Original Research Article

Assessment of Knowledge, awareness and practice of MBBS students regarding COVID-19 pandemic

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Abstract

Background: The present study was conducted to assess knowledge, awareness and practice of MBBS students regarding COVID-19 pandemic. **Materials & Methods:** 340 Medical students of both genders were given a questionnaire regarding clinical symptoms, transmission routes, prevention, and control of COVID-19.**Results:** 77% 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%, 90% replied that 2-14 days is the incubation period of Covid- 19, the overall mortality was correctly answered by 80% and 83% correctly showed that rRT-PCR is the laboratory test available for detection of COVID- 19. The difference was significant (P< 0.05). 75% replied that COVID- 19 increased the frequency of washing hands, 70% replied that COVID- 19 increased the frequency of using hand sanitizers, use of handkerchief while coughing is by 75%, unnecessary travel is avoided by 81%, 78% maintain social distance. The difference was significant (P< 0.05).**Conclusion:**Most of the students had sufficient knowledge, awareness and practice of regarding COVID-19 pandemic.

Key words: COVID, Knowledge, Pandemic.

Introduction

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[1]. 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[2]

The clinical symptoms are varied and manifest as fever, nasal congestion, sore throat, sneezing, loss of taste and smell[3].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)[4].Multiple studies have emerged assessing the virologic characteristics and clinical consequences of COVID-19; however, not enough studies focused on exploring the knowledge, perceived severity and controllability of the COVID-19 among the communities living this pandemic[5]. The knowledge and behavior assessment of the public toward such outbreaks is essential, especially due to the large amount of misconceptions and false information that are circulating on social media in regard to transmission of the disease and methods of acquisition[6].The present study was conducted to assess knowledge, awareness and practice of MBBS students regarding COVID-19 pandemic.

Materials & Methods

The present study was conducted on 340 MBBS students of both genders. All were informed regarding the study and their consent was obtained. Details such as name, age, gender etc. was recorded. All students were given a questionnaireregarding clinical symptoms, transmission routes, prevention, and control of COVID-19. Knowledge was checked by asking COVID- 19 is causes by which virus, symptoms in COVID- 19, incubation period, mortality rate, laboratory test available to detect COVID- 19. Practice was checked by asking did COVID- 19 increased the frequency of washing hands, hand sanitizers, handkerchief, do you avoid unnecessary travel, do you maintain social distance. These questions were responded on a true/false/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. Results were tabulated and subjected to statistical analysis. P value < 0.05 was considered significant.

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Results

Table 1: Distribution of participants

Year	Male (140)	Female (200)	P value
3rd year	20	30	0.01
4th year	40	60	
Intern	80	110	

Table 1, Fig. 1 shows that 3rd year had 20 males and 30 females, 4th year had 40 males and 60 females, interns had 80 males and 110 females. The difference was significant (P< 0.05).

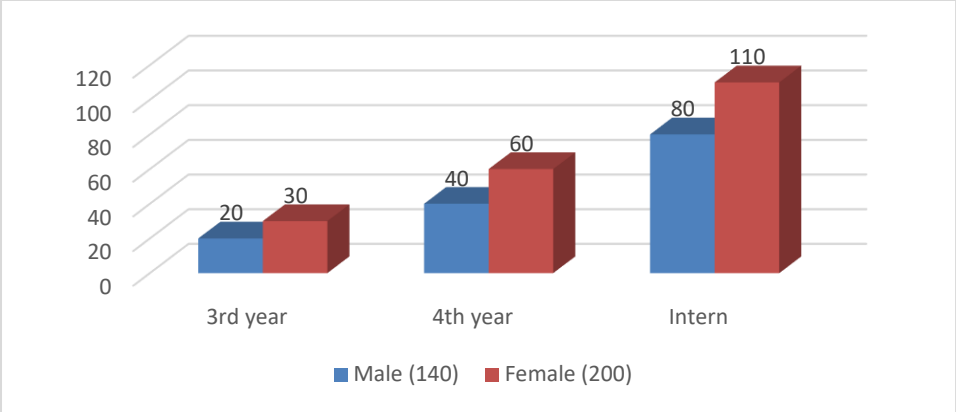

Fig. 1: Distribution of participants

Table 2: Knowledge among students

Questionnaire	Correct response	Incorrect response	P value
COVID- 19 causative virus	77%	23%	0.03
Main symptoms	90%	10%	0.01
Incubation period	72%	28%	0.03
Mortality rate	80%	20%	0.02
Test to detect COVID- 19	83%	17%	0.02

Table 2, Fig. 2 shows that 77% showed that SARS-CoV-2is the cause of COVID- 19. Main symptoms are fever, fatigue, dry cough and myalgia was replied true by 90%, 90% replied that 2-14 days is the incubation period of Covid- 19, the overall mortalitywas correctly answered by 80% and 83% correctly showed that rRT-PCR is the laboratory test available for detection of COVID- 19. The difference was significant (P< 0.05).

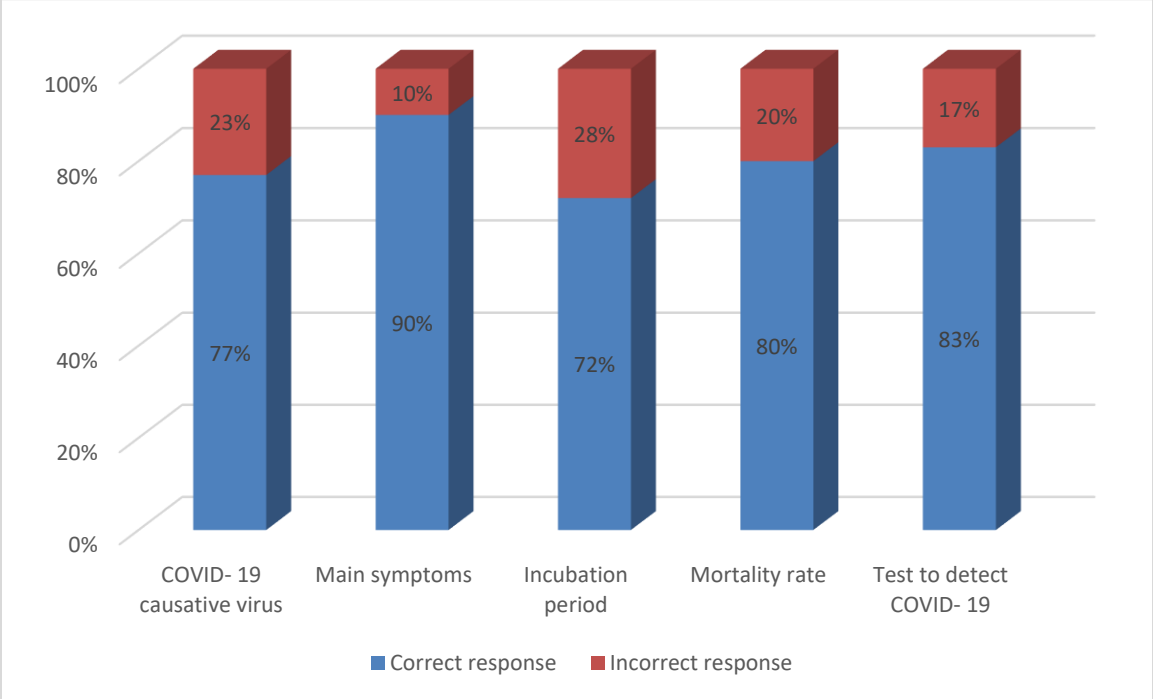

Fig. 2: Knowledge among students

Table 3: Practice among students

Questionnaire	Response	%	P value
COVID- 19 increased the frequency of washing hands?	Yes	78%	0.03
	No	20%	
	I don't know	2%	
COVID- 19 increased the frequency of using hand sanitizers?	Yes	72%	0.02
	No	24%	
	I don't know	4%	
Do you cough using handkerchief?	Yes	75%	0.02
	No	15%	
	Don't know	10%	
Do you avoid unnecessary travel	Yes	81%	0.01
	No	14%	
	Don't know	5%	
Do you maintain social distance?	Yes	78%	0.05
	No	10%	
	Don't know	12%	

Table 3, Fig. 3 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,use of handkerchief while coughing is by 75%,unnecessary travel is avoided by 81%, 78% maintain social distance. The difference was significant (P< 0.05).

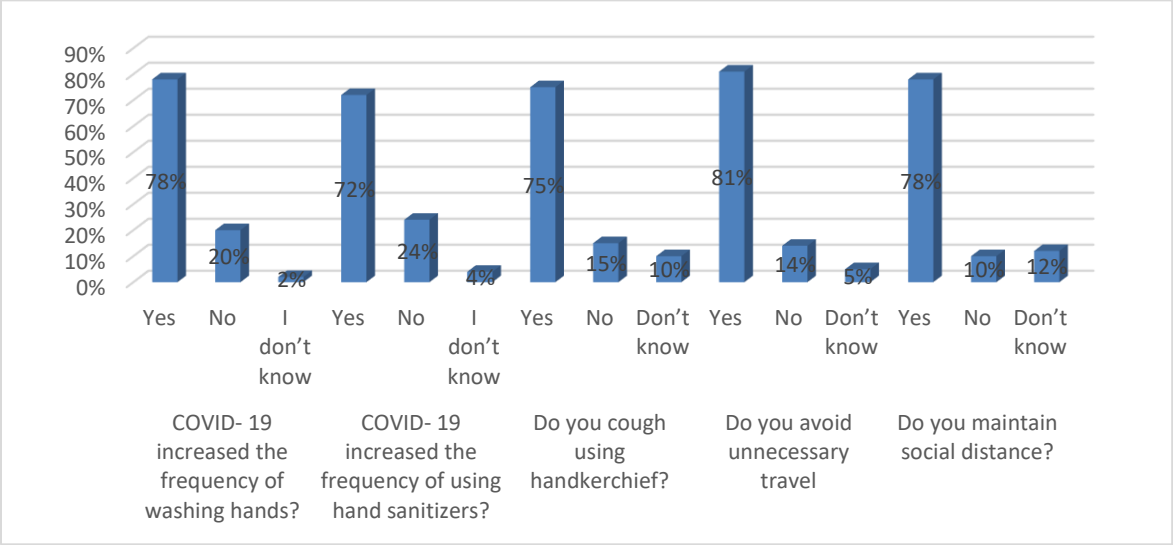

Fig. 3:Practice among students

Discussion

The Coronavirus Disease 2019 (COVID-19) pandemic has caused an unprecedented disruption in medical education and healthcare systems worldwide.7The disease can cause life-threatening conditions and it presents challenges for medical education, as instructors must deliver lectures safely, while ensuring the integrity and continuity of the medical education process. It is therefore important to assess the usability of online learning methods, and to determine their feasibility and adequacy for medical students.8COVID-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.9The present study was conducted to assess knowledge, awareness and practice of MBBS students regarding COVID-19 pandemic.

We found that3rd year had 20 males and 30 females, 4th year had 40 males and 60 females, interns had 80 males and 110 females. Alsoufiet al10 conducted a study among medical students from more than 13 medical schools. A total of 3,348 valid questionnaires were retrieved. Most respondents (64.7%) disagreed that e-learning could be implemented easily in Libya. While 54.1% of the respondents agreed that interactive discussion is achievable by means of e-learning. However, only 21.1% agreed that e-learning could be used for clinical aspects, as compared with 54.8% who disagreed with this statement and 24% who were neutral. Only 27.7% of the respondents had participated in online medical educational programs during the COVID-19 pandemic, while 65% reported using the internet for participating in study groups and discussions.

We found that 77% 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%, 90% replied that 2-14 days is the incubation period of Covid- 19, the overall mortality was correctly answered by 80% and 83% correctly showed 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, use of handkerchief while coughing is by 75%, unnecessary travel is

avoided by 81%, 78% maintain social distance.Maheshwariet 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.Khasawneh et al[12] found that medical students used mostly social media (83.4%) and online search engines (84.8%) as their preferred source of information on COVID-19 and relied less on medical search engines (64.1%). Most students believed that hand shaking (93.7%), kissing (94.7%), exposure to contaminated surfaces (97.4%), and droplet inhalation (91.0%) are the primary mode of transmission but were indecisive regarding airborne transmission with only 41.8% in support. Participants also reported that elderly with chronic illnesses are the most susceptible group for the coronavirus infection (95.0%). As a response to the COVID-19 pandemic more than 80.0% of study participants adopted social isolation strategies, regular hand washing, and enhanced personal hygiene measures as their first line of defense against the virus.

Conclusion

Authors found that most of the students had sufficient knowledge, awareness and practice of regarding COVID-19 pandemic.

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