

Effectiveness of extension training methods in educating the fisherwomen in two fishing centers

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The paper presents the socio-personal characteristics of trainees and the effectiveness of training methods in two fishing centers viz. Kollam and Kasaba. Out of two treatments namely demonstration with discussion, and demonstration with lecture and discussion, each one was used in a centre for training the respondents. The results revealed that in terms of knowledge, there were significant gains in knowledge scores of trainees (35.36% and 28.61%) in the two training centers where the two training treatments were used. In terms of attitude, by using lecture + demonstration + group discussion methods, there was found to be a significant gain (10.97%) after the training. By using demonstration + discussion methods, there was found to be a slight reduction (-2.68%) in the attitude scores after the training when compared with the 'Before training' scores. In terms of skill learnt, it was found that in both treatments, the trainees had gain in skill scores (60.97% and 36.11%). Thus the results implied that lecture + demonstration + discussion methods were found to be more effective in changing the knowledge, attitude and skill scores of trainees.

Key words: Extension training, methods, fisherwomen, fishing centers

Training is found to be the most common method used in fisheries to transfer the technologies from research stations to the actual end users. Training influences the knowledge level of participants, brings about changes in attitude and teaches new or improved skills in a better way. In order to bring about desired changes in the knowledge, attitude and skill levels of trainees, several extension training methods are being used (Selvaraj, 1997; Siddaramaiah and Rajanna, 1984). Premavathy and Vennila (2007) revealed that farm women have gained maximum knowledge and skill through the video method than that of lecture followed by discussion method. Balakrishna and Ramachandra (1994) reported that lecture with advance organizer resulted in higher gain in cognition in terms of knowledge, comprehension and evaluation when compared with lecture presentation without advance organizer. Mani (1976) reported that any one of the three combinations of extension methods namely lecture aided with slides and discussion, lecture aided with flash cards and discussion, and lecture with discussion was found

to increase the farmers' knowledge significantly in the topic taught.

In fisheries, Thiagarajan et al (1988) reported that lecture aided with slides induced maximum knowledge followed by lecture aided with charts, and lecture alone. In this context, a research study was undertaken with the following specific objectives: i) To determine the socio-personal characteristics of fisherwomen trainees in two selected fishing centers ii) To find out the effectiveness of training in terms of knowledge, attitude and skill levels iii) To determine the effectiveness of selected extension training methods in educating fisherwomen and iv) To find out the correlations between the selected socio-personal variables and the gain in knowledge, attitude and skill scores.

Materials and Methods

The project work was conducted in two selected fishing centers viz., Kollam and Kasaba. In both centers, training programmes of three days duration on the preparation of value added fish products were organized

for a group of selected fisherwomen respondents (Kollam:41 and Kasaba:18). Two extension treatments namely demonstration with discussion (Kollam), and demonstration with lecture and discussion (Kasaba) were selected for this study and each treatment was used in only one fishing center for training the respondents.

The effectiveness of training was assessed in terms of the changes in knowledge, attitude and skill levels of participants. 'Before' and 'After' experimental design was used to assess the changes in knowledge, attitude and skill levels. For this study, knowledge, attitude and skill indices were developed and used. For data collection, well structured interview schedules were developed and used for pre-training evaluation. The independent variables used in the study were age, education, occupation, number of days employed in a year, experience, total number of family members, annual income, number of information sources used, training attended and training need in fish processing. The dependent variables were gain in knowledge, attitude and skill scores of the respondents. Statistical techniques such as mean, standard deviation, 't' test, percentage analysis, and correlation techniques were used for the analysis of the data.

Results and Discussion

Table I presents the means and standard deviations of socio-personal variables of fisherwomen respondents. It is seen that on all the variables except annual income, there were significant differences between the women trainees in the two centers. In Kollam center, on an average, the age of fisherwomen trainee was 32, employed for about 78 days in a year, had just one year experience in the occupation, had four members in the family and used four information sources.

In Kasaba center, on an average, the age of fisherwomen trainee was 38, employed for 138 days in a year, had 18 years of experience in the occupation, had 5-6 members in the family and used two information sources. In both centers, the average annual incomes (Rs. 14,673 and Rs. 12,780) did not vary significantly.

The qualitative variables of fisherwomen trainees are given in Table 2. It is seen that in Kollam, more number of the trainees had higher education (high school and college education) while in Kasaba center, more number of trainees (83.33%) had primary school education followed by high school education (11.11%) and college education (5.56%) respectively.

Table 1. Means and standard deviations of selected socio-personal variables of respondents

Socio-personal variables	Quilon (n:41)		Kasaba (n:18)		't'
	Mean	SD	Mean	SD	
Age (years)	32.58	7.96	38.16	7.46	2.52*
Number of days employed in a year	78.04	113.36	137.72	47.46	2.14*
Experience (years)	1.29	1.97	18.27	9.45	11.08**
Total number of family members	4.36	0.99	5.50	2.28	2.67**
Annual income (Rs.)	14673.17	16381.88	12780.55	11873.43	0.44
Number of information sources used	4.12	2.38	2.11	0.75	3.48**

* Significant at 5 per cent level

** Significant at 1 per cent level

Table 2. Qualitative variables of fisherwomen respondents in two fishing centres

Qualitative variables	Quilon (n:41)		Kasaba (n:18)	
	No.	%	No.	%
Education				
a) Primary school	-	-	15	83.33
b) High school	17	41.46	2	11.11
c) College	24	58.54	1	5.56
Occupation				
a) Community organizer	18	43.90	-	-
b) Unemployed	23	56.10	1	5.56
c) Fish marketing	-	-	17	94.44
Training attended				
a) Attended	22	53.66	1	5.56
b) Not attended	19	46.34	17	94.44
Training need in fish processing				
a) Needed	35	85.37	15	83.33
b) Not needed	6	14.63	3	16.67

Further on the variable occupation also, there were significant differences. Thus, unemployed (56.10%) and community service (43.90%) were the major occupation categories in Kollam center while in Kasaba fish marketing (94.44%) was found to be the major occupation among fisherwomen trainees. In Kollam center, 53.66 per cent of the trainees had earlier attended training programmes and in Kasaba, the majority (94.44%) did not attend any training programmes. In both centers, majority of the trainees (85.37% and 83.33%) expressed the need for further training in fish processing subjects.

The effectiveness of training methods in terms of knowledge, attitude and skill learnt among the trainees are given in Table 3.

It is seen that in terms of knowledge, there were significant gain in knowledge scores (35.36% and 28.61%) when the two treatments were used in the two centres. In terms of attitude, by using demonstration + discussion methods, there was found to be a slight reduction (-2.68%) after the training and this meant that the trainees had not changed their attitude favourably after the training. This might be because the trainees at Kollam had realized that the preparation

Table 3. Effectiveness of training methods among the participants

Effectiveness of training	Training method I (n=41)			Training method II (n= 18)			't'
	Before training (Mean)	After training (Mean)	Gain (Mean)	Before training (Mean)	After training (Mean)	Gain (Mean)	
Knowledge (%)	24.51	59.87	35.36	37.22	65.83	28.61	1.72
Attitude (%)	66.95	64.26	-2.68	57.63	68.61	10.97	3.06**
Skills known (%)	21.03	82.01	60.97	18.05	54.16	36.11	4.05**

Training method I : Demonstration with discussion (Kollam centre)

Training method II : Demonstration with lecture and discussion (Kasaba centre)

** Significant at 1 per cent level

and marketing of value added products would not be feasible for most of them under their circumstances. But, when lecture + demonstration + discussion methods were used in the second center, there was found to be significant gain (10.97%) in attitude scores.

These results revealed that for changing attitudes, the lecture + demonstration + discussion was found to be effective than demonstration + discussion.

In terms of skill, it was found that in both treatments, the trainees had gain in skill scores (60.97% and 36.11%). The 't' tests results also revealed that there were no significant changes in knowledge levels due to the two treatments of training methods. However, on attitudes and skills, there were significant differences due to the two treatments of training. Thus, for increasing the attitude scores, the lecture + demonstration + discussion methods were found to be effective while demonstration + discussion methods were found to be more effective in increasing the skills learnt.

The correlation between the socio-personal variables and gain in knowledge, attitude and skill scores are given in Table 4.

The results in Table 4 revealed that number of days employed in a year had significant negative correlation in Kollam center while age had significant positive correlation with the gain in knowledge scores at Kasaba centre. On gain in attitude score also, age was found to have positive correlation and experience was found to have negative correlation. This means that aged persons have to be involved in the training programmes and at the same time, very experienced persons have to be excluded from the training. Regarding the gain in skill scores, almost all the variables didn't have any significant influence in Kollam centre, while in Kasaba centre, number of days employed in a year was found to have negative correlation. This was probably because, they had already possessed certain skills in fish processing and they had little to improve or learn new skills when compared with the younger candidates with less practical experience.

Thus, the study results revealed that training had positive impact on the knowledge, attitude and skill levels of trainees and lecture + demonstration + discussion were found to be more effective than the demonstration + discussion methods.

Table 4. Correlations among socio-personal variables and gain in knowledge, attitude and skills

Socio-Personal variables	r values - Quilon centre			r values - Kasaba centre		
	Gain in Knowledge	Gain in attitude	Gain in skills	Gain in Knowledge	Gain in attitude	Gain in skills
Age	-0.17	0.32*	-0.08	0.54*	0.18	-0.08
No. of days employed in a year	-0.45**	0.13	-0.03	0.09	0.004	-0.69**
Experience	-0.20	-0.47**	0.23	0.35	0.34	-0.26
Total no. of family members	+0.02	0.22	0.11	0.18	0.12	-0.29
Annual income	-0.05	-0.05	-0.16	-0.28	-0.37	0.41
No. of information sources used	0.16	0.01	-0.08	-0.18	-0.22	0.01

* Significant at 5 per cent level

** Significant at 1 per cent level

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