

Communicable Diseases of Grass Root Level Students in A Selected Madrasah

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ABSTRACT:

Background: In Bangladesh, about 4 million students study in nearly 64000 madrasahs, which represent approximately 7% of all students. Most of these madrasah are unregistered. Madrasah students usually come from low socioeconomic background. Madrasahs are often congested with large number of students. Personal hygiene and communicable diseases are interrelated. **Methodology:** This study conducted in a madrasah located in rural part of Narayanganj. This was a cross sectional study which was carried out on 164 out of 1000 residential students selected by simple random sampling. Face to face interview was conducted with a structured questionnaire. **Results:** All of 164 students were male and age range from 06 to 18 years. Communicable disease prevalence was 81%. Most common problem (25%) was the RTI followed by Scabies and loose motion and Enteric fever (20%, 18% & 15%). Among all 30 (19%) students suffered by non-contagious diseases. Allergy was most common (35%), 27% suffered growing pain and 23% were nonspecific abdominal pain. Only 6 students suffered by chronic diseases. **Conclusion:** There need regular surveys to determine incidence and prevalence of communicable diseases and to identify their risk factors. It is important for appropriate management and control, as well as equality of treatment facilities.

Key words: Communicable disease, Madrasah students.

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INTRODUCTION:

In Bangladesh there are 20,808 registered madrasahs and it is believed that unregistered will be 64,000 and about 04 million students study there¹. Most of these are residential. They study, live and sleep on the floor of that madrasah. Therefore chance of communicable diseases are more common. The prevalence of contagious diseases is increasing throughout the world at an unprecedented rate. A contagious disease is a sub section of infectious diseases which are easily transmitted by the physical contact with one person to another by their cough, sneeze or objects touched by unclean hand or by surrounding environment².

One study shows that, in Africa, one in every ten children aged 6 to 12 years old is affected by contagious diseases³. Furthermore, in both developed and developing countries proportionately girls are more susceptible than boys to contagious diseases. Contagious disease surveillance deals with contagious diseases (also called communicable diseases), which are diseases capable of being transmitted from one person or species to another⁴. These are often spread through direct contact with an individual, contact with the bodily fluids of infected individuals, or with objects that the infected individual has contaminated⁵.

Madrasahs are the densely populated residential cum study home where a lot of students commonly live. They have no separate room for these different purposes. Overcrowding creates huge increase in communicable diseases like diarrhea, RTI, skin diseases. Proportionate numbers of

toilet are not available. Consequently, they have no legal access to safe drinking water. As elsewhere, madrasa students do not attracted much attention from the public health policy makers in Bangladesh. Studies on the effects of environmental factors on madrasah student's health in the context of Bangladesh are scarce⁶. So the objective of the study was to observe the prevalence of communicable diseases of students in a grass root level madrasah.

METHODS AND MATERIALS:

This descriptive type of cross sectional study was designed to assess the prevalence of communicable diseases conducted in convenience selected madrasah in Narayanganj, Bangladesh during March to August 2012. The target population (1000) consisted of individuals live and study in that madrasah in Arihazar, Narayanganj. A large tin shed room of that madrasah, with cross ventilated 14 windows, 5 doors. No furniture is there for usual use. A total of 164 madrasah students were enrolled for the study by simple random sampling. An open ended structured questionnaire was used to collect data; from face to face interview. Verbal information was collected for disease prevalence and check list was filled by current problem after observation of each sample. Verbal informed consent was taken from the respondents by explaining the purpose of the study. Collected data were analyzed by SPSS (Statistical Package for Social Science) software. The study was approved by the ethical board of the Bangladesh Society of Epidemiology (BSE).

RESULT:

Data was collected from 164 madrasah students. Ages were 6-18 years. Among parents 45% were illiterate and 5.5% were HSC or above, 43% fathers were cultivator and only one father was a moulovi. Among madrasah students 96% suffered by various types of diseases and these were both communicable and non-communicable.

Table-1: Age wise disease prevalence of madrasah students (n-158):

Age group	Frequency (%)	Categorical disease		Total
		Communicable	Non communicable	
06-12	Frequency (%)	51(74%)	18(16%)	69

13-18	Frequency (%)	77(87%)	12(13%)	89
Total	Frequency (%)	128	30	158
	Percentage	81%	19%	100%

$\chi^2(df-1)-8.650, P<0.05$

Among all 87% students between the age group 13-18 years, were more vulnerable for communicable diseases and whereas 74% 06-12 years age group were more vulnerable for communicable diseases. More than three quarter (81%) were suffered by communicable disease and non-communicable were only 30 in number.

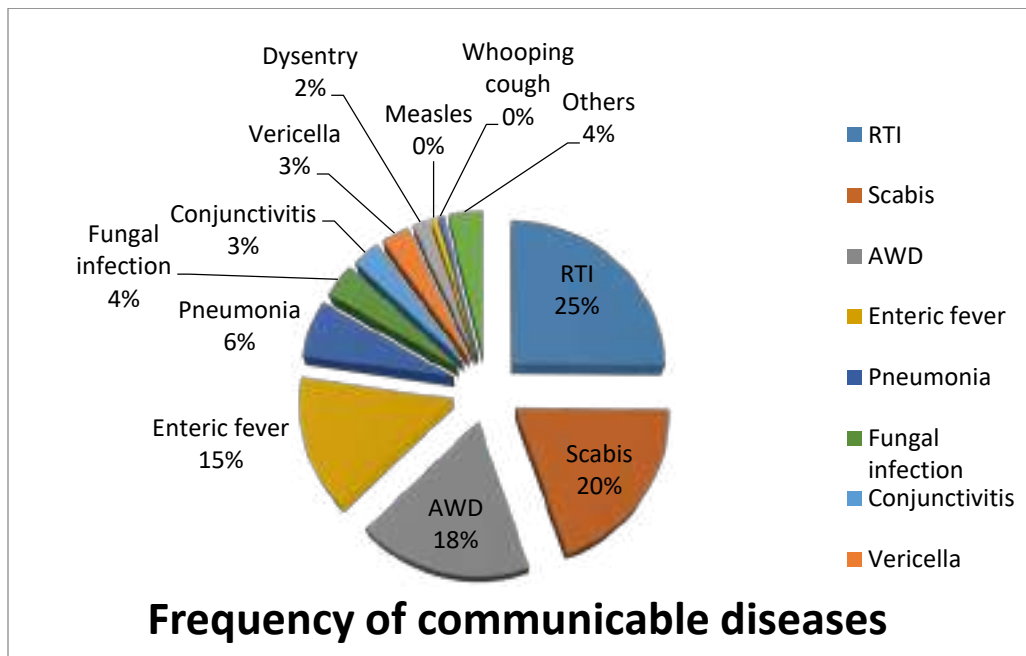


Figure-1: Prevalence of communicable diseases (n-128)

Most prevalent communicable disease was RTI (25%), followed by Scabies and loose motion and Enteric fever (20%, 18% & 15%); 04% had fungal infection, and 3% had eye infection and varicella infection. Almost all (96%) did not suffered from any chronic diseases and alternatively 06 students suffered by CSOM and their hearing capacity apparently became less.

Most students treated by self cost and from local non registered medical practioner and medicine shop keeper (68%), religious treatment only 14% and 18% recovered

from their physical illness without any treatment.

In this study all (100%) students used sanitary latrine, they uses pond water for ozu and other utensils wash. They use tube well water for drinking. Among them 64% students wearied cloths were not found clean. They are provided with three meals from the madrasah at a minimum cost, most of the meal costs are provided from available donation, varying from time to time. Only a few 4% student take one snacks like biscuit or cake a day.

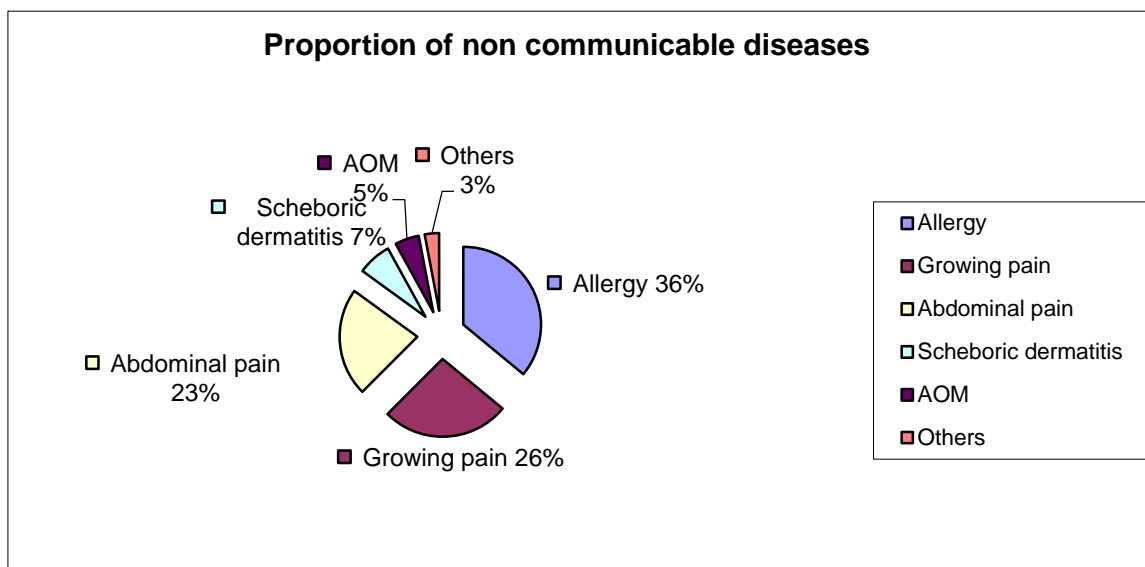


Figure-2: Prevalence of non-communicable diseases (n-30).

In case of non-communicable disease, more than one third (36%) students complained about allergy, and a great number of students suffered by growing pain (26%) and non-specific abdominal pain (23%) (Figure-2).

DISCUSSION:

This is a descriptive type of cross sectional study. In this study 96% madrasah students suffered by various types of diseases and these were communicable and non communicable. More then three quarter (81%) suffered by communicable diseases. Almost all (96%) suffered by acute illness.

Nearly 87% students between 13-18 years age group were more vulnerable for communicable diseases whereas 74% between the age group 06-12 years were vulnerable for communicable diseases ($X^2=8.650$, $df=1$, $p<0.05$) (Table-1)

Study by Khan et. al. highlights the major contagious diseases in the children of five government primary school in Tangail city.⁷ It was found that **30.95% students had scabies, while 20.24% had influenza and 7.14%, 9.52%, 15.48%, 5.95% & 10.71% had typhoid fever, chicken pox, measles, pneumonia, and whooping cough, respectively.** In our study most prevalent disease was the RTI (25%) problems, followed by Scabies and loose motion and Enteric fever (20%, 18% & 15%); 04% had fungal infection, and 3% had eye infection and varicella infection. This is more or less similar to the above study, as no study on madrasah students were found, searching the web and literature, so this study was compared to a study on students of government primary school of a district city in Bangladesh.⁷ Almost all (96%) did not suffered from any chronic diseases and alternatively 06 students suffered by CSOM and their hearing capacity apparently became less.

It was found that some of these contagious diseases strongly affect the nutritional status of the children. In infected group more than 50% of the children were underweight, stunted or wasted. This may be a risk factor for them to be easily attacked by contagious diseases.⁶ In our study anthropometric measurements were not studied.

One study found that most of the children were suffering from scabies and then influenza, typhoid, chicken pox, measles, pneumonia, whooping cough and more than 46% respondent recovered from disease within 6-10 days. Most of the respondent (53.3%) took curative treatment during affected by contagious disease. Only (20%) took preventive and some took both curative and preventive (26%) treatment to prevent contagious disease⁷. In our study, most of the students were treated from local non registered medical practioner and medicine shop keeper (68%) by self-cost. Religious treatment was taken by 14% students and 18% recovered from their physical illness without any treatment.

In this study all students used sanitary latrine, they uses pond water for ozu and other utensils wash. Most (64%) students' wearied cloths were not found clean during the study, which is supposed to be a major risk factor for contagious disease apart from overcrowded living room. In another study,⁷ the percentages of hygiene and sanitary condition of respondent's family was not good, about 48.8% respondents home toilets condition was in satisfactory level but in school 21.4 % was bad. Approximately half of the respondent washed their cloths 6-9 day interval which may be a major risk factor to attack by contagious disease. Most of the respondent bathed in tube-well and some used pond (22.4%).

In this study almost all students took three meals a day. Only 4% had a snack like biscuit or cake a day. In this study all (100%) students used sanitary latrine, they uses

pond water for ozu and other utensils wash. They use tube well water for drinking. Study by Khan et. al. showed about 38.1% respondents took their meal four times in a day and 25%, 20.2% respondent took meal in five times and three times respectively. Maximum respondent (31%) had their tiffin at the school with biscuit, cake. Most of the respondent's family used tube well (38.1%) and tap water (42.9%) as source of drinking water⁷. About 26% children were suffered from vitamin deficiency, about 14% suffered from mineral deficiency and 13.3% suffered from both vitamin and mineral deficiency but 50% children have no vitamin and mineral deficiency.⁷ Vitamins and Mineral deficiency status were not observed in this study.

In our study 19% madrasah students suffered by non-communicable diseases. More than one third (36%) students complained about allergy. About 50% students suffered by growing pain and non specific abdominal pain. In child hood these are usually common complaint. In maximum case these are non pathological in nature. Growing pain is very common in this age and in most case this is non pathological condition. Over activity, always playfulness are risk factors of growing pain and disproportionate growth of limb bones than limb muscle is another hypothetical cause of growing pain for children. Non specific abdominal pain is another problem for children. In most condition these are also non pathological. Non ulcerative dyspepsia, gas in abdomen, helminthiasis etc. are the main causes.

However, recent statistics shows that non-communicable disease burden has increased to 61% of the total disease burden due to epidemiological transition. According to National NCD Risk Factor Survey in 2010, 99% of the survey population revealed at least one NCD risk factor and ~29% showed >3 risk factors. Social transition, rapid urbanization and unhealthy dietary habit are the major stimulating reasons behind high prevalence of non-communicable diseases in Bangladesh, remarkably in under-privileged communities such as rural inhabitants, urban slum dwellers⁹.

CONCLUSION:

Madrasah students suffered by both communicable and non-communicable disease. There needs a regular surveys to form a data base of disease prevalence, to identify the risk factors associated with communicable diseases. Teachers should also be educated regarding their diseases. Topics like personal hygiene practice for prevention of contagious diseases could be integrated into madrasah studies. Infrastructure developments are vital. It is important for control of this problem by availability and equality of treatment facilities same as all over students of the country.

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