



NUTRITIONAL ASSESSMENT OF ADOLESCENT GIRLS IN JALNA OF MAHARASHTRA.

Dr. S. A. Mahajan

Head, Dept. of Home Science Smt. Dankunwar Mahila Mahavidyalaya, Jalna.

ABSTRACT

Adolescence is the period of rapid growth and maturity in human development. The nutritional status of adolescent girls who are the future mothers? Contribute significantly to the nutritional status of the community. The causes of anemia are multifactorial. Nutritional requirement for Iron in relation to the body size is higher during adolescence. Nutritional status or nutrient is the condition of health of an individual as influenced by the nutrient intake and utilization in the body. The present study was undertaken to assess the current nutritional status of adolescent girl. Studying at Smt. Dankunwar Mahila Mahavidyalaya, Jalna belongs to the age group of 17 to 22 years. The sample size was 100 students pursuing their graduation. 62% respondents belongs to underweight that is 18.5 BMI which is alarming and need attention to supplement their food with additional source of Protein and calcium, so that they becomes normal. 36% of respondents where belongs to normal range of BMI that is 18.5 to 24.5. In the present study, all the respondents are found to be normal hemoglobin level that is 10-12.5mg/dl non anaemic. The deficiency of protein requirement was reflected in sign and symptoms of easily plucking of hair, oedema and fatigue while recording the observation, it is observed. In survey that there is no awareness about the nutritional food and also cooking method so there is need to educate the adolescent girls.

KEYWORDS :

INTRODUCTION

Adolescence is a period of rapid growth and maturation in human development. The nutritional status of adolescents girls who are the future mothers, contribute significantly to the nutritional status of the community. It is only recently that efforts, although small, have been made to include adolescent girls as beneficiaries in some of the health and nutritional intervention programme. Currently, it is estimated that there are about 200 million, over 8 million are 15-19 years old have experienced pregnancy. About a quarter of the married adolescent girls had short stature and 18.6% were under weight. About 70% of adolescents consumed more than 70% of RDA for energy. The intake of micro nutrients such as Vitamins A and Riboflavin were inadequate. (Venkaiah et-al.2002). The causes of anemia are multifactorial. Nutritional requirement for iron in relation to the body size is higher during adolescent. Nutritional status is condition of health of an individual as influenced by the nutrient intake and utilization in the body. It can be determined with the help of clinical examination of symptoms of nutritional deficiencies, dietary intake, anthropometric Measurements., and laboratory investments. When these methods are used in combination like dietary assessment with Anthropometry and clinical examination. Provide better picture of assessment of nutritional status of Adolescent girls.

Jalna in Maharashtra has an array of nutritional and health related problems due to poverty and illiteracy. The availability of information on nutritional status of adolescent is limited who are the future citizens of the state and comprising nearly half of adult population. Majority of adolescence are doing their studies in college. Pursuing their graduate programme. Adolescent is the crucial phase of growth since it offers the second and last chance for the Catch up growth in the life cycle of girls. On the basis of available data on the growth of adolescent girl's it is the Crystal clear that a remarkable percent of Adolescents are found to have low body weight and less height as compared to the standard values. (Srikantia 1969, Rao and singh 1970, Gupta et-al, 1990).

The present study was conducted in jalna Which is the major district having wide spread of industries and educational institutes to know the nutritional status of college going adolescent and their relationship with the. Socio economical profile in which they are living. The present study was conducted on adolescent girl of college going in jalna city with following objectives.

OBJECTIVES

1. To study current status of nutritional anemia in adolescent girls.

2. To record their anthropometric index, that is height, weight and BMI.
3. To determine clinical symptoms of nutritional deficiencies in adolescent girls.
4. To study the nutrient intake in the diet of adolescent girls.

MATERIALS AND METHODS

Sample Size

The present study was undertaken to assess the current nutritional status of adolescent girls studying at Srimathi Dankunwar Mahila Mahavidyalaya, Jalna. belongs to the age group of 17 to 22 years. The sample size was 100 Students pursuing their graduate .Background information, Anthropometric measurement, Clinical observation, were recorded through questionnaires, Hemoglobin level was estimated and 3 day recall method was selected for getting the dietary intake.

Anthropometric Measurements

The present study includes height and weight. Measurements of standard height was with the help of show off, body standing straight with the help of measuring tape was measured. Weighing balance was used for recording weight in kgs.

Clinical Examination or Observation:

All Adolescent girls were examined clinically for symptoms of nutritional disorders.

Dietary Intake

Food intake was recorded for 3 days. Recall method.

RESULT AND DISCUSSION

70% of respondents belongs to Nuclear family and 30% respondents belongs to Joint family. 56% of respondents were from small family size consisting of one to 5 members. 43% of respondent belongs to family size of 6 to 10 members. 64% of respondents belongs to the age group of 17 to 19 Year. 36% of the respondents belong to the age group of 20 to 22 year. 34% respondents belong to the income group of Rs 10,000 to 15,000, while 50% of respondents income group was Rs 16,000 to 30,000. 16% of respondents were income Group is above Rs. 30,000.

Socio Economical Profile, Table Number 1.

Profile	Group	% of Respondents
Type of Family	Joint	30
	Nuclear	70

Size of family	1-5 members	56
	6-10	44
Age of Adolescent	17-19	64
	20-22	36
Income of the Family	10,000 to 15,000	34
	16,000 to 30,000	50
	Above 30,000	16

• Anthropometric Measurements:

The mean height of the girls were found to be 160 centimetre and mean weight was 43.82 kg.

• Body Mass Index BMI:

Body mass index BMI of adolescent girls are presented in table no 2.

Grade	BMI	%of Respondents
Under weight	< 18.5	62
Normal	18.5 to 24.5	36
Over weight	23 to 24	02
Obese	> 25	00

Data from table number 2, indicates that 62% of respondents belongs to underweight. That is less than 18.5 BMI. Which is alarming and need attention to supplement their food with additional source of protein and calcium. So that they become normal. 36% of the respondents were belongs to normal range of 18.5 to. 24.5 BMI, indicates that normal growth and development. Only 2% of respondents were of over body weight.

• Blood Hemoglobin Level.

The adolescent girls are based on their hemoglobin level were categorised into nonAnaemia and Anaemia. The cut off for which was 12g/dl (WHO/UNICEF/UNO) In the present study, all the respondents are found to be normal hemoglobin level that is 10-12mg/dl and are non anaemic.

• Clinical Examination.

The signs and symptoms observed by the survey on adolescent girl are presented in table number 3.

Sr.No.	Sign and Symptoms	% Respondents
1	Fatigue	28
2	Easy pluckability of hair	62
3	Thin Split hair	30
4	Eye problem	44
5	Oedema	4
6	Pain in bones	4
7	Muscular pain	14
8	Spongy and bleeding gums	10
9	Cheilosis.	4

As per the table number 3, it is clear that 62% of respondents show the symptoms of easy pluckability of hairs and 44% of respondents were suffering from problems related to eyes and 4% of respondents were suffering from pain in bones and cheilosis.

• Dietary Intake.

The intake of nutrients of Adolescent girls were assessed by 3 day recall method. The data Collected on actual food intake was converted to nutrient by use of food consumption table. The mean nutrients intake was shown in Table 4.

Nutrients	Observed RDA	Standard RDA
Energy (Kcal)	1361.40(868.36 to 2021.02)	2490
Protein(gm)	37.62(25.73 to 56.22)	85
Calcium(mg)	502.47(171.76to931.75)	1050
Iron(mg)	30.67(17.92 to 85.03)	32

(Figures in Parenthesis indicate observed range.)

From the table number 4, it is clear that the energy intake by adolescent girl mean value was 1361.40. Which is less by. 66% as compared to RDA of ICMR which is 2490 kilo calories. The main source of carbohydrates in the present study was rice ,chapatti and bread. With regards to protein, 60% of protein requirement, 37.62grams was made as compared to 85 grams of RDA. The mean daily calcium consumption or intake was observed as 502.47 milligram which is half of requirement as

per the RDA standard. The requirement of iron is also fulfilled to 100% of requirement. The major source of iron was found to be green leafy vegetables.

SUMMARY AND CONCLUSION.

62% of respondents are observed to be underweight as the energy intake is completed by 66% of requirement only which is less by 2/ 3 of the requirement. It was reflected in the underweight of adolescent. 36% of adolescent belongs to normal weight. All the respondents were found to be non anemic as the requirement of calcium and iron support them to the higher hemoglobin level as their diet. Mainly consist of green leafy vegetable which are available in cheap and abundant quantity. The deficiency of protein requirement was reflected in the signs and symptoms of easily pluckable of hair, oedema, fatigue. While recording the observation it is observed in survey that there is no awareness about the nutritional food and also cooking methods so there is need to educate the adolescents.

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