



A STUDY ON THE PARTICIPATION OF WOMEN IN AGRICULTURAL SECTOR TOWARDS SUSTAINABLE DEVELOPMENT IN COIMBATORE DISTRICT**

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ABSTRACT

Women perform a variety of tasks in agricultural works in Coimbatore District. In the study area of Coimbatore is wholly depending upon the income of agricultural activities having most backward villages and the women working in agricultural activities by participating more actively than men. The study could found that the women agricultural labour in the field number of hours and get only a meager wages. Their income from allied activities also does not help them to live at the subsistence level. In this study judgement sampling method was adopted for the identification of the 200 female agricultural labour in Coimbatore District. The involvement of women in farming activities found very high in all aspects. The seasonal unemployment, lack of irrigation facilities and poverty are the main factors that determine wages women in agricultural sector. To analyse the data Simple percentage method, Garret Analysis, Chi-Square test and Multiple regression techniques were used. The findings shows that women are facing more problems and challenges in Agricultural activities.

Key words: Agriculture, Women, Economic Development

1.1 INTRODUCTION

Agriculture is the oldest profession of the world. India is an agriculture dominated country. Agriculture is the life blood of Indian economy. It contributes about twenty five percent of GDP and about 70 percent of the population of our country. Agricultural development was given high priority in the past 50 years and especially under various five year plans. The share of agriculture in national income is considered as an indicator of economic development. In our country agriculture has a big role in the development of industries specially the agro- based industries such as textiles, sugar, tea, etc. The prosperity of these ago-based industries depends upon the availability of puts from the agricultural sector. A comparative study with the other countries revealed that most of the underdeveloped countries are heavily depends upon agriculture as their main source of employment.

Women are the backbone of village economy of rural India. Women take up different works to eke out their livelihood and the majority of the rural women depend on agriculture, which is the major unorganized sector in India. Many of these labour are landless belongs to lower social and economic status. The role and status of women are altered in the process of agrarian transformation due to the technology of cultivation. The impact of new technology benefited only the rich farmers and not the poor agricultural labour and as a result, the gap between the poor and rich further widened and agricultural labour was left far behind.

Women are involved in all aspects of agriculture and allied activities from preparation of land to processing and marketing. In addition to their responsibilities at home. Women play a vital role in agricultural management and production activities. They do the most tedious and backbreaking tasks in agriculture, (1. Sidhu, 2011). Many households in rural areas are headed by a single parent, usually a mother, the illiterate women behind with the land and children leading to “feminization” of agriculture. A major reason for the failure of developmental planning lies in treating women as “end products” rather than “agents of changes”.

1.2 STATEMENT OF THE PROBLEM

Women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Many of these activities are not defined as “economically active employment” in national accounts but they are essential to the well- being of rural households.

1. Sidhu-Anatomical investigations in *Silybum marianum* (L.) Gaertn.

The problems of women in agriculture are more acute and distressing manner. When addressed in a women-centric manner, the potential for increased productivity, restoration of ecological balance for high positive social

impacts like increased status, self- confidence and food security for communities which all are increased much more tangibly than working in a gender neutral manner. The problems relate to land ownership, security of tenure, land quality issues in cases where land ownership is assured and finally land management issues in agriculture and the support systems are required. Any changes in land ownership and agricultural patterns affect women far more than men (positive or negative) given the existing gender roles that women are expected to fulfill, mainly related to management of the household in their reproductive roles- fuel wood collection, fodder collection, livestock tending in general, food security needs and so on. Women are equally working with men in agriculture but still there is wage difference between male and female for the same type of work. Three different issues are involved in women's participation in agriculture. These are i) the changing nature of women's work. ii) The persistence of gender based differential in wages and iii) the relation between increasing participation of women and their empowerment. Therefore, there is a need to make an attempt to study the women labour especially in agricultural sector. Hence, the present is taken up to make a study on the women participation in agriculture across various social categories in Coimbatore District.

1.3 NEED FOR THE STUDY

In the present developed modern society also, the women is being exploited in agriculture on the basis of gender differentiation. The correct payment for her work is not being provided, though she is working equally with men. Along these lines, the economic condition of women isn't improving. The present study envisages women are face up to issues every day in their life and their socio economic condition is important and significant. However, the present study is necessary for understanding the Socio-economic conditions, problems faced by women agricultural laborers and to suggest suitable remedial measures to improve the conditions of the women agricultural laborers in the study area.

1.4. OBJECTIVES

- 1.To analyze the Socio-economic profile of women agriculture workers in Coimbatore district
- 2.To identify the various agricultural activities performed by women in study area.
- 3.To ascertain the determinants of women's participation in agriculture in the study area.
- 4.To find out the problem faced by the women agricultural labourers in the agricultural work in the study area.

2.1 METHODOLOGY

This study was based on both primary and secondary sources of data. The required primary data were collected from sample women agricultural laborers by direct personal interview method with pretested and well-structured questionnaire and interview schedule. The Primary data relating to family size, cost composition, level of literacy, land holding size, socio-economic conditions, employment, mode and method of payment, total income of the

family, expenditure and savings of the family are collected through personal interview with the help of a structured questionnaire.

The study is based mainly on Primary Data collected through field survey using interview schedule in Coimbatore district. The interview schedule hovers round the Socio-economic status, living conditions, season-wise employment, season-wise unemployment, occupational classification, wage structure, wage differentials, migration analysis, and alternative sources of employment by the women agricultural labourers. Data were collected and subjected to analysis for interpretation. The sources of secondary data were obtained from various sources such as relevant reports, Journals, magazines, reviews and web-site were also used for data collection.

The field research data were analyzed with the help of appropriate statistical techniques. Besides, simple methods of analysis like averages, percentages, Garret Analysis, multiple regression analysis, chi square and ANOVA are made use of. Averages and simple percentages are employed for the analysis of data. On the basis of tables and processed data, pie-diagrams, multiple bar diagrams have been prepared to show the socio-economic characteristics of the women agriculture workers of Coimbatore district

2.2 REVIEW OF LITERATURE

(2)Ponnarasu and Parthiban (2020) this study was concluded that the average money wage and real wage of both male and female agricultural labourers were increased by every year except one or two cases in Tamil Nadu. The money wage and real wage of female agricultural labourers were much smaller than the male agricultural labourers. In the last decade, the average money wage rate of agricultural labourers like male and female agricultural labourers was increased. The real wage rate of agricultural labourers was also increased but, the low proportion with compare to money wages.

(3)Jeyasheela (2015) examines the ways in which greater integration through agriculture impact women. This paper finds that agriculture creates many jobs for women in agriculture sector. Jobs that bring many household resources under women control leads to greater earnings in the family. Although, women are more than ever finally employed, differences in wages earned by women and men persist in India

(4)Gosh and Gosh (2014) analyse the women participation in agriculture across diverse Indian states based on secondary data source. The study clearly depicts active involvement and participation of women in the agricultural sector in almost all the states with few exceptions like Kerala, Punjab and West Bengal where women are actively participating in non-agricultural activities which includes house-hold industry, service sector etc

(5)Nisha.S (2010) evaluated in her paper “women’s, work and employment outcomes in rural India”. The main objective of the research is to find out the employment outcomes in rural India. It concluded that the participation of women in agriculture is declining year by year. The participation of women increasing in other sectors but is very slow in comparison to men.

2. Ponnarasu and Parthiban (2020), "labour force participation in agriculture With special reference to female Agriculture labours in Tamilnadu", EPRA International Journal of Economics, Business and Management Studies Volume: 7 | Issue: 5, pp 1-7
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5. Nisha.S is Associate Professor of Allahabad in her paper, "women's, work and employment outcomes in rural India". Economic and political weekly July 10, 2010 volume XLV no 28.

(6)Raghavan (2008) indicates there has been a steep turn down in the labour hours applied in its cultivation, as also stagnation in casual wages and the decline was persistent in all major wheat mounting states though it was significantly steeper in Punjab, Haryana and Uttar Pradesh.

(7)Thangamani and Uma Rani (2005) pointed out that women are facing so many problems in agriculture like mechanization has, affected women by reducing the demand for employment in peak season. Poor access to financial services, lack of mobility and time, lack of education and lack of incentives, low status and rigid traditional and social norms and heavy work load is carried by women in agriculture.

(8)Satyasundaram (2003) in his paper titled "India's Economy and Rural Women Workers", discussed about the policies introduced by Government of India towards the women in agriculture and allied activities. Even though policies introduced towards women, they are lagging behind in employment opportunities because of lack of education, training and skills but when compared to men, women work load is heavy and they earn low income and there is discrimination towards women particularly in wages.

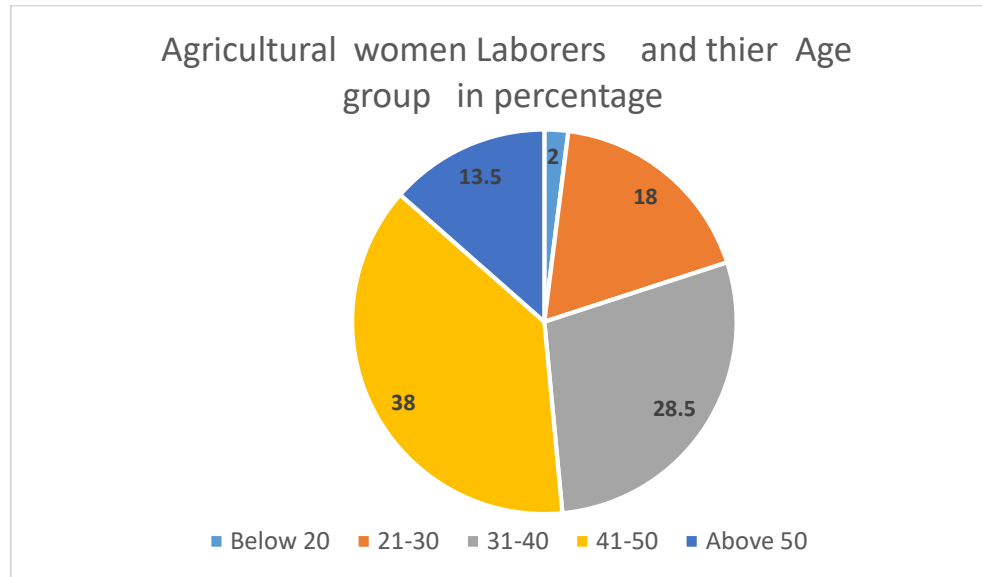
(9)Bimla et. al. (2003) investigated that the women's participation in agricultural activities in Kaithal region of Haryana. They experiential that participation of rural women in agricultural activities was to the degree of 73percent and furthermore work was associated with the activities like transplanting, crushing and so on.

(10)Sobha (2001) pointed out that mainly rural women depending on agriculture, women are belonged to backward classes and their economic position is not good. Caste plays a dominant role to provide employment of women as agricultural labour belonged to lower caste and the upper caste women supervise the work in own farming to other women engaged as wage labour. Socio-economic conditions play a dominant role on women.

(11)Dangat and Yadav (1985) witnessed that the proportion of hired female labour utilized on the farm to the all-out hired human labour was more prominent when contrasted with family female labour. This might be because of the lower wage rates for the females than the males and furthermore their relatively more use on larger farms.

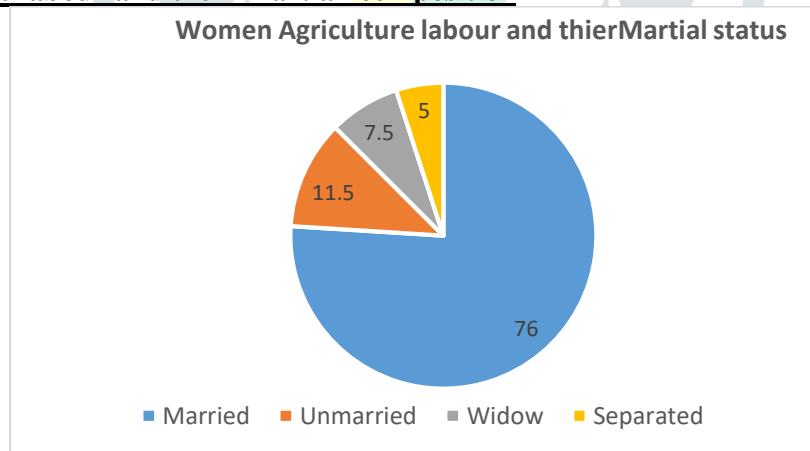
6. Raghavan (2008). Changing Pattern of Input Use and Cost of Cultivation, Economic and Political Weekly, and Vol.67 (45), pp. 123-129.
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11. Dangat S.B. and Yadav D.B., (1985), Role of Women in Crop Production: A Case Study of A Dry Farming Area in Maharashtra, Indian Journal of Agricultural Economics, Vol. XL (3), pp. 265

3.1.1 Women Agriculture labour and their Age composition



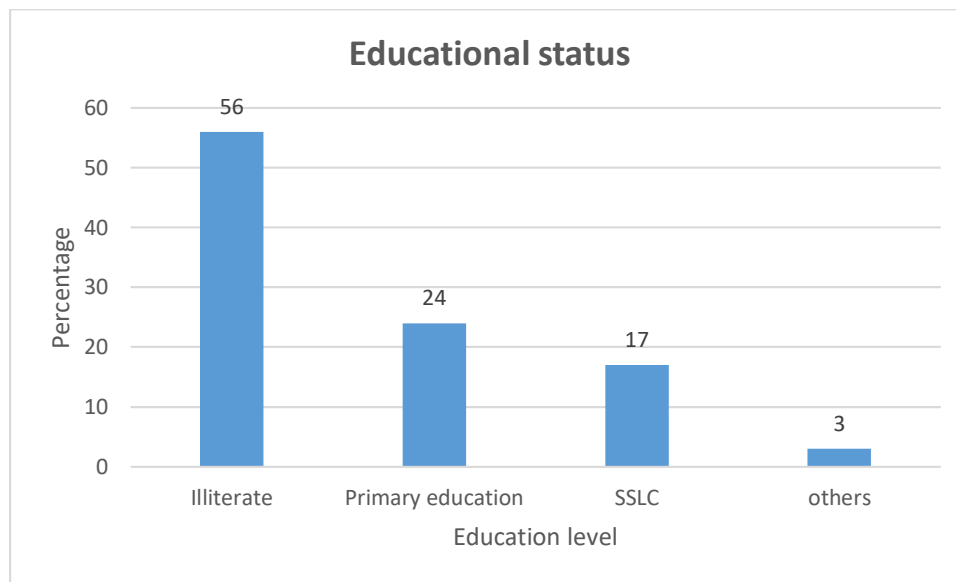
The above diagram 3.1.1 exhibits that among the 200 women agricultural labourers, majority of women agriculture labour belongs to 41-50 age group which constitutes 38 percent, 28.5 percent of women were in the age group of 31-40, 18 per cent of the women constitutes 21-30 age group, 13.5 percent of the respondents were in the age group of above 50 years and the remaining 2 per cent belongs to the age group of below 20 years.

3.1.2 Women Agriculture labour and their Martial composition



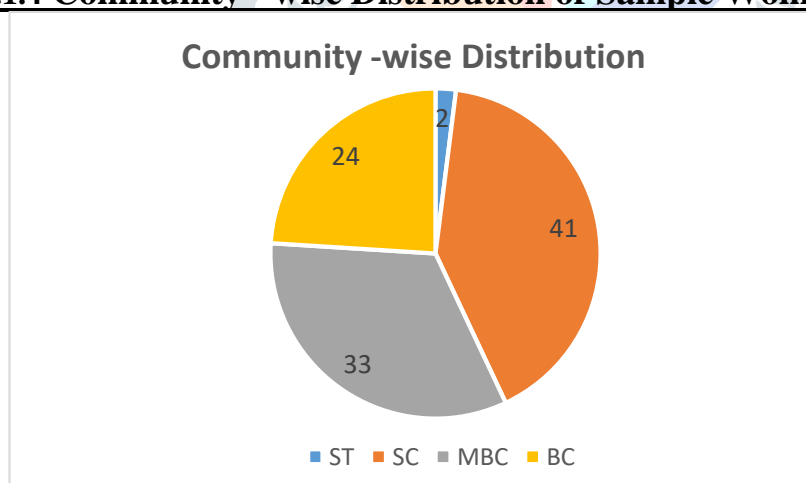
The above chart 3.1.2 . is evidenced that 76 per cent of agricultural women labourers are married and 11.50 per cent are unmarried. There are 7.50 percent who come under the category of widowed and 5 percent are independent the category of married labourer's accounts for the maximum.

3.1.3 Educational status of women agriculture labour



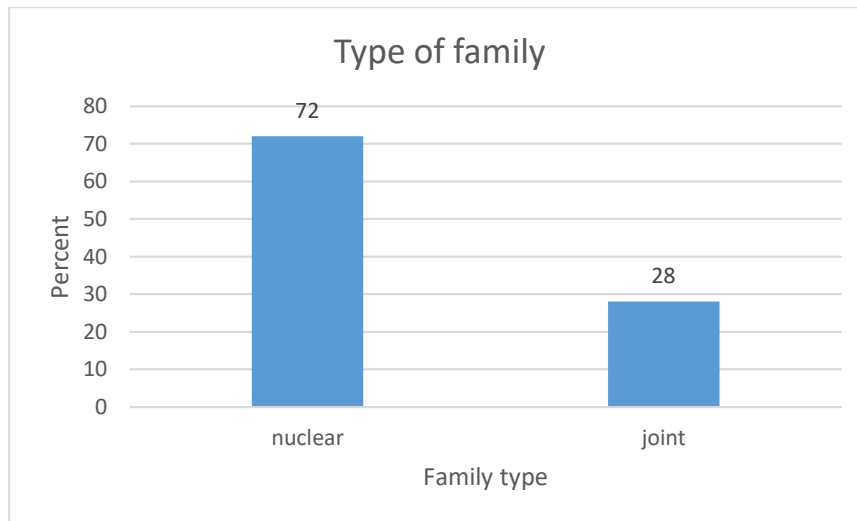
The above chart 3.1.3 shows the educational qualification of the women agriculture labour. 56 percent of women are in uneducated. It indicates nearly half of the agricultural women labourers is also noted that 24 per cent of labourers have only primary education. 17 percent of the women's are completed up to SSLC.

3.1.4 Community - wise Distribution of Sample Women



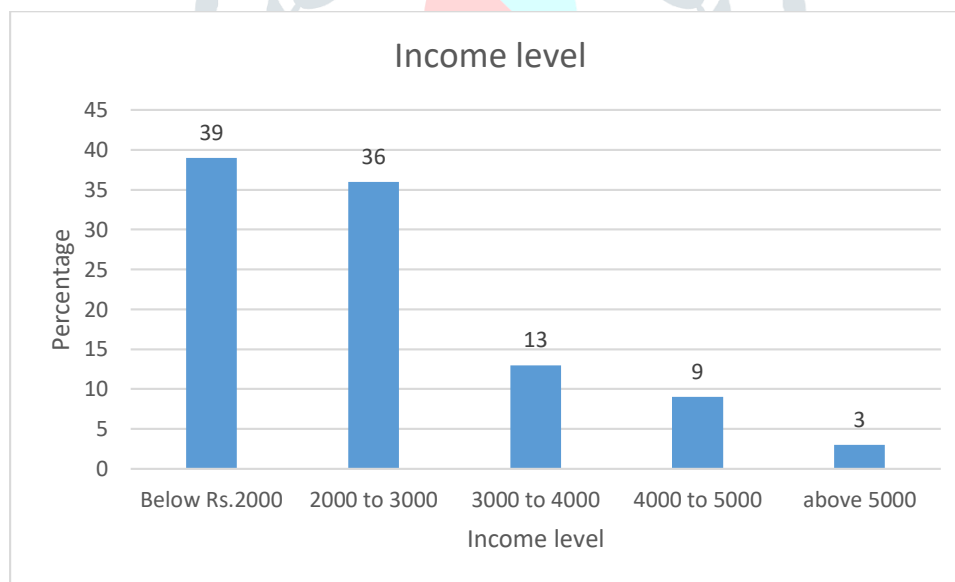
The above chart 3.1.4 shows, out of 200 sample women agriculture laborers, 41 per cent of them belong to SC and SCA. The category of BC labourers accounts for 24 percent to total number of women agricultural labourers. 33 percent of them belong to the MBC. It is above chart shows that only 2 per cent of them are belong to tribe community.

3.1.5 Women agriculture labour and their Family type



The above chart 3.1.5 shows that the majority of women agriculture labours are living in Nuclear family 72 percent and 28 per cent of women agriculture labour living in Joint family respectively.

3.1.6 Agriculture Women Labour and their Income Level



The above chart 3.1.6 shows that the Income is an economic index to measure the quality of life of the people in the society. The income earned by the agricultural women labourers per month is presented in the above table. The majority 39 percent of women agriculture laborers earn less than Rs.2000 per month. Similarly 36 percent of the women's are earning between 2000 to 3000 rupees. Only 3 per cent of women agriculture laborers earn income above 5000.

Table : 1 Relationship between Age and Preferred agricultural work

Hypothesis: There is no significant difference between age and the Agricultural work preferred

Age	To Fulfill the Family Needs	Absence of Male Earning	Low Family Income	To Meet Personal Needs	To Meet Additional Family Requirement	Poverty	Total
Below 20	10	4	0	2	4	4	24
21-30	18	6	8	2	4	6	44
31-40	26	8	14	6	0	2	56
above 40	30	18	10	14	0	4	76
Total	84	36	32	24	8	16	200

Result: In table 1, we find that Chi-Square = 19.34, Degrees of Freedom = 15, Probability = 0.198. Chi-Square test result showed that there is no significant relationship between age and type of preferred the agricultural work since $p > 0.05 (0.198)$. So the hypothesis can't be rejected, the hypothesis is accepted.

4.1 AGRICULTURAL ACTIVITIES OF WOMEN LABOURERS

The agricultural operations are classified into nine categories in the study area for the purpose of analysis. They include Ploughing, Sowing, Weeding, Transplanting, Harvesting, Winnowing, and Threshing, Picking Vegetable / Fruits and others. The operations carried out by the agricultural women labourers, the type of implements used and wage pattern received by them are given in the following Table 2.

Table 2: AGRICULTURAL ACTIVITIES OF WOMEN LABOURERS

S.No	Activities	Type	Wage (Cash / Kind)
1	Sowing	Using Hand	Cash
2	Fertilizer application	Using Hand with Equipments	Cash
3	Weeding	Using Hand	Cash
4	Transplanting	Using Hand	Cash
5	Harvesting	Using Hand with Equipments	Cash / Kind
6	Winnowing	Using Hand	Cash
7	Threshing	Using Hand/ Sickle	Cash / Kind
8	Picking Vegetables / Fruits	Using Hand/ Thrasher	Cash / Kind
9	Post-harvest Operation	Using Hand	Cash
10	Others	Using Hand	Cash

In table 2 explain the Women labourers are engaged in agricultural crop cultivation through undertaking various operations. The activities are either hand-used by the labourers or with equipments and thresher process. The

ploughing, sowing, weeding and transplanting operations were hand-used by women labourers in agriculture. The harvesting operations are performed by the labourers through hand-used agricultural implements. The winnowing process was also done through sickle. The operation of threshing and picking cotton was also done by them through hand-used implement and thresher machine. The popular mode of wage payment in the study area is the one of cash payments. The operations such as harvesting threshing and picking vegetable and fruits were done by the women labourers either for cash payment or for payment in kind.

5.1 FACTORS RESPONSIBLE FOR THE UNEMPLOYMENT OF WOMEN LABOURERS

A number of factors contribute to the unemployment of agricultural women labourers in the study area. The agricultural labourers are asked to identify reasons for their being unemployed during the study period.

6.1 GARRETT'S RANKING ANALYSIS

Garrett Ranking Table is used to find out the influencing factors according to ranks assigned to various factors identified by the sample labourers. They identified eight such factors. They include Sense of dissatisfaction, Poor wage structure, Family reasons, Caste discriminations, Festivals and Functions, Personal reason, Health Problems and Climate Change. The agricultural women labourers identified the factors responsible for them being unemployed for a specified period in a year according to their preferences. The following formula is used to convert the order of factors into ranks.

The per cent position is obtained and it is converted into scores using Garrett's table. After that, the scores of the individual labourer for each of the factors are added and then divided by the total number of labourers who had responded. The mean score is the rank in descending order of magnitude.

Table : 3 Garrett's Ranking Table for Women Agricultural Labourers

S.NO	Factors	Total Score	Mean Score	Rank
1	Caste discriminations	14865.10	82.48	II
2	Poor wage structure	15410.25	84.58	I
3	Festivals and Functions	8121.60	62.10	VII
4	Sense of dissatisfaction	7864.10	59.15	VIII
5	Personal reason	8418.18	64.88	VI
6	Health Problems	9420.65	70.60	V
7	Climate Change	10412.34	73.15	IV
8	Family reasons	12110.70	80.18	III

Table 3 shows the Garrett's Ranking factors responsible for the unemployment of women labourers in agriculture. The factor of climate change has the total score of 15410.25 and the mean score of 84.58. This is rated as the number one factor which causes unemployment of organized women labourers in agricultural activities. The factor of sense of dissatisfaction is ranked eighth with the Total score 7864.10 and the mean score 59.15.

7.1 Determinants of Supply of Agricultural Women Labourers

In general, a number of factors influence the supply of women labourers in agricultural sector. The factors determining supply of women labourers are age of the labourers, level of agricultural operations, income of the household, family size, current wage structure, income earned through assets expenditure of the family and natural settings of the family. In order to examine this, the following form of Multiple Linear Regression Technique.

$$Y = \alpha + \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_7 X_7 + u$$

Where y = Supply of Labourer, X_1 - Age of the labourer X_2 - Level of Agricultural Operations X_3 - Income of the household X_4 - Family Size X_5 - Current Wage Structure X_6 - Income earned through Assets X_7 - Expenditure of the Family X_8 = Natural Settings of the Family β - Intercept u - an error term.

Table 4:

S.No	Variables	Co -efficients	
1	Age of the Labourer	1.946(1.786)	Con :10.684 R ² :0.86
2	Family size	1.534*(1.725)	
3	Education Level	0.683(1.851)	
4	Income of household	1.412*(3.429)	
5	Wage structure	2.418*(2.342)	
6	Expenditure of the family	0.051(2.565)	
7	Climate	0.712*(0.812)	

*Significant at 1 percent, ** significant at 5 percent

The results obtained from the regression analysis Table 4 shows that the significant factors which influence the work participation of women laborers is annual family income and the size. The current wage structure of agricultural women cultivating labourers has positive and significant influence on supply of labourers with the value of 2.418 at 5 per cent level of significance. It is clearly evidenced that current wage structure has been positively influenced with the supply of women agricultural labourers. The R2 value for the variables was 0.547; this shows that 86 per cent of the variability in women work participation is explained by the selected variables.

The Regression analysis explains 86 per cent of variations in the determinants of supply of agricultural women labourers. Among the variables explanatory variables, four of them have statistically significant co-efficient and remaining four variables have insignificant coefficients in the estimated equation.

Conclusion

Agriculture is the life blood of Indian economy. It contributes about twenty five percent of GDP and about 70 percent of the population of our country. The present study attempted to examine the participation of women headed agricultural labour households in the district of Coimbatore. The study Convenience sampling method was adopted in the identification of 200 sample female agricultural labour. The study Simple percentage method, garret analysis, chi-square test and multiple regression techniques were used. The study could found that the women agricultural employees work in the field for more number of hours but get only a meagre salary. Their income from allied activities also does not help them to live at the subsistence level. They all live below the poverty line. Women perform a variety of tasks in agricultural works. The involvement of women in farming activities found very high in all aspects. In the study area of Coimbatore is wholly depending upon the income of agricultural activities having most backward villages and the women working in agricultural activities by participating more actively than men. But, since inception women is facing more problems and difficulties in agriculture laboring than males. The season wise and irrigation facilities are the main factors that determined the employment and wages of the agriculture labour.

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