

Evaluation and Strengthening of Consciousness in Secondary School Students about Hygiene and Common Health Hazards

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Abstract

Background: Knowledge of hygiene and common health hazards is a must to know during schooling. It would be efficient to use a school as the basis of such public health activities, and it would also have a major impact on the community. But there is no record of such previous formal studies in our context. So objective of the present study was to search consciousness in secondary school students regarding health education.

Materials and methods: It was a cross sectional observational study done in five schools. Of these schools, 100 high school students were selected by random lottery method during a period of six months from July 2023 to December 2023. Prior consent was taken from all the school authorities and students were all explained. A pretest was taken with a questionnaire by using Likert scale in some questions, where scoring was done from 1 to 5 and in some questions, in dichotomous style, scoring 1 for correct answer and 0 for wrong answer. After collection of data it was compiled and analyzed by SPSS 20. A posttest was also taken using the same questionnaire and the results were analyzed similarly.

Results: Post intervention tests were higher than the pretest scores in all aspects. The mean pre-test score of 100 students of the five schools was 70.9900 with a standard deviation of 3.97846, the mean post-test score of that was 94.0300, with a standard deviation of 1.20147. This increment in the score was highly significant (*p* value <0.001). The comparison between scores of male and female students in case of both pre-test and post-test showed no significant differences. Mean pre-test score of male students was 71.6750 with a standard deviation of 4.31091 and mean pre-test score of female students was 70.5333 with a standard deviation of 3.70738, *p* value being 0.161. Mean post-test score of male students was 93.9000 with a standard deviation of 1.31656 and mean post-test score of female students was 94.1167 with a standard deviation of 1.12131, this finding is not significant, *p* value being 0.280.

Conclusions: The integration of practices in the areas of health and education considering the prospect of continuing education for educators and students, and the consequent exchange of knowledge that emerges in this context, allows us to reframe the relationship which historically had been constituted between health and education.

Key words: Consciousness; Health hazard; Hygiene; Student.

INTRODUCTION

School is a dynamic space that aims to promote and transform society through construction and dissemination of knowledge. In this sense, it is a privileged space to health promotion, since “health education” is to contribute to the formation of citizens capable of acting in order to improve the levels of personal and community health.¹

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The healthy future of the society depends on the health of the children of today and their mothers, who are guardians of the future. The school health team, led by the school physician, provides leadership in the planning and implementation of a school health policies and food allergy management plan, while supporting partnership among the student's family and health care providers and school staff. Throughout the world, especially in the developing countries, there is an increasing concern and interest in maternal and child health care.

Working with the theme of school health implies not only convey information, but to develop knowledge, skills for the adoption of healthy lifestyles, not only individually, but are potentiated for all members of the society.

Health education builds students' knowledge, skills and positive attitudes about health. Health education teaches about physical, mental, emotional and social health. It motivates students to improve and maintain their health, prevent disease and reduce risky behaviors.

Severe malnutrition is a major problem among under- five children in Bangladesh and many developing countries and is associated with high morbidity and mortality. Malnutrition contributes to more than one-third of all deaths of under-five children. According to the reports of Bangladesh Bureau of Statistics, 10.45% populations are under 5 age group.² Factors associated with poor socioeconomic status including food insecurity, mother's education and high incidence of infectious diseases are the important determinants of severe malnutrition. The future of a nation is linked with the well being of its children, which depends to a considerable extent on their nutritional status.

Medical hygiene includes a specific set of practices, for example, environmental cleaning, infection control in health care facilities, hand washing, water and sanitation and safe disposal of medical waste.

Bangladesh is a developing country in south-east Asia sharing borders with India and Myanmar with a population of >182 million, a poverty level of 33% in addition to another one-third of the population just above poverty level and also having lots of health-related issues.

It would be efficient to use such a school as the basis for public health activities and it would also have a major impact on the community.³

In our study, we tried to evaluate the knowledge of secondary school students about common hygiene and health hazards, e.g., general hygiene, food habits, compliance with EPI schedule, first aid training, mental health awareness, preventive measures against common diseases, like helminthiasis, food poisoning, infectious and contagious diseases.

This type of study enhanced our knowledge about awareness of the students about hygiene and health hazards and helped us to take necessary measures of giving more emphasis on health education delivery to them. The findings of this study will be of tremendous use in curriculum development in secondary level education. The objective study was to search consciousness in secondary school students regarding health education.

MATERIALS AND METHODS

This was a cross sectional observational study with a sample size of 100 (10 students from class IX & 10 students from class X, from 5 secondary schools) from 5 secondary schools in Sitakunda Upazila, namely Hajarat Kalushah (Rah:) Girls' High School, Fouazerhat K M High School, Fouzderhat Collegiate School (FCS) Bhatiary Hazi TAC High School (BHTACHS) Bangladesh Military Academy High School (BMAHS) The schools were selected by random lottery method. A pre-study test was taken on the basis of a structured questionnaire based on hygiene, food habits, common infectious diseases. They were taught by the researcher himself, arranging classes (Two sessions were carried out) about hygiene and common health hazards and the ways to prevent these. Scoring was done for each response. A post-test was taken on the same questionnaire and it was compared with the previous one. The results were analyzed through appropriate statistical procedures (SPSS 20), Student's T test and ANOVA tests were applied and conclusion was drawn. Prior consent was taken from the school authority what is going to be done was explained to the school students and consent was also taken from them.

RESULTS

Table I Comparison of pre-test and post-test scores

	Mean	n	Std. Deviation	p value
Pre-test score	70.9900	100	3.97846	0.001
Post test score	94.0300	100	1.20147	

Table II Gender difference of pretest score and post test scores

	Gender	n	Mean	Std. Deviation	p value
Pre-test score	Male	40	71.6750	4.31091	0.161
	Female	60	70.5333	3.70738	
Post- test score	Male	40	93.9000	1.31656	0.280
	Female	60	94.1167	1.12131	

Table III Gender differences of scores of male students (Pretest and post test) and female students (Pretest and post test)

Gender		Mean	n	Std. Deviation	p value
Male	Pair 1	Pre-test score	71.6750	40	4.31091
		Post- test score	93.9000	40	1.31656
Female	Pair 1	Pre-test score	70.5333	60	3.70738
		Post- test score	94.1167	60	1.12131

Table IV Interschool variations with gender differences of test scores

Gender		n	Mean	Std. Deviation	Std. Error
Male	Pre-test score	BMAHC	10	68.4000	1.26491
		FCS	10	68.4000	1.50555
		BHTACHS	10	72.0000	2.70801
		FHKMHS	10	77.9000	1.52388
		Total	40	71.6750	4.31091
					.68162

Gender		n	Mean	Std. Deviation	Std. Error
□	Post- test score	BMAHC	10	94.2000	.63246
□	□	FCS	10	94.0000	.66667
□	□	BHTACHS	10	94.6000	1.64655
□	□	FHKMHS	10	92.8000	1.39841
□	□	Total	40	93.9000	1.31656
Female	Pre-test score	BMAHC	10	69.6000	1.71270
□	□	FCS	9	68.5556	1.42400
□	□	VHTACHS	11	68.6364	2.06265
□	□	FHKMHS	10	77.8000	1.22927
□	□	HKGHS	20	69.3000	1.92217
□	□	Total	60	70.5333	3.70738
□	Post- test score	BMAHC	10	95.3000	.82327
□	□	FCS	9	94.1111	.92796
□	□	BHTACHS	10	93.3636	.80904
□	□	FHKMHS	10	94.6000	.96609
□	□	HKGHS	20	93.7000	1.03110
□	□	Total	60	94.1167	1.12131

Table V Interschool variations of test scores

Gender		Sum of Squares	d.f	Mean	F	Sig. Square
Male	Pre-test score	Between Groups	603.075	3	201.025	.59.465
□	□	Within Groups	121.700	36	3.381	
□	□	Total	724.775	39		
□	Post- test score	Between Groups	18.000	3	6.000	4.355
□	□	Within Groups	49.600	36	1.378	
□	□	Total	67.600	39		
Female	Pre-test score	Between Groups	641.966	4	160.491	.52.241
□	□	Within Groups	168.968	55	3.072	
□	□	Total	810.933	59		
□	Post- test score	Between Groups	26.049	4	6.512	7.441
□	□	Within Groups	48.134	55	.875	
□	□	Total	74.183	59		

*calculated by ANOVA.

DISCUSSION

A sound mind resides in a sound health. Childhood malnutrition still remains a major cause of childhood morbidity and mortality in Bangladesh. School plays a key role in developing the social and emotional skills that underpins students' physical and mental health and wellbeing alongside academic learning. For that reason, present study was intended to explore the hygiene and common health hazards before and after the deliberation of health educations. The integration of practices in the areas of health and education considering the prospect of continuing education for educators and students, and the consequent exchange of knowledge that emerges in this context, allows us to reframe the relationship which historically had been constituted between health and education.⁴⁻⁷

The mean pre-test score of 100 students of the five schools was 70.9900 with a standard deviation of 3.97846, the mean post-test score of that of was 94.0300, with a standard deviation of 1.20147. This increment in the score was highly significant (p value <0.001). So this is as expected and were also found in some previous studies.^{8,9} These emphasizes the overall necessary steps that may be taken to enrich the national curriculum, giving emphasis on the health and hygiene. Considering the importance of school as a space for the development of health, self-esteem, behavior and life skills for its students, staffs and the community , it certainly is the appropriate environment for the formation of healthy nation of a country,

The comparison between scores of male and female students in case of both pre-test and post-test showed no significant differences. Mean pre-test score of male students was 71.6750 with a standard deviation of 4.31091 and mean pre-test score of female students was 70.5333 with a standard deviation of 3.70738, p value being 0.161. Regarding interschool variations, there were significant differences in pre-test scores of the students of the five schools. Same is true in case of post-test scores, mean scores of different schools showed significant differences. The study was aimed to know the level of consciousness of the secondary level students of Bangladesh about hygiene and common health hazards and their ability to enrich themselves. The study findings will give input to the preferences needed to be given in the study elements in the national curriculum.

CONCLUSION

This study clearly reveals that educating the school -students about hygiene and common health hazards will add to the efforts of the government to give proper health care to the citizens of Bangladesh. In fact, attempts to incorporate the school students in health care delivery system in the form of voluntary activities, such as taking their help in vaccination program, management of natural calamities and infectious disease outbreak etc will be of tremendous positive impact on the health care delivery system.

DISCLOSURE

The author declared no competing interest.

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