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**Experts evaluation of instructional material on
nutrition for children (0-3 years)**

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Abstract

Nutrition plays a major role in an individual's overall health. Good nutrition is the fundamental basic right for the maintenance of positive health. The word nutrition means 'the process of nourishing or being nourished,' especially the process by which a living organism assimilates food and uses it for growth and replacement of tissues. 'Nutrients are substances that are essential to life which must be supplied by food. The instructional materials or educational resources improve learners' knowledge, abilities, and skills and further monitor the assimilation of information, and contribute to their overall development and upbringing. instructional material was limited to multimedia CD and flip book. Rasul *et al.* (2011) conducted a study to analyze the effectiveness of audio-visuals aids in teaching learning process at university level and reported that the majority of the respondents considered that audio visuals aids play important role in teaching learning process and make teaching learning process effectively. They further found that A.V aids provide knowledge in depth and detail and it brings change in class room environment. The instructional material was subjected to experts evaluation. For this, a group of fifteen experts from the field of Foods & Nutrition and Extension Education & Communication Management was considered. Finding revealed that overall evaluation of the visual aspect of multimedia CD was rated good by experts with 2.92 MWS and overall evaluation of flipbook was rated good by experts with MWS 2.95 out of 3.00 score.

Keywords: experts, information and communication technology, rural women

Introduction

Growth of any country depends on healthy human resource. A healthy adult emerges from a healthy child. It is the health status of children of any country that represents the health status of people of that country. Healthy children ensure for healthy adult who in turn ensure a sound growth and development of the economy. The first six years of life constitutes the most crucial span in life. At this stage of life, the foundations are laid for mental, physical and social developments which in turn impact our life time health, strength and intelligence. Malnutrition in all its form remains a major public health problem throughout the developing world and is an underlying fact in over fifty per cent of the 10-11 million deaths in children under five years of age. India ranks second in the world for child malnutrition (43.1%) after Timor-Leste (43.7%) according to World Health Statistics Report (WHO, 2012). High malnutrition rates in the country pose a significant obstacle in achieving better child health outcomes (Ragini, 2014) [1].

India still has the highest number of under-weight children under five in the world and 70 per cent of children are anaemic. The link between malnutrition and infant feeding has been well established. Poor feeding practices in infant and early childhood resulting in malnutrition contribute to impaired cognitive and social development, poor school performance and reduced productivity in later life. Poor feeding practices are, therefore, a major threat to social and economic development as they are among the most serious obstacles in attaining and maintaining the health of this important age group. Nutritional problems like malnutrition, anemia, vitamin A deficiency, iodine deficiency and obesity continues to plague large proportion of under-five children in India. India is home to 40% of worlds malnourished

children and 35% of developing world low birth weight infants (IFPRI 2008). Every year 2 million children die in India (UNICEF 2009), accounting for one in five child death in the world.

Generally aids are prepared and procured by organizations, institutions and educated people. These institutions or educated people need to take much care to find out whether the aids are prepared according to understanding of the people with whom they are to be used. If an aid is not correctly understood, it fails to communicate right message to the people. Field testing helps to assess effectiveness of communication medium with the audience for whom the material is meant before it is multiplied and used on a large scale. It is a very cost effective way to prevent large expenses. The purpose is to find out whether people understand the messages or ideas in the way it is communicated. Field testing helps in finding the level of perception / comprehension of the material by the people thus serving the purpose to the best possible extent. Thus, the present study was undertaken to develop instructional material on nutrition for children (0-3 years) for rural women with following objectives: To design the instructional material for rural women on nutrition for children of 0-3 years.

Methodology

- 1. Evaluation of developed multimedia CD by experts:** - To test the validity and appropriateness of the content with visuals and audio, the designed multimedia CD was subjected to evaluation by panel of experts (15). The expert panel comprised of subject matter specialists (SMS) from Extension Education and Communication Management and Foods and Nutrition. A checklist was developed for evaluation of multimedia instructional material by the experts which consisted of two sections.
- 2. Evaluation of flipbook by experts:** The panel of 15 judges (selected for evaluation of the CD) was considered for evaluation of the flipbook. For experts evaluation a checklist was developed covering criteria's.

Results and discussion

A. Evaluation of multimedia CD by experts

Experts evaluation of multimedia CD on visual aspect:

The multimedia CD on nutrition for children (0-3 years) was evaluated by experts on ten visual criteria's i.e. purpose accomplished, subject matter coverage, organization and lay out, colour, visual clarity, attention catching, self explanatory, continuity of message and synchronization of audio & visuals and overall presentation. The results are presented in table 1.1 and fig.1. The results of table 1.1 clearly reveal that overall evaluation of the visual aspect of multimedia CD was rated good by experts with 2.92 mean weighted score out of 3.00.

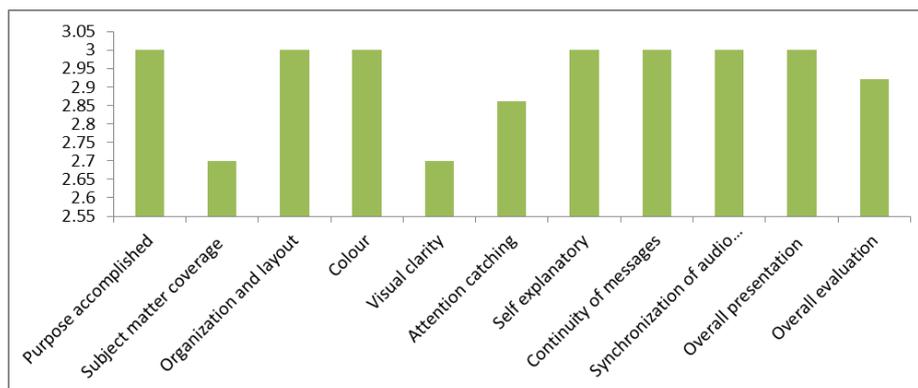


Fig 1: Evaluation of multimedia CD by experts on the visual aspect

Similarly in all the criteria's i.e. purpose accomplished, subject matter coverage, organization and lay out, colour, visual clarity, attention catching, self explanatory, continuity of message and synchronization of audio & visuals and

overall presentation the multimedia CD was rated good as mean weighted scores in all the criteria's range between 2.7 to 3.0 out of 3.0 score.

Table 1.1: Evaluation of multimedia CD by experts on the visual aspect n= 15

S.No.	Visual criteria's	Mean Weighted scores (MWS)
1.	Purpose accomplished	3
2.	Subject matter coverage	2.7
3.	Organization and layout	3
4.	Colour	3
5.	Visual clarity	2.7
6.	Attention catching	2.86
7.	Self explanatory	3
8.	Continuity of messages	3
9.	Synchronization of audio & visuals	3
10.	Overall presentation	3
	Overall evaluation	2.92

Experts evaluation of multimedia CD on audio aspect: The multimedia CD on nutrition for children (0-3 years) was evaluated by experts on eleven audio criteria's i.e. language, commentary, content clarity, voice, continuity of messages,

pace and speed of narration, length and time of narration, overall length of programme, music, interest orientation and overall presentation.

The results presented in table 1.2 indicate that overall

evaluation of audio aspect of multimedia CD was rated as good by experts with mean weighted score 2.94 out of 3.00. Further, all the eleven criteria's of audio aspect of multimedia CD, was rated good by experts as the mean weighted scores range between 2.8 to 3.0 out of 3.0 scores.

Table 1.2: Evaluation of multimedia CD by experts on the audio aspect n=15

S. No	Audio criteria's	Mean Weighted Scores (MWS)
1.	Language	3
2.	Commentary	3
3.	Content clarity	3
4.	Voice	2.86
5.	Continuity of Messages	3
6.	Pace and speed of narration	3
7.	Length and time of narration	3
8.	Overall length of programme	3
9.	Music	2.8
10.	Interest orientation	2.9
11.	Overall presentation	2.86
	Overall evaluation	2.94

Component wise evaluation of multimedia CD by experts:

Table 1.3: Component wise evaluation of multimedia CD on various aspects by expert n=15

S.No.	Components\Criteria's	Feeding Practices	Supplementary Nutrition	Normal Nutrition	Diet During Common Childhood Ailments
Visual Aspect (Mean Weighted Scores)					
1.	Purpose accomplished	3	3	3	3
2.	Subject matter coverage	2.8	2.67	2.6	2.67
3.	Organization and layout	3	3	3	3
4.	Colour	3	3	3	3
5.	Visual clarity	2.8	2.67	2.6	2.67
6.	Attention catching	2.86	2.8	2.8	2.86
7.	Self Explanatory	3	3	3	3
8.	Continuity of Messages	3	3	3	3
9.	Synchronization of audio & visuals	3	3	3	3
10.	Overall presentation	3	3	3	3
Audio Aspect (Mean Weighted Scores)					
1.	Language	3	3	3	3
2.	Commentary	3	3	3	3
3.	Content clarity	3	3	3	3
4.	Voice	2.86	2.8	2.8	2.86
5.	Continuity of Messages	3	3	3	3
6.	Pace and speed of narration	3	3	3	3
7.	Length and time of narration	3	3	3	3
8.	Overall length of programme	3	3	3	3
9.	Music	2.8	2.8	2.8	2.8
10.	Interest orientation	2.93	2.86	2.86	2.93
11.	Overall presentation	2.86	2.8	2.8	2.86
	Overall evaluation	2.81	2.79	2.67	2.80

B. Evaluation of flip book

The flip book was also subjected to evaluation by experts. The flipbook on nutrition for children (0-3 years) was evaluated by experts on ten criteria's and the results are

The detailed component wise evaluation of audio visual aspects of multimedia CD by the experts is presented in Table 1.3. In depth review of the data in the table clearly reveals that in all the four components various criteria's in audio (language, commentary, content clarity, voice, continuity of messages, pace and speed of narration, length and time of narration, overall length of programme, music, interest orientation, overall presentation) and visual aspects (purpose accomplished, subject matter coverage, organization and layout, colour, visual clarity, attention catching, self explanatory, continuity of messages, synchronization of audio & visuals, overall presentation) were evaluated good by experts as obtained mean weighted scores range between 2.6 to 3 in all the criteria's. However, the component 'feeding practices' was rated best by the experts with the highest MWS 2.81 followed by 'diet during common childhood ailments' with MWS 2.80, supplementary nutrition with MWS 2.79 and normal nutrition with MWS 2.67.

The results get decisive support from the findings of Sharma (2009) [3] who in a study on developments of multimedia CD on entrepreneurship development for rural women concluded that the developed multimedia CD on entrepreneurship development including nine components was rated good by experts with overall MWSs ranged between 2.5 to 3.00.

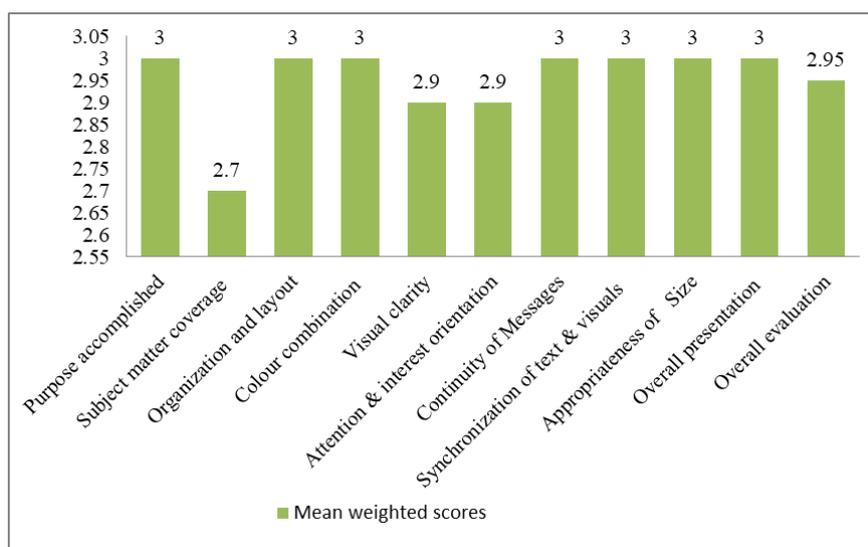
presented in table 1.4. Perusal of Table 1.4 & fig.3 reveal that the overall evaluation of flipbook was rated good by experts as the mean weighted score was 2.95 out of 3.00.

Table 1.4: Overall evaluation of flipbook by experts n=15

S.No.	Criteria	Mean weighted scores
1.	Purpose accomplished	3
2.	Subject matter coverage	2.7
3.	Organization and layout	3
4.	Colour combination	3
5.	Visual clarity	2.9
6.	Attention & interest orientation	2.9
7.	Continuity of Messages	3
8.	Synchronization of text & visuals	3
9.	Appropriateness of Size	3
10.	Overall presentation	3
	Overall evaluation	2.95

Similarly the evaluation in all the criteria's of flipbook mean weighted scores range between 2.7 to 3 out of 3, which

indicate that flipbook was judged good for all the criteria's by the experts.

**Fig 3:** Overall evaluation of flipbook by experts

Component wise evaluation of flip book by experts:

The detailed component wise evaluation of flip book on different aspects by experts is presented in Table 1.5. The data in the table clearly reveals that in all the four components viz. feeding practices, supplementary nutrition, normal nutrition and diet during common childhood ailments the flip book was evaluated good by experts on all the ten criteria's (purpose

accomplished, subject matter coverage, organization and layout, colour combination, visual clarity, attention & interest orientation, continuity of messages, synchronization of text & visuals, appropriateness of size and overall presentation) as obtained mean weighted scores range between 2.6 to 3.0 out of 3 score.

Table 1.5: Component wise evaluation of flip book by experts n=15

S.No.	Components\ Criteria	Feeding Practices	Supplementary Nutrition	Normal Nutrition	Diet During Common Childhood Ailments
1.	Purpose accomplished	3	3	3	3
2.	Subject matter coverage	2.8	2.67	2.6	2.67
3.	Organization and layout	3	3	3	3
4.	Colour combination	3	3	3	3
5.	Visual clarity	2.93	2.86	2.86	2.93
6.	Attention & interest orientation	2.93	2.83	2.86	2.93
7.	Continuity of Messages	3	3	3	3
8.	Synchronization of text & visuals	3	3	3	3
9.	Appropriateness of Size	3	3	3	3
10.	Overall presentation	3	3	3	3
	Overall evaluation	2.97	2.65	2.93	2.95

The component 'feeding practices' was rated best by the experts with highest MWS 2.97 followed by diet during common childhood ailments' with MWS 2.95, normal nutrition with MWS 2.93 and supplementary nutrition with MWS 2.65.

The results get support from the findings of Randhawa and

Gujjar (2006) [2] in a study on designing a media mix kit / package on fuel conservation technology as a learning resource for technical empowerment of rural women revealed that the instructional material included demonstration guide, printed booklet, model, photographs, synchronized slide tape unit and specimen were highly effective as rated by majority

of the judges as the overall mean scores of different attributes ranged between 2.90 to 2.95 out of 3.

The results are in line with the findings of Sharma (2009) [3] instructional material on entrepreneurship development for rural women was rated as good by the experts with overall mean weighted scores ranged between 2.74 to 2.97 out of 3.00.

Conclusion

Thus, it could be concluded that Instructional material i.e. multimedia CD and flipbook was found to be good and it will help the rural women to take better care of their children in the family. The developed instructional material can be used as a handy reference by home scientists/extension workers of KVKs for transfer of technology to rural women and thereby making their training and learning programme more effective and meaningful.

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