ORIGINAL ARTICLE

FIRST YEAR MEDICAL STUDENT'S KNOWLEDGE AND ATTITUDE TOWARDS LEARNING ABOUT THE PANDEMIC COVID -19

SANA RASHEED, KOMAL IQBAL, ISMA MEER, MUNIZA SAEED
Department of Physiology, Postgraduate Medical institute/Ameer-u-din Medical College, Lahore.

ABSTRACT:

Background: Last year in December 2019 a new disease of corona virus, responsible for new cases of pneumonia was detected in Wuhan City of China**.** The outbreak of the disease has put an impact at all levels of education including professional institutes. It has left the institutes with no other option than to shift the entire curriculum to online formats which include online teaching along with self-directed learning. So a study was planned to assess the knowledge and attitude of 100 first year MBBS students of Ameer ud din Medical College towards self-directed learning about Corona virus disease pandemic.

Methods: This cross sectional study was done on 100 first year MBBS students of Ameer ud din Medical College in the first week of April. They were first given a questionnaire having thirteen questions about COVID-19 symptoms, spread, mode of transmission and prevention, and then after few days were given an assignment which had questions related to response of immune system towards SARS CoV2.

Result: Out of 100 students80% of the students responded to questionnaire. Out of this 80%, 40 % of the students showed outstanding performance with 100% correct answers, and 40% of students had maximum of four wrong answers. Response rate of the assignments was 95%, with outstanding performance of A+, 5% and A grade by 41% students, 38 % had B and 11 % of the students got C grade.

Conclusion: Majority of the first year medical students had adequate knowledge about COVID -19 and challenge of self-directed learning even at this level can make them show outstanding performance.

Key words: Awareness, Attitude, COVID -19

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Correspondence to: Dr Sana Rasheed, MBBS, FCPS
Demonstrator, Department of Physiology,
PGMI/AMC/LGH, Lahore, Pakistan.

Email: sanajawad53.sj@gmail.com

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INTRODUCTION:

On March 11th, 2020 WHO declared an outbreak of a disease called the Corona Virus Disease (COVID-19) as a worldwide pandemic. By now 32.5 million registered cases of COVID-19 have been reported globally . [1] In Pakistan first confirmed case of COVID 19 was reported in Karachi on 26 February 2020 by Ministry of Health, government of Pakistan. The number of cases continued to increase and within fifteen days the twenty confirmed cases and 471 suspected cases were reported.[2]

The corona virus disease (COVID- 19) outbreak put a halt the education system of the whole world.[3] Due to this pandemic all the education departments including medical schools were closed and all hostels were evacuated with immediate effect on 13 of March 2020.This all lead to prevalent uncertainty to the medical education. The students of medical colleges are related to such pandemics either directly or indirectly. They should have a high level of information and better approach towards such diseases. [4]

Medical education has a changing trend for the last few years by introduction of new techniques, executing facilitator based, active, and self-directed learning; and encouraging competency-based learning.[5]In response to

COVID-19, it was need of the time to shift the entire preclerkship curriculum to online formats that include content in the basic sciences, and behavioral sciences. Small-group formats were convened online in virtual team settings.[6]

First year medical students in our setup face a challenge to adapt to new modes of learning because of two reasons. Firstly they have mainly experienced rote learning and secondly have a very diverse educational background. The transition from the workplace or medical school setting to home in isolation, gave an opportunity to increase the responsibility of self-directed learning, [6]So the objective of our study was to assess the knowledge and attitude of our first year medical students towards acquiring basic information about the corona virus disease and immune response of the human body towards COVID -19.

METHODS

This cross sectional study was conducted on 100 first year MBBS students of Ameer-ud-Din Medical College Lahore. Five Google classrooms of twenty students with one facilitator were made. The students were given a questionnaire comprising of 13 questions related to the symptoms, mode of transmission and prevention from the disease of corona virus. Then after few days the basic knowledge of immune system was given in google classroom followed by an assignment related to response of immune system towards SARS CoV 2, giving them the responsibility of self-learning. The assignment comprising of three questions was given just two week after the lockdown on 8th April 2020 which was to be returned after two days. Grading of the assignments was mutually decided to be done according to, relevance, extensiveness of content and presentation of assignment. Individual facilitators did the grading of assignments which was counter checked by the assistant professors. Grade A+ was given to students who interpreted the topic in accurate and insightful way, used information thoroughly in a way that was factually relevant and accurate. Grade A was given to those students, who accurately interpreted the topic, used main points of information from recourses and attempted to offer new insight. Grade B was given to a student who gathered and understood simple concepts related to topic but not in depth. Grade C was given to students made error in interpreting the topic

RESULTS

Outstanding performance was shown by 40 %of the students who gave 100% correct answers when their knowledge about the disease of corona virus was assessed by a questionnaire, 18% of students gave one wrong answer, 15 % gave two wrong answers, 4% gave three wrong answers and 3% gave four wrong answers (Fig1). The most frequently wrong answered questions were three related to symptoms, mode of transmission and whether the COVID is airborne or not (Table 1). Assignment was given to 100 students out of which 5% were non responders, 5 % of the students got A+, 41 %of students got A, 38 % of students got B and 11 % of the students got C grade in their assignments as shown in fig 2.

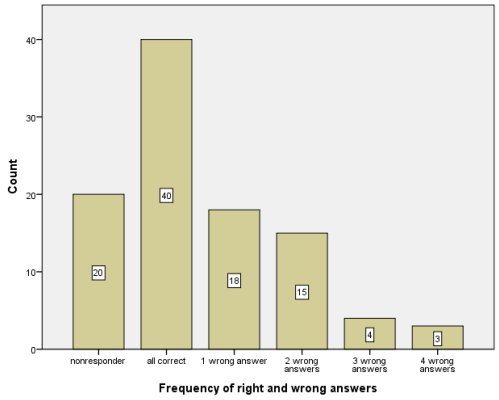

Fig 1.A Bar chart showing frequency of students with right and wrong answers.

Table 1: Questionnaire showing frequency of correct and incorrect answers

		Frequency of correct answers n=80	Frequency of incorrect answers n=80
1	The symptoms of COVID-19 are fever, fatigue ,body aches and dry cough	78	2
2	The symptoms of COVID- 19 are same as common cold	62	18
3	Till now the treatment of COVID 19 is only symptomatic and supportive.	80	0
4	All the patients of COVID 19 do not develop severe symptoms	75	5
5	Simple touching or eating wild animal results in COVID 19 infection	63	17
6	A COVID -19 person cannot infect the other person if he/she does not	77	3

	have fever		
7	The spread of the virus is by respiratory droplets	78	2
8	SARS CoV 2 is airborne	60	20
9.	Wearing a face mask by residents can be effective in preventing the infection	77	3
10	Children and young adults cannot get infected by the virus	76	4
11	COVID-19 infection can be prevented by avoiding going to crowded places and avoiding public transport.	80	0
12.	One of the effective way to decrease the spread of COVID -19 is isolation of the patient.	79	1
13.	Those who have contact with COVID -19 patient should be isolated immediately.The period of isolation is 14 days.	80	0

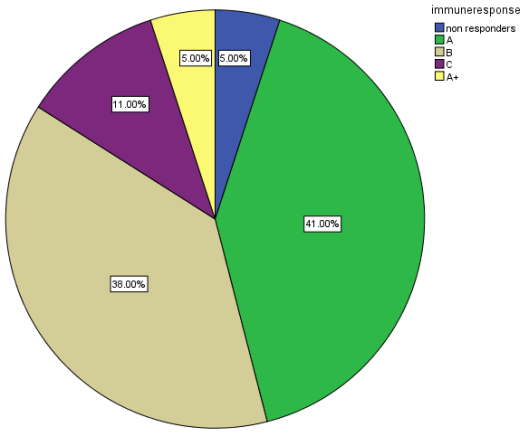

Fig 2. Pie chart showing the frequency of grades.

DISCUSSION:

First year medical students can make their own contribution in health care system through learning, volunteering and educating friends, family and the public .This study was planned to assess the knowledge and response of first year medical students towards self-directed learning by giving them a questionnaire and assignment related to COVID-19

The most frequently wrong answered questions were three which were related to symptoms, its mode of transmission and whether the disease is airborne or not. Majority of the students were able to differentiate the symptoms of COVID-19 from common cold. Similarly mode of transmission was clear to the students (Sixty three percent) of students knew, and 17 % of students didn't know that disease is not transmitted by touching and eating of the wild animal. This result is similar to study conducted on medical students in Malaysia, which reported a perceptible uncertainty amongst the responders with only 35.7% of participants knew that eating or simply touching the wild animal does not result in the infection by the COV1D-19 virus.[7] Sixty percent of students were aware and twenty percent were unaware of disease not being aiborne. This is in accordance to the study conducted on medical students in Jordan in which they reported 41.8% of their respondents believed that virus is airborne which could be due to a misunderstanding between airborne and respiratory droplets modes of transmission. [8] Another study done on undergraduate students (nursing ,BDS, MBBS and allied health sciences) in Lahore Pakistan showed more than 90% students had a sufficient knowledge and awareness about the disease of corona virus [4]. This could be due to involvement of students at all levels of training whereas our focus was mainly newly inducted first year students.

When the assignment related to immune response of the body towards SARS CoV2 was given to the students, 5% of the responding students were able to interpret the topic in an insightful way and elaborated their answers with the help of diagrams, while 41% were those who accurately interpreted the topic, used main points of information from recourses and attempted to offer new insight. Switching of learning methodology from teacher centred to student centred did not hamper the enthusiasm of students to learn. A study done by Turan and Koc found a significant relationship between self-directed learning, critical thinking and general efficacy in students thus indicating the need for education systems to focus more on self-directed learning to bring forth individuals who can organise their own learning. [9]

Medical students and faculty members are already struggling with the changes that they have to face due to this pandemic. The changes may seem to be minor, but such pandemics can have a drastic impact on level of education being imparted.[10]The impact of pandemics on medical education can be seen from the history of SARS pandemic in 2002. Some of the Chinese and Canadian medical colleges legitimately cancelled formal teaching at that time which lead to profound effects on the education and career of medical students later on.[11]

In this study we found out that first year MBBS students have sufficient knowledge related to COVID-19 pandemic and we concluded from our study that even first year medical students are of such caliber that when they are subjected to challenges of self-directed learning related to the topic whose basic concepts were given they can show outstanding performance. Therefore such challenges should be encouraged throughout the academic year so as to widen the thinking process of the undergraduate students.

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