



Letter to the Editor

The impact of e-learning modalities on medical students in KSA during the COVID-19 pandemic



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In late December 2019, a number of patients with pneumonia of unknown cause were admitted to hospitals in Wuhan, Hubei Province, China.^{1,2} Through a comparison with early incidents, likely origins of this pneumonia were ruled out, including the severe acute respiratory syndrome coronavirus (SARS-CoV), Middle East respiratory syndrome coronavirus (MERS-CoV), and influenza virus.¹ Later on, these cases would be posing a threat of a new potential outbreak of the coronavirus (CoV) family, subsequently being named the 2019 novel coronavirus (SARS-CoV-2) by the World Health Organization (WHO)², which generated the coronavirus disease (COVID-19).

COVID-19 was amended to be classified as a class B notifiable illness on 20 January 2020, by China's 'National Infectious Disease Law'. Additionally, the 'Frontier Health and Quarantine Law' was therefore imposed in an effort to lessen the COVID-19 outbreak.¹ According to the WHO, COVID-19 has managed to break barriers, spreading to over 215 countries.³ Therefore, the WHO has declared the COVID-19 epidemic a pandemic, as of 11 March 2020.⁴ Moreover, SARS-CoV-2 has managed to infect over 4 million people from all over the world, as of 11 May 2020, and caused about 278,993 deaths worldwide.³

Furthermore, the COVID-19 outbreak had inflicted a huge burden on the quality of life of many people. Therefore, officials in public health sectors and governments have introduced a variety of measures to help stop the spreading

of COVID-19, for instance social distancing, self-quarantine, and closure of public sites, such as gyms, movie theatres, and educational institutions.⁵

Therefore, students' educational programs have been disturbed, which entailed a significant shift from traditional learning in schools and universities to a virtual experience via online or distance learning.⁶ As such, closures of educational institutions worldwide are affecting 'over 70% of the world's student population'.⁷

The aim of our study is to explore the impact of distance or e-learning on medical students in KSA, and their outlook into this dramatic shift.

A cross-sectional study was conducted under the authority of the College of Medicine of King Faisal University in Al-Ahsa, KSA. The study was carried out through an electronic questionnaire, which was distributed through social networking applications, targeting medical students in KSA. An ethical approval was obtained from participants. The study was conducted over a period of 8 weeks (from 16 March 2020 until 11 May 2020).

The questionnaire was composed of two sections. The first explored demographic data of the participants (age, gender, marital status, academic year, area of residence). The second section consisted of 10 questions, exploring the opinions of medical students regarding e-learning during the COVID-19 pandemic.

A total of 342 medical students from all over KSA participated in the study by answering an online survey. The majority of the participants (82) were studying at King Faisal University, Al-Ahsa (24%).

Participants in this study were asked to evaluate their satisfaction with the traditional method of learning as medical students, in classrooms, at their university. The results showed that 52 (15.2%) students believe it to be excellent, 105 (30.7%) students considered it acceptable, 25 (7.3%) thought it was average, and 160 (46.8%) evaluated it as unsatisfactory.

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Our study has also shown negative views regarding e-learning, for instance, 277 (80.1%) students mentioned that they had a problem with their internet connection. Furthermore, 263 (76.9%) students believed that e-learning has a negative impact on their practical training as future physicians.

COVID-19 is an infectious disease that manifests in mild to moderate respiratory distress; it is fairly known that such distress will be severely affecting people of older age.⁸ Therefore, governments in different countries have taken measures to help limit the spread of this virus, including the closure of educational institutions.⁵

However, the education sector had to continue throughout this health crisis through means of distance or e-learning.⁶ Moreover, a study was conducted to evaluate 'student's perception and attitude towards e-learning', finding that 60 students (48.4%) preferred both means of learning, namely e-learning and face-to-face interaction in classrooms.⁹ Additionally, 21 students (16.9%) preferred the e-learning method, exclusively, and 43 (34.7%) favoured the traditional method of learning in classrooms.⁹ Our study has shown that 196 participants (57.3%) preferred e-learning, while 146 (42.7%) believed that the traditional way of learning in classrooms is better.

Furthermore, our research found that the majority of medical students who have participated in this study preferred e-learning over traditional methods. However, it was also concluded that even with students preferring e-learning, they also have faced a few obstacles throughout this process, mainly students in their clinical years, who needed clinical training, which was irrelevant in the e-learning method.

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Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

There are no ethical or financial issues, conflicts of interests, or animal experiments related to this research.

Authors contributions

Every author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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