

Original Research Article

Knowledge and attitude of school students regarding COVID-19 pandemic

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ABSTRACT

Background: In India, a variety of approaches was adopted to control the spread of COVID-19 among people including social distancing, compulsion on wearing a mask, and vaccination. However, there is still lacking the awareness among people regarding COVID-19. knowledge and attitude of the youth can make a huge difference in these efforts and so this study is aimed to find the knowledge and attitude of school students regarding COVID-19.

Methods: A descriptive study was conducted in September 2021 on a total of 286 school students. Different schools in Nagpur were used to collect data from students aged between 15-18 years. Prior consent and accent were taken from the parent and students respectively before data collection. A convenient sampling technique was used to collect data by using the demographic form, structured knowledge questionnaire (SKQ), and attitude Likert scale (ALS).

Results: In the study group, 37.06% were in 16-17 years of age, 57.69% were male, 32.87% were in 11th standard, about 55.94% of student's parents were doing the private job, 39.51% of student's family income was between 10001 - 20000, 46.85% students were living in a nuclear family, 89.16 students had previous knowledge of COVID-19 and about 71.37% of student got this knowledge from the television. In the study group, 5.94% of students had Good knowledge and 35.66% of students had a favorable attitude.

Conclusions: The majority of the school students have poor knowledge and attitude toward COVID-19. Educational intervention is very necessary to improve the knowledge of students.

Keywords: Knowledge, Attitude, school students, COVID-19

INTRODUCTION

Globally, more than 180 million cases and 3.9 million deaths have been reported due to coronavirus disease 2019 (COVID-19).¹ To prevent the spread of the disease, most governments closed all schools during the first wave of the pandemic, affecting over 1.5 billion children, or 90% of the world's student population.² Children do not seem to be directly affected by COVID-19's adverse health effects. Pandemics can have profound effects on young children around the world, particularly those who are developing mentally and physically. Their short-term and long-term effects remain unclear.³

India has closed its schools due to the COVID-19 pandemic. As schools closed, online learning platforms grew in popularity.^{2,4} Because students have lost their traditional information sources, they are more susceptible to online threats like misinformation spread through social media, resulting in potential miscommunications.⁵ Accurate information about the disease and the current situation could prevent irrational worries and concerns of children and minimize their anxiety or fear.⁶ Knowledge and attitude are important aspects of public health as they can prevent the spread of and promote health in the general population.⁷ Knowledge about the predisposing and precipitating factors, spread, identification of early

symptoms, prompt reporting, seeking health care attitude, available methods of treatment, and prevention strategies can make a huge impact on the general population.⁸ In many cases, lack of knowledge, misconceptions, spreading of wrong information, and miscommunication can cause potential risk.^{9,10}

Though the government of India has started public vaccination in all states with free-of-cost vaccination, cases of COVID-19 are still in the report and people are still in fear of infection.^{6,11,12} Many authorities and public media started to make changes in people by providing proper information and practicing majors.¹³ The government of India implemented different preventive measures such as social distancing in crowded places, use of masks in public places, staying at home, hand washing, use of hand sanitizers, and vaccination.^{4,14} However, as the schools reopened the scenario changed drastically and people are getting back to their habits and COVID-19 cases started increasing.^{15,16} This may be because of the disease characteristics such as high infectivity, asymptomatic people, and lack of effective antiviral therapy.¹⁷ So, ultimately prevention is the key to the COVID-19 case and that can be achieved through the proper information spread among the most vulnerable population children and adolescents. This study aimed to identify the knowledge and attitude of school students regarding COVID-19 and spread awareness about it.

Objective

Objective of the study was to assess the knowledge and attitude of school students regarding COVID-19.

METHODS

Study design

This descriptive, cross-sectional study was designed to assess the following aspects: how much do school students know about COVID-19? and what is their attitude toward COVID-19?

Inclusion criteria

The students present at the time of data collection, who are willing to participate in the study, and who got permission from their parents to participate in the study were included.

Exclusion criteria

The students who refused to participate were excluded.

Study population and sample

The population of the study involves students aged between 16-18 years of age from different schools in Nagpur city in Maharashtra, India. The sample of the study was calculated based on the minimum required sample calculated using a standard formula based on a known

population. Non-probability convenient sampling was used to collect data. The total sample size was 286 school students who respond to data collection.

Data collection tool

The data was collected using a demographic form, structured knowledge questionnaire (SKQ), and attitude Likert scale (ALS). The demographic form includes 9 questions related to age, gender, education, occupation of a parent, family income, type of family, religion, knowledge about COVID-19, and source of information.

Each scale question was validated by an expert and through statistical methods. For calculating the reliability of each scale a pilot study was conducted on 30 samples from schools in an urban area. The reliability of standardized questionnaires and observation was established by Guttman, split half, and Chronbach's alpha method. Each scale was found reliable to use in the study with a reliability of 0.77 (SKQ) and 0.81 (ALS).

Ethical permission

Ethical approval was given from Dr. Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra with the ref. no. IEC/GCON/2021/1 on date 19/07/21. Written consent and assent were also obtained from the parents and students respectively.

Data collection procedure

The data collection was done in the month of September 2021. Permission was obtained from the principal of each school. The students and their parents were informed about the study and consent and assent were taken. A total of 286 school students along with parental consent participated in the study. The data were collected using structured and standard scales.

Statistical analysis

The data were coded and transferred onto an excel sheet. Descriptive statistics and inferential statistics were used for data analysis. Frequency, percentage, means, and standard deviation has been used to describe the socio-demographic variable, and for association Chi-square test was used.

RESULTS

In the study group, 37.06% were in 16-17 years of age, 57.69% were male, 32.87% were in 11th standard, about 55.94% of student's parents were doing a private job, 39.51% of student's family income was between 10001-20000, 46.85% students were living in a nuclear family, 48.95% students were Buddhist, 89.16 students had previous knowledge of COVID-19 and about 71.37% of student got this knowledge from the television (Table 1).

Table 1: Frequency and percentage distribution of participants in terms of demographic variable (N=286).

Personal variable	F	Percentage
Age		
15-16	76	26.57
16-17	106	37.06
17-18	104	36.36
Gender		
Male	165	57.69
Female	121	42.31
Education		
9 th std	54	18.88
10 th std	50	17.48
11 th std	94	32.87
12 th std	88	30.77
Occupation of parent		
Business	56	19.58
Government job	14	4.90
Private job	160	55.94
Farmer/labor	56	19.58
Family income (monthly)		
<10000	102	19.58
10001-20000	113	39.51
20001-30000	63	22.03
>30000	8	2.80
Type of family		
Joint	119	41.61
Nuclear	134	46.85
Extended	22	7.69
Separated	11	3.85
Religion		
Hindu	98	34.27
Buddhist	140	48.95
Muslim	41	14.34
Any other	7	2.45
Knowledge of COVID-19		
Yes	255	89.16
No	31	10.84
Sources of information		
Friends	65	25.49
Television	182	71.37
Health professional	8	3.14

Table 2: General assessment of the level of knowledge (N=286).

Score	F	%	Mean ± SD
Poor	6	2.1	12.17±2.38
Average	263	91.96	
Good	17	5.94	

In the study group, 2.10% of students had poor knowledge (Table 2), and 19.93% of students had unfavorable

attitudes (Table 3). No association was found between Knowledge and attitude with the demographic variable.

Table 3: General assessment of the level of attitude (N=286).

Score	F	%	Mean ± SD
Unfavorable	57	19.93	34.17±12.22
Neutral	127	44.41	
Favorable	102	35.66	

DISCUSSION

The COVID-19 pandemic impact every aspect of people's life and education is no other than that. Awareness among the vulnerable population can make a huge impact on the prevention and treatment of COVID-19. This study identifies the current knowledge and attitude of school students regarding COVID-19.

In this study, about 5.94% of students had good knowledge and 91.96% of students had average knowledge scores which are not consistent with the finding of 90.4% of good knowledge scores of the other study conducted in India.¹⁸ Similarly, a study conducted in Egypt reported 90% of students had good knowledge of COVID-19 which is way better statistics than this study.¹⁹ A study conducted in Malaysia in 1207 shows that 56% of students had good knowledge with 73.75% of correct responses which is way more than the current findings.²⁰ Another study conducted in New Delhi shows that 39.6% of students had good knowledge and 60.29% of students had average knowledge which is way more than the current study findings.²¹ As this shows that the current finding is not consistent with the others studies.

The focus of the researcher is not just to find the knowledge and attitude of the school students but to educate them with the correct information about COVID-19. An information session was conducted after the data collection regardless of the study outcome at each school to improve the knowledge of the participant. The study conducted among secondary school students to study the impact of educational intervention on knowledge and attitude shows improvement in the knowledge score and the attitude of the students.²²

Attitude is also an important part of health promotion behavior, in this study the participant shows 35.66% of students had a favorable attitude towards COVID-19 which is way less than the study conducted in southern Ethiopia in 2021 which found that the 70.9% of the 422 of students had a positive attitude toward the COVID-19 and 86.5% in another study.^{20,23} Attitude can be changed with an increase in knowledge and health-seeking behavior. The researcher conducted a brief session on the correct technique of hand washing, use of masks, and social distancing behavior to improve the attitude and practice of school students regarding COVID-19. A study conducted in Egypt shows that 95.2% of students show handwashing

practices at home, more than 5% of students wear a mask, and 39.2% cover their mouth and nose when in public places. The student's commitment also depends upon demographic factors such as age, female gender, urban residence, and mothers' education.²⁴

There are some limitations to this study such as it depicts the knowledge of the students only in age group between 16-17 years of age and that may impact the actual knowledge of the adolescent population. The similar study can be done using the more variable population to generalize the result. Another aspect is study area is small and only involve the one city population. The sample size is small and could have been more to generalize the result.

CONCLUSION

The majority of the school students have poor knowledge and attitude toward COVID-19. Which shows better insight on knowledge and attitude of the adolescent population. Indian government and mass media plays a major role in enhancing the knowledge of general population however, we have to go far than this on the road of awareness. Educational intervention is very necessary to improve the knowledge of students especially in schools. Active participation and involvement can improve the knowledge and develop desirable attitude towards the COVID-19.

Recommendations

This study is evidence that though we have a lot of resources we still need to improve our communication with school students to make them knowledgeable and change their attitude towards COVID-19.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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