

ORIGINAL RESEARCH**ABSTRACT****Health Problems in School going Adolescent Girls in field practice Area of Tertiary Care Centre**¹Dr.Mehaboobi Shaik, ²Dr.Moniza Maheen¹Assistant Professor, Department of Community Medicine, Deccan College of Medical Sciences, Hyderabad, Telangana, India.²Assistant Professor, Department of Community Medicine, Deccan College of Medical Sciences, Hyderabad, Telangana, India.**Corresponding author:**

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ABSTRACT

Background: Adolescents form precious human resources in every country & constitute 18% of the total population in India. Adolescence is a period of rapid physical growth, sexual and psychological changes. The aim of the study is to assess the health problems and health issues in Adolescent girls. Their physical growths were also studied.

Methods: It is a cross-sectional study carried out among school-going adolescent girls of standard 6 to 10 in the field practice area of a medical college in Hyderabad. The study duration was from February 2022 to January 2023. The data collection tool used for the study was a semi-structured questionnaire. The data was analysed by using SPSS 20 software.

Results: Among the total of 904 participants 60.1% belong to the 13-15 years age group and the majority belonged to class II socioeconomic status i.e. 45.6%. Around 79.2% are having skin problems. Among them, 37.1% have hair fall problems and 25.6% have multiple problems. Girls with any episode of illness from the past 15 days show stomach pain at 22.9% and headache at 15.9%.

Conclusion: Health problems were found during health check-ups, indicating the need for regular health services.

Keywords: adolescent, health problems, school.

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Introduction

In India, out of 1.4 billion of the total population, 253 million are adolescents constituting around 18% of the total population. Adolescent females are 120 million around 47% of the total adolescent population in India. [1]WHO has defined adolescence as a period between 10-19 years. The adolescence period is further divided into 3 phases: Early (10 to 14 years), middle (15 to 17 years) and late (18 to 19 years). [2]The different problems of adolescent girls are infections, nutritional deficiency disorders (stunting, wasting), iron deficiency anaemia, childhood obesity, menstrual disorders, and skin, dental and eye problems. [3]Undernutrition among adolescent girls is a major public health problem leading to impaired growth.[4] Adolescent girls are the worst sufferers of the ravages of various forms of malnutrition because of their increased nutritional needs and low social power.[5] Most of the problems are linked to lifestyles and social determinants. The behavioural patterns

established during this developmental phase determine their health status and the risk of developing some chronic diseases later. Promoting healthy practices during adolescence and taking steps to protect young people from health risks are critical for preventing health problems in adulthood, thereby improving the country's socio-economic development. [6]

Aim and Objectives: To study the health problems and health issues among school-going adolescent girls of 6th to 10th standard in the field practice area of a medical college.

Methodology: Study design: The study was carried out as a cross-sectional study.

Study area: The study was conducted in an urban, field practice area of a medical college with a population of around 28628. Study duration: The study was conducted from February 2022 to January 2023. Sample size: All students from the above-

mentioned schools. The total number of students was 934, of which 22 were absent and 8 refused to participate in the study. A sample size of 904 was thus obtained. Inclusion criteria: All students who were present on the day of study. Exclusion criteria: Students who did not give consent for participation. The approval by the institutional ethical committee was taken and the necessary permission was taken from the head of the educational institution. After taking the informed consent of the participants a total of 904 school students were interviewed using a pre-tested questionnaire. Questions pertaining to the socio-demographic information and health status.

Anthropometric measurements that is height and weight taken to assess physical growth. Histories of any present illness or any episode of illness in the past 15 days were taken. A general clinical examination of every student was done and any deviation from normal was recorded. Necessary medical advice was given and appropriate treatment was suggested for minor ailments detected during the study. Collected data was entered in Excel format and analysis was done by using SPSS version 20. Data were expressed as a percentage and a P-value <0.05 was considered statistically significant.

Results:

Demographic

The majority of the study participants were in the age group 13 to 15 years i.e., 60.1% followed by 10 to 12 years (5.7%) and 16 to 18 years (14.1%). In the present study majority of the study participants were studying 8th class i.e., 29.8% followed by 9th class (20.1%), 10th class (19.1%) 7th class (19.5%) and 6th class (11.1%) and the majority belonged to class II socioeconomic status i.e. 45.6% followed by class III (39.5%), class IV (9.1%) and class I (5.9%). Physical health status among the total 60.8% of study participants were underweight, 2.7% were obese and the rest (36.5%) had normal BMI. In the present study, 22.9% of study participants were suffering from stomach pain for the past 15 days and 15.9% had headaches. The least common illness was diarrhoea (10.6%) (Figure 1)

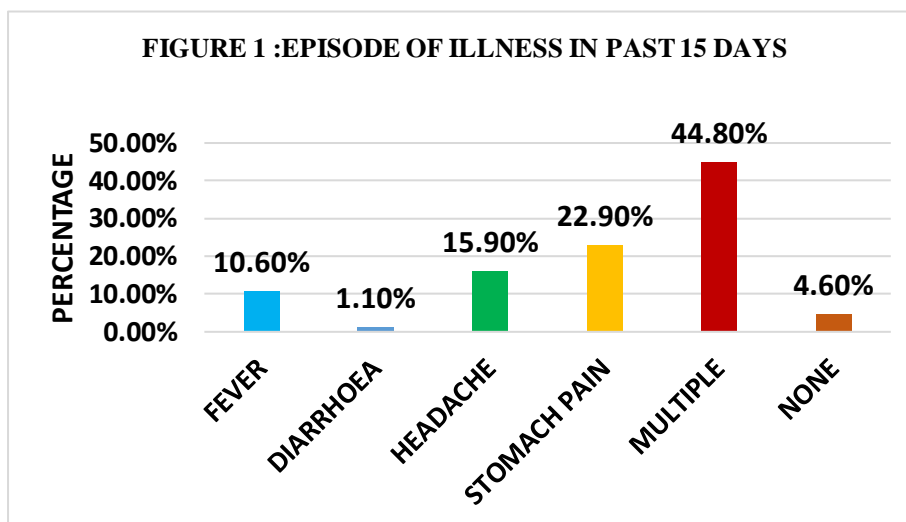


TABLE 1: DISTRIBUTION OF SKIN PROBLEMS

SKIN PROBLEMS		
	FREQUENCY	PERCENTAGE
ACNE	43	4.8
DANDRUFF	90	10
ALLERGIC RASH	14	1.5
SCABIES	2	0.2
HAIR FALL	336	37.1
MULTIPLE	231	25.6
NONE	188	20.8
Total	904	100

Table 1 shows major skin problem was hair fall i.e,37.1% followed by multiple skin problems (25.6%), dandruff (10%), acne (4.8%), allergic rash (1.5%) and the least common skin problem was scabies (0.2%).

TABLE 2: RELATIONSHIP BETWEEN BMI AND SOCIOECONOMIC STATUS

		<18.5 N=550 (%)	18.5 to 24.99 N=330 (%)	>25 N=24 (%)	TOTAL N=904 (%)	Chi- square	p-value
SES	CLASS 1	26 (49.1)	27 (50.9)	0 (0)	53 (100)	23.931	0.001*
	CLASS 2	238 (57.8)	169 (41)	5 (1.2)	412 (100)		
	CLASS 3	238 (66.7)	104 (29.1)	15 (4.2)	357 (100)		
	CLASS 4	48 (58.8)	30 (36.6)	4 (4.9)	82 (100)		

In Class II and III of socioeconomic status each comprising 57.8% undernutrition while 66.7 % of study participants who belong to Class III socioeconomic status were undernourished. There was statistically significant difference was observed between socioeconomic status and BMI (Table 2).

TABLE 3: AGE DISTRIBUTION VS HEALTH PROFILE

		10-12 N=223 (%)	13-15 N=543 (%)	16-18 N=128 (%)	Total N=904 (%)	chi- square	p-value
PALLOR	Yes	40 (17.2)	100 (18.4)	29 (22.7)	169 (18.7)	1.707	0.426
	No	193 (82.8)	443 (81.6)	99 (77.3)	735 (81.3)		
REFRACTIVE ERROR	Yes	42 (18)	138 (25.4)	53 (41.4)	233 (25.8)	23.698	<0.05*
	No	191 (82)	405 (74.6)	75 (58.6)	671 (74.2)		
DENTAL PROBLEM	Yes	48 (20.6)	102 (18.8)	27 (21.1)	177 (19.6)	0.559	0.756
	No	185 (79.4)	441 (81.2)	101 (78.9)	727 (80.4)		
SKIN DISEASES	Yes	176 (78.9)	450 (82.9)	90 (70.3)	716 (79.2)	12.484	0.002*
	No	57 (24.5)	93 (17.1)	38 (29.7)	188 (20.8)		
ENT PROBLEM	Yes	62 (26.6)	107 (19.7)	15 (11.7)	184 (20.4)	11.653	0.003*
	No	171 (73.4)	436 (80.3)	113 (88.3)	720 (79.6)		
UTI	Yes	11 (4.9)	57 (10.5)	21 (16.4)	89 (9.8)	13.361	0.001*
	No	222 (95.3)	486 (89.5)	107 (83.6)	815 (90.2)		
RESPIRATORY CONDITIONS	Yes	23 (9.9)	34 (6.3)	2 (1.6)	59 (6.5)	9.505	0.009*
	No	210 (90.1)	509 (93.7)	126 (98.4)	845 (93.5)		

The most common morbidity in the present study was skin disorders (79.2%) followed by refractive errors (25.8%), ENT Problems (20.4%), Dental problems (19.6%), Pallor (18.7%), UTI (9.8%), Respiratory Problems (6.5%). The most common age group with skin diseases were 13-15 years (82.9%) followed by age group 10-12 years (78.9%) and 16-18 years (70.3%). The difference between them was found to be statistically significant. 22.7% of study participants in the age group 16-18 years had pallor. The most common age group with ENT problems were the age group 13-15 years (19.7%). 41.4% of study participants in the age group 16-18 years had refractive errors. The most common age group with dental problems were age group 16-18 years (21.1%). 9.9% of study participants in the age group 10-12 years had respiratory diseases. 16.4% of study participants in the age group 16-18 years had UTI problems. There was a statistically significant difference among age groups presented with refractive errors, skin diseases, ENT problems, UTI, and Respiratory disorders (Table 3).

TABLE 4: HEALTH PROFILE VS EDUCATION

		6 th Class N=104	7 th Class N=176	8 th Class N=269	9 th Class N=182	10 th Class N=173	Total N=904	p-value
Pallor	Yes	22 (21.2)	11 (6.2)	41 (15.2)	41 (22.5)	54 (31.2)	169 (18.7)	<0.05*
	No	82 (78.8)	165 (93.8)	228 (84.8)	141 (77.5)	119 (68.8)	735 (81.3)	
Refractive Error	Yes	20 (19.2)	31 (17.6)	79 (29.4)	54 (29.7)	49 (28.3)	233 (25.8)	0.015*
	No	84 (80.8)	145 (82.4)	190 (70.6)	128 (70.3)	124 (71.7)	671 (74.2)	
Skin Problems	Yes	78 (75)	144 (81.8)	239 (88.8)	146 (80.2)	109 (63)	716 (79.2)	<0.05*
	No	26 (25)	32 (18.2)	30 (11.2)	36 (19.8)	64 (37)	188 (20.8)	
Ent Problem	Yes	26 (25)	51 (29)	46 (17.1)	48 (26.4)	13 (7.5)	184 (20.4)	<0.05*
	No	78 (75)	125 (71)	223 (82.9)	134 (73.6)	160 (92.5)	720 (79.6)	

There was a statistically significant difference among study participants with different classes of education presented with pallor, refractive errors, skin diseases, ENT problems, UTI, and Respiratory disorders. Pallor and Refractive errors were most common among tenth-class students i.e., 31.2%, and 28.3%. In the present study, 88.8% of study participants who were studying 8th class presented with skin diseases. 29 % of study participants who were studying 7th class had ENT problems (Table 4)

TABLE 5: HEALTH PROFILE VS SOCIOECONOMIC STATUS

	Class-1 N=53 (%)	Class-2 N=412 (%)	Class-3 N=357 (%)	Class-4 N=82 (%)	Total N=904 (%)	Chi-square	p-value
PALLOR							
Yes	3 (5.7)	84 (20.4)	70 (19.6)	12 (14.6)	169 (18.7)	7.787	0.051*
No	50 (94.3)	328 (79.6)	287 (80.4)	70 (85.4)	735 (81.3)		

DENTAL PROBLEM							
Yes	20 (37.7)	52 (12.6)	91 (25.5)	14 (17.1)	177 (19.6)	32.012	<0.05*
No	33 (62.3)	360 (87.4)	266 (74.5)	68 (82.9)	727 (80.4)		
SKIN PROBLEMS							
Yes	47 (88.7)	336 (81.6)	259 (72.5)	74 (90.2)	716 (79.2)	19.936	<0.05
No	6 (11.3)	76 (18.4)	98 (27.5)	8 (9.8)	188 (20.8)		
ENT PROBLEM							
Yes	3 (5.7)	67 (16.3)	88 (24.6)	26 (31.7)	184 (20.4)	21.898	<0.05
No	50 (94.3)	345 (83.7)	269 (75.4)	56 (68.3)	720 (79.6)		

The majority of the study participants who belong to socio-economic class IV and Class II had various health problems. In the present study, 20.4% of study participants presented with pallor belonging to socioeconomic status class II. The majority of study participants presented with skin diseases (90.2%) belonged to socioeconomic class IV. 37.7% of study

participants had dental problems and belonged to socioeconomic class I. There was a statistically significant difference among study participants with different classes of socioeconomic status presented with pallor, dental problems, skin diseases, and ENT problems (Table 5)

DISCUSSION

In the present study majority of the study, participants were in the age group of 13 to 15 years (60.1%). In a study conducted by Gahlot et al (7) majority of study participants belonged to the 14-16 years age group (44.6%) and in another study conducted by Gedam JK et al (8), where a major fraction of the population was in the age group of 15 to 19 years.

In the present study majority of the study participants (29.8%) were studying 8th class which were similar to that of findings in studies done by Sivaguru Nathan C et al (9) done in Kancheepuram, Tamil Nādu (22.7%-middle school). Regarding socioeconomic status the present study shows the majority of participants belonged to (Upper Middle) class II (45.6%) according to modified Kuppaswamy's classification. 39.5% belonged to (Lower middle) class III. None of them belonged to Lower class V. Our findings are inconsistent with a study done by R Altaf Hussain et al (10) who found that 50.7% of study participants belonged to the lower class. In another study done by Kajal Jain et al (11), they found that 50.49% belonged to the upper middle class which was similar to the present study.

Results about nutritional status in the present study show 60.8% of study participants were underweight

and 2.7% of study participants were obese. In a study done by Beevi NP et al (6) obesity was found in 2.8% of students and 51.6% were in the underweight category which was similar to the present study where as a study done by Mendiratta SL et al 63.7% had normal weight, 25.7% of girls are obese & 10.6% are underweight which was not similar to the present study. (2) The most common morbidity in the present study was skin disorders (79.2%) followed by refractive errors (25.8%), ENT Problems (20.4%), Dental problems (19.6%), Pallor (18.7%), UTI (9.8%), Respiratory Problems (6.5%). Srinivasan et al (12) in a study found that the most common prevalent morbid conditions were skin disorders (25.7%), dental caries (21.5%), ARI (1.7%) and diarrhoea (1.2%). Gahlot A et al (7) in their study found that (28.6%) had mild pallor, (18.6%) had moderate and the remaining (9.7%) had severe pallor. Genitourinary (6.6%) Respiratory (3.1%). Skin and hair diseases and (4.6%) ENT and dental diseases (7.7%) which are not similar to the present study. Our study findings correlate with a study done by Sivagurunathan C et al (9) in Kancheepuram district Tamilnadu where about 78.2% of adolescents suffered from acute conditions while 21.8% suffered from chronic conditions. Among the acute conditions, upper respiratory tract infection

constituted 22.5% of adolescent complaints followed by gastrointestinal and ENT problems. The most common chronic condition reported was anaemia (6.1%) which was followed by acne (6%). About 6.6% of the adolescents had some form of genitourinary symptoms and about 6.2 % of subjects reported having skin problems. The difference in the morbidity pattern could be due to regional variation of skin problems in the present study contributing 79.2% of which the most common was hair fall (37.2%) followed by multiple skin problems (26.6%), dandruff (10%), acne (4.8%), allergic rash (1.5%) and the least common skin problem was scabies (0.2%) Similarly, a study done by Ganapathy et al (13) found that 42.9% had dermatological problems. Acne vulgaris (16.1%) was the most common skin disease seen among the study group. Our study findings didn't correlate with a study done by Sivagurunathan C et al (9) in Kancheepuram, Tamilnadu reported that only 6.2 % of subjects had skin problems. The high prevalence of skin diseases in the present study can be attributed to overcrowding and poor personal hygiene. Regarding illness in the past 15 days, the present study shows 22.9% of study participants suffered from stomach pain and 15.9% had headaches. The least common illness was diarrhoea (10.6%) whereas the study done by Ratna et al (14) on adolescent girls found that 51% of adolescent girls were found to be affected by some kind of illness.

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Conflict of interest: None

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Conclusion:

The study concludes that the majority of the study participants are having skin problems (155) and are underweight (136).

Many programs are being held for adolescents nationwide addressing nutrition, health and hygiene, still, we found out that many of them don't have awareness of the health services available to them free of cost.

Various other health problems at health check-ups indicate poor access to regular health services.

Recommendations:

1. Considerable underweight is a concern in the study group hence it is mandatory to reinforce to students the need to take a balanced & nutritious diet.
2. Improvement of personal hygiene and environmental hygiene as it is going to improve the Skin infections in the group studied.
3. Health education to be included in the curricula of regular education.

Limitations

1. This study is based only on the history, clinical and physical examinations of the study participants but no laboratory investigations were done to confirm the same.
2. The results of this study cannot be extrapolated to the general population as it was carried out in a special setting.

Ethics approval:

Approved by the Institutional Ethics Committee

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