Effectiveness of Distance Education Package on Value Added Products from Fruits and Vegetables

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ABSTRACT

Present study conducted in purposively selected two villages Kolayat and Jhajhu of Kolayat Panchayat Samiti of Bikaner district was an attempt to provide knowledge regarding value addition for preventing losses of fruits and vegetables. Experts judged that developed distance education package as good. The overall mean weighed scores of Module I and II was 4.34 and 4.53, respectively out of the total score of 5. In both pre and post test the majority of the respondents fall in the category of medium level of knowledge. After exposure of the distance education package, knowledge of respondents about value addition was significantly increased. The distance education package was found to be very effective in providing knowledge regarding value addition.

Key Words: *Effectiveness; Distance education; Value addition; Fruits; Vegetables;*

Distance education is emerging as vigorous educational alternative in nearly every region of the world. Emergence of Distance is described by Henri Dieuzeide as the "Copernican Revolution" changing the centre of gravity from teacher centered mentality to the student centered approach. *Nettleton (1991)* indicates that the move towards maturity in distance education is reflected not only in the proliferation of research in the field, but much more significantly, in the changes in quantity and quality of distance education programmes themselves. Value addition of food is the process of adding value to the under utilized foods and their discard portion in term of their nutritive value and better utilization as well as developing their variety and utilization as well as developing their variety and broadcasting them in monitory term. It is easy to prepare value added products at home. Housewives at household level can take the technology of acceptable different values added food product, as the raw ingredients are already available in their houses. With the help of distance education package consisting of variety of teaching methods the knowledge gap regarding value addition and value added products could be fulfilled. *Savita et al. (2006)* stressed that value addition is an important technology gaining attention in the recent years. Value is added to agricultural produce by changing its form, colour and other such method. Value addition to food products is of vital importance due to change in socio-economic conditions, industrial growth and urbanization. *Kiradoo and Goyal (2006)* observed that creation of employment opportunities plays central role in over all socio-economic development of women. Preservation of fruits not only provides employment and nutrition security but also prevent fruit losses.

Most of rural women do not know how to prepare value added products from fruits and vegetable. Hence knowledge about value addition was considered as one of the important aspects regarding which women should be enlightened and distance education is the medium which can bridge the knowledge gap of rural women. At present there are insufficient distance education programmes for fifth pass rural people in Rajasthan. In the present study an effort is made to develop distance education package for fifth pass rural women. Therefore for providing knowledge regarding value addition the present study was undertaken on "Development of distance education package on value added products from fruits and vegetables".

METHODOLOGY

The study was conducted in purposively selected two villages Kolayat and Jhajhu of Kolayat Panchayat Samiti of Bikaner district. A sample of 50 rural women in the age group of 18-45 years (fifth class onwards) was selected randomly (twenty five respondents from each village) by chit method for present investigation. The study was conducted in two phases:

Phase I- *Development of distance education package on value added products from fruits and vegetables*: As per the objective, distance education package (two modules) was developed on value added products from fruits and vegetables. Module I entitled "Fundamental of foods and nutrition" and Module II entitled "Value addition and value added products". These two modules were evaluated by experts on a pre determined score cards. After that it was pre-tested with 15 identical respondents from Beechwal village of Bikaner district.

Phase II- *Implementation of distance education package on "Value added products from fruits and vegetables"*: After pre-testing, distance education package was implemented for two months. Modules were given to every respondent for reading and solving questions given in the modules. Four contact classes were conducted in each village for solving their doubts and problems. In contact classes activities like lecture, group discussion, surprise test, game, problem solving session, demonstration etc. were included.

Data were collected through interview method with the help of interview schedule. This knowledge check was pre-tested with 20 respondents (not included in final sample) from Beechwal village of Bikaner district, to see the clarity of questions and improvement were made in the schedule accordingly. For statistical analysis percentage, frequency mean score, mean per cent score, standard deviation, range, coefficient of variation, paired 't' test and coefficient of correlation were used.

RESULTS AND DISCUSSIONS

Attempt has been made to find out the effectiveness of developed distance education package in terms of gain in knowledge by the respondents. Results presented in this section including existing knowledge regarding "Value added products from fruits and vegetables", overall knowledge level of the respondents in post-test, differential knowledge gain by the respondents and comparison in pre-test, post-test scores for their gain in knowledge

Table 1 shows that majority of the respondents (56%) had medium knowledge with mean per cent score of 97.06, while 22 per cent of respondents had low knowledge with mean per cent score of 23.66 and also 22 per cent of the respondents had high level of knowledge with mean per cent score of 51.34 per cent.

Table 1. Distribution of respondents by overall knowledge and mean per cent scores of each category in pre-test

Knowledge with score range	N	%	Mean per cent score
Low (0-18.04)	11	22	23.66
Medium (18.05-35.05)	28	56	97.06
High (35.06-68.0)	11	22	51.34

To test the level of knowledge of the respondents after intervention of distance education package by investigator, same knowledge check was administered after the intervention of distance education package individually and their responses were recorded. The data presented in Table 2 indicate that in post-test, majority of the respondents (58%) had medium knowledge with mean per cent score of 79.41, while 20 per cent of the respondents had low knowledge with mean per cent score of 67.01 and 22 per cent respondents had high level of knowledge with mean per cent score of 94.52 per cent.

Table 2. Distribution of respondents by overall knowledge and mean per cent score of each category in post-test

Knowledge with score range	N	%	Mean per cent score
Low (0-47.74)	10	20	67.01
Medium (47.75-61.42)	29	58	79.41
High (61.43-68)	11	22	94.52

Table 3. Differential knowledge gain

Knowledge with score range	N	%	Mean per cent score
Low (0-21.74)	10	20	30.56
Medium (21.75-34.34)	31	62	40.67
High (34.35-68)	9	18	53.92

It is observed from the Table 3 that according to the difference in respondents pre and post-test scores, majority of the respondents (62%) were in the category of medium knowledge gain with mean per cent scores

of 40.67 followed by 20 per cent were in the low level of knowledge gain category with mean per cent score of 30.56 and 18 per cent were falling in the category of high knowledge gain with mean per cent score of 53.92 per cent.

Table 4. Overall gain in knowledge of the respondents

Items	Mean per cent scores	Calculated 't' value
Pre-test	39.02	
Post-test	80.38	31.42**
Gain	41.23	

** Significant at 0.01 level of significance

The comparison between pre and post-test scores finds out effectiveness of developed distance education package in terms of gain in knowledge. Paired't' test was applied to find out whether there was significant gain or not, in the knowledge level of respondents. Table 4 shows that there was significant difference in the pre and post test scores of the respondents as calculated 't' value was found to be significant at 0.01 level of significance indicate that there was significant gain in knowledge after intervention of distance education package. The initial knowledge of the respondents was poor as their pre test score was only 39.02 per cent. Significant improvement in the knowledge of respondents was found as a result of intervention of distance vegetables.

education package as the pre-test scores increased 39.02 to 80.38 per cent with the gain in knowledge about 41.23 per cent.

Nithyashree and Hiremath (2005) in their study on impact of distance education on household storage methods mentioned that difference in means of pre and post test was highly significant. The post test mean was higher than the pre-test. The distance education given to the rural women has made a real impact on the knowledge of the respondents with regard to that subject. It helped the rural women to increase their knowledge with respect to household storage methods.

CONCLUSION

On the basis of results obtained from the study it can be concluded that developed distance education package i.e. Module I entitled "Fundamental of Food and Nutrition", Module II entitled "Value addition and value added products", were found to be effective and significant in terms of gain in knowledge. It shows that knowledge level of rural women regarding value addition and value added products was enhanced because they were capable of making preservative products like pickles, squashes, murabba etc. and also were able to dehydrate and preserve many of the fruits and vegetables through the learning of distance education package on value added products from fruits and

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