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Elements of Scenario-Based Learning on Suicidal Patient Care Using Real-Time Video

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Abstract. This study aims understanding of students' learning experiences when receiving scenario-based learning combined with real-time video. Videos that recorded student nurses intervention with a suicidal standardized patient (SP) were replayed immediately as teaching materials. Videos clips and field notes from ten classes were analysed. Investigators and method triangulation were used to boost the robustness of the study. Three key elements, emotional involvement, concretizing of the teaching material and substitute learning were identified. Emotions were evoked among the SP, the student performer and the students who were observing, thus facilitating a learning effect. Concretizing of the teaching material refers to students were able to focus on the discussions using visual and verbal information. Substitute learning occurred when the students watching the videos, both the strengths and weaknesses represented were similar to those that would be likely to occur. These key elements explicate their learning experience and suggested a strategic teaching method.

Keywords: nursing education, video analysis, scenario based learning, suicide

1. Introduction

Following South Korea and Japan, Taiwan has the third highest suicide rate among the west pacific countries [1].Due to the efforts made by the Taiwan Ministry of Health and Welfare, suicide has not been one of the top ten leading causes of death since 2010 [2]. However, suicide has a great impact on the youth population. In 2014, suicide was the second leading cause of death among Taiwanese youths aged 15-24. For the last five years, over 90% of the total suicide cases have been reported by hospitals and clinics, indicating that nurses are situated at the frontline of suicide management. However, nurses have found barriers related to caring for suicidal patients [3].

It has been suggested that in didactic teaching, context is often extracted in order to purify knowledge or theories, causing difficulties for learners to obtaining situational understanding [4]. Scenario teaching can bridge the gap between knowledge and practical reality by simulating real world situations that include behavior and attitudes [5]. Due to cultural sensitivity and the complexity of the issue of suicide [6], scenario-based learning is suitable to apply for education on suicidal patient care. However, studies on the effectiveness of scenario-based learning are mainly focused more on quantitative measurements [7]. With the increased emphasis on the use of

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digital technologies, the timing is right to engage in more in-depth discussions about the role of video data in education research [8].

This study is aimed at gaining an understanding of students' learning experiences by using real time videos as teaching materials in line with scenario-based learning.

2. Methods

As the major manpower in health profession in Taiwan is two-year degree programme nursing students they are recruited as study participants [9]. The study was approved by the IRB of Chang-Gung hospital. Information of the study was revealed to them as well as the right of rejection. Inform consents were signed with their agreement.

Video analysis was chosen as the research method because video is a powerful way to collect, share, study, represent, and document detailed practice cases to support the intensive study of such practice [10]. Jacobs' [11] cycle model was adopted for data analysis, and repeated watching/discussion, hypotheses generation, code development and application, as well as analysis/ interpretation were applied.

In each class, two sections of eight minute videos that captured students' nursing intervention with a suicidal standardized patient (SP) were recorded and replayed immediately as the teaching materials. Then, debriefing between the students and teachers over the materials were recorded and integrated as the research data for this study. Consequently, the videos from ten classes were collected and divided into two major parts, intervention and debriefing. Each investigator wrote a narrative summary in each section individually, and then they met together to watch the same video for discussion. A table used by the researchers was designed to capture the important issues related to learning experiences. This table contained the video ID, time, critical events (what happened?), meaning or hypotheses, reflection (why choose the clip?) and overall opinions about the video section. Simultaneously, field notes were analyzed to enhance the robustness of the study.

3. Results

Students from ten classes aged 21-23 (SD 1.04) were mainly female (96%), unmarried (99.5%) and licensed (98%). Three key elements, emotional involvement, concretizing of the teaching material and substitute learning, were identified.

1) Emotion involvement refers to the emotion that was evoked by SP and it was pervade among students of performance and students of observation. Emotional connection facilitated learning by raising their attention and deep self reflection.

"When assessing suicidal history, the SP burst out crying. I was stunned and then tried to stop her crying and wanted to comfort her with all my heart. At the beginning, I did not expect the SP to be so real because I knew that we were in a classroom doing a scenario. It is high fidelity but not REAL actually." Concurrently, in the field notes, it was noted: The classroom went into silence; all small noises ceased. All students sat on the edge of their chairs staring at the scenario. A few students who were observing leaned over to pass their tissues to the flustered student actor, creating a

weird situation. This is because they broke the invisible boundary that existed between the scenario stage and the student audience. All of the students' attention was thoroughly captured. Some students were moved by the performance of the SP, and they talked to the SP to express their appreciation.

Emotional involved became deeper and personal. *"In the surgical nursing scenario, we were trained to do the procedure correctly and to not become involved emotionally as deeply as was the case with the SP with mental illness"; "When the SP talked about her daughter and sobbed while describing how close they were, I started to reflect on the relationship I had with my mom."* Facing a real person (SP) and challenged by her mood, the scenario demanded not only that the students interact instantly but also forced them to reflect on personal experiences. This reflection was able to deepen their understanding of mother's role and enabled them to express their empathy better.

2) Concretizing of the teaching material refers to when students can focus their questions on detailed visual and verbal information that has just occurred in the classroom. Videos produced by familiar classmates bridge and confine issues so that they can be clearly identified rather than viewed as abstract nursing principles.

One of the performing students reported: *"I was still concerned that I might provoke the patient's suicidal action although I was taught that it is OK and necessary to ask about a suicidal plan with an appropriate attitude. But what is the appropriate attitude? It was just so hard to initiate the topic with the right timing and right words."* The video allowed second thoughts to develop. *"Watching myself on the big screen, with a time and space distance from what I just practiced, it seems easier for me to find the right timing."* In the field notes, several students reflected they learned a couple of ways to start the tough questions using appropriate wording"

The other performing students reported: *"Theoretically, we should support the patient but did not really understand how to do it. When the SP cried, I wondered if I should hug her, stroke her shoulder or pat on her hand....I finally held her hand, but then I didn't know when I could let go of her hand."* In the field notes recorded: the teacher first invited all students to answer the question by recalling their experience of crying. A wide range of responses were collected. A male student brought out a gender issue related to body contact and expressions of empathy. Secondly, the SP was invited to give feedback about how she felt about being supported and was encouraged to say what else the nurse could do for her. These discussions concretized the knowledge.

Using real time video allows educators to make debriefing precise and concrete. Both students and teachers can focus on the event or concepts in the here and now. Abstract ideas in theory can be practically performed and closely examined via the characteristics of visualization and verbalization related to the video.

3) Substitute learning refers to when students observe their classmates practicing nursing care. Both the strengths and weaknesses of nursing performance shown in the scenario (and later on the video) were similar to how the student observers are likely to behave. By closely observing the performance of their classmates, students can imagine or project themselves as if they are on the stage as well. With the assistance of video clips and a teacher leading the discussion, learning from the experience of their peer's performance or mirroring it themselves are both possible.

In the debriefing section, one student observer gave feedback to the performing student. *"She interviewed almost all aspects to assess suicidal risk, especially the possibility of a suicide attempt. Although she was not very complete in every detail, I do not think I could do better than she did."* Watching classmates practice nursing care

seems to enable them to learn from their peers because they are similar in terms of nursing training background. They learned to imitate the strengths and also to avoid the drawbacks discussed. *Another student reported, "While watching two classmates providing nursing care to the patient with the same suicidal situation, we could compare the different ways of addressing the key questions. "*

The teachers challenged the student observers to make improvements to parts of the clips, and a couple of students in many of the classes reported, *"I feel uneasy when someone cries in front of me. I saw the classmate performer trying hard to stop the SP by giving too much insignificant advice as I did before."; "I would be speechless, similar to the classmate performer when the SP expressed her sadness and indicated that she wished to die. I would agree with the patient's ideas and fall into a dilemma. I am inadequate at persuading people."* Student observers learned from the student performers as if they mirrored themselves, especially the difficult parts.

4. Discussion

Few papers have discussed how real time video can benefit learning when it is accompanied with scenario-based learning since video footage is an innovation in the area of classroom research [8]. Our study answered a research question about what the key elements of students' learning experiences are when real-time video is used.

Theory and principles of nursing care for suicidal patients have been stated, but there are gaps between knowledge and practice [12]. Through providing interactive and role play elements, scenario-based learning is a powerful teaching strategy to enhance student confidence, satisfaction and evoke active learning [5][6][13]. Correspondingly, the students in our study showed more interest and participated more in activities when the SP showing intense emotion. Emotion involvement is an element to boost learning [14].

Used as teaching materials, real-time video contains rich, detailed, here and now information, and it also helps to confine the discussion to concrete nursing behavior, such as silence, distance and atmosphere. Teachers can pause punctually at a suitable point to facilitate discussion [8]. Overbaugh [15] pointed out that students of visual learning styles benefit from video-generated, graphic representations, especially in the case of those who have imagery skill difficulties. Videos embody abstract ideas into seeable and auditable information.

In this study, the nursing practice videos were freshly produced by the students themselves rather than being standard courseware. By closely inspecting their classmates' performance on the videos and discussing with the lecturer, they were able to advance their knowledge and skill through observation of the student performer. Similar to peer learning, which provides a positive learning environment that may benefit the students [16], substitute learning involves more role play features.

To conclude, using scenario-based learning assisted by real-time video brings a sense of clinical reality into classrooms for novices. The three key elements, emotional involvement, concretization of the teaching material and substitute learning, expanded their learning experience and suggested a strategic teaching method.

5. Acknowledgments

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