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ASSESSMENT OF HEALTH STATUS AND DIETARY INTAKE OF ADOLESCENT GIRLS IN URBAN PATNA: A CASE STUDY

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ABSTRACT:

Adolescence is an especially extraordinary period in life since it is a period of exceptional physical, psychosocial, and psychological improvement. Expanded dietary needs at this crossroads identify with the way that youths increase up to 50 percent of their grown-up weight, in excess of 20 percent of their grown-up stature, and 50 percent of their grown-up skeletal mass during this period. Caloric and protein prerequisites are maximal. Expanded physical action, joined with poor dietary patterns and different contemplations, for example monthly cycle and pregnancy, add to complementing the potential hazard for young people of poor sustenance. The main nutrition problems affecting adolescent populations worldwide include under nutrition, Iron deficiency and anemia; Iodine deficiency; Vitamin A deficiency; Calcium deficiency and other specific nutrient deficiencies like zinc, foliate, and obesity. This paper is based on a pilot study against health status and dietary intake which was conducted in urban Patna, the aim of this study is to assess the nutritional status of adolescent girls using Body Mass Index (BMI) & Hemoglobin level. For cross-sectional study 200 adolescent girls aged 13-18 years were selected from B.N.R.School/ College, Guljarbagh, Patna City as the study subjects. Pertinent information was obtained by anthropometric measurement and hemoglobin testing. Therefore the study recommends the strong need of nutritional education for adolescents in the urban area also.



KEYWORDS: period of exceptional physical, psychosocial, and psychological.

INTRODUCTION

Bihar, the third most populous State in India, with a population density of 880 persons per sq. km. has recorded the highest decadal growth during the nineties and around 40 percent of its population is below poverty line (**Census 2011**). The major health and demographic indicators of the State like infant mortality rate, maternal mortality ratio,

total fertility rate, etc. are much higher than the all India level and reflect a poor health status in the State. Amongst the major States, the Human Development Index in Bihar has been the lowest for the last three decades (NSI 1983). Our health and well-being, quality of life and ability to learn, work and play depend on how well we are nourished. Good nutrition or nutritional status is the outcome of many complex and interrelated determinants such as access to

adequate, safe, affordable and nutritious food, care and health services. Although good nutrition is universally accepted as a basic human right, it is estimated that globally, more than 800 million people suffer from malnutrition and that in developing countries, more than 20 % of the populations are hungry. Adolescence is a crucial period in a woman's life where socio-demographic factors not only affect her health but also

determine the health of the future generations. The present study was conducted to examine the socio-demographic factors associated with the nutritional status of adolescent girls. Higher the economic status, lower the percentage of malnutrition and vice-versa. A significant correlation was found in the nutritional status among the girls when it was compared with the educational status and occupation of fathers. Higher the economic status, lower the percentage of malnutrition and vice-versa. A significant correlation was found in the nutritional status among the girls when it was compared with the educational status and occupation of fathers (**Jellife1966**).

Youthfulness is an especially one of a kind period in life since it is a period of extraordinary physical, psychosocial, and psychological improvement. Expanded dietary needs at this point identify with the way that young people increase up to half of their grown-up weight, over 20% of their grown-up stature, and half of their grown-up skeletal mass during this period. Caloric and protein prerequisites are maximal. Expanded physical movement, joined with poor dietary patterns and different contemplations, for example period and pregnancy, add to emphasizing the potential hazard for youths of poor nourishment. The main nutrition problems affecting adolescent populations worldwide include under nutrition, Iron deficiency and anemia; Iodine deficiency; Vitamin A deficiency; Calcium deficiency and other specific nutrient deficiencies like zinc, foliate, and obesity (**WHO 1986**). By keeping above all points in mind a pilot study was done against health status and dietary intake which was conducted in urban Patna, the aim of this study is to assess the nutritional status of adolescent girls using Body Mass Index (BMI) & Hemoglobin level.

METHODOLOGY

The core sample for the present study comprised adolescent girls in the age group 13-18 years. A total of 200 girls from B.N.R. School/ College, Guljarbagh, Patna City were selected as the study subject. Interview schedule was constructed to record the data obtained. In addition all the subjects were interviewed regarding their food habits, daily intake of various food items and life style pattern and for achieving these targets physical examination and biochemical examination were also undertaken by using anthropometric tools (measuring tape, weighing machine) and haemoglobinometer.

RESULTS AND DISCUSSION

The results of the present research have been presented under various sections. These sections provide an overview of distribution of the respondents according to age group.

Table 1: Distribution of the Respondents according to Age group

Sl.No.	Age group(in year)	Number(n)	Percentage (%)
1.	13-14	76	38
2.	15-16	54	27
3.	17-18	70	35

Table 1. reveals that out of total 200 adolescent girls, the maximum number that is, 76 (38%) were in the age group of 13-14 years, 70 (35%) were in the age group of 17-18 years and the rest 54 (27%) were in the age group of 15-16 years.

Table 2. Mean Height & weight of Adolescent girls

Age Group (Yrs in range)	Mean Height (Cm)	Mean Weight (Kg)
13-14	150-152	42-45
15-16	152-154	46-49
17-18	154-156	50-53

Table 2 presents anthropometric results of respondents. This Mean Height & weight table shows that most of the children's were underweight.

Table-3 Distribution of subjects according to Prevalence of Clinical Signs of Anemia.

Clinical Signs of Anemia	Adolescent Girls (N-200)	
	N	Percentage (%)
Paleness of Skin	112	56
Pale Conjunctiva	60	30
Pigmentation of Nails	28	14

Clinical signs of skin pallor, pale conjunctiva and pigmentation of nails indicating prevalence of anemia among the subjects were observed (**Table 3**).

Table-4 Grading of Anemic Adolescent girls according to age after biochemical testing.

Anemic stage Grading	Adolescent Girls(Age range)		
	13-15	16-18	Total
Mild	15	21	36
Percent (%)	7.5	10.5	18
Moderate	42	30	72
Percent (%)	21	15	36
Severe	11	17	28
Percent (%)	5.5	8.5	14
Total	110	90	200
Percent (%)	55	45	100

Table 5: Distribution of Subjects according to the category of Anemia as per NIN (1986) classification.

Category	Hb level (g/dl)	Adolescent Girls	
		N-(200)	Percentage (%)
Severely Anemic	≤ 7.0	28	14
Moderately Anemic	8.0-9.9	72	36
Mildly Anemic	10.0-10.9	36	18
Marginally Anemic	11.0-11.9	20	10
Non-Anemic	≥ 12.0	44	22

Table 4 shows the result of biochemical testing of respondents, when compared with **NIN (1986)** classification, 14% & 36% of the Adolescent girls were found to be severely & moderately anemic, 18% of adolescent girls were found to be mildly anemic. 10% of the respondents were marginally anemic. Only 22% of the girls belonged to non -anemic category (Table 5).

CONCLUSION

Nutritional status of the adolescent girls in this study was not satisfactory and the diet of these girls was not balanced. The major factors leading to poverty were large family size and lack of nutrition education. Large longitudinal and cross-sectional studies, regarding nutrient consumption, dietary habits and nutritional intervention are required in the adolescent girls. These studies can be thought provoking for the policy maker at the government level. Nutritional education and health promotion can be used as tool to improve the health status of the nation.

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