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RESEARCH ARTICLE

Participation of rural women in farm decision making in Marathwada region

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ABSTRACT : The present study was carried out in Parbhani district. The three tahsils namely, Parbhani, Purna and Gangakhed were selected by lottery method from Parbhani district. From selected each tahsil 40 rural women were selected for the present study. Thus from three tahsils 120 respondents were selected purposively from twelve villages of Parbhani district of Maharashtra State. They were interviewed personally to collect the data with the help of structured interview schedule. The collected data were processed and statistically analyzed. It observed from result that majority (58.33%) of the respondents were found in medium decision making followed by 21.67 per cent in low decision making category, whereas only (20.00%) in high decision making category. There was positive and significant relationship between size of family, type of family, land holding and annual income, while social participation, economic motivation, risk orientation and sources of information was positive and highly significant with their level of participation in farm decision making. Further age was negatively significant relationship between age and decision making and their level of participation in farm decision making.

KEY WORDS : Rural women, Participation, Farm decision making

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INTRODUCTION

Rural women constitute the most important productive work force in the Indian economy. Agriculture in India contributes about 18 per cent GDP and is predominantly a female activity. About 18 per cent of the economically active women are engaged in Agriculture sector in the country. In dairying and animal husbandry, women far outnumber the men and this sector of agriculture is wholly dependent upon the women workforce. Almost all the rural women in India can be considered as farmers in some senses as almost all of these are directly or indirectly engaged in some agricultural activity such as agriculture labour, working in the family, farm land holding, dairying and animal husbandry etc.

Indian rural women share substantial responsibilities and perform a wide spectrum of duties in most of the farm and family related activities, beside their exclusive involvement in domestic chores. Therefore, the rural women are considered as backbone of Indian economy. At present, population of women in the world is 3439.4 million *i.e.* (49.76%) of total population. Out of total population of women, population of women contributing to agriculture is 564 million *i.e.* (16.4%) of the total women population. While in case of India, population

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of women is 614.39 million *i.e.* (48.34%) out of it (55 to 60%) contributing to agriculture. Whereas, considering Maharashtra, population of women is 54 million *i.e.* (48.21%) out of which (76.72%) are engaged in agriculture.

Objectives :

– To study the profile of the rural women,
– To know the extent of participation of rural women in farm decision making,
– To find out the relationship between profile of the rural women and their extent of participation in farm decision making.

METHODOLOGY

The present study was conducted in Parbhani district of the Marathwada Region of Maharashtra state. Three tahsils were randomly selected by lottery method and from each tahsil four villages purposively selected. The villages were selected were inhibited by progressive farmer and this area women were actively engaged in farming activities, from each village ten respondents was randomly selected, thus, total sample size was 120. The "Ex- post facto" research approach was used in the present study. For the present study interview schedule was found to be most convenient method for data collection from the farmers. The respondent was categorized with the help of mean and standard deviation.

OBSERVATION AND ASSESSMENT

The experimental findings obtained from the present study have been discussed in following heads:

Profile of the rural farm women :

The data with respect to profile of the respondent have been studied and furnished in Table 1.

The distribution of the respondent in Table shows that majority (65.83%) of the respondents were from middle age group (28 to 45 years) followed by 20.22 per cent young age group (up to 27 years) and remaining 14.16 per cent were from the old age group (46 and above). The relatively higher proportion of the respondents (35.83%) had education up to primary school level followed by (33.33%) of the respondents had educated up to higher secondary level, while (12.50%) of the respondents educated up to secondary school level and only (1.66%) of the respondents were having college level. Whereas (16.66 %) of the respondents were illiterate. The majority (71.83%) of respondent were having medium family size consisting 4 to 10 members, followed by 17.50 per cent of the respondents had large family size consisting 11 and above members. While only 10.83 per cent of respondents were having small family size consisting up to 4 members in their family. The majority (65.00%) of the respondents were from nuclear family. While 35.00 per cent were from joint family.

The relatively higher proportion (33.33) of the respondents belongs to medium land holding (4.1 to 10 ha) followed by one fourth of the respondents large land holdings (10.1ha and above). The 19.17 and 12.50 per cent of the respondents had semi-medium (2.1 to 4.0ha) and small (1.1 to 2.0 ha) and only (10.00%) of the respondents were belonged to marginal land holding. The majority (84.17%) of the respondents were belonging to medium of annual income in the range of (Rs. 64743 to 576173), whereas, 11.67 per cent of the respondents were from high annual income in the range of (Rs. 576174 and above) and meagre (4.16%) of the respondents were from low annual income in the range of (up to Rs.64742).

It was observed that majority (64.16%) of the respondents had low social participation, whereas more than one fourth (34.18%) of the respondents had medium social participation. Only (1.66%) of the respondents were having high level of social participation. The majority (66.67%) of respondents were having medium economic motivation, followed by 23.33 per cent and 10.00 per cent high and low economic motivation, respectively. It was observed that half (50.83%) of respondents were having medium level of risk orientation, followed by 29.17 per cent rand 20.00 per cent high and low risk orientation, respectively, It was observed that more than half (58.33%) of respondents used medium sources of information followed by low 21.66 per cent and high 20.00 per cent, respectively.

Extent of participation of rural women in farm decision making :

From Table 2 it was observed that in case of extent of participation of rural women about preparatory tillage 13.33 per cent of the respondents always took decision about selection of land for cultivation of crops while, only (5.83%) and of the respondents were always took decision about levelling and, respectively.

It was also noted that majority (65.83%) of the respondents sometimes participated in decision making about selection of land for cultivation of crop, while relatively less (30.00%) of the respondents sometimes participated in decision making about ploughing. This is may be due to some of the women always participated in decision of selection of land for cultivation of crops and harrowing because head of the family preferred their decisions.

Further majority (63.33%) of the respondents never took decision about ploughing, while only (20.83%) of the respondents were always took decision about selection of land for cultivation for cultivation of crops. Reason may be that as preparatory tillage operation generally done by men, that's way women have less participation in its decisions. Similar findings were reported by Wakle *et.al.* (2003) Vidhate (2007), Aswar (2008) and Gund (2008).

It was clear from Table 3 that 16.66 per cent of the respondents always participated in decision making about

Table 1 : Distribution of the respondents according to their profile

Sr. No.	Profile of the respondents	Category	Respondents (n=120)	
			No	%
1.	Age (years)	Young (Up to 27)	24	20.00
		Middle (28 to 45)	79	65.83
		Old (46 and above)	17	14.17
2.	Education	Illiterate	20	16.67
		Primary school (1^{st} -4^{th})	43	35.83
		Secondary school (5^{th} -10^{th})	15	12.50
		Higher secondary (11^{th} -12^{th})	40	33.33
		College level (above 12^{th} lass)	02	1.67
3.	Size of family	Small (Up to 4 member)	13	10.83
		Medium (5 to 10 member)	86	71.67
		Big (10 and above)	21	17.50
4.	Type of family	Nuclear	78	65.00
		Joint	42	35.00
5.	Land holding	Marginal (Up to 1.0 ha)	12	10.00
		Small (1.1 to 2.0 ha)	15	12.50
		Semi- medium (2.1 to 4.0)	23	19.17
		Medium (4.1 to 10ha)	40	33.33
		Large (10 and above)	30	25.00
6.	Annual income	Low (Up to Rs.64742)	5	4.16
		Medium (Rs. 64743 to Rs. 576173)	101	84.17
		High (Rs. 5761734 and above)	14	11.67
7.	Social participation	Low (Up to 1)	70	58.33
		Medium (1.1 to 2.0)	48	40.00
		High (2 and above)	2	1.66
8.	Economic motivation	Low (Up to 21)	12	10.00
		Medium (22 to 26)	80	66.67
		High (27 and above)	28	23.33
9.	Risk orientation	Low (up to 21)	24	20.00
		Medium (22 to 24)	61	50.83
		High (25 and above)	35	29.17
10.	Sources of information	Low (Up to 5)	26	21.66
		Medium (6 to 14)	70	58.33
		High (15 and above)	24	20.00

Table 2 : Extent of participation of rural women in farm decision making about preparatory tillage

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1.	Decision making in selection of land for cultivation of crops	16	13.333	79	65.83	25	20.83
2.	Decision making in ploughing	08	6.66	36	30.00	76	63.33
3.	Decision making in harrowing	12	10.00	38	31.66	70	58.33
4.	Decision making for application of FYM	11	9.16	67	55.83	42	35.00
5.	Decision making for levelling of land	07	5.83	65	54.16	48	40.00

selection of variety, while few (8.33%) of the respondents were always took decision about seed treatment. Probable reason may be due to some women always decided the selection of variety of crop because as due to education or information available, they were having ample knowledge of performance of variety.

Further it was observed that more than half (52.00%) of the respondents were sometimes participated in decision making about seed rate, while relatively less (38.33%) of the respondents sometimes took decision about sowing method and detecting spacing between two crops. Thus, it is due to some of women always decided the application of seed rate because they having experience and knowledge that's way women can accurately determine to seed rate.

Whereas, more than half (56.66%) of the respondents never participated in decision making about deciding spacing between two crops, while more than one fourth (27.50%) of the respondents never participated in decision making method of sowing. The reason may be they are not familiar with, which combination of spacing let crop grow healthy and yield more. Similar findings were reported by Dhutmal (2005) and Gund (2008)

From Table 4 it was revealed that majority (70.83%) of the respondents always participated in decision making about weeding, whereas only (5.00%) of the respondents always took decisions about application of fertilizer for irrigated crops. Generally weeding is generally performed by women traditionally, similarly other intercultural operations as above are also traditionally performed by women. Women labour is cheap and employed for such light type of work.

Also result shows that majority (60.00%) of the respondents sometimes participated in decision making about thining, while (23.33%) of the respondent sometimes participated in decision making about weeding. The reasom may be it is simple task and these operation generally done by women.

Results indicate that majority (62.50%) and (60.83%) of the respondents never participated in decision making about application of fertilizer for irrigated and dry land crops. Whereas, only (5.83%) of the respondents never participated in decision making about weeding. This is due to women are not comfortable with practice of chemical fertilizer application due to passive role in application in the past, insufficient information is also a lacuna. Findings of the present study are in conformity with findings reported by Aswar (2008), Gund (2008), Hossain and Mishra (2002) and Walke *et al.* (2005).

It was depicted from Table 5 that 13.33 per cent of the respondents always participated in decision making about application of water through drip irrigation, while few (6.66%) of the respondents were always took decision about application of water from bore well. The reason is that women were educated and so they were able to get at information through various resources such as television, radio, news paper etc. and they were being allowed to take decision about water management by the family head hence they were confident to took decision.

Further it observed from result that 40.00 per cent of the respondents sometimes participated in decision making about application of water from well irrigation, while relatively less (28.30%) of the respondents sometimes participated in decision making about application of water through sprinkler irrigation. The possible reason could be that women working in the farm

Table 3 : Extent of participation of rural women in farm decision making about seeds, seed treatment and sowing

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1.	Decision making in selection of variety	20	16.66	56	46.66	44	36.66
2.	Decision making in seed treatment	10	8.33	60	50.00	50	41.66
3.	Decision making in detecting sowing time	07	5.83	46	38.33	67	55.83
4.	Decision making in application of seed rate	14	11.66	63	52.50	43	35.83
5.	Decision making in detecting method of sowing	15	12.50	48	40.00	33	27.50
6.	Decision making in deciding spacing between two crops	06	5.00	46	38.33	68	56.66

Table 4 : Extent of participation of rural women in farm decision making about intercultural operation

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1.	Decision making in weeding	85	70.83	28	23.33	07	5.83
2.	Decision making in hoeing	50	41.66	54	45.00	16	13.33
3.	Decision making in gap feeling	23	19.16	70	58.33	27	22.50
4.	Decision making in thining	20	16.66	72	60.00	28	23.33
5.	Decision making in application of fertilizer for dry land crops	07	5.83	40	33.33	73	60.83
6.	Decision making in application of fertilizer for irrigated crop	06	5.00	39	32.50	75	62.50

might be ask about their decision by the head of family and sometimes women actually engaged in that activities which is not skilled task.

Results shows that more than half (58.33 %) of the respondents never participated in decision making about application of water through drip irrigation. Due to male dominant condition, women are not taken into consideration to decide about water management, usually. It was seen from Table 6 that 17.50 per cent of the respondents always participated in decision making about spraying, while, very few (3.33%) of the respondents always participated in decision making about purchase of pesticide and insecticide.

Result shows that more than half (59.16 %) of the respondents sometimes participated in decision making about

Table 5 : Extent of participation of rural women in farm decision making about water management

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1.	Decision making in application of water from well	09	7.50	48	40.00	63	52.50
2.	Decision making in application of water from bore well	08	6.66	45	37.50	67	55.83
3.	Decision making in application of water through flood irrigation	06	5.00	43	38.33	68	56.66
4.	Decision making in application of water through drip irrigation	16	13.33	34	28.33	70	58.33
5.	Decision making in application of water through sprinkler irrigation	15	12.50	36	30.00	69	57.50

Table 6 : Extent of participation of rural women in farm decision making about integrated pest and disease management

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1	Decision making in purchase of pesticide and insecticide	04	3.33	55	45.83	61	50.83
2	Decision making to identify pest and disease	12	10.00	43	35.83	65	54.16
3	Decision making in spraying	11	9.11	71	59.16	38	31.66
4	Decision making in dusting	21	17.50	63	52.50	36	30.00

Table 7 : **Extent of participation of rural women in farm decision making about harvesting, threshing and sale and storage**

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	o	%	No	%
1.	Decision making in harvesting with help of labour	48	40.00	62	51.66	10	8.33
2.	Decision making in harvesting with help of labour	32	26.66	67	55.83	21	17.50
3.	Decision making in threshing with help of labour	44	36.66	61	50.83	15	12.51
4.	Decision making in threshing with help of labour	31	25.83	63	52.50	26	21.66
5.	Decision making in sale farm produce to retailer	28	23.33	56	46.66	36	30.00
6.	Decision making in sale farm produce to wholesaler	18	15.00	60	50.00	42	35.00
7.	Decision making in sale farm produce by self	06	5.00	51	42.50	63	52.50
8.	Decision making in storage	33	27.50	52	43.33	35	29.16

Table 8 : Extent of participation of rural women in farm decision making about investment and other activities

Sr. No.	Extent of participation	Always		Sometimes		Never	
		No	%	No	%	No	%
1.	Decision making for purchase of improve farm implement	28	23.33	56	46.66	36	30.00
2.	Decision making for purchase of improve seed	18	15.00	60	50.00	42	35.00
3.	Decision making for purchase of chemical fertilizer	06	5.00	51	42.50	63	52.50
4.	Decision making for investment of money	33	27.50	52	43.33	35	29.16
5.	Decision making for employing occasional labour	39	32.50	59	49.16	22	18.33
6.	Decision making for employing annual farm labour	43	35.83	50	41.66	27	22.50
7.	Decision making to obtain bank loan	26	19.16	54	45.00	40	33.33
8.	Decision making to assigning work to family member	34	28.33	61	50.83	25	20.83

spraying, while relatively less 35.83 per cent of the respondent sometimes participated in decision making about identify pest and diseases. This may be due to women actually helping male farmer in the operation likes spraying and preparation of solution for it. So having experience of these of operation they could decide about spraying and dusting.

Whereas, more than half (54.16%) of the respondents never participated in decision making about identify pest and diseases, while relative less (30.00%) of the respondents never involved in dusting. Generally women are unable to detect and identify the pest or diseases infecting the crop. And instead, although they know, they are unable to carry out integrated pest or disease controlling operation. Lack of both information and knowledge about insecticide and pesticide.

Table 7 further shows that 40.00 per cent of the respondents always involved in decision making about harvesting with the help of labour, while relatively less (27.50%) of them were always took decision about storage. Reason might be that these farm operations generally were done by women so they can easily estimate about need of labour.

Results indicate that more than half (55.83%) of the respondents sometimes involved in decision making about harvesting with the help of machine. Thus, it is due to women knew advantages of using machine such as low human and animal labour input, time saving etc.

Further it is observed that 52.50 per cent of the respondents never participated in decision making about sale farm produce by self, whereas, only (8.33%) of the respondents never participated in decision making about harvesting with labour. This might be due women were not having freedom to decide about sale farm produce by self. Similar finding were reported by Prasad *et al.* (2004), Aswar (2008) Gund (2008) and Tekale (2012).

It was seen from Table 8 that more than one fourth (35.83%) of the respondents always involved in decision making about employing annual labour, while very few (5.00%) of them were always took decision about purchase of chemical fertilizers and pesticides. This might be due to some reasons such as their precision in calculation of required labour force.

It also indicate that 50.83 per cent and 50.00 per cent per cent of the respondents sometimes involved in decision making about assigning work to family member and purchase of farm implements. The probable reason is that in our community most of the times male are assigning works to other family members.

Whereas, more than half (52.50%) of the respondents never participated in decision making about purchase of chemical fertilizer and insecticide, while relatively less (18.33%) of the respondents never involved in employing occasional labour. Their non participation in decision making about purchase of chemical fertilizer and insecticide is an expected finding because such a decision is complex. Secondly women may not have much knowledge about insecticide and pesticide. Similar finding were reported by Aswar (2008), Gund (2008) and Tekale (2012).

It observed from Table 9 that majority (63.66%) of the respondents were found in medium decision making followed by 19.17 per cent in low decision making category, whereas only (17.50%) in high decision making category. It means that majority of respondents involve in medium to low category of farm decision making. Reason might be that raising graph of education, level of knowledge, spectrum of experience and its application for implementation of decision that were taken in various farm activities *viz.*, application of fertilizer, hoeing, gap filling, appointment of occasional or annual labour etc. This finding is in line with findings Shinde (2007), Vidhate (2007), Aswar (2008) and Gund (2008).

Table 9 : Overall participation of rural women in farm decision making

Sr. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (Up to 25)	26	19.17
2.	Medium (26 to 43)	70	63.33
3.	High (44 and above)	24	17.50

Relationship between profile of the rural women and their extent of participation in farm decision making :

Age and decision making :

The data of results of the present study clearly explained that the correlation co-efficient indicate the negatively correlation between age and decision making and their level of participation in farm decision making.

Table 10 : Relationship between profile of the rural women and their extent of participation in farm decision making

Sr. No.	Profile	Co-efficient of correlation
1.	Age	-0.296
2.	Education	0.353**
3.	Size of family	0.211*
4.	Type of family	0.223*
5.	Land holding	0.206*
6.	Annual income	0.248*
7.	Social participation	0.313**
8.	Economic motivation	0.342**
9.	Risk orientation	0.358**
10.	Sources of information	0.430**

* and ** indicate significance of values at P=0.05 and 0.01, respectively

It can be visualize from the data that age of the women was negatively correlated with their extent of participation in agriculture operations. Obviously the young farm women more prone to change. Their physical strength enables them to perform

more agriculture operation than old age women. This finding was supported by Chaudhary and Singh (2007).

Education and decision making :

The data of results of the present study clearly explained that the correlation co-efficient showed positive and highly significant relationship between the education and decision making and their level of participation in farm decision making.

The level of education also helps to an individual to get himself acquainted with the skill that are required for undertaking the improved techniques of agriculture. This might be resulted in establishing a positive and highly significant relationship of education with decision making. The similar finding was also reported by Prasad *et al.* (2004); Aswar (2008) and Gund (2008).

Size of family and decision making :

It was noted in the results of the study that the correlation co-efficient showed positive and significant relationship between the size of family and decision making and their level of participation in farm decision making.

If the size of family medium then more number of members are available to work in the different farm activities so it help to reduce labour cost. This might be resulted in establishing a positive and significant relationship of education with decision making. These finding supported by Prasad *et al.* (2004) and Tekale (2012).

Type of family and decision making :

It was noticed in the results of present study that the correlation coefficient showed positively and significantly relationship between the type of family and decision making and their level of participation in farm decision making.

It can be inferred from these findings that the farm women belonging to nuclear family had higher participation in decision making than those belonging to joint family. This may be due to the more freedom to women in nuclear family as there is no elder person in family other than husband. The similar finding was also reported by Saif-ur-Rehman *et al.* (2001); Vidhate (2007); Aswar (2008) and Chayal *et al.* (2013).

Land holding and decision making :

The data delineated that land holding positively and significantly related with the level of participation in farm decision making.

This clearly shows that increasing in land holding, also increases the level of participation in farm decision making. The larger size of land holding could afford to use modern technology for better farming due to which land holding might be established positive and significant relationship with participation of women in farm decision making. This finding is similar to the findings of Kamta *et al.* (2004); Wasnik (2005); Vidhate (2007) and Chayal *et al.* (2013).

Annual income and decision making :

It was revealed that annual income positively and significantly related with the level of participation in farm decision making.

From this result it can be said that the annual income determines the economic status of the respondents. This clearly indicates that higher the annual income, higher the level of participation in farm decision making. Annual income of the respondents therefore, could establish positive and significant relationship with participation of women in farm decision making. This finding was supported by Gawande *et al.* (2009).

Social participation and decision making :

It was portrayed in the study that the correlation coefficient indicated positive and highly significant relationship between social participation and decision making and their level of participation in farm decision making.

In general individual having more social participation have broader outlook and have greater access for communication. Exchange of ideas, thought and experience helps them to get more insight in variety of subject and to modify their thinking. Thus increasing social participation increasing their extent of participation in farm decision making. The similar finding was also reported by Prasad *et al.* (2004); Aswar (2008) and Gund (2008).

Economic motivation and decision making :

It was elucidated in the study that the correlation coefficient indicates positive and highly significant relationship between economic motivation and decision making and their level of participation of women in farm decision making.

It indicate that, if for the first time respondents got benefited by the some aspects such as use of seed of certain variety, certain crop, irrigation resources *i.e.* drip or sprinkler irrigation then for the next year too respondents used the same benefit yielding aspects for getting more return.

Risk orientation and decision making :

The data delineated that land holding positively and significantly related with the level of participation in farm decision making.

It clearly indicates that, due to information media *viz.*, television, radio, news paper women came to know new technologies in farming .There social participation also provides them information about new technology. As they got information, they were enough confident and were able to take risk, once benefited, they could again take up risk. Thus the increasing risk orientation increases level of participation of women in farm decision making. This finding was supported by Dhakane (2005).

Sources of information and decision making :

It was elucidated the sources of information positive

and highly significant relationship with the level of participation in farm decision making.

Use of sources of information increase level of information and develop self confidence about ability to take up new and better decisions. It might be the reason that use of sources of information could express the positive and highly significant relationship these two variables. This finding is in line with findings of Aswar (2008) and Gund (2008).

Conclusion :

The majority of the rural women were middle aged, having primary school level education, belonged medium size of family and nuclear type of family, medium annual income ranged from (Rs. 64742 to 57617), with low social participation, having medium economic motivation and medium risk orientation, having medium use of sources of information. It was concluded that majority of the respondents involve in medium to low category of farm decision making. Reason might be that raising graph of education, level of knowledge, spectrum of experience and its application for 4appointment of occasional or annual labour etc. The study also revealed that size of family, type of family, land holding, annual income, social participation,economic motivation and sources of information were these factor influence the participation of rural women in farm decision making. So there is need to improve the productivity of agriculture involvement of rural women in farm decision making. This requires capacity building of rural women regarding latest technical knowhow agriculture information actuation and processing.

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