Sir Salimullah Medical College Journal

Sir Salimullah Med Coll J 2022; 30: 40-45

Original Article

Knowledge Among School Students Regarding Selected Common Preventable Diseases

Col A S M Zulfiquer Ali

Article information
Received: 08-07-2021
Accepted: 05-12-2021

Cite this article:
Ali ASMZ. Knowledge among school students regarding selected common preventable diseases. Sir Salimullah Med Coll J 2022; 30: 40-45

Key words:
Knowledge, School students, and common preventable disease.

Abstract

Introduction*: The health of school children is a common concern of the school, parents and the community. A child has to be healthy to learn and the school is an important place, next to home, where a child learns to be healthy. The schools are particularly important because these institutions represent gathering places for population of age 5-17 years. They are susceptible to many communicable diseases and vulnerable to physical, mental and moral hazards.*

Objective: *To assess the level of knowledge of school students regarding selected common preventable diseases.*

Methods and Materials*: This descriptive cross-sectional study was conducted from January 2019- June 2019 among purposively selected 101 students of class IX and X of Cantonment Public School and Millennium Star School, Rangpur Cantonment. Data were collected through face to face interview using pre-tested structured questionnaire. Data were checked for quality control and analyzed by computer by using SPSS software.*

Results: *Mean age of the respondent was 14.68 ± 0.24 years. Among the participants maximum 77.2% were in the 13-15 years age group, followed by 22.8% were in the age group of 16-18 years, Male were 55.5% and female 44.5%. Majority of the respondents 51.5% from class X and rest 48.5% from class IX. Out of total 101 respondents 40.0% belonged to Good knowledge, 50.0% average and 10.0% were poor knowledge (Table-IV). Association between mean score of knowledge and age, sex, educational status and monthly family income found statistically significant ($p<0.05$) (Table-V).*

Conclusion: *The study revealed that 40.0% of respondent had 'good knowledge',50.0% had 'Average knowledge', and 10.0% had 'poor knowledge' regarding preventable disease.*

Introduction

Secondary school students are adolescent. Adolescence is the clinical stage of growth and human development which emerge from childhood and merges into adulthood. Proper care of adolescents means investment for the future. Now a days the idea is to encourage people to engage consistently in healthful pursuits. Increased emphasis is given to preventive medicine and consumer's education. Public health efforts are getting importance. People should avoid unhealthy behavior. Risk taking and to adopt health promoting activities, behavioral intervention is a major focus of health education practice [1].

After the family, Schools are most important places of learning for children; they have a central place in the community. Schools are a stimulating learning environment for children and stimulate or initiate change. If sanitary facilities in schools are available, they can act as a model, and teachers can function as role models. Schools can also influence communities through outreach activities, since through their students; schools are in touch with a large proportion of the households in a community [2].

Health and education are interrelated means of development. The success of child survival

Address of Correspondence: Col A S M Zulfiquer Ali, Assistant Director of Medical Service (ADMS), 10 Infantry Division, Ramu Cantonment, Cox's Bazar.

program and the expansion of basic education coverage have resulted in a greater number of children reaching school-age with a higher proportion actually attending primary school. The poor, particularly children in low income countries, carry the greatest burden of morbidity and mortality. Much of this burden results from hazards within their homes or their immediate environment [3].

In the past several decades, Bangladesh has made significant progress in reducing infant mortality and ensuring more children survive to five, the typical age at which most children begin schooling. Increased access to primary school and greater awareness of the importance of education have also increased the number of children receiving a basic education, and 89% of primary school-age children are now enrolled in school, although the mortality rate among school-age children is relatively low, the burden of disease is high affecting children's ability to attend, learn and remain in school [4].

A considerable proportion of school children, particularly in the underdeveloped and developing countries, suffer from malnutrition and deficiency diseases and as such they naturally desire special attention for their physical and intellectual development [5].

A healthy child comes to school to learn and efforts must be made to keep him healthy. The children are a most responsible group and have attitude of learning. It is the best time to include in them the good habit of healthful living. Health knowledge and health practices acquired by a child in the course of study in a school become a part of his way of life [6].

Communicable diseases in humans result from the transmission of contagious agents, such as bacteria and viruses, from another infected person, animal or inanimate reservoir. In almost every case, success in managing communicable diseases follows early recognition and prompt action to ensure that the infectious child stays away from school. [7].

The school going children could make a change about good hygiene practice into home. Health education in school in developing countries is very important. Now school health pilot project started to enhance preventive services. For those purpose teachers are given training on health problems as part of education curriculum. Students are getting education on physical exercise, personal hygiene and common diseases [8].

Communicable diseases are easily pass on from child to child in schools and play-yards. We need to know what to do if our child becomes infected with one of them.

Scabies is a contagious disease of skin caused by the itch mite. People living in a poor sanitary condition suffer more from this disease. Poor hygienic habits band unclean clothing are mostly responsible for development of scabies. All ages, sexes and races are susceptible to scabies [9].

Viral hepatitis is a serious public health problem particularly in developing countries. Hepatitis-A is endemic all over the world. Overcrowding and poor sanitation facilitates the spread of the disease [10]. The school students should be aware of safe drinking water and food.

Hepatitis-B virus infection is one of the causes of morbidity and mortality related to liver disease all over the world. Asymptomatic carriers are the commonest source of infection. But a minor portion of the carriers suffers from acute or chronic hepatitis, cirrhosis or hepatocellular carcinoma [11]. The disease is caused by blood transfusion from infected person, using razors, needles and syringes of infected person. So, adequate information can prevent the Hepatitis-B infection and fatal complication can be avoided[12].

Dental caries in children is one of the important health problems, which concern parents and children. The school system is the logical environment in which to teach preventive dental health practices [12].

All types of heart disease are prevalent in Bangladesh. We can prevent and control many cardiovascular diseases and to reduces the number of attack. People should be informed about various risk factors and dangers of the diseases. So that risk factors can be avoided and corrected in the time before actual damage has taken place [13].

This study will provide information about how much the students aware about the selected diseases. This will identify their lacking and will provide guidelines for planning and preparation of

curriculum to conduct intervention program for students. The findings of the study may help planner to rethink about preventive aspects of those diseases.

Methods and Materials

This descriptive cross-sectional study was conducted in Cantonment Public School and Millennium Star School, Rangpur Cantonment from January 2019 to June 2019. A total of 101 students of class IX and X selected through convenient type of non-probable sampling. Data was collected by face to face interview with semi-structured questionnaire. Out of 101 respondents 51 from Cantonment public school and 50 from Millennium star school, Rangpur cantonment. Data were collected 7 respondents per working day. Knowledge was assessed as per correctness of answer of each question. Total question was 20. Level of knowledge was graded (as per Likert-type scale) according to the correctness of answer of the question. Scoring '1' for each correct answer and '0' for each incorrect answer, Score 16-20 counted as 'Good' knowledge, 11-15 'Average', and 0-10 'Poor' knowledge. Confidentiality was duly ensured to all participants and informed consent was obtained. After collection data were processed and analyzed by computer software SPSS version 23 and expressed in frequency and percentage.

Results

Mean age of the respondent was 14.68 ± 0.24 years. Among the participants maximum 77.2% were in the 13-15 years age group, followed by 22.8% were in the age group of 16-18 years, Male were 55.5% and female 44.5%. Majority of the respondents 51.5% from class X and rest 48.5% from class IX . The highest 56.4% respondent had their monthly family income Tk >40000, followed by 42.6% respondent had their monthly family income between Tk 20000-40000 (Table-I).

Regarding knowledge on preventable diseases, most of the respondents (77.2%%) correctly answered the statement that scabies is transmitted by direct contact and sharing clothing of infected person, scabies can be prevented by taking bath and washing cloth regularly; The mode of transmission of viral Hepatitis-B is the Hepatitis-B infected blood, blood product, syringes and needles. Smoking, extra salt with meal and excess intake of red meat and fatty food are risk factors to develop heart disease. Health problem may occur without cleaning teeth regularly. Diseases may occur without wearinig shoe/sandle during use of toilet. The highest 35.6% respondents could not correctly answer that Hepatitis-B can be prevented by screening blood donors before transfusion. Prevention of disease is possible by washing hand before meal and after defecation (Table-III).

Out of total 101 respondents 40.0% belonged to good knowledge, 50.0% average and 10.0% were poor knowledge (Table-IV). The highest mean score of knowledge 15.60 belonged to those who had monthly family income < Tk 20000, age group 16-18 years had mean score 14.88. Male respondents had more mean score of knowledge (14.71) than female (14.54). Association between mean score of knowledge and age, sex, educational status and monthly family income found statistically significant ($p<0.05$) (Table-V).

Table-I

Socio-demographic characteristics of respondents

Characteristics	Frequency	%
Age group in years		
13-15	78	77.2
16-18	23	22.8
Total	101	100
Mean ± SD = 14.68 ± 0.24 years		
Sex Male	56	55.5
Female	45	44.5
Educational status		
Class IX	49	48.5
Class X	52	51.5
Monthly family income	<20000	1 1
20000-40000	43	42.6
>40000	57	56.4
House type		
Pacca	83	82.2
Semi-pacca	16	15.8
Kaccha	2	2

Table-II

Distribution of respondents by knowledge on preventable diseases

Statements		True n(%)	False n(%)
•	Scabies is a parasitic disease caused by Sarcoptes scabeii	68 (67.3)	33 (32.7)
•	Scabies is transmitted by direct contact and sharing clothing of infected person	78 (77.2)	23 (22.8)
•	Scabies can be prevented by avoiding contact with infected person.	70 (69.3)	31 (30.7)
•	Scabies can be prevented by taking bath and washing cloth regularly	78 (77.2)	23 (22.8)
•	Dental caries or cavities are destruction of teeth due to poor hygiene.	75 (74.3)	26 (25.7)
•	Dental caries are caused by a breakdown of tooth enamel	68 (67.3)	33 (32.7)
•	Good oral hygiene can prevent Dental caries.	76 (75.2)	25 (24.8)
•	The cause of Hepatitis-A or Jaundice is the hepatitis A virus contaminated water and meal	76 (75.2)	25 (24.8)
•	Faeco-oral route is the mode of transmission of Viral hepatitis-A or Jaundice.	67 (66.3)	34 (33.7)
•	Viral Hepatitis-A or Jaundice can be prevented by use of safe, boiled water, hand washing before eating and after toilet.	76 (75.2)	25 (24.8)
•	The mode of transmission of viral Hepatitis–B is the Hepatitis B infected blood, blood product, syringes and needle	78 (77.2)	23 (22.8)
•	Hepatitis-B can be prevented by screening blood donors before transfusion.	65 (64.4)	36 (35.6)
•	Chest pain, Dyspnea on exertion, Palpitation are the symptoms of heart disease.	76 (75.2)	25 (24.8)
•	Smoking, extra salt with meal and excess intake of red meat and fatty food are risk factors to develop heart disease.	78 (77.2)	23 (22.8)
•	Heart disease can be prevented by stoping smoking, regular exercise, reducing body weight and reducing intake of fatty food.	75 (74.3)	26 27.7)
•	Health problem may occur without cleaning teeth regularly	78 (77.2)	23 (22.8)
•	Diseases may occur without cutting or cleaning nail	76 (75.2)	25 (24.8)
•	Diseases may occur without shoe/sandle during useing toilet	78 (77.2)	23 (22.8)
•	Health problem may occur if hair care is not taken	68 (67.3)	33 (32.7)
•	Prevention of disease is possible by washing hand before meal and after defecation.	65 (64.4)	36 (35.6)

Table-III

Distribution of respondents by level of knowledge

Level of knowledge	Frequency	percentage
Good knowledge (Score 16-20)	40	40.0
Average knowledge (Score 11-15)	51	50.0
Poor knowledge (Score 0-10)	10	10.0
Total	101	100.0

Table-IV

Association between mean score of knowledge and socio-demographic characteristics

Variables	Frequency	Mean score	SD	Statistics	
Age group in years	13-15	42	14.29	4.32	F=2.00df=1P<0.05
	16-18	59	14.88	5.79	
Sex	Male	54	14.71	5.39	F=1.99df=1P<0.05
	Female	47	14.54	4.79	
Educational status	Class IX	46	14.39	4.71	F=1.99df=1P<0.05
	Class-X	55	14.84	5.46	
Monthly family income	<20000	31	15.60	2.81	F=3.00df=2P<0.05
	20000-40000	33	14.65	3.24	
	>40000	37	14.73	3.71	

Discussion

The mean age of the respondents was 14.68 ± 0.24 years. Maximum 77.2% were in the age group 13-15 years and rest 22.8% were in the age group 16-18 years, which is dissimilar with the finding of the study conducted by Rahman A in 2002 [14], where he found age of the majority students 46.66% were in the age of 12 years. In present study majority of the respondents were male (55.5%), which is dissimilar with the finding of the study conducted by Rahman A in 2002 [14] where he found majority of the respondents were girls (63.33%)

It was evident from the study that 82.2% respondents were living in pucca house, which is dissimilar to the finding of the study conducted by Chowdhury FA in 2008 [15], where he found 24.2% respondents were living in kaccha house. The cause of the dissimilarity may be due to differences in the study population and sample size. Rural people are still living in kaccha house. Parents of majority 56.4% respondents had monthly family income > Tk 40000, which is dissimilar with the finding of the study conducted by Dhar S in 2000 [16], where they found monthly income of majority respondents were ranged Tk. 1000-2000.Monthly income of the respondent's parents was high because of their occupation and educational status.

In this study, it was revealed that 67.3% respondents had knowledge about cause of scabies, which is dissimilar with the finding of the study conducted by Hossain MM [17], where it was found that 9.1% respondents had awareness regarding cause of scabies. This may be due to practicing good health habits with emphasis on the improvement of personal hygiene.

In this study it was depicted that 74.3%, 67.3% and 75.2% respondents had knowledge about definition, cause and prevention of dental caries respectively, which is inconsistent with the finding of the study conducted by Ahmed S and Aftabuddin AKM[18], where they found 15.04% of total respondents had good knowledge and 96.09% had poor knowledge.

In this study it was evident that regarding Hepatitis A, 75.2%, 66.35% and 75.2% respondents had knowledge about causes, mode of transmission and prevention of disease respectively, which is similar to the finding of the study conducted by Ahmed S Aftabuddin AKM [18], where it was found that respondents gave correct response about meaning of hepatitis and respondents knew that hepatitis is a communicable disease.(56)

In this study it was shown that,77.2% and 64.4% respondents had knowledge about mode of transmission and prevention of Hepatitis-B respectively. A study was conducted on knowledge regarding hepatitis infection among the Madrasha students by Siddque S [19], and findings were relevant with meaning of hepatitis as communicable disease.

In this study it was revealed that 75.2%, 77.2% and 74.3% respondents had knowledge about symptoms, risk factors and prevention of heart diseases respectively, which is dissimilar with the finding of the study conducted by Hossain MM [17], where he found only 4.5% had correct knowledge

and 45.5% had no knowledge about heart disease and only 12.7% had correct knowledge about prevention of heart disease.

In this study it was evident that respondents had knowledge regarding cleaning teeth 77.2%, cutting or cleaning nail 75.2%, Using toilet without shoe or sandel 77.2%, hair care 67.3% and washing hand before meal and after defecation 64.4%. This finding differs from the study conducted by Alyssa Vivas et al [7] ,which shows that 25% respondents having good knowledge about personal hygiene. (Table-II).

In this study it was shown that 40.0% respondents had level of 'good knowledge', 50.0% 'average knowledge' and 10.0% had 'poor knowledge'. Association between mean score of knowledge and age, sex, educational status and monthly family income found significant ($p<0.05$).

Conclusion

A child has to be healthy to learn, and the school is an important place, next to home, where a child learns to be healthy. The study was designed to assess the knowledge of school children about common preventable diseases including personal hygiene awareness. The study depicted that 40.0% of respondent had 'good knowledge', 50.0% had 'average knowledge', and 10.0% had 'poor knowledge' regarding preventable disease like Scabies, Dental caries, Viral hepatitis-A, Viral hepatitis- B and Heart disease. It was revealed that majority of the students had knowledge that disease may occur without personal hygiene practice.

References

1. Park K. Text book of Preventive and Social Medicine, 20th edition. M/s Banarsidas Bhanot, Jabalpur, India, 2009;108(1):43-45
2. Pal BY. A handbook of Hygiene and Public Health, 13th edition, Page-563.
3. Rashid KM, Rahman M, and Hyder S. Text book of Community Medicine and Public health, 4th edition. RHM Publishers, Dhaka 2004:14-16
4. National Workshop, School Health and Nutrition, Jointly organized by Ministry of Health and Family Welfare and save the children, Bangladesh bCountry Office, May 2004.
5. Khabiruddin M. Health of School Children in :Rashid KM, Khabiruddin M, Hyder Sayeed, editors. Text Book of Community Medicine and public Health 3rd edition. Dhaka:RKH publisher;1999:160
6. DGHS/SHFP/WHO. School Health introductory Book;Dhaka; School Health Pilot project DGHS,1998. p-1
7. Vivas A et al. A study on knowledge, attitude and practice of hygiene among school children in Angola, Ethiopia, October, 2008.
8. School Health Pilot Project DOHS Dhaka.School Health Guide for teachers.Dhaka: DGHS, 2000:1
9. Islam Shariful AKM. Scabies and Ringworm.In: Rashid KM, Khabiruddin M, Hyder Sayeed, editors. Text book of Community Medicine and Public Health 3rd Edition.Dhaka: RKH publisher;1999:256.
10. Rahman M. Communicable disease in: Rashid KM,Khabiruddin M Hyder S, editors. Text Book of Community Medicine and Public Health. 3rd Edition. Dhaka: RKH publisher; 1999.p-207.
11. Shahidullah M, Hafez M, Rahman MM, Hossain MM. Hepatitis –B surface antigen in non-professional blood donors in IPGMR, JOPSOM. 1998;17(2):116.
12. Badruddin M Uddin B, Khatun F, Ahamed A. Prevalence of Dental Caries in Adult populous in a District of Bangladesh. JOPSOM 1992;11(1):39
13. Malik A. Prevention of Cardiovascular Disease. Bangladesh Medical Journal 1979;7L3 and4):91-93.
14. Rahman A. A study on practice regarding personal hygiene among school going and non school going children in a selected rural area. NIPSOM: Dissertation, June,2002.
15. Chowdhury FA Study on personal hygiene practice among the food handlers of Dhaka University Hostels, NIPSOM: Dissertation,June,2008.
16. Dhar S. Personal hygiene practice and distribution of intestinal parasite among the restaurant workers of Mohakhali area, Dhaka, NIPSOM: Dissertation June, 2000.
17. Hossain MM. "Knowledge of rural population about some common preventable diseases".[Dissertation, NIPSOM]. Dhaka University 2001.
18. Ahmed S; Aftabuddin AKM. Common skin diseases. Bangladesh Medical Research Council Bulletin. 1977;111(1):43.
19. Siddique SA. Health education intervention on knowledge regarding Hepatitis-B infection among the Madrasha students in selected Madrasha of Bangladesh. [Dissertation] NIPSOM June 2000 p-26.