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## Awareness amongst Pharmacy Undergraduates about prevention and treatment of novel coronavirus: A survey study

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### ABSTRACT

Currently situation in India is very critical as second wave of corona virus striking all age group people with increased mortality. All healthcare workers and corona warriors are working extremely hard to fight against the situation. No doubt lot of new treatment and vaccine have made a good impact to control the situation but still it demands lot of care and prevention from general population. There is a dire need to increase awareness about prevention and hygiene and impart knowledge about latest treatment research in youth. Objective: To assess awareness level and knowledge towards prevention and treatment of novel coronavirus amongst Pharmacy undergraduates of Pharmacy colleges from Gujarat. Methodology: In this study, we determine cross sectional survey through online medium to study awareness amongst Pharmacy undergraduates of south Gujarat. The data were collected and analyzed by percentage analysis. Results 78.9 % participants were interested in gaining further detail information about treatment and prevention. Only 63.3 % were aware about vaccine developed by Bharat biotech in collaboration with ICMR. 97.2 % were aware about the preventive measures against coronavirus. Conclusion: As we know youth is the future of an India and becomes imperative to capture their perceptions and carefully assess their knowledge and involvement regarding pandemic situation to take preventive & corrective measures for a healthy future. Towards this, our study can provide necessary momentum for updating and upgrading the important issues like involvement and interest of healthcare sector students towards current pandemic situation.

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**KEY WORDS:** Cross sectional survey, Covid-19, awareness and knowledge, online survey

### INTRODUCTION

Everyone knows about the coronavirus and its symptoms and complications. Coronavirus is a single stranded RNA virus and major issue with its complications is due to the target site ACE-2 in lungs. Therefore, majority of complications are due to imbalance in oxygen saturation. Maximum chances of mortality are seen with elderly and patients exhibit comorbidities. Currently the online survey has become important tool in assessing the conventional research on knowledge and awareness assessment on

Covid-19. This online survey has provided unique opportunities for researcher to learn and study various parameters about Covid-19. [1-4] Currently situation in India is very critical as second wave of corona virus striking all age group people with increased mortality. All healthcare workers and corona warriors are working extremely hard to fight against the situation. No doubt lot of new treatment and vaccine have make a good impact to control the situation but still it demands lot of care and prevention from general population. There is a dire need to increase awareness about prevention and hygiene and

impart knowledge about latest treatment research in youth.

**Objectives:** The objective of study is assessment of Awareness level about covid-19 and knowledge towards prevention and treatment of novel coronavirus in pharmacy under graduates. Secondary objective was to know how many participants were interested in gaining knowledge in future.

**METHODOLOGY**

A cross sectional online multiple choice questionnaires based study has been designed to assess the objectives. In this study non probability and convenient sampling method was used. [4-5] The participants were asked to provide their informed consent virtually in google form accepting the same can then proceed for the survey participation. The participants had shown an adequate amount interest in giving their valuable responses and passed it to their contacts, which resulted in getting responses from other colleges too. Undergraduates of pharmacy program in pharmacy colleges of Gujarat with smartphone had participated in this survey study. A questionnaire was designed with simple English language in Google form. Results are analyzed in percentage analysis. This study was a part of undergraduate project. Total 256 responses were received but 6 responses were excluded due to incomplete data filling by participants. The results of survey were analyzed by percentage analysis n represented using pie chart for representation of data.

**RESULTS**

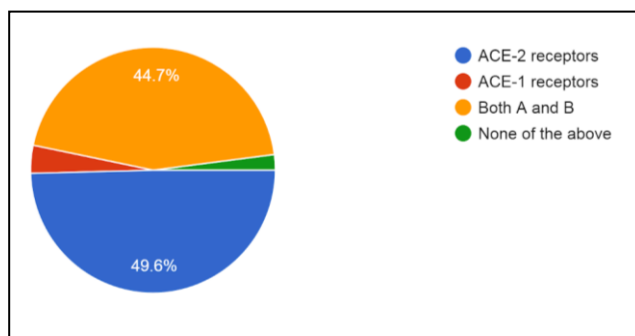
78.9 % participants were interested in gaining further detail information about treatment and prevention. The results of participants as per semester wise distribution are mentioned as below in table.

*Table 1 Basic information of participants*

Semester	Participants (in Percentage)
2	25.7
4	19..4
6	26.1
8	20.9
<b>Boys</b>	35.79
<b>Girls</b>	64.20

Awareness of knowledge and information about novel coronavirus amongst pharmacy undergraduates was found

as below. Participants were not so clear regarding the site at which coronavirus target in human body. Almost 44.7% participants responded both ACE-1 &2 are receptors for the coronavirus. Whereas 49.6% participants have answered correct for the binding site of coronavirus. As it is already documented that virus enters the humans attack on Angiotensin converting enzyme-2 in alveoli and through it impacts other organs in body. This attack causes imbalance in level of angiotensin I and II leads to vascular complications. ACE-2 is vital link in cardiovascular complications especially in elderly. [3] Therefore information and knowledge regarding the site of attack and its balance in body is must for participants.



*Figure 1 Response of participants showing binding site of covid-19 virus in human.*

Generally, coronavirus spreads in all age group people with equal possibilities but chances of mortalities are more with patients with coexisting morbidities. Therefore 62.4% participants believe that it can spread in all age group populations. Regarding the various types of Coronavirus only 48.6% participants were aware about the various types. 97.2 % participants were aware about the preventive measures for corona and 88.6 % participants amongst them were aware about the possible ways of transmission of coronavirus. Regarding the clinical features of coronavirus responses are mentioned in below table. 69.6% participants were aware about the clinical features prevail as the primary symptoms of novel coronavirus. 26.8 % participants believe coughing and fever as primary symptoms suggested that terminologies like ageusia( loss of taste) and anosmia ( loss of smell) are might not be familiar to participants.

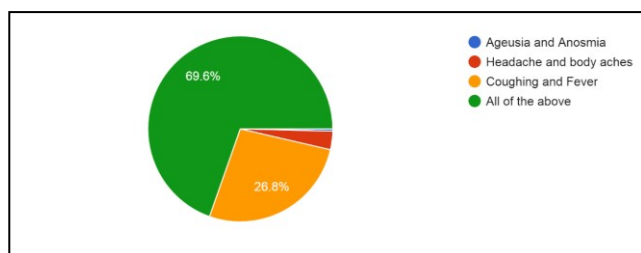


Figure 2 Responses for primary symptoms of novel coronavirus.

Table 2 Results of assessment of participants on information about preventive measures (%)

Sr.no	Particulars	Aware	Not aware
1	Awareness on mobile application for contact tracing, disease mapping n further information retrieval	95.5	4.5
2	Information on alcohol free sanitizer content	39.6	60.4
3	Information about Vaccine developed by Bharat Biotech and ICMR	63.3	36.7
4	Information about viral vector based vaccines in India	56.3	43.7

Table 3 Results of assessment of knowledge on treatment (%) in covid-19:

Sr. No	Particulars	Aware	Not aware
1	Information about parentral antiviral agent useful for children and adults in Covid-19 treatment	82.2	17.8
2	Information about oral antiviral agent approved by DCGI for emergency use in mild to moderate patients	57.7	42.3
3	Information's regarding the vital supportive treatment measures in covid-19 treatment	68	32
4	Food habits to be avoided during covid-19 infection	38.6	61.4
5	Information about Plasma therapy	90.5	9.5
6	Serious side effects of HCQ	47.5	42.5
7	Mechanism of Tocilizumab in Covid-19	60	40

8	Which antibiotics is useful in treatment of covid-19 infection	58.7	41.3
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For assessing home remedy to boost immune system to combat against coronavirus 37.4 % participants' responded yoga and exercise are very important in routine life style to adhere. Whereas 32.9% believe consumption of spices and lemon juice might be important in boosting immunity. Maximum participants were aware of the novel coronavirus but somehow they were lacking the precise information and knowledge about virus. Knowledge towards the treatments was also require more such kind of awareness measures on regular interval. The limitations of the study include limited sample size and geographical limitation. The future scope is to increase the sample size and analyze other aspects such as impact of treatment combinations on durations of recovery in covid-19. Future study can also be emphasize of importance of vaccination and post vaccination experience in youth to encourage future generations. Our study highlights the need of spreading awareness and updating the relevant and appropriate knowledge of COVID-19 prevention and treatment amongst the undergraduate Pharmacy students.

**CONCLUSION**

The participants have appropriate information regarding the corona virus and its preventive measures. Proper events and platform like webinar should be organized to encourage youth to inform about advantage of vaccination and role of medicine and supportive medicines in corona at regular interval. Adequate knowledge of pharmacy undergraduates will empower the country to combat against coronavirus.

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