

Knowledge, attitude and practice of adolescents on healthy eating- An intervention study in Kerala

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ABSTRACT

Adolescence is a period when peer pressure can affect teenage eating behaviour and they may start skipping meals or possibly under-eating or over-eating. Adolescents are becoming more independent and making many food decisions on their own. Many adolescents experience a growth spurt and an increase in appetite and need healthy foods to meet their growth needs. Adolescents tend to eat more meals away from home than younger children. It was also highlighted often that, lack of awareness about the importance of healthy food habits, wrong food choices and even lack of awareness among parents are the main reasons for bad eating habits among adolescents. The present study on “Effect of an educational intervention package on the healthy eating habits of adolescents” was undertaken to study the eating habits, physical activity pattern, level of knowledge, attitude and practice and eating behavior of the adolescents, and also to find out the effect of a multimedia package on their knowledge, attitude and practice on healthy eating habits. Hundred adolescents in the age group of 14-16 years (middle adolescents) studying in the ninth, tenth classes of various schools in Thiruvananthapuram was selected using stratified random sampling method. Equal consideration was given to both the genders and both government and private schools will be selected. A detailed questionnaire and a food habit inventory were prepared to find out the food habits and dietary pattern of the selected samples. A multi media kit in the form of a PowerPoint presentation in flash, incorporating short videos was also prepared on creating awareness to adolescents, teachers and parents on the importance of healthy eating during adolescence and the same was demonstrated to students, teachers and parents with the help of the Parent Teacher Association (PTA) functioning in the respective schools. A CD kit was distributed to all the samples (100 numbers) for ensuring adoption of healthy eating practices as well as to keep it for their future reference. From the study it can be concluded that majority of the samples had poor or low level of knowledge, attitude and practice on the healthy eating habits and its importance. Certain socio-economic variables were found to have significant relation with the level of knowledge, attitude and practice of the samples, like, monthly income of the family and daily meal pattern of the samples.

Key Words : Adolescence, Healthy eating habits, KAP study

INTRODUCTION

Adolescence is a period of time in which children are prone to a higher prevalence of risk taking behaviours such as overeating and under eating. Overeating and under eating can be a

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displacement for other problems such as a low self - concept, interpersonal problems, and an acute sense of shame and doubt. It is the most rapid period of growth, wherein a boy gains 19g/day and a girl 16g /day of body weight (Agarwal, 2010).

Data from cross sectional studies have identified several dietary patterns associated with early obesity development, such as meal frequency and distribution, skipping meals, soft drink and fast food consumption, as well as high eating speed (Moreno, 2010). The importance of developing healthy eating habits during childhood and adolescence is obvious. Rapid physical growth creates an increased demand for energy and nutrients (Spear, 2002).

There are many factors that contribute to poor eating behaviors. Meal skipping is a common behavior among adolescents as they try to sleep longer in response to early school start times or they wanted to lose weight-through calorie restriction. Among meals, breakfast is the most commonly skipped meal. Adolescents who skip meals often snack in response to hunger instead of eating a meal. Snack foods consumed are often high in added fats, sweetness, and sodium. Soft drinks are one of the most commonly consumed snacks. A healthy meal plan for adolescents provides enough calories and nutrients for growth and good health. This is important because children normally have a growth spurt during their adolescent years (10 to 19 years old). A healthy meal plan can also help prevent health problems. These include anemia, eating disorders like anorexia nervosa, bulimia nervosa, diabetes, pre disposition to osteoporosis, under nutrition, premenstrual syndrome and obesity.

Nutrition education involves teaching the client about the importance of nutrition, providing educational materials that reinforce messages about healthy eating, teaching adolescents skills essential for making dietary change, and providing information on how to sustain behavior change. Information gathered during a nutrition screening or assessment will provide the necessary information on which nutrition issues need to be addressed during nutrition education and counseling sessions. Prior to beginning the education process, it is helpful to assess what the adolescent already knows about nutrition, how ready they are to adopt new eating behaviors, and if there are any language or learning barriers that may need to be addressed in order to facilitate the nutrition education process (Stang, 2005).

Significance of the study:

A number of factors influence the food habits of an individual. These include educational and economic level of the community, availability and cost of the foods and social and cultural practices. Once the food habits are established, they are handed down from generation to generation. The studies on food, nutrition and health is always been an area of interest and research for students, academicians' and researchers in any part of the world. So is the case with India also. The simple reason behind this is that food, health and nutrition are interlinked with the quality of life of an individual, which is very important to every human being, irrespective of any disciplines and age groups.

It was also highlighted often that, lack of awareness about the importance of healthy food habits, wrong food choices and even lack of awareness among parents are the main reasons for bad eating habits among adolescents. Schools play a critical role in improving the dietary and physical activity behaviors of children and adolescents. Schools can create environments supportive of students' efforts to eat healthy and be active by implementing policies and practices that support healthy eating and regular physical activity and by providing opportunities for students to learn about and practice these behaviors. The health of students is linked to their academic success. Both physical activity and healthy eating may help improve academic achievement. Representatives

from different segments of the school and community, including parents and students, should work together to maximize healthy eating and physical activity opportunities for students.

Food choices of adolescents have become increasingly unhealthy putting them at increased risk of malnutrition and chronic diseases in the future. Thus, dietary decisions made in adolescence may have long term health implications. Awareness on healthy eating habits will definitely make the adolescents aware about their health and its importance in future living. Teachers and parents can play a major role in bringing a positive and healthy change in the eating pattern of the adolescents. Nutrition education through multimedia will also help to recollect the points and can be used for future reference as well. Hence the present study will definitely throw light on the strategies to develop healthy eating habits among adolescents through imparting thorough knowledge on healthy eating with the help of multimedia.

Objectives of the study:

1. To find out the socio-economic background of the selected samples.
2. To assess the knowledge, attitude and practice of adolescents on healthy eating.
3. To understand the nutritional status of the samples.

METHODOLOGY

Hundred adolescents in the age group of 14-16 years (middle adolescents) studying in the ninth, tenth classes of various schools in Thiruvananthapuram was selected using stratified random sampling method. Equal consideration was given to both the genders and both government and private schools were selected for the study. A detailed questionnaire and a food habit inventory were prepared to find out the food habits and dietary pattern of the selected samples. A multi media kit in the form of a PowerPoint presentation in flash , incorporating short videos was also prepared on creating awareness to adolescents, teachers and parents on the importance of healthy eating during adolescence and the same was demonstrated to students, teachers and parents with the help of the Parent Teacher Association (PTA) functioning in the respective schools. A CD kit was distributed to all the samples, free of cost (100 numbers) for ensuring adoption of healthy eating practices as well as to keep it for their future reference.

RESULTS AND DISCUSSION

The details regarding the socio-economic background of the samples is discussed on Table 1.

From the Table 1, it was found that about 76 per cent of the samples belong to the age group of 14-15yrs of age. Twenty four per cent belongs to the age group of 15-16yrs of age. Majority of the samples were Hindus. It was found that forty eight per cent of the sample resides in the urban areas, and fifty two per cent resides in rural areas. About thirty seven per cent of the samples have less than four members in their family, 59 per cent of them have 4-6 members in their family, 3 per cent of the samples have 6-8 members in their family, and remaining 1 per cent of sample have more than 8 members in their family.

Regarding the ordinal position of the samples in the family, 6 per cent of the samples were single child in their families, 50 per cent of the samples were first child in their families, 35 per cent of the samples were second child in their families, 8 per cent of the samples were third child in their families, and only 1 per cent of the sample is fifth child in their family.

Table 1 : Personal data of the samples	
Category	Percentage (%)
Age (in years)	
14-15yrs	76
15-16yrs	24
Place of residence	
Rural	52
Urban	48
Income of the family (in Rs.)	
Below Rs.5000	56
Rs.5000 - Rs. 10,000	25
Rs.10,000 - Rs. 20,000	18
Above Rs. 20,000	1
Father's occupation	
Government employee	6
Private employee	6
Business man	13
NRI	4
Professional	1
Coolie	55
Nil	4
Other	11
Mother's occupation	
House wife	81
Government employee	6
Private employee	7
Professional	Nil
NRI	0
Coolie	5
Nil	1
Ordinal position in the family	
Single child	6
First child	50
Second child	35
Third child	8
Fourth child	0
Fifth child	1

Knowledge, attitude and practice of the samples:

The knowledge, attitude and practice, regarding the healthy eating habits, of the samples were assessed and the details is given in Table 2.

Table 2 : KAP of the samples regarding healthy eating habits (n=100)		
Knowledge	Range	Per cent
Low	75 and below	5
Medium	76-85	22
High	86 and above	73
Practice		
Low	Below 30	0
Medium	31-40	33
High	41 and above	67
Attitude		
Low	75 and below	37
Medium	76-85	37
High	86 and above	26

Based on the scores obtained from the knowledge scale, the samples were further classified in to low, medium and high. Those who secured a score value below 75, out of 100, were categorized as low, those who secured a score value between 76-85 out of 100, were categorized as medium and those who secured a score value above 86, out of 100, were categorized as high. It was found that five per cent of the samples have low knowledge, twenty two per cent of the samples have medium, and seventy three per cent have high knowledge.

Similarly, based on the scores obtained from the before practice scale, the samples were further classified in to low, medium and high. Those who secured a score value below 30, out of 100, were categorized as low, those who secured a score value between 31-40, out of 100, were categorized as medium and those who secured a score value above 41, out of 100, were categorized as high. It was found that two per cent of the samples have low practice, seventy eight per cent of the samples have medium, and twenty per cent have high practice.

It was found that thirty seven per cent of the samples have low level of attitude and twenty six per cent have high attitude level, towards healthy eating habits.

Table 3 shows the association between before Knowledge level and daily meal pattern of the sample. It was found that there exists no significant association between the variables. The chi-square value obtained is 9.30 and was found to be statistically no significant at five per cent level. There is no significant relation between before knowledge and meal pattern of the sample.

Table 3 : Association between knowledge level and daily meal pattern					
Before knowledge level and meal pattern	Three meals	Less than three meals	More than three meals	Total	χ^2
Low	10	0	0	10	9.30 ^{NS}
Medium	24	4	4	32	
High	72	46	40	158	
Total	53	25	22	200	

Table 4 show the association between before practice level and daily meal pattern of the sample. It was found that there exists significant association between the variables. The chi-square value obtained is 3.62 and was found to be statistically significant at five per cent level. There is significant relation between before practice and meal pattern of the sample.

Table 4 : Association between practice level and daily meal pattern					
Before practice level and meal pattern	Three meals	Less than three meals	More than three meals	Total	χ^2
Low	2	0	0	2	3.62*
Medium	38	18	13	69	
High	13	7	9	29	
Total	53	25	22	100	

* Significant

Table 5 shows the association between before attitude level and daily meal pattern of the sample. It was found that there exists no significant association between the variables. The chi-square value obtained is 5.75 and was found to be statistically no significant at five per cent level. There is no significant relation between before attitude and meal pattern of the sample.

Table 5 : Association between attitude level and daily meal pattern					
Before attitude level and meal pattern	Three meals	Less than three meals	More than three meals	Total	χ^2
Low	20	12	4	36	5.75 ^{NS}
Medium	21	7	9	37	
High	12	6	9	27	
Total	53	25	22	100	

Nutritional intake of the samples:

Nutritional needs during adolescence are increased because of the increased growth rate and changes in body composition. The dramatic increase in energy and nutrient requirements coincides with other factors that may affect adolescent's food choices and nutrient intake, and thus nutritional status. 24 hour recall method was used to find out the nutrient intake of the samples.

It was found that majority of the boys, meet their Energy and Protein daily requirements with that of the recommended allowances, *i.e.*, about 88 and 94 per cent of the samples, respectively; where as the consumption of Calcium and Vit. A were found to be much better in girls. In spite of that, both the genders have very poor intake of nutrients and about half of the samples; do not meet their basic daily requirements from their meals, which clearly shows their poor eating habits (Table 6).

Table 6 : Nutritional intake of the samples		
Nutrient consumption	Boys (n=50)	Girls (n=50)
Energy	44 (88 %)	41 (82%)
Protein	47 (94)	33 (66%)
Calcium	29 (58%)	41(82)
Vit. A	28 (56)	30 (60 %)
Iron	26 (52 %)	28 (56%)
Thiamine	23 (46 %)	27 (54%)
Riboflavin	22 (44 %)	25 (50%)
Vitamin C	33 (66 %)	34 (68 %)

Details regarding the intervention programme:

After collecting the baseline information and the details regarding the eating habits of the

samples, an educational intervention package was prepared in the form of a multimedia presentation in flash, incorporating short videos in order to create awareness to adolescents, teachers and parents on the importance of healthy eating during adolescence and the same was demonstrated to the three groups with the help of the Parent Teacher Association (PTA) functioning in the respective schools. A CD kit was distributed to all the samples (100 numbers) free of cost, for ensuring adoption of healthy eating practices as well as to keep it for their future reference. A sub sample of 15 students was given a diary to record their eating pattern and with the help of the school authorities, a teacher was designated to review their recordings weekly. It was found that, after the intervention programme, students were conscious about their eating pattern and tries to choose foods wisely than before, and was clearly evident from their records as well.

Conclusion:

From the study it was concluded that majority of the samples had poor or low level of knowledge and attitude on the healthy eating habits and its importance. Certain socio-economic variables were found to have significant relation with the level of knowledge, attitude and practice of the samples, like monthly income of the family and daily meal pattern of the samples. It was also found both the genders have very poor intake of nutrients and about half of the samples, do not meet their basic daily requirements from their meals, which clearly shows their poor eating habits.

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