

An Epidemiological Study To Assess The Knowledge, Attitude And Practices Of University And School Students Of Chandigarh Towards Covid-19 Pandemic

Running title: Assess the knowledge, Attitude and Practices of University & School Students towards COVID-19

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Abstract

Introduction- The highly contagious zoonotic coronavirus (SARS-CoV-2) has emerged as a global public health emergency. Adequate understanding and attitudes towards COVID-19 is crucial for control of this pandemic. *Objective:* The present study was done to assess the knowledge, attitude, and practice of the university and school students of Chandigarh towards the COVID-19 pandemic. *Methodology:* A cross-sectional study was conducted among the students of Panjab University and Ankur School of Chandigarh. 150 students were recruited through purposive sampling (100 from Panjab University students and 50 from Ankur School, Chandigarh). The data was collected through a pre-tested, pre-designed semi-structured questionnaire. MS Excel 2019 was used for statistical analysis. *Result-* The study showed that the university and school students had adequate knowledge about COVID-19. Also, about 50-70% of the students had a positive attitude toward COVID-19. The students followed all necessary measures for the prevention of COVID-19. *Conclusion:* Students with adequate knowledge, attitude, and practices could be used as a potential resource by the higher authorities to increase public awareness of the disease and its prevention. Also, it could form a basis for the resumption of classes.

Keywords: Knowledge, Attitude, Practice, COVID-19

Introduction

COVID-19 is an acute respiratory illness with viral pneumonia-like symptoms that emerged in Wuhan, Hubei Province of China, in December 2019[1]. World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern (PHEIC) on 30th January 2020 and called for collaborative efforts of all countries to prevent its rapid spread. It was declared as a global pandemic by WHO on 8th March 2020 [2] [3]. In India, the first case got reported in Trissur, Kerala, on 27th January 2020, in a 20-year-old lady with a travel history to China [4]. The fight against COVID-19 is still continuing in India and other countries. Citizens' knowledge, attitude, and practices (KAP) towards COVID-19 control measures is crucial. During the pandemic, in India complete lockdown was imposed in March 2020, which continued till May 2020 to stop the chain of transmission of COVID-19. During the lockdown, all schools, along with other teaching institutions, were closed [5], and classroom teaching at school was replaced by online teaching. Lockdown was being gradually lifted with the phase-wise resumption of activities by unlock 1 (June 2020), unlock 2 (July 2020), unlock 3 (August 2020), unlock 4 (September 2020), and unlock 5 from 15th October 2020 with phase wise resumption of activities [6]. This study was planned to assess the knowledge, attitude, and practices of school and university students regarding COVID-19. Understanding the knowledge, attitude, and practices regarding COVID-19 among schools & universities will provide a basis for formulating relevant policies and directions to the health education department for the resumption of classes.

Objectives

- 1) To assess the knowledge of COVID-19 among school and university students.
- 2) To measure the attitude of school and university students toward COVID-19.
- 3) To observe the COVID-19 preventive measures protocols practiced by the school and university students.

Material and Methodology

Study design: It was a cross-sectional descriptive study. *Sampling design:* The participants were recruited through a convenient sampling technique. *Study area:* Research was conducted among the Students of Panjab University and Ankur School of Chandigarh. *Sample size:* The sample size was 150 students, of which 100 students were from a University and 50 from a School, Chandigarh. *Study Tool:* The data was collected through a self-administered, semi-structured questionnaire from the participants in online mode. Forms were circulated via an online portal named Google Forms to maintain the norms of lockdown.

Data analysis After collecting the required information from the subjects, the data was entered in the coded form in an Excel sheet. MS Excel 2019 was used for statistical analysis. Keeping in mind the study's objectives, the data was coded for analysis. Frequency tables and graphs were developed to display the data and to explain and discuss the results.

Results The data was analyzed regarding demographic variables such as age, gender, educational qualification, and name of the institution of respondents.

Table 1: Distribution of Respondents According to Age (N=150)

		Numbers	Percent
Age(in Years)	05-15	30	20%
	15-25	100	66.7%
	Above 25	20	13.3%
	Total	150	100.0

Table 1 shows that few (20%) respondents were in the age group of 5-15 years, many (66.7%) of respondents were in the age group of 15-25 years, and the remaining (13.3%)

respondents belonged to the age group of above 25 years.

Table 2: Level of knowledge towards COVID-19 among university and school students (n=150)

Sr. no.	Questions	No. of Respondents who gave Correct Answers No. (%)
1	Have you heard about the COVID-19 Pandemic?	147 (98%)
2	What is COVID-19?	103 (68.7%)
3	What is/are the mode of transmission of COVID-19?	88 (58.7%)
4	What are the symptoms of COVID-19?	139 (92.7%)
5	What are the options to stop COVID-19 pandemic?	145 (96.7%)
6	Person with COVID-19 cannot transmit the virus to others when a fever is not present?	110 (73.3%)
7	The COVID-19 virus spreads via respiratory droplets of infected individual?	143 (95.3%)
8	Isolation and treatment of people who are infected with the COVID-19 virus are effective ways to reduce the spread of the virus?	128 (85.3%)
9	To prevent infection by COVID-19, individuals should avoid going to crowded places such as malls, and parks and avoid taking public transportation	145 (96.7%)
10	The isolation period is of two weeks if suspected infection?	135 (90%)

Table 2 shows that more than 90% of respondents gave correct answers to 6 questions related to the knowledge about COVID-19. Most respondents (98%) had heard about the pandemic. Most

participants were aware of the options (96.7%) and preventive measures to stop the spread of COVID-19 (96.7%). More than half (58.7%) of the respondents were aware of the modes of transmission of COVID-19.

Table 3: Attitude of the university and school students toward COVID 19

Sr. No.	Questions	No. of Respondents who demonstrated COVID appropriate attitude (%)
1.	If getting COVID-19, you will accept isolation in health facilities?	123 (82%)
2	You are worried if one of your family member may get infection?	30 (86.7%)
3	Transmission of COVID-19 can be prevented by washing hands frequently?	110 (73.7%)
4	Do you believe COVID-19 cannot affect young people?	113 (75.3%)
5	Do you believe eating garlic helps to prevent infection with the new coronavirus?	80 (53.3%)
6	Do you believe exposing yourself to the sun or temperature higher than 25 degree C prevents COVID-19?	79 (52.7%)
7	Do you believe MoH measures are helpful to combat COVID-19?	72 (48%)
8	Do you support the government's decision to a 21-day lockdown?	116 (77.7%)

Table 3 shows that 82% of the participants were ready to accept isolation if infected with COVID-19. Most participants (86.7%) were worried about their family members getting affected. Many participants (75.3%) believed COVID-19

could not affect young people. More than half of the participants (53.3%) believed that eating garlic would not prevent infection with the new coronavirus. A majority (77.7%) of participants supported the government's decision to a 21-day lockdown.

Table 4: Extent of practices related to prevention of the spread of COVID-19 among university and school students

Sr. No.	Questions	No. of Respondents who demonstrated COVID-appropriate practices (%)
1	Do you participate in meetings, religious activities, events, and other social gatherings or any crowded place in areas with ongoing community transmission?	124 (82.7%)
2	In recent days, have you worn a mask when leaving?	145 (96.7%)
3	If yes, do you touch the front of the mask when taking it off?	110 (73.3%)
4	Do you reuse a mask?	82 (54.7%)
5	Do you wash your hands with soap and water frequently for at least 20 seconds or use sanitizer/ 60% alcohol?	142 (94.7%)

6	Do you touch your eyes, nose, and mouth frequently with unwashed hands?	111 (74%)
7	Do you practice "physical Distancing" by remaining 6 feet/ 2 meters away from others at all time?	125 (83.3%)
8	Do you cover your nose and mouth during coughing or sneezing with the elbow or a tissue, then throw the tissue in the trash?	139 (92.7%)
9	Do you limit contact (such as handshakes)?	143 (95.3%)
10	Do you listen and follow the direction of your state and local authorities?	143 (95.3%)
11	Do you stay home when you were sick due to common cold-like infection during the transmission period?	145 (96.7%)

Table 4 shows that most of the participants (82.7%) did not participate in meetings, religious activities, events, and other social gatherings in areas with ongoing COVID-19 community transmission. The majority of participants (96.7%) wore masks while leaving home. Most of the participants (94.7%) maintained hand hygiene by washing their hands frequently and using sanitizer. 83.3% of participants always maintained physical distancing. It was reported that 95.3% of the participants listened and followed the direction of their state and local authorities.

Discussion

COVID-19 is an emerging infectious illness which presented a considerable threat to human beings in the past years. Before the advent of vaccination for COVID-19, preventive measures played an effective role in decreasing the rate of infection and controlling the spread of the virus. Therefore, it became necessary for public health professionals to target the student population and to understand their knowledge, attitude, and practices towards COVID-19 to limit its spread.

The present study reported that most of the university students had adequate knowledge about COVID-19. More than half of the participants were aware of the COVID-19 etiology and management. This finding agreed with other previous

studies that reported significant levels of knowledge among the North Indian people [7]. Similarly, in our study, it was reported that the basic knowledge of COVID-19 among students of Panjab University and Ankur School was acceptable. The high score of knowledge about COVID-19 among the participants was not surprising as there was an intensive spread of awareness about COVID-19 and its transmission via social media, news channels, and television. In a study conducted in Malaysia, a positive association was found between knowledge and individual educational background, which supported our findings [8] [9].

The attitude of the participants toward COVID-19 was found to be positive. The students were aware of the etiology, and mode of transmission of the virus and recommended methods for the isolation of patients with confirmed COVID-19. Also, Most of the participants showed a positive attitude towards following the best-preferred methods of protection, while some of them showed a negative attitude.

In a previous study conducted in North India, students' attitudes were reported to be positive and optimistic towards COVID-19. The results show the gap in students' attitudes towards hand hygiene, which enables health educators to design training programs to educate students to

improve their attitudes towards adequate hand washing techniques [10].

COVID-19 illness could be prevented by following appropriate protective measures. In our study, we also evaluated the extent of protective measures followed by various students. The study found that the participants had a good routine of following all the protective measures, such as wearing of face mask, hand washing, social distancing, etc. The results were consistent with the other studies, which also reported adequate levels of protective measures followed by the students [8]. If all the students would achieve complete knowledge about COVID-19 related to its etiology, mode of transmission, and other preventive measures, it will help the Chandigarh health authorities to increase public awareness of the disease at a greater level and would be able to bring behavioral change among the residents of Chandigarh.

With these findings, it has been shown that the extent of student's knowledge about the virus could be very useful. This knowledge gained by students could supplement different health authorities in mitigating the effects of COVID-19, especially when WHO declared it a pandemic disease. The potentialities and capabilities of youth could be utilized by the specialists in designing various health education and awareness programs to disseminate knowledge of this deadly virus.

Conclusion

The study concluded that the students had adequate knowledge and a positive attitude and followed good practices to mitigate the spread of COVID-19 illness. Hence, they could be used as a potential resource by the higher authorities to increase public awareness of the etiology, mode of transmission, and preventive measures of the disease.

Ethical approval

The data was collected after taking informed consent from all the participants by explaining to them the purpose of the study.

Conflict of Interest

None

Author's Contribution

The conception and design of the work were done by all the authors. The first author did the data collection. The first author made data analysis and interpretations. The final version of this research paper has been approved by all the authors.

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