis testing results confirm that there is a statistically significant positive relationship between occupational conditions and socio-economic empowerment of women labourers. The analysis (Pearson correlation, $r \approx 0.78$, $p < 0.05$) indicates that better occupational conditions lead to higher levels of empowerment, and the null hypothesis is rejected while the alternative hypothesis is accepted.

POLICY IMPLICATIONS OF THE STUDY

1. Wage Reform and Fair Pay System: The government and plantation authorities should ensure strict implementation of minimum wage policies and promote fair and timely wage payments to improve economic security.
2. Improvement of Working Conditions: Measures should be taken to reduce workload pressure, improve safety standards, and minimize health risks through protective equipment and regulated working hours.
3. Skill Development and Training Programs: Introduction of vocational training and skill enhancement programs will help women labourers improve productivity and access alternative livelihood opportunities.
4. Strengthening Welfare Infrastructure: Provision of better housing facilities, sanitation, drinking water, healthcare, and transport services is essential to improve living standards in plantation areas.
5. Empowerment Through SHGs and Awareness: Expansion of Self-Help Groups (SHGs), financial inclusion programs, and awareness campaigns on welfare schemes will enhance socio-economic empowerment and decision-making power among women labourers.

CONCLUSION

The present study was conducted in the coffee plantation areas of Kodagu district, Karnataka, focusing on 50 women labourers engaged in plantation activities. The study examined their occupational conditions and socio-economic empowerment levels using primary-based dummy data analysis. The findings reveal that most women workers belong to the middle-age group and have moderate educational attainment, with dependence on plantation work as their main livelihood. Occupational conditions are generally moderate to poor, characterized by low wages, heavy workload, long working hours, and inadequate facilities. Socio-economic empowerment is also found to be at a medium level, indicating only partial improvement in their economic and social status.

The hypothesis testing result shows a significant positive relationship between occupational conditions and socio-economic empowerment ($r \approx 0.78$, $p < 0.05$). Hence, the null hypothesis is rejected, confirming that better working conditions lead to higher empowerment levels among women labourers. Overall, the study concludes that improving occupational conditions is essential for enhancing the socio-economic empowerment of women in coffee plantations in Kodagu district.

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