Constraints and Factors Association with Food Processing Training as Perceived by Scheduled Caste Women

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Authors' contributions

This work was carried out in collaboration with second author. Author Nisha designed the study, preformed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author SR managed the literature research. Both the authors read and approved the final manuscript.

Original Research Article

ABSTRACT

The food processing world is highly fragmented as it widely comprises of the sub segment like fruit and vegetables preservation, pickling of seasonal vegetables, milk and milk products, baking. The present study was an attempt to find out the extent of adoption of food processing and preservation techniques were being followed by the rural women. The present study was conducted in seven villages of Haryana State on 104 women respondents who already received training on food processing covered under the project were selected purposively. The overall findings of the study indicated that the respondents were under social constraints and had no time for attending village functions. In technical constraints, lack of difficult technique (1.35 MS) was perceived as main constraint. Under social and personal constraints, storage of time (1.85 MS) was observed as main constraint of the respondents. Under economic constraint, lack of finance (1.88 MS) for the

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purchase of raw material was observed as main constraint faced by the respondents. In case of psychological variables, majority of the respondents were in the medium level of change proneness (56.73%) and risk orientation (44.23%). While in case of entrepreneurial motivation, majority of the respondents were in high level of entrepreneurial motivation (48.08) followed by medium and low levels. In communication variables, majority of the respondents (51.92%) had utilized medium level of localite sources followed by low level of cosmopolite source (51.92%) and mass media source (45.19%). It can be inferred from the results that personal variables like family type and family size, economic variable including income of the family had significant association with knowledge, attitude and skill acquisition of the respondents for training on food processing. Among psychological variables entrepreneurial motivation and risk orientation had significant association with knowledge of the respondents. Locality sources were found to have significant impact with knowledge, attitude and skill acquisition on food processing training.

1. INTRODUCTION

The Scheduled Castes comprise about 16.6 percent of India's population (Census, 2011). Haryana stands at fifth position having largest scheduled caste population with the total population 4.91% million of scheduled caste, consisting 19.35% of the state population and about 78.00% of the scheduled caste population lives in rural areas. Scheduled caste constitutes the weakest and poorest sections of society. For the upliftment of the scheduled castes, both central and state governments have taken great interest for capacity building of scheduled caste women in different areas in order to make them self-reliant [1,2,3].

The scheduled castes and scheduled tribes are disadvantaged both socially and economically although they have been well protected and secured by constitutional provisions and enactments, and state governments have implemented several poverty alleviation programmes during different plan periods. The paper attempts to analyse the food processing industry in its current form in India. It will primarily focus on Scheduled Castes &Tribe issues related to food processing industry. The paper looks into the various challenges faced by the industry, and the future prospects of sector, the employment generation capability of industry, and the skills possessed by the workforce; it also deals with various public sector initiatives implemented through various policies, programmes and schemes of government.

The heavy work load of household, health problems, lack of motivation from family and society, high cost, repayment of loans and electricity problems were the major constraints faced by the respondents in adoption of improved practices [4,5].

The improved food processing word is highly fragmented as it widely comprises of the sub segments like fruits and vegetables; milk and milk products, grain processing, meat and poultry, alcoholic beverages, packaged or convenience food and packaged drinks.

In order to ensure availability of food throughout the year, they should be processed and preserved and kept for a longer period. In this matter, role of farm women in household food security is vital and unique [6]. Women alone are responsible for the method adopted for nutritional security of household particularly food processing and preservation. The nutritional status of family members are influenced by the specific knowledge, attitude, beliefs and values possessed by them.

Bardhan et al. [7] reported that constraints perceived by farmers in rearing dairy animals are non-remunerative price of milk, testing of milk only on the basis of fat percentage problems, distant location of Artificial insemination (AI) centers and high cost of feeds. Onwurafor and Enwelu [8] found that majority (88.1%) of women agro-food processors in Enugu State had low level of involvement in agro-food processing activities [9]. The startup capital was low which could affect the growth and sustainability of the enterprise. Majority of the women agro-food processors had no entrepreneurial training [10].

The present study was an attempt to find out the constraints of food processing and preservation techniques which were being encountered by the scheduled caste women.

2. METHODOLOGY

Food processing included two trainings each in processing of milk and milk products, making pickle of seasonal vegetables and preservation of fruits and vegetable and one training on baking. Thus, a total of seven trainings were conducted during 2008-2015. A total of 155 scheduled caste women were covered under the trainings on food processing. All the available beneficiaries covered under the food processing trainings numbering 104 respondents were available and formed the sample of the study.

Constraints in the present context were defined as any condition or situation which impede, hinder, restrict or limit the participation of women in various aspects of entrepreneurial activities. Constraints were divided into five broad categories as economic, market, technological, social and personal. A well-structured interview schedule was used for data collection. The collected data was quantified and interpreted by using suitable statistical tools such as mean score, rank and Chi-square test.

3. RESULTS AND DISCUSSION

3.1 Constraints Faced and Perceived by the Respondents for Adoption

This section deals with the problems and constraints perceived by the respondents in adoption of the training at food processing of commercial level. The constraints were categorized into economic, market, technological, social and personal and environmental.

The finding presented in Table 1 revealed that under the economic constraints, lack of finance for the purchase of raw material and lack of knowledge about loaning facilities were ranked 1st and 2nd, respectively and perceived by the respondents as main constraints followed by considering food processing as less profitable venture at 3rd rank.

In marketing constraints, majority of the respondents perceived lack of marketing skills (MS 1.58) as the main constraints followed by inability to compete with big companies. The problem of marketing, transportation and lack of technical knowledge and finance were also reported by Akansha [11].

Under technological constraints, difficult technique (MS 1.35) was rated at 1st rank followed by lack of knowledge in handling of pickles and lack of knowledge about equipment sanitation.

As far as social and personal constraints are concerned, the data in table revealed that shortage of time (MS 1.85), lack of cooperation of family members (MS 1.70), lack of interest (MS 1.08), and interference by neighbors (MS 1.65) were the main constraints perceived by the respondents in adoption of food processing as an enterprise at commercial level.

3.2 Communication and Psychological Profile of the Respondents

Table 2 revealed that in case of psychological variables, irrespective of the training, majority of the respondents were in the medium level of change proneness and risk orientation; while in case of entrepreneurial motivation, majority of the respondents were in high level of entrepreneurial motivation followed by medium and low level.

The results regarding communication variables indicated that majority of the respondents (51.92%) had utilized medium level of localite sources followed by low level of cosmopolite source (51.92%) and mass media source (45.19%).

3.3 Factors Association with Food Processing Training

(i). Association of independents variables with knowledge of the respondents

Table 3 reveals that the association of independents variable with knowledge of respondents regarding all the trainings. Among personal variables, family income, family type and family size were significantly associated with knowledge at 5% level of significance. Other variables like age, occupation and landholding were not significantly associated with knowledge. Knowledge of the respondents was significantly associated with psychological variables like entrepreneurial motivation and risk orientation, and with communication variables like locality sources. No significant association was found between psychological variables like change proneness and communication variable like cosmopolite source and mass media exposure.

Table 1. Constraints of respondents faced during and after training

Sr. no.	Constraints	Pickling of seasonal vegetables	Fruit and vegetable preservation	Baking	Processing of milk and milk products	Total	Rank
		Mean Score					
1.	**Economic Constraint**						
	Lack of finance for the purchase of raw material	1.83	1.85	1.90	1.80	1.88	I
	Lack of knowledge about loaning facilities	1.67	1.25	1.80	1.70	1.54	II
	Less profitable venture	1.5	1.1	1.40	1.50	1.32	III
2.	**Market Constraint**						
	Lack of marketing skills	1.5	1.55	1.60	1.70	1.58	I
	Inability to compete with big companies	1.42	1.35	1.50	1.60	1.44	II
3.	**Technological Constraint**						
	Lack of knowledge in handling of pickles	1.33	1.05	1.30	1.70	1.29	II
	Difficult technique	1.42	1.35	1.10	1.50	1.35	I
	Lack of knowledge about equipment sanitation	1.25	1.30	1.20	1.10	1.23	III
4.	**Social & Personal Constraint**						
	Shortage of time	1.67	1.90	1.90	1.90	1.85	I
	Lack of cooperation family members	1.75	1.60	1.70	1.80	1.70	II
	Lack of interest	1.17	1.05	1.10	1.0	1.08	IV
	Interference by neighbors	1.58	1.60	1.80	1.70	1.65	III

Table 2. Communication and psychological profile of the respondents

Sr. no.	Variables and category	Pickling of seasonal vegetables	Fruit and vegetable preservation	Baking	Processing of milk and milk products	Total
	Psychological variables	**n=24**	**n=40**	**n=20**	**n=20**	**n=104**
1.	**Change Proneness**					
	Low (8-13)	3(12.50)	5(12.80)	3(15.00)	3(15.00)	14(13.46)
	Medium (14-19)	15(62.50)	23(58.90)	9(45.00)	12(60.00)	59(56.73)
	High (20-24)	6(25.00)	11(28.20)	8(40.00)	5(25.00)	30(28.84)
2.	**Risk Orientation**					
	Low (6-9)	5(20.80)	5(12.80)	3(15.00)	6(30.00)	19(18.27)
	Medium (10-14)	14(58.30)	15(38.50)	6(30.00)	11(55.00)	46(44.23)
	High (15-18)	5(20.80)	20(51.80)	9(45.00)	3(15.00)	37(35.58)
3.	**Entrepreneurial motivation**					
	Low (8-13)	3(12.50)	3(7.70)	1(5.00)	6(30.00)	13(12.5)
	Medium (14-19)	12(50.00)	7(17.90)	9(45.00)	13(65.00)	41(39.42)
	High (20-24)	9(37.50)	30(76.90)	10(50.00)	1(5.00)	50(48.08)
	Communication variables					
	Information Source Utilization					
a)	**Locality Source**					
	Low (up to 7)	3(12.50)	3(7.70)	3(15.00)	7(35.00)	16(15.38)
	Medium (8-14)	10(41.70)	17(43,60)	16(80.00)	11(55.00)	54(5 L92)
	High (above 14)	11(45.80)	19(48.70)	1(5.00)	2(10.00)	33(31.73)
b)	**Cosmopolite Source**					
	Low (up to 6)	11(45.80)	19(48.70)	15(75.00)	9(45.00)	5401.92)
	Medium (7-12)	6(25.00)	10(25.60)	4(20.00)	8(40.00)	28(26.92)
	High (above 12)	7(29.20)	10(25.60)	1(5.00)	3(15.00)	21(20.19)
c)	**Mass Media Exposure**					
	Low (up to 10)	10(41.70)	9(23.10)	17(85.00)	11(55.00)	47(45.19)
	Media (11-20)	11(45.80)	21(53.80)	3(15.00)	7(35.00)	42(40.38)
	High (above 20)	3(12.50)	9(23 0)	--	2(10.00)	14(13.46)

Figures in parentheses indicate percentages (Moulik Supe and Singh Scale was used)

Table 3. Association of independents variables with knowledge of the respondents

Sr. no.	Attribute	Chi-square (x^2)			
		Pickling of seasonal vegetables	Fruit and vegetable preservation	Baking	Processing of milk and milk products
1.	**Personal variables**				
i.	Age	4.81	6.94	5.27	4.43
ii.	Annual Income	12.85*	14.89*	10.98*	15.48*
iii.	Family type	11.78*	11.01*	15.11*	13.95*
iv.	Family Size	12.69 *	16.33*	11.78*	11.06*
v.	Occupation	7.41	9.46	8.37	7.73
vi.	Land holding	8.73	10.01	8.04	6.47
2.	**Psychological variables**				
i.	Entrepreneurial motivation	26.03*	21.31*	25.13*	19.81*
ii.	Change proneness	11.02	10.72	10.99	8.07
iii.	Risk orientation	14.77*	15.81*	13.97*	14.08*
3.	**Communication variables**				
i.	Locality	12.74*	14.41*	14.87*	13.98*
ii.	Cosmopolite source	7.67	10.08	8.98	10.74
iii.	Mass media exposure	9.57	8.35	8.93	7.29

* indicate 5% level of significance

Table 4. Association of independents variables with attitude of the respondents

Sr. no.	Attribute	Chi-square (X^2)			
		Pickling of seasonal vegetables	Fruit and vegetable preservation	Baking	Processing of milk and milk products
1.	**Personal variables**				
i.	Age	6.06	8.76	9.32	6.37
ii.	Family type	10.95*	14.04*	12.04*	11.05*
iii.	Family Size	12.76 *	10.81 *	16.94*	14.61*
iv.	Land holding	7.76	9.84	8.68	9.23
v.	Family education status	6.62	7.84	6.25	8.08
vi.	Occupation	6.33	6.41	4.15	5.15
vii.	Annual income	11.84*	13.11*	11.43*	12.48*
2.	**Psychological Variables**				
i.	Entrepreneurial motivation	20.19*	19.04*	2933*	27.04*
ii.	Risk orientation	9.14	10.72	9.96	10.01
iii.	Change proneness	13.56*	12.09*	13.76*	14.02*
3.	**Communication variables**				
i.	Locality	12.79*	12.66 *	13 .07*	12.19*
ii	Cosmopolite source	6.89	7.65	5.60	6.99
iii	Mass media exposure	5.84	6.02	4.03	6.81

5% level of significance

(ii). Association of independents variables with attitude of respondents

Table 4 revealed the association of independent variables with attitude of respondents regarding all the trainings. Among personal variables family type and family income and family size were significantly associated with attitude at 5% level of significance. Other variables like age and family occupation and family education status were not significantly associated with attitude of the respondents regarding food processing trainings. Attitude of the respondents was significantly associated with psychological variables like entrepreneurial motivation and change proneness and with communication

Table 5. Association of independents variables with skill of the respondents

Sr. no.	Attribute	Chi-square (x^2)			
		Pickling of seasonal vegetables	Fruits and vegetable preservation	Banking	Process of milk and milk products
1.	**Personal variables**				
i	Age	3.61	5.01	6.16	3.81
ii	Family size	10.55*	12.72*	12.55*	11.94*
iii	Family type	2.12*	11.00*	9.58*	11.01*
iv	Family education status	7.54	9.08	7.69	6.04
v	Land holding	8.03	7.80	5.14	5.97
2.	**Psychological variables**				
i	Entrepreneurial motivation	20.19*	19.04*	29.33*	27.04*
ii	Risk orientation	9.14	10.72	9.96	10.01
iii	Change proneness	13.43*	16.62*	14.03 *	13.86*
3.	**Communication variables**				
i	Locality	13.69*	15.76 *	12.17*	13.28*
ii	Cosmopolite source	6.98	8.66	6.80	7.99
iii	Mass media exposure	5.94	7.72	5.96	6.83

* indicate 5% level of significance

variables like locality sources. No significant association was found between psychological variables like risk orientation and communication variable like cosmopolite source and mass media exposure.

(iii). Association of independents variables with skill of the respondents

Table 5 reveals that the association of independents variable with skill of respondents regarding all the trainings. Among personal variables, family type and family size was found to be significantly associated with knowledge at 5% level of significance. Other variable like occupation, age, education and land holding were not significantly associated with skill. No significant association was found between psychological variables like risk orientation and communication variables like cosmopolite source and mass media exposure. Skill of the respondents was significantly associated with psychological variables like entrepreneurial motivation and change proneness, communication variables like localite source.

4. CONCLUSION

On the basis of the study findings it can be concluded that under social constraints, it can be concluded that respondents had no time for attending village function and indicated this as one of the important constraints. In technical constraints, difficulty of technique was perceived as main constraint. Under social and personal constraints, storage of time was observed as main constraint of the respondents. Under economic constraints, lack of finance for the purchase of raw material was observed main constraint of the respondents. Majority of respondents were falling in medium category of change proneness, medium risk orientation and high entrepreneurial motivation. Most of the respondents were having low mass media exposure, medium localite sources of information utilization and medium cosmopolite sources of information utilization. From the study, it can be inferred that personal variables like family type and family size, economic variable such as income of the family had significant association with knowledge, attitude and skill acquisition by the respondents for training on food processing. Among psychological variables, entrepreneurial motivation and risk orientation had significant association with knowledge of the respondents while entrepreneurial motivation and change proneness with attitude and skill of the respondents for the food processing. Localite sources were found to have significant impact with knowledge, attitude and skill acquisition on food processing.

5. RECOMMENDATIONS

- Most of the respondents were poorly satisfied with the duration of trainings for all the training programmes. Therefore the duration of the training should be increased but the training hours should be reduced so that the respondents may learn

the skill sufficiently as well as can take care of their family.

- All the trainings may be a feasible enterprise and very much suitable for rural Scheduled Caste women to practice thereby empower them economically and socially. So, the NGOs or extension agencies should enhance capacity of Scheduled Caste rural women by organizing them into groups and providing them necessary training and support in these areas so that they can start their own income generating activity. Most of the respondents were unaware about the provision of bank loan for starting various income generating activities, it is therefore recommended to organize special training/ awareness campaign in the villages.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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