STUDY OF PERSONAL HYGIENE, NUTRITIONAL AND MORBIDITY PROFILE OF SCHOOL CHILDREN IN RURAL AREA OF KHAMMAM DISTRICT, ANDHRA PRADESH

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ABSTRACT: BACKGROUND: Majority of the health problems of school children can be prevented by promotion of hygiene and sanitation through health education of school children, teachers and parents. **OBJECTIVES:** 1. To find out the status of personal hygiene among the primary school children. 2. To study the nutritional and morbidity profile of the school students. **MATERIALS AND METHODS:** A cross sectional study was conducted among primary school students in rural area of Khammam district, A.P. **RESULTS:** the study included 180 primary school children (105 boys and 75 girls). The status of personal hygiene was better among girl as compared to boys when it came to clean and combed hairs (82.66 vs. 66.66% , $p < 0.05$), clean clothes (94.66% vs. 79.04%, $p < 0.05$), clean teeth (89.33% vs. 80.95% , $p < 0.05$), use of soap for hand washing at school (86.66% vs. 72.38%, $p < 0.05$), hand washing after toilet (93.33% vs. 80.95%, $p < 0.05$). Anemia (43.88%) and malnutrition (31.66%) was found to be common among the school children. **CONCLUSIONS:** The government health services should regularly undertake school health checkup and health education session in the schools for a wider coverage. Periodic appraisal of school staff and parents of the school students needs to be undertaken in aspects of health of the children.

INTRODUCTION: School health is an important branch of community health. In 1960, the government of India constituted a School Health Committee to assess the standards of health and nutrition of school children and suggest ways and means to improve them.¹ The committee recommended the need for medical examination of pupils and of school nutrition program. Schools are sacred because they provide an environment for learning skills and for development of intelligence that can be utilized by students to achieve their goals in life. School is a place where health education regarding important aspects of hygiene, environment and sanitation, as well as social customs, is being imparted.

There are 6.3 lakh schools in India, with 128.3 million children in primary schools and about 50 million in upper primary schools. ² It is a fact that only 8% of the schools have sanitation facilities in school premises, only 44% have water supply facilities, 19% have urinals and 8% have lavatory facilities. Under these conditions, schools and community environment become unsafe places where diseases are transmitted.³

The present study was undertaken among primary school children of rural area of Khammam district, Andhra Pradesh, with the following objectives:

1. To find out the status of personal hygiene among the primary school children.
2. To study the nutritional and morbidity profile of the school students.

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MATERIALS AND METHODS: The study was undertaken in three Zilla Parishad Primary schools in Villages of Raghunathpalem Mandal of Khammam district in the month of July 2013, after taking necessary permission from the Principals of the school. The base line health check-up of all the 180 students in the school was carried out with the help of pretested and structured questionnaire to find out the status of personal hygiene and related morbidities. The age of the participants ranged from 5-11 years (mean Age 7.2 years). The check-up was carried out by the team of medical officers and social workers from the Department of Community Medicine, Mamata Medical College, Khammam. Data thus collected were analyzed using suitable statistical tests with the help of Epi Info version 3.2.

RESULTS: Table 1 shows that status of personal hygiene was better among girl as compared to boys when it came to clean and combed hairs (82.66 vs. 66.66%, $p<0.05$), clean clothes (94.66% vs. 79.04%, $p<0.05$), clean teeth (89.33% vs. 80.95%, $p<0.05$), use of soap for hand washing at school (86.66% vs. 72.38%, $p<0.05$), hand washing after toilet (93.33% vs. 80.95%, $p<0.05$).

Table 1: Status of personal hygiene among school children.

Indicators of personal hygiene	Boys (n=105)	Girls (n=75)	Total (n=180)	Z -TEST	P-value
Clean and combed hair	70 (66.66)	62 (82.66)	132 (73.33)	2.20	<0.05
Clean and cut nail	58 (55.23)	45 (60.00)	103 (57.22)	0.51	>0.05
Clean clothes	83 (79.04)	71 (94.66)	154 (85.55)	2.58	<0.05
Clean teeth	85 (80.95)	67 (89.33)	152 (84.44)	2.22	<0.05
Use of soap for hand washing at school	76 (72.38)	65 (86.66)	141 (78.33)	2.04	<0.05
Hand washing after toilet	85 (80.95)	70 (93.33)	155 (86.11)	2.22	<0.05
Use of soap for hand washing at home	78 (74.28)	62 (82.66)	140 (77.77)	1.08	>0.05
Use of toothpaste with tooth brush	54 (51.42)	46 (61.33)	100 (55.55)	1.17	>0.05

Figures in the parenthesis indicates percentage

It was found that 30.47% of boys and 28% of girls were suffering from some illness. Table 2 shows that vitamin A deficiency, other vitamin deficiencies and malnutrition was more in boys as compared to girls but this difference was not statistically significant ($p>0.05$). Clinically detected anemia was more common in girls than boys (57.33% vs. 43.28%, $p>0.05$). Overall 43.88% of the school students were anemic, and 25.55% were suffering from vitamin A deficiency.

Table 2: Nutritional status among school children.

Variables	Boys (n=105)	Girls (n=75)	Total (n=180)	Z -TEST	P-value
Anemia	36 (43.28)	43 (57.33)	79 (43.88)	1.70	>0.05
Vitamin A Deficiency	28 (26.66)	18 (24.00)	46 (25.55)	0.13	>0.05
Other Vitamin Deficiency	19 (18.09)	12 (16.00)	31 (17.22)	0.15	>0.05
Underweight (BMI < 5 th percentile)	34 (32.38)	23 (30.66)	57 (31.66)	0.12	>0.05
Overweight (BMI <> 95 th percentile)	3 (2.85)	1 (1.33)	4 (2.22)	1.60	>0.05

Figures in the parenthesis indicate percentage.

Table 3: Morbidity status among school children

Morbidity	Boys (n=105)	Girls (n=75)	Total (n=180)	Z-TEST	P-value
Diarrhea, fever, Upper RTI	12 (11.42)	6 (8)	18 (10)	0.41	>0.05
Head Lice	6 (5.71)	4 (5.33)	10 (5.55)	0.38	>0.05
Scabies	3 (2.85)	2 (2.66)	5 (2.77)	0.12	>0.05
Multiple boils	7 (6.66)	5 (6.66)	12 (6.66)	0.16	>0.05
Dental Caries	2 (1.90)	1 (1.33)	3 (1.66)	0.86	>0.05
History of worm infestation	2 (1.90)	3 (4.00)	5 (2.77)	2.93	<0.05
Total	32 (30.47)	21 (28.00)	53 (29.44)	0.12	>0.05

Figures in the parenthesis indicate percentage.

Boys had more morbidities (30.47%) as compared to girls (28%) but this difference was not found to be significant. Significant difference was observed among boys and girl students about history of worm infestation with worm infestation more among girls (4%) as compared to boys (1.9%).

DISCUSSION: A similar study carried out in South Kolkata ⁴ found that the status of personal hygiene among girls was better compared to boys when it came to clean and trimmed nails (77.8% vs. 50.5%), clean hands and skin (92.6% vs. 68.9%), which are similar to the findings of the present study. However in the South Kolkata study ⁴ boys had better clean and combed hairs as compared to girls (92.23% vs. 85.19%) which are contrary to the findings of our study (boys 66.66% vs. girls 82.66%). Another study carried out in a school in Wardha district⁵ found that 27.6% of the students had clean/combed hair as compared to 73.33% in the present study, while 29.7% of the students had clean/cut nails as opposed to 57.22% in the present study. In the present study girls fared better than boys when it came to clean teeth (80.95% vs. 89.33%, $p<0.05$), use of soap for hand washing at school (72.38% vs. 86.66%, $p<0.05$), hand washing after toilet (80.95% vs. 93.33%, $p<0.05$). Similar findings were observed in the South Kolkata study ⁴. The most common morbidity among girls was clinically detected anemia (57.33%) and underweight (30.66%). For boys the most common morbidity was anemia (43.28%), underweight (32.38%) and vitamin A deficiency (26.66%). The South Kolkata ⁴ study found that the most common morbidity for boys was clinically detected pallor (55.34%) followed by undernutrition (40.78%) and worm infestation (39.81%) while among girls the most common morbidity was again clinically detected pallor (51.85%). These findings are similar to our study. It was found that boys were more under weight than girls (32.38% vs. 30.66%). Similarly the South Kolkata⁴ study observed that boys were more undernourished than girls (40.78% vs. 25.93%).

CONCLUSION AND RECOMMENDATION: The level of personal hygiene was found to be poor among the primary school children. The level of personal hygiene was found to be better in girls as compared to boys. Anemia and malnutrition was found to be common among the school children. The department of Community Medicine, Mamata Medical College, Khammam, regularly takes health education sessions in different schools and localities of Khammam but the government health services should regularly undertake school health checkup and health education session in the

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schools for a wider coverage. Periodic appraisal of school staff and parents of the school students needs to be undertaken in aspects of health of the children.

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