

Original article:

Health-seeking behavioral intentions and prevention practices of medical undergraduates during COVID-19 lockdown period

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ABSTRACT:

Background:

COVID-19 pandemic is being transmitted rapidly across the globe. The best way of averting the spread is to know about its prevention strategy and act accordingly. **Material and Methods:** A cross-sectional questionnaire-based online survey regarding health-seeking behavioral intentions and prevention practices of medical undergraduates during COVID-19 lockdown period was conducted. Responses were analyzed for number and percentage.

Results:

84.89% of students were aware of Arogya Setu App. 76.10% were willing to participate in the training of COVID-19 to work as a frontline worker and 91.76% students were ready to work in hospitals in case the need arises. Precautionary measures such as hand washing (90.66%), using hand sanitizer (83.79%) and wearing a face mask (93.68%) were adopted by most of the participants.

Conclusion-

The medical students have good behavioral intentions and prevention practices and could spread this knowledge to the society and help in curbing the menace of COVID -19.

Key words:

Behavioral intentions, Prevention practices, COVID-19 lockdown, Medical undergraduates.

Introduction:

After its outbreak in Wuhan, China at the end of 2019, the novel corona virus COVID-19 pandemic has resulted in significant public health and socioeconomic damage and its global spread has been declared a global pandemic by the World Health Organization (WHO) on March 11, 2020^{1,2}. Globally, the number of cases and deaths is on the rise. Much of the virus remains unknown and lockdown steps are seen as necessary to curb the spread of the virus since rapid transmission from humans to humans is necessary.

Medical undergraduates are the future physicians and focus on their community and culture as a whole, becoming the role models of society, actions and activities carried out by them. Their behavioural reflection on such an outbreak is therefore important. Healthcare services are put under great strain during pandemics such as COVID-19, and a lack of healthcare providers can drive the involvement of less experienced healthcare professionals such as medical students. Despite our college's major closure, medical undergraduate students are a source of medical assistance and awareness to the public from volunteers in

their neighbourhoods and local hospitals. In conjunction with the high transmissibility of diseases that cause pandemics, the role of medical students in providing treatment to patients puts them at greater risk of contracting as well as transmitting the disease. Moreover, they are commonly referred to for family and friends healthcare advice^{3,4}.

The role and experience of medical students during the COVID-19 pandemic has varied widely in the context of individual countries⁵. Although medical students in our setup are at homes and have not defined roles for a pandemic, they can create a small change in the surrounding through their thoughts. There is a paucity of evidence regarding the behavioral intentions and practices about COVID-19 among medical undergraduate students in our tertiary healthcare setup and hence in this context, the present study was carried out.

Materials and methods:

After obtaining permission from the Institutional Ethics Committee, a cross-sectional questionnaire-based online survey was conducted among medical students of N.K.P. Salve Institute of Medical Sciences & Research Centre and Lata Mangeshkar Hospital, Nagpur from July 2020 to August 2020.

An online questionnaire was developed with a consent form attached to it. The link of the questionnaire was sent through E-mails and WhatsApp to the medical students. On receiving and clicking the link, the participants got auto directed to the information about the study and informed consent. The questionnaire was framed under three sections: the first section was for background data which included age, gender, and year of the study. The second section comprised of a set of

questions prepared and validated by experts targeting behavioral intentions regarding COVID-19 and the third section was for assessment of prevention practices of medical undergraduates during COVID-19 lockdown period. Online responses were analyzed for number and percentage.

Statistical Analysis:

Online responses were analyzed for number and percentage.

Results:

Online survey was conducted among 600 medical students. Of these 364 (60.66%) students who participated in the study, 203 (55.8%) were females. Year of study and gender wise distribution is depicted in Table 1.

Table 1: Distribution of students as per year of study and gender

Year of study	Males	Females	Total
I MBBS	52 (44.44%)	65 (55.55%)	117 (32.14%)
II MBBS	27 (36.98%)	46 (63.02%)	73 (20.05%)
III-I MBBS	35 (52.23%)	32 (47.76%)	67 (18.40%)
III-II MBBS	47 (43.92%)	60 (56.08%)	107 (29.39%)
Total	161 (44.2%)	203 (55.8%)	364 (100%)

As depicted in Table 2, majority of students (84.89%) were aware of the importance of the mobile application app promoted by Government of India i.e. Arogya Setu App. 76.10% students were willing to participate in the training of COVID-19 to work as a frontline worker and 91.76% students were ready to work in hospitals in case the need arises. But only 51.65% parents approved of the same.

Table 2: Behavioral intentions among medical undergraduate students during COVID-19

Parameters	I MBBS	II MBBS	III-I MBBS	III-II MBBS	Total
Stored helpline number	63(53.85%)	49(67.12%)	35(52.24%)	45(42.06%)	192(52.75%)
Downloaded Aarogya Setu app	111(94.87%)	66(90.41%)	59(88.06%)	73(68.22%)	309(84.89%)
Like to have corona virus vaccine if available	103(88.03%)	61(83.56%)	57(85.05%)	95(88.75%)	316(86.81%)
Willing to participate in COVID-19 training program	82(70.09%)	55(75.34%)	51(76.12%)	89(83.18%)	277(76.10%)
Willing to work as a frontline worker	102(87.18%)	68(93.15%)	62(92.54%)	102(95.33%)	334(91.76%)
Parents' support for participation	58(49.57%)	36(49.32%)	34(50.75%)	60(56.07%)	188(51.65%)

Almost all the students practiced preventive measures which have been stated in various guidelines issued for public interest during COVID-19 pandemic as shown in Table 3 and Figure 1.

Table 3: Preventive measures followed by medical undergraduate students during COVID-19

Parameters	I MBBS	II MBBS	III-I MBBS	III-II MBBS	Total
Increase frequency of washing hands	103(88.03%)	68(93.15%)	62(92.54%)	97(90.65%)	330(90.66%)
Increase frequency of using protective measures like mask	109(93.16%)	70(95.89%)	61(91.04%)	101(94.39%)	341(93.68%)
Cover cough and sneeze with a tissue, handkerchief, etc	110(94.02%)	69(94.52%)	64(95.52%)	106(99.07%)	349(95.88%)
Increase frequency of using sanitizer	100(85.47%)	66(90.41%)	50(74.63%)	97(90.65%)	313(85.99%)
Carry hand sanitizer	101(86.32%)	63(86.30%)	51(76.12%)	90(84.11%)	305(83.79%)
Clean mobile, keys, wallets with sanitizer	81(69.23%)	50(68.49%)	39(58.21%)	65(60.75%)	235(64.56%)
Maintain social distance	102(87.18%)	68(93.15%)	62(92.54%)	102(95.33%)	334(91.76%)
Take bath on reaching home instantly	75(64.10%)	54(73.97%)	42(62.69%)	70(65.42%)	241(66.21%)
Avoid unnecessary travel or outing	110(94.02%)	71(97.26%)	63(94.02%)	104(97.20%)	348(95.60%)

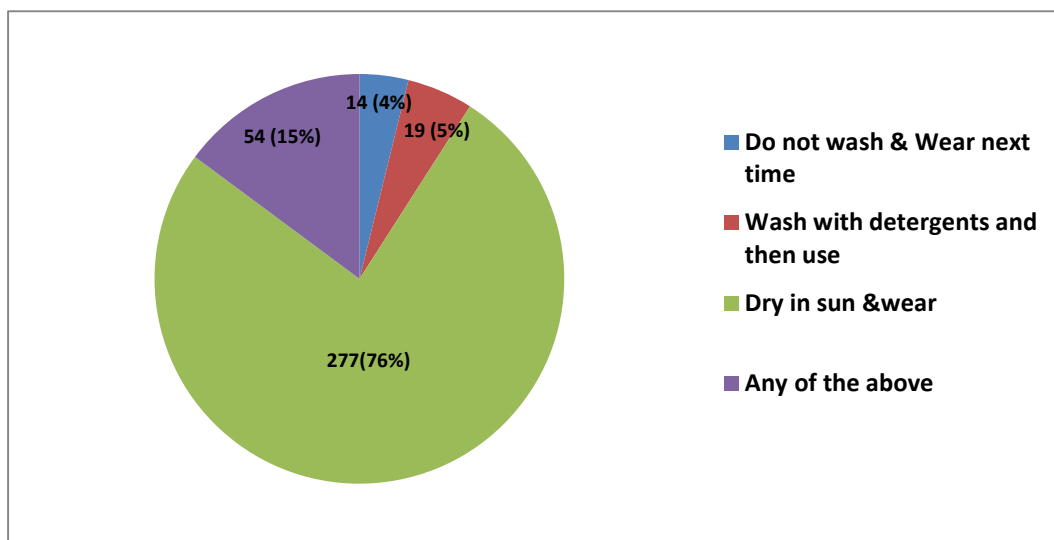


Figure 1: Prevention measures of clothing

Discussion:

The well-being of the society is directly or indirectly linked to medical students. It is of utmost importance to the behavioural intentions and preventive practises they carry out. Assessments of these criteria can also prove useful as an effective means of informing and raising knowledge of society's best practises. Of the students enrolled in the study, 32.14 % were pre-clinical, 20.05 % paraclinical, and 47.79 % clinical, respectively. This is similar to the study of Khasawneh AL et al⁶ and Taghrir MH et al⁷ in which the questionnaire was posted online to a small size of medical students.

Developed by the Government of India, Arogya Setu is a mobile application. The stated aim of this app is to spread knowledge of COVID-19 and to connect the citizens of India with critical health services related to COVID-19. This app extends the Health Department's programmes to include COVID-19 and shares best practises and guidance. Majority of the students were aware and had installed the same. While the duration for which the pause has been created by the pandemic, medical students have been kept at a distance from clinical learning environments for some time. A good communication remains one of the foremost attributes in teaching and learning. As the pandemic continues to unfold, apart from online academic teaching, training for the COVID -19 are set to play a larger role since the students may be called in assistance of the healthcare professionals who are in the forefront. The basic role of becoming clinician is patient care. Majority of the students were willing to participate in online COVID-19 training program so that they could be well versed with the arenas of operations in treatment of COVID -19. Also with the scientific approach towards vaccination going on, the students were of the notion that they would take the vaccine. However, majority of the parents did not support that their wards could be a part of the corona front liners if

time demanded. This might be due to their fear and concern that their child will contract COVID-19 on working as a frontline worker.

As a response to the COVID-19 pandemic, precautionary measures such as hand washing (90.66%), using hand sanitizer (83.79%) and wearing a face mask (93.68%) were adopted by most of the participants. This is in accordance with a recent study done by Zhong BL et al⁸ where nearly 98% admitted to wearing masks when leaving their homes. However Taghrir MH et al⁷ reported dissimilarity in the same which could be due to attributed to the differences in set of laws enforced by the state, cultural occurrence in previous pandemics and also the educational level.

As goes the saying "Prevention is better than cure", other prevented measures adopted were social seclusion strategies like maintaining social distance, regular hand washing, and enhanced personal hygiene measures like bathing immediately and cleaning of belongings like mobile, keys, wallets etc after having returned from a public place and avoiding unnecessary travel or outing as their primary line of defense against the virus. Our study showed concordant relation between preventive behavior and risk perception whereas the study by Taghrir MH et al⁷ showed a negative correlation between the same. In India, various regions have been instituted with a helpline number to get information or any help on COVID-19 pandemic. Though majority of the students knew about the same only 52.75% had stored the same. The availability of the helpline numbers at the click of the button and the variedness of the helpline numbers region wise was one of the reasons that the number was not stored by the majority of the students.

Conclusion:

In conclusion, medical students showed expected level of health-seeking behavioral intentions and implemented proper strategies to prevent the spread. To the best of our

knowledge, this is the first study that evaluates the behavioral intentions of medical students in COVID-19. In the midst of the crisis, dissemination of knowledge in the society to prevent spread is the foremost criteria and who better than the budding doctors of the society which if followed may spread to the surrounding people and through small but in a huge way could be one of the ways in helping to curb the growing menace of the disease. Moreover, online sessions which could give them positive inputs make them aware of the ways to help the society positively.

Study limitations:

The study was done in a single medical institute in Central India, thus the results shown here may not be applicable to other areas of the country.

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