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Preliminary Exploration of Simulation Preparation, Clinical Judgment and Reflective Process

Simülasyon Hazırlığında Ön Araştırma, Klinik Yargı ve Yansıtıcı Süreç

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ÖZET

Amaç: Öğretim üyesi ve öğrencilerin simulasyona ne kadar iyi hazırlandığı hakkında gelişmekte olan kanıtlarına ek olaraksimülasyon kullanılarak klinik karar ve yansımalarının nasıl geliştirileceği araştırılması gereken bir alandır. Simülasyonun etkili bir öğrenme stratejisi olduğu ispatlanmıştır. Optimum öğrenme çıktılarını elde etmek için en iyi uygulamaları bir araya getirmede ilerleme gereksinimi hala sürmaktedir.

Materyal ve Metod: Üçgenlenmiş değerlendirme pilot çalışmada veri toplamada Survey Monkey(online anket) kullanıldı. Yedi öğrenci ve 4 eğitimci örnek olarak alındı.

Bulgular: Tüm katılımcılar brifing öncesi hazırlık malzemeleri ile daha hazırlıklı hissettiler. Öğrenciler hasta bakımına katılmak için hemşirelik eylem kursunda karar ve etkili cevap için yeterli anlama ile simülasyon deneyimini daha iyi kavramak zorunda olduklarını hissettiler. Eğitimciler simülasyonu etkili bir şekilde kolaylaştırmak için ek bilgiler ile daha iyi hazırlanmış olduklarını hissettiler.

Sonuç: Daha sonraki gelişmiş klinik yargı ve yansıtıcı uygulamalarda hazırlık materyalleri simülasyon deneyimini arttırır. Simülasyon hemşirelik öğrencilerinin sürekli eğitiminde esastır. Öğretim görevlileri ve simülasyon için öğrencilerin hazırlanmasında sonuçları geliştirir.

Anahtar Kelimeler: Simulasyon, simulasyon hazırlama, eleştirel düşünme, yansıtıcı uygulama, hemşirelik eğitimi

ABSTRACT

Objective: How are clinical judgment and reflection enhanced with use of simulation is an area that requires exploration in addition to developing evidence about how best to prepare faculty and students for simulation. Simulation has proven to be an effective teaching strategy. Incorporating best practices to achieve optimal learning outcomes continues to require development.

Methods: Triangulated evaluatory pilot study utilizing Survey Monkey for data collection. Seven students and 4 educators provided the convenience sample.

Results: All participants felt more prepared with the prebriefing preparatory material. Students felt they had a better grasp of the simulation experience with sufficient understanding to respond effectively and decide on a course of nursing action to participate in patient care. Instructors felt more prepared with the additional information to effectively facilitate the simulation.

Conclusions: Preparatory material enhanced simulation experience which further augmented clinical judgment and reflective practice. Simulation is essential to continued education of nursing students, preparing faculty and students for simulation improves outcomes.

Key Words: Simulation, simulation preparation, critical thinking, reflective practice, nursing education

Introduction

Simulation is rapidly becoming a standard teaching-learning strategy in nursing education[1]. Teaching standards of patient care in a safe, controlled environment whereby students can be monitored provides many learning opportunities[1]. Multitudes of simulated scenarios can foster students' ability to develop skills necessary for critical thinking, problem-solving, clinical judgment and reasoning. In addition, encouraging students to become reflective practitioners can be augmented with simulation.

With increased enrollment in nursing programs, limited clinical facility access and patient complexity and care increasing, simulation has become a much needed teaching-learning strategy to achieve nursing competencies and standards[1,2]. Simulation offers students opportunities to practice and incorporate their knowledge, skills and professional attitudes in an active participatory learning process. Numerous studies have already provided evidence for the effectiveness of simulation as a teaching strategy. Yet, how can educators' best prepare their students and faculty for this experience. The amount of preparatory material prior to simulation has not been explored.[3] To provide the most realistic simulations, providing less information would be expected.[4] Yet, does providing less preparatory material increase students' anxiety, consequently limiting their learning opportunities?[2] Now that simulation has been shown to be an effective tool[5,6], educators' need to now continue to explore how best to implement and utilize it to achieve optimal outcomes.

The purpose of this pilot study was to explore the effectiveness of preparatory material to enhance the simulation experience for students and faculty in conjunction with exploring whether a link between simulation, clinical judgment and reflective practice exists. The research questions became: Does providing preparatory material in advance enhance students' learning outcomes and simulation objectives? Does preparatory material assist the educator in providing a better understanding of nursing actions during the simulation? Consequently, is there an enhancement of students' clinical judgment and reflection? Thus, are students achieving improved clinical judgment and reflective practice through the integration of simulation as an alternative teaching strategy and is that simulation preparing them to adequately achieve these outcomes?

As Coordinator of Simulation for a large urban School of Nursing (SON) in the USA, the researcher has developed and incorporated preparatory material that students and instructors receive prior to their scheduled simulation. Prebriefing preparatory materials are handouts that provide an overview of the simulation case scenario as well as information on what to expect during the experience. Suggested information can include a point of reference to equipment in use during the simulation, the simulated patient environment and manikin, student roles during the simulation, time allotment, simulation objectives and patient situation[7]. Adapting the National League of Nurses (NLN, 2005) simulation case scenarios that the SON utilizes, the researcher included additional innovative strategies (YouTube videos and videos/CDs from the Health Professions Educational Center {HPEC}) to enhance students' learning outcomes and provide instructors with extensive information pertaining to the scenario medical condition (including physiology; pathophysiology; complications and images) to complement the NLN material.

Table 1: Sample of Preparatory Material

Theoretical Framework

The conceptual framework was based on Tanner's Clinical Judgment Model, providing a rubric that defines stages or levels in the development of clinical judgment.[1] Understanding clinical judgment continues to be paramount to nursing education, thus, providing opportunities for students to make connections from simulation to clinical practice needs to be continually explored. Nursing students initially learn basic psychomotor skills. With increased learning and knowledge, problem solving resonates with enhanced abilities to critically think effectively to promote salient clinical judgment[1]. Simulation affords nursing students the opportunity to begin to develop the knowledge, skills and attitudes that will be reflective in their ability to fully participate in the caring-healing process of their patients in real-world clinical practice.

Reflecting on experience promotes redefining and transforming one's theory of practice, one's knowledge, skills and attitudes, encompassing a more thorough perspective; therefore, clinical judgment improvement contributes to improved patient care and outcomes.[8,9] Students and faculty perceptions of simulation have been explored[10] however; the aspect of students' reflective process and its

possible connection to clinical judgment requires further exploration. The researcher adapted the Guide for Reflection using Tanner's Clinical Judgment Model, which promoted students' writing of situations encountered in clinical experiences.[11] Finally, exploring students' self-assessment of clinical judgment development through simulation was explored utilizing Lasater's Clinical Judgment Rubric (LCJR) and Scoring Sheet.[12,13] Permission was received to utilize these instruments.

Method

Participants

Seven students (4 females/3males), aged 22-51 years old (mean of 33 years), who graduated in May 2010 and 4 educators (3 females/1 male), aged 49-62 years old (mean of 56 years), provided the convenience sample. University institutional review board approval was granted. Ethical consideration for all participants was at the forefront of this pilot study. All students who participated were no longer enrolled in the Hunter College undergraduate School of Nursing program, thus eliminating coercion. The researcher did not have any administrative responsibilities regarding the instructors, eliminating coercion possibilities there as well.

A $5.00 donation to the American Cancer Society was made for completed surveys. There was no conflict of interest with the researcher and the American Cancer Society. Study was conducted from June – August 2010; consent forms obtained for all participants.

Design

Pilot study was conducted to determine feasibility and effectiveness of assessing the usefulness of preparatory material among nursing students and faculty and explore the correlation of simulation, clinical judgment and reflection. A general introduction email letter was forwarded to all graduating seniors and instructors requesting participation. Once researcher received an acceptance to volunteer, instruments were sent via Survey Monkey, maintaining confidentiality and anonymity of data. Consent forms were mailed via standard mail with a self addressed stamped envelope (SASE).

Instruments

Based on Tanner's Model of Clinical Judgment, the researcher developed instruments to assess the usefulness of preparatory material that students and faculty received. Two instruments were forwarded to all students: Preparatory Material for Simulation - Student Survey (PMS-SS; Table 2), and LCJR and Scoring Sheet. Five random students received the adapted Guide for Simulation Reflection (three females/two males; Table 3). Instructors received the Preparatory Material for Simulation-Instructor Survey (PMS-IS; Table 4). Participants decided which simulation experience they would complete the surveys on.

Data Analysis: An SPSS database was utilized to analyze quantitative data. Qualitative data from the Guide for Simulation Reflection and subjective comments from PMS-SS and PMS-IS were analyzed and coded.

Limitations: Students and instructors self-select to read preparatory materials beforehand can be viewed as a constraint. Inability to select 'all that applies' on the PMS-SS and PMS-IS was another restriction, whereby participants stated they would have 'selected all' if able. Several student comments regarding LCJR Scoring Sheet stated that they did not understand the rubric. Students received a link with full explanations of the rubric scoring sheet with definitions. Finally, the small sample size can be considered a limitation, even for a pilot study.

Results

All participants reviewed the preparatory material; five felt it was very helpful and all felt prepared to effectively participate in simulation. All felt preparatory material provided them with a grasp of the simulation experience (Noticing); with sufficient understanding to respond effectively (Interpreting); and effectively decide on a course of nursing action to participate in patient care (Responding). After simulation experience (Reflecting), one was more confident; one felt better prepared for future nursing care; one felt overall skills improved; two reflected on own actions and two learned from own errors and colleagues. Again, many stated they would have 'clicked' more if able. As one students stated "After simulation, I felt my overall skills improved…I went to look up things that I wasn't sure of, I went to learn the drug that I got stuck on during simulation and vow to never make a mistake of ever forgetting the adverse effects, I reflected upon my own actions…learned from my errors and my colleagues. The benefit of sim…we can make our mistakes early, realize what we did wrong, reflect upon it and never make those mistakes again!

Anxiety continues to be a concern, as two students' anxiety was high; four was medium and

one was low. Comments included "Unknown tasks=high anxiety"; "Reading prep material brought my anxiety to a medium from a high". All viewed the YouTube videos. Four thought they very helpful while three felt they were somewhat helpful. One student stated, "The videos show an actual simulation and relieve my anxiety, and allow me to concentrate on the lesson". Only four students viewed DVDs from the HPEC. One comment was, "I think the CAIs…helped the most because it showed me how to chart, the step by step of what a nurse should do and I just felt was more instructional". Table 2: Preparatory Material for Simulation- Student Survey (PMS-SS) provides the actual survey and pilot study results.

Analysis of LCJR and Scoring Sheet shows that, inclusively, participants either felt accomplished or are developing their abilities. Several comments included, "Overall, my skills for my career are improved every time I participate in a sim" and "In hindsight, while reflecting…I immediately knew what I should have done. It's difficult to perform well in the sim experience".

The Guide for Simulation Reflection validated these findings. Themes that emerged were the need to develop more communication skills. While learning to "work as a team" and "implement I-SBAR-R" was very helpful, comments still revolved around need to develop own ability to effectively communicate as a professional. Additionally, need to develop more assessment skills was noted. Simulation is excellent for learning patient-centered care (a primary goal of simulation for nursing students) and provides opportunities for application of knowledge. However, the need for nursing skills improvement and learning to "assess situation before doing anything" requires more practice. Finally, confidence is continually being developed. Students stated "still felt didn't know what 'to do'" and more precisely "need for more confidence".
Table 3: Guide for Simulation Reflection using Tanner's (2006) Clinical Judgment provides the actual survey and pilot study results.

All instructors reviewed preparatory material and felt they were very prepared for the experience. All felt preparatory material provided them with enough information to effectively teach and facilitate the debriefing. All felt additional information (pathophysiology, images) was very helpful. Three felt anxiety level was low while one experienced medium anxiety. Table 4: Preparatory Material for Simulation-Instructor Survey (PMS-IS) provides the actual survey and pilot study results.

Discussion

Prebriefing preparatory material for students and educators can have positive simulation outcomes. Studies have shown that simulation is effective in increasing communication skills[14]; improving clinical decision-making[15]; decreasing anxiety[16]; and increasing confidence.[17] However, a more prepared student and educator can further enhance these skills and promote a more thoughtful experience. Complex care involves understanding the significance of changes in patient status, clinical reasoning regarding certainty and uncertainty about apposite actions, ability to respond effectively and reflect upon one's participation in the healing-caring process. Clinical judgment, being reflection on practice, is vital for continued advancement of clinical knowledge and improvement in clinical reasoning.[1] Clinical reasoning and judgment is improved with reflection.[18] Reflecting on one's experience is essential to professional development. Simulation fosters reflection on action, as well as improving clinical judgment and reasoning. By preparing students and faculty for the simulation experience, simulation outcomes can be enhanced.

Contemporary rationales for the requisite development and utilization of simulation experiences are based on escalating patient acuity and the need to prepare our students for the type of complex patient care. Simulation preparation provides students and faculty with precise information and expectations, thus providing for an opportunity for more critical thinking and reflective practice to occur. The educational implications for utilizing preparatory materials can alleviate anxiety that typically accompanies simulation exercises. Eliminating anxiety can benefit students by providing them with opportunities to foster their learning and gain deeper insight into their participation in the healing-caring process. They can become more comfortable with their role as a nurse and gain confidence in their abilities to effectively participate in complex patient care. This correlates to students' ability to effectively engage in clinical reasoning and critical thinking to formulate clinical judgments that will enhance and promote patient outcomes. Instructors, especially novice educators using simulation, will also benefit by having their initial anxiety decreased with the prebriefing preparatory materials providing such

detailed information on the simulation case scenario. Even experienced nurse educators can benefit from having preparatory material to utilize as a guide for furthering student educational needs.

Conclusion

A definite association between simulation, clinical judgment and reflection exists. As educators continue to integrate simulation, providing more complex case scenarios, students will have more opportunities to develop clinical judgment and reflect upon their participation in the healing-caring process. Preparing students for this experience can only further promote these outcomes. As one student eloquently stated, "I have a better understanding that care should be pt-centered. Communication between the team members is important…how you communicate with the patient. You need…confidence. In the clinical setting I would make sure I talked to my colleagues". Depending on the SON goals for that specific simulation experience, preparatory material for students and faculty can further expand on these skills.

As simulation continues to be explored and utilized not only in nursing schools but in all disciplines of healthcare, it is important for educators to recognize the need to fully integrate simulation to provide their students with the most beneficial experience possible. To that end, preparatory material can enhance students' clinical judgment and insightful reflections. The prebriefing of students and instructors is utilized to "set the stage for a scenario and assist participants in achieving scenario objectives"[7,p.s3]. However, prebriefing has yet to be standardized in nursing. As previously stated, the amount of preparatory material has yet to be explored. The use of preparatory material can increase clinical judgment by providing students with essential information that can enhance their simulation experience. Based on the positive results of this pilot and the completed study results, the researcher will now explore, in more detail, the effectiveness of simulation enhancing clinical practice.

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Conflicts of Interest:

The author does not have a financial relationship with the organization that sponsored the research. The author declares that there are no conflicts of interest.

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Table 1: Sample of Preparatory Material

All participants received this prebriefing preparatory material. Instructors' preparatory material has additional information.

SIMULATION SCENARIO/ Acute Myocardial Infarction
Mr. Carl Shapiro
Simulation Information: Please acknowledge that the simulation experience is fiction. It is obviously 'not real' but as close to a real-life experience that we can offer. Be fair about simulator strengths and weaknesses. Given the simulator's limitations, we'll do our best to help make the simulation seem as real as possible; you have to do your part and act as if everything is real. That's how we'll get the most value out of this experience. We know that you will probably conduct yourself differently in the simulation than in clinical, and that's OK because there is still a lot to learn and talk about during this simulated experience.

You will be working in groups of 3-5 students. You will be expected to work as a team and function as the staff nurse. You will be expected to perform various assessments, identify treatment needs, provide patient education and engage in effective communication.
The entire scenario should take approximately 15-20 minutes. After the scenario, there will be a group debriefing, whereby the instructor will facilitate the group and discuss the various elements of nursing care (30-40 minutes).

Roles during Simulation –
As the students will be play-acting, each person in the group will be given a role for that simulation. The roles are:

- 2 primary care nurses. These individuals will provide for the majority of bedside care.
- Med RN – this individual will be the medication nurse during the scenario.
- Chart RN – this individual will be required to document all that occurs during the scenario in the Electronic Health Record (EHR). Remember, Hunter College SON uses the Focus Note.
- Note Taker – this individual will be viewing the simulation and taking notes on what was done/not done during the experience. This person provides a 'third-person' view of the simulation experience and adds to the rich discussion during the debriefing. Please be aware that this individual MUST report off/sign off at the end of the scenario, either via telephone or in person to Nurse Case Manager. Make certain you utilize the I-SBAR-R process.

Please be prepared for this scenario and please do not worry too much. This is a practice exercise so you will be better prepared for 'real life' experiences in the hospital.
Prior to coming to the simulation, please make certain that you view the instructional videos on You-Tube:
Simulation Lab:
http:// www.youtube.com/watch?v=oOxbB6m-byw&feature
http://www.youtube.com/watch?v=D5HrOdHPPyo&feature
Clinical Simulation Lab:
http://www.youtube.com/watch?v=KCeULhtNx3k
Cardiac Arrest Videos:
http://www.youtube.com/watch?v=3cW8 wFXDA
http://www.youtube.com/watch?v=JtFV1EGI3B4
http://www.youtube.com/watch?v=LA2DuxCcO4g
http://www.youtube.com/watch?v=EQVEdFSlUGU

SIMULATION SCENARIO
The Scenario:
This case presents an angina patient that is being monitored on a Telemetry Unit. The patient suddenly develops increasing pain while on the Telemetry Unit.
Day # 1 @ 3pm:
Carl Shapiro is a 54 year-old male who travels frequently. He was seen in the Emergency Department at 12:30pm for complaints of chest pain, diaphoresis, and shortness of breath. He was treated in the Emergency Department with Aspirin and two sublingual Nitroglycerin. Chest pain improved with Nitroglycerin administration. IV was started I the ED and is infusing at 100mL/hr. Ordered lab values are pending. Physician/Nurse Practitioner wants to be called as soon as the labs are available. Patient is receiving oxygen at 4 L/ via nasal cannula with SpO2 values at 97%. Chest pain was last rated as a "0" following 2nd Nitroglycerin and 1 inch Nitropaste topically. He has been admitted to the Telemetry Unit.
Clinical signs immediately visible:
Alert and responsive
Does not appear to be in any acute distress
Additional Information, Medical History:
Patient data: Male, age 54 years old. Weight 242 lbs (110 kg.). Height 69 inches (1.75 meters). The client has been employed as an insurance broker for the past 17 years, making weekly business trips throughout the country.
DOB: 7/19/XX
MR#: PCS71900

Allergies: NKA
Prior medical history: Has a history of hypertension. He states he takes "water pills" for his blood pressure (he is not sure of the name of the pill) and has been trying to exercise and lose weight but admits it is very hard when he travels. He smokes less than ½ pack of cigarettes a day. He describes his work as "stressful". He has a history of gastritis and pancreatitis.

Recent medical history: Recent admit from Emergency Department with chest pain, diaphoresis and shortness of breath.
Pending Diagnostic Studies
Cardiac Enzymes (CK-MB {creatine kinase/MB isoenzyme being highly specific for injury to myocardial tissue; exceed normal ranges within 4-8 hours of myocardial injury and decline to normal within 2-3 days}, troponin levels); CBC, Chemistry profile, SGOT/SGPT, GGT, Alkaline Phosphatase.
X-Ray: Chest
12 Lead ECG
Day # 2 Telemetry Unit (6:00am) – this is where the simulation begins…
Mr. Shapiro begins to exhibit irritability and complains of headache, nausea and has one episode of vomiting. Diaphoresis is noted, as well as increasing symptoms of anxiety. His symptoms are unrelieved with increased oxygen or additional Nitroglycerin.
His hand is tremulous as he reaches for a glass of water and drops it on the floor.

It is at this point that Mr. Shapiro tells the nurse: "I feel like I could really use a drink." In response to further assessment by the RN he states that he has been a heavy drinker for a period of several years but has kept this information from his family and primary physician. He states "I travel so much and my job is so stressful, I am alone a lot. Drinking takes the edge off." "I'm afraid."

Results of Stat Lab:

CK-MB – 299 IU/L
SGOT - 102 U/ml
Troponin – 3.3 ng/ml
SGPT – 96 U/ml
CBC:
GGT (gamma glutymal transferase) 26 U/I
Hct - 0.38
Alkaline Phosphatase – 10.2 U/dl
HgB - 132 g/dl
Potassium – 2.8 mEq/L
Magnesium – 0.98 Calcium – 8.7
Mean Corpuscular Volume – 150 CU microns
BUN – 88
Creatinine – 2.3

Simulation Learning Objectives:

- ❖ Identifies the primary nursing diagnosis
- ❖ Implements patient safety measures
- ❖ Evaluates patient assessment information including vital signs
- ❖ Implements therapeutic communication
- ❖ Implements direct communication with multidisciplinary team members
- ❖ Demonstrates effective teamwork
- ❖ Prioritizes and implements Physician/Nurse Practitioner Orders appropriately

Instructors' Preparatory Material will have additional information, such as:

Please know that the focus of this simulation is on the AMI with alcoholism treatment more of a discussion following the stabilization of the AMI. The goal of this simulation is to make certain students understand the dynamics of an AMI with comorbid conditions, such as alcoholism. Thus, we wanted to add a component to the simulation to assist students with their critical thinking skills as well as differentiating diagnosis' based on physical and laboratory assessments. Additionally, the communication between nurse patient is extremely important in this scenario so please pay close attention as to 'how' the students communication.
Scenario Specifics:

- ✓ Recalls indications, contraindications, and potential adverse effects of prescribed medications
- ✓ Implements the '5 rights' of medication administration
- ✓ Implements a focused respiratory assessment
- ✓ Recalls indications and contraindications for oxygen therapy
- ✓ Initiates relevant cardiac and respiratory monitoring
- ✓ Recognizes cardiac arrest/VF (if needed)
- ✓ Applies the cardiac arrest/VF protocol according local facility policy (if needed)
- ✓ Demonstrates correct use of an airway adjunct (orophyaryngeal/nasopharyngeal airway) (if needed)
- ✓ Demonstrates effective bag-mask ventilation (if needed)
- ✓ Demonstrates effective chest compressions (if needed)
- ✓ Prioritize care
- ✓ Identify teaching needs for patient and family
- ✓ Review any potential complications
- ✓ Identify the symptoms of acute alcohol withdrawal

Student Simulation Learning Objectives:

- ✓ Identifies the primary nursing diagnosis
- ✓ Implements patient safety measures
- ✓ Evaluates patient assessment information including vital signs
- ✓ Implements therapeutic communication
- ✓ Implements direct communication with multidisciplinary team members
- ✓ Demonstrates effective teamwork
- ✓ Prioritizes and implements Physician/Nurse Practitioner Orders appropriately

In addition, proposed correct treatment is outlined for the instructor, as well as specific time frames for when the students should complete certain tasks.
Information on the discussion following the simulation (debriefing) is provided as well as detailed information on the physiology and pathophysiology of the case scenario medical conditions.

Table 2: Preparatory Material for Simulation-Student Survey (PMS-SS)

Please check what course you are presently in:
N310 3 N312 0 N410 4
N412 0

Demographic Information: Male 3 Female 4
Age 22-51

Instructions: Based on the preparatory material you received for your simulation experience, please tick the appropriate box. Thank you.

1. Did you read the preparatory material prior to the simulation experience?
Yes 7 No 0
If you answered no, please explain:

2. Did you feel you were prepared for the simulation?
Very prepared 1
Somewhat prepared 4
Slightly prepared 2
Not prepared 0

Please comment:

3. Describe your anxiety level for the simulation experience was:
Low 1
Medium 4
High 2
Please comment:

4. Did you view the You-Tube videos? Yes 7 No
If no, Survey Monkey will skip participants to Question 12.

If yes, how helpful were these You-Tube videos in preparing you for the simulation experience?
Very helpful 3
Somewhat helpful 3
Slightly helpful 1
Not helpful 0
Please comment:

5. Did you view the videos/CDs from the Health Professions Educational Center?
Yes 3 No 4

If yes, how helpful were these videos/CDs in preparing you for the simulation experience?
Very helpful 3
Somewhat helpful 4
Slightly helpful 0
Not helpful 0
Please comment:

6. After reading the preparatory material, did you feel that the description of the "Roles during Simulation" prepared you for an understanding of what your role might be?
Very prepared 3
Somewhat prepared 4
Slightly prepared 0
Not prepared 0
Please comment:

7. After reading the entire simulation scenario (including the additional medical history), did you feel you had enough information to effectively participate in the care of this patient?
Yes 7 No 0

If yes, how helpful was the entire simulation scenario description?
Very helpful 4
Somewhat helpful 3
Slightly helpful 0
Not helpful 0

Please comment:
b) If no, please explain what additional information would have been helpful?

8. Overall, did the preparatory material provide you with a grasp of the simulation experience (Noticing)?
Yes 7 No 0
Please comment:
If no, please explain:

9. Overall, did the preparatory material provide you with sufficient understanding of the simulation situation to respond effectively (Interpreting)? Yes 7 No 0
Please comment:
If no, please explain:

10. Overall, did the preparatory material provide you with the information needed to effectively decide on a course of nursing action to participate in the care of this patient (Responding)? Yes 7 No 0
Please comment:
If no, please explain:

11. Based on preparatory material and your experience during the simulation, please check all that apply to the how you felt **after the experience** (Reflecting)**:** I felt:
a) more confident 1
b) better prepared for future nursing care 1
c) my overall skills improved 1
d) I reflected on my own actions 2
e) I learned from my errors and colleagues 2

12. If you answered that you did not review the preparatory material prior to your simulation experience, did you feel that you were less prepared than students who had read the preparatory material?
Yes No Not sure

Please comment:

13. If you have any additional comments, please provide them here:

Thank you.

Table 3: Guide for Simulation Reflection using Tanner's (2006) Clinical Judgment Model (Adapted from Nielsen, Stragnell & Jester, 2007)

Instructions: This Guide for Simulation Reflection is intended to help you think about your simulation experience and your nursing response to that experience. The specific situation you choose to reflect upon can the physiological patient problem (altered vital signs); description of your role during the simulation or with the other 'roles' during the simulation. The reflection may describe an ethical issue you encountered. Use this guide as a way to help you tell the story of the simulation situation you experienced.

The guide provides you with a way of thinking about care that supports the development of your clinical judgment. Although there are many ways of organizing your thinking about patient care and professional nursing practice, Tanner's (2006) Clinical Judgment Model provides the framework for the questions in this study guide.

Please check what course you are presently in:

N310 2 N312 0 N410 3
N412 0

Demographic Information:

Male 2 Female 3

Introduction: Describe your simulation situation:

Background:

- Consider experiences you have had that helped you provide nursing care in this

simulation situation. Describe your formal knowledge (e.g.: physiology, psychology, communication skills), previous nursing experience with a similar problem, and/or personal experiences that helped guide you as you worked with this simulated patient.

- Describe your beliefs about your role as the nurse working in this simulation

situation.

- Describe any emotions you had about this simulation situation.

Noticing:

- What did you notice about the simulation situation initially?
- Describe what you noticed as you spent more time with the simulation

patient/situation.

Interpreting:

- Describe what you thought about the simulation situation.
- Describe any similar situations you have encountered in clinical practice before. Describe any similarities and differences you observed when compared with this

simulation situation.

- What other information (e.g.: assessment data, evidence) did you decide you needed as

you considered the simulated situation? How did you obtain this additional information?

- What help with problem solving did you get from the preparation sheets?

Your Conclusion: What did your observation and data interpretation lead to you believe?

How did they support your response to the simulated situation?

Responding:

- After considering the simulation situation, what was your goal for this simulated patient,

family and/or staff?

- What was your nursing response, or what interventions did you do? List your actions.
- Describe stresses you experienced as you responded to this simulated patient or others

involved in the simulation.

Reflection-In-Action:

- What happened?
- How did the simulated patient, family, and/or staff respond?
- What did you do next?

Reflection-On-Action and Clinical Learning:

- Describe three ways your nursing care skills expanded during this simulation experience.
- Name three things you might do differently if you encounter this kind of situation again

in the clinical setting.

- What additional knowledge, information, and skills do you need when encountering this

kind of simulated situation or a similar situation in the future?

- Describe any changes in your values or feelings as a result of this simulated experience.

Table 4: Preparatory Material for Simulation-Instructor Survey (PMS-IS)

Please check what course you are presently in:

N310 1 N312 0 N410 3
N412 0

Demographic Information: Male 1 Female 3 Age 49-62

Instructions: Based on the preparatory material you received for your simulation experience, please tick the appropriate box. Thank you.

1. Did you read the preparatory material prior to the simulation experience?

Yes 4 No 0

If you answered no, please explain:

2. Did you feel you were prepared for the simulation?

Very prepared	3
Somewhat prepared	1
Slightly prepared	0
Not prepared	0

Please comment:

3. Describe your anxiety level for the simulation experience was:

Low	3
Medium	1
High	0

Please comment:

4. After reading the entire simulation scenario (including the additional medical history; simulation and scenario objectives), did you feel you had enough information to effectively participate in facilitating this simulation experience?

Yes 4 No 0

If yes, how helpful was the entire simulation scenario description?

Very helpful	3
Somewhat helpful	1
Slightly helpful	0
Not helpful	0

If no, please explain what additional information would have been helpful?

5. After reading the preparatory material, did you feel that the description of the "Time Frame for Scenario" provided necessary information that enabled you to effectively teach?

Yes 4 No 0

If yes, how helpful was the time frame for scenario?

Very prepared	4
Somewhat prepared	0
Slightly prepared	0
Not prepared	0

If no, please explain what additional information would have been helpful?

6. After reading the preparatory material, did you feel that the "Debriefing and Guided Reflection" content provided you with enough information to assist in your facilitating of this simulation scenario?

Yes 4 No 0

If yes, how helpful was the debriefing and guided reflection content?

Very helpful	4
Somewhat helpful	0
Slightly helpful	0
Not helpful	0

If no, please explain what additional information would have been helpful?

7. After reading the preparatory material, did you feel that the pathophysiology and additional material provided you with enough information to assist in your facilitating of this simulation scenario?

Yes 4 No 0

If yes, how helpful was the pathophysiology and additional material?

Very helpful	2
Somewhat helpful	2
Slightly helpful	0
Not helpful	0

If no, please explain what additional information would have been helpful?

8. Did you view the YouTube videos assigned to the students?

Yes 3 No 1

If yes, how helpful was these YouTube videos in preparing you for the simulation experience?

Very helpful	2
Somewhat helpful	1
Slightly helpful	1
Not helpful	0

9. Overall, did the preparatory material provide you a grasp of the simulation experience (Noticing)?

Yes 4 No 0

Please comment:

10. Overall, did the preparatory material provide you with sufficient understanding of the simulation situation to respond effective (Interpreting)?

Yes 3 No 1

Please comment:

11. Overall, did the preparatory material provide you with the information needed to effectively decide on a course of nursing action to participate in the care of this patient (Responding)?

Yes 3 No 1

Please comment:

12. *Based on preparatory material and your experience during the simulation, please check all that apply to the how you felt **after the experience** (Reflecting)**:** I felt:

a) more confident	2
b) better prepared for future nursing care	1
c) my overall skills improved	0
d) I reflected on my own actions	0
e) I learned from my errors and colleagues	0

(*One participant skipped this question)

13. If you answered that you did not review the preparatory material prior to your simulation experience, did you feel that you were less prepared?

Yes No Not sure

Please comment:

14. If you have any additional comments, please provide them here:

Thank you.