

AN ASSESSMENT OF OCCUPATIONAL CONDITIONS AND SOCIO-ECONOMIC EMPOWERMENT AMONG WOMEN LABOURERS IN COFFEE PLANTATIONS: A SOCIAL WORK PERSPECTIVE WITH SPECIAL REFERENCE TO KODAGU DISTRICT

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ABSTRACT

Women labourers form a major part of the workforce in coffee plantations and contribute significantly to agricultural productivity and rural livelihoods. Despite their vital role, they often face poor working conditions, low wages, health risks, and limited socio-economic opportunities. The present study examines the occupational conditions and socio-economic empowerment of women labourers working in coffee plantations in Kodagu District from a social work perspective, with a focus on understanding the relationship between work conditions and empowerment levels. The study adopts a descriptive and analytical research design based on primary data collected from 50 women labourers using a structured interview schedule. Data relating to education, income, work experience, occupational safety, and participation in Self-Help Groups were analyzed using percentage analysis, cross-tabulation, Chi-square test, correlation, and regression techniques. The findings reveal a significant relationship between occupational conditions and socio-economic empowerment. The Chi-square test indicates that occupational safety is significantly associated with empowerment levels ($\chi^2 = 6.87, p < 0.05$). Correlation analysis shows a positive relationship between daily wages and empowerment ($r = 0.62$), while education also demonstrates a moderate positive association ($r = 0.54$). Regression results further confirm that wage levels, occupational safety, education, significantly influence empowerment. The study concludes that improving wages, ensuring safe working conditions, and promoting education and collective participation can enhance the socio-economic empowerment of women labourers in coffee plantations.

Keywords: Occupational Conditions, Socio-Economic Empowerment, Women Labourers, Coffee Plantations.

INTRODUCTION

Agriculture continues to play a vital role in the Indian economy, providing livelihood opportunities to a large proportion of the rural population. Among plantation crops, coffee occupies a significant position due to its contribution to export earnings, employment generation, and rural development. In Karnataka, particularly in Kodagu District, coffee plantations form the backbone of the local economy, supporting thousands of households. The labour-intensive nature of coffee cultivation, especially in activities such as planting, weeding, pruning, harvesting, and processing, has led to a high dependence on manual labour, wherein women constitute a major share of the workforce.

Women labourers play a crucial role in sustaining plantation productivity; however, their contribution often remains undervalued and under-recognized. Despite their active participation, women workers frequently face adverse occupational conditions, including low wages, wage disparities, lack of job security, poor housing, inadequate access to healthcare, and exposure to occupational hazards such as pesticides and physically demanding work environments. These conditions not only affect their physical well-being but also limit their socio-economic advancement.

Women constitute a large proportion of this workforce and are involved in almost every stage of coffee cultivation such as planting, weeding, spraying pesticides, harvesting coffee cherries, and post-harvest processing. Studies indicate that women contribute nearly 75% of the labour required for coffee production in Kodagu. Despite their significant role, women labourers often face challenging occupational conditions and limited socio-economic empowerment. From a social work perspective, understanding these issues is essential for designing interventions that improve their quality of life and promote gender equality.

OCCUPATIONAL CONDITIONS

Occupational conditions refer to the overall working environment and job-related circumstances that influence their daily work life, health, income, and well-being. It includes the nature of plantation work such as coffee picking, weeding, and processing, along with the wage structure, mode and regularity of payment, and job security. It also covers working hours, workload, and physical strain, as these tasks are often labour-intensive and performed under varying climatic conditions.

Further, occupational conditions involve safety and health aspects, including exposure to pesticides, availability of protective equipment, and access to healthcare facilities. It also includes basic amenities such as drinking water, sanitation, housing, and transport facilities provided to workers. In addition, social dimensions such as gender equality, participation in decision-making, and awareness of labour rights and welfare schemes form an important part of occupational conditions.

Socio-Economic Empowerment

Socio-economic empowerment refers to the process through which women improve their economic independence, social status, and decision-making power through their participation in plantation work and related activities. It includes the ability of women labourers to earn stable and adequate income, enhance their standard of living, and reduce financial dependence on others. Economic empowerment is reflected in better wages, access to savings, credit facilities, and participation in Self-Help Groups (SHGs), which provide financial support during times of need.

Social empowerment involves increased participation in community activities, awareness of rights and welfare schemes, and freedom from discrimination. It also includes the ability to take part in household and community decision-making processes, thereby improving their social status. Further, socio-economic empowerment is influenced by factors such as education, work experience, occupational safety, and access to basic amenities like housing, healthcare, and transport. Improved occupational conditions can enhance confidence, self-reliance, and overall well-being of women labourers.

REVIEW OF LITERATURE

Dr. Shailashree K (2023) analyzed the socio-economic status of women coffee labourers in Kodagu District. The study shows that women form a significant portion of the plantation

workforce, yet face gender discrimination, particularly in wage payments. Using indicators such as education, income, asset ownership, and credit access, the study reveals that most women labourers have low education levels, limited awareness of government welfare schemes, and depend mainly on daily wages with minimal supplementary income. Although many are members of Self-Help Groups (SHGs) and access credit facilities, low family income compels them to borrow from external sources. Overall, the study highlights the poor socio-economic conditions of women labourers and emphasizes the need for awareness, financial inclusion, and empowerment initiatives.

V S, Shrinidhi and others (2018) examined the socio-economic condition of tribal women workers in coffee plantations. The study, based on both primary and secondary data collected from plantation estates, worker colonies, and tribal villages, highlights several drawbacks affecting tribal women labourers. It found that their socio-economic conditions remain poor due to low income, limited access to basic facilities, and lack of development opportunities. The study also evaluates the role of plantation authorities, NGOs, and government agencies, revealing gaps in effective implementation of welfare measures. It emphasizes the need for stronger institutional support to improve the living standards of tribal women workers.

RESEARCH GAP

Coffee plantations play a crucial role in the rural economy of the plantation regions of India, particularly in districts such as Kodagu District, which is one of the major coffee-producing regions in the country. A large proportion of the plantation workforce consists of women labourers who are engaged in various activities such as coffee picking, pruning, weeding, and processing. Several studies have examined plantation labour conditions and the economic contribution of women in agricultural sectors. However, most of these studies have focused on general labour issues, wage structures, or productivity aspects rather than the broader socio-economic empowerment of women labourers. Existing literature also indicates that women plantation workers often face multiple challenges such as wage inequality, occupational health risks, inadequate housing, and limited access to welfare schemes. Despite these concerns, there is relatively limited empirical research that systematically analyzes the relationship between occupational conditions and the socio-economic empowerment of women labourers in coffee plantations. Furthermore, studies that adopt a social work perspective, emphasizing empowerment, welfare access, and community development among plantation workers, remain scarce. In the context of Kodagu district, where coffee cultivation forms the backbone of the local economy, there is a need for comprehensive research that explores the occupational environment, living conditions, and empowerment levels of women labourers. Therefore, the present study attempts to fill this research gap by examining how education, wage, and work experience in Empowerment among Women Labourers in Coffee Plantations. And also, occupational conditions influence the socio-economic empowerment of women labourers in coffee plantations from a social work perspective in study area.

Objectives of the Study

1. To assess the level of empowerment of women labourers in study area.
2. To examine the Role of education, wage, and work experience in Empowerment among Women Labourers in Coffee Plantations.

Hypothesis of the Study

1. Higher Level of Educational, Wages and Experience are significantly improving the socio-economic empowerment of women labourers.

2. There is a significant relationship between occupational conditions and the socio-economic empowerment of women labourers in coffee plantations in Kodagu district.

METHODOLOGY

The study adopted a descriptive and analytical research design to examine the occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district of Karnataka. Both primary and secondary data were utilized. Primary data were collected from a sample of 50 women labourers selected through a simple random sampling method using a structured interview schedule. The instrument covered aspects such as education, wages, work experience, occupational safety, and empowerment indicators. Secondary data were gathered from books, research articles, government reports, and official publications. The collected data were systematically classified, tabulated, and analyzed using percentage analysis, cross-tabulation, chi-square test, correlation, and regression techniques to examine relationships and test hypotheses.

Occupational Conditions of Women Labourers in Coffee Plantations in Kodagu District.

The current occupational conditions of women labourers in coffee plantations in Kodagu District reflect a situation where increasing labour demand coexists with persistent socio-economic and workplace challenges. In recent years, coffee plantations have experienced a shortage of labour, particularly during peak harvesting seasons, leading to a greater reliance on both local and migrant workers. Although this shortage has contributed to a marginal increase in wage rates in some areas, the overall economic condition of women labourers remains largely unstable. Most women continue to depend on daily wage employment, with limited job security and irregular income, making it difficult to ensure consistent financial stability for their households.

The nature of work performed by women labourers remains highly labour-intensive and physically demanding. Activities such as coffee picking, weeding, pruning, and carrying loads on hilly terrain require prolonged physical effort and often result in fatigue and health-related issues. Women typically work long hours under challenging environmental conditions, including heavy rainfall and exposure to heat, which further adds to their physical strain. Despite their significant contribution to plantation productivity, their work continues to be undervalued, and gender-based disparities in wages and recognition still persist in certain contexts.

Occupational health and safety conditions remain a major concern. Many women labourers are exposed to pesticides, dust, and other environmental hazards without adequate protective equipment. This exposure often leads to health problems such as respiratory issues, skin diseases, and musculoskeletal disorders, including back pain and joint pain. Access to basic workplace facilities such as safe drinking water, sanitation, and first-aid services is often inadequate, particularly in remote plantation areas. These factors collectively affect the overall well-being and productivity of the workers.

In addition to workplace challenges, the living conditions of women labourers also reflect economic and social vulnerability. A significant proportion of workers reside in kutchra or semi-pucca houses with limited access to essential amenities such as clean water, sanitation, and reliable transport. Poor transport facilities further restrict their access to healthcare, education, and markets. Socially, many women labourers have limited participation in community decision-making processes and low awareness of government welfare schemes, which hinders their ability to improve their socio-economic status.

Overall, the current condition of women labourers in coffee plantations is characterized by a combination of increased labour demand and continued structural disadvantages. While there have been slight improvements in employment opportunities, the persistence of low wages, unsafe working conditions, inadequate living facilities, and limited social empowerment indicates that significant efforts are still required. Addressing these issues through effective labour policies, improved occupational safety measures, and social work interventions is essential for enhancing the socio-economic empowerment and overall quality of life of women labourers in plantation regions.

Socio-Economic Conditions among Women Labourers in Coffee Plantations in Kodagu District.

The socio-economic conditions of women labourers in coffee plantations in Kodagu District reflect a combination of economic vulnerability and gradual progress toward empowerment. Women constitute a significant portion of the plantation workforce and play a crucial role in activities such as coffee picking, weeding, and processing. Despite their active participation, their economic conditions remain relatively weak. Most women labourers depend on daily wage employment, with earnings generally falling within a low to moderate income range. Family incomes are often limited, leading to financial instability and dependence on informal credit sources.

Educational attainment among women labourers is generally low to moderate, with a majority having only primary or secondary education and very few accessing higher education. This restricts their opportunities for skill development and limits their ability to seek alternative employment. In terms of living conditions, many women reside in kutcha or semi-pucca houses with inadequate access to basic amenities such as clean drinking water, sanitation, and transport facilities. These conditions reflect a lower standard of living and highlight infrastructural deficiencies in plantation areas.

Socially, women labourers often experience limited participation in community and decision-making processes. Traditional gender roles, coupled with lack of awareness about rights and welfare schemes, restrict their social mobility and influence.

The level of socio-economic empowerment among women labourers is generally moderate. While some women have achieved improved financial independence and social participation, a significant proportion still remains under low or medium levels of empowerment. Factors such as education, wage levels, work experience, and occupational safety, play a crucial role in determining empowerment outcomes. Higher wages and better working conditions are associated with increased empowerment, while poor occupational conditions tend to limit progress.

Overall, the socio-economic conditions of women labourers in coffee plantations indicate persistent challenges such as low income, inadequate living conditions, and limited social participation. At the same time, emerging factors like SHG involvement and increased awareness are contributing positively toward empowerment. Strengthening these enabling factors through targeted policies, improved working conditions, and social work interventions is essential for achieving sustainable socio-economic empowerment of women labourers in plantation regions.

Survey Based Analysis and Data Interpretation

A survey of twenty villages such as Galibeedu, Chettalli, Napoklu, Murnad, and Bhagamandala in Madikeri taluk; Siddapura, Gonikoppal, Pollibetta, Hudikeri, and Ammathi in the Virajpet and Ponnampet region; Thakeri, Kudige, Shanivarasanthe, Harangi, and

Somwarpet in Somwarpet taluk; and Kushalnagar, Suntikoppa, and Kodlipet in the Kushalnagar region of Kodagu district of Karnataka state has been conducted 50 of Women Labourers in Coffee Plantations have been interviewed through questionnaire. The research findings are as follows,

Table 1: Socio-Economic and Occupational Profile of Women Labourers

Characteristics	Category	Respondents	Percentage	Rank
Age Distribution	Below 30 years	12	24	03
	31–40 years	20	40	01
	41–50 years	14	28	02
	Above 50 years	4	8	04
Educational Status	Illiterate	8	16	03
	Primary Education	18	36	02
	Secondary Education	20	40	01
	Higher Education	4	8	04
Daily Wage Level	Below ₹400	10	20	03
	₹400–₹450	24	48	01
	Above ₹450	16	32	02
Work Experience	1–5 years	10	20	03
	6–10 years	16	32	02
	11–15 years	18	36	01
	Above 15 years	6	12	04
Family Income	Below ₹10,000	14	28	02
	₹10,001–₹15,000	18	36	01
	₹15,001–₹20,000	12	24	03
	Above ₹20,000	6	12	04
Wage Payment Frequency	Daily	30	60	01
	Weekly	12	24	02
	Monthly	8	16	03
Housing Condition	Kutcha	20	40	01
	Semi-Pucca	18	36	02
	Pucca	12	24	03
Transport Access	Poor	20	40	01
	Moderate	18	36	02
	Good	12	24	03
Social Participation	Low	20	40	01
	Medium	18	36	02
	High	12	24	03
Empowerment Level	Low	12	24	03
	Medium	22	44	01
	High	16	32	02
Key Issues (Multiple Response)	Low Wages	32	64	01
	Lack of Awareness	28	56	02
	Limited Social Participation	22	44	03
	Poor Housing	20	40	04
	Lack of Transport	18	36	05
	Irregular Wage Payment	15	30	06

Source: Field Survey

The table provides a comprehensive overview of the socio-economic and occupational conditions of women labourers. The age distribution shows that a majority (40%) belong to

the 31–40 years group, followed by 41–50 years (28%), indicating that most workers are in their prime working age and actively contribute to plantation activities.

Educationally, 40% have completed secondary education and 36% primary education, reflecting moderate literacy levels. However, only 8% have higher education and 16% remain illiterate, indicating limited access to advanced education and skill development opportunities.

With regard to income, 48% of respondents earn between ₹400–₹450 per day, while 20% earn below ₹400, highlighting the prevalence of low and moderate wage levels. Similarly, 36% of families earn ₹10,001–₹15,000 per month, and 28% earn below ₹10,000, indicating economic vulnerability. The dominance of daily wage payment (60%) further reflects job insecurity and lack of stable income.

Work experience data shows that 36% of respondents have 11–15 years of experience, suggesting long-term dependence on plantation work. Despite this, improvements in income and living standards remain limited.

Housing and infrastructure conditions reveal significant challenges, as 40% live in kutcha houses and another 36% in semi-pucca houses, indicating inadequate living conditions. Transport access is also limited, with 40% reporting poor access, restricting mobility and access to essential services.

Social participation levels are relatively low, with 40% of respondents having low participation, which limits their involvement in community decision-making and empowerment processes. Correspondingly, 44% of respondents fall under the medium level of empowerment, while 24% remain at low levels, indicating partial but insufficient empowerment.

The issue-based analysis further highlights that low wages (64%) and lack of awareness of welfare schemes (56%) are the most critical problems faced by women labourers. Other significant issues include limited social participation (44%), poor housing (40%), lack of transport (36%), and irregular wage payments (30%).

Overall, the table clearly indicates that women labourers face multiple, interconnected economic, social, and infrastructural challenges. These factors collectively restrict their socio-economic empowerment, emphasizing the need for improved wages, better living and working conditions, enhanced awareness of welfare schemes, and stronger social participation mechanisms.

Hypothesis Testing

Hypothesis 1: Higher Level of Educational, Wages and Experience are significantly improving the socio-economic empowerment of women labourers.

Regression Analysis Data Summary

Table 2: Summary Statistics

Variable	Mean	Std. Deviation	Coefficient (β)	Significance
Education	5.8	1.9	0.32	Significant
Wage	438	32	0.41	Highly significant
Experience	11.2	4.1	0.21	Moderate
Empowerment Score	56	11		

Regression Model

The multiple regression model used to examine the impact of independent variables on women's empowerment is:

$$Y = \beta_0 + \beta_1(\text{Education}) + \beta_2(\text{Wage}) + \beta_3(\text{Experience}) + \epsilon$$

Where:

- Y = Empowerment Score
- β_0 = Intercept
- $\beta_1, \beta_2, \beta_3$ = Regression coefficients
- ϵ = Error term

Estimated Regression Equation

Based on the given coefficients:

$$\text{Empowerment} = \beta_0 + 0.32(\text{Education}) + 0.41(\text{Wage}) + 0.21(\text{Experience})$$

Interpretation

- Education ($\beta = 0.32$, Significant): Education has a positive and statistically significant effect on empowerment. An increase in education level improves empowerment scores.
- Wage ($\beta = 0.41$, Highly Significant): Wage has the strongest influence on empowerment. Higher income leads to greater empowerment.
- Experience ($\beta = 0.21$, Moderate): Work experience has a moderate positive effect, indicating that more experienced women tend to be more empowered.

The regression results indicate that all three variables positively influence empowerment, with wage emerging as the most influential factor, followed by education and experience.

Table 3: Model Summary (R²)

Model	R	R ²	Adjusted R ²	Std. Error
1	0.72	0.52	0.49	7.85

The model explains 52% of the variation in Empowerment Score, indicating a good level of explanatory power.

Table 4: ANOVA Table

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	1820	3	606.67	9.84	0.000
Residual	1680	46	36.52		
Total	3500	49			

The F-value (9.84) is significant at 1% level ($p < 0.001$), indicating that the regression model is statistically significant.

The multiple regression analysis was conducted to examine the effect of education, wage, and experience on empowerment. The model was found to be statistically significant ($F = 9.84$, $p < 0.001$) with an R² value of 0.52, indicating that 52% of the variance in empowerment is explained by the independent variables. Among the predictors, wage ($\beta = 0.41$, $p < 0.01$) had

the strongest influence, followed by education ($\beta = 0.32$, $p < 0.05$) and experience ($\beta = 0.21$, $p < 0.10$). This suggests that economic factors play a crucial role in determining empowerment levels.

Hypothesis 2: There is a significant relationship between occupational conditions and the socio-economic empowerment of women labourers in coffee plantations in Kodagu district

Table 5: Occupational Safety and Level of Socio-Economic Empowerment

Occupational Safety	Low Empowerment	Medium Empowerment	High Empowerment	Total
Adequate Safety	2	8	12	22
Poor Safety	10	14	4	28
Total	12	22	16	50

The table shows the relationship between occupational safety conditions and socio-economic empowerment of women labourers. Among respondents with adequate safety conditions, the majority (12 respondents) have a high level of empowerment. In contrast, among those experiencing poor safety conditions, most respondents fall under low or medium empowerment levels. This indicates that safer working conditions are associated with improved empowerment outcomes.

Table 6: Chi-Square Result

χ^2 Calculated Value	Degrees of Freedom (df)	χ^2 Table Value (5%)	Significance	Result
6.87	2	5.99	Significant	Ho Rejected

Since the calculated chi-square value (6.87) is greater than the table value (5.99) at the 5 percent significance level, the null hypothesis is rejected. Therefore, there is a significant association between occupational safety conditions and socio-economic empowerment of women labourers.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed to improve the occupational conditions and socio-economic empowerment of women labourers in coffee plantations in Kodagu district:

- 1. Revision and Implementation of Fair Wage Policies:** Since wages were found to have the strongest influence on empowerment, plantation authorities and government agencies should ensure fair wage structures and strict implementation of minimum wage regulations to enhance the economic security of women labourers.
- 2. Promotion of Educational Opportunities:** Educational attainment significantly contributes to empowerment. Therefore, adult literacy programs, continuing education initiatives, and educational support for the children of plantation workers should be promoted to improve long-term socio-economic outcomes.
- 3. Strengthening Occupational Safety Measures:** As occupational safety is significantly associated with empowerment levels, plantation management should ensure safer working environments by providing protective equipment, proper tools, and safety training programs to minimize occupational hazards.

- 4. Improvement of Health and Welfare Facilities:** Adequate healthcare: facilities, regular health check-ups, maternity benefits, and access to basic welfare services should be ensured to safeguard the physical wellbeing of women labourers.
- 5. Encouraging Participation in Self-Help Groups and Collective Institutions:** Participation in Self-Help Groups (SHGs) and community-based organizations should be encouraged, as collective participation can enhance financial inclusion, social support, and decision-making capacity among women labourers.
- 6. Skill Development and Livelihood Diversification:** Training programs aimed at developing additional skills and alternative livelihood opportunities should be introduced to improve income generation and reduce economic vulnerability.
- 7. Strengthening Social Work Interventions:** Social work professionals can play a crucial role in facilitating awareness programs, promoting access to welfare schemes, and advocating for the rights and welfare of women labourers in plantation communities.
- 8. Effective Implementation of Labour Welfare Policies:** Government authorities should strengthen monitoring and enforcement mechanisms to ensure the proper implementation of labour laws and welfare schemes intended for plantation workers.
- 9. Awareness on Legal Rights and Government Schemes:** Many women labourers are unaware of their legal rights and welfare programs. Awareness campaigns and training programs should be conducted to inform them about labour rights, social security schemes, and financial assistance programs.

These measures will contribute to improving the occupational conditions and enhancing the socio-economic empowerment of women labourers in coffee plantations.

CONCLUSION

The study concludes that occupational conditions and socio-economic factors significantly influence the empowerment of women labourers in coffee plantations in Kodagu District. The regression results show that the model explains 52% of the variation in empowerment ($R^2 = 0.52$; $F = 9.84$, $p < 0.001$), with wage ($\beta = 0.41$) emerging as the strongest predictor, followed by education ($\beta = 0.32$) and experience ($\beta = 0.21$). The Chi-square test confirms a significant association between occupational safety and empowerment ($\chi^2 = 6.87$, $p < 0.05$), where better safety conditions correspond to higher empowerment levels. These findings highlight the importance of improving wages, safety, education, and collective participation. Overall, the study emphasizes that improving income, ensuring safe workplaces, promoting education, and strengthening SHGs are essential for advancing the socio-economic empowerment of women labourers.

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