Journal of Animal Research: v.12 n.2, p. 257-262. April 2022

DOI: 10.30954/2277-940X.02.2022.14

Factors Affecting and Association of Different Factors with Livelihood Security among Tribal Women in Animal Husbandry Activities

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Received: 20 Jan., 2022 **Revised:** 10 March, 2022 **Accepted:** 16 March, 2022

ABSTRACT

The present study was aimed to find out the factors affecting by tribal women and association of different factors with livelihood security of the tribal women in animal husbandry based livelihood activities. The study was conducted in three districts of Rajasthan namely Dungarpur, Udaipur and Banswara. A total of 100 respondents constituted the sample of the study. Data were collected through a well- structured interview schedule. The research findings revealed that there was highly significant association between all the factors and livelihood security of the respondents as the calculated chi-square values were greater than the tabulated values. This indicates that the livelihood security of the respondents was associated with all the factors i.e. access to resources ($\chi^2 = 25.80$**), access to technological information ($\chi^2 = 15.17$**), market and regular income ($\chi^2 = 29.24$**, $\chi^2 = 15.62$**), risk factors ($\chi^2 = 19.88$**), risk taking ability ($\chi^2 = 30.74$**) and decision-making ability ($\chi^2 = 34.55$**). It can be inferred that all these factors affected to livelihood security of the tribal families with animal husbandry based livelihood.

HIGHLIGHTS

- Study was conducted to understand the association of various factors with livelihood security among tribal women in Animal Husbandry activities.
- There was close association with various factors such as access to resources, access to technological information, market and regular income etc.

Keywords: Factors affecting, association, tribal women, livelihood security, significant association, Chi-square values

Covering an area of 342,239 square km, Rajasthan is the largest state (10.4% of country's area) in the Republic of India and it consists of 33 districts with Jaipur as its capital. It is located in the northwestern part of the subcontinent. It was formally known as 'Rajputana' meaning 'the adobe of the rajas (kings)' (Sethy, 2020). As per the 2011 Census, the Scheduled Tribe population of Rajasthan state is 9,238,534. Out of twelve tribes scheduled for the State, Meena is the most populous tribes, having a population of 3,799,971, constituting 53.05 per cent of the total ST population followed by Bhil (2805948). Meena and Bhil together constitute 93 per cent whereas Garasia, Damor, Dhanka and Saharia combine to form 6.6 per cent of the total ST population. Six tribes, Bhil, Meena, Naikda, Kathodi, Patelia, Kokna and Koli Dhor along with the generic tribes constitute the residual 0.3 per cent of the total tribal population. The highest concentration of this population is mainly in districts viz. Udaipur, Bhilwara, Dungarpur, Banswara, Chittorgarh, Pratapgarh, and Rajsamand. The tribal women, constitute as in any other social group, about half of the total population. They are the backbone of the agricultural workforce. They do the most tedious and backbreaking tasks in agriculture, animal

How to cite this article: Dagar, A. and Upadhyay, R. (2022). Factors Affecting and Association of Different Factors with Livelihood Security among Tribal Women in Animal Husbandry Activities. *J. Anim. Res.*, **12**(02): 257-262.

Source of Support: None; **Conflict of Interest:** None

husbandry and homes (Sahu, 2014). Besides routine household work, the tribal women work in the agricultural fields, forests for long hours. The overall output if seen in terms of number of hours of work is low. Their schedule of long working hours continues even during pregnancy, natal and postnatal stages. They have a negative energy balance, high morbidity rate and low child survival rate. There are various circumstances which may restrict the performance of tribal women such as access to resources, technological information, information sources, market facility, regular income, risk factors, risk taking ability and decision making ability. An attempt was made to study the factor which may affect the livelihood security of the family through different livelihood activities.

MATERIALS AND METHODS

The present investigation was conducted in three districts of Rajasthan state namely Banswara, Dungarpur and Udaipur were selected. Two *panchayat samities* from each district and two villages from each *panchayat samiti* were selected randomly. Total 100 tribal women were selected from the three districts. Interview schedule was developed by the investigator. Interview technique was used for data collection. The response was recorded on three point continuum of complete, partial and not at all for the factor viz. access to resources (capital, input, labour, cash earned from sale of produce, credit and loan, storage facility and transportation facility) assigning 2, 1 and 0 score respectively. The response regarding access to technological information and information sources like extension contact, mass media exposure and electronic media response was recorded on three point continuum of regular, occasional and never assigning 2, 1 and 0 scores respectively. Similar the response regarding the access to regular income, market, risk factor and risk taking ability, was recorded on three point continuum of always, sometime and never assigning 2, 1 and 0 scores respectively. On the basis of scores obtained by the respondents mean per cent score were calculated to have uniformity of the data.

RESULTS AND DISCUSSION

Information related to factors affecting and association of different factors with livelihood security presented in this section.

Factors affecting animal husbandry based livelihood

An attempt was made to study the factors affecting animal husbandry based livelihood activity such as access to resources (capital, input, excreta management, management of produce at commercial level, labour, cash earned from sale of produce, credit and loan, storage facility and transportation facility), access to technological information, market, regular income, risk factors, risk taking ability and decision-making ability. The information related to these factors affecting animal husbandry based livelihood activity is presented in Tables.

Access to resources

It can be observed from the table that more than half of the respondents (56%) had complete access to sale and purchase of livestock whereas more than half of the respondent (52%) had complete access to selection of animal breed with MPS 76 and 77.5 respectively. Regarding fodder management, nearly two third of the respondents had complete access to feed of animal (66%) and storage of fodder (63%). More than half of the respondents were procuring fodder (59%), raising fodder (58%) and purchasing cattle feed (57%). This may be due to the reason that tribal women were actively involved in management of livestock and spending many hours a week taking care of livestock. It can be seen from the table that majority of the respondents were not at all having access to capital loan (63%) and saving (68%) with MPS 27.5 and 25.5 respectively. Regarding input, majority of the respondents had complete access to cleaning equipment (70%) drying shed (68%) and cattle shed (60%). More than half of the respondents had complete access to machinery (58%) and milking utensil (56%). In case of access to excreta management, majority of the respondents were managing fresh excreta (65%) and processed excreta (60%) with MPS 80 and 82.5 respectively. Response related to labour revealed that 52 per cent were having complete access to family labour whereas cent per cent of the respondents (100%) were not at all having access to hired labourer. This may be due to the reason that most of tribal were having small herd size and tribal women themselves managed the livestock. Women performed indoor activities and other family members were also engaged in related activities so they did not require any hired labourer. Data in table further depicts that majority

Table 1: Distribution of the respondents on the basis of access to resources (n = 100)

Sl. No.		Factors	Complete		Partial		Not at all		MPS
			f	%	f	%	f	%	
(A)		Access to resources							
1		Sale and purchase of livestock							
	(a)	No. of animals be purchased / sold	56	56	43	43	1	1	77.5
	(b)	Selection of animal breed	52	52	48	48	0	0	76
2		Fodder management							
	(a)	Procuring fodder	59	59	41	41	0	0	79.5
	(b)	Raising fodder	58	58	42	42	0	0	79
	(c)	Storage of fodder	63	63	36	36	1	1	81
	(d)	Feed of animal	66	66	34	34	0	0	83
	(e)	Purchase of cattle feed	57	57	43	43	0	0	78.5
3		Capital							
	(a)	Loan	18	18	19	19	63	63	27.5
	(b)	Saving	19	19	13	13	68	68	25.55
4		Input							
	(a)	Cattle shed	60	60	40	40	0	0	80
	(b)	Machinery	58	58	42	42	0	0	79
	(c)	Milking utensil	56	56	44	44	0	0	78
	(d)	Cleaning equipment	70	70	30	30	0	0	85
	(e)	Drying shed	68	68	32	32	0	0	84
5		Excreta management							
	(a)	Fresh excreta	65	65	35	35	0	0	82.5
	(b)	Processed excreta	60	60	40	40	0	0	80
6		Labour							
	(a)	Family labourer	52	52	40	40	8	8	72
	(b)	Hired labourer	0	0	0	0	100	100	0
7		Storage facility	60	60	40	40	0	0	80
8		Transportation facility	20	20	20	20	60	60	30
9		Cash earned from sale of produce	45	45	49	49	6	6	69.5

of the respondents were having storage facility (60%) and they stored their products at household level using indigenous methods. Majority of the respondents (60%) were not at all having access to transportation facility as they were remotely inhabited and couldn't afford their own vehicles. Less than half of the respondents (45%) had complete access to cash earned from sale of produce as male member of the family dominated the use of income. The results are in conformity with findings of Chauhan and Ghosh (2014).

Access to technological information and information sources

Visualization of Table 2 indicates that more than half of the respondents (52%) had regular access to scientific livestock methods related to fodder preservation whereas occasional access to cattle immunization and vaccination (56%), improved breed (54%) and advance milking methods (52%). Data in table reveal that more than half of the respondents (52%) were not having access to State Department of Agriculture and NGOs personnel whereas half of the respondent (50%) had occasional access to personnel of KVK with MPS ranging between 36.5 to 55 respectively. Respondents, regarding print media exposure reported that cent per cent of the respondents did not have access to newspaper and magazine. This may be due to the reason that most of the respondents were uneducated and they lived in remote area which affected the print media exposure. Data in table further reveal that majority of the respondents had regular access to television (70%), telephone (62%) and radio (60%) with MPS ranging between 75-80.

Table 2: Distribution of the respondents on the basis of Access to technological information and information sources (n=100)

Sl. No.	Factors	Regular		Occasional		Never		MPS
		f	%	f	%	f	%	
(B)	**Access to technological information and information sources**							
(I)	Scientific livestock methods							
(a)	Fodder preservation methods	52	52	38	38	10	10	71
(b)	Improved breed	40	40	54	54	6	6	67
(c)	Advance milking methods	38	38	52	52	10	10	64
(d)	Cattle immunization and vaccination	30	30	56	56	14	14	58
(II)	Extension contact							
(a)	State department of agriculture	25	25	23	23	52	52	36.5
(b)	KVK personnel	30	30	50	50	20	20	55
(c)	NGOs personnel	28	28	20	20	52	52	38
(III)	Mass media exposure							
	Print media							
(a)	Newspaper	0	0	0	0	100	100	0
(b)	Magazine	0	0	0	0	100	100	0
(IV)	Electronic media							
(a)	Television	70	70	20	20	10	10	80
(b)	Radio	60	60	30	30	10	10	75
(c)	Telephone	62	62	30	30	8	8	77

Table 3: Distribution of the respondents on the basis of access to market and regular income (n = 100)

Sl. No.	Factors	Always		Sometimes		Never		MPS
		f	%	f	%	f	%	
(C)	Access to market							
(a)	Constant demand	34	34	45	45	21	21	56.5
(b)	Stable price	38	38	45	45	17	17	60.5
(D)	Access to regular income	43	43	42	42	15	15	64

Access to market and regular income

Table 3 clearly depicts that sometimes less than half of the respondents (45%) had stable price and constant demand for their produce with MPS 56.5 and 60.5 respectively. This may be due to weather changes. Regarding access to regular income, less than half of the respondents (43%) sometimes had profit from the products with MPS 64.

Risk factors and risk taking ability

Data in table reveal that less than half of the respondents always faced risk related to production (43%) market (44%) and finance (43%). Regarding risk taking ability less than half of the respondents sometimes produced new products (45%), took loan for livelihood activities (43%) and used improve methods and practices (41%) with MPS ranging between 44.5-61.

Decision-making ability

A decision can be defined as a course of action purposely chosen from a set of alternatives to achieve day to day objectives or goals. Data furnished in Table 5 highlight the activities on which decision were taken by the respondents. It can be seen from the table that less than half of the respondents (45%) were able to take decision related to marketing of the produce, selection of products (43%) and purchase of raw material (42%).

Data presented in Table 6 point out that there was highly significant association between all the factors and

Table 4: Distribution of the respondents on the basis of access to risk factors and risk taking ability (n=100)

Sl. No.	Factors	Always		Sometimes		Never		MPS
		f	%	f	%	f	%	
(E)	**Risk factors**							
(a)	Production risk	43	43	34	34	23	23	60
(b)	Marketing risk	34	34	44	44	22	22	56
(c)	Financial risk	23	23	43	43	34	34	44.5
(F)	**Risk taking ability**							
(a)	Use improve methods and practices	41	41	40	40	19	19	61
(b)	Take loan for livelihood activities	23	23	43	43	34	34	44.5
(c)	Produce new products	26	26	45	45	29	29	48.5

Table 5: Distribution of the respondents on the basis of Decision-making ability (n = 100)

Sl. No.	Factors	Always		Sometimes		Never		MPS
		f	%	f	%	f	%	
(G)	**Decision-making ability**							
(a)	Selection of products	38	38	43	43	19	19	59.5
(b)	Purchasing of raw material	35	35	42	42	23	23	56
(c)	Marketing of the produce	21	21	45	45	34	34	43.5

Table 6: Association of different factors with livelihood security of the respondents in animal husbandry based livelihood

Sl. No.	Factors	χ^2 value
1	Access to resources	25.80**
2	Access to technological information and sources	15.17**
3	Access to market	29.24**
4	Access to regular income	15.62**
5	Risk factors	19.88**
6	Risk taking ability	30.74**
	Decision-making ability	34.55**

livelihood security of the respondents as the calculated chi-square values were greater than the tabulated values. This indicates that the livelihood security of the respondents was associated with all the factors i.e. access to resources, access to technological information, market facility and economic sources, risk factors, risk taking ability and decision making ability. Gelaneh (2014) also mentioned that sources of information and extension contact have significant relationship with livelihood of small farmers. This implies that the small holder farmers were significantly influenced by these factors to sustain the status of their livelihood. It can be inferred that these factors play an important role in animal husbandry based livelihood of the tribal family.

CONCLUSION

From the findings it can be concluded that poor access to land and low land holdings could be an important factor behind their poor economic status. They have also poor access to technological information and sources. This may be due to their shy nature as they do not like to have contact with outsiders, wish to remain in isolation from the outsiders and are neglected by other community. Also less contact of KVK and NGO personnel, illiteracy and less exposure to training programmes and low social participation they have less access to inputs and other specialized tools. In order to increase income and contribution of tribal women in development of tribal area, it is imperative that they are trained in scientific practices and improved technologies

by keeping them abreast with the latest innovations. Access to resources, technological information and institutional support can enable, strengthen and empower the long deprived tribal community and enhance tribal livelihood. Resources help to improve work capacity and quality in animal husbandry. Tribal women have poor knowledge of the improved technologies in the field of animal husbandry which should be improved to make the tribal women secure.

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