Research Article

Indian Journal of Extension Education
Vol. 58, No. 2 (April–June), 2022, (163-166)

ISSN 0537-1996 (Print)
ISSN 2454-552X (Online)

# Factors Affecting Livelihood Security of the Tribal Women in Crop Based Livelihood Activities

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ARTICLE INFO

Keywords: Factors, Association, Tribal women, Livelihood security, Chi-square values

http://doi.org/10.48165/IJEE.2022.58239

ABSTRACT

The 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 crop based livelihood activities conducted in three districts of Rajasthan namely Dungarpur, Udaipur and Banswara 180 respondents data were collected through a well- structured interview schedule. Majority of the respondents had occasional access to extension agency, mass media sources, technological information as well print media. More than half of the respondents never had access to regular income, less than half of the respondents sometimes only produced new products, used improved methods and practices and took loan for carrying out livelihood. The livelihood security of the respondents was associated with access to resources, access to technological information, market and regular income, risk factors, risk taking ability and decision making ability. It can be inferred that all these factors affected to livelihood security of the tribal families with crop based livelihood.

## INTRODUCTION

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. 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 husbandry and homes (Sahu, 2014). Besides routine household work, the tribal women work in the agricultural fields, forests for long hours. 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.

## METHODOLOGY

The 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 180 tribal women were selected from the three districts. Interview schedule was developed which was used for data collection. The responses were recorded on three point continuum of complete, partial and not at

Received 02-01-2022; Accepted 15-03-2022

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. Similarly, 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

### Factors affecting crop based livelihood

Data in Table 1 show that half of the respondents (50%) had partial access to land and 33.33 per cent respondents reported they were not having ownership of land which may be due to the reason that the tribal don't have land on their name because most of tribal live in forest and land is owned by the government. The findings are in conformity with Kumar (2010) who mentioned that tribal, have poor access to land and forests. Some of the respondents got access to the land because there were only daughters in the family and they got it as gift from their parents with the relatively low MPS of 41.66. It was found that more than half of the respondents (52.77%) had complete access as indicated by mean per cent score of 69.44. Table further reveals that half of the respondents (50%) had partial access to loan and saving with mean per cent score 41.66 and 49.16. Regarding farm assets it can be seen that respondents had low access to tractor (13.88 MPS), tool and implements (34.72 MPS) as very few of the respondents (0 to 15.55%) had complete access to these assets. This may be due to the reason that they did not have proper knowledge about tool and implements and they could not afford to purchase these assets. Regarding inputs like planting material, more than one third of the respondents (36.66%) had complete access whereas 31.11 per cent and 32.22 per cent

**Table 1.** Respondents' access of resources, technology, market and income

| S.No. | Factors | Regular | Occasional | Not at all | MPS |
|---|---|---|---|---|---|
| 1. | Access to resources | | | | |
| I | Ownership of land | 16.66 | 50.00 | 33.33 | 41.66 |
| II | Irrigation water | 52.77 | 33.33 | 13.88 | 69.44 |
| III | Capital | | | | |
| | Loan | 16.66 | 50.00 | 33.33 | 41.66 |
| | Saving | 25.00 | 48.33 | 26.66 | 49.16 |
| IV | Farm assets | | | | |
| | Tractor | 0.00 | 27.77 | 72.22 | 13.88 |
| | Tools and implements | 15.55 | 38.33 | 46.11 | 34.72 |
| V | Input | | | | |
| | Planting material | 36.66 | 31.11 | 32.22 | 52.22 |
| | Improved seed/ varieties | 28.88 | 47.22 | 23.88 | 52.50 |
| | Fertilizers | 23.33 | 41.11 | 35.55 | 43.88 |
| | Machinery | 6.66 | 43.33 | 50.00 | 28.33 |
| VI | Pest management | | | | |
| | Chemical application | 12.77 | 37.22 | 50.00 | 31.38 |
| | Indigenous method | 54.44 | 42.22 | 3.33 | 75.55 |
| VII | Labour | | | | |
| | Family labourer | 43.33 | 48.88 | 7.77 | 67.77 |
| | Hired labourer | 36.11 | 42.22 | 21.66 | 57.22 |
| VIII | Cash earned from sale of produce | 23.33 | 22.22 | 54.44 | 34.44 |
| IX | Storage facility | 38.88 | 38.33 | 22.77 | 58.05 |
| X | Transportation facility | 37.77 | 46.11 | 16.11 | 60.83 |
| 2. | Access to technological information and information sources | | | | |
| I | Scientific farming methods | 25.00 | 13.88 | 56.00 | 31.11 |
| II | Extension contact | | | | |
| A | State department of agriculture | 26.00 | 14.44 | 96.00 | 53.33 |
| b | KVK personnel | 19.00 | 10.55 | 131.00 | 72.77 |
| c | NGOs personnel | 35.00 | 19.44 | 120.00 | 66.66 |
| III | Mass media exposure (Print media) | | | | |
| a | Newspaper | 10.00 | 5.55 | 57.00 | 31.66 |
| b | Magazine | 0.00 | 0.00 | 50.00 | 27.77 |
| IV | Electronic media | | | | |
| a | Television | 95.00 | 52.77 | 55.00 | 30.55 |
| b | Radio | 93.00 | 51.66 | 60.00 | 33.33 |
| c | Telephone | 96.00 | 53.33 | 50.00 | 27.77 |
| 3. | Access to market and regular income | | | | |
| I | Access to market | | | | |
| A | Constant demand | 11.11 | 25.00 | 63.88 | 23.61 |
| b | Stable price | 16.66 | 27.77 | 61.11 | 30.55 |
| II | Access to regular income | 15.55 | 32.22 | 52.22 | 31.66 |

partial and no access respectively. Regarding access to improved seed/ varieties and fertilizers about one fourth of the respondents (23.33 to 28.88%) had complete access whereas very few of them (6.66%) had complete access to machinery with MPS 28.33. Data in table also reveals that 54.44 per cent of the respondents had complete access to indigenous method of insecticides/pesticides. This may be due to the reason most of these substance are safe, low cost, biodegradable, less persistent, non-toxic, more dependable method of crop protection/technically feasible and easily available in and around their house tenements and land. Few of the respondents (12.77%) had complete access to chemical application with MPS 31.38 because most of tribal farmers did not have proper knowledge about chemical pesticides and it puts extra burden of costly on farmer.

Further an in-depth analysis of the data show that 43.33 per cent of the respondents had complete access of family labourer and 42.22 per cent respondents had only partial access to hired labourer. Regarding cash earned from sale of produce, more than half of the respondents (54.44%) did not have access this may be due to the reason that they totally depend on husband and other family member. Their most of decision related to money where taken by family male member. In case of storage facility (38.88%) and transportation facility (46.11%) the respondents had partial access with MPS ranging between 58.05-60.83. The tribal farmers are forced to dispose part of the food grain produced immediately after harvesting due to lack of storage facilities at lower prices. Later on they need to buy the food grain from the market at higher prices. There is the wide variation in food grain price, price are typically the lowest in the harvest season and the strongest before the harvest period. Without storage, these farmers eventually spend double the value of their food grain and often face a shortage of food. Regarding cash earned from sale of produce it can be seen that more than half of the respondents (54.44%) had no access which may be due to the reason that most of the economic activities in tribal families were male dominated. The results are in conformity with findings of Chauhan & Thakor (2010) and Chauhan & Nikulsinh (2011); Kaur et al., (2018): Paine et al., (2021).

Data highlight that few of the respondents (13.88%) had regular access to technological information regarding scientific farming methods which was due to the reason that most of tribal farmers are illiterate and have poor information regarding scientific farming and they were using traditional farming practices. Data in the table related to source of information reveals that majority of the respondents (72.77%) had occasional access to KVK personnel; while more than half of the respondents (66.66%) had access to NGOs personnel and State Department of Agriculture Personnel (53.33%) occasionally with MPS 46.94, 52.77 and 41.11 respectively. The findings get support from study by Dhakade (2020) who reported the agricultural extension contact and communicational activities are not that good because of lack of transportation facilities and communication networks, due to which most of the farmers have no access to technologies and current market information, especially in tribal area. Further it can be seen from the table regarding mass media exposure that majority of the respondents had no access to magazine (72.22%) and newspaper (62.77%) This is mainly due to the high incidence of illiteracy and very low level of education among the tribal people whereas electronic media had greater access whereas more than half of the respondents had regular access to telephone (53.33%), television (52.77%) and radio (51.66%) with MPS ranging between 67.22 to 68.05. The probable reason is that the respondents were quite aware about the prevalent electronic media in the study area.

More than half of the respondents (63.88 and 61.11%) never had stable price and constant demand with mean per cent score of 23.61 to 30.55 respectively. It can be seen that more than half of the respondents (52.22%) never had access to regular income with 31.66 MPS. They were able sell their products in the regulated markets thereby earning less profit. Risk taking ability is the quality of an individual that tells about the degree of taking shots in grabbing new opportunity. Data in table regarding risk factors affecting the respondents depict that more than half of the respondents had financial risk (51.66%) followed by production risk (51.11%) and marketing risk (50.55%) with mean per cent score ranging between 49.16-66.66. Regarding risk taking ability, less than half of the respondents sometimes only produced new products (49.44%), used improved methods and practices (48.88%) and took loan for carrying out livelihood (48.33%) with MPS 46.94, 51.94 and 58.33.

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 3 highlight that more than half of the respondents sometimes took decision regarding marketing of the produce (55.55%) followed by purchasing of raw material (52.22%) and selection of products (51.11%) with mean per cent score ranging between 53.88-68.88. Findings are in conformity with Awasthi et al., (2020) and Kobba et al., (2020) who revealed that important

**Table 2.** Risk factors and risk taking ability

| S.No. | Factors | Always | | Sometimes | | Never | | MPS |
|---|---|---|---|---|---|---|---|---|
| | | f | % | f | % | f | % | |
| I | Risk factors | | | | | | | |
| 1. | Production risk | 74 | 41.11 | 92 | 51.11 | 14 | 7.777 | 66.66 |
| 2. | Marketing risk | 43 | 23.88 | 91 | 50.55 | 46 | 25.55 | 49.16 |
| 3. | Financial risk | 46 | 25.55 | 93 | 51.66 | 41 | 22.77 | 51.38 |
| II | Risk taking ability | | | | | | | |
| 1. | Use improve methods and practices | 61 | 33.88 | 88 | 48.88 | 31 | 17.22 | 58.33 |
| 2. | Take loan for livelihood activities | 50 | 27.77 | 87 | 48.33 | 43 | 23.88 | 51.94 |
| 3. | Produce new products | 40 | 22.22 | 89 | 49.44 | 51 | 28.33 | 46.94 |

**Table 3.** Decision making ability of the respondents

| S.No. | Factors | Always | | Sometimes | | Never | | MPS |
|---|---|---|---|---|---|---|---|---|
| | | f | % | f | % | f | % | |
| 1. | Selection of products | 78 | 43.33 | 92 | 51.11 | 10 | 5.55 | 68.88 |
| 2. | Purchas of raw material | 50 | 27.77 | 94 | 52.22 | 36 | 20 | 53.88 |
| 3. | Marketing of the produce | 55 | 30.55 | 100 | 55.55 | 25 | 13.88 | 58.33 |

**Table 4.** Association of different factors with livelihood security of the respondents in crop based livelihood

| S.No. | Factors | $\chi^2$ value |
|---|---|---|
| 1. | Access to resources | 11.84** |
| 2. | Access to technological information & sources | 45.47** |
| 3. | Access to market | 29.24** |
| 4. | Access to regular income | 11.42** |
| 5. | Risk factors | 11.28** |
| 6. | Risk taking ability | 20.64** |
| 7. | Decision making ability | 18.72** |

****** Significant at 1 per cent level of significance

decision related to farm and livestock were taken by male members whereas women respondents were involved jointly in some decisions although final say was of men only.

To study the association of livelihood security of family with different factors chi square was employed. Data presented in Table 4 point out 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, access to technological information, market and regular income, risk factors, risk taking ability and decision making ability. It can inferred that all these factors affected to livelihood security of the tribal families with crop based livelihood. The present finding is conformity with the finding of Mahadik & Sawant (2012); Sunanda et al., (2014); Umunnakwe (2014); Ramya et al., (2017); Mishra et al., (2020) & Pradhan et al., (2021).

## 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. Poor access to technological information and sources may be due to shy nature of respondents 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 due to 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.

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