

# **NUTRITION EDUCATION IN ACTION**

*Through*

**Sri Avinashilingam Home Science College For Women  
Coimbatore - 641 043**



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# NUTRITION EDUCATION IN ACTION

Sri Avinashilingam Home Science College is part of a larger educational complex comprising Preschool, Primary School, Higher Secondary School, Extension Unit and a College of Education. Nutrition education starts at the preschool and extends to the Ph. D. level through the primary, secondary, undergraduate and post graduate stages in the formal setting and to the community through several action cum training programmes. Research is geared to solving

the nutritional problems of community. Thus nutrition education is structured and woven into all the activities of the institution with continuity. In order to give depth to nutrition education activities, suitable methods for nutrition education have been developed using local folklore.

Nutrition education is delivered through the following channels covering a multivariuous net work of activities and infrastructure.

## NUTRITION EDUCATION

### A. Formal Channels

1. Teaching from the preschool to the Ph. D. stage
2. Curriculum development
3. Research
4. Training programmes for functionaries in nutrition in the Government Departments of Social Welfare, Child Welfare, Rural Development and Education
5. Publications, radio, telecast

### B. Non - Formal Channels

1. Applied Nutrition Programmes
2. Preschool feeding programmes
3. School lunch programme
4. Community nutrition programmes
5. Canteens
6. Parent's meetings
7. Local service clubs and associations
8. National Service Scheme
9. Community and Social Service
10. National Adult Education Programme and
11. Krishi Vigyan Kendra (Farmer's Centres)

## A. Formal Channels

### 1. Teaching from the preschool to the Ph. D. stage

Nutrition is taught at all levels, directly as part of the curriculum and indirectly as part of community action efforts, to over 3500 students every year.

Nutritional knowledge is imparted to the **Preschool** children through in door play, songs and stories, out door activities, field trips and lunch programme.

In the **Primary School**, nutrition education has been integrated into the curriculum and taught through the school lunch, garden activities, simple science experiments and other audio visual methods.

In the **Higher Secondary School**, nutritional themes have been incorporated in the school subjects. Pupils opting Home Science organise exhibitions and displays, and thus transmit nutritional knowledge.

At the **University College** level, nutrition is one of the major subjects for the undergraduate students enrolled in B.Sc. Home Science. Nutrition is offered also as a major at the postgraduate level for M.Sc. Both at undergraduate and post graduate levels students in the other majors also have an opportunity to study Human Nutrition which is offered also as an elective to other majors.

At the higher research levels, courses leading to M.Phil. and Ph.D. degrees are offered in nutrition. Thus nutrition education is being imparted from the nursery school level to the Ph.D.

### 2. Curriculum development

School age is an impressionable age and habits formed at this age will leave an indelible mark on the minds of young children and influence them throughout their life. Hence efforts have been taken by Devadas *et al* (1973) to integrate nutrition themes into the primary school curriculum in the different school subjects. Nutritional themes have been incorporated in the school subjects such as Science, English, Tamil (local language), Mathematics, Social Studies, Physical Education and Arts and Crafts. The nutrition concepts thus incorporated were taught with suitable aids such as posters, slides, pictures and folk methods to a group of 200 children in a primary school over a period of six months. The 'Before' and 'After' picture of their nutritional knowledge and dietary habits, and the nutritional practices of their mothers were studied through a specially designed schedule. They observed that the percentage retention of nutritional concepts when imparted through a nutrition integrated curriculum was highly significant ( $p > 0.01$ ) for the children in all the five classes of the primary school when compared with children in another school who did not receive nutrition education. They noted also that after nutrition education consumption of protein rich foods, green leafy and other vegetables, and fruits had increased in their families. The nutritional knowledge of their mothers had also increased, highlighting the 'Carry home' effect of nutrition education imparted through the curriculum.

The primary school teachers are also being trained continuously to gear their teaching to nutritional orientation.

Devadas *et al* (1975) examined the possibilities of integrating nutrition into the primary school learning situations and the feasibility of training teachers in the existing set up. The study indicated the wide scope for incorporating nutrition education in the primary school curriculum and having it taught by the existing teachers with some orientation. They recommended that foods and nutrition and the basic principles involved in teaching nutrition in the primary school children should be integrated in the teacher training curriculum, if effective learning of nutrition is to take place in the primary school.

Another study revealed that the children in a school where nutrition information was delivered through both the curriculum and a well organised lunch programme, showed significantly higher knowledge when compared with children in schools where no nutrition education was given.

### 3. Research

Devadas *et al* (1974) evaluated some methods used for nutrition education, namely, lecture, dramatisation, use of flash cards, field trips, songs, demonstration and puppet show for teaching nutrition to primary school children. A single theme was selected and taught through different methods to seven groups of primary school children and the results indicated that puppet show ranked first with 54 per cent retention. In the descending order of efficacy, the other methods ranked as follows : demonstration (40%), songs (37%),

field trips (37%), flash cards (31%), dramatisation (19%) and lecture (3%). This indicated that when a single method was used for the primary school children, the retention was not high and that among the methods studied, puppet show was the best.

In another investigation Devadas *et al* (1974) studied the effectiveness of a few selected methods singly and in combination, when imparting nutrition education in selected contexts to selected audiences. The methods selected were (1) lecture, (2) folk method, (3) lecture cum demonstration, (4) lecture cum demonstration cum audio visual aids and (5) lecture cum demonstration cum audio visual aids and folk methods.

The knowledge gained by the pupils was evaluated using a schedule and scoring at different intervals of time, namely, immediately on the spot, after one month, after six months and after two years.

Analysis of the percentage retention after a lapse of two years by the group taught, indicated that among the single methods the folk method had scored higher than lecture. A variety of items such as Villupattu (singing with bow), Kummi (clapping dance), Drama and other Dances constituted the 'Folk method' which appeared to have left more lasting impression on the learners. When lecture and demonstration were combined, the score obtained was higher than that of the folk method alone. When more methods were combined, the impact was greater for all the categories of the population.

#### 4. Training programmes

Sri Avinashilingam Home Science College has been the venue for various training programmes, organised for different categories of workers. Hundreds of Mukhya Sevikas (Women Extension Officers), Instructors of Mukhya Sevikas, Gram Sevikas (Women Village Level Extension Officers), home makers and Associate Women Workers, Applied Nutrition Programme Officers from the District level to the village level, CARE Officers and FAO, UNICEF, UNESCO sponsored candidates from other countries have been trained. Administrators, namely, Block Development Officers, Chairman of Panchayat Unions (Block) and District Officers have also been oriented

Other workers such as those in Catering Colleges, Peace Corps, Preschool (Balwadi creche) teachers and others deputed periodically for special training in nutrition have also been given nutrition education. In addition to these, training programmes for University and College teachers through Summer Institutes to reorient their teaching in the light of the needs of the community and latest research and trend in the field of nutrition have been undertaken.

#### 5. Publications, radio and telecast

The message of nutrition is spread through the publication of books, a scientific monthly journal, The Indian Journal of Nutrition and Dietetics, a popular magazine, 'Vignana Chudra' (Light of Science) in the local language, Tamil, pamphlets, radio programmes,

telecast and publication of articles in newspapers and other media. Papers are presented frequently at national and international meetings. Most of the research work carried out in the institution has been published.

#### B. Non-Formal Channels

##### 1. The Applied Nutrition Programme (ANP)

The nationwide Applied Nutrition Programme comprises comprehensive, interrelated educational activities aimed at the improvement of local food production, its consumption and distribution for the benefit of the rural communities. The college has been closely associated with the ANP from 1964. Nutrition education has been stepped up in the ANP Blocks in Tamil Nadu.

Devadas and coworkers (1965 - 1966, 1969-72) have evaluated the impact of the education and other components of ANP on the nutritional status of the preschool children, expectant women and nursing mothers. Efforts have been made to utilise Women's Clubs (Mahalir Manrams) for the efficient functioning of the programmes (Saraswathi and Yegammai, 1970). The views of the beneficiaries, functionaries, like the preschool teachers (Balasevikas) and officials regarding the ANP have been assessed by Kamala and Sithalakshmi (1972) and Andal and Jayapoorani (1976). The awareness and attitude of selected homemakers towards the ANP was studied by Suchetha and Sharadambal (1971).

Devadas *et al* (1977) assessed the nutritional knowledge and practices of selected rural homemakers in a post ANP

after 10 years, in comparison with a corresponding group drawn from a non-ANP block. The impact of nutrition education was evident from the homemakers food selection, food preparation and cooking methods, concepts of foods suitable for different health conditions, food preservation practices, food production and sanitation. The ANP had influenced favourably the rural homemakers in terms of improving their knowledge and practices.

## 2. Preschool feeding programmes

In several preschool feeding programmes, launched by the college and by the Central and State Governments, non-formal nutrition education of the mothers and children has been an integral part-

Kamalanathan *et al* (1970) have reported that mothers of the preschool children, who participated in a feeding programme had improved considerably, their nutritional practices. The children also evinced a liking towards foods like ragi (millet) and green leafy vegetables and were able to sing simple songs related to nutritional concepts, which bear testimony to the nutritional knowledge gained through their participation in the preschool feeding programme. Balarao (1973) and Latha (1973) imparted nutrition education in a supplementary feeding programme with simple low cost, locally available foods to preschool children. The impact of nutrition education was encouraging.

In the Special Nutrition Programme (SNP) nutritious food supplement is

distributed to preschool children under six years of age. In selected centres children and their mothers were given nutrition education along with the food supplement. The results have been striking in terms of improved nutritional practices.

Another nutritional intervention where in nutrition education could be successfully incorporated in the 'carry home food' project, Murthy *et al* (1975) studied the effect of incorporating nutrition education in an on going 'carry home food' project along with use of a weaning mixture made out of local foods. The ideas 'carried home' through this programme were need for proper dietary habits, value of low cost nutritious foods, supplementary and weaning foods, and importance of kitchen garden and poultry keeping. It was observed that there was an increase in food and nutrient intake of children after nutrition education. Forty six per cent of the mothers valued with great significance the weight card given for the children, after nutrition education. An analysis of the reasons given by mothers for allowing their children to participate or not participate in the feeding programme revealed that after nutrition education, the attitude of mothers towards the supplement had changed considerably.

## 3. School lunch programme (SLP)

Ever since the inception of the school lunch programme in 1962, in Sri Avinashilingam Primary School, nutrition education has been a component of the school lunch. In several studies from 1964 onwards, Devadas *et al* have tried various methods, use of charts, dramatisation, cultivation of school garden, story

telling etc., over different periods of time. The impact of nutrition education has been evaluated through interviews with parents and children. The nutritional knowledge acquired by the children in the school lunch group is always higher than that of their counterparts, who generally do not have any concept of what good food does for them. The studies have revealed also that a good part of the nutritional knowledge is carried to their homes by children who participate in the programme.

#### 4. Community nutrition programmes

Teaching nutrition and other aspects of Home Science is related to the needs, aspirations and cultural background of the community. Since nutritional improvement is one of the pressing needs, participation of the students in the Master's Degree Classes of Sri Avinashilingam Home Science College in community nutrition programme has been considerable. The post graduate students enrolled in the M.Sc. course in nutrition, the faculty and the research assistants, approach the individual families in selected rural areas in Coimbatore district through their leaders and alumni. They live in the villages for considerable periods of time and participate in all the activities of the village community and establish rapport and become accepted. Thereafter they conduct diet and nutrition surveys, covering the different age groups in the selected families.

These surveys comprise :

- a. The general socio-economic background of the family
- b. The dietary patterns
- c. Weighment of the food intake of selected groups of population in different stages and special conditions
- d. Dietary intake of each member of the family through a 24 hours recall method
- e. The fads and fallacies attached to diets in disease and special conditions and
- f. Anthropometric measurements, and clinical and biochemical assessment of the nutritional study on the groups studied.

The data on food intake are analysed, and the problems located with a view to help the families through selected nutrition education projects, planned to meet the problems cited.

During the second phase, the students live in the villages again, for one week to carry out the nutrition education programme they had planned on the basis of the surveys. They organise nutrition education activities using various methods of education such as demonstration, dramatisation, folk songs, villupattu, mass drill involving children, screening of movies, projection of slides, puppetry and flannelo-graphs along with lectures and home visits. Living in the community, being identified with the rural families, respecting their leaders, involving the elders and practising the principles preached, all help in the process of convincing the homemakers and their families.

During the third phase, six to nine months after imparting nutrition education the students stay in the village for a week to evaluate the nutrition education

programmes conducted. Follow up work is undertaken during the subsequent periods.

From 1962-1980 such community nutrition projects have been carried out in 23 villages in Perianaickenpalayam Block, Perui Block, Bhavanisagar Block and Karamadi Block in Coimbatore district.

The results of the diet surveys conducted in these areas have revealed that the diets of the expectant and nursing mothers, adolescents and weaned children are deficient in calories, proteins, calcium, vitamin A, riboflavin and vitamin C.

The nutrition education programme planned and conducted to eradicate the problems located in these villages have been successful to varying degrees. In general, the rural families have responded favourably to the suggestions made. It is hoped that such approaches towards reinforcing the importance of nutrition in the rural areas over a period of time would help in improving the nutritional situation in the community.

#### **5. Canteens**

Canteens and hotels could provide an effective media of imparting nutrition education to the public. With the directive given by the Commissioner of Civil Supplies, Government of Tamil Nadu, a Janatha (People's) meal canteen was run by this college in a public bus stand, where people of all socio-economic strata came for low cost meals. They were very receptive to any efforts made to teach nutrition. Simple nutrition concepts conveyed through posters and charts caught their attention and the outcomes were encouraging. Continuous effort for imparting

nutrition education is in progress at these public centres and efforts are underway to evaluate them systematically.

#### **6. Parents meetings**

Several programmes are planned and conducted to involve the active participation of the parents. Starting from the preschool, through the primary school and high school Parent Teacher Associations have been organized and periodical meetings are conducted wherein various nutrition messages are conveyed to the parents through lectures, demonstrations on preparing nutritious recipes, songs and film shows.

Apart from the Parent Teacher Associations, parents are involved in all the preschool and other feeding programmes. Community nutrition education programmes are also conducted in the villages. In all these programmes parents are educated on the health and nutritional needs. Parents are also invited for the various functions of the college and through their participation, their knowledge gets widened.

#### **7. Local clubs and associations**

The college is closely associated with the various clubs like Rotary Club, Lions Club, Productivity Council, Women's Clubs, and Defence Women's Organisations. The young students of the college are the members of these associations and they participate in the meetings and give lectures on the importance of nutrition and convey the nutrition messages to the public. The students and staff often conduct demonstration classes to the participants of the association and give nutrition

education. Thus, the college continuously conduct various programmes for nutrition education of the community and the National at large.

### **8. National Service Scheme (NSS) for college students**

Activities of the National Service Scheme which is an extra-curricular programme for adolescent students include nutrition education, survey of the nutritional status of the different groups of people in the villages, their food habits and saving practices, service to handicapped children and hospital service. Whenever students visit the hospitals in the neighbourhood they assist the doctors in examining the patients and preparing blood smears. For slum improvement, students visit individual houses and explain to the home-makers the hazards of unhygienic conditions and educate the parents and children about simple nutritious foods. They use different teaching techniques and make their approach interesting and appealing.

### **9. Community and Social Service (CSS)**

The Community and Social Service (CSS), is part and parcel of the curriculum both at the undergraduate and post graduate levels in colleges affiliated to the University of Madras. It presents students with numerous opportunities to apply their academic knowledge to the requirements of rural and slum areas. Under this programme the college has adopted 21 villages and three slums around Coimbatore. Groups of students with staff

members of the college go to these areas regularly once a fortnight for four to five hours at a time and carry out developmental activities. Besides general activities such as conducting surveys to obtain information regarding family background, food habits, education, income and expenditure pattern, and savings pattern, students are engaged in subject oriented activities such as assessing the nutritional status of the vulnerable groups.

### **10. National Adult Education Programme (NAEP)**

The college is involved deeply in the implementation of the NAEP. As part of NAEP, more than 100 volunteers are involved in conducting adult education classes by setting up centres in 11 villages. Nutrition information is incorporated in their lessons. The participation of the staff team in college is highly remarkable and appreciable.

On behalf of Sri Avinashilingam Education Trust Institutions, 60 centres were organised for conducting adult education for the year 1980-81. Sixty local volunteers were selected from 39 villages and were given training on how to conduct classes for the adults. Nutrition education is an important area in functional literacy.

### **11. Other venues**

Services to handicapped children include activities in Blind Relief Home, Podanur, Municipal Deaf and Dumb School, R.S. Puram, Home for the Physically Handicapped, Mettupalayam Road and Reception Home, Pappanaickenpalayam. Coaching classes, cultural and quiz programmes and competitions are organised for these children, using nutrition themes.

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