



RESEARCH PAPER

Time use participation (Pre-harvesting activities) of farm women in Himalayan region North India

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Abstract : The present study was undertaken at Kunzer village located in the district Baramulla of Kashmir valley. A Total of 100 respondents (Farmwomen) actively involved in paddy cultivation were selected to study their involvement and time use pattern in various pre-harvesting activities. The study showed that majority (55%) of the respondents belonged to age group of 25-45 years and could not read and write. Most of them (46%) were living in joint family system, with 46% having 5-10 kanal of paddy land and most of them (36%) having 6-9 members in their family. Pre-harvesting activities include (Cleaning boundaries, collecting stubbles, nurse preparation, seed cleaning seed treatment, sowing, pulling out seedlings, transplanting and weeding). Seed cleaning was done by 61% of respondents for more than 4 hrs during shift one, seed treatment activity was performed by 52% of respondents for more than 4 hrs in shift one and by 52% respondents for less than 2 hrs in shift three. Sowing was done by 46% of the respondents during shift two for about less than 2 hrs with pulling out seedling activity was performed by 76% of the respondents for more than 4 hrs in shift one. Majority of the farmwomen (68%) work for more than 4 hours in shift one for transplanting of the seedlings, while 53% of respondents perform weeding activity for more than 4 hours a day during the shift one. Overall, farmwomen spent 6 hours a day in pre-harvesting activities during farming season, working for more than 4 hours during a shift.

Key Words : Rural, Farmwomen, Farm activities, Sowing, Weeding, Time use

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INTRODUCTION

Woman was first to domesticate the crop plants and thereby initiate the art and science of farming (Swaminathan, 2006). Women have been working in the

fields since years and help their husbands in raising, rearing their families. Women are the backbone of farming all over the world and it is now a well known acknowledged fact. Role of rural women in building

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country's economy, agri-horti development and towards food security sectors is clearly visible. The main activities they perform include producing agricultural crops, preparing and cooking of food, tending of animals, caring for the family, collecting fuel, and maintaining their homes. These activities are not normally considered as "economically active work" but are vital for the wellbeing of our rural households. Labao and Meyer (1995) stated that farmwomen in particular have been found to be stressed as they are overburdened with household work, farm work and non farm income generating activities. It has been seen that statistical data is available regarding their role in agriculture and allied sector which has been ignored and same has been stated by Kishtwaria *et al.* (2009), that their work is considered as non productive, unorganised and undocumented globally. Thus, it becomes imperative to study the role and participation of their involvement in various activities performed by farmwomen. The paper presents time use participation of farmwomen during pre-harvesting activities carried out in district Baramulla of Kashmir himalyas.

MATERIAL AND METHODS

The present study was carried out in Baramulla district of Kashmir valley using random sampling. District Baramulla is one of the major paddy belt of Kashmir valley. A total sample of 100 farm women was selected, these farm women were actively involved in home and farm activities and within reproductive age group of 25-45 years. A 24 hour time diary was prepared by using ATUS to know about the time use pattern of different activities of the representative group. The basic aim of time diary was to record all activities and time taken during the activity by the person during 24 hours. (American Time Use Survey, 2016 Bureau of Labour Statistics). Direct observation method was also carried out side by side. The data collected was analysed using appropriate statistical techniques (SPSS 12). The analysed data is presented in form of tables and figures.

RESULTS AND DISCUSSION

Fig. 1 indicates that majority of farmwomen (46%) belonged to joint families while (40%) farmwomen belonged to extended families and only 14% belonged to nuclear families. It's obvious that work load increases as the number of family members are more, however, sometimes in joint families the relatives also provide help

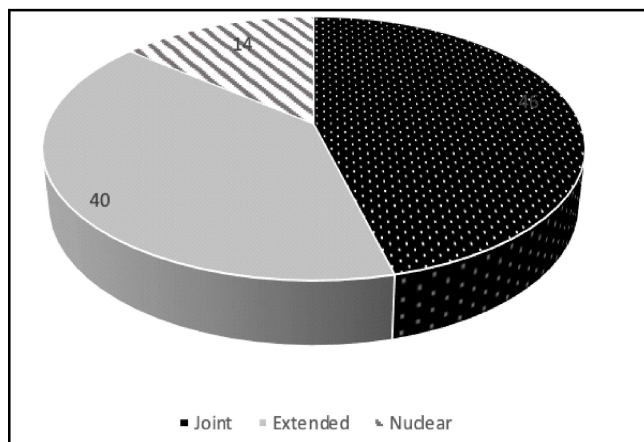


Fig. 1 : Showing distribution of family types within district Baramulla of Kunzer area

which help in division of labour and reduce the work load.

Majority of farm women (34%) have 10-20 kanals of land holding, while 28% of farm women have 20 kanal of land holding. The data revealed that 46% farm women have 5-10 kanals of paddy land. The area of paddy fields had a direct impact on workload of farm women, as the farm activities are directly proportional to area of paddy land. It's obvious that more the land area, more the production of paddy, more the work load, so more will be the energy and time utilization. This may be mainly due to economic compulsions for sustaining their families for which they have to overburden themselves by agricultural work and that too in low paying, less skilled and monotonous activities finding supported by Bala (2010).

Table 1: Information related to land holding of families of respondents

Total land	Respondents (n= 100) *(%)
Upto 5 Kanals	7 (7)
5 - 10 Kanals	31 (31)
10- 20 Kanals	34 (34)
Above 20 Kanals	28 (28)
Paddy land	
Upto 5 Kanals	21 (21)
5 - 10 Kanals	46 (46)
10- 20 Kanals	24 (24)
Above 20 Kanals	9 (9)

Parenthesis indicates percentage

* indicates sample number (applicable to all tables)

It is clearly seen in Table 2 that majority of respondents *i.e.* 36 % have 3-6 members in family

followed by 23% who had 3–6 members while only 20 % of farm women have 11 and more family members.

Table 2 : Number of family members of farmwomen

Number of family members	Respondents (n= 100) * (%)
3-6	23 (23)
6-9	36 (36)
9-11	21 (21)
11 and more	20 (20)

Table 3 gives the information regarding number of children within sample group. Majority of respondents *i.e.* 62% had 1-2 no of children followed by 24 % who have 2-3 children while 14 % of respondents had 3-4 numbers of children.

Table 3 : Distribution of respondents according to the number of children

No. of children	Respondents (n= 100) * (%)
1-2	62 (62)
2-3	24 (24)
3-4	14 (14)

Fig. 2 shows the source of family income. Agriculture was the main source of income (71%) of respondents. Hence, it is quite obvious from data that women play a vital role for the economy of their families and also improve economy at national level too.



Fig. 2 : Source of family income of respondents

Fig. 3 gives information regarding time to go to farm. 60 % of respondents go to farm between 9-10 am, whereas, 25 % of farmwomen go to farm between 8-9

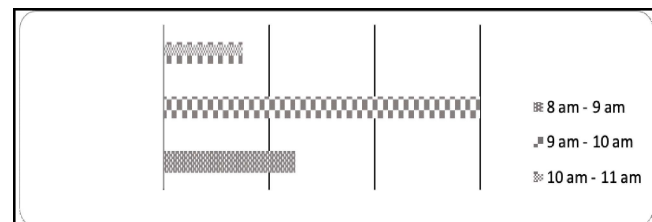


Fig. 3 : Information of respondents regarding time to go to farm

am and only 15% of reach farm between 10- 11 am.

The Table 4 gives information regarding time spent on collecting stubbles by farm women. Majority of the respondents (71%) spend more than 4 hours a day in shift one and 47% in shift two for collecting stubbles activity. Similarly, during shift three 43% of respondents work for 2-4 hours a day. It was also observed that 6% of respondents do not participate in the said activity. The reason for farm women who did not participate in this activity was that collecting stubbles was done by the male members in their home. So they utilize this period in performing other household and allied activities.

Table 4 : Percentage of time spent on collecting stubbles by farm women

Collecting stubbles	Respondents n=100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2hrs/day	4	12	26
2-4 hrs /day	19	31	43
>4 hrs /day	71	47	2
No shift	-	4	23
Do not participate	6	6	6

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

Table 5 gives information regarding time spent on cleaning boundaries. Majority of the farm women (71%), spend more than 4 hours a day in shift one, for performing the activity cleaning boundaries. In shift two, maximum of the respondents (43%), spends 2-4 hours a day. During shift three, majority of the farmwomen (43%), spend less than 2 hours a day. As observed some of the farmwomen did not participate in the activity. On the other hand, some respondents skipped shift three and work only for two shifts in performing the said activity as shown in the table. Kumar *et al.* (2011) also reported that most of the female perceived drudgery in task like field preparation (55.00 %), carrying FYM (58.33%), preparation of field (63.33%), seed treatment (55.00%)

Table 5: Percentage of time spent on cleaning boundaries by farm women

Cleaning boundaries	Respondents (n=100)		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
Less < 2 hrs /day	9	8	43
2-4 hrs /day	21	43	20
>4 hrs /day	61	31	4
No shift	-	9	24
Do not participate	9	9	9

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

and use of implements with inappropriate shape (63.33%).

Table 6 gives information about the time spent on nursery preparation by farm women. Its clear from the table that majority of the respondents (41%), spend more than 4 hours a day in performing nursery preparation. In shift two, maximum of respondents who spend 2-4 hours a day include 34%. In shift three, majority of respondents who work for less than 2 hours a day are 23% a day. Whereas, 37% for respondents work for 2-4 hours a day during shift one. Many of respondents (28%) did not work during shift three. These women performed other activities during that time. Some of the respondents (16%) who did not participate in said activity because these activities were performed by the male members of the family.

Table 6 : Percentage of time spent on nursery preparation by farm women

Nursery preparation	Respondents n =100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2 hrs./day	6	21	23
2-4 hrs. /day	37	34	31
>4 hrs. /day	41	24	2
No shift	-	5	28
Do not participate	16	16	16

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

Table 7 gives the information about seed cleaning activity. It's clearly visible from the table that during shift 1, majority of farmwomen (61%), worked for more than 4 hours a day followed by 39% who worked for 2-4 hours a day. During shift three, maximum of the farm women (31%) work upto 2 hours a day, whereas; 25% of the farm women worked for 2-4 hours a day. The average workload of men and women of low socio-economic strata were higher than those of medium and high socio-economic strata, in operation like land preparation, nursery raising, manure and fertilizers

Table 7 : Percentage of time spent on seed cleaning by farm women

Seed cleaning	Respondents n =100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2hrs/day	6	19	31
2-4 hrs. /day	31	35	25
>4 hrs. /day	61	39	8
No shift	-	5	34
Do not participate	2	2	2

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

application and Intercultural operation (Anshu and Varma, 2017).

The information regarding the activity seed treatment is revealed in Table 8. Majority of farmwomen (52%) worked for more than 4 hours a day during shift one maximum respondents (43%), work for 2-4 hours a day in shift two, whereas, 52% of respondents work for less than 2 hours a day during shift three. It was also observed that some of the farm women did not participate in the said activity because male members did this activity themselves. The average number of days spent was found to be 2.13 days for seed treatment (Sunita *et al.*, 2009).

Table 8 : Percentage of time spent on seed treatment by farm women

Seed treatment	Respondents n =100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
Less than 2 hrs. /day	8	33	52
2-4 hrs. /day	32	43	17
>4 hrs. /day	52	10	2
No shift	-	6	21
Do not participate	8	8	8

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

Table 9 gives information about sowing. During shift one, majority of the farm women (37%), work for more than 4 hours a day, 46%, work for less than 2 hours a day during shift two, whereas, shift three was skipped by majority of respondents (47%) because they have to perform other activities. Mer (2007) also found that on an average the maximum number of days spent were 28.90 days for sowing and nursery raising.

Table 9 : Percentage of time spent on sowing by farm women

Sowing	Respondents n =100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2 hrs. /day	6	46	22
2-4 hrs. /day	34	24	5
>4 hrs. /day	37	7	3
No shift	-	-	47
Do not participate	23	23	23

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

The information regarding the pulling out seedling activity is revealed in Table 10. Almost all farm women participated in this activity, excluding 1%. In shift one, majority (76 %) farm women work for more than 4 hours a day followed by 43% and 33% farm women who

Table 10 : Percentage of time spent on pulling out seedlings by farm women

Pulling out seedlings	Respondents n=100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2 hrs. /day	2	24	19
2-4 hrs. /day	22	43	33
>4 hrs. /day	76	33	30
No shift	-	-	17
Do not participate	1	1	1

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

work for 2-4 hours a day in shift two and shift three, respectively.

Table 11 reveals that except 1% of farm women, all participate in transplanting the seedling. In shift one, majority of farmwomen (68%) work for more than 4 hours followed by 39% each who work up to 2 hours a day during shift two and shiftthree. Bimla *et al.* (2003) examined women's participation in agricultural activities in Haryana and stated that involvement of farm women in agricultural activities was to the extent of 73 per cent and also drudgery was involved in the activities like transplanting, crushing etc. In her study, she emphasized that farm women who participate equally with men should be trained in the modern techniques of agriculture to reduce drudgery. Sunita *et al.* (2009) stated that participation of women was found highest (84%) in transplanting activity. Mer (2007) also found that on an average the maximum number of days spent were 38.20 for transplanting.

Table 11 : Percentage of time spent on transplanting by farm women

Transplanting	Respondents n=100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2 hrs. /day	5	39	28
2-4 hrs. /day	25	36	39
>4 hrs. /day	68	19	26
No shift	1	5	5
Do not participate	1	1	1

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

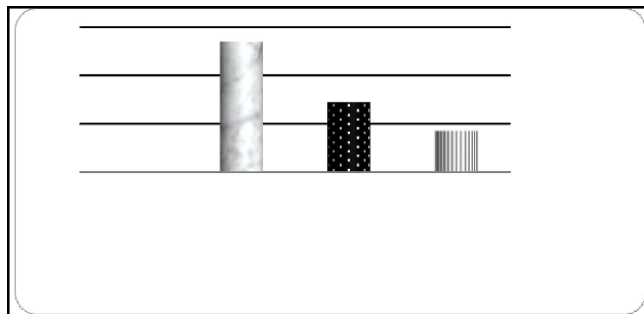
Table 12 gives information about weeding. The table clearly shows that majority of farm women (53%), work for more than 4 hours a day during the shift one followed by 45% (shift two) who work for 2-4 hours a day, whereas in shift three, 39% farm women work for less than 2 hours a day. It was also observed that many farm women (32%) did not work during shift three. Sunita *et*

al. (2009) stated that, the average number of days spent was found to be 40.4 for weeding activity and majority of the farm women (79.5%) spend 40-50 days on weeding of paddy. Mer (2007) also found that on an average the maximum number of days spent were 46.54 days for inter-culturing and weeding, followed by, 28.90 days for sowing and nursery raising, respectively.

Table 12 : Percentage of time spent on weeding by farm women

Weeding	Respondents n=100		
	S ₁ (%)	S ₂ (%)	S ₃ (%)
less than 2 hrs. /day	19	40	39
2-4 hrs. /day	21	45	20
>4 hrs. /day	53	15	9
No shift	5	-	32
Do not participate	2	2	2

Fig. 4 gives information about help received by the respondents in farm activities. Majority of farm women (54%) received help from their husbands. It was observed that 29% of the farm women were helped by all family members whereas; 17 % of them received help from their other relatives like sister in law, wife of brother in law.

**Fig. 4 : Person who help the respondents in the farm activities**

Conclusion :

The majority of respondents in present study were in age group 25-45 years *i.e.* young adulthood years and were not able to read and write. They were living in joint families. The family comprised of minimum six members and had more than 5 kanals of paddy land. The women worked in three shifts. First shift started from morning to lunch with a short tea break, then second shift after lunch up to tea time in afternoon and last third shift started after tea till evening. Activities like collecting stubbles, cleaning boundaries, sowing, pulling out seedlings, transplanting, weeding were carried out in

three shifts spending more than 4 hours in two shifts whereas in third shift they worked for less than four hours a day. Activities like nursery preparation and seed treatment was done for more than four hours in shift one, whereas, in other two shifts they worked for less than four hours. It was observed that overall, farmwomen spent 6 hours a day in pre-harvesting activities during farming season, working for more than 4 hours in a shift. The farm women face lots of drudgery, so measures should be taken to reduce drudgery, intervention programmes should be performed regarding time management, latest agricultural technologies which save time and energy. Measures should be taken to acknowledge their unpaid work, which indirectly adds to economy of nation.

REFERENCES

- Anshu and Varma, S.K. (2017).** Involvement of man and women in paddy cultivation operation . *Internat. J. Scient. & Res. Public.*, **7** (10):3 6.
- Bala, N. (2010).** Selective discrimination against women in Indian Agriculture, A Review. *Agric. Rev.*, **31** (3): 224-228.
- Bimla, Dilbagi, Kusumrana, M. and Gandhi, S. (2003).**

Contribution of rural women to farm productivity, *Social Welfare*, **49** (10): 29-31.

Choudhary, H. and Singh, S. (2003). Farm women in agriculture operations. *Agricultural Extension Revision*, **15** (1) : 21-23.

Ganaie, S.A.M. and Bhat, S. (2014). Dynamics of cropping land use pattern and status of food scenario in Jammu and Kashmir- a spatio-temporal analysis. Thesis, Department of Geography and Regional Development, Srinagar: University of Kashmir (J&K) India.

Kumar, B., Gowda, V.G. and Khandekar, N. (2011). Time utilization pattern and drudgery of horticultural farmers. *Internat. J. Engg. & Mgmt.*, **2** (2) : 93-96.

Kumari, Sunita, Singh, Kiran, Mehta, Manju and Dahiya, Manju (2009). Women involvement in paddy cultivation in Haryana state agricultural research communication centre. *Agric. Sci. Digest*, **29** (4) : 271-274.

Mer, S. (2007). M.Sc. Thesis, CCS Haryana Agricultural University, Hisar (Haryana) India.

WEBLIOGRAPHY

American Time Use Survey (2016). *Bureau of labour statistics*. Department of Labor Bureau of Labor Statistics, U.S. retrieved from: www.bls.gov/news.release/pdf/atus.pdf.

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