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## Time use pattern of farmwomen during post-harvest activities in Kashmir, India

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### Abstract

The present study was undertaken randomly at a selected village of Kunzer of district Baramulla as it is one of the major paddy belt of Kashmir. A sample of 100 respondents who were actively involved in paddy cultivation were selected. The present study showed that majority of the respondents belonged to age group of 30-40 years and could not read and write. Most of them belonged to joint family system. Harvesting was one of the major activity in paddy cultivation, almost every respondent performed the said activity. The post-harvest activities performed by the respondents were in a series of bundling, threshing and winnowing, bagging, stocking, storing and transporting of the paddy. Last but not the least guarding of the paddy was also an activity performed by the respondents. It was observed that 64% of the respondents' work for more than 4 hrs a day during shift one. Bundling was carried out by 60% of the respondents for more than 4 hours a day in shift one. 47% of the respondents worked for 2-4 hrs a day during shift two for performing the activity threshing and winnowing. The activity bagging was mostly performed by 49% of the respondents for more than 4 hrs a day in shift one. 62% of the respondents did stocking of the paddy for more than 4 hrs a day during shift one. Storing was mostly performed by 41% of the respondents for more than 4 hrs a day during shift one. It was also seen that most of the respondents (54%) received help by their husbands in farm activities. Transportation of paddy was the last activity, which was carried by 71% of the respondents. The results showed that farm women worked for 7 hours a day during harvesting season in the fields.

**Keywords:** Farmwomen, farm activities, rural, harvesting, agriculture, time use pattern

### Introduction

Farming is a family enterprise globally where 86% of rural women work in agriculture, either as cultivator or agriculture labourer. According to an assessment in the Indian Himalayan, a pair of bullock work for 1064 hours, a man for 1212 hours whereas a women for 3485 hours in a year on a farm of one hectare. An Indian farmwoman except ploughing, cart, driving, arranging farm inputs and marketing of produce, participate in all farm related activities.

Participation of rural women is relatively more in post-harvest activities than that of pre-harvest activities. But it is very noticeable that in spite of their major contribution in the farm, their recognition as "worker" is still not considered. Women play a significant and important role in agricultural development. It is most unfortunate that the role of women in agriculture has not yet been recognised in India. They still remain as invisible workers. Traditionally, middle class women are involved in domestic tasks emphasizing childcare, but the present condition of women has changed, women perform other tasks along with the primary role. Women are the backbone of farming all over the world and it is well-known but seldom formally acknowledged fact. As of 2018, some women have served in various occupations. Observations have been made that more than 75 percent women are involved in activities like winnowing, weeding, grading, threshing and cleaning of field farm operations. The physical strain of female farmers seems to be very high because of heavy work load of various activities done by them in agriculture (Singh and Vinay, 2013) [3, 4]. Women perform 66 percent of the world's work, produce 50 percent of the food, but earn 10 percent of the income and own 1 percent of the property. Globally, women represent 49.6 percent of the total population, but only 40.8 percent of the total workforce is in the formal sector (World Bank Group, 2011) [5]. Women who work in paddy cultivation is higher than male in the poorer families. In middle-class households, rice farming involved male and female labour is almost equal. The present study was performed in village Kunzer of Kashmir Valley with an objective: To study about the involvement of women in harvest and post-harvest activities of paddy.

### Materials and Methods

The present study was carried out in block Kunzer of district Baramulla, as it is one of the rice belts of Kashmir valley. The sample group included farm women of reproductive age group

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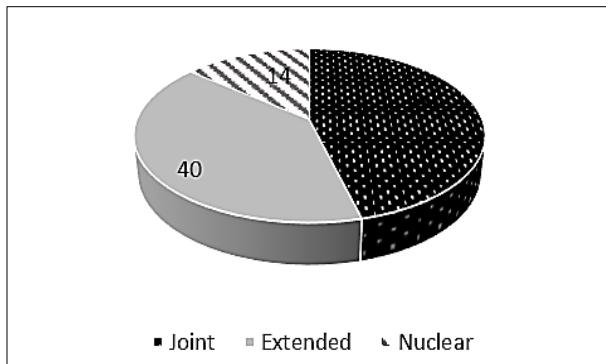
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(30-40) and who performed activities in rice cultivation. The total sample of 100 farm women was selected from chukar and batapora (50 from each). Activities of these women were deeply studied along with a co observer. A 24 hour time diary was used to know about their time use pattern of different activities along with direct observation which was also carried out side by side. The activities done were recorded along with their time, frequency and duration. The data collected was analysed using appropriate statistical techniques. The analysed data is presented in form of tables and figures.

## Results and Discussions

Figure 1 indicates that majority of rural women belonged to joint families. It was seen 46% of rural women from Kunzer had joint families. Study reveals that 40% farmwomen of belonged to extended families and only 14% of farmwomen belonged nuclear families. It's a clearly understood that work load is increased according to the number of family members but sometimes in joint families the co relatives also provide help which means that there is more man power.

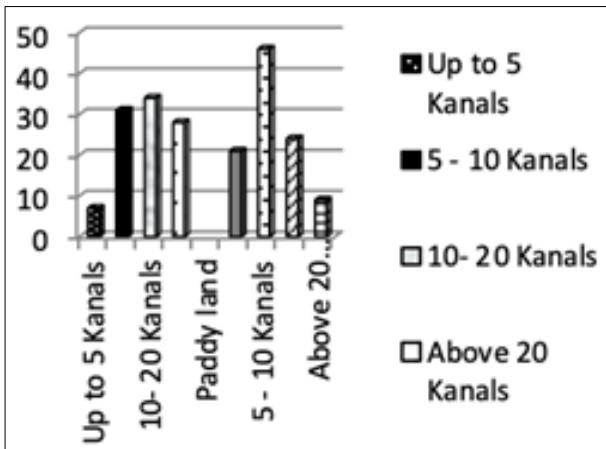


**Fig 1:** Showing distribution of family types within district Baramulla of Kunzer area

**Table 1:** Distribution of sample farm women according to age

Age	Respondents (n = 100) * (%)
20-30 years	50 (50)
30-40 years	50 (50)
Average age	31.00

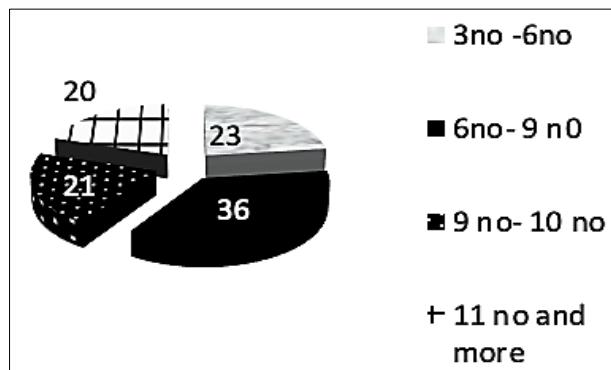
The table 1 gives us the information about the age group of the respondents. It was observed that the average age of the sample was 31 years.



**Fig 2:** Information related to land holding of families of respondents

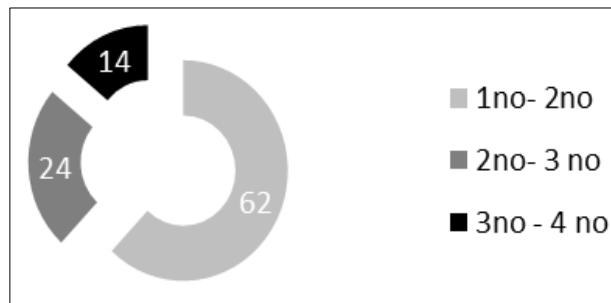
Figure 2 reveals information about total land holding and paddy fields of the rural women. Majority of rural women 34

% have 10-20 kanal of land holding. Further findings show that 28 % rural women have above 20 Kanal of land holding. The data reveals that majority of farm women (46%) had 5-10 Kanals of paddy. The area of paddy fields had a direct impact on workload of rural women, as the farm activity is directly proportional to area of paddy land. It's quite relevant that more the land area, more is the production of paddy hence more the work load, so more energy and time will be utilized.



**Fig 3:** Number of family members of farmwomen

It is clearly seen in figure 3 that majority of respondents (36 %) have 3-6 members in family followed by 23% who had 3 – 6 no of members. Only 20 % of rural women have 11 and more members in family.



**Fig 4:** Distribution of respondents according to the number of children

Figure 4 gives the information regarding number of children of sample group. Majority of respondents (62%) had 1-2 no of children followed by 24 % who have 2-3 no of children. It is clearly visible that only 14 % of respondents had 3-4 numbers of children.

**Table 2:** Information of respondents regarding time to go to farm

Time to go to farm	Respondents n = 100 (%)
8 am - 9 am	25
9 am - 10 am	60
10 am - 11 am	15

Table 2 reveals 60 % of respondents go to farm between 9-10 am. Whereas, 25 % of respondents go to farm between 8-9 am and only 15% of respondents reach farm between 10- 11 am.

**Table 3:** Percentage of time spent on harvesting by farm women

Harvesting	Respondents n = 100		
	S1 (%)	S2 (%)	S3 (%)
Less than 2 hrs./day	5	4	20
2-4 hrs./day	31	35	47
>4 hrs./day	64	61	31
No shift	-	-	2

Where S1 = Shift one, S2 = Shift two, S3 = Shift three;

The details about harvesting activity is clearly revealed in table 3. The data clearly reveals that every respondent participates in this activity. During shift one, majority of sample (64%) work for more than 4 hours a day. Similarly during shift two, respondents (61%), work for more than 4 hours a day. During shift 3, majority of respondents (47%) work for 2-4 hours a day. Kumari *et al.* (2009) [4] says that the average number of days spent for harvesting are 24.13 days. According to Sunita *et al.* (2009) time spent hrs/day in harvesting activity was 9.39. Mer (2007) [2] also found that on an average the maximum number of days spent were 26.00 for harvesting.

**Table 4:** Percentage of time spent on bundling by farm women

Bundling	Respondents n = 100		
	S1 (%)	S2 (%)	S3 (%)
less than 2 hrs./day	7	7	16
2-4 hrs./day	33	38	40
>4 hrs./day	60	52	36
No shift	-	3	8

Where S1 = Shift one, S2 = Shift two, S3 = Shift three

Table 4 gives information regarding the activity bundling. All farm women participate during this activity. In shift one, majority of respondents (60%), work for more than 4 hours a day. Similarly, during shift two most of respondents (52%) work more than 4 hours a day. 40% of the respondents work for 2-4 hours a day during shift three. According to Kumari *et al.* (2009) [4] average number of days spent for bundling was 6.15 days.

**Table 5:** Percentage of time spent on threshing and winnowing by farm women

Winnowing	Respondents n = 100		
	S1 (%)	S2 (%)	S3 (%)
less than 2 hrs./day	9	14	31
2-4 hrs./day	46	47	42
>4 hrs./day	43	35	19
No shift	-	2	6
Do not participate	2	2	2

Where S1 = Shift one, S2 = Shift two, S3 = Shift three

Table 5 gives information regarding threshing and winnowing. In shift one majority of farm women (46%) work for 2-4 hours a day. During shift two 47% of the farm women work for 2-4 hours a day. During shift three most of respondents (42%) work for less than 2 hours a day. Only 2% of the respondents did not perform this farm activity as performed by male members. Kumari *et al.* (2009) [4] stated in her study that the average number of days spent for threshing was 3.29 days, 2.13 days for seed treatment and only single day was spent for storage of paddy. Mer (2007) [2] also found that an average of 2.70 days was spent for threshing of paddy.

**Table 6:** Percentage of time spent on bagging by farm women

Bagging	Respondents n = 100		
	S1 (%)	S2 (%)	S3 (%)
Less than 2 hrs./day	22	17	32
2-4 hrs./day	21	47	36
>4 hrs./day	49	25	9
No shift	-	3	15
Do not participate	8	8	8

Where S1 = Shift one, S2 = Shift two, S3 = Shift three

Table 6 reveals the information about bagging of paddy. In shift one, majority of respondents (49%) work for more than 4 hours a day. In shift two, most of respondents (47%) work for 2-4 hours a day. During shift three, 36% of respondents work for 2-4 hours a day. It was also seen that some farm women do not participate in this activity as performed by the male members in family.

**Table 7:** Percentage of time spent on stocking by farm women

Stocking	Respondents n = 100		
	S1 (%)	S2 (%)	S3 (%)
less than 2 hrs./day	11	14	36
2-4 hrs./day	20	44	31
>4 hrs./day	62	29	7
No shift	-	6	19
Do not participate	7	7	7

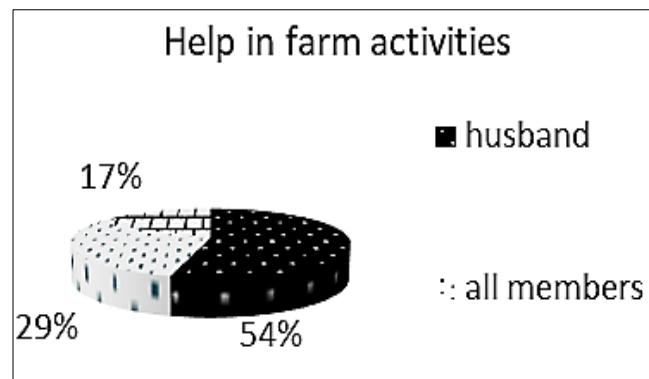
Where S1 = Shift one, S2 = Shift two, S3 = Shift three; data in parenthesis shows percentage

The information regarding stocking of paddy is revealed in table no 7. Majority of sample (62%), work for more than 4 hours a day during shift one. Similarly, during shift two, most of respondents (44%), work for 2-4 hours a day. The results of shift three show that majority of respondents (36%) work less than 2 hours a day. Many of respondents (7%) did not perform this work.

Storing is the last farm activity. Table 8 reveals about the activity storing of paddy. Majority of sample (41%) worked for more than 4 hours a day during shift one. In shift 2, maximum respondents (35%), work for 2-4 hours a day. During shift three, most of respondents (34%) work less than 2 hours a day. Many of the respondents (26%) were observed not to work during shift three. Also, 39% of sample did not perform this activity. Kumari *et al.* (2009) [4] revealed that only single day is spent for storage of paddy.

**Table 8:** Percentage of time spent on storing of paddy

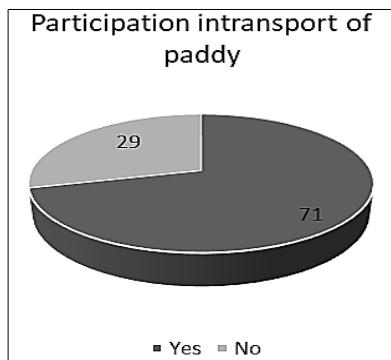
Storing	Respondents N = 100		
	S1 (%)	S2 (%)	S3 (%)
0-2 hrs./day	13	21	34
2-4 hrs./day	28	35	16
>4 hrs./day	41	19	6
No shift	-	7	26
Do not participate	18	18	18



**Fig 5:** Person who help the respondents in the farm activities

Figure 5 gives information about help received by the respondents in farm activities. Majority of sample (54%) received help from their husbands. It was observed that 29% of the sample was helped by all members of family whereas;

17% of them received help from their other relatives like sister in law, wife of brother in law.



**Fig 6:** Participation of respondents in transport of paddy

Figure 6 depicts about transport of paddy. Most of the sample (71%) transport paddy from the field to store. Farm women who did not transport paddy had facilities to carry the paddy to the store; like some of them had carrier, some used to hire labour etc. So, they did not require performing this activity of their own. Jahan and Khan (2016)<sup>[1]</sup> have stated that women participation varied between 70-80% in loading and unloading of grains/straw, transport of farm produce and weighing.

**Table 9:** Person who helps in transport of paddy

Person who helps in transport of paddy	Respondents n = 100 (%)
All members of family	7 (7)
Husband	46 (46)
Labour	20 (20)
Both labour & family members	11 (11)
None	16 (16)

Table 9 gives information about person who help in transporting paddy. Mostly respondents (46%) were helped by their husbands only. It was observed that 20% of sample used to hire labour for transportation. Only 7% of sample received help from all members of family. The farm women who received no help comprises 16% of the sample.

**Table 10:** Time taken in transport of paddy

Time taken in transport of paddy	Respondents n = 100 (%)
1-3 days	22
3-6 days	60
More than 6 days	18
Don't transport	-

Table 10 depicts how many days were taken by farm women in transportation of paddy. Majority of respondents (60%) took 3-6 days in transportation of paddy to storage. 22% of the sample took 1-3 days for the same. Time taken for transportation depended upon various factors like distance from farm, destination to be taken to, quantity of paddy, number of people transporting paddy and lastly if they had carrier or vehicle for the purpose.

**Table 11:** Person who guards paddy

Person who guards paddy	Respondents n = 100 (%)
All members of family	40
Myself	20
Myself and husband	20
Husband	20

Table 11 reveals that majority of respondents (40%) were helped by all members of family. It was observed that 20% of the sample guarded the paddy themselves, 20% guarded themselves and were helped by their husbands. Some of respondents (20%) didn't perform this activity as their husbands managed it themselves. The paddy when transported was stocked and needed to be guarded with respect to theft.

## Conclusion

In the present study most of the respondents belonged to age group 30-40 years and lived in joint family system with minimum six family members. They had more than 5 kanals of paddy land with agriculture as main source of income. The data indicates that majority of the respondents were in young adulthood years and could not read and write. The farm women worked for 7 hours a day during harvesting season in the fields. The farmwomen worked in three shifts during field days. First shift started from morning to lunch with a short tea break, followed by a second shift after lunch up to tea time in afternoon and last third shift started after tea till evening. During harvesting and bundling, the respondents (64% and 60% respectively) worked for more than four hours a day in first two shifts but in third shift they worked up to four hours. Maximum respondents (47%) work for 2-4 hours a day during shift 2. During bagging (49%), stocking (62%) and storing (41%) respondents worked for four hours in one shift and less than four hours in other shifts. Maximum number of farm women used to transport paddy in 3-6 days and received help from their husbands in farm activities. The paddy was guarded mostly by all members of the family. Post harvesting activities consume lots of energy and time, hence farm women need to work a lot during the time period. Measures need to be taken to save their energy and time by providing various drudgery reducing instruments and techniques. Farm women can be facilitated by providing various training programmes regarding farming techniques, awareness about drudgery should be performed.

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