

Original Article

Assessment of Environment in Selected Primary Schools in Mymensingh Municipality

M.S. Basher¹, ASM S Ullah², ABM M Haque³, A A Begum⁴, M S Kamal⁵, S Akhter⁶

Abstract

A school health service is an economical and powerful means of raising community health. Healthful school environment is one of the aspects of school health services. A descriptive, cross-sectional study was conducted at five purposively selected government and non-government primary schools in Mymensingh Municipality with a view to assess their environment. It was revealed that one (20.0%) school was situated in busy or crowded places, and one (20.0%) school did not have any enclosure. As many as 2 (40.0%) schools were located in low land. Most (4, 80.00%) of the schools were two-storied or multi-storied. One school did not have any facility for drinking water. Majority (3, 60.0%) of the schools were devoid of play-ground. It was observed that out of thirty-six, 17 (47.22%) classrooms were provided with non-attached and mixed type of seats and desks. At least 5 (15.99%) class-

rooms did not have cross-ventilation. The distance of black-board was less than 7 feet from the front desks in 30 (80.33%) class-rooms, while it was over 25 feet from the rear desks in 35 (97.22%) class-rooms. It was revealed that a significant number (24, 66.67%) of class-rooms accommodated more than 40 students, while a considerable number (33, 91.67%) of class-rooms had floor space less than 480 square feet. Moreover, only 8 (22.22%) class-rooms had 10 square feet floor space per student. It can be concluded that existing school environment is not acceptable at all, and should be improved to help in promoting growth and development of our future generations. Further large scale study should be carried out for better understanding of actual scenario of school environment existing in our country.

Key Words: School Health Service, School Environment, Class-room Environment

Introduction:

A school health service is an economical and powerful means of raising community health, for future generations in particular.¹ Modern concept of school health services is to provide comprehensive health care to school students.² Healthful school environment, one of the aspects of school health services, therefore is essential for the best emotional, social and personal health

of the pupils^{1,2}.

The minimum standards for sanitation of the schools and its environs are important factors for growth and development of students. The school should ideally be located at a place away from busy places^{1,2}. It should be properly fenced and kept free from all sorts of hazards.² The site should be on suitable high land, and not subject to inundation or dampness.¹ Ideally, for a primary school playground should be five acre with an additional one acre of land per 100 students.¹ In addition, for nursery and secondary classes, school should as far as possible be single-storied^{1,3}.

Class-room environment constitutes an important part of whole of the school environment. A class-room should have white interior wall and sufficient natural light, with an area not less than 480 square feet.² Furthermore, in a class room per capita floor space for students should not be less than 10 square feet. No class-room should accommodate more than 40 students in general.¹ Single seat and desks are ideal, and next in order of preference comes the dual seats and desks. Desk in primary school should be of minus type.¹ The distance of the black board should not be greater than 25 feet (710 cm) from rear desk, or less than 7 feet (212 cm) from front desk.² Windows should be placed on different walls for cross-ventilation. The ventilators should not be

1. Md. Shahidul Basher, Assistant Professor, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

2. A S M Shahid Ullah, Lecturer, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

3. A B M Maqsubul Haque, Lecturer, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

4. Anow Ara Begum, Lecturer, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

5. Mohammad Shahjahan Kamal, Medical Officer, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

6. Suraiya Akhter, Lecturer, Department of Community Medicine, Mymensingh Medical College, Mymensingh.

Corresponding author

Md. Shahidul Basher
E-mail: drmsbasher@yahoo.com

less than two per cent of the floor area.¹ In addition, there should be an independent source of safe and potable water supply, which should be continuous, and distributed from the taps. A school should also be provided with privies and urinals, separate for boys and girls.¹

The children are considered as future leaders of a nation. Proper development of children is very essential for the prospect of a nation. School, undoubtedly, plays a vital role to develop as well as to prepare physically, mentally and socially for entry into adulthood as a step towards achieving the development of a nation. So, adequate facilities of a school are good indicators for the development of a nation. In our country, school health programme emerged in 1951 as a pilot project of Ministry of Health and Family Welfare (MOHFW). Later on, health education programme was integrated in 1982. At present, school health service has been organizing nationally in a limited scale in 1551 schools through 23 school health clinics. It may be mentioned that school health service in our country is in primitive stage.⁴ Government of Bangladesh has been trying to promote the school health programme.

Health of the school children is a common national concern. Child has to learn to be healthy, and the school is an important place next to home, where a child is taught to be healthy. School environment should be healthful as children spend golden portion of their time in the school. Healthful school environment therefore is necessary for the best emotional, social and personal health of the pupils.¹ Moreover, Bangladesh government has identified the school to be the focal point for health promotion through school teachers, and students who can educate their peers, their families and their communities on health.⁴ Less is known as to the environment in which our students, the future leader, spending a considerable duration of life time. So, it was decided to assess the school environment to know the actual scenario existing in our situations.

Methodology:

A Descriptive, cross-sectional study was conducted from October 24, 2009 to April 22, 2010 at five government and non-government primary schools under Mymensingh municipality

in an attempt to assess school health environment in selected schools. Non-probability, purposive type of sampling technique was followed in selecting the schools. Semi-structured, interviewer-administered questionnaire was the research instrument. Data concerning the school environment, such as site, location, drinking water, eating, lavatory and play-ground facilities; number of students and floor space in a class-room, per capita floor space, desks and seats, were collected by the fourth year under-graduate medical students (M-44) as per their requirements of undergraduate curriculum. For quality control of data, orientation of the students about the survey including its objectives, methodology, questionnaire, and their role as data collector was carried out for about a month. Over and above, data were collected in five different batches under the guidance of one teacher in each batch from Community Medicine Department, Mymensingh Medical College, Mymensingh. Data were analyzed manually by using master sheet and scientific calculator.

Results:

A descriptive, cross-sectional study was conducted in five selected government and non-government primary schools to assess school environment that exists in our country. It was evident that out of five schools, 4 (80.00%) were situated away from busy places and had enclosure. Three (60.00%) schools were located in high land, while two (40.00%) were in low land. Majority of the schools (3, 60%) were two-storied, while one (20.00%) was single and the rest one (20.00%) was multi-storied.

Facilities for drinking water were available in most (80.00%) of the schools. Of them, three had shallow tube-well, while the rest one had deep tube-well. It was observed that majority (3, 60.00%) schools did not have any play-ground.

In five schools, there were 36 class-rooms in total. Of them, 29 (80.55%) class-rooms had veranda, whereas the rest 7 (19.44%) did not have any veranda. It was observed that majority of the class-rooms (19, 52.78%) had attached seats and desks, while 15 (41.67%) had non-attached type, and the rest 2 (5.55%) had mixed type of seats and desks

Table-I: Class-rooms with type of Seat and Desk

Type of Seat and Desk	Frequency	Percentage
Attached	19	52.78
Not Attached	15	41.67
Mixed	2	5.55
Total	36	100.00

Out of thirty-six, 25 (69.44%) class-rooms had plus type of school desk and the rest 11 (30.56%) had minus type of desk (Fig.1).

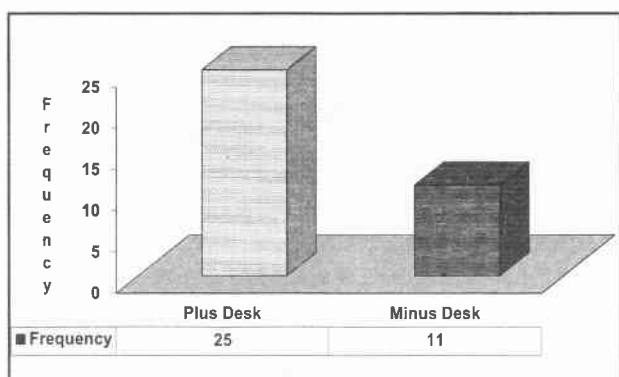


Fig.1: Simple bar diagram showing type of desk in schools

Most of the class-rooms (31, 86.11%) were well-ventilated with cross-ventilation facilities, while only 5 (13.89%) did not have cross-ventilation.

Regarding the source of light in class-rooms, it was revealed that 26 (72.22%) had natural light, while in the rest 10 (27.78%) the sources were both natural and artificial one. Majority of the class-rooms (16, 44.44%) were painted with white colour, whereas 11 (30.56%) with yellow colour, 6 (16.67%) with mixed colour and the rest 3 (8.33%) with off-white colour. As regards to distance of black board from front and rear desk, it was estimated that in a significant number (30, 83.33%) of class-rooms the distance was less than 7 feet from the front desks, and in a considerable number of class-rooms (35, 97.22%) the distance was more than 25 feet from the rear desks (Table II & III).

Table-II: Distance of black-board from front seat

Distance in Feet	Frequency	Percentage
Less than 7 feet	30	83.33
7 feet or over	6	16.67
Total	36	100.00

Table-III: Distance of black-board from rear seat

Distance in Feet	Frequency	Percentage
More than 25 feet	35	97.22
Equal to or less than 25 feet	1	2.78
Total	36	100.00

It was revealed that majority (24, 66.67%) of the class-rooms were designed for accommodation of more than 40 students, while 12 (33.33%) class-rooms were meant for 40 or less students. It was estimated that out of 36 class rooms, only 3 (8.33%) had floor space 480 square feet and above (Fig.2).

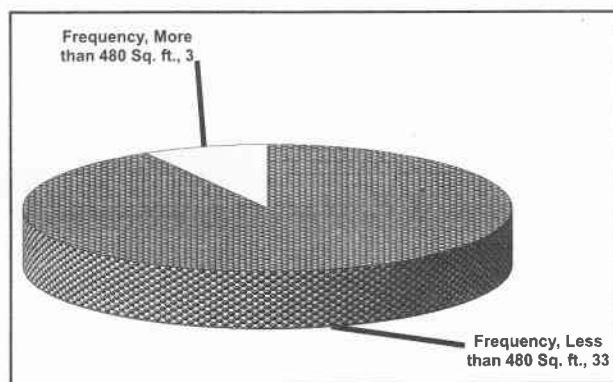


Fig. 2: Pie diagram showing floor space in classrooms

Moreover, it was calculated that in class-rooms per capita floor space ranged from 1.41 to 29.06 square feet. Out of 36 class rooms, only 8 (22.22%) met the minimum requirements of 10 square feet floor space per capita. Only two schools had urinals and toilets. Of them, one had five toilets and five urinals, whereas the rest one had only one toilet and one urinal. No where,

urinals and toilets were, however, separated for boys and girls.

Discussion:

A descriptive, cross-sectional study was conducted in five selected government and non-government primary schools to get an idea about existing situation of school environment in our country. It was observed from the study that one (20.0%) school was situated in busy or crowded places, whereas one (20.0%) school did not have fence. Ideally, a school should be located away from a busy place with a fence around its premises to protect students from all sorts of hazard^{1,2}. It was also observed that two (40.0%) schools were located in low land. This was not in line with ideal condition that school site should be on suitable high land, and not subject to inundation or dampness¹. As many as 4 (80.00%) schools were either two-storied or multi-storied. This observation was also in contrast with the ideal criteria that nursery and secondary schools, as far as possible, are single-storied^{1,3}. Also, it was observed that one school (20.0%) was not provided with drinking water. Ideally, in a school there should be an independent source of safe and potable, continuous water supply^{1,2,3}. Regarding availability of play-ground, it was observed that majority (3, 60.0%) schools did not have any play-ground. In a school there should be a play-ground near it or it should be centrally placed^{1,2}.

Five schools had 36 class rooms in total out of them, 17 (47.22%) class rooms had non-attached and mixed type of seat and desk. Single seat and desk is ideal for the primary schools^{2,4}. It was also observed that 25 (69.44%) class-rooms had plus type of school desk and the rest 11 (13.89%) classrooms had minus type of desk. At least 5 (15.99%) class-rooms did not have cross-ventilation. Ideally, windows should be placed on different walls for cross ventilation¹. As many as 20 (55.56%) class-rooms had interior wall other than white colour. This was in contrast with the standard that the inside colour of the class room should be white¹. It was estimated that in a significant number (30, 80.33%) of class rooms, the distance of black-board was less than 7 feet from the front desks, and in a considerable number of class-rooms (35, 97.22%), the distance was more than 25 feet from the rear desks. Ideally, the distance of the black

board should not be greater than 25 feet or less than 7 feet². With regard to number of students in a class-room, it was revealed that majority (24, 66.67%), of class-rooms accommodated more than 40 students. Regarding floor space of class-room, it was revealed that a considerable number (33, 91.67%) of class-rooms had floor space less than 480 square feet. A highest number (28, 77.78%) of class-rooms did not meet the minimum requirements of 10 square feet floor space per student. Ideally, no class-room should accommodate more than 40 students¹, and area of the class-room should not be less than 480 square feet², per capita space for students in a class-room should not be less than 10 square feet¹.

Conclusions:

A school is next to home, as the students spend a considerable amount of time in school. Environment in a school may act as a demonstration centre, and encourage students to inculcate knowledge, attitude and practice with regard to good health habits and personal hygiene. On the basis of the findings of the survey, it can be concluded that existing school environment is not up to the mark. It should be improved to help in promoting growth and development of our future generations.

Recommendations:

On the basis of study findings, the following recommendation can be made:

Further large scale study may be carried out to get an idea about the actual scenario of school environment existing in our country. If it be in line with this study, then all important aspects of school environment like site, location, play ground, facilities for drinking water, eating, lavatory and play ground; number of students and floor space in a class-room, per capita floor space, desks and seats should be taken into consideration for making the environment healthful which pave the way for promoting growth and development of our future generations.

References:

1. Park K. Park's Textbook of Preventive and Social Medicine, 20th edition, M/s Banarsidas Bhanot, 1167, Prem Nagar, Jabalpur, 482 001 (MP), India 2009: p.498 - 514.
2. Rashid KM, Rahman M, Hyder S. Rashid,

Khabir, Hyder's Textbook of Community Medicine and Public Health, 4th edition, RHM Publishers, House No. 98-E, Road No. 13/C, Banani, Dhaka-1213, Bangladesh, 2004: p.164 - 168.

3. Bari SAA. A Textbook of Community Medicine (Preventive Medicine and Public Health), 1st edition, Lubdhok Prokashani, House-7, Road-8,

Block-C, Mirpur, Dhaka, Bangladesh, May 1986:p.291-297.

4. Anonymous. School Health Programme in Bangladesh, Ministry of Health and Family Welfare (MOHFW), Directorate General of Health Services (DGHS), Mohakhali, Dhaka, 1993:1-5.