

# Bioethics in COVID-19 times: Undergraduate Medical student's perspective

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**Abstract— Aim:** To study the student's perspectives about the bioethical issues during the COVID-19 pandemic. **Materials and Methods:** This was a retrospective study of the feedback form received following the conduct of online webinar titled "Bioethics during COVID 19 times", from the undergraduate medical students. The feedback was in the form of a questionnaire, which consisted of three open ended questions and three Likert scale questions regarding bioethical challenges faced by the students. The responses were then analyzed for each category of questions. **Results:** More than 300 undergraduate medical students participated in the webinar & 213 responded for the feedback. Out of the 213 responses on various issues concerning medical profession, 62% strongly agreed that medical professionals are putting in their best efforts to treat and protect people during COVID-19 pandemic. 22% of the students were of the view that while treating SARS CoV2 positive patients, younger patients must be preferentially treated over aged patients, but 38% of the participants said it was unethical. 57% of the students said it was not a good strategy to reduce the testing frequency as a strategy to reduce the number of cases. Students were also aware of many bioethical issues during pandemic like the origin of SARS CoV2 virus, handling of pandemic by World Health Organization, Central and State governments, issues of shortage of personal protective equipments, shortage of essential drugs and medical equipments in India, the plight of rural masses for the want of basic health care with additional burden posed by the pandemic. A significant outcome of this study was, majority of the students were of the view that, including bioethical training in curriculum would help in inculcating empathy & enable them to interact with patients compassionately. **Conclusion:** COVID-19 pandemic has affected all rungs of the society including the student population. Medical undergraduate students are not an exception to this. They have given an insight to various Bio-ethical challenges faced by them & these need to be addressed by incorporating ethical training in the

curriculum, empowering the future graduates to be better professionals.

**KEYWORDS—** Medical undergraduates, Bioethics, pandemic, SARS CoV2, COVID-19, feedback.

## INTRODUCTION

SARS CoV-2, a corona virus, originated in the Wuhan City of China<sup>1</sup>, causing COVID-19 which was declared a pandemic by the World Health Organization on march 11 2020<sup>2</sup>. The possible modes of transmission for SARS-CoV-2, include contact, droplet, airborne, fomite, feco-oral, bloodborne, mother-to-child, and animal-to-human transmission<sup>3</sup>.

Infection with SARS-CoV-2 primarily causes respiratory illness ranging from mild disease to severe disease and death, and some people infected with the virus never develop symptoms<sup>3</sup>.

The global emergency of the COVID-19 pandemic confronts us all with unpredictable, disruptive situations which have changed our daily lives, economies, political decisions and universities.

The COVID-19 pandemic has changed the course and experience of medical training for thousands of undergraduate medical students globally. Online lectures, video based demonstrations, seminars, group discussions, etc., have pervaded the medical curriculum. The real life clinical exposure has been substituted by virtual training. This has opened up an entirely novel set of problems for the teaching learning activity. The greatest impact is bound to be on the actual human interactions such as communication, empathy & such other basic principles of clinical practice.

The recent inclusion of AETCOM (Attitude, Ethics and Communication) module in the undergraduate curriculum is indeed a welcome measure & this study aims to understand the students perspectives about the bioethical issues faced by them during this major

pandemic.<sup>4</sup> These inputs can be valuable reflections for curricular refinement as COVID -19 may have far and wide impact on health care system in the years to come.

### STUDY DESIGN AND METHODOLOGY:

The subjects of this retrospective study are the undergraduate students who participated in an online Webinar titled "Bioethics during COVID-19 times" held at Sri Devaraj Urs Academy of Higher Education and Research on 30/6/2020 for 2 hours. The speakers spoke about 'Reflections on the International COVID-19 pandemic and the post COVID Bio Ethics' and 'Challenges in Medical Education during COVID 19 Pandemic'. The participants who volunteered to give feedback were provided with a Google feedback form consisting of questionnaires having three open ended type and three Likert scale type regarding the issues pertaining to bioethics which are faced by the undergraduate medical students during the COVID 19 pandemic. Institutional ethical committee clearance was obtained. The responses from these feedback forms were then analyzed.

### RESULTS:

More than 300 undergraduate medical students participated in the webinar & 213 volunteered to give feedback responses. Students were asked about the bioethical issues which they came across during the pandemic from across the world. 94 students mentioned about the issue of origin of SARS CoV2 virus, 114 participants about handling of pandemic by China, WHO and central and state governments, 112 about issues of shortage of personal protective equipments, shortage of essential drugs and medical equipments like ventilators in India, 65 participants about the plight of rural masses for the want of basic health care, the shortage of health care services during the extensive lockdown imposed globally during the pandemic, 54 students about harassment faced by medical professionals, 125 students about issues faced by the student community with suspension of all the clinical activities which affected their learning outcome. The responses for question 1 are tabulated in Table 1.

When asked about the need for any additional ethical training in the medical undergraduate curriculum, 26 participants mentioned about ethical conduct and code of ethics as part of curriculum, 44 about incorporation of bioethics in clinical case based discussion at bed side, 58 students about communication and public health relations. 18 students mentioned about the importance of debates and creating awareness amongst them. 64 students did not respond to this question. The responses for question 2 are tabulated in Table 2.

The third question was about their opinion about involvement of undergraduate students in the COVID-

19 task force. 131 students were in favor of involving undergraduate students in the task force. Out of 131 students, 21 participants said that students should be involved only for extension activities, 25 students said they can be involved only after adequate training, 22 students said that they should be involved only in case of shortage of man power, 1 participant said that the choice of participation should be given to each student. 43 students were not in favor of such a decision. 62 students gave a neutral response. The responses for question 3 are tabulated in Table 3.

209 responses were received for questions about the efforts of medical professionals to treat and protect people during COVID-19 pandemic, preference in treatment to young over old persons and reduction in testing frequency to reduce the number of cases. The responses are showed in the graph below.

**Table 1**

BIOETHICAL ISSUES DURING COVID-19 PANDEMIC	NUMBER OF RESPONSES
Origin of SARS cov2 virus	94
Handling of pandemic by China, WHO	62
Handling of pandemic by Indian Government (Central) and other state governments	52
Shortage of PPE and other medical devices	112
Rural health care services	65
Undergraduate medical training	125
Harassment faced by the medical professionals	54

**Table 2**

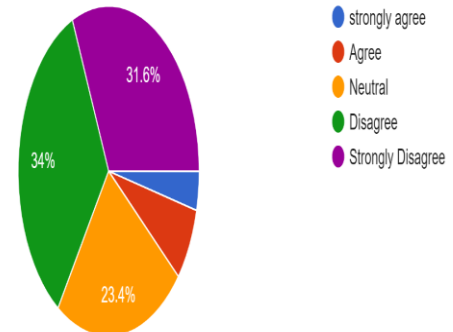
BIOETHICS TO BE INCLUDED IN THE UNDERGRADUATE CURRICULUM	NUMBER OF RESPONSES
Code of ethics and ethical conduct	26
Bioethics in clinical case based discussion	44
Communication and public health relations	58
Debates and awareness creation	18
No response	64

**Table 3**

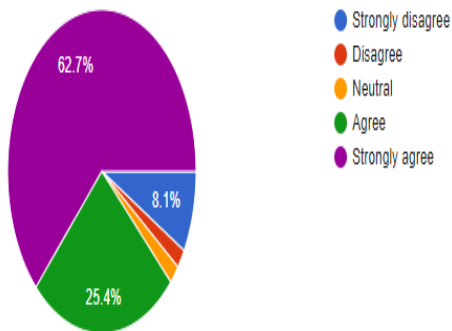
FOR INVOLVEMENT OF UNDERGRADUATE STUDENTS IN COVID-19 TASK FORCE	NUMBER OF RESPONSES
To be involved in extension activities	21

Need for adequate training of undergraduate students	25
Should be involved in case of shortage of man power	22
Should be optional	1
Undergraduate students should not be involved	43
Neutral response	62

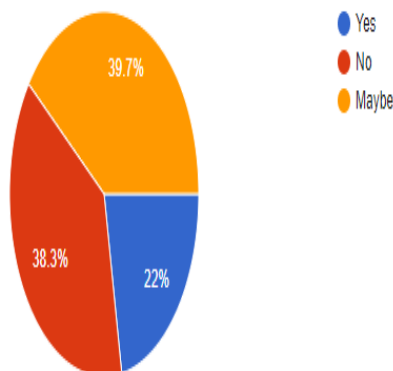
Aggressive testing for SARS CoV2 has been feared to flare up the number of cases and hence the testing frequency has been reduced. Is it the correct strategy to deal with any pandemic?  
209 responses



Medical professionals are putting in their best efforts to treat and protect people during COVID-19 pandemic,  
209 responses



While treating SARS CoV2 positive patients, younger patients are preferred to be given treatment over aged patients. Do you think it is ethical?  
209 responses



62% of students strongly agree that medical professionals are putting in their best efforts to treat and protect people during COVID-19 pandemic. 22% of the students were of the view that while treating SARS CoV2 positive patients, younger patients are preferred to be given treatment over aged patients but 38% of the patients said it was unethical. 57% of the students said it was not a good strategy to reduce the testing frequency as a strategy to reduce the number of cases.

**DISCUSSION:**

Students were aware of many bioethical issues during the pandemic like the origin of SARS CoV2 virus, handling of pandemic by China, WHO, Central and state governments, issues of shortage of PPEs, shortage of essential drugs and medical equipment's like ventilators in India, the plight of rural masses for the want of basic health care, the shortage of health care services during the extensive lockdown imposed globally during the pandemic, issues faced by the student community with suspension of all the clinical activities which affected their learning outcome, harassment faced by medical professionals. They were also aware of the abuse & attack on health care givers, due to various reasons that was evident during community testing, surveillance & quarantining during the pandemic. The mental health and commitment of health care givers may be influenced by public reactions that are driven by fear, panic, misinformation about viral spread, and misplaced anger.<sup>(5)</sup> The undergraduate medical student must receive realistic, ethical and practical training to handle this.

Majority of the students were of the view that, including training in bioethics as a curricular component will help them to develop empathy interact with patients compassionately. It could be of immense help in handling various activities to

manage the pandemic situation more effectively. There is a need for incorporation of ethics in the undergraduate curriculum to make the doctors confident enough to deal with the ethical dilemmas independently and also improve professional efficiency.<sup>(6)</sup> The AETCOM module will empower the medical graduate in communicating better with the patients during their professional interactions.<sup>(7)</sup>

Students have brought about many challenges associated with involving undergraduate students in the COVID-19 task force. Prevalent fears and inadequate understanding of Covid-19 suggest that undergraduate medical students are not prepared to be the front-line taskforce in the current pandemic.<sup>(8)</sup> These include the importance of proper training to be imparted to students to handle the COVID-19 patients, ensure availability of adequate personal protective equipments to students. They are of the view that this decision should be taken when there is extreme shortage of manpower and should be optional.

The physical and psychological well-being of medical professionals has been affected as COVID-19 patient loads continue to increase and fellow co-workers become infected with COVID-19, contributing significantly to exhaustion among them. The effects of increase in workload with the associated risks has a negative impact on the mental health of HCW. Throughout this pandemic HCWs have had to self-isolate from their own families for fear of transmitting the virus to their loved ones. Our HCWs are bravely living in a constant state of psychological stress founded in fear of transmitting the virus and stress of the unknown aspects of this virus<sup>(9,10)</sup>. These efforts of medical professionals has been lauded by international organizations, governments, eminent leaders, medical fraternity, students and general public alike.

Increasing tests would identify the infected individuals early in the disease process providing more robust and aggressive treatment to the population, improving morbidity and probably mortality. In addition it would warn the exposed to take strict steps to quarantine themselves, reducing rates of new and active cases. Increased testing frequency was associated with a positive correlation with recovery and was negatively correlated with new cases, new deaths, active cases<sup>(11)</sup>.

The relevance of old age as a predictive factor of efficacy combined with the principle of healthcare affording equality of opportunity to enjoy a life makes age an important factor in making the difficult choice of who will receive scarce resources in a pandemic<sup>(12)</sup>. Older adults might have lost their retirement savings and have little/ no scope for taking up new jobs in the future. Physical and mental health may be compromised even after the pandemic is over. This crisis has spotlighted engrained ageism, racism, and classism. Positive changes can come from increased

levels of technology use, self-care, and time management<sup>(13)</sup>. Although protocols may vary depending on the resource, scarcity, and setting, several criteria should be considered in their development. Preferably, multiple criteria should be integrated into an allocation protocol for selecting patients for intensive treatment because no single element can incorporate every applicable moral consideration in treatment protocols for treatment of young and old individuals alike<sup>(14)</sup>.

## CONCLUSION:

COVID-19 pandemic has affected all rungs of the society including the student population. Medical undergraduate students are not an exception to this. They have given an insight to various Bio-ethical challenges faced by them& these need to be addressed by incorporating ethical training in the curriculum, empowering the future graduates to be better professionals.

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