Impact of TANWA training on operational skills acquired by the trainees about paddy cultivation practices

K. RAMAKRISHNAN[1], A. SAKUNTHALAI[2] AND S. MAHENDRAN[3]

1. Teaching Assistant (Agrl. Extension), Coastal Saline Research Centre (TNAU), Ramanathapuram - 623 503.
2. Assistant Professor (Agrl. Extension), Coastal Saline Research Centre (TNAU), Ramanathapuram - 623 503.
3. Professor and Head, Coastal Saline Research Centre (TNAU), Ramanathapuram - 623 503.

Abstract : The impact of TANWA training on operational skills acquired by the trainees revealed the significant co-efficient of determination 'R2' value of 0.5941 which indicated that all the selected eleven independent variables put together explained about 59.00 per cent variation in operational skills acquired by the trainees about paddy cultivation practices. Further regression revealed that mass media exposure, economic motivation, achievement motivation, innovativeness and training received had positively and significantly contributed to most of the variation in operational skills acquired by the trainees.

Key words : TANWA, operational skill.

Introduction

Attempting to develop human resources in the rural areas, the Tamil Nadu State was pioneering in implementing the training programmes especially for farm women and youths during the year 1986 with the financial assistance of Government of Denmark in the banner of Tamil Nadu women in Agriculture (TANWA) with a view to strengthen the position of farm women in the society. This was done through providing the upto date knowledge of relevant agricultural technology and developing appropriate skills through practical training to farm women. Success of trained farm women would act as a catalyst to spread their experience to other fellow farm women to participate in future training programmes. Unless the operational skills acquired by the trainees is positive and relevant to them, the future participation in the training programmes will be futile.

Keeping this in view, a study was conducted with an intention to study the operational skills acquired by the trainees about paddy cultivation practices with the following specific objectives.

1. To study the operational skills acquired by the trainees.

2. To study the relationship between the selected personal, socio-economic and psychological characteristics of the trainees and their operational skills acquired.

3. To predict the important variable contributing for the operational skills acquired by the trainees.

Materials and Methods

Ex-post-facto research design was followed in the present investigation. Madurai district of Tamil Nadu was purposively selected for the study. Two agricultural division viz. Melur and Tirumangalam were selected randomly. There are two blocks in Melur agricultural division and three blocks in Tirumangalam agricultural division. Out of that one block from each agricultural divisions viz., Melur and Kallikkudi were selected randomly and 4 AAO (Assistant Agricultural Officer) groups from each block and 15 trainees from each AAO group were selected randomly making a total of 120 sample trainees. Eleven independent variables and

operational skills acquired was one of the dependent variables. A well structured interview schedule was developed and used in data collection through personal interview method.

The following skill practices pertinent to paddy cultivation were selected on perusal of TANWA manual, in consultation with trainees and by observing some of the previous trainings conducted by TANWA staff.

1. Seed treatment with fungicides

2. Seed treatment with Azospirillum

3. Optimal planting techniques

4. Herbicide application

5. First top dressing with Neem blended urea

Each skill practice was divided into number of technological components in consultation with subject matter specialists and extension personnel. Totally 53 technological components were identified from five skill practices, to measure the operational skills acquired by the trainees. Each correct response was given one score and incorrect response with no score.

Types of trainings offered under TANWA Project

S.No.	Training programmes	Types of training	Duration of trainings	No. of farm women/training	No. of training / year
1.	Village based training	Peripatetic	5 days	30	12
2.	Specialised training	Institutional	1 day	30	4
3.	Farm Women Conference	Institutional	1 day	150	2
4.	Multiplied effect scheme	Institutional and Peripatetic	2 days	500	1

Measuring operational skills acquired

The operational skills acquired by trainees were assessed at two stages viz., pre and post training sessions by using the scale developed by Sundararajan, (1985) with suitable modifications in the present study. The difference between the pre and post training session was taken as the operational skills acquired by an individual trainee. The summated score for each practice indicated the operational skill acquired for that practice and the total scores of all practice put together constituted the operational skill acquired score of the individual trainee. The possible range of operational skills score was obtained between 0 to 53. Based on the operational skills scores obtained, the trainees were grouped into three categories by using mean and Standard Deviation.

1. Low   -   < (Mean - SD)
2. Medium   -   Mean ± SD
3. High   -   > (Mean + SD)

Results and Discussion

Based on total score, the trainees were grouped into low, medium and high operational skills acquired categories taking mean and standard deviation as a check. Percentage analysis was done to make simple comparisons. Correlation coefficient was calculated to find out each degree of relationship between the selected eleven independent variables and operational skills acquired by the trainees. To predict the important variables contributing for operational skills acquired by trainees, the multiple regression analysis was carried out.

It could be seen from the Table 1 that majority of the trainees (70.83 per cent) had medium level

Table 1. Distribution of trainees according to their operational skills acquired n = 120

S.No.	Category	Frequency	Percentage
1.	Low	21	17.50
2.	Medium	85	70.83
3.	High	14	11.67
	Total	120	100.00

of operational skills acquired followed by low operational skills acquired (17.50 per cent) and high operational skills acquired (11.67 per cent) respectively. There were considerable operational skills acquired by the trainees. The practices selected were sample, new and most important to increase the yield. In addition to this intensive and effective training imparted are the major reasons for such a medium level of acquisition of skills. This results is in compliance with the results of Perumal (1994).

Relationship between the selected personal, socio-economic and psychological characteristics of trainees and their operational skills acquired

In order to study the nature of relationship between the selected personnel, socio-economic and psychological characteristics of the trainees and their operational skills acquired, correlation coefficient (r) were computed and the values are presented in Table 2.

A perusal of Table 2 indicates that age was negatively significant, while the remaining variables were positively significant with operational skills acquired at 0.01 level of probability. It reveals that age has a negative relationship with operational skills acquired by the trainees, which indicates that as the age of the trainees advances, the operational skills acquired decreases. The possible reason for this negative significance of age might be that most of the middle and old aged farm women were less educated and they were not able to learn and acquired skills unlike young farmers who were dynamic and energetic.

Combined effect of all selected independent variables and their operational skills acquired by the trainees

To determine the combined effect of all the selected independent variables in explaining variation in operational skills acquired by the trainees, multiple

Table 2. Relationship between the selected personal, socio-economic and psychological characteristics of trainees and their attitude towards TANWA

S.No.	Independent Variables	Correlation Co efficient (r)
1.	X_1 Age	-0.777*
2.	X_2 Education	0.575**
3.	X_3 Family size	0.607**
4.	X_4 Mass media exposure	0.457**
5.	X_5 Extension conduct	0.467**
6.	X_6 Economic motivation	0.217**
7.	X_7 Achievement motivation	0.619
8.	X_8 Scientific orientation	0.591**
9.	X_9 Innovativeness	0.128
10.	X_{10} Training received	0.626**
11.	X_{11} Facilities provided	0.139*

* Significant at 0.05 level of probability   ** Significant at 0.01 level of probability

Table 3. Multiple linear regression analysis of the selected independent variables with the operational skills acquired by the trainees.

S.No.	Independent Variables	Partial regression coefficient values (b)	Computed 't' values
1.	X_1 Age	-0.1766	-1.1553
2.	X_2 Education	-0.4050	-2.7659
3.	X_3 Family size	-0.5131	-0.7062
4.	X_4 Mass media exposure	0.6081	3.3859**
5.	X_5 Extension conduct	-0.4097	-0.3818
6.	X_6 Economic motivation	0.6044	2.6689**
7.	X_7 Achievement motivation	0.7286	3.0022**
8.	X_8 Scientific orientation	-0.1110	-0.8369
9.	X_9 Innovativeness	0.9421	4.1387**
10.	X_{10} Training received	0.8557	2.1074*
11.	X_{11} Facilities provided	-0.1980	-0.9389

* Significant at 0.05 level of probability $R^2 = 0.5941$

** Significant at 0.01 level of probability $F = 15.616*$

't' value 1 % = 2.58   5% = 1.96

linear regression analysis was carried out and the values are presented in Table 3.

From the Table 3, the "R2" value 0.5941 indicates that all the selected eleven independent variable put together explained about 59.00 per cent variation in operational skills acquired by trainees. Thus it could be concluded that the independent variable selected to a large extent explained the variation in operational skills acquired by trainees.

The partial regression coefficient values presented in Table 3 further revealed that the independent variables i.e., X_{10} (Training received), was found positively significant at 0.05 level of probability and X_4 (Mass Media exposure), X_6 (Economic motivation), X_7 (Achievement motivation), X_9 (Innovativeness) were found positively significant at 0.01 level of probability as evident from their significant 't' values.

As the findings of the study indicated that majority of the respondents had medium level of operational skills acquired, it is desirable to develop high operational skills by educating the farmers through conduct of more numbers of pre-seasonal training programmes, field trips, group discussions, demonstrations, supply of sufficient literature on the subject and necessary follow up activities after the training programmes.

References

Perumal, L. (1994). Impact of TANWA training on participants. Unpub. M.Sc.(Ag) Thesis, AC & RI, Tamil Nadu Agricultural University, Killikulam.

Sundararajan, L. (1985). Developing a model for farmers training. Unpub : PhD(Ag) Thesis, Tamil Nadu Agricultural University, Coimbatore.