

Assessment of Health Profile of Adolescent Girls in Government Schools in Rural Areas of Rohtak, Haryana

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"No adolescent ever wants to be understood, which is why they complain about being misunderstood all the time." - Stephen Fry

Adolescents constitute 22.8 percent of India's population. Adolescence is a significant period of human growth and maturation. It is the most vulnerable stage from the point of view of health. In a country like India, adolescent girls face many health problems due to socio-economic, environmental conditions, nutrition and gender discrimination. A vast majority of girls in India are suffering from either general or specific morbidities.

International Centre for Research on Women (ICRW) has revealed that 60-70 percent of adolescent girls are facing nutritional deficiencies, which have far reaching consequences. If their nutritional needs are not met, they are likely to give birth to undernourished children, thus transmitting under nutrition to future generations.

Objectives

The study had three objectives:

- To assess the health profile of school going adolescent girls in government schools of rural area of Rohtak by recording their body mass index (BMI) and haemoglobin (Hb) level.
- To assess their dietary pattern and physical activities.
- To provide health education pamphlet.

Assumptions

This study assumes that: (1) some students may have knowledge about good health, and (2) 60-70 percent of students may have appropriate health.

Conceptual Framework

The conceptual framework selected for the study was based on General System Theory by Ludwig Von Bertalanffy, 1968. This study included input (assessment of health of school going adolescent girls of rural area), throughput (to check the health profile of adolescent girls with structured health profile

performa), output (nutrition status of study subjects after calculating their BMI and Hb level and categorising them according to the standard cut off values).

Review of Literature

Kanodia et al (2016) conducted a study of anaemia among adolescent girls in eastern part of Nepal with objective was to determine prevalence and distribution of anaemia among adolescent girls. The overall prevalence of anaemia was found to be 51.3 percent. Prevalence was significantly more in pre-menarche age and undernourished girls ($p < 0.05$). However factors like diet (vegetarian/non-vegetarian), worm infestation and parental education did not have a significant impact on occurrence of anaemia.

Varun Gaiki et al (2014) conducted a study to assess the nutritional status of adolescent girls (15-19 years) using anthropometric measures. The average age of study population was 16.72 years with standard deviation of ± 1.47 years. The majority of the study participants were of class IV (37.14%), as per modified BG Prasad classification. Prevalence of wasting was found to be 48.05 percent whereas 30.39 percent individuals were stunted (Premlatha et al, 2012).

Methodology

Research approach adopted was quantitative type and the research design was exploratory. The study setting was GGSSS, Chandi and Kharanti. Consecutive sampling technique was adopted. The sample size was 200 school-going adolescent girls of classes 9, 10, 11 & 12. The dependent variable was health profile of adolescent girls; the demographic variable was class, parent's education and occupation. Health Profile Performa was used.

Inclusion criteria: Adolescent girls who were studying in classes 9 to 12 and were willing to participate, and those available during the period of data collection were included.

Table 1: Frequency and percentage distribution of study subjects according to dietary habits and physical habits

		Number	Percentage
i) Dietary pattern			
1	Vegetarian	187	93.50
2	Non- Vegetarian	13	6.50
Total		200	100
ii) Regular fast food intake			
1	Yes	76	38
2	No	124	62
Total		200	100
iii) Tea intake with meals			
1	Yes	184	92
2	No	16	8
Total		200	100
iv) Fruits and vegetable consumption			
1	Yes	197	98.50
2	No	3	1.50
Total		200	100
v) Green vegetable consumption			
1	Yes	185	92.50
2	No	15	7.50
Total		200	100
vi) Frequency of meals per day			
1	2 meals	70	35
2	3 meals	130	65
Total		200	100
vii) Vitamin C-rich food			
1	Yes	42	21
2	No	158	79
Total		200	100
viii) Participation in outdoor games			
1	Yes	129	64.50
2	No	71	35.50
Total		200	100
ix) Regular physical exercise			
1	Yes	13	6.50
2	No	189	94.50

Table 2: Frequency and percentage distribution of study subjects according to BMI criteria of WHO

S.No.	BMI Criteria	Frequency	Percentage
1	Below 18.5 (Malnourished)	92	46
2	18.5 – 24.9 (Normal)	101	50.50
3	25 – 30 (Overweight)	7	3.50
4	Above 30 (Obese)	0	0
Total		200	100

Table 3: Frequency and percentage distribution of study subjects according to BMI criteria of WHO

S.No.	Anaemia criteria	Frequency	Percentage
1	Above 11 (Normal)	20	10
2	< 9 – 11 (Mild)	107	53.50
3	< 7 – 9 (Moderate)	50	25
4	Below 7 (Sever)	23	11.50
Total		200	100

- Measuring weight by weighing machine and
- Measuring height by measuring scale.

Results

Distribution of study subjects as per dietary pattern, BMI and anaemia prevalence is shown in Tables 1 to 3.

The results with respect to BMI and demographic variables showed that there is a significant among the age, whether the family belongs to BPL, and the dietary pattern; intake of fast food, fruits and vegetables was significantly associated with the physical activities.

The results with respect to anaemia and demographic variables show that there was a significant association of age, class and type of family and with dietary pattern of study subjects; it was significant with meals per day.

Discussion

In the present study the subjects were assessed according to the health profile Performa prepared by the researcher and validated by the field experts. Points included in the Health Assessment Performa were demographic profile of study subjects, questions related to assess dietary habits and physical habits and examination of anaemia with Sahli's method and BMI assessment with weighing machine for weight and measuring tape for measurement of height.

Supportive studies related to the current study:

Among 200 study subjects, 50.50 percent subjects were normal, 46 percent were underweight, 3.50 per-

Exclusion criteria: Adolescent girls not willing to take part or who were not available during the whole period of data collection of same school.

Procedure of data collection was based on following factors:

- Structured health Performa filling
- Measuring Hb by Sahli's Method

cent were overweight category according to WHO. No one was in obese category i.e. 50.50 percent were normal and rest malnourished. While in reference to anaemia, 10 percent were normal, 53.50 percent were mild, 25 percent were moderate and 11.50 percent were in sever category according to WHO i.e. only 10 percent were in non-anaemic and rest were anaemic.

Association between demographic variables (age, class, parent's education and occupation), dietary habit and physical activity questions were seen with BMI in which level of significance was seen at 5 percent, in age, family belongs to BPL, regular fast food intake and fruits & vegetable consumption; with anaemia it was significant with age, type of family and meals per day.

Jugal Kishore (2006) in the study on school adolescents in a rural area of Uttar Pradesh found that 45 percent of study subjects were under weight; in present study 46 percent were under weight. Results were similar.

Premalatha et al (2012) found that the prevalence of anaemia was 78.75 percent and in present study 90 percent were anaemic whereas association was significant with type family, socio-economic status and diet. In present study, it was also significant with type of family and dietary pattern.

Implications

Nursing practice: (a) Health education should aim at improving their knowledge about nutritional status and anaemia by motivating them to change their health deviating behaviours. (b) A Public Health Nurse (PHN) / community health nurse is capable of initiating prevention and control measures along with school health services. (c) Health worker should be encouraged to consider BMI and anaemia surveillance as part of their routine work.

Nursing education: Community health nurses should include in-depth epidemiology of malnutrition and anaemia, its mode of transmission, path physiologic changes, physical assessment, laboratory diagnostic technique, process of community surveillance and its preventive and curative management. Continuing education programme and short term course should be designed for ANM and public health nurse.

Nursing administration: In the context of technological changes and knowledge explosion, nurse administrators should take their responsibilities to update the knowledge and practice of nursing personnel to move along with change. Nurse administrators should support conduction and participation in vari-

ous continuing education programme regarding prevention and control of malnutrition and anaemia. Management should allocate adequate budget, manpower to implement effective health education to help parents and girls to gain knowledge (and confidence) towards prevention and control of malnutrition and anaemia.

Nursing research: The findings of the present study can be helpful for the nursing professional and nursing students to conduct further studies to find out effectiveness of various educational programmes on malnutrition and anaemia.

Recommendations

- ❑ A similar study can be conducted by developing information booklets or by educating teachers.
- ❑ An experimental and comparative study can be done.
- ❑ Health programmes for housewives should focus on the utilisation of easily available and affordable iron-rich diet, forming kitchen garden etc.
- ❑ School health programmes, antenatal programmes should focus on anaemia, targeting individuals' benefit.

Conclusion

This study shows that 46 percent of subjects were malnourished and 90 percent were anaemic out of which 53.50 percent were mildly anaemic. Only few study subjects were having appropriate knowledge about good life style and proper nutritional habits. The printed health pamphlet provided to the subjects will help the teachers and study subjects to improve their knowledge and help in enhancing their life style.

References

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