

## EFFECT OF PEER GROUP NUTRITION EDUCATION AMONG SCHOOL GOING ADOLESCENT GIRLS IN THOOTHUKUDI DISTRICT

Dr. M. S. Rubha

M.Sc., M.Phil., Ph.D, Associate Professor,  
In Food Science and Nutrition  
Holy Cross Home Science College ,Thoothukudi  
*Email- [msrubha17@gmail.com](mailto:msrubha17@gmail.com)*

### ABSTRACT

Adolescents are considered to be a nutritionally vulnerable segment of the population. A rapid growth rate combined with a marginal nutrient intake increases the risk of nutritional deficiencies in this population. Healthy diets and adequate regular physical activity are major factors in the promotion and maintenance of good health during adolescence and throughout the entire life course. The phenomenal growth that occurs in adolescence creates increased demands for energy and nutrients.

The need of nutrition education is to determine strategies to prevent the occurrence of under nutrition, anaemia and over nutrition among school going adolescents in order to increase their nutritional status and to enable them to grow into complete individuals, with mental as well as physical wellbeing. Adolescents are the future generation of any country. Their nutritional needs are critical not only for the wellbeing of a society, but their health has been neglected because they are considered to be less vulnerable to diseases compared to relatively young children or the old people. If the adolescents are well-nourished, they can make optimal use of their skills, talents and energies and would be healthy and responsible citizens (Priyadharshini *et al.*, 2011).

**Keywords :** *Adolescents, Nutrition Education, Knowledge, Attitude and Practice*

### INTRODUCTION

Adolescence is the transition period between childhood and adulthood. It is an important stage of growth and development in the lifespan of human beings. Nutritional health during adolescence is important for supporting the growing body and for preventing future health problems (Cmade,2012)Adolescent nutritional problems are common throughout the country. They have adequate amount of food but make poor choices. They develop a series of nutritional problems like anaemia, under nutrition, obesity, vitamin A deficiency and iodine deficiency (Gupta *et al.*, 2009). Peer education method is a new technique in nutrition education wherein a group of children will be trained by nutrition experts, who in turn will teach their fellow mates. This method can be especially beneficial in adolescent girls because they are open minded and friendly in their age groups and as a result they can communicate more freely with their fellow mates. Another advantage of this method is that, one can reach a large group in a short period (Sarkaret *al.*, 2015).

In order to lead a healthy, responsible and fulfilling life and to protect them from health problems adolescence need to be knowledgeable about themselves and need adequate information about the physical, psychological changes that take place during puberty, menstruation, pregnancy and child birth. The need to address these problems through nutrition education has been recognized at various national and international forums. Though several options are available, creating awareness among adolescents appears to be an important tool and adolescent education programmes face many challenges.

Nutrition education in adolescence suggests components of promotion, prevention and treatment. Thus, promoting adequate nutrition by having a control over their food and food resources and improving their access to appropriate nutrition services in addition to strengthen food-related skills and encouraging healthy lifestyle (Sundarlal, 2007). Dietary knowledge and access to resources are critical to improve health and nutrition in a sustainable way. Adolescence is the time to learn and adopt healthy habits to avoid many health and nutritional problems later in life. Adolescents have more easy access to health and nutrition information through schools, recreational activities, and mass media than they have later in their lives. Particularly, health and nutrition knowledge and healthy habits of female adolescents will have critical roles to play in maintaining future family health and nutrition (Alamet *al.*, 2010).

## NUTRITION EDUCATION

Nutrition education is the process. According to the individual needs and available food resources, knowledge, attitudes, and understanding about food lead to practices. It sounds scientifically correct practical and consistent.

### SCHOOL GOING ADOLESCENT GIRLS

Adolescence is a unique point of the life cycle. It is a stage of new ideas and a point at which lifestyle choices may determine an individual's life course. In this study the school going adolescent girl's age group is between 12- 14 years. Hence the study entitled "Effect of Peer Group Nutrition Education Among School Going Adolescent Girls in Thoothukudi District".

### OBJECTIVES :

- ❖ To impart nutrition education to the selected adolescent girls by the peer group.
- ❖ To assess the impact of nutrition education on the selected adolescent girls

### METHODOLOGY

In an investigation, certain tools and techniques are adopted depending upon the type of research undertaken. Main tool for collection of the primary data was the questionnaire. In a questionnaire respondents read the questions interpret what is expected and then write down the answer. The questionnaire was framed with a clear thought to assess the nutrition knowledge and dietary practices of the adolescent girls before and after the nutrition education program. As surveys are the most popular means of obtaining the desired data, the selected adolescent girls were interviewed and information regarding their age, economic background, BMI, was obtained by the questionnaire. The investigator also examined the knowledge, practice, and attitude (KAP) on nutrition, nutritional deficiency and its symptoms. The data obtained was recorded.

### NUTRITION EDUCATION

Nutrition education is an important strategy to combat many nutritional issues like underweight, anaemia, overweight and other disorders in adolescent girls, stressing the importance of nutrients and consumption of nutritious foods which are excellent sources of protein, iron and other micronutrients. Nutrition education has been described as the process, which assists the public in applying knowledge from the nutrition science and the relationship between diet and health to their practices (Canadian *et al.*, 2010). Thus, nutrition education helps adolescents to gain knowledge of nutrition and persuades to bring about required changes in their food habits. Nutrition education was conducted for a period of 10 months. A sample of 530 school going girls, were given nutrition education. The selected 530 respondents were grouped in two groups namely Experimental Group (265) and Control Group (265). Nutrition education was given to experimental group by seventy five peer educators called communicators.

### SCORING OF KNOWLEDGE, ATTITUDE AND PRACTICE (KAP)

The nutritional KAP questionnaire was containing three parts (Knowledge, Attitude and Practice). A nutritional knowledge questions were designed to test the knowledge of nutrition. There were 15 questions, each with yes or no answer. The score was given 1 for correct answer and 0 for the wrong answer respectively. The adolescent girls can score minimum 0 marks and maximum 15 marks. Same method was followed for attitude and practice of nutrition. 1 to 15 for control group higher the score the better the adolescents girls nutrition education related, knowledge, attitude and practices.

The questions provided in an attitude section were designed to know the beliefs among the school going adolescent girls regarding nutrition. There were 15 questions provided and the adolescent girls were asked to indicate their attitudes. In the attitude section agree / disagree choice questions were assigned to them. The mark criterion for agree was 2 and for disagree was 1.

### EFFECT OF NUTRITION EDUCATION

The impact of nutrition education was assessed on all the selected respondents in terms of anthropometric measurement, skin fold thickness, clinical examination bio-chemical, dietary survey and testing their Knowledge, Attitude and Practice (KAP).

### RESULT AND DISCUSSION

Effect of nutrition education on nutritional knowledge of the respondents after the nutrition education

**Table 1**  
**Nutrition education on nutritional knowledge of the respondents**

Knowledge	Before (n=265)				After (n=265)			
	Control		Experimental		Control		Experimental	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Do you know food pyramid?	145	55	152	57	148	56	265	100
Green leafy vegetables prevent anaemia.	130	49	145	55	142	54	265	100

Food rich in Carbohydrate are roots and tubers.	127	48	128	48	121	46	265	100
Food rich in protein are pulses and nuts.	113	43	110	42	118	45	265	100
Fruits & vegetables are vitamins and minerals.	99	37	142	54	128	48	265	100
Fiber content food are fruits, leafy vegetables.	99	37	88	33	98	37	265	100
Food advised to eat plenty of vitamin and minerals.	80	30	85	32	77	29	265	100
Skipping meals leads to underweight.	129	49	115	43	122	46	265	100
Underweight&anemia weakened immune system.	126	48	107	40	101	38	265	100
Drinking lots of water reduces weight loss.	101	38	96	36	110	42	265	100
Lack of nutrients leads to underweight.	95	36	115	43	96	36	265	100
Fast food consumptions leads overweight.	99	37	111	42	105	40	265	100
Snacks / bakery products exceeds metabolism.	118	45	107	40	118	45	265	100
Anemia leads to unhealthy skin, brittle hair.	104	39	100	38	100	38	265	100
Iron def- impaired cognitive functioning.	109	41	131	49	111	42	265	100

The table 1 reveals that the percentage score on knowledge level for control group remains same as there was no improvement among the respondents and the maximum score was fifty five per cent. Among the two groups after the nutrition education, the experimental group gained more knowledge to hundred per cent. The knowledge level of all the respondents in the experimental improved their involvement in peer group. The peer education plays an important role in their dietary habits. The result of the study reveals that the knowledge in the experimental group improved.

Baroah (2012) assessed the knowledge regarding nutrition and nutritional needs to maintain good health and also to gain an insight into food behaviour and practices among adolescents aged between 13-19 years. The results of the study revealed that the children of the target population have knowledge regarding nutrition but they are not well informed about nutritional needs.

#### **Effect of nutrition education on nutritional attitude of the respondents after the Nutrition Education**

**Table 2**  
**Nutrition education on nutritional attitude of the respondents**

Attitude	Before (n=265)				After (n=265)			
	Control		Experimental		Control		Experimental	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Do you prefer to eat rice, pulses?	50	20	34	13	70	26	263	99
Do you prefer vegetables in your menu?	47	18	43	16	45	17	265	100
Do you take fruits to maintain your diet?	39	15	38	14	39	15	262	99
Do you take supplementary food?	48	18	55	21	48	18	265	100
Do you add more vegetables in the diet?	47	18	42	16	47	18	265	100
Do you prefer fried food often?	51	19	54	20	57	22	265	100
Do you have interest in doing physical activity?	37	14	36	14	44	17	265	100
Good eating habits maintain health	52	20	58	22	55	21	265	100
Improving nutrition knowledge is good for health	46	17	61	23	53	20	265	100
Skipping the breakfast is not good for health	51	19	52	20	57	22	265	100
Do you have confidence about nutrition education?	59	22	40	15	48	18	265	100
Three meals a day good for health	60	23	48	18	63	24	265	100
Eating disorder is not a concern for adolescent girls	49	19	47	17	52	20	265	100

Appropriate body weight is good health	47	18	40	15	46	17	265	100
Iron-rich diet reduces fatigue , improves learning	49	19	36	14	49	19	265	100

The table 2 reveals that after the education in the control group, the maximum percentage score was 26 per cent and respondents in the experimental group scored hundred per cent. The attitude of nutrition education was found to be effective to improve the level of nutrition education among the respondents. There was an increase in values in the experimental group due to impact of attitude. This positive impact of nutrition education was also found among the respondents.

The studies reveal that schools provide a social context in which children learn and develop, thus making schools a desirable environment for nutrition education promotion (Petrie *et al.*,2004).

### Effect of nutrition education on nutritional practice of the respondents after the nutrition education

**Table 3**  
**Nutrition education on nutritional practice of the respondents**

Practice	Before (n=265)				After (n=265)			
	Control		Experimental		Control		Experimental	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Do you prefer veg or non veg in daily meals?	152	58	152	57	153	58	265	100
Do you take leafy vegetables in your lunch?	139	53	133	50	149	56	263	99
Do you prefer all the fruits?	102	39	97	37	118	46	263	99
Do you eat morevegetables?	129	49	119	45	112	42	265	100
Do you drink plenty of water?	112	42	128	48	91	34	265	100
Do you do physical exercise in future?	120	45	128	48	111	42	263	99
Do you eat any supplementary food?	119	45	128	48	112	42	265	100
Do you prefer dairy products?	104	39	121	46	132	50	265	100
Do you have regular eating in future?	125	47	114	43	111	42	265	100
Do you skip your breakfast hereafter?	123	46	109	41	104	39	265	100
Do you prefer spicy food?	102	39	102	39	77	29	265	100
Do you take any soft drinks often?	89	34	104	39	95	36	265	100
Do you take junk food here after?	90	34	90	34	104	39	265	100
Do you prefer cooked or fried foods?	85	32	96	36	105	40	265	100
Do you teach nutrition education to the family?	122	46	129	49	109	41	265	100

The table 3 indicates that there was no improvement among the respondents in the control group. The improvement could be observed only in the experimental. The scoring was hundred per cent. This implies that nutrition education has brought about changes in their practices and makes the respondents tried to practise the knowledge in their day to day life. (Begum Raheena, 2002). Practices scores were helpful in assessing the practice adopted on nutrition by school going adolescent girls in the present study. Nutrition education helps to promote good health and well-being of the respondents. Improvement in the nutritional practices was found among the respondents belonging to experimental group.

### CONCLUSION

The researcher pointed out that the selected adolescent girls were having basic ideas about nutrition but they were lacking in scientific concepts related to nutrition. It was also found that provision of nutrition education had a significant impact on nutritional knowledge, attitude and practice among the respondents which in turn will improve the nutritional status of the respondents.

Peers may have had more influence to their colleagues who may have developed more confidence in their teaching hence better performance in many aspects of the education is needed. After the education overweight of the adolescent girls in experimental group was decreased, underweight and anaemic girls increased in weight, as well as in their haemoglobin. The respondents in the control group who did not receive any nutrition education remained same. This implies that the nutrition educations were effective and were improving relationship between proper intake of nutrition and KAP. The findings of the nutrition education study leads to the conclusion that the food based approach using the KAP nutrition education

teaching strategies peer facilitated, could have some influence and hence an effective strategy to combat overweight, underweight and anaemia deficiency and promote good health and well-being of the adolescent girls. Emphasis should be laid on the importance of nutrition education among the adolescent girls. Hence, it is concluded from the present nutrition education is an important measure to improve dietary habits, nutrition knowledge, and food choices of the adolescent girls, as poor dietary habits and ignorance are the main reason for poor nutritional status of the adolescent girls. The lack of concentration which can interfere with learning and they have low energy. Future curriculum can focus on some or all of these areas for building a dietary component in childhood obesity prevention programs. Nutrition education could be an effective tool to improve the nutrition knowledge. It would not only improve the health of adolescent girls, but future generation also, as adolescent girls are would be mothers.

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