AATCC Review

10 February 2025: Received
07 April 2025: Revised
13 April 2025: Accepted
16 May 2025: Available Online

https://aatcc.peerjournals.net/

Original Research Article

Open Access

Women's Participation and the Level of difficulty in Agricultural Activities: "Unveiling the Struggles"

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ABSTRACT

This research study investigates the participation and drudgery of women in agricultural activities in rural areas, with a focus on the socio-economic characteristics, the extent of their involvement, and the level of difficulty they face in various farming tasks. The research study was conducted in Mandihal village of Dharwad district, Karnataka, the research examines the labor-intensive nature of agricultural work and highlights the disparity between men's and women's roles in farm activities. The data revealed that, the women were heavily involved in tasks such as weeding, sowing, transplanting, and harvesting, which require significant time and physical effort. The study also measures the drudgery index, a tool to assess the labor intensity and difficulty of these activities. The findings showed that, activities such as weeding and transplanting are particularly strenuous, with women reporting high levels of physical exhaustion. Despite their substantial contribution, women's agricultural roles are often undervalued, and they face numerous challenges due to unequal access to resources, technology, and decision-making power. This study underscores the need for policies and interventions that address the gendered nature of agricultural labor, aiming to reduce the physical burden on women while promoting their participation and empowerment in the sector. The agricultural activities call a primary attention to mitigate the drudgery of the performer. Hence it is a challenging to the agriculture sector to look in to the work efficiency and out put based on the women freindly technologies.

Keywords: *Women, Agriculture, Participation, Level of difficulty, Gender inequality, Drudgery, Physical effort*

Introduction

Agriculture is widely recognized as a sector that underpins the livelihoods of rural communities, particularly in developing countries. Women have long played a crucial role in agricultural production, both in terms of food security and economic activity. However, despite their central role, their participation in agriculture is often obscured by societal norms, gender biases, and structural inequalities. Women's contributions tend to be viewed as secondary to the work of men, even though they contribute significantly to crop cultivation, livestock management, and food processing.

One of the most overlooked aspects of women's labor in agriculture is the nature of their work, which is often physically demanding and characterized by long hours, low wages, and minimal recognition. This research paper explores the dual nature of women's roles in agriculture-highlighting their essential participation while also examining the drudgery they face. The term "drudgery" is used here to describe repetitive, tedious, and often grueling tasks that women are primarily responsible for, such as fetching water, weeding fields, or harvesting crops.

Historical Context and Women's Role in Agriculture

Historically, agricultural labor has been a gendered activity, with women often relegated to tasks that are perceived as "less important" or "supportive" to the main agricultural processes dominated by men. In many cultures, women have been responsible for domestic agriculture, such as the cultivation of subsistence crops, while men focus on cash crops. This division of labor has not only shaped the type of work women do but has also reinforced gender hierarchies within rural economies.

In many parts of the world, particularly in sub-Saharan Africa, South Asia, and Latin America, women are responsible for a significant proportion of agricultural production. They provide crucial labor for planting, weeding, harvesting, and processing food, as well as managing small livestock. However, despite their contributions, women often have limited access to resources such as land, credit, and agricultural technology, which restricts their productivity and reinforces their dependency on male family members or landowners.

Participation of Women in Agricultural Activities

Women's participation in agricultural activities is multifaceted and varies by region, culture, and economic structure. In rural areas, women often engage in both subsistence farming and cash crop cultivation, although their participation in the latter is generally limited by access to land and credit.

Subsistence Agriculture

In subsistence farming, women typically handle most of the day-to-day activities such as planting, weeding, harvesting, and food processing. These tasks are labor-intensive and can take up the majority of a woman's day. Women are also responsible for preparing food for the household and often work with limited access to technology or mechanized tools that could ease their burden. As a result, the work is physically exhausting and time-consuming.

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DOI: https://doi.org/10.21276/AATCCReview.2025.13.02.512

Cash Crop Agriculture

While women contribute significantly to cash crop production (e.g., coffee, cotton, and cocoa), their involvement is often limited to lower-value stages of production, such as harvesting or processing, while men control the more lucrative stages like marketing and trading. This unequal distribution of labor restricts women's ability to generate income from cash crops, further entrenching gender disparities.

Drudgery in Agricultural Work

The drudgery of agricultural work refers to tasks that are repetitive, physically demanding, and often performed under harsh conditions. Women's agricultural labor is disproportionately concentrated in such drudgery, which can have long-term physical and psychological consequences.

Objectives:

- To study thesocioeconomic characteristics of selected women respondents
- To study the extent of participation in agricultural activities
- To study the level of difficulty in various agricultural activities

METHODOLOGY

Study area

The present research study was conducted in Dharwad district of Karnataka State under DST project on "Strengthening livelihood Systems of Rural Community through on-Farm and Off Inventions" during the year 2024-25. For this study, Mandihal village from Dharwad taluka was selected and Total 100 respondents were selected from this village and they were interviewed personally to collect the data with the help of a self-structured interview schedule. Thereafter, data were tabulated, and analysed and inferences were drawn in light of the objective.

Drudgery faced by farm women in agricultural activities

The activity-wise drudgery involved in various farm operations faced by farm women were ascertained on the following point such as, average time spent on farm activities, frequency of performance of farm activity and degree of difficulty in doing farm activities.

Sample size of 100 households was selected. Data were collected by following interview cum observation method. A structured schedule, especially designed for the study was used. The recall method was adopted to collect major portion of data. Frequencies, percentage, mean and drudgery index were calculated to assess the findings.

The drudgery index of farm activities was calculated on the basis of time spent (hrs/ year) performance frequency score and difficulty index were calculated by following the formula (Jain and Verma, 1992):

$$\text{Drudgery Index} = \frac{x_1 + x_2 + x_3}{3} \times 100$$

where,

- X is time (hrs/year) = Time in min/day x Total number of days performed in a year
- Y is frequency performance was calculated on the basis of frequency of performance *i.e.* daily (5) alternatively (4) weekly (3) fortnightly (2) and rarely (1) the total score thus obtain is divided by total performers for each activity.

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads.

Results and Discussion

Socio economic Characteristics

Table 1 details the socio-economic characteristics of the selected respondents in the study. Caste distribution shows a varied representation with 26.00 per cent from backward castes, 20.00 percent each from Scheduled Castes (SC) and Scheduled Tribes (ST), and 34.00 per cent from forward castes. The majority of respondents belongs to nuclear families (73.00%), followed by joint (21.00%) and extended families (6.00 %). In terms of age, 33.00 per cent are young, 43.00 per cent are middle-aged, and 24.00 per-cent are old. Regarding land holdings, 25.00 per cent have marginal land, 42.00 per cent hold small land, 21.00 per cent have medium land, and 12.00 per cent possess large land. The sample includes a variety of animals: 35.00 per-cent have bullocks, 52.00 per cent have cows, and 13.00 per cent have buffaloes. The number of years of farming experience is predominantly between 10 and 20 years (41%), with 35.00 per cent having 20 to 30 years, 15.00 per cent less than 10 years, and 9.00 percent more than 30 years. Finally, the total family income is mostly middle (54%), with 25.00 per cent classified as low and 21.00 per cent as high.

To get an overview of drudgery level, the respondents were divided into three groups viz., low level of difficulty (< 55.54), medium level of difficulty (55.54 to 78.14) and high level of difficulty (>78.14). The groups were formulated on the basis of the calculated mean and standard deviation of the adoption scores obtained by the respondents. The results are presented in the table 1. The data with respect of level of difficulty involved in farm activities in Table 2 and Fig 1. shows that, great majority of (45.00%) respondents faced medium level of difficulty, followed by 33.00 per cent and 22.00 per cent of them who felt the work involved low and high level of difficulty respectively. These results were in line with the study conducted by Kavyashree *et al.,*(2022). Therefore, it could be inferred that themajority of the respondents faced work of farm operations involved medium level of difficulty.

Time spent, frequency of Participation, level of difficulty and drudgery index of selected respondents in different activities

Analysis of Table 3 reveals that, the Collection and Carrying of Stalks is a task that all participants engage in, making it a central and universal activity in the study. With an average of 84.58 hours per year spent on this activity, it is moderately time-consuming but not excessively so. The task is highly frequent, with 60.00 percent of participants performing it daily and it is not perceived as particularly difficult or labor-intensive, as indicated by the lack of responses at higher difficulty levels. The relatively low Drudgery Index (27.03) further supports the idea that, although it is a common task.. Overall, the collection and carrying of stalks appears to be an essential but manageable task in the farming process.

The Transportation of Manure is performed rarely by 15.00 per-cent of participants. Despite its limited involvement, it is a highly time-consuming task for those who participate, requiring an average of 240.65 hours per year. The frequency of participation varies, with some participants engaging in its fortnightly and others rarely. The Drudgery Index of 16.57 suggests that the task is not viewed as highly physically demanding, despite the significant time investment required. Overall, the transportation of manure is a specialized, time-intensive activity for a smaller group of participants, but it is not perceived as overly strenuous.

Sowing is a moderately involved activity with 30.00 per cent of participants engaged in it. On average, participants spend 72.10 hours per year on sowing, making it a moderately time-consuming task. The frequency of participation is spread across various levels, with some participants performing it daily during the season and others doing rarely and fortnightly. Despite the time commitment, the Drudgery Index of 13.63 suggests that sowing is not a highly strenuous or difficult task and it is perceived as less physically demanding compared to other activities like weeding or transportation of manure. Overall, sowing is an essential but manageable task for a portion of the participants, requiring a moderate amount of time and effort.

Involvement of women in Transplanting activity with 28.00 per-cent of participants and spend 85.97 hours per year on it. It is considered a daily activity during the season for those who engage in it with 16.00 per-cent followed by an alternative day with 12.00 percent. The task is perceived as physically challenging, with 18 percent finding it very difficult and 10.0 per cent finding it moderately difficult. The relatively high Drudgery Index (56.13%) further indicates that transplanting is a labor-intensive task, though it is not as universally demanding as other tasks like weeding. Despite its moderate time commitment, transplanting plays a significant role in the overall physical effort required in farming.

Weeding is a critical and ubiquitous activity in the farming process, with 100.00 per cent involvement of participants. It is not only frequent, with 70.0 percent of participants engaging in daily during the season, but also extremely time-consuming (214.37 hours per year). This was supported by Shilparani *et al* (2015), and they reported in their study that, during season women participated daily in weeding activity. Additionally, it is regarded as a difficult task with a large majority of participants (63.00%) finding it very difficult and another 37.00 per cent considering it normal task. The relatively high Drudgery Index (52.62) further emphasizes the labor-intensive nature of weeding. This suggests that weeding is one of the more challenging and physically exhausting activities in the agricultural process.

Cob removal is a moderately involved activity (43.00 %), with a substantial time commitment of 179.37 hours per year. It is a relatively frequent activity for those who participate, with 43.00 per cent engaging in it at moderate to high frequencies. The task is generally considered difficult and physically demanding, with 23.00 per cent of participants finding it moderately difficult and 20% finding it very difficult. The Drudgery Index of 48.13 further highlights that cob removal requires a moderate to high level of physical effort. While not as universally or time-intensive as weeding, cob removal still plays a significant role in the overall labor intensity of farming activities.

Gathering and heaping is a less frequently performed activity (11.00 %), with participants dedicating an average of 24.64 hours per year to it. It is not as time-consuming or frequent as other tasks like weeding or transplanting. Participation is spread across moderate to low frequencies, with the majority of participants engaging in weekly or fortnightly. The Drudgery Index of 33.94 suggests that it is a moderately physically demanding activity, but not as strenuous as other tasks in the study. Overall, while gathering and heaping is a relevant activity for a smaller group of participants, it is not as central or labor-intensive as some of the other farming activities.

Overall, the Drudgery Index values highlight that tasks like transplanting and weeding are seen as highly strenuous, whereas activities like sowing and manure transportation, though time-consuming, are perceived as less physically taxing. These results were on par with the study conducted by Shanabanu *et al* (2019).

Future Scope of the Study

1. Exploring Women-Friendly Technologies: Further research can focus on identifying and developing women-friendly technologies that can reduce the physical burden of agricultural labor on women, enhancing their efficiency and productivity.

2. Policy Interventions and Empowerment Programs: The study can be extended to investigate the impact of policy interventions and empowerment programs on promoting women's participation and reducing gender inequality in agriculture.

3. Comparative Analysis Across Regions: A comparative analysis of women's participation and drudgery in agricultural activities across different regions and cultures can provide valuable insights into the complexities of gender dynamics in agriculture**.**

Conclusion

This study highlights the significant yet often overlooked role of women in agricultural activities, emphasizing both their extensive participation and the high difficulty level associated with their tasks. Women in rural communities contribute greatly to various farming activities, including sowing, weeding, transplanting, and harvesting, which are crucial for ensuring food security and economic sustainability. However, the nature of their involvement is disproportionately associated with physically demanding tasks that require long hours and minimal technological support. The analysis of the Drudgery Index indicates that activities like weeding and transplanting are particularly strenuous, posing considerable physical and psychological challenges for women.

Socio-economic factors, such as limited access to land, credit, and agricultural technology, further exacerbate their labor burdens, contributing to a cycle of inequality. The study also reveals that despite their central role, women's contributions to agriculture are often undervalued and neglected in decision-making processes. It is crucial to recognize the need for targeted interventions to reduce the drudgery faced by women in agriculture. This can be achieved through improving access to resources, promoting labor-saving technologies, and ensuring that women's work is acknowledged and rewarded equally. Ultimately, empowering women in agriculture is essential for enhancing productivity, achieving gender equality, and ensuring the sustainable development of rural communities.

Acknowledgement

The authors acknowledge the Department of Science and Technology (DST), New Delhi, for the finance as an instrumental in conducting this research study. The DST's funding enabled us to explore the critical issue of women's participation and drudgery in agricultural activities, shedding light on the need for policies and interventions that promote gender equality and empowerment in the agricultural sector.

Table 1: Socio economic characteristics of the selected sample N=100

Sl. No.	Variables	Categorization	Percentage
I	Caste	Backward caste	26.00
		SC	20.00
		ST	20.00
		Forward caste	34.00
II	Family type	Nuclear	73.00
		Joint	21.00
		Extended	6.00
III	Age of the respondent	Young (18 - 35 Yrs)	33.00
		Middle age (36-50 yrs)	43.00
		Old age (>51 yrs)	24.00
IV	Land Holdings	Marginal	25.00
		Small	42.00
		Medium	21.00
		Large	12.00
V	Type and Average number of animals	Bullocks	35.00
		Cows	52.00
		Buffaloes	13.00
VI	Number of years of farming	Less than 10 years	15.00
		10 - 20 years	41.00
		20 - 30 years	35.00
		More than 30 years	9.00
VII	Total Family Income	Low (< Rs. 51,000)	25.00
		Middle (Rs.51,000- Rs.1,20,000)	54.00
		High (>Rs. 1,20,000)	21.00

Table 3 : Time spent, frequency of Participation, level of difficulty and drudgery index of selected respondents in different activities N:100

Activities	Mean time (hrs/yr)	Frequency of Participation					Level of difficulty					Drudgery Index
		5	4	3	2	1	1	2	3	4	5	
Collection and carrying of stalks	84.58	60.00	12.00	28.00	-	-	-	-	67	33.00	-	27.03
Transportation of manure	240.65	-	-	-	5.00	10.00	-	-	10.00	-	5.00	16.57
Sowing	72.10	5.00	9.00	4.00	5 .00	7.00	-	12.00	10.00	8.00	-	13.63
Transplanting	85.97	16.00	12.00	-	-	-	-	-	10.00	18.00	-	56.13
Weeding	214.37	70.00	30.00	-	-	-	-	-	37.00	63.00		52.62
Cob removing	179.37	8.00	35.00	-	-	-	-	-	23.00	20.00	-	48.13
Gathering &heaping	24.64		6.00		5.00		-	-	8.00	3.00	-	33.94

Note: Frequency of Participation: Daily (5), Alternatively (4) Weekly (3) Fortnightly (2) and Rarely (1)
Level of Difficulty: Very difficult (5) Difficult (4) normal (3) easy (2) and very easy (1).

Table.2 and fig. 1 Distribution of respondents on the basis of level of difficulty in agricultural activities N=100

Sl.No	Level of difficulty	Percentage
1	Low (< 55.54)	33.00
2	Medium (55.54 to 78.14)	45.00
3	High (> 78.14)	22.00

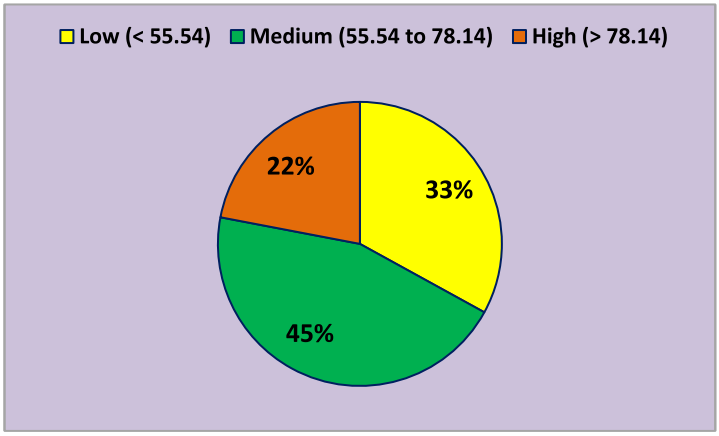

Fig. 1 Distribution of respondents on the basis of level of difficulty in agricultural activities

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