

Virtual learning for teaching medical ethics during COVID-19 pandemic

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What problem was addressed?

COVID-19 has been spread in many countries around the world, and its death toll is on the rise. During this COVID-19 pandemic, medical students and their professors faced numerous challenges due to restrictions caused by canceling or disrupting clinical education programs (1,2), especially for medical ethics courses. Medical students learn medical humanities and professional values from their interactions with patients, as well as with their professors, colleagues, other healthcare providers, and the society (3). Although altruism, responsibility, honesty, respect, and justice are better understood by medical students at the time of a world-wide COVID-19 catastrophic pandemic (4). Teachers should employ suggested methods for training the values and concepts in the formal curriculum of medical ethics. Many studies support the use of student-centered approaches for teaching professionalism and concepts related to medical ethics and recommend that students should participate in the learning process to the furthest possible extent (5). Critical thinking plays an indispensable role in learning ethics, and is involved in interactive teaching methods (6). When online platforms were adapted for educational purposes, medical ethics teachers did not think that they could use interactive techniques (e.g., group discussions) to analyze clinical cases. Accordingly, they did not see the possibility of developing critical thinking competency without face-to-face interaction with students.

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As e-learning and online platforms are the staples of social-distancing and similar practices during the quarantine period, the primary concern is whether these platforms are suitable to be utilized for teaching the values and concepts of medical ethics and professionalism.

What was tried?

The author modified the medical ethics curriculum for medical and dental students and created an online course consisting of 16 sessions to teach and then assess reasoning skills. In this modified curriculum, the fundamental concepts of medical ethics taught through a series of self-study

materials to analyze cases that were freely available in the Learning Management System (LMS) platform of the university. In each session, a specific theme from the medical ethics curriculum was discussed. The students interacted in the virtual class to contribute to the case analysis and discussion of the introduced issue. Each session’s materials included assessment topics which allowed for formative feedback. Assessment topics were uploaded in the LMS platform based on the specific themes to be taught. These topics consisted of case analysis, storytelling, and review of excerpts from books and articles, and case presentation (Figure 1).

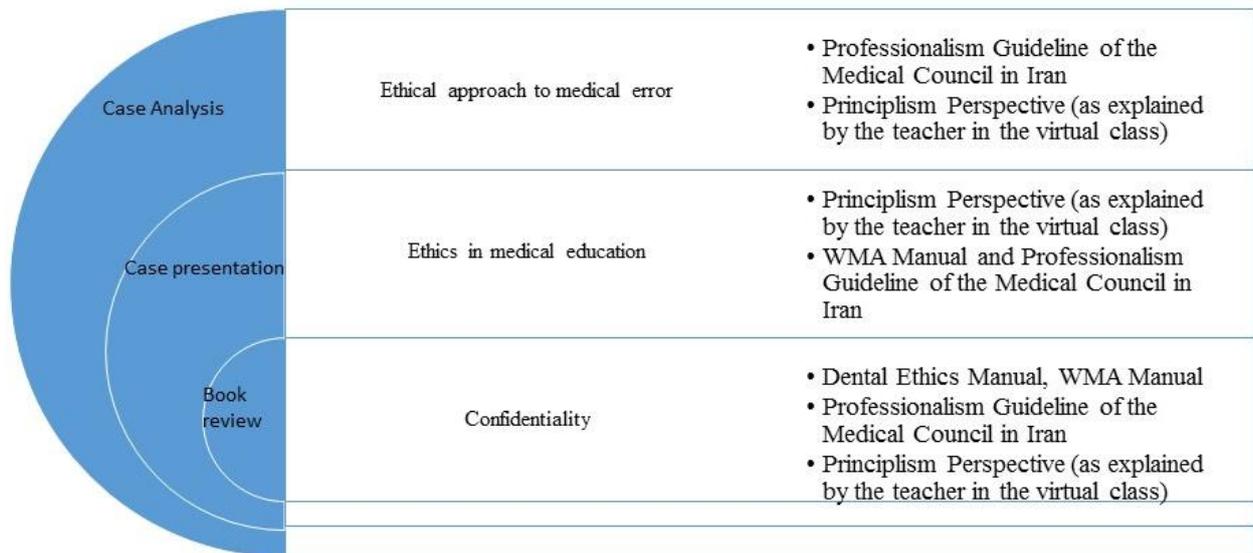


Figure 1. Assessment Topics and analysis tools in LMS platform

A qualitative study was conducted using inductive content analysis of the students’ responses in three main phases: open coding, creating categories, and abstraction (7). Figure 2 shows an example of the abstraction phase. This study showed that

applied concepts in the analysis of individual cases by medical students and the review of books by dental students had meant the same for both students and teachers without face-to-face communication.

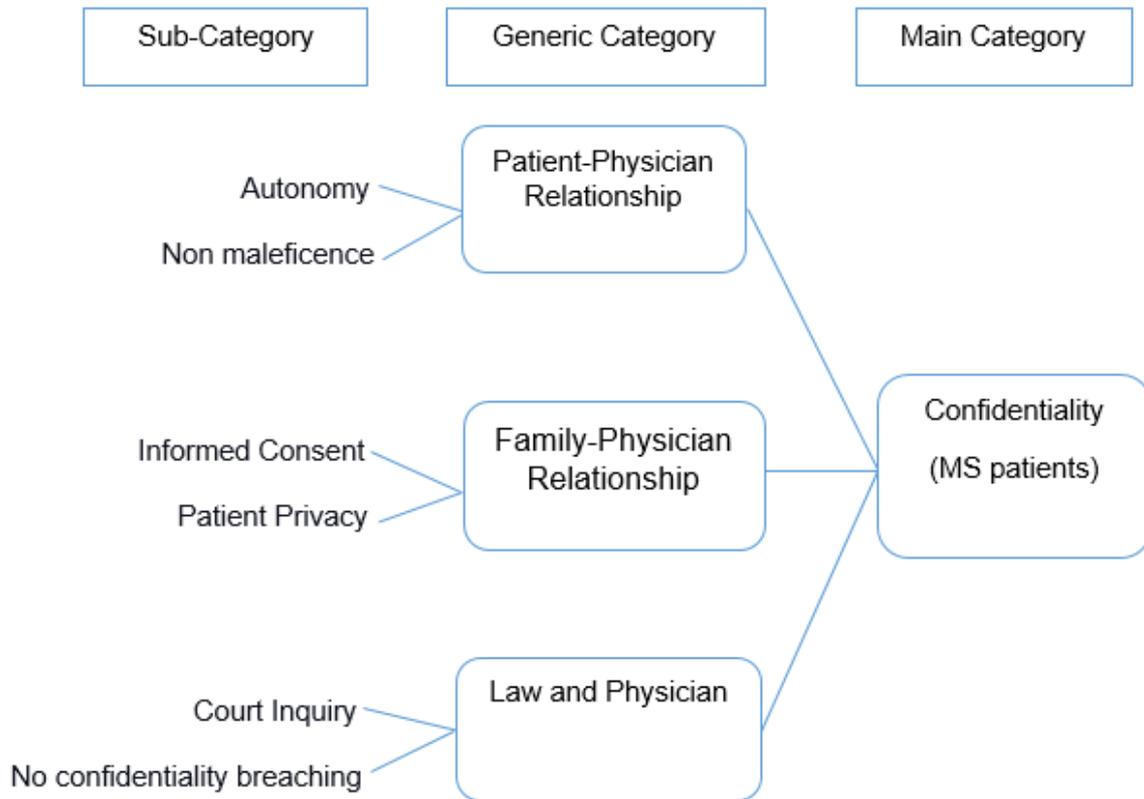


Figure 2. An example of the abstraction phase in this inductive content analysis

This finding can demonstrate the efficacy of the tried approach for teaching ethical concepts and promoting critical thinking for real-life problem-solving. The students could access various materials, including guideline for professional practice prepared by the Medical Council in Iran (8), the World Medical Association (WMA) manual¹ and the Dental Ethics Manual (9), using ethical analysis tools. The students' engagement with the LMS platform of the university provided them with a good opportunity to access all valuable course resources. Additionally, the new generation of students is more interested

in learning information from the virtual sources at their convenience, and hence they could more precisely analyze the ethical clinical cases. This virtual communication can help students participate in the learning process and enable them to develop cognitive and practical skills based on their capabilities as well as to obtain and incorporate assessment criteria. Especially, students' performance in ethical case analyses can be used to determine their reflection on concepts and values in light of what is being offered in the online class. Furthermore, use of on-line sources for the current generation of medical and dental students provides a good opportunity to build their reasoning skills and

1- Williams JR. Medical Ethics Manual. <https://www.wma.net>

reinforce their lifelong learning of medical ethics.

What lessons were learned?

During COVID-19 pandemic, to meet the educational standards, a validated curriculum should be prepared for learning ethics. The areas that need to be improved in medical ethics training are critical thinking skills and related competencies. Virtual learning initiatives can provide high-quality, engaging, and active learning environments to improve decision-making skills and foster a healthy mindset. Students' interaction with the training approach tested in this study can help build critical thinking and reflection skills as well as

result in achieving medical ethics learning. This approach can be a student-centered or student participatory method for teaching medical ethics.

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Conflict of Interests

The author declares no conflict of interests.

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