

Structured Debriefing in Simulation-Based Education

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ABSTRACT

Debriefing following a simulation event is a conversational period for reflection and feedback aimed at sustaining or improving future performance. It is considered by many simulation educators to be a critical activity for learning in simulation-based education. Deep learning can be achieved during debriefing and often depends on the facilitation skills of the debriefer as well as the learner's perceptions of a safe and supportive learning environment as created by the debriefer.

On the other hand, poorly facilitated debriefings may create adverse learning, generate bad feelings, and may lead to a degradation of clinical performance, self-reflection, or harm to the educator-learner relationship. The use of a structure that recognizes logical and sequential phases during debriefing can assist simulation educators to achieve a deep level of learning.

Keywords: simulation, debriefing, structured, health care education

When a simulation is appropriately designed for and implemented with practicing clinicians as learners,^{1,2} the learners demonstrate various degrees of performance during the simulation that, if explored, reveal many thoughts. This exploration allows opportunity for rich dialogue on how to keep patients safe and provide the best possible care in one's environment. Because of this, the dialogue following a simulation event is often seen as the heart of learning in simulation-based education in health care and a powerful tool for improving individual and team performance.³ This structured period of reflective discussion and feedback is usually held immediately after a simulation event and is referred to in the literature as the simulation "debriefing." For this article, we define debriefing as a conversation between 2 or more people to review a real or simulated event in which participants analyze their actions and reflect on the roles of thought processes,

psychomotor skills, and emotional states to improve or sustain performance in the future.

Effective debriefings are usually facilitated by an educator or instructor responsible for the educational development of the practitioners or for quality improvement activities. The quality of learning achieved during a debriefing depends on the facilitation skills of the debriefer. Debriefing is a complex skill

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that requires understanding of reflective practice, experiential learning, and specific facilitation skills to promote reflection.^{4,5} For novice debriefers, use of a structure during the debriefing can provide guidance in facilitating the reflective discussion that leads to deep learning.⁶

We offer in this article a framework to assist advanced nurses who are novice debriefers. The framework provides a structure for use of current debriefing techniques and suggested scripting before and during the debriefing. Although additional research on debriefing is still needed, the material presented here is shaped from established and tested educational theories and research programs from a variety of disciplines (including psychology, education, aviation, health care, and organizational behavior) and the authors' reflections after almost 20 years of involvement in simulation-based education with debriefing and more than 13 years of developing and conducting a "train-the-simulation instructor" course with more than 3000 clinical educators.

The Practice Before the Debriefing: A Suggested Framework

High-quality debriefing begins before the actual discussion. As with any experiential learning activity or small-group exercise, the success of the debriefing depends partially on how the session was prepared for the learners. We outline here a framework for establishing a foundation for high-quality debriefing sessions.

Developing Objectives

Before a simulation course can be developed and run, objectives must be developed to meet the demands of the curriculum and the needs of the learners.⁷ Objectives guide the development of the simulated case and debriefing. Objectives should be written in such a way that they can be observed: not focusing on learners' ability to know or understand facts, but on how learners demonstrate observable skills and behaviors.⁸

Planning

Planning is essential to ensure that the course, the case(s), the progression of the cases, and the equipment chosen for the case achieve the predetermined objectives. These practical considerations have significant influence on

the quality of the educational experience. Some important practical considerations for the simulation session as a whole and for the debriefings are as follows: Is simulation the most appropriate platform to meet these objectives? Are the objectives appropriate for the level of learning? Who are the learners and how many learners are there? What are the learners' and teachers' expectations of the session? What are the roles of the debriefers? Is there more than 1 debriefer?

With these considerations in mind, it is key to embed in the simulation opportunities for the learners to demonstrate behaviors that allow the facilitator to assess the degree to which the learners meet the learning objectives. This assessment, and any observed performance gaps, generate topics for the debriefing. To ensure this, ask: During the simulation, will learners have the opportunity to demonstrate actions that demonstrate or do not demonstrate these skills and behaviors? Adequate debriefing time will be required to explore the objectives. As a general rule, the length of time for debriefing is approximately 15 minutes per objective or twice the time of the actual simulation. Pilot testing the simulation and debriefing with target learners will help determine if the debriefing time is adequate.

Establishing a Safe and Supportive Learning Environment: Setting the Stage

Psychological safety is critical to learning and occurs when learners can and do feel safe to engage in the simulation and can openly disclose and discuss their actual thoughts.⁹ Creation of psychological safety occurs well before the debriefing, and it is essential that it be created and maintained throughout the course for effective learning.

Rudolph et al⁹ suggest 4 practices to establish a psychologically safe environment: declaring and enacting a commitment to respecting learners and concern for their psychological safety, attending to logistic details, clarifying expectations, and establishing a "fiction contract" with learners. These 4 practices are summarized here with 1 additional consideration: setting the stage for the clinical case.

Declaring and Enacting a Commitment to Respecting Learners and Concern for Their Psychological Safety. A learner-centered approach focuses on the experience and comfort of the learners, including addressing topics

of importance to the learners. This learner-centered approach is achieved when participants' interest is blended with educators' interest. When educators verbally declare the importance of teaching that is based on observed behavior in the simulation and the thoughts of the learners, it explicitly sets a tone that the teaching and learning will occur in a collaborative manner. Soliciting, listening, and being open to different perspectives, questions, or concerns demonstrate a commitment to respecting learners and their psychological safety. Doing so may require divergence from planned discussion topics—a challenge that we address next.

Attending to Logistic Details. Before participants arrive, it is important to ensure that the environment is conducive to learning and that the location and schedule have been clearly communicated to the learners. Logistical preparation also includes pilot testing of the simulation with the learner in mind, preparation of the rooms and equipment before learners arrive, and provision of learning materials including cognitive aids. Staff or other persons who are not involved in the education should be informed not to enter the educational or debriefing rooms. These outside observers can be distracting to the learners and may contribute unsolicited comments during the debriefing.

If educators feel it is necessary, learners may be oriented to the simulation environment—where to obtain supplies or simulator requirements such as virtual simulator supplies and on-screen directions. Many programs allow learners to meet the simulators; however, in other programs, it is thought that such an orientation potentially decreases participants' ability to act as if the mannequin is a patient and engage in the simulation. Many programs use an embedded simulated person (sometimes called an actor or confederate) to keep the learners oriented to the simulation environment (eg, obtaining the supplies for the group, guiding learners as to where to feel a pulse during the simulation event). Other programs have had success using a mannequin that is animated vis-à-vis a realistic voice, demonstrates a likable personality, generates vital signs, and displays other mannequin features such as chest movements resembling breathing and eyes blinking. Continuous orientation to the physical environment may be needed if the course includes physical movement between activities.

A “prebriefing” or verbal orientation just before a simulation case includes clarifying expectations, establishing a fiction contract, and setting up the clinical case and debriefing.¹⁰

Clarifying Expectations. Because participants' expectations vary, exploring their expectations during the introduction to the course is often helpful. From his research on how adults learn, Malcolm Knowles¹¹ posits in his adult learning theory that learners need to understand what, why, and how they are learning. Providing information before the session (eg, e-mailed information on the simulation center, what to expect, the agenda for the day, or clinical content or knowledge) may assist in clarifying expectations.

A higher level of clarity is critical when using simulation for high-stakes assessment (eg, summative assessments, using simulation for certifying, passing, or hiring purposes), including details around performance expectations and planned consequences such as advancement or remediation as a result of performance. High-stakes assessment simulations are not a focus of this article because they are very different from simulations structured as a learning exercise (ie, formative assessment). The debriefings described here are those attached to simulations created for learning.

Learners have the right to be informed of the planned confidentiality of the sessions, including answers to the following questions: What can the educator running this simulation share with others, including my supervisor, and why? Will my supervisor have knowledge about my performance? What can we agree to talk about and not talk about outside of this simulation experience, and why? Video recording of the simulation may be used to support the debriefing. When using video, clarity around confidentiality and exactly how and under what circumstances a video may be used helps to address privacy and recording-related anxiety.

Establishing a Fiction Contract. Simulation is not meant to replace the real patient care experience, but to provide a similar event for the purpose of exploring health care practice needs. Despite simulation's advantages, there are limitations that learners will perceive as unrealistic (eg, simulators, actors, equipment in the simulation rooms). Dieckmann et al¹² promote the use of an explicit agreement between the educator/facilitators and the participant learners for the success of

simulation-based learning. Usually, the educator suggests a verbal agreement (eg, “We have done the best we can to make this simulation seem real. We will try our best to give you a realistic interactive experience. But the fact is that it is simulated and certain things may not seem real to you. To help make our time together successful, I’m asking you to meet me halfway. I hope you will agree to act as though things are real, as if you are truly in this clinical event. If we both work at it, then I think we’ll have a much better learning experience. Can you agree to that?”).

Setting the Stage for the Clinical Case.

Educators should determine, depending on the learners and objectives of the session, what information is needed and appropriate for the learners to know before the simulation. Four things that facilitate engagement are ensuring that learners know who they are, where they are, who the team is (eg, surgeon, nurse), and what the issue is (eg, “we have an unconscious patient in the emergency department, his mother is at the registration area, and the nurse is currently at his bedside”).

If learners are not provided information needed for engagement or do not agree to the process of learning, feelings of being placed in an unfair situation will emerge during the debriefing, potentially undermining the debriefing. Practicing use of this framework before debriefing sets the stage for rich debriefing sessions.

The Practice of Debriefing: A Suggested Structure

It is generally agreed that the debriefing process has 3 main phases.^{6,13-15} The Institute for Medical Simulation suggests a 3-phase structure:

1. A reactions phase that addresses the learners’ reactions and feelings immediately following the case and also provides the facts of the case in which learners have been involved. The facilitator may preview his or her plan for the debriefing time. Main issues for subsequent reflection may be determined.

2. An understanding phase where performance gaps¹⁶ are identified and their source determined through examination of learners’ perspectives. Teaching takes place to help move learners to new understandings that can be generalized to the learners’ real settings.

3. A summary phase in which the learning from the simulation experience and debriefing

is elicited from the learners for use in a real-world context. Learners state ways in which they can implement any new learning in their daily practice.

The Reactions Phase

The purpose of this short phase, usually lasting 2 to 5 minutes, is 2-fold: (1) to allow a release of emotion and tension so that individuals are able to be reflective in group discussion and (2) to identify the learners’ areas of interest for discussion that could be woven into the objectives. Information received by the debriefer during this reactions phase may change the direction of the debriefing as previously planned. We present strategies for the reactions phase next.

Emotion Before Cognition. One of the benefits of an appropriately challenging simulation is that the learners are activated to a heightened state of emotion equivalent to the physiological state in which clinicians provide care. Creating challenges that trigger emotional engagement gets to the affective component of learning and, provided it is managed appropriately, sets the scene for a more meaningful debriefing.⁹

Learners need to release some of this emotion before they are able to move from individual thoughts to group thinking and discussion.¹⁷⁻¹⁹ This process of release begins immediately after ending a simulation (ie, while leaving the action in the simulation room). So that the debriefer can gauge how to enter the debriefing (eg, if someone is excited and another is upset), it is important to capture the learners’ immediate feelings to gain insight into their emotional state through nonverbal and verbal actions such as walking down the hallway to the debriefing room with learners. Animated talking is typical and reflects normal emotional release. A quiet ambiance may indicate a general perception that the simulated case was not handled well or that the case was not challenging enough.

A useful opening question once in the debriefing room is, “Reactions? How are you feeling at this moment?” This question is aimed at eliciting learners’ emotions in the moment rather than a detailed discussion of their performance. If time permits, allow each participant to answer. The range of emotions identified should be acknowledged as normal—stress, relief, embarrassment, frustration, anger. Because of time constraints

and the purpose of the reactions phase, discussion of specific performance is reserved for the understanding phase. If responses around specific performance are provided by the learners, the debriefer can make note of the topic and preview that they will be discussed in just a moment (if it is part of an objective or if time allows).

Finding Out What Matters to the Learners. Listening to the topics discussed during the time of emotional release can indicate what is most relevant to the learners from the scenario and what they would most like to discuss. Building on the principles of adult learning theory, this listening provides insight for the facilitator to weave learners' interests into the educator-chosen debriefing topics or to substitute a learner's topic for an educator-chosen topic. If the priority objectives were appropriately embedded in the simulation, the learners often identify interests that match the objectives.

A common challenge in the reaction phase is commentary about a lack of realism in the simulation. Some learners genuinely struggle to achieve high engagement in the scenario because specific elements of the simulation prevent them from holding to the fiction contract.¹² It is important to remember that the simulation is no more or less real than the participant perceives it to be. Addressing this explicitly during the prebriefing makes it easier to address during the debriefing. While upsetting to an educator who spent time developing the realism of the case, when this occurs, educators should agree with the participant's perspective, since it is a valid perspective: One technique to use when this occurs is to redirect the discussion to previous real experiences, for example, "Yes, it is not real. It can be confusing. So without simulation artifacts, let me ask you if you have ever, in your clinical experience, tried to feel a pulse on a patient and not been sure whether you felt it or not?"

At the end of this short reactions phase, the facts of the case can be given proactively (eg, "This 56-year-old man was admitted to the intensive care unit for hyperkalemia and progressed into pulseless electrical activity."). The facts do not include the performance of the learners, just an overview of the facts of the clinical case. If facts are not clarified in this phase, it places the debriefing at risk of continued questioning by learners in attempt

to clarify the nature of the case throughout the debriefing.

If identifying the case is an objective of the educator, clarifying background, history, and symptoms of the patient(s) with a preview is helpful in organizing the discussion (eg, "This case was a 14-year-old patient who suddenly became diaphoretic with a rash. The nursing assistant noted that he had a 103.4°F (39.7°C) fever that she just noticed 2 minutes ago. The electronic chart had some information in it, and the charge nurse also knew some information about the patient.") If identifying the diagnosis is not a primary objective (eg, objectives are teamwork and communication), stating the basic facts of the case most often saves discussion time so that the limited debriefing can be used effectively for understanding and teaching.

The Understanding Phase

A preview is a short description that orients learners to the conversational topics in the debriefing and is a helpful technique in transitioning from the reaction phase to the understanding phase. An example of a preview is, "We have about 30 minutes for this discussion. There are 2 things that interest me and from your reactions just now, I think it will be interesting for all of us. First, I'd like to talk about how the team shared information, and then I'd like to talk about the upset mother." The topics mentioned should be general headline topics and relate to some of the comments that arose during the reactions phase. If time permits, another option is to ask the learners if there are any additional topics that they would like to discuss and openly negotiate how to work any additional topics into the time allotted.

The understanding phase consists of 3 subphases: exploring, discussion and teaching, and generalizing and applying. The subphases may be repeated with each topic that is debriefed.

Exploring. During the simulation, educators observe and judge actions and inactions. Although actions are observable, learners' thoughts cannot be observed, and the observed actions may not have been for the reasons that an educator assumes. Rather than assuming that the actions or inactions reflect a lack of knowledge or competency, the assumptions of an educator should first be tested by exploring the learner's perspective. The most effective explorations begin with a stated observation,

an explicit statement of the educator's perspective, followed by an eliciting of the learner's perspective. This art of direct and respectful transparency during debriefing is called "debriefing with good judgment."¹⁷

Many simulation programs use video in the debriefing session to provide a powerful trigger for reflection. As an objective reflection, watching self-performance often contrasts with learners' perceptions or helps learners recall their thoughts at specific moments, stimulating powerful reflective discussion. There are frequent challenges when video is used. Glitches in technology often occur and can be alleviated by familiarity with the audiovisual system or having staff present who understand the technology. Heightened anxiety may occur among learners, especially if the purpose of the video has not been made clear to them. Video playback may cut into needed discussion time. Time used can be minimized by reviewing only relevant clips (whether by marking the video in real time or writing down the time of the clip). Video should not be used to show that learners' recollection of the case is faulty or that their statements are not accurate. Using video to "settle an argument" may cause learners to feel inadequate, generate defensiveness, and undermine the trust between the educator and the learners. Telling learners what they are about to watch before playing the video and what topic is planned to discuss after watching prevents a "gotcha" approach. A useful sequence for video review is the following:

1. Preface the video (eg, "I'd like to discuss team communication. To do this, I'd like to play a segment of the video where the patient starts to complain about a headache.")

2. Play the short segment of the video clip.

3. Discuss the issue in question in relation to the video (eg, "I noticed that Cora started to repeat what she was saying here a little louder, it seemed to me in an urgent way. Cora, what were you thinking at the time? Gerry, when Cora appeared to speak up, what were your thoughts? What aspects of the communication were effective? Why? Ineffective? Why?")

4. Discuss the issue in a broader context (eg, "What are some other aspects of effective communication?")

Discussion and Teaching. The exploration subphase analyzes areas in need of discussion,

teaching, and brainstorming. Once these areas have been discovered, the educator can then provide focused teaching or facilitate focused discussion around these areas. Ideally, in the simulation development process, the educators have identified likely topics of discussion (eg, effective leadership, team communication, care of family). It is helpful to anticipate likely topics of discussion, and novice debriefers may benefit from having printed material available to help in guiding the discussion and teaching.²⁰

Generalizing and Applying. After discussion and teaching, the educator may allow the learners to conceptualize how the topics just discussed are relevant to their practice. Such conceptualization can be accomplished by asking the learners about their real-life experiences in this type of situation: "How would the things we just discussed work for you in your practice?" This question may lead to insights for professional development or policy or system change that could be used to inform administration, quality, or risk management departments. It is crucial to maintain confidentiality as agreed with participants if ideas are communicated to other departments.

Many challenges occur during the understanding phase. The biggest debriefing challenge may be to balance a thorough discussion of the objectives of the debriefing within time limits. It can be challenging to meet learners' needs and explore their perspectives in a limited amount of time.²¹ At times, the discussion may stray off topic and may need to be redirected back to the objectives. Overcoming this challenge requires practice, feedback, skilled facilitation, and transparency. Another common challenge is keeping everyone equally engaged. "Cold calling" or redirecting the conversation to the quiet learners can help with this challenge. If all debriefees are seemingly disengaged, it may be a result of the simulation case (eg, case not challenging enough).

Raising nursing issues not covered by learners in the discussion is critical to learning. Failing to address an oversight or misconception validates the error. For this reason, practices of concern that affect patient safety must be brought to the surface and prioritized with a sense of importance matching the degree of error, even if done briefly. Having fact sheets on the medical management of the simulation cases available for learners to take home is a

Table: Debriefing Facilitator Tips For Use During the Understanding Phase

- Be familiar with the case, including ideal and typical performances (if simulation runs numerous times).
- If you missed observing an action during the running of the simulation, openly inform the group that you missed that part and ask the learners to help recall what happened.
- Use open-ended questions that show curiosity about the learners' perspectives to initiate discussion. If the question is directed at one learner, ask the group for other similar or different perspectives once the learner shares his or her perspective.
- Redirect questions asked by learners back to the group to solicit their thinking on the question.
- Avoid long lecturing, especially on topics that you want to discuss that were not mentioned in the reactions phase.
- Use silence as a technique to encourage participant input to the discussion. Try counting to 10 after you ask a question if necessary before speaking again. If you think the question is an important one, ask the learners if they need you to clarify or rephrase the question. Pay attention to nonverbal expressions: Do they appear to be confused or processing thoughts?
- Body language is important. Be conscious of appearing interested and enthusiastic. Video recording of the debriefing may provide an objective reflection of your body language.
- Stick to your objectives as much as possible, but be prepared to be flexible as needed.

practical way to save time and ensure provision of good information. The Table provides additional tips for debriefers to use during the understanding phase.

The Summary Phase

The summary phase concludes the debriefing session and is also brief. Because this phase usually lasts 5 to 10 minutes, it is important to state that the debriefing session is ending (eg, "We have about 5 minutes left, so I'd like to wrap up the debriefing session.").

Educators often assume what the learners will be taking away from the session. To ensure that the learners are taking away important teachings, the learners should first be asked what was meaningful to them (eg, "From what we discussed today, what are some take-aways?"). If an important issue for teaching/learning was not stated in the summary of the participants, the educator may add in a summary of those topics.

Conclusion

Debriefing, including its many challenges, varies from program to program, session to session. Because these topics are beyond the intent of this article, we recommend formal training as a debriefing instructor to allow reflective practice, guidance, and feedback on debriefing skills. A common finding is that debriefers overcome many challenges by seeking to achieve true learner-centeredness.

The ideal process for learner-centeredness is an open and flexible tone with mutual negotiation and collaborative learning—demonstrated by the sharing of thoughts, needs, vulnerabilities, and expectations of all members of the group.

The way the debriefing is facilitated influences the perspective of each learner (ie, whether the simulation was a positive or a negative experience for the learner). For novice debriefers, this role may be challenging and intimidating. The steps and phases before, during, and after a debriefing as outlined in this article will help guide a debriefer in providing learners with a rich experience. Debriefing requires practice to develop expertise. Clinician-educators who dedicate themselves to maximizing the learning power of simulation and debriefing can have a significant effect on the education of clinicians, and as a result, influence both quality patient care and patient safety.

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REFERENCES

1. Bambini D. Writing a simulation scenario: a step-by-step guide. *AACN Adv Crit Care*. 2016;27(1):62-70.
2. Willhaus J. Simulation basics: how to conduct a high-fidelity simulation. *AACN Adv Crit Care*. 2016;27(1):71-77.
3. Tannenbaum SI, Cerasoli CP. Do team and individual debriefs enhance performance? A meta-analysis. *Hum Factors*. 2013;55(1):231-245.
4. Decker S, Fey M, Sideras S, et al. Standards of best practice: simulation standard VI: the debriefing process. *Clin Simul Nurs*. 2013;9(6):S26-S29.
5. Husebø SE, Dieckmann P, Rystedt H, Søreide E, Friberg F. The relationship between facilitators' questions and the level of reflection in postsimulation debriefing. *Simul Healthc*. 2013;8(3):135-142.
6. Eppich W, Cheng A. Promoting excellence and reflective learning in simulation (PEARLS): development and rationale for a blended approach to health care simulation debriefing. *Simul Healthc*. 2015;10(2):106-115.
7. Lioce L, Meakim CH, Fey MK, Chmil JV, Mariani B, Alinier G. Standards of best practice: simulation standard IX: simulation design. *Clin Simul Nurs*. 2015;11(6):309-315.
8. Rosen MA, Salas E, Silvestri S, Wu TS, Lazzara EH. A measurement tool for simulation-based training in emergency medicine: the simulation module for assessment of resident targeted event responses (SMARTER) approach. *Simul Healthc*. 2008;3(3):170-179.
9. Rudolph JW, Raemer DB, Simon R. Establishing a safe container for learning in simulation: the role of the presimulation debriefing. *Simul Healthc*. 2014;9(6):339-349.
10. Page-Cuttrara K. Prebriefing in nursing simulation: a concept analysis. *Clin Simul Nurs*. 2015;11(7):335-340.
11. Knowles M. *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. Wilton, CT: Association Press; 1980.
12. Dieckmann P, Gaba D, Rall M. Deepening the theoretical foundations of patient simulation as a social practice. *Simul Healthc*. 2007;2(3):183-193.
13. Littlewood KE, Szlyd D. Debriefing. In: Palaganas JC, Maxworthy J, Epps C, Mancini MB, eds. *Defining Excellence in Simulation Programs*. Philadelphia, PA: Wolters Kluwer Lippincott, Williams & Wilkins; 2014.
14. Lederman LC. Debriefing: toward a systematic assessment of theory and practice. *Simul Gaming*. 1992;23:145-160.
15. Zigmont J, Kappus L, Sudikoff S. The 3D model of debriefing: defusing, discovering, and deepening. *Semin Perinatol*. 2011;35(2):52-28.
16. Rudolph JW, Simon R, Raemer D, Eppich W. Debriefing as formative assessment: closing performance gaps in medical education. *Acad Emerg Med*. 2008;15:1010-1016.
17. Rudolph JW. There's no such thing as "nonjudgmental" debriefing: a theory and method for debriefing with good judgment. *Simul Healthc*. 2006;1:49-55.
18. Kindler CH, Szirt L, Sommer D, Häusler R, Langewitz W. A quantitative analysis of anaesthetist-patient communication during the pre-operative visit. *Anaesthesia*. 2005;60(1):53-59.
19. Eysenck MW, Derakshan N, Santos R, Calvo MG. Anxiety and cognitive performance: attentional control theory. *Emotion*. 2007;7(2):336-353.
20. Cheng A, Hunt EA, Donoghue A, et al; EXPRESS Investigators. Examining pediatric resuscitation education using simulation and scripted debriefing: a multicenter randomized trial. *JAMA Paediatr*. 2013;167(6):528-536.
21. Fey MK, Scrandis D, Daniels A, Haut C. Learning through debriefing: students' perspectives. *Clin Simul Nurs*. 2014;10(5):e249-e256.