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Off the Verge: Teaching De-escalation Through Simulation

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OFF THE VERGE: TEACHING DE-ESCALATION THROUGH SIMULATION

By

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Abstract

Workplace violence is an ongoing concern for nurses in healthcare settings and it is imperative nurses are equipped with the knowledge and skills to de-escalate a potentially violent situation. Verbal de-escalation should be the first intervention nurses use to curtail patient aggression, and training in effective de-escalation techniques is essential to increase nurses' confidence and decrease the use of restraints. As an undergraduate student at Rhode Island College (RIC), this writer identified the need for this training and developed a simulation where nursing students could practice verbal de-escalation skills with a live-actor in the controlled, safe environment of the RIC School of Nursing Simulation Center. The students' confidence was measured using a pre- and post-simulation survey and improved in nearly all categories after participating in the trial run of this Emergency Department-based simulation. Additionally, the feedback and results from this project indicate a simulation developed by a student, for peers, was effective in addressing an identified educational need. Generous financial support from the Anne and Bob De Stefano Fund for Undergraduate Research made it possible to hire professional improvisational actors and design and implement a simulation that mirrors actual practice.

Off the Verge: Teaching De-escalation through Simulation

Due to the rise of conflict and violence in the healthcare setting, the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), and The Joint Commission all have published reports and guidelines that recognize the importance of nurses' and healthcare workers' abilities to prevent violence in the workplace (Joint Commission, 2010; Craine, et al., 2014; U.S. Department of Labor, 2013). OSHA and the Bureau of Labor Statistics report hospitals are one of the most hazardous places to work due to a variety of factors; but, of the injuries to hospital workers in 2011, nearly 1 in 10 was a result of workplace violence (OSHA, 2013). Therefore, for their own safety, and for the safety of their patients, it is imperative nurses are equipped with the knowledge to identify agitation and escalating behavior, and possess the skills to de-escalate a potentially hostile situation.

Gacki-Smith, et al. (2009) surveyed 3,465 emergency room nurses; 50% of whom stated they had been physically assaulted and 70% reported they had been verbally abused. Additionally, there are 1.7 million cases annually of agitated patients seeking treatment in emergency rooms (Zeller & Rhoades, 2010). However, agitated patients are not unique to one particular population, and nurses across all specialties will almost certainly encounter agitated patients or family members in their first years on the job. The Centers for Disease Control and Prevention (CDC), NIOSH and OSHA have extensive online resources and training (Centers for Disease Control, 2016; Craine, et al., 2014; Occupational Safety, 2016), and organizations like the Crisis Prevention Institute provide by-request, in-person de-escalation training for institutions (Crisis Prevention, 2016).

Rhode Island College (RIC) undergraduate nursing students receive a short lesson on introductory concepts of de-escalation, but are not provided with specific de-escalation training

or given an opportunity to practice evidence-based techniques. Since there is a high likelihood of encountering an agitated person in the clinical setting or in the work environment as a new graduate nurse, a simulated high-stress event was created where nursing students could practice verbal de-escalation skills with a live-actor in a controlled, safe environment of the RIC School of Nursing Simulation Center.

The purpose of this project was to design and implement a simulation to teach student nurses verbal de-escalation to bring agitated persons 'off the verge'—to prevent aggressive displays of anger such as an attack on the environment, self, other patients, or staff (Keltner, Schwecke & Bostrom, 2007), instill confidence in the students to cope with aggressive patients (Thackrey, 1987), and curtail potentially violent situations. Desired outcomes of the simulation were for students to: learn experientially to identify when a person is escalating, solicit and empathize with a person's underlying reasons for the agitation, and employ appropriate, evidence-based techniques. This is the first student developed simulation at Rhode Island College School of Nursing, and based on available published research articles, may be the first nursing simulation created by a student, intended for use by their own peer group.

As a senior in the RIC nursing program, the developer of this simulation was uniquely positioned to identify a gap in the curriculum, create a simulation to meet the need, and ensure the materials were relatable to the student-learners. All phases of development and implementation were viewed through an 'insider's' perspective, allowing the author to write the script, tailor the pre-simulation materials, and set the scene with himself and his fellow students in mind. It is the opinion of this author that because of his shared experiences with other RIC student nurses, their needs and requirements for the simulation were understood at a level impossible for educators to comprehend. The developer experienced more than ten simulations

in the RIC nursing program and was able to build upon what he had seen and felt, or the feedback he heard from peers about the perceived shortfalls of previous simulations. Oftentimes, simulations used in nursing school curriculums are based on generic, standardized scripts sold to simulation centers by companies invested in simulation development. These scripts are valuable in many cases, and while faculty and educators can tailor the generic scripts to the students, the level of fidelity provided by a student developed simulation created for peers is invaluable.

In 2014, 82% of Bachelors of Science in Nursing (BSN) students were under 30 years of age (NLN, 2014). New graduate nurses have a wide variety of personal and professional experience, but it is likely some new nurses will enter the workforce having never dealt with an agitated person. Age and experience of undergraduate nurses are not predictors of ability to de-escalate, and improvement in this area does not occur without training (Nau, Halfens, Needham & Dassen, 2010). Furthermore, Richmond et al. (2012) found, "All persons who work with agitated patients should receive training in de-escalation techniques" (p. 19). Thus, new professionals who enter the workforce without the tools for verbal de-escalation may resort to using physical or chemical restraints when confronted with an aggressive patient (Cole, 2014; Knox & Holloman, 2012)—a practice no longer supported as a practice standard.

The Department of Health and Human Services (2006) dictates, "Restraint or seclusion may only be used when less restrictive interventions have been determined to be ineffective to protect the patient or others from harm" (p. 71386). The American Nurses Association (ANA) and American Psychiatric Nurses Association (APNA) have also published their positions on the issue, urging healthcare providers to use the least restrictive means possible before using seclusion or restraint (American Nurses, 2012; American Psychiatric Nurses, 2014). An essential therapeutic intervention when trying to employ the least-restrictive means to de-escalate an

agitated patient is verbal de-escalation (Cowin, et al., 2003; Richmond, et al., 2012; Knox & Holloman Jr., 2012), and research reveals nurses who receive training in verbal de-escalation, or who are exposed to less-restrictive alternatives, are less likely to use restraints (Cole, 2014; Özdemir & Karabulut, 2010). Verbal de-escalation often takes less time and follow-up than physical restraints, and its potential advantages in safety and patient satisfaction (Richmond, et al., 2012) make it a technique that should almost always be employed first.

Simulations based around communication work best with a live-actor. Generous financial support from the Anne and Bob De Stefano Fund for Undergraduate Research made it possible to hire professional improvisational actors and design and implement a simulation that mirrors actual practice (Bell, et al., 2014; Pascucci, Weinstock, O'Connor, Fancy & Meyer, 2013).

Background

The 2016 meeting of the Society for Simulation in Healthcare (SSH) was the launchpad for this project and the motivation to bring a student developed simulation to RIC. The creativity, dedication and use of evidence-based practice by simulation designers were on display at this conference. According to the SSH website, more than 2,500 healthcare simulation professionals and exhibitors attended the event (Society, 2016). The keynote speakers and exhibitors reiterated that even though simulation in healthcare has been around for decades—the use of simulated patients was first documented in 1964 (Jones, Passos-Neto & Braghiroli, 2015)—simulation remains an emergent field.

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Literature Review

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A literature review was conducted using CINAHL Plus, MEDLINE and PubMed databases for full text articles published in the last twelve years before beginning the simulation design and implementation. Key search terms included: verbal de-escalation, aggression, agitated

patient, restraint, student developed, and simulation. This literature review found no available articles discussing student developed nursing simulations intended for the developer's peer group. Conversely, these databases and search terms yielded numerous articles discussing de-escalation training, efficacy and proper use.

Teaching Verbal De-escalation Works

Nau, Halfens, Needham and Dassen (2010) found, "A training programme in aggression management can positively affect students' performance in de-escalating aggressive patients" (p. 706). In this study, after completing a pre-test simulation, 104 students attended 24 hours of aggression management training, and then experienced a second, different simulation. They were videotaped during both the pre and post intervention simulations, and three de-escalation experts reviewed their videos. Without knowledge of whether or not they were viewing a pre or post intervention simulation, the de-escalation experts graded the students' performance using the De-escalating Aggressive Behaviour Scale (DABS), which is intended to measure de-escalating behavior. Their findings showed students performed better after receiving training, and the students most in need of improvement gained the most benefit. The positive results after training were irrespective of age or previous nursing education, signifying these skills are not learned simply through life experiences. The authors determined, "It is possibly erroneous to assume [nurses] will learn aggression management on the job" (p. 705).

Needham, et al. (2005) provided a training program to undergraduate nursing students to evaluate their confidence in dealing with aggressive patients. Using the *Confidence in Coping with Patient Aggression* tool, they found their intervention group of 57 students, "Demonstrated a highly significant increase in confidence" (p. 418) in comparison to the 60 students who were part of the control group. The intervention group received 24 lessons, each lasting 50 minutes

over four consecutive days. The lessons included role-play, group discussion, self-reflection, and

hands on skills training, but did not contain a simulation. The results from this study imply

aggression management training is beneficial because it improves students' perceived confidence

in managing patient aggression.

Key components of de-escalation techniques

Verbal de-escalation has long been understood to be an effective technique to calm

agitated patients, but no gold standard existed for *how* to properly do verbal de-escalation

(Richmond, et al., 2012). Studies such as the American Association for Emergency Psychiatry's

Project BETA (Best practices in Evaluation and Treatment of Agitation) addresses this need and

provides evidence-based guidelines to care for agitated patients. Project BETA was initiated by

the American Association for Emergency Psychiatry with the goals of establishing consistency in

treatment approaches for agitation, and providing, "Guidelines that are not only effective and

safety minded but also in the best interests of the patient" (p. 1). Project BETA established five

working groups who published their findings on best practices at multiple stages of the

encounter. The five articles were: *Medical Evaluation and Triage of the Agitated Patient,*

Psychiatric Evaluation of the Agitated Patient, Verbal de-escalation of the Agitated Patient,

Psychopharmacologic Approaches to Agitation and Use and Avoidance of Seclusion and

Restraint (Holloman & Zeller, 2012).

In the article *Verbal De-escalation of the Agitated Patient*, Richmond, et al. (2012)

published their consensual findings on verbal de-escalation and identified its utility, etiology and

recommendations for training. They stressed that the skills needed for verbal de-escalation must

be taught and reinforced annually. Based on clinical experience and a review of available

literature, the authors defined the following 10 domains of de-escalation to guide clinicians' care of agitated patients:

Domain I: Respect personal space

Doman II: Do not be provocative

Doman III: Establish verbal contact

Domain IV: Be concise

Domain V: Identify wants and feelings

Domain VI: Listen closely to what the patient is saying

Domain VII: Agree or agree to disagree

Domain VIII: Lay down the law and set clear limits

Domain IX: Offer choices and optimism

Domain X: Debrief the patient and staff

Additionally, Price and Baker (2012) conducted a thematic synthesis of de-escalation techniques and outlined seven themes based on available evidence that provided the foundation for effective de-escalation. Their seven themes, which research indicates will improve verbal de-escalation, focused on staff skills (characteristics of the de-escalator, maintaining personal control, verbal and non-verbal skills) and the interventions (engaging with the patient, when to intervene, ensuring safe conditions, and strategies for de-escalation). The authors discussed that although many programs and institutions understand the need to train their members on verbal de-escalation as a first line intervention, the programs do not properly focus on these seven evidence-based areas.

Why Simulation Works

Substantial research has been conducted on the effectiveness of simulation in healthcare, and the evidence supports that simulation is effective, especially when teaching communication techniques. A landmark research article by Hayden, Smiley, Alexander, Kardong-Edgren and Jeffries (2014) suggested that up to half of all clinical hours for undergraduate nursing students could be substituted with high-quality simulation experiences when done under the proper circumstances. They highlight that successful simulation requires both realism and faculty trained in simulation, as well as the incorporation of best practices in order to achieve excellent student outcomes.

Aebersold & Tschannen (2013) highlight the importance of simulation in nursing by analyzing the findings from previous studies, and elaborating on those findings to find the *impact* simulation has on nursing care. They state simulation is not only an effective way to train nurses for new procedures, but can also be effective at improving collaboration and competency, and should be considered as an evaluation method for new hire nurses to complete during orientation.

Furthermore, Bell, et al. (2014) suggested improvisational, or live-actors, have a high educational value in teaching communication and relational skills, which adds to the nursing students' experiential learning. Students in their study expressed appreciation of the realism provided by live actors and highlighted the importance of actor feedback during debriefing.

Method

The purpose of this project was to expose students to an agitated patient—while in a safe environment—through simulation. A group of eight junior level undergraduate nursing students participated in the student-designed trial run simulation in February 2017. Using a pre-test-post-test intervention study, students' confidence in managing an agitated patient was measured

before and after receiving pre-simulation training materials and experiencing a simulation with a

live-actor who was agitated. All eight students completed the pre-test and post-test

questionnaires, as well as the simulation feedback form.

Prior to the start of the simulation, the students were briefed as a group on the importance

of psychological safety and were informed they would be filmed during this simulation. The

students were told that simulation can have an unforeseen effect on some individuals and they

could, at any point, choose to opt-out of the simulation without penalty.

Developing the Simulation

After reviewing the literature, the simulation was developed following Jeffries (2007)

guide for implementing simulations. To plan for the various components of a simulation, the

developer started by envisioning a common scenario where a patient may become agitated.

Although agitated patients may be encountered in any clinical setting, this simulation was based

around a patient who was in pain while enduring a long wait in the Emergency Department.

From this initial vision, a detailed plan was needed for the venue, expectations, script, actors,

props, rehearsals, technical support, feedback, evaluation, and time management (Jeffries, 2007).

Rather than writing a script that the actor would follow line-for-line, the script outlined

triggers or events, because simulation almost always requires improvisation by the actor. Input

from the student nurses makes every iteration of the simulation slightly different, and the actor

must adjust based on the verbal and non-verbal communication from the students. Furthermore,

Bell, et al. (2014) stated that, "Improvisation and unscripted interactions mirror real practice, and

are central aspects of the actor-based pedagogy" (p. 386). However, in order to provide

consistency, the actor was provided a two-page document outlining his/her background, as well

as five phrases he/she was *required* to say (as seen in the Appendix). A diagram created by this

writer, as shown in Figure A1, was provided to the actor to visually depict where these required phrases were suggested to occur on the timeline, and on the arc of rising agitation.

The arc of rising agitation was derived from Keltner, Schwecke and Bostrom (2007) who identified a triggering phase, escalation phase, crisis phase, and recovery phase in dealing with aggressive patients. The crisis phase for this simulation culminated in an indirect threat from the agitated patient that would ideally prompt the student to, "Lay down the ground rules and set clear limits" (Richmond, et al., 2012) and tell the patient that threats will not be tolerated.

It was important this simulation was believable, realistic, and stressful for the student nurse. Prior to implementation, a Registered Nurse employed at a local Emergency Department reviewed the actor background sheet and other relevant materials for realism. Her feedback was incorporated into the scenario, which added an extra level of fidelity. The experience of RIC faculty was also leveraged and incorporated into creating a realistic environment, as the student-developer lacked real-world emergency room nursing experience. Additionally, emergency room sounds were played during the simulation, adding to the complexity and stress of the environment. One student commented in debriefing, "I kept trying to listen to the patient, but the noises in the background were distracting!"

The simulation was intended to last 5-7 minutes for each student, but the run times averaged four minutes. This highlighted the need for increasing the number of actor cues and tasks for the student in order to create an environment conducive to interaction between the student and the actor. However, as most de-escalations can be conducted in 5 minutes or less (Richmond et al., 2012), lengthening the simulation to meet an arbitrary timeline may not be warranted if the learner outcomes can be met in a shorter amount of time.

Learner Outcomes

The learner outcomes for this simulation, based on the Project BETA De-escalation

Workgroup's ten domains (Richmond, et al., 2012), were to:

- Self-identify abilities in coping with patient aggression prior to and after simulation.

- Recognize and interpret escalating behavior to intervene as early as possible.

- Demonstrate respect for the client's and the student's personal space.

- Omit provocative verbal or non-verbal actions to avoid appearing confrontational.

- Portray a calm and relaxed demeanor despite patient's escalating behavior.

- Establish verbal contact with the patient and provide orientation and reassurance. Ask
  open-ended questions to identify patient wants and feelings.

- Use concise, repetitive language to ensure the patient receives the message.

- Demonstrate active listening through body language, verbal acknowledgement and
  non-verbal cues showing empathy.

- Develop rapport with the patient and find a way to honestly agree, or agree to
  disagree.

- Effectively set boundaries and respectfully set clear limits so the patient understands
  acceptable behaviors.

- Extinguish the patient's feeling of 'fight or take flight' by offering choices to
  empower the patient and provide hope.

- Evaluate and reflect on strengths and weaknesses of de-escalation skills through
  debriefing.

These outcomes were developed to teach students the techniques any healthcare provider

should use when encountering an agitated patient. The scenario was developed with these

outcomes in mind, and the pre-simulation materials provided to the students armed them with information that would help them accomplish these goals. These outcomes were discussed during debriefing, but were not statistically measured.

Pre-simulation materials

The pre-simulation materials accounted for the expected, limited preparation time the participating students would dedicate to this simulation. Anecdotally, the amount of time RIC nursing students spend preparing for simulations—which are non-graded assignments—is less than the time spent studying for tests and completing other graded assignments. The materials were also compiled with a first-hand understanding of the cumulative information the students had been taught up to this point in their degree program. A YouTube video (Zeller, 2015), the list of Project BETA's ten domains of de-escalation (Richmond, et al., 2012), and an easily understood graphic (Bowers, 2014) were provided to the students—rather than assigned textbook or research article readings. The YouTube video demonstrating techniques for de-escalation was provided for pre-simulation training because the developer felt students would benefit from seeing the techniques in action, rather than simply reading how it should be done.

Debriefing, Feedback from Students and Changes for Future

As a trial run and as part of a research study, the debriefing for this simulation was slightly different than other simulation debriefings in the RIC curriculum. This debriefing needed to not only address the students' learning, but also queried the students on how future iterations of this simulation could be improved. A nearly unanimous issue the students highlighted was the 'lack of resources' they felt they had when intervening with the agitated patient. They stated they, "Could do nothing but talk to the guy," and couldn't get him what he needed (i.e. pain medication, water, etc.). While this was partially by design to force the learner to practice verbal

de-escalation, it was clear through video observation the students were underequipped to

realistically diffuse the situation. While nurses should be able to act autonomously, a nurse in an

Emergency Department would almost never operate completely alone. Based on this feedback,

future implementation of this scenario will likely include a confederate who may act as a

'Charge Nurse' or 'Provider' who can help the student navigate the scenario and increase the

level of realism.

Any simulation should incorporate feedback from students to avoid continual pitfalls and

minimize areas of frustration year after year. If this finding of "lack of resources" was not

addressed after this trial run, next semester's students would likely have the same frustrations.

The debriefing with students was a guided discussion to explore emotions experienced

during the simulation, techniques that worked or didn't work, and self-reflection on how they

might conduct themselves the next time they are in a potentially hostile simulation. Jeffries

(2007) highlights the importance of integrating guided reflection to solidify the learning

experience and encourage the students to become active in their learning. As she suggests,

questions were developed (prior to the simulation) based on learner outcomes, and were crafted

to encourage students to 'think out loud' and express what they might do differently the next

time. For example, the students were asked, "What was it like?" Responses included,

"Intimidating," "Helpless," and, "I didn't know what to say."

Additionally, the actor who portrayed the agitated patient was asked to attend the

debriefing and to provide direct feedback to the students about their techniques. He, unlike

anyone else, was able to tell the students how their verbal and non-verbal techniques made him

feel. As Pascucci, Weinstock, O'Connor, Fancy and Meyer (2013) suggest, the actor was

encouraged to provide feedback in the first person to establish a personal connection with the

learner. As an example, the actor informed one of the students, who smiled when the actor started to become more agitated, that the student's nonverbal cues made the actor feel angrier. The actor said, using first person, "When you smiled, I felt like you didn't care about me." The student responded modestly by stating, "I know that I 'nervous smile'," and self-identified her need to improve this before entering the workforce. Feedback from the actor provided the students with increased self-efficacy, as it gave them opportunity to ask the actor, "How did you feel when I …" and the feedback from the actor provided immediate subjective results about how they performed (Bell, et al., 2014).

Instrument

The *Confidence in Coping with Patient Aggression* (CCWPA) instrument was used to survey students' pre-simulation confidence and compare their confidence post-simulation. This tool was used to capture growth in the students' confidence in managing an agitated patient. (Thackrey developed this tool in 1987 and granted this author permission to use the tool for this project). The tool is widely used in research articles measuring confidence when dealing with patient aggression (Guay, Goncalves & Boyer, 2016; Nau, Dassen, Needham & Halfens, 2009, 2010) and has a high degree of reliability (Cronbach's alpha = .92) and validity. Nau, Dassen, Needham and Halfens (2010) found this instrument, "Useful for evaluations on the group level when used as a pre and post-test measure" (p. 2586). It is an easy-to-use Likert Scale tool with ten items, scored from 1-11, as shown in Table 1, with lower scores representing less confidence, and higher scores showing greater confidence (Thackrey, 1987). The students took a pre-test online, within one week of the simulation. The post-test was administered immediately after their simulation experience.

Table 1

Confidence in Coping with Patient Aggression Instrument

Item	Scale anchors	
	1	11
1. How comfortable are you in working with an aggressive patient?	very uncomfortable	very comfortable
2. How good is your present level of training for handling psychological aggression?	very poor	very good
3. How able are you to intervene physically with an aggressive patient?	very unable	very able
4. How self-assured do you feel in the presence of an aggressive patient?	not very self-assured	very self-assured
5. How able are you to intervene psychologically with an aggressive patient?	very unable	very able
6. How good is your present level of training for handling physical aggression?	very poor	very good
7. How safe do you feel around an aggressive patient?	very unsafe	very safe
8. How effective are the techniques that you know for dealing with aggression?	very ineffective	very effective
9. How able are you to meet the needs of an aggressive patient?	very unable	very able
10. How able are you to protect yourself physically from an aggressive patient?	very unable	very able

Note. The *Confidence in Coping with Patient Aggression* Instrument is by Thackrey (1987).

Data Analysis

This project was a proof-of-concept for a student developed simulation, and the data

collected from the small sample size of eight students should be scrutinized before drawing

conclusions for larger populations. The findings showed students' increased confidence but more

importantly, showed that a student developed simulation is a feasible concept and provides a

level of insight that makes simulation relatable to fellow students.

Pre-test Post-test Results

The mean scores in 8 of the 10 questions on the *Confidence in Coping with Patient Aggression* (Thackrey, 1987) instrument improved after the training, showing an overall increase in the students' confidence as shown in Table 2. The greatest area of improvement was in Question 5, "How able are you to intervene psychologically with an aggressive patient?" The simulation forced students to implement psychological interventions, and after doing so, survey results showed they felt more confident in their ability. This implies that a main objective of the simulation—a simulation designed to teach a type of psychological intervention—was accomplished. Question 2 showed the next largest increase, which aligns with the available evidence stating verbal de-escalation training improves confidence (Özdemir & Karabulut, 2010; Nau, Halfens, Needham & Dassen, 2010; Needham, et al., 2005). Prior to this experience, these students had not yet received any theoretical content about how to interact with aggressive patients as part of their RIC nursing program. This training increased their confidence.

Questions 9 and 10 showed a decrease in confidence of the students, and these results are expected based on the framework of the simulation. The decrease in scores for question 9 show the students felt unable to meet the needs of the patient. This finding is expected based on the deliberate lack of resources available to the student in the simulation. The patient repeatedly demanded pain medication and an, "X-Ray so I can go home." The student nurses did not have the option or resources to provide either of these things to the patient. Rather, they were forced to use verbal de-escalation only, and felt unable to meet the needs of the patient. The students' decrease in confidence in these two questions likely indicates a need to make adjustments in future scenarios, rather than an accurate measure of students' confidence.

In addition to not having the resources to meet the needs of the patient (and thus potentially de-escalating his agitation), the students were alone in the emergency room with the patient. Question 10 showed a decrease in confidence of being able to protect oneself physically. This finding may be related to the students' perceived lack of resources, e.g., they did not have security available to call if the patient became violent and there were no other nurses to provide backup if needed. It is also possible that the decrease is due to overconfidence during the pre-test; some students may have learned through this simulation they are not as capable of protecting themselves as they had presumed beforehand.

Of the questions where growth occurred, the mean score improved by 1.27 points on average. Thus, on a scale of 1-11, confidence improved by more than one point on each question, as shown in Figure 1. Interestingly, this increase is similar to what Thackrey (1987) saw in 125 individuals after they were provided the training program, *Therapeutics for Aggression*.

Table 2

Confidence in Coping with Patient Aggression Pre vs. Post-Test Results

		Total	Mean	Net Change
1. How comfortable are you in working with an aggressive patient?	Pre	28	3.5	
	Post	38	4.75	1.25
2. How good is your present level of training for handling psychological aggression?	Pre	25	3.125	
	Post	36	4.5	1.375
3. How able are you to intervene physically with an aggressive patient?	Pre	29	3.625	
	Post	37	4.625	1
4. How self-assured do you feel in the presence of an aggressive patient?	Pre	28	3.5	
	Post	36	4.5	1
5. How able are you to intervene psychologically with an aggressive patient?	Pre	28	3.5	
	Post	41	5.125	1.625
6. How good is your present level of training for handling physical aggression?	Pre	24	3	
	Post	33	4.125	1.125
7. How safe do you feel around an aggressive patient?	Pre	30	3.75	
	Post	42	5.25	1.5
8. How effective are the techniques that you know for dealing with aggression?	Pre	33	4.125	
	Post	43	5.375	1.25
9. How able are you to meet the needs of an aggressive patient?	Pre	36	4.5	
	Post	34	4.25	- 0.25
10. How able are you to protect yourself physically from an aggressive patient?	Pre	52	6.5	
	Post	45	5.625	- 0.875

Figure 1

Confidence in Coping with Patient Aggression Net Change Results
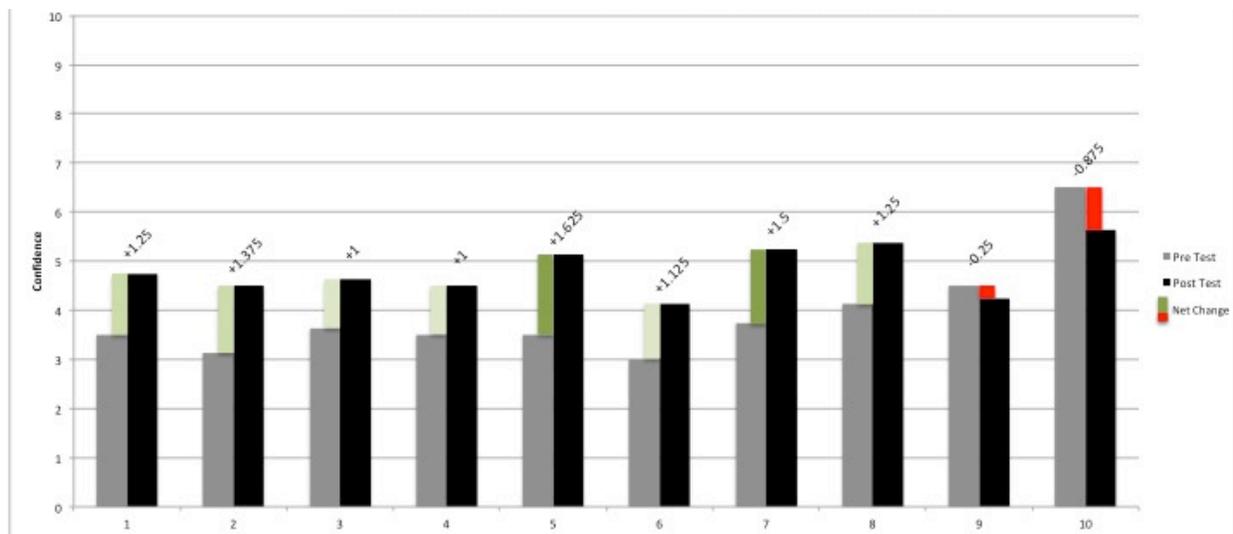
Student Perceptions

All eight students who participated in this simulation agreed this simulation should become part of the RIC School of Nursing's curriculum. During the debrief, one student commented, "I don't know why we don't already do this." After the simulation, students were asked to rate their experience on a Likert scale 1-5, with the mode scores shown in Table 3. The students were unanimous in their support of this project and stated the environment and scenario were realistic. The feedback—albeit from a small sample size—implies that a simulation developed from the student's perspective can be effective.

Table 3

Students' Rating of Experience

	Mode	% Agree
This was a valuable learning experience	5	100
The pre-simulation materials were beneficial	4	100
I felt overwhelmed	5	75
I was able to remain calm	4	63
I'm thankful to have practiced this in a safe environment	5	100
If faced with this situation as a practicing nurse, I will be glad I've been through this simulation	4	88
The environment was realistic	5	100
The scenario was realistic	5	100
I think this simulation should become part of RIC's nursing curriculum	5	100

'Off the Verge' Simulation Feedback

The students were also given the opportunity to answer in free text, "How would you improve this experience?" and "Additional Feedback". Three of the eight students commented on the lack of resources available to the student nurse, as discussed previously. Some of the other responses included, "It was a great realistic experience …" and, "… a great example of the stressors involved in nursing." One student, who voiced their frustration with the lack of resources available to them in the simulation, made a second comment saying, "I'm glad I had my first encounter w/ [*sic*] an agitated patient here at RIC instead of in real life."

Discussion

Pre-simulation Materials

The appropriate amount and use of pre-simulation materials demands further exploration. It could be argued that providing too much material—like the YouTube video and handouts provided for this simulation—'gives the simulation away' and may inhibit a student's learning. However, the pre-simulation materials included with this simulation provided *specific* examples of how to act, what to say and how to effectively de-escalate an agitated patient. Yet, the students

felt the pre-simulation materials were beneficial, as shown in Table 3, and still had a challenging, positive learning experience that resulted in improved confidence.

While different simulations may require a variable amount of content in pre-simulation material, in this writer's opinion, its value and appropriate use could be explored further. As an example, Nau, et al. (2010) provided 24 hours of 'pre-simulation' de-escalation training to their students, and yet the group mean in post-test still did not reach 'good performance.' Granted, an agitated patient and the proper de-escalation techniques for each situation will never be exactly the same—new situations would likely challenge experts with extensive training in de-escalation.

Other questions related to provision of pre-simulation materials may be: (1) Do students *know* what's going to happen when given more pre-simulation material?, (2) What types of materials are most effective?, (3) How do these materials affect the level of learning?, and (4) Do they have better or worse outcomes with more or less pre-simulation material?

Tunnel Vision

Zero of the eight students in the trial run addressed or responded to the indirect threat from the patient during the simulation. The actor said to each student, "I can't handle this <expletive>! If I wanted to, you would all pay for this!" Every student either ignored or did not address this comment, which was designed to be the climax of the patient's agitation, requiring immediate attention from the student nurse. When presented with this fact during debrief, the students stated they either didn't hear the comment, or didn't think much of it. According to one student, they were too focused on their next action, and didn't actually hear the patient.

Male versus Female Actor

It is difficult to characterize what type of patient will become agitated or aggressive. A delicate, petite older woman may be become agitated just as quickly as a tall, young, burly man.

This simulation was written to accommodate any individual as the actor, yet feedback from the trial run students was that having the male actor was "scarier" and "provided more of a physical threat" than if the actor would have been a young female. Further research could be conducted to explore whether student nurses engage a male patient differently from a female patient, and whether the physical appearance of a patient alters the way students perform de-escalation.

Incorporating Feedback

The trial run students' suggestions for changes should be implemented in subsequent applications of this simulation. Ideally, the changes such as increasing resources available to the student nurse will improve the students' experience and could be measured in future iterations. This may also provide the opportunity to expand this simulation to incorporate graduate nursing students or medical students. Fine-tuning each simulation may be time-consuming, but it could improve student experiential learning each semester, making every semester's simulations better than the previous.

<div align="center">

Limitations

</div>

The sample size of this trial run simulation was sufficient to demonstrate a simulation developed by a student, for peers, is an effective means to fill an identified need, but serious consideration should be given before drawing conclusions from the data collected. Additionally, it is not known if this simulation would be equally successful if developed by a faculty person or educator. Given the paucity of student developed simulations, there is not sufficient data supporting the idea that a student developed nursing simulation would be more effective than a generic, or faculty-developed simulation.

The actor was provided five cues to say during each simulation (see Appendix). These cues were designed to cultivate repetition between iterations, but could be perceived as a

limitation due to the fact that the student would not receive immediate feedback if their actions were actually de-escalating the situation.

Conclusion

Students are in a unique position to identify a need within the course of their own education. Many needs in a nursing curriculum can be met through simulation (Hayden, Smiley, Alexander, Kardong-Edgren and Jeffries, 2014), and thus students should be encouraged to create simulations to improve their school's program, ultimately improving the quality of the nurses they'll soon be working alongside. This student developed simulation yielded results similar to findings in previous studies with larger sample sizes (Guay, Goncalves & Boyer, 2016; Nau, Dassen, Needham & Halfens, 2009, 2010; Nau, Halfens, Needham & Dassen, 2010; Needham, et al., 2005). It also received endorsement from RIC faculty, and positive feedback from trial run participants—all of which suggest this proof-of-concept was effective. The reviewed literature and the findings from this study indicate training in de-escalation works, which ultimately promotes safety for nurses and their patients. The experiential learning provided by this simulation is an effective way for RIC nursing students to experience a potentially hostile environment while in the safety of the classroom. However, this simulation alone is not adequate to fully prepare new graduate nurses for potential violence in the workforce. More robust training on de-escalation and management of the aggressive patient is required for RIC nursing graduates to confidently employ evidence-based techniques. If incorporated into the curriculum, this simulation could provide a safe, stressful, realistic experience for RIC's nursing curriculum to embolden future nurses to safely defuse and prevent dangerous situations.

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Appendix

Actor Background Information

- You were working on your house when you fell off a ladder. You're in pain. You think you broke a rib, so you drove yourself here to the Emergency Department.

- You're a single parent and you were able to leave your young son with the neighbors, but you're concerned about him staying there too long.

- It's a busy Friday night. You've waited in the lobby for almost 2 hours before you were even brought back to the room where you are now.

- After you were brought back—almost two hours ago—someone came by and put an IV in your arm, but you haven't talked to a doctor. You have not received any pain medication. 'Someone' said you need an X-Ray, but nothing has happened.

- You've been waiting for over 4 hours now. You're slightly pissed off. You're worried about your son, you're tired of waiting, you're craving a cigarette, and you're in pain. Your ribs are hurting more, especially when you take deep breaths.

- You've been to this ED before and "it sucked" then too. You had been in a fight, came to the ED, "got pissed at the stupid Docs" and left Against Medical Advice.

- When the student nurse enters the room, you are pacing around the room, repeatedly checking your phone.

Actor Cues / Script

You will begin the scenario already agitated, and will become angrier. Although the simulations will require improvisation, these cues will be said/should happen:

1. The nurse will enter, introduce him/herself, ask how you are, etc. You will be irritable, not making eye contact, making snappy comments and/or demands.

    a. "This hospital sucks. You guys don't know what you're doing."

2. The nurse will try to take your vital signs … this will increase your agitation. Do not

    allow them to take vitals. Increasing volume:

    a. "What the <expletive> do you mean, you need vitals? Are you listening? It hurts

        to breathe! I just want a <expletive> X-Ray and some drugs so I can go home."

3. You will demonstrate non-verbal cues that you're getting really mad. Hands clinched in

    fists; fidgeting; moving toward the student nurse; aggressive posture.

4. Your agitation will culminate in an indirect threat.

    a. Making direct eye contact with the nurse: "I can't handle this <expletive>! If I

        wanted to, you would all pay for this!"

5.* If the Student Nurse handles the situation well and makes you feel more calmed down, you

    will begin to de-escalate and become more cooperative.

Figure A1

Visual Depiction of Actor Cues and Timeline
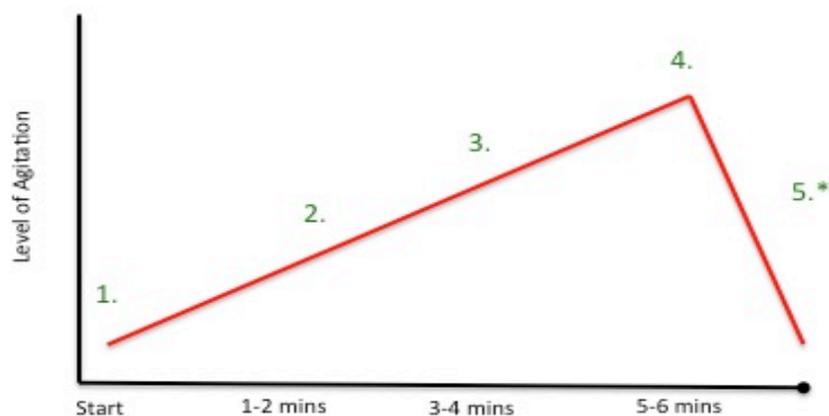
5.* -- Only if actor feels they've been "talked down"