

Knowledge of Communicable and Non-communicable Diseases among Rural High School Students in Jalgaon District of Maharashtra



Medical Science

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ABSTRACT

Background: School education has been described as 'social vaccine' and it can serve as a powerful preventive tool for prevention and control of these communicable and non-communicable diseases. Objective: To assess the knowledge of high school students in rural Maharashtra about highly prevalent non-communicable and communicable diseases. Material and Methods: A cross-sectional study was conducted in one of the randomly selected schools in rural area of Jalgaon district of Maharashtra. A Structured pretested self administered questionnaire consisting of 26 questions in local language was distributed to all 107 students. The data was entered in Microsoft Office Excel Sheet and analyzed by using Microsoft Office Excel Sheet. Results: Majority (94%) of the students in present study were familiar with diabetes. Conclusion: The study revealed inadequacies in the knowledge of communicable and non-communicable diseases amongst school children in rural area of Maharashtra.

Introduction

Communicable and non-communicable diseases are assuming increasing importance among the adult population in both developed and developing countries.¹ India is experiencing a rapid transition with a rising burden of these diseases causing significant morbidity and mortality both in urban and rural population, with considerable loss in potentially productive years of life.¹

Patterns of mortality are shifting from high burden of infectious diseases like Malaria, Diarrhoeal diseases to an increase in life style diseases like Diabetes and Hypertension.²

The predominant reasons for high prevalence of these diseases especially in rural areas are language barriers, lack of health education and awareness, geographical barriers and lack of adequate health care. Etc. The diseases like Malaria and Diarrhoeal diseases, Diabetes and Hypertension are preventable with adequate health education.²

Programme managers and policy makers have often recommended that schools can act at the centre point for disseminating health education. School education has been described as 'social vaccine' and it can serve as a powerful preventive tool for prevention and control of these communicable and non-communicable diseases.

Very few studies have been conducted so far in India to evaluate the knowledge of school students of rural area pertaining to these diseases. The present study was undertaken to assess the knowledge of highly prevalent non-communicable diseases like diabetes and hypertension as well as communicable diseases like malaria and diarrhoeal diseases among high school students of Rural Maharashtra.

Materials and methods

A cross-sectional study was conducted in one of the randomly selected schools in rural area of Jalgaon district of Maharashtra.

A total of 107 students belonging to VII and VIIIth class were enrolled in study. Written permission was obtained from the principal of school after explaining the purpose of study.

A Structured pretested self administered questionnaire consisting of 26 questions in local language was distributed to all 107 students. All were close ended questions of which 10 questions were related to Diabetes, 5 were related to Hypertension, 6 and 5 questions were based on Malaria and Diarrhea respectively.

All students were allowed 30 minutes to complete questionnaire under strict supervision. Readability and comprehension of questions by the students were confirmed by respective school teachers. The marking system for each complete question was assigned. The data was entered and analyzed by using Microsoft Office Excel Sheet.

Results and Discussion

In present study, of 107 students, 61 were boys and 46 were girls. All (100%) students were in age bracket of 14-16 years. The occupations of their family members were farmers and day laborers. Around 60% of student's family heads were illiterate. Teachers, Radio and televisions were the top-ranked sources of health information reported by the students. In present study, the response rate of students was 100%.

Non-communicable diseases

Majority (94.39%) of the students in present study were familiar with diabetes. However the students had poor knowledge about curable aspects as well as complications of Diabetes. In present study, 47(43.92%) students rightly stated that Diabetes is not curable disease, it is manageable disease. (Table 1)

A study conducted by Thaworn Lorga et al.³ reported that 105 (28.69%) students correctly said that Diabetes is manageable diseases not curable disease. Seventy six (71.02%) students were not aware about normal value of blood pressure. High percentage of students not knowing normal level of blood pressure was also reported in rural Thasongyang, the far northwest of Thailand where 244(67.22%) students stated incorrect normal range of blood pressure.³

Table 1 Knowledge of students about Diabetes and Hypertension (n=107)

Question	Correct answer		Incorrect answer	
	n	%	n	%
Do you know about diabetes? Yes /No	101	94.39	06	5.61
Diabetes is a communicable disease- T/F	58	54.20	49	45.79
Diabetes is a curable disease -T/F	47	43.92	60	56.07
Obese/fat people are at risk for diabetes- T/F	81	75.70	26	24.29
Diabetes is a hereditary disease - T/F	67	62.61	40	37.38

Loss of sensation of hands and legs is a symptom of diabetes – T/F	38	35.51	72	67.28
Diabetic person has to wear chappal/shoes whenever he/she walks-T/F	54	50.46	53	49.53
Wound healing is delayed in diabetic people- T/F	47	43.92	60	56.07
Blindness or kidney disease is a complication of diabetes –T/F	31	28.97	76	71.02
Consumption of high fat and sugar foods increases the risk of diabetes - T/F	87	82.24	20	18.69
Hypertension is a hereditary disease – T/F	56	52.33	51	47.66
Smoking increases the risk of hypertension – T/F	80	74.76	27	25.23
Normal blood pressure of human is:120/80 or 140/100	31	28.97	76	71.02
High salt intake increases the risk of hypertension-T/F	51	47.66	56	52.33
Stress aggravates hypertension- T/F	67	62.61	40	37.38

Table 2 Knowledge of students about Malaria and Diarrhea (n=107)

Question	Correct answer		Incorrect answer	
	n	%	n	%
Do you know about malaria disease? -Yes/no	105	98.13	02	1.86
What causes malaria? -Mosquito/Housefly/Pig	101	94.39	06	5.60
Malaria is caused by bacteria – T/F	65	60.74	42	39.25
Malaria is a curable disease – T/F	71	66.35	36	33.64
Wearing full sleeve shirt and full pant can prevent malaria – T/F	84	78.50	23	21.49
Malaria is a preventable disease – T/F	49	45.79	58	54.20
Diarrhea is caused by eating unclean food.-T/F	100	93.45	07	6.54
Frequent hand washing controls the spread of diarrhoea- T/F	71	66.35	36	33.64
Diarrhoea can be fatal- T/F	56	52.33	51	47.66
Washing hands before eating can prevent diarrhoea.-T/F	76	71.02	31	28.97
Drinking boiled water can prevent diarrhoea.-T/F	70	65.42	37	34.58

Communicable diseases

Personal protective measures are one of the key elements in prevention of malaria, while vector control and human vector interface were less successfully controlled. The majority of the students (98.13%) knew malaria and recognized it as a vector-borne disease caused by mosquito bite (Table 2). However, knowledge of students pertaining to preventive nature of Malaria was poor as only 49 (45.79%) students stated that Malaria is preventable disease.

Diarrheal diseases are leading causes of morbidity and mortality in India especially in rural area. Diarrhoea is a hygiene-related disease and hand washing is a basic and critical personal behaviour which can cut down on infections, prevent illness, and save lives.⁴ In present study, Majority of the students had good knowledge about various aspects of diarrhoea.

Despite being familiar with diarrheal disease and its symptoms, only 52.33% of students realized that diarrhea can be fatal. This study finding corroborates with study finding of Thaworn Lorga et al.³ where 60% of students knew that diarrhoea can be fatal if it is not adequately managed.

The present study findings may provide a spotlight on the health knowledge of school students in rural province of Maharashtra. The present study also recognized the entry points for promoting awareness about health related issues amongst school students which needs to be enhanced in future.

Conclusions

The study revealed inadequacies in the knowledge of communicable and non-communicable diseases among school children in rural area of Maharashtra. The current study findings emphasized the need for comprehensive health education in high school students to prevent the double burden of non-communicable and communicable diseases in India especially in rural provinces.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

REFERENCE

- Park. K. (2013). Textbook of Preventive and Social Medicine, (22nd ed.). India: Banarsidas Bhanot Publishers, Jabalpur, (Chapter 6). | Kishore J. (2012). National Health Programmes of India. (10th ed.). India: Century Publications, New Delhi, (Chapter 1). | Thaworn Lorga, Myo Nyein Aung, Prissana Naunboonruang, Piyatida Junlapeeya, Apiradee Payaprom. (2013). Knowledge of communicable and noncommunicable diseases among Karen ethnic high school students in rural Thasongyang, the far northwest of Thailand. International Journal of General Medicine. 6(5):19-526. | Centers for Disease Control and Prevention. Handwashing: Clean hands save lives. (2013) [Webpage on the internet]. Atlanta: Centers for Disease Control and Prevention; Available from: <http://www.cdc.gov/handwashing/>. Accessed April 29, 2014. |