



Cinemedicine: The Use of Movies to Teach Bioethical Principles for Undergraduate Medical Students

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Abstract. Teaching professionalism and bioethics for medical students are necessary to build a humanistic perspective for becoming a good physician. Several studies show the efficient use of movies (cine medicine) for educating medical students in the psychosocial aspects of medicine. The study aimed to evaluate the use of cine medicine in teaching bioethical principles to undergraduate medical students at the Medical School of Jambi University. Problem-based learning principles were implemented as a learning method where scenarios used to trigger the small group discussion were replaced by the use of movies. During the first semester, students viewed three movies portraying dilemmas in bioethics. Before the movies, a series of brief lectures, covering bioethical theories influencing health care, was presented. Students were divided into small groups consisting of ten to twelve students to discuss ethical dilemmas confronted in the movies hence analyzing the application of bioethical principles interplay. In subsequent classes, a plenary session where groups of students presented their analysis regarding the movies assigned were held. Students' reflective writing regarding the effectiveness of using movies to their learning of bioethical principles were then analyzed qualitatively. Students experienced pleasant and motivating learning during an exciting discussion among a small group of students regarding ethical dilemmas covert in the movie assigned. The use of movies can provide simulacra of tangible physician experiences to students so then help them to understand better the implementation of bioethical principles in the medical profession. Students also perceived small group discussions as a useful method to enhance study skills and communication skills. Cinemedicine seems to be an effective modality to introduce students to bioethical principles and their implementation.

Keywords: Cine Medicine · Bioethical principle · effectiveness

1 Introduction

The implementation of problem-based learning (PBL) started in the past five decades ago has brought many changes in higher education, especially medical professional education. PBL was firstly administered in McMaster University, Canada, in 1968, and various

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majors of medical education all over the world today have joined the implementation of this learning system. Traditional education curriculums that in the past were focused on student learning towards lecturers (teacher-centered) with the majority of learning methods being one-way lecture have now shifted to student-centered [1, 2].

PBL is generally characterized by learning that uses a specifically arranged scenario integrated with various disciplines based on a specific learning theme-to initiate and stimulate student learning through discussions in a small group, facilitated by a tutor [3, 4]. Through a case or scenario provided in the tutorial, students are stimulated to learn. Barrows cite Taylor et al. [4] emphasizes that the used scenario must be clinical cases that are often found and crucial to be mastered in real medical practices.

Indonesian Medical Council issued Competency Standards of Medical Doctors in Indonesia (SKDI) in 2013, including the obligation to achieve noble professional competencies for every medical graduate. Medical graduates need to be equipped with knowledge and skills so they can make decisions over cases with ethical dilemmas that occur in health services of individuals, families, and society [5].

The Medical Study Program of the Faculty of Medicine and Public Health Sciences of Jambi University gives their attention to the importance of learning Bioethics on the achievement of students' professional competencies. Since the first year of study, students have been introduced to bioethical principles that crucially contribute to medical decision-making created by a medical graduate. The previous bioethics lesson is conveyed by lecturers through one-way teaching. The understanding of bioethical principles requires complex processes that involve humans and psychosocial aspects, which will not be fully achieved by students only through one-way teaching. Searight et al. [6] explain that in 1994, Alexander, Hall, and Pettice started to introduce the use of movie as the learning medium for psychosocial aspects in the medical field, which is known as cinemedicine.

The reflection of the researcher as the lecturer of Bioethics materials in the first-year learning program at 2019/2020 academic year found that students seemed to find difficulties to comprehend bioethical principles mentioned in clinical cases delivered during the lecture. This condition may be caused by a lack of exposure to cases of ethical dilemma in the actual patient management. Students were unable to understand autonomy principles when the researcher provided explanations regarding bioethical principles of appreciating individual autonomy over the choice to be unwilling to receive cardiopulmonary resuscitation during a critical condition. As first-year students, being unfamiliar with cardiopulmonary resuscitation procedures might hinder them to understand the implementation of autonomy principles on these patients' case management. The researcher also found students experienced difficulties to comprehend other bioethical principles which were explained merely by lectures portraying related clinical situations.

The researcher attempts to develop a bioethical module for first-year medical students using cine medicine integrated with a problem-based learning method. Movies portraying dilemmas in bioethics were used to replace a written clinical scenario to trigger small group discussion regarding the implementation of bioethical principles. This study aims to evaluate the effectiveness of the use of cinemedicine on learning bioethical principles for first-year medical students of Jambi University.

2 Research Method

This case study research used a phenomenological approach. Of the collected data, the researcher did not only study the variation of experiences (an individually unique experience that varies from one to another) but also sought the essence, namely parts of the experience that were consistently encountered by some research participants.

This study was commenced by developing a bioethics learning module that used cinemedicine, integrated with the problem-based learning method that applied case method innovated by the use of movie as the trigger of small group discussion. In this module, students were also taught the skill of writing reflections with Gibb's reflective cycles. This module was implemented for first-year medical students of the 2021/2022 academic year. Due to Covid-19, all the learning activities were conducted online.

Students attended an online session of lectures regarding bioethical principles. Then, every 10–12 students were grouped to conduct further small group discussions. Each group was assigned to study movies that portray ethical dilemmas. This bioethics module used three movies, they are *My Sister's Keeper*, *John Q*, and *Extreme Measure* movies.

The researchers developed guidance to help students systematically analyze the dilemmas portrayed in the movie:

1. Briefly describe the story of the movie.
2. Briefly describe all the key characters in the movie.
3. Analyze bioethical principles covert on the movie.
4. Find ethical dilemma portrayed in the movie and critically analyze the conflict among bioethical principles interplay.

Students worked independently in small group discussions (also done online). At the next online meeting, each group representative was asked to present their discussion results and the lecturer facilitated the course of discussion with full active participation of all students. At the end of the module meeting, students were asked to write their self-reflections regarding the experience of learning Bioethics by using cinemedicine. The evaluation of the implementation of a learning module with the use of cinemedicine was conducted through a qualitative evaluation towards reflection writings of students regarding the effectiveness of movie use in learning bioethical principles.

3 Result and Discussion

Result

A total of 10 students wrote self-reflections that are rich with information related to learning experiences of using movie as a trigger for discussion in small groups, were selected purposively, and then analyzed qualitatively. There are four themes of the resulting learning experience, namely:

1. Cinemedicine learning provides fun learning experiences and improves students' learning motivation.

All self-reflection writings provided positive responses towards the use of movie as a trigger for discussion regarding ethical dilemmas and bioethical principles that are interrelated in the storyline of assigned movie. Students considered the cinemedicine learning as fun, not boring, and able to improve the learning motivation of students in the topic of bioethical principles being taught; as shown in the following verbatim:

... I experienced more fun because from them (movie) I can learn without feeling that the subject is heavy or if I am burdened with it, and I can interact more with many people, exchange opinions, and this condition facilitates me to understand bioethical principles without quickly getting bored (R3).

... by seeing my friends being passionate to discuss those movie, I am motivated to learn and know more about bioethical principles, especially those presented in the movie (R3). I consider this activity as a good learning experience by learning directly from a story, so we can grasp a depiction or direct example from an issue or material learned previously. It's also very fun because watching a movie first builds enthusiasm to learn later (R4).

2. The use of movie provides a simulation of real situations of a doctor's work experience in applying bioethical principles

Bioethics lessons have been given since the first year of Undergraduate Medical Program. Students are known to have difficulty to understand clinical situations in the form of ethical dilemmas encountered by doctors in doing their work. The use of movie provides a realistic simulation of how a doctor interacts with patients and deals with ethical dilemmas that must be resolved by applying various relevant bioethical principles. The following verbatim supports this statement.

I learned a lot of bioethical values through the John Q movie, such as human dignity and human rights, benefit and harm, consent, justice, autonomy, and others. I also understood more ethical dilemmas/conflicts presented in the movie. This activity also gives me more understanding regarding bioethical principles that I can apply when I become a doctor in the future.

...Watching the movie and assessing bioethical principles made me understand and aware how I should behave when I become a doctor (R1).

3. Learning through discussion in small groups is a good learning method to improve students' learning skills, collaboration, and communication skills.

Students responded positively to the learning in small groups that they were able to develop their skills in expressing opinions, responding to other people's opinions, leadership, analyzing problems, time management, and building teamwork, as shown in the following verbatim.

... we can train our soft skills to express arguments, cooperate, respecting the argument of others, leadership, and time management by discussing with friends in the group (R1). This learning activity made me happy because group members and I can interact actively with our friends to discuss. We exchanged opinions, there were even a few objections amidst the discussion. Hearing other people's opinions that are often different from us made me think that I still have limited insights and only know a little. This condition is certainly challenging for me because uniting arguments of some people is not easy, it requires patience and good teamwork (R3).

I feel that the purpose of this learning is not only to deliver materials about bioethical principles and ethical dilemmas but also to train critical mindset and activeness of

students in arguing. To train our critical mindset, we were provided with movie as the material to discuss, besides thinking critically, we can also see the perspective of other friends from these movie. As a form of activeness as a student, the assignment was given in small groups, so students that were not too active during the lesson can be more flexible to express their mind (R4).

4. Lack of cinemedicine learning methods.

This study found that the use of movie with the duration of the story lasting more than 2 h was considered by students to be very time-consuming for them. The tight schedule of lectures causes students to respond negatively to the obligation to watch movie for a long time, in addition, the group discussion process also takes a long time.

Some students also complained that there were students who were reluctant to actively participate in group assignments so they depended on other students to complete the assignments. The following verbatim shows the negative experiences of students in carrying out group discussions.

... only a few people responded when the group leader gave directions to group members. In addition, time management issue can be seen when the completion of assignments is close to the deadline (R1).

Sometimes there were students who did not actively contribute in doing group assignments, which burdened some other (R3).

The downside of this activity is that some students believe that watching movie first is time-consuming where students have other things to do than only watch movie, however, because watching movie in this context is part of the assignment, watching these movie is not less important than other assignments (R3).

... although this assignment is fun due to the movie, I experienced a little trouble to find the perfect time to watch movie amidst other things (R6).

Discussion

Bioethics are values related to life and the process of life. Therefore, in the current development of medical technology, bioethics also refers to the ethical implications of the practice of applying biomedicine technology. The current situations in medical practice and medical research present problems that require moral judgment, for instance: Do parents have the right to refuse immunization for their children? Can the public interest take precedence over individual rights? Should a fetus with severe birth defects be kept alive in the womb? Can people who have genetic disorders be allowed to have children? What are the criteria for determining a person is eligible to receive an organ donor? [7].

A medical student in the current era of very rapid advances in medical technology requires more mastery of professional competence in conducting medical practice. Medical students need to understand the principles of Bioethics which will be the basis of decision making when dealing with ethical dilemmas in medical practice [5].

The medical department of the Faculty of Medicine and Health Sciences, Jambi University have included Bioethics lesson since the first year of study. Bioethics material begins with an introduction to the principles of Bioethics in Block 1.1 learning. Introduction to Medical Science in odd semesters. Furthermore, Bioethics materials are integrated with other Block learning according to the clinical theme of each Block.

The current medical curriculum is developed on the implementation of cine medicine, the use of movie as a medium of learning. Currently, there is a concern in the world of medical education about the importance of instilling professional values in students as future doctors. Medical education experts view the importance of learning innovations to be able to improve the teaching of humanistic and psychosocial aspects in the medical field. Humanism is a system consisting of values, attitudes, and behaviors that underlie the performance of a doctor in interacting with patients through his ability to integrate psychosocial factors with biomedical aspects. Doctors who can practice humanistic services will be able to respect each of their patients and pay attention to the values, thoughts, and needs of patients [8].

It is doubt that conventional learning methods through one-way lectures will be able to effectively provide medical students with humanistic and psychosocial aspects. Alexander, Hall and Pettice started to introduce the use of movie as a medium for learning psychosocial aspects of medicine in 1994, known as cinemedicine [9].

The qualitative evaluation in this study received positive responses. Students shared fun and motivating experiences during small group discussions about the ethical dilemmas hidden in the assigned movie. The use of movie is perceived to be able to provide a simulation of the real experience of a doctor to help students understand more easily the way to implement bioethical principles in the medical profession. Students also found that assignments given through small group discussions provided opportunities for students to practice communication and learning skills. A number of other studies have also found that the use of cinemedicine is very useful in building medical humanistic perspective and at the same time increasing students' motivation to be actively involved in learning [8, 10].

4 Conclusion

This study also found negative perceptions related to the allocation of time for working on assignments and active participation in discussion groups. The duration of the movie, which lasts almost two hours each, is perceived as taking up quite a lot of time to be watched and discussed together in groups. Choosing the right movie with a shorter duration might be a good alternative in designing cinemedicine. Students also complained that some members of the discussion groups were reluctant to actively participate in completing group assignments. Cinemedicine is known to be a very appropriate medium in providing medical students with professionalism, ethical issues, and communication skills. Lecturers need to allocate adequate time for students to conduct the discussion process to the completion of assignments in between other structured academic schedules. Assessments related to the active participation of each student is working on group assignments need to be considered and communicated to students.

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