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School Health Screening Program at Khubi Village of Western Maharashtra: A Comparative Study

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ABSTRACT

Background: The goal of this program is to investigate the health and wellness attitudes and novelty of students. Now a day's health is major aspect for student to overcome illiteracy about illness and injury among adolescents. This study promoting healthy behaviors at early age it protects from health risks in adulthood for countries future.
Methods: This is comparative study between primary and secondary school students. Here self administered questionnaire & health cards were used to collect data.
Statistical Analysis: For modeling data SPSS (20.0) software, IBM, INDIA was used.
Results: The mean health knowledge Zillah parishad school students was 6.4±2.2 and high school students was 7.5±1.6 found statistically significant with $p<0.05$. Also personal hygiene, hygiene practices of high school students was quite good while compare it with Zillah parishad school.
Conclusion: Surrounding of high school students was better in respect of Zillah parishad students. A more strategies requires from Zillah parishad organization to bring sustainable changes from tomorrow future.

Keywords: Health status, school health screening, hygiene, BMI.

INTRODUCTION

Schools are in-comparable vantage to promote health of school children. [1-3] School going children's represent one-fourth of the total population and are the future of the country. School health is effective engagements that can helps to improve the quality of education and lifestyle. It has a potential to help students achieve health literacy, enhance their health-related behaviors, and thereby improve their health status. [4-7] Schools with poor water, sanitation and hygiene conditions, and intense levels of person-to-person contact, are high-risk environments for children and staff, and exacerbate children's particular susceptibility to environmental health hazards. Children's ability to learn may be affected by shortage of water, sanitation and hygiene conditions in several ways. It has been focusing on school health policies, life skills-based health education, health services, and a supportive school environment for health promotion. [8,9] School, a convergence center for health and education, is a setting that plays an important role in physical, social, mental and emotional development of children. School health program is an important component of health care facility in the country with starter to purpose of addressing the health needs of children, both physical and mental and in addition, provide for nutritional interventions, yoga facilities and counseling. [10] This program promotes screening of school children for various health problems and raises awareness about health issues in children and their families. [11,12] The important services include general health examination, anthropometry, treating minor ailments, referral and health education. School health program also caters to adolescents who represent around 25% of the world's population and around 59% of developing countries. [3] Morbidity

among school-going children adversely affects their normal growth and development and hence it is a major public health concern. The common ailments seen in this age group are malnutrition, Vitamin A deficiency, [13] dental caries, [14-16] Malnutrition due to deficiency or excess or imbalance of nutrients can put children at high risk of early development of chronic diseases particularly if combined with other adverse lifestyle behaviors. [8,9] Hence, it is vital that these morbidity design and deficiency in nutritional status are detected and controlled to get a healthy and economically productive future generation.

MATERIALS & METHODS

Study Area: Khubi Village, Maharashtra (India).

Study Setting: Observational Comparative Study

Samples: Selected by Randomization (Total =130)

This information was collected during National Service Scheme (NSS) visit at Village Khubi. The results were totally reliable on secondary data. The team comprising of Faculty, Postgraduates, Interns, Medico-Social Workers and Psychologists visited schools for conducting health check-up and imparting health education to the students. The topics for health education constituted locally endemic diseases, reproductive health and personal hygiene. Prior training was provided to volunteers for measuring anthropometry and clinical exam. The health card of the students issued by the department of education was taken as a standard proforma. Age of children was ascertained by school catalogue. Anthropometry readings such as height and weight were measured; body mass index (BMI) was calculated which was followed by detailed general and systemic examination. Information was synthesized after student interactions under observation of Principal. All self administered questions was asked one by one personally. The study questions were multiply into two parts.

1. Sanitary & Hygienic Situation (awareness, monitoring etc.)
2. Major/Minor Health Issues (Any non communicable diseases/BMI etc.)

Measurements and examination details

Weight

Weight was recorded using electronic machine, zero was its calibration before start, school students were asked to step on it and stand still for equal distribution of weight. 100 g. was targeted closer value for consideration. [17]

Height

Height was taken using the wall mounted stadiometer. It was taken after removing the footwear, subject standing erect with feet parallel; heel, shoulders and occipital touching the upright rod, position of head being comfortably erect with the lower border of orbit of the eye in the basement and it was ensured that it should closer to 1 cm.[17]

BMI

The BMI was calculated as the weight (in kilograms) divided by the square of their height (in meters). World Health Organization BMI for age tabular configuration was considered to classify a child as normal, underweight and overweight. [18]

General examination included overall general appearance etc. observationally calculated.

Statistical Analysis:

Results was done by using SPSS (Statistical Packages for Social Sciences 20.0), IBM. “Unpaired t-test” was used for comparison between two independent groups. “Chi-square” was assessing to find out association between knowledge and practices.

RESULTS

A total 130 school students were covered in the field practice during National Service Scheme Camp at Village, Khubi comprising Zillah Parishad School (government body) from 1st std. to 7th std.

and High School (private body) from 8th & 9th std. (10th std. was not part of this study).

All the school students were divided into the different environment (dif. Geographical area) of schools. Hence 1st group was students from "Zilha Parishad School" and 2nd group was students from "High School" which represent primary, secondary and high school students respectively. The mean age of primary and secondary student was 9.67±1.99 years. Whereas, mean age high school student was 13.90±0.73 years. [Pls. see Table1 & Figure1]

Table 1: Distribution of School Student.

School/Gender	*Zilha Parishad School N=87*	*High School N=43*
Male	39(45%)	21(49%)
Female	48(55%)	22(51%)
Age (in years)	9.67±1.99	13.9±0.73

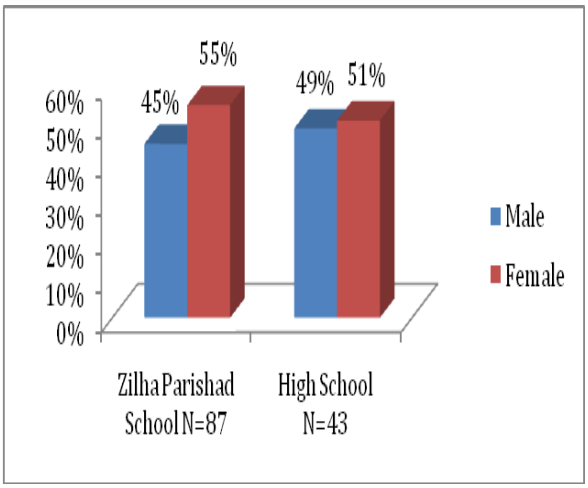

Figure 1: Bar Diagram Representing Distribution of School Student.

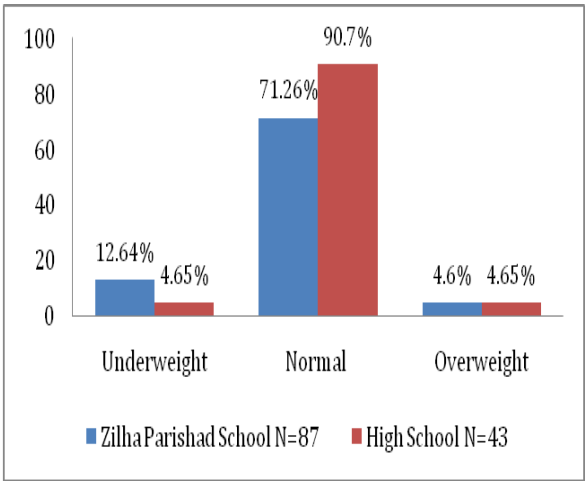

Figure 2: Nutritional Status of School Children as per Body Mass Index.

Table 2: Distribution of Health Knowledge among School Student.

Health Knowledge	*Zillah Parishad School N=87*	*High School N=43*
Mean	6.4	7.5
SD	2.2	1.6
P-value	P<0.0001	

Table 2 revealed that statistical significance in the mean knowledge scores of the students from the group 1 (6.4, SD 2.2) and the comparison group 2 (7.5, SD 1.6). It seems high school student knowledge was significantly better while compare with Zillah parishad school.

Table 3: Distribution of Students as per Grades of Personal Hygiene Status.

Grades	*Good*	*Fair*	*Poor*
Zillah Parishad School N=87	38(44%)	30(34%)	19(22%)
High School N=43	22(51%)	14(33%)	7(16%)
Total N=130	60(46%)	44(34%)	26(20%)
Chi-square = 0.8258 and p=0.6618			

Table 3 revealed that after examination of personal hygiene different grades was examined. Among 130 school students 46% had good personal hygiene, 34% had fair personal hygiene, 26% had poor personal hygiene. The personal hygiene of Zillah Parishad School was poor while compared it with high school students.

Table 4 reported in high school students a slightly higher proportion of hygiene practices such as hand washing before eating (86% vs.64.4%), hand washing after toilet use (93% vs. 78%), using soap while hand washing (63% vs. 34%), brushing teeth at least one times per day (60.1% vs. 54.9%) and brushing teeth two times per day (26% vs. 2%), In this study it seems brushing frequency of both the school was found serious cause of dental caries. Also, the incidence of diarrhea (9% vs. 33%, p = 0.0027) and worming infection (2% vs. 13%, p = 0.1028) was significantly lower among the students in high school. However, most of study variables were found to be statistically significant.

DISCUSSION

A total of 130 school students were interviewed for finding health knowledge, BMI, hygiene practices and health outcomes. Here, Majority students were

present to participate in self hygiene. This study reflected the adverse effect due to unawareness of health risk factors. The frequency of hygiene practices and hygiene knowledge of Zillah Parishad School shows signs of deficiencies. Although investigations indicate that high school student comparatively better among all the study parameters. School health program is, therefore, a vital bridge of departments of Education and Health care providers.

Table 4: Distribution of School Student Hygiene Practices & Health Outcomes.

Hygiene Practices	*Zilha Parishad School N=87*		*High School N=43*		*p-value*
	N	*%*	*N*	*%*	
During the past 30days, how often did you wash your hands before eating?					
Always	56	64.4	37	86	0.0161*
Sometimes	31	35.6	6	14	
During the past 30days, how often did you wash your hands after using the toilet or latrines?					
Always	68	78	40	93	0.0453*
Sometimes	19	22	3	7	
During the past 30 days, how often did you use soap when washing your hands?					
Always	30	34	27	63	0.0027*
Sometimes	57	66	16	37	
How often do you brush your teeth?					
<=One time per day	85	98	32	74	<0.0001*
>=Two times per day	2	2	11	26	
Health Outcomes					
How often did you have a toothache because of your teeth?					
Always	70	80	20	47	0.0002*
Sometimes	17	20	23	53	
Did you suffer from diarrhea or dysentery within past one month?					
Yes	29	33	4	9	0.0027*
No	58	67	39	91	
Did you suffer from worm infection within past one month?					
Yes	11	13	1	2	0.1028
No	76	87	42	98	

**Significant When P<0.05*

It is a golden chance to implement in schools for better prevention at the same time to a large number of students. A lots studies already been done in majority of geographical area of India to discover the health status of school student and to find the growth chart and built up, including the examination of minor illnesses. [19-21]

CONCLUSION

This type of study will helps to gain health outcomes among the schools in Maharashtra. For superiority of school environment need to carry out best health assessing practices for school betterment, by improving quality of available infrastructure mainly focusing screening program in regular manner. It is necessary for schools to work on health risk factors including the effects of knowledge, attitudes, and practices of school going students. This study helps to reduce the risk of harming students and have in place a safe and supportive environment for students. It is necessity for the District Health Officer and PHCs to pay more attention and make separate policies for school students for interventions mainly in rural area to reduce early stage risk. This study helps various schools for health intervention.

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