

Use of Information, Education and Communication (IEC)-Based Materials: An Effective Teaching-Learning Strategy in Nutrition Education

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Abstract: Human health depends on what is eaten or not eaten, Nutrition is key in developing and maintaining optimal health, hence the necessity for nutrition education. This is because a nutritionally educated person is an asset to himself and to others around. To achieve the aim and objectives of nutrition education, appropriate materials and approaches should be employed for a successful teaching-learning process. Studies have recognized information, education and communication (IEC) as one of the practicable and effective approaches that can be used in addressing a wide range of health-related issues. This paper, therefore, discusses use of IEC-based material as an effective-learning strategy in nutrition education in a community setting.

Key words: IEC, IEC-based materials, nutrition, communication, teaching-learning.

I. INTRODUCTION

Information, education and communication (IEC) has been considered a very important means of imparting knowledge, disseminating health information and positively modifying health attitude and behaviours. According to Osumanu, (2008) IEC has recognized as one of the practicable and cost-effective approach that can be used in addressing wide range of determinants of health, risk factors, building trust and commitment, nurturing community participation and empowerment in the development and implementation of health initiatives (such as nutrition education).

According to Zaman, (2013) IEC has been described as a public health approach aimed at changing or reinforcing health-related behaviours in a target audience concerning a specific problem and within a predefined period of time through communication. It is broader than developing health education material because it includes the process of communication and building networks for communicating information. It means sharing information and ideas in a way that is culturally sensitive and accepted to the community, using appropriate channels, messages and methods.

II. CONCEPT OF INFORMATION EDUCATION COMMUNICATION (IEC)

IEC is a broad term made up of a series of approaches, activities and output. This approach includes the use of posters, mass media to inform and create positive norms amongst the general population, including the use of target interpersonal communication aimed at helping those at

specific risk to evaluate their behavior and develop new personal skills. According to the World Health Organisation (WHO), (2001) IEC process involves various processes to achieve change in behavior. It takes several stages in the transformation, such as receiving information, processing and understanding the received information, changing the health behavior, and lastly maintaining it. It combines strategies, approaches, and methods that enable individuals, families, groups, organizations and communities to play an active role in achieving, protecting and sustaining their own health (Zaman, 2013). It is a process of learning that empowers people to make decisions, modify behaviors and change social conditions. Halliday, (2012) added that IEC multi-disciplinary and client centered in its approach, drawn fields of diffusion theory, social marketing, behavior analysis, anthropology and instructive design.

According to Murthy, Gupta and Bachani, (2002) IEC has three main approaches namely; interpersonal or individual approach, group approach, and mass approach. Interpersonal approach involves personal contacts, home visits, personal letters or messages. Group approach involves lectures, demonstrations, discussion methods (group panel, symposium, workshop, conferences, seminars, role play), while mass media involves television, radio, newspaper, printed materials, posters, direct mailing, museums/exhibition/melas, folk method (Katha, Keerthan, folk songs, dances, drama, puppet shows), and internet. Individual and group approaches are face-to-face approaches as they involve two-way free flow of information to enable room or opportunities for questions and clarifications of doubts. Individual approach is fundamental when providing personalized services considering the sensitive nature of some of the issues to be addressed. The approach is vital to influence the decisions of undecided persons (Sachdeva, Kar, Bharti, & Tyagi, 2015). Generally, the aim of IEC in health programmes is to raise awareness, knowledge, and ensure change in attitude and specific behaviours. It is a systematic combined approaches and activities arranged to inform, educate, interact and enable individuals to build new skills using the most effective messages, medium supported with visual materials such as flannels, posters, flyers, leaflets, brochures, and booklets, powerpoints videos and radio broadcast to aid activities and transmit information all in

attempt to bring about desire change in attitude and behaviours, and building capacity to make right health decisions.

Information, Education and Communication creates great impact in health education, including nutrition education. It uses systematic strategies to deliver planned learning experiences in nutrition education to help develop in individuals, community and institutions the ability to improve on their health through acquisition of knowledge and skills in nutrition matters that positively influence their attitudes and behaviours toward nutrition. IEC is a practicable and effective approach that can be used in nutrition education.

Nutrition education is a process of providing knowledge and skills about nutrition in order to achieve healthy attitudes and behaviours toward nutrition. Nutrition education encompasses providing knowledge on types of foods and their essential nutrients in relation to health; effects of good nutrition and consequences of malnutrition; quality and quantity of food needed based on age, health status and conditions; factors affecting availability of food; ways of improving dialing diets; food fads, beliefs and misconceptions; and skills to make proper choice of foods; and finally, adoption of positive attitudes and behaviours toward nutrition.

Rufus, (2018) emphasized the need for nutrition education. According to her, human health depends on what they eat or fail to eat. Nutrition is key in developing and maintaining optimal health. A nutritionally educated person is an asset to himself and others around, because he or she practices what he or she knows and can teach others the right thing concerning nutrition intake and the effects of malnutrition. Prevalence of deficiency and malnutrition diseases among the people, especially the most vulnerable groups, women and children, makes the study of nutrition absolutely necessary and expedient to prevent diseases, protect and maintain health, and promote health. Nutrition education equips individuals with necessary knowledge and skills to make wise choices of food, maximally utilize available food, resist bad food habits and styles, avoid or ignore nutrition fads, fallacies, beliefs and practices, and adopt healthy attitude and behavior toward nutrition in general. According to Wardlaw and Kessel, (2001) poor diet coupled with a bad nutrition lifestyle are known to be major risk factors life-threatening chronic diseases and death.

Planning a health education programme is one thing and implementation of the programme using appropriate instructional materials and methods is another thing. Studies have shown that people remember more what they see, smell and touch. And IEC materials offer the learners the opportunity to see, smell and touch what they have been taught, hence the need to use IEC-based materials in nutrition education.

III. IEC-BASED MATERIALS

IEC-based materials, otherwise known as instructional materials, are teaching aids used to stimulate, motivate, and hold the learner's attention in the teaching and learning process (Lucas, & Olamiyan, 2007). These materials include chalkboards, printed materials, radio, record player, tape recorder, television, motion pictures among others. These materials aid in the effective teaching-learning process, especially in nutrition education. Ben-Igwe and Opara (2007) stated that IEC materials are energizers for effective teaching, for they are stimulants that the teachers and health educators used to make teaching and learning realistic and meaningful. Achalu, (2007) described IEC materials as those aids which can be physically shown, manipulated and pointed at, which contributes to spoken words and enhances teaching and learning processes. They are used to make teaching more purposeful and meaningful as they are supplementary multisensory and perceptual aids to learning. They provide real experiences of the situation.

IV. EFFECTIVENESS OF IEC-BASED MATERIALS IN NUTRITION EDUCATION

Studies have discussed extensively the very important roles IEC materials play in health education programmes. Halliday, (2012) quoted Dike (1998) who emphasized that IEC materials evoke a mental image of learners, which can facilitate effective cooperation and communication during instruction, and help to make the learning environment educationally stimulating. Lucas, (2007) acknowledged that IEC materials are used to stimulate, motivate, and hold learners' attention in the teaching and learning process.

In similar views, Achalu, (2007) stressed that IEC materials help to gain and hold attention of learners, focus attention on highlighted points, create impact vividly, save time by limiting the use of wordy explanations, provide a framework of experience to a large number of learners and stimulate reality. In addition, they help learners to learn through practical seeing, hearing, touching and feeling events remote in time and space, and used by teachers to transform interest, curiosity and expectations into knowledge and understanding (achalu, 2006).

The importance of IEC materials in nutrition is noted by WHO based in its study on IEC-based materials in nutrition communication among mothers. WHO (2001) found out based on the project that the use of IEC materials creates awareness, increases knowledge, changes attitude, and motivates people to change or continue their behavior or adopt an innovation, particularly, on proper nutrition programmes among mothers. On the importance of visual aids, Achalu, (2007) averred that people tend to believe and remember seventy percent of what they can see, touch, feel and hear. This opinion can be highlighted by the popular Chinese Research also shows that people learn: 1% through the sense of taste- tongue; 1½% through the sense of touch- skin; 3½% through the sense of smell – nose; 11% through the sense of

hearing – ear; and 83% through the sense of sight – eyes (Achal, 2008).

According to Ministry Health and Child Welfare (1998), IEC interventions programme design to increase awareness, provide and disseminate information / ideas in such a way that is culturally sensitive and acceptable to the group of people via appropriate media, message and method. It gives people the opportunity to develop their individual knowledge, skill and confidence to persuade, motivate individuals to change their behavior positively to health. It also provides reinforcement to confirm and sustain already changed behavior. The ministry of Health and Child Welfare further stated their advantage such as that IEC materials create opportunity for individuals to learn specific health issues or conditions, their causes, transmission, signs/symptoms, and treatment; acquire relevant skill related to health practice; develop self-efficacy and confidence to reduce and handle health issues or problems; help individuals or groups to overcome barriers to health practices; motivate audience to improve and maintain their health; prevent diseases; sensitize media professionals and other worker about health issues or problems; encourage shift in social and cultural influences or pressure.

In a study conducted to evaluate the effectiveness of an IEC programme on knowledge of pregnant mothers regarding prevention and management of warning signs during pregnancy in a selected healthcare setting in New Delhi. The study revealed that the women had a maximum knowledge deficit of warning signs of pregnancy (Sachdeva, et al., 2015). Another test on the effectiveness of IEC was carried out in study on effectiveness of IEC intervention in reducing HIV/AIDS- related stigma among high school adolescents in Hawassa, Southern Ethiopia. IEC was proven to be effective. The researchers observed a significant reduction in HIV-related misconceptions, stigmatizing and discriminatory attitude compared to the initial level (Cherie, Mitkie, Ismail & Berhane, 2005). In a similar study, Halliday (2012) carried out a study on the effect of IEC material-based nutrition education on knowledge and attitude of mothers in Bonny Local Government Area of River State. The researcher discovered higher gain in the respondents' knowledge in the experimental group than in the control group, indicating that IEC materials had significant positive impact or effect on the knowledge of the mothers about nutrition. However, the result of the study showed that IEC material –based instruction had no significant effect on the attitude of the mother toward nutrition.

V. ADVANTAGE OF IEC MATERIAL IN NUTRITION EDUCATION

Advantage of IEC materials in the Nutrition education programme has been highlighted by studies. Halliday, (2012) averred that IEC material creates an enabling environment for proper understanding of Nutrition education as well as highlight the “dos” and “don’t” in their knowledge and

attitude towards nutrition. IEC materials provide realism and high quality definition of education, and they are cheap, simple, portable, suitable and easy to display (Achal, 2007). Newspaper and other printed materials have large communication circulation, and can reach many people within a short time. They are capable of using descriptive pictures. According to Okolie, (1991) newspaper is a favourable medium for cumulative publicity build-up that could be read and digested within leisure and convenience. It is evident that the use of IEC materials in teaching, such as textbooks, pamphlets, handout leaflets, flyers and other write-ups from instructors are advantageous. They help in individualization of instruction so that individuals can progress at one's pace.

Nutrition education programmes on radio and television reach a large number of audiences within a short time, and a repeat message as a reminder has a lot of impact and realism. These communication media disperse current news and facts immediately, and they are readily available as information media for community health workers (Salisu, 2006). Mokonkola, (2003) concurred that IEC uneducated people, as they can teach movement, mechanism and even demonstration. The materials center on concretizing the learning process as they appeal to the senses of the learners and carry information from sources to the receivers.

John Hopkins Center for Communication programme (2007) highlighted numerous advantages of overhead computer projectors, which are devices for projecting IEC materials on screen during seminars, workshops and teachings on nutrition. The Center states that the projectors serve as chalkboard where all IEC materials, such as pictures, diagrams, cartoons and feeding habits on all types of nutrients, such as carbohydrates, proteins, fats and oils, vitamins and mineral salts with their various roles in human health are displayed to the notice and view of audience, and how they can be used for better nourishment of the body. WHO, (2001) explained that when IEC materials are carefully carried out, they help to foster positive practices among individuals in a community, which can contribute to sustainable change in the desired behavior. As substantiated by Zaman, (2013) IEC helps people to do away myths, misconceptions and taboos; reduces stigma and discrimination; generates demand for information and services; helps people to cope with difficult situations; break sensitive news; motivates people to change; adopts and maintains more healthful practices; encourages teaching, and communicating skills in all those involved in educating consumers about health; and advocates for change in environment that facilities healthful conditions and behaviours. Visual materials, in particular, help to captivate and sustain intellectual curiosity of the learners long enough for learning to take place (Opara, 2000).

VI. CHALLENGES OF IEC MATERIALS USED IN TEACHING AND LEARNING

The more people value their health, the more they will be willing to make use of appropriate human and material

resources, including IEC materials needed to promote and safeguard their health both at personal and community levels. However, studies have noted some limitations of IEC materials in health education which at times, retard the success of health programmes. According to Halliday, (2012), some of the limitations include high cost or expensive nature of audio-visual materials, like televisions, and it takes a long time to plan for the use of IEC material-based nutrition education before presentation. Achalu. (2007) noted that some of the mass media such as posters, outdoor advertising transit, direct mails, telephones and press, health exhibitions pose barriers to audience in nutrition education because the materials little involvement by the target population, and they present only simple messages which are difficult to evaluate in regards to their impact on the audience. People can easily change dials on radio or tune to different channels on television at the shortest time, and this poses problems and barriers to health educators on radio and television. This frequent change in radio stations and television channels affect the size of the audience and distracts the focus of the audience on the health programme under discussion. In addition, this is one way communication that provides no opportunity for questions and answers. In some cases, there may be no or poor reception, signals or perception.

Fayose, (2003) observed that video recording is very expensive and the size of pictures are limited and only few people can view the programme. Most often, specific materials are difficult to locate on tape recorders, and cheap, fake and low quality audio-tape recorders produce low quality programmes, which negatively affect teaching and learning in nutrition education. Aniemeka, (2003) emphasized that the audience's attention and some of the IEC materials pose storage problems.

Additionally, printed materials such as newspapers, leaflets, handouts and other write-ups pose great problems to the illiterate audience, as they cannot read or understand what is written in those materials. Halliday, (2012) however added that even for the educated ones, at times they tend to read the portions that have to do with funny things instead of health issues, and often, some of the printed media do not give detailed information on issues concerning health.

VII. CONCLUSION

IEC has been adjudged a very effective means of importing knowledge, disseminating health information and positively modifying health attitudes and behaviours among large audiences at short time and space. It's multi-sensory and combined approaches, and being learner-centered, IEC materials an effective strategy in nutrition education. It helps to raise awareness and knowledge, motivate positive change in attitude and behavior toward nutrition, and build the capacity of learners to make informed and right decisions on nutrition issues.

VIII. SUGGESTIONS

The following suggestions are put forth:

1. Nutrition education should be taught using IEC materials, to expose the learners to different approaches that will enable them to acquire adequate knowledge, skills, and positive attitude and good behavior toward nutrition practices.
2. Selection of IEC-based materials should be based on the age, literacy level, locations of the target audience. For the uneducated audience, more video-visual materials should be used.
3. Use of interpersonal or individual and group approaches of IEC should be encouraged and be improved upon, as they offer opportunities to face-to-face contact between the instructors and the learners, and question and answer for feedback.session
4. IEC materials must always be tested and found to be in good condition before use to ensure a smooth teaching and learning process, as faculty materials retard learning. More so, the materials should be handled and presented in an appropriate way and manner by people who are knowledgeable on the use and manipulation of IEC-based materials.
5. Instructions via mass media should be attractive and relevant to needs of the target audience, and the message should be simple, accurate, and understandable language and form, and the time convenient to the larger population of the target audience.

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