

Health Consciousness of School Going Adolescents*

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Abstract— The study was conducted among the school going adolescents in Kerala to assess their socio-personal profile, food consumption pattern and to understand their health consciousness and health status through health indicators like Body Mass Index (BMI). The study revealed that 15.6 per cent of the respondents had symptoms suggestive of some nutritional problems. Regarding BMI, above two-third of the students were included in the underweight category, 1.7 per cent were having overweight and a small percentage were even obese.

Keywords— Adolescents, Body Mass Index, Health consciousness, Puberty

I. INTRODUCTION

Kerala situated at the south western part of Indian peninsular is the third densely populated state with 859 persons per square km. However, Kerala's population growth rate is far lower than the national average (GOK, 2005). Kerala ranks highest in India with respect to social development indices such as elimination of poverty, primary education and healthcare.

According to age structure of Kerala in 2011 census, about 23.8 per cent of the population comes in the age group of 7-14 years. Projected Population in different age groups in 2016 shows that persons in the age group of 11-13 Years were 1618453 and those in the group of 14-15 Years were 1072077.

1.1 Adolescence

Adolescence is a transitional stage of physical and psychological human development between puberty and adulthood. The period of adolescence is closely associated with the teenage years. Larson and Wilson (2004) view adolescence as a transitional period between childhood and adulthood, whose cultural purpose is the preparation of children for adult roles. It is a period of multiple transitions involving education,

training, employment and unemployment, as well as transitions from one living circumstance to another (Coleman and Roker, 1998).

1.2. Importance of protein in the diet of adolescents

Protein is necessary for human growth, and the essential amino acids can only be obtained from foods eaten (Grigg,1995). The consumption of protein is determined by the protein content of foods, which is generally higher in animal foods than in plant foods, and the quantities consumed. There are marked spatial differences in the consumption of total protein, animal protein and animal protein as a percentage of all protein. Though the state has greater potential for production of livestock products there is limited documented information on consumption pattern and the constraints associated with the consumption of products. Hence the study was designed with the following objectives.

- To assess the socio-personal profile of the school going adolescents of Kerala
- To assess the food consumption pattern of the adolescent children
- To study the health status and health indicators like BMI of adolescent students

II. MATERIALS AND METHODS

2.1. Study area

The study was conducted in the Kerala state of South India.

2.2. Technical Programme

Adolescent boys and girls aged 12-17 years, who were apparently healthy, were included in the study. The study was conducted using primary data collected from the selected respondents. Data were collected through participatory methods, questionnaire techniques and telephonic interviews wherever necessary. A semi-structured questionnaire was prepared for data collection for both qualitative and quantitative variables. The questionnaire was tested in the pilot area and necessary adjustments were made before commencement of the actual survey.

A multi stage random sampling procedure was employed to select samples. First the state was arbitrarily considered as south, central and northern regions. Then one district each was randomly selected from each region. Thus Trivandrum, Ernakulam and Kozhikkode districts were selected. Then one local body was selected from each district. From the identified local body a minimum of 100 respondents were selected. Pre-tested questionnaires were distributed to the students and got them filled in under the guidance of the Research Assistant. The government schools, Anganwadis and the respective houses were approached in the local bodies to get the students interviewed. Before collecting the data, permission was obtained from the respective authorities of the institutions and verbal consent from the students. Telephonic interviews were conducted with the parents as and when required to get some of the answers clarified. One improper questionnaire was eliminated. Thus a total of 299 respondents formed the sample of the study.

The school going adolescents were interviewed and examined for nutritional deficiency disorders. The identification data for each of the selected respondent included information on family income, family size, education and occupation of parents. Information was also collected on age, educational, age at menarche and dietary intake of the adolescent. The data on height and weight of the respondents were obtained. BMI is calculated by dividing weight in kilograms by height in meters squared. Underweight is defined as having a BMI ≤ 18 kg/m², normal between 19-24 kg/m²,

Overweight as having a BMI 25-30 kg/m² and obesity is defined as having a BMI > 30 kg/m².

Dietary intake was assessed by 24 hour recall method using an oral questionnaire. The study was conducted during January to May 2017. The data were analysed using simple statistical techniques.

The independent variables in this study included age, gender, height, weight, educational level of the parents, and household income. Dependent variable was consumption pattern of livestock products among adolescents.

III. RESULT

Results of the study were presented as socio-personal profile, food consumption pattern, health consciousness of the respondents.

Table.1 Socio-personal profile of respondents n=299

Sl.No	Category	Frequency	Percentage
1	Age of respondent (years)		
	12 - 13	59	19.7
	14 - 15	230	76.9
	16 - 17	10	3.3
2	Sex of respondent		
	Female	160	53.5
	Male	139	46.5
3	Religion of the respondent		
	Christian	65	21.7
	Hindu	186	62.2
	Muslim	48	16.1
4	No of Family Members		
	1-4	172	57.5
	5-8	125	41.8
	>8	2	0.7
5	Monthly Family Income (Rupees)		
	< 15000	262	87.6
	15000 - 25000	28	9.4
	>25000	9	3.0
6	Order of Birth		
	First child	155	51.8
	Second child	130	43.5
	Third child	14	4.7
	Total	299	100.0

From the Table – 1, it was found that the 76.9 per cent of the student respondents belonged to the age group 14-15 years and 51.8 per cent of them were the first born of the families. About 53.5 per cent of respondents were female and 46.5 per cent were male. Majority (62.2 %) of the student respondents were Hindus and 21.7 per cent of the respondents were Christians whereas Muslims constituted only 16.1 per cent of the respondents. It was observed that majority (57.5 per cent) of the respondents belonged to small families with 1 - 4 members and majority (87.6per cent) of the respondents had income of below Rupees 15000 per month.

Table. 2 Distribution of respondents based on food consumption pattern

Sl.No	Category	Frequency	Percentage
1	Having Homely Food regularly		
	No	3	1.0
	Yes	296	99.0
2	Preference to eat out		
	Daily	1	.4
	Weekly	53	19.9
	Monthly twice	68	26.2
	Monthly once	133	46.9
	Never	44	6.6
3	Consumption of livestock products		
	No	1	0.3
	Yes	298	99.7
	Total	299	100.0

From the Table 2 it was found that majority (98.8 per cent) of the respondents had homely food regularly. The rest preferred hotel or canteen food during their school time. It was found that almost all (99.7 per cent) included livestock products in their daily menu. About 46.9 per cent of the respondents preferred to eat out on a monthly basis. A small percentage (0.4%) of respondents had food from hotels every day. and 6.6 per cent of them never had food from outside.

According to Speedy (2003), per capita consumption of animal source protein was low in the developing countries of South Asia. But Islam and Jabbar (2010) cited that the demand for animal products showed an increasing trend in Bangladesh may be due to income,

change in dietary patterns, population growth and urbanisation. Anyiro et al (2013) and Grigg (1995) reported some factors influencing the quantity of meat consumed such as age, annual income, price of the commodity, religious taboos and household size of the respondents. In a similar study Okunlola (2012) found that meat consumption pattern of students was moderated by access, income, season, location and their likes and the major factors that influence respondents' decision to purchase meat were quality, taste and price.

Table. 3 Health consciousness of the respondent

Sl.No	Category	Frequency	Percentage
1	Age of attaining puberty		
	Not attained at the time	26	8.7
	9 – 10	8	2.7
	11 – 13	204	68.2
	14 – 16	61	20.4
2	Encountered Nutritional problems		
	No	253	84.6
	Yes	46	15.4
	Total	299	100.0
3	Awareness of blood group		
	Don't know	61	20.4
	A-	4	1.3
	A+	50	16.7
	AB+	22	7.4
	B+	65	21.7
	O-	10	3.3
	O+	87	29.1
4	Body Mass Index		
	Underweight (≤ 18)	201	67.2
	Normal (19 - 24)	91	30.4
	Overweight (25 – 30)	5	1.7
	Obese (>30)	2	0.7
	Total	299	100.0

From the Table – 3, it was found that the majority (68.2 %) of the respondents attained puberty at the age of 11-

13 years while 20.4 per cent of the respondents reached puberty at 14-16 years and a small percentage (2.7 %) of the respondents attained puberty of the age group 9-10. The rest (8.7 %) of the respondents reported that they had not attained puberty at the time of the study. The study revealed that 15.6 per cent of the respondents had symptoms such as anaemia, white spot, allergy, arthritis, migraine, joint pain suggestive of some nutritional problems.

Regarding BMI, above two-third of the students were included in the underweight category, 1.7 per cent were having overweight and a small percentage were even obese. Only one-third of the study respondents were having normal weight. Almost similar results were obtained in some recent studies like Ramesh (2010), Radha and Chellappan (2015), Vadasseril (2015), Danasekaran and Vinoth (2015), Jacob et al (2016) and Beevi et al (2017). All of them had concentrated on the obese and overweight categories. None had studied the underweight category.

Okunlola (2012) reported in a study conducted among students of Nigeria that only one fifth of them had a good knowledge of the effects of cholesterol on human health.

IV. CONCLUSION

The study revealed an alarming situation of school going adolescents of Kerala as elsewhere in the country. The students are the citizens of tomorrow. They should be having normal health conditions. Then only the future of the society will be safe in their hands. The authorities should involve for making India better through those healthy individuals.

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