

Original Research

Knowledge, awareness and practice of Medical students regarding COVID-19

Arushi Dalia¹, Sourav Bansal², Gary Batra³

^{1,2} M.B.B.S. Intern, Govt. Medical College, Amritsar, Punjab, India;

³ M.B.B.S. Intern, Punjab Institute of Medical Sciences, Jalandhar, Punjab, India;

ABSTRACT:

Background: The present study was conducted to assess knowledge, awareness and practice of Medical students regarding COVID-19 pandemic. **Materials & Methods:** 480 Medical students of both genders were provided with a questionnaire regarding knowledge and practice regarding COVID-19 pandemic. **Results:** 75% showed that SARS-CoV-2 is the cause of COVID-19. Main symptoms are fever, fatigue, dry cough and myalgia was replied true by 90%, 85% replied that 2-14 days is the incubation period of Covid-19, 75% correctly replied that 6.8% is the overall mortality and 81% replied that rRT-PCR is the laboratory test available for detection of COVID-19. 75% replied that COVID-19 increased the frequency of washing hands, 70% replied that COVID-19 increased the frequency of using hand sanitizers, 80% use handkerchief while coughing, 80% avoid unnecessary travel, 78% maintain social distance. **Conclusion:** Medical students had sufficient knowledge, awareness and practice regarding COVID-19 pandemic.

Key words: COVID, Knowledge, Practice

Received: 12, January 2021

Accepted: 25 February, 2021

Corresponding Author: Arushi Dalia, M.B.B.S. Intern, Govt. Medical College, Amritsar, Punjab, India

This article may be cited as: Dalia A, Bansal S, Batra G. Knowledge, awareness and practice of Medical students regarding COVID-19. J Adv Med Dent Scie Res 2021;9(3):89-92.

INTRODUCTION

A pneumonia outbreak associated with a novel coronavirus, termed severe acute respiratory coronavirus 2 syndrome (SARS-CoV-2), was first documented in Wuhan, China, in December 2019. Since then, the infection has spread across China and then to numerous countries around the world.¹ At the beginning of June 2020, more than 7,676,209 confirmed new cases were reported, with more than 426,158 deaths attributed to the coronavirus infection.² In India, a confirmed case of COVID-19 was reported on 30th January 2020, who was a student travelled from Wuhan, China, and has successfully recovered from the infection on 14th February 2020.³ On 27th April 2020, the Ministry of Health and Family Welfare confirmed a total of 28,380 confirmed cases, 6362 cured/ discharge cases, and 886 death cases in the country from 32 states/ union territories. The infection rate of COVID-19 in India is reported to be 1.7%, significantly lower than the worst affected countries, as the report on 29 March 2020.⁴ After a 14-hour voluntary public curfew named as 'Janta Curfew', India immediately announced the implementation of a nation-wide complete lockdown for 21 days which

only allowed essential services to operate over the entire 130 million population of India. The battle against COVID-19 is still unending in India.⁵ The clinical symptoms are varied and manifest as fever, nasal congestion, sore throat, sneezing, loss of taste and smell.⁶ People with co-morbidities, including diabetes and hypertension, who are treated with the drugs such as thiazolidinediones, angiotensin-converting enzyme (ACE) inhibitors, and angiotensin-II receptor blockers (ARBs) have an increased expression of angiotensin-converting enzyme-2 (ACE-2).⁷ The present study was conducted to assess knowledge, awareness and attitude of COVID-19 among medical students.

MATERIALS & METHODS

The present study was conducted among 480 Medical students of both genders. All were informed regarding the study and their consent was obtained.

Data such as name, age, gender etc. was recorded. All practitioners were given a questionnaire regarding knowledge, attitude and practice against towards COVID-19 infection. Knowledge questions mainly dealt with the participants' knowledge regarding

clinical symptoms, transmission routes, prevention, and control of COVID-19. These questions were responded on a true/false basis with an additional “I don’t know” option. The true answer was assigned with 1 point and false/I don’t know answers were assigned with 0 point. Higher scores represented a better knowledge of COVID-19. Similar options were

assigned for the questions related to attitude while only two options namely ‘Yes’ and ‘No’ were assigned for the questions related to practice towards COVID- 19. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Knowledge among Medical students

Questionnaires	Correct response
COVID- 19 is causes by which virus?	
SARS-CoV-2	SARS-CoV-2 (75 %)
MERS-CoV	
SARS-CoV	
Do not know	
Main symptoms are fever, fatigue, dry cough and myalgia?	
True	True (90%)
False	
I don’t know	
What is the incubation period of COVID- 19?	
1-7 days	2-14 days (85%)
2-7 days	
2-14 days	
Don’t know	
What is overall mortality of COVID- 19?	
3.2%	6.8% (75%)
6.8%	
10.4%	
What are laboratory test available to detect COVID- 19?	
ELISA	rRT-PCR- (81%)
rRT-PCR	
Western Blot	
Do not know	

Table I shows that 75% showed that SARS-CoV-2 is the cause of COVID- 19. Main symptoms are fever, fatigue, dry cough and myalgia was replied true by 90%, 85% replied that 2-14 days is the incubation period of Covid- 19, 75% correctly replied that 6.8 % is the overall mortality and 81% replied that rRT-PCR is the laboratory test available for detection of COVID- 19.

Table II Practice against COVID- 19

Questionnaire	Response	%	P value
Did COVID- 19 increased the frequency of washing hands?	Yes	75%	0.05
	No	20%	
	I don’t know	5%	
Did COVID- 19 increased the frequency of using hand sanitizers?	Yes	70%	0.01
	No	28%	
	I don’t know	2%	
Do you cough using handkerchief?	Yes	80%	0.03
	No	15%	
	Don’t know	5%	
Do you avoid unnecessary travel	Yes	80%	0.02
	No	12%	
	Don’t know	8%	
Do you maintain social distance?	Yes	78%	0.01
	No	14%	
	Don’t know	8%	

Table II shows that 75% replied that COVID-19 increased the frequency of washing hands, 70% replied that COVID-19 increased the frequency of using hand sanitizers, 80% use handkerchief while coughing, 80% avoid unnecessary travel, 78% maintain social distance. The difference was significant ($P < 0.05$).

DISCUSSION

COVID-19 prompted implementation of public health protocols to control the spread of the virus, many of them involving social distancing, hand washing, and lockdown procedures, but has also resulted in creating public anguish and massive fear, particularly among the unaffected population.⁸ Bangladesh has not previously experienced epidemics such as SARS or MERS, and it is clear that the public healthcare systems are not readily prepared for COVID-19.⁹

The magnitude and rapid proliferation of COVID-19 through slightly symptomatic or asymptomatic infected people in Bangladesh stresses the need to identify the behavioral responses of the population, such as to better address behavioral determinants of pandemic control.¹⁰ The present study was conducted to assess knowledge, awareness and practice of dental practitioners regarding prevention of COVID-19 infection.

Maheshwari et al¹¹ found that out of the total participants ($n=354$), 50.3% were male and 54.5% were 21-23 years. Almost all the participants (96.6%) increase the frequency of washing hands under the influence of COVID-19. Although no significant relationship was found between different religions, age-categories in terms of knowledge, the participants who were aged 21-23 years had higher knowledge. In addition, gender had a significant impact on practice scores ($P < 0.05$) while no demographic variable was found to have a significant relation with attitude score ($P > 0.05$). The majority of the participants had good knowledge, positive attitude, and sufficient practice. Females and males have significantly different practices. Although the results are very positive, it is suggested that people should continue to strengthen knowledge, attitude, and practice towards COVID-19, so that India can win the battle against the disease.

We found that 75% showed that SARS-CoV-2 is the cause of COVID-19. Main symptoms are fever, fatigue, dry cough and myalgia was replied true by 90%, 85% replied that 2-14 days is the incubation period of Covid-19, 75% correctly replied that 6.8% is the overall mortality and 81% replied that rRT-PCR is the laboratory test available for detection of COVID-19. Noreen et al¹² investigated the knowledge, attitudes, and practices (KAP) regarding COVID-19 and its impact on medical students of Pakistan. Of the 1474 medical students in the study, 576(39.1%) were males, and 898(60.1%) were females. Two-thirds of the participants 1057(71.7%) had adequate knowledge, and almost all the students had positive attitudes (1363(92.5%)), and good

practices 1406(95.4%) to COVID-19. Two-thirds of the medical students 1023(69%) believed that the COVID-19 outbreak had affected their social, mental, and psychological well-being. One-quarter of the medical students 391(26%) become more religious, 597(40%) realized the importance of life, and 1140(77%) became careless because of the pandemic. The female medical students were 2.545 times ($p < .001$) and 4.414 times ($p < .001$) more likely to have positive attitudes and good practices toward COVID-19 as compared to males.

CONCLUSION

Authors found that Medical students had sufficient knowledge, awareness and practice of safety guidelines regarding COVID-19 pandemic.

REFERENCES

1. Zhou M, Tang F, Wang Y, et al. Knowledge, attitude and practice regarding COVID-19 among health care workers in Henan, China. *J Hosp Infect.* 2020;S0195-6701(20)30187.
2. Zhong BL, Luo W, Li HM, et al. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *Int J Biol Sci.* 2020; 16(10):1745-1752.
3. Morse, S.S.; Mazet, J.A.K.; Woolhouse, M.; Parris, C.R.; Carroll, D.; Karesh, W.B.; Zambrana-Torrel, C.; Lipkin, W.I.; Daszak, P. Prediction and prevention of next pandemic zoonosis. *Lancet* 2012;380:1956–1965.
4. Bidaisee, S.; Macpherson, C. Zoonoses and One Health: A Review of Literature. *J. Paras. Res* 2014;1–8.
5. Furuse, Y.; Suzuki, A.; Oshitani, H. Origin of measles virus: Divergence from rinderpest virus between the 11th and 12th centuries. *Virology* 2010;7:1–4.
6. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, et al. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *Int J Biol Sci* 2020; 16(10): 1745-1752.
7. Huynh G, Nguyen TNH, Tran VK, Vo KN, Vo VT, Pham LA. Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City. *Asian Pac J Trop Med* 2020; 13
8. Mahase E. 2020. China coronavirus: WHO declares international emergency as death toll exceeds 200. *BMJ* 2020;368.
9. Centers for Disease Control and Prevention, Interim Infection Prevention and Control Guidance for Dental Settings during the COVID-19 Response, Centers for Disease Control and Prevention, Atlanta, GA, USA, 2019.
10. Bansal P, Agnihotri A, Gupta A, Singh G, Kaur A, Arora R, Singh S. Emergency preparedness of oral health professionals during COVID-19 pandemic: A knowledge, attitude, and practices study. *Indian J Dent Sci* 2020;12:137-44.

11. Maheshwari S, Gupta PK, Sinha R, Rawat P. Knowledge, attitude, and practice towards coronavirus disease 2019 (COVID-19) among medical students: A cross-sectional study. *J Acute Dis* 2020;9:100-4.
12. Noreen K, Rubab ZE, Umar M, Rehman R, Baig M, Baig F. Knowledge, attitudes, and practices against the growing threat of COVID-19 among medical students of Pakistan. *PloS one*. 2020 Dec 11;15(12):e0243696.