

# Are Multimedia Case Teaching Videos Better than Multi-Disciplinary Simulations in Teaching Medical Ethics? Experience of a Regional Teaching Hospital in Taiwan

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## Background

Few studies involving medical ethics education in regional hospitals in Taiwan have been conducted, and there are even fewer surveys involving the proper methods to be used. We have developed multimedia case teaching videos and multi-disciplinary simulations to replace lectures to promote the interests of our hospital staff for teaching medical ethics, including communication skills. This report is our experience with these two methods in medical ethics education.

## Work

Based on real ethics cases at the Taipei City Hospital, nine narrative movies were filmed by the Center for Faculty Development beginning in 2009. With the collaboration of trained standardized patients, a multi-disciplinary simulation theater workshop was developed in 2016. We also selected actual cases involving medical disputes as background content, which were then rewritten into a script. Because medical communication skills were also the main goal for this teaching course, the dialogue illustrated inappropriate words, attitudes, or responses that contributed to patient misunderstanding. Pre-arranged standard patients rehearsed before each formal performance. The performances required approximately 2 hours. The format included an introduction, synopsis of the medical dispute, and three scenes in each show. We invited experts and participating colleagues to discuss and analyze the scenes upon completion. The final version presented the correct way to handle this challenging situation and demonstrated the appropriate communication skills.

Hospital staff attending the ethics course completed an anonymous, self-administered questionnaire and satisfaction survey. Pre- and post-tests for the Perceived Confidence Scale were administered in the multi-disciplinary simulation theater workshop. The Perceived Confidence Scale is a questionnaire (Chinese version) to quantify communication skills. There are 8 items in this questionnaire. Each item is rated from 0 (no confidence) to 10 (very confident). The items of the satisfaction survey include the overall course, content, teacher performance, administration, and service. There were five satisfaction ratings, from 0 (very dissatisfied) to 5 (very satisfied).

## Results

Seven hundred seventy-three valid questionnaires collected and analyzed; 633 questionnaires were completed after the multimedia case teaching video course and 140 after the multi-disciplinary simulation workshop. Greater than 80% and 90% of the respondents indicated that they were satisfied or very satisfied with the multimedia case teaching video course and multi-disciplinary simulation theater workshop, respectively (Table 1). After completing the multi-disciplinary simulation workshop, 82.4% of the participants agreed that multi-disciplinary simulation was more helpful than the multimedia case teaching video. In analyzing the Perceived Confidence Scale, a total of 37 questionnaires were considered valid for analysis. All of the post-test scores for each item were higher than the pre-test scores. Overall, the average score that participants gave themselves regarding communication skills improved from 7.1±1.9 to 7.9±1.3 for the pre- and post-test, respectively ( $p < 0.1$ ; Table 2). The reflections and suggestions given by the participants were also very enthusiastic (Table 3).

## Discussion

The aim of ethics education is to train medical staff to identify and resolve ethical issues. To address ethical concerns, training of effective communication skills is helpful for challenging ethical issues and to maintain a good patient-physician relationship. To accomplish these goals, instead of a lecture only, case-based teaching has been advocated as the primary method. Our previous study demonstrated that use of a video with actual case examples is an effective method for medical ethics education. The participants were highly satisfied and the teaching effectiveness increased.

In addition, simulation-based teaching has been applied extensively in medical education, including humanity, communication skills, and medical ethics. In this survey, we further found that a multi-disciplinary simulation theater, which combines theater performance and the actual case for teaching communication skills and medical ethics, is also valuable. Because this method has high fidelity and allows students to repeat the exercise, followed by high-quality peer teaching, the participants responded that the simulation theater was more helpful than the multimedia case teaching videos. Compared with the pre-test of the Perceived Confidence Scale, the scores after completion of the simulation theater course also increased significantly. All participating colleagues greatly appreciated this course, and highly recommended this model of teaching. The multimedia case teaching video, once filmed, was more convenient and cost less for personnel than the multi-disciplinary simulation theater. Therefore, we suggest both methods are suitable for teaching medical ethics.

## Conclusions

Our previous study demonstrated that use of a video with actual case examples is an effective method in medical ethics education. In the current survey, we further found that the multi-disciplinary simulation theater is also valuable. The participants responded that the simulation theater was more helpful than the multimedia case teaching video. The multimedia case teaching video, once filmed, was more convenient and cost less for personnel than the multi-disciplinary simulation theater. Therefore, we suggest both methods are suitable for teaching medical ethics.

**Table 1.** Satisfaction survey of multi-disciplinary simulation.

	The overall course	The content of course	Time arrangement	Teacher's performance	Site arrangement	Satisfaction for the course's content and teacher's performance
Very satisfied	33%	41%	38%	42%	39%	38%
Satisfied	55%	51%	52%	52%	52%	54%
Fair	12%	7%	9%	6%	7%	8%
Dissatisfied	0%	1%	1%	0%	2%	0%
Very dissatisfied	0%	0%	0%	0%	0%	0%

**Table 2.** Pre- and post-test scores for the Perceived Confidence Scale

	Using words that patient can understand	Keep eye contact when communication	Including patient's family members of friends in decisions about your illness and management	Answering all questions about patient's illness and management	Listening to what patient want to say	Caring about patient as a person	Giving patient with all your attention	Overall, how many score would you give about communication skills?
Pre-test	7.1	7.1	6.7	6.9	7.1	7.2	7.1	7.1
Post-test	7.9	8.0	7.8	7.9	8.0	8.1	8.1	7.9

\* $p < 0.05$

**Table 3.** Reflections and suggestions provided by the participants

The way of small theater makes me more able to absorb the content of the course.
Substantial in content! Thanks to all involved staff!
Simulated-based teaching provides staff education opportunities very well. Feel the same way, get a smile with a relief effect, and the program is both entertaining and informative. Good performance!
Through the theater's show plus on-site colleagues share different insights, enriching personal learning opportunities.
Small theater is too great!
<b>Learn medical communication crisis response</b>
More learning than through documents only. We can learn both body expression and harmony the manner of speak and tone!
Medical ethics and communication course cannot be a lecture in the lobby !! Not achieve the effect! this course should be more to hold!
This course should be filmed to increase the rate of rebroadcast and reduce staff performance burden and time.
If scheduling can avoid working hours will be better
Great, the show is successful, all staff should be encouraged to attend this course!

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