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Research Brief

The Use of Veteran-Centric Simulations in a Nursing Program

Elizabeth Roe, PhD, RN[a,*], Adrienne Galbraith, MSN, RN CHSE[b], Lina Daou Boudiab, MSN, RN[c], Barbara S. Johnson, MSN, RN[d]

[a]*Professor of Nursing, Saginaw Valley State University, 7400 Bay Road, University Center, MI 48710, USA*
[b]*Simulation Specialist, Saginaw Valley State University, 7400 Bay Road, University Center, MI 48710, USA*
[c]*Complementary and Integrative Therapies Program Coordinator, Former VA Nursing Academy Faculty, Aleda E. Lutz VA Medical Center, 1500 Weiss Street, Saginaw, MI 48602, USA*
[d]*Nursing Supervisor, Former VA Nursing Academy Program Director and Faculty, Aleda E. Lutz VA Medical Center, 1500 Weiss Street, Saginaw, MI 48602, USA*

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veteran;
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Abstract

Background: Veterans and their families seek care in all health care settings; therefore, it is imperative for nurses to understand the unique needs of this population to effectively provide care.

Sample: The research was conducted at a U.S. Midwestern University that uses Veteran-centric simulations throughout their baccalaureate nursing program with 41% of the simulations during the first semester being Veteran centric. A convenience sample of first semester nursing students participated in this study.

Methods: A descriptive-comparative research design was used to compare students' perception of confidence and comfort in caring for Veterans at the beginning and end of the first semester.

Results: Findings from this study indicate a significant improvement in students' perceptions from the beginning to the end of the first semester ($p < .00$).

Conclusion: This study adds to the body of literature using empirical research to evaluate the effectiveness of simulation in increasing students' awareness of Veteran's health care needs.

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Background

In addition to the health care needs that are commonly seen in the general population, many Veterans have a unique set of medical and behavioral health care needs that stem from their varying military experiences (Fischer, 2015). In 2016,

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* Corresponding author: eroe@svsu.edu (E. Roe).

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the estimated number of Veterans living in the United States was reported around 20.4 million, with only six million (~29%) utilizing the Veteran Health Administration care system (U.S. Department of Veterans Affairs, 2017). Moreover, many Veterans live in areas without access to a Veteran Health Administration facility. It is imperative for nurses to understand the unique needs of this population to effectively provide personalized care. A study by Maiocco, Stroupe, Rhoades, and Vance (2018) found that clinical nurses working in non-Veteran facilities were uncertain about how to adapt care and interact with Veterans. Furthermore, the authors' personal experiences with students caring for Veterans indicated nursing students often feel uncomfortable interacting with this population. The focus of this research and simulations were specific to American Veterans; however, they may be applicable to other countries based on similar health care concerns of military personnel globally. Many of the unique needs of Veterans such as post-traumatic stress disorder (PTSD) are common internationally. According to the World Health Organization (2010), PTSD is a global public health concern for many individuals to include military personnel exposed to war. In the United Kingdom, Cooper, Andrew, and Fossey (2016) stressed the significance of equipping civilian nurses to care for Veterans. It is thus important that education regarding Veteran health care begins at the collegiate level to ensure that nurses are prepared to care for this population.

Key Points

- Nurses working in all settings need to know how to care for the unique needs of Veterans and their families.
- Educating nurses about caring for the health care needs of Veterans should start in undergraduate nursing programs.
- Because clinical experiences for nursing students in Veteran facilities are limited, simulation is a valuable teaching modality.

In recent years, many nursing organizations and schools have pledged their commitment to raising awareness and improving care for Veterans and their families. Since the 1940s, affiliations between the U.S. Department of Veterans Affairs (VA) and schools of nursing have been robust, and these relationships have continued into the 21st century (Elliott & Patterson, 2017). Veteran care has been increasingly incorporated into undergraduate nursing curricula in the United States, in response to the Joining Forces initiative (Joining Forces, 2011), which aimed at supporting military families and Veterans in vital aspects of civilian life, including health and wellness. This effort was pioneered in 2007 by the VA, with the launch of the VA Nursing Academy, which consisted of partnerships between VA health care systems and colleges of nursing. One program goal was to provide educational and practice innovations to enhance knowledge of Veteran care. The VA and University academic partnership discussed in this study focused on the use of simulation across an undergraduate nursing curriculum as an innovative teaching strategy to influence nursing students' confidence and comfort caring for Veterans. Because it was not possible for every nursing student to have a clinical experience at a VA facility, exposing nursing students to the unique needs of Veterans in a simulated setting was a more attainable goal.

The use of simulation has been highlighted in many publications to introduce students to the Veteran population and increase awareness of their unique health care needs (Desmond, Burkhart, Horsley, Gerc, & Bretschneider, 2018; Kaplan, Murihead, & Zhang, 2017; McKenzie, Freiheit, Steers, & Noone, 2016). Nevertheless, there is a lack of empirical studies that evaluated the effectiveness of Veteran-centric simulations in preparing student nurses to care for Veterans.

A review of the literature in the United States and the United Kingdom between 2011 and 2015 examined how academic nursing programs prepared students to care for Veterans (Cooper et al., 2016). It concluded that, while there was a surge in U.S. programs incorporating Veteran care in their curricula in response to Joining Forces initiative, there was still a need for rigorous studies to evaluate the effectiveness of such ''educational innovations'' (p. 68); which included use of simulation in preparing future nurses to care for Veterans in the private sector. Many publications reported positive anecdotal feedback regarding the effectiveness of simulation in increasing students' awareness of Veterans' health care needs (Beckford & Ellis, 2013; Nye, Keller, & Wrenn, 2013; Magpantay-Monroe, 2017). Others found that the use of simulations helped students unveil their own biases, assumptions, and lack of knowledge about Veterans (Beckford & Ellis; Magpantay-Monroe). Data collection varied from pretest and post-test (Beckford & Ellis) and standardized evaluations at the end of the simulation (Nye, Keller, and Wrenn), to unsolicited feedback on course evaluations and thematic analysis of students' reflections (Magpantay-Monroe). One article (Beckford & Ellis) also spoke of self-reported improvement by students over a two-week period with repeated exposure to Veteran-centric simulations.

Although formal empirical research on the effectiveness of Veteran-centric simulations has been scarce, preliminary findings and anecdotal feedback seem promising. This study illustrates how providing exposure to the unique health care needs of Veterans through integrated simulation in a nursing curriculum changed nursing students' perceptions of confidence and comfort in caring for Veterans.

Conceptual Framework

Deliberate practice was used as a theoretical framework for this study. Simulated clinical experiences offer nursing students an opportunity to practice knowledge, skills, and attitudes in a safe learning environment (Tosterud, Hedelin, & Hall-Lord, 2013). Simulation is an effective teaching strategy for adult learners that provides active engagement through deliberate practice (Tshannen, Aebersold, Sauter, & Funnell, 2013), potentially influencing clinical practice. In health care, many skills are "taught and forgotten." Deliberative practice provides an evidence-based alternative to traditional methods of education; it is defined as "effortful activities designed to optimize improvement" (Ericsson, Krampe, & Tesch-Romer, 1993). Providing the students with multiple opportunities to experience caring for Veterans in simulated settings not only provides a context for care but also repeated exposure. Although deliberative practice has been studied primarily related to skills in nursing education, its use in simulation to change perceptions of confidence and comfort in caring for Veterans was the premise of this study.

Methods

A descriptive-comparative research design was used to measure perceptions of confidence and comfort in caring for Veterans at the beginning and end of the semester for first semester nursing students participating in Veteran-centric simulations. The research study was conducted at a Midwestern U.S. University with approximately 450 prelicensure BSN students in a five-semester program. Throughout the program, the students participate in a total of 11 Veteran-centric simulations. However, this research reports the results of the study for the first semester which includes the largest number of Veteran-centric simulations (41%). The simulations involved diverse Veteran patient populations from different war eras including Operation Enduring Freedom, Operation Iraqi Freedom, Korean Conflict, and Vietnam. Some simulations addressed health care concerns directly related to service including PTSD and chronic pain, whereas other simulations focused on concerns not directly related to service (see Table 1). The simulations were designed and implemented collaboratively by educators from the university and the local VA Medical Center using International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of best practice: Simulation[SM] Simulation design (2016) as a guiding framework. A needs assessment determined a lack of Veteran-centered simulation within the undergraduate curriculum and a need to expose all nursing students to the unique needs of this patient population, as they would be caring for Veterans in all clinical settings. The simulation objectives and outcomes were carefully considered to ensure they were realistic and attainable. The primary learning objective for each Veteran-centric simulation did not focus specifically on the Veteran's status; however, assessing the Veteran's history and how it related to the patient's care was clearly identified as an expected outcome in each Veteran-centric simulation and addressed in debriefing.

After approval by the institutional review board, all students present in the class were asked to participate in the study at the beginning and end of the first semester of the program. Data were collected at the beginning and end of the Fall semesters (September and December) and Winter semesters (January and April) over two years. All students present participated in the simulation as a regular part of the class; however, participation in the study was voluntary. To examine the students' perceptions of caring for Veteran, the Nursing Student Perceptions About Caring for Veterans questionnaire (Lippman & Ozment, 2013), a 12-item Likert scaled questionnaire measuring students' perception of confidence and comfort caring for Veterans, was used. The questionnaire was originally designed as a process improvement tool to evaluate nursing students' perceptions of comfort and confidence in caring for Veterans after a clinical rotation at a VA Medical Center. Because this study was conducted in a simulation lab, not applicable was added as a choice for the two questions that specifically asked about clinical experiences at the VA. At the time the study was conducted, this was the only quantitative survey identified that measured perceptions of caring for Veterans. Due to difficulty with matching students' presurvey and postsurvey, a decision was made by the researchers to use a nonmatched design, understanding that this may decrease the validity of the results.

Results

Data collection occurred over four semesters with eight data collection points. A total of 325 students participated at the beginning of the semester and 282 at the end of the semester. Of the participants, 58 indicated having a clinical rotation in the VA system and 61 having interactions with VA staff. The Cronbach's alpha for the scale, not including the two items about the VA clinical experiences, was $r = 0.901$, which supports reliability. Means for the sample items at the beginning and end of the semester are presented in Table 2, with higher means indicating more positive perceptions.

The item with the highest mean was "I feel comfortable in my ability to care for non-Veterans of the geriatric population." Three other items had means higher than 3.75 and two of these items were answered only by students with experiences in the VA ("I am satisfied that the VA was chosen for my clinical rotation experiences" and "I believe that the VA staff members support meaningful clinical rotations for nursing students"). The additional item with a mean higher than 3.75 was "I feel comfortable in my ability to care for non-Veterans younger than 35 years." The item with the lowest mean was "I believe that Veterans would choose health seeking behaviors."

Table1 Simulation Foci

Simulation Focus	Simulation Veteran Focus	Patient Veteran Status
Obtaining health history	Students will demonstrate the principles of therapeutic communication while obtaining a health history for an elderly Veteran in a retirement setting. The patient's Veteran status is significant to his health history, including physical and psychosocial history.	• Korean conflict Veteran
Pain and neurological disorders: chronic back pain	Students will demonstrate ability to prioritize care for a Veteran family. The primary patient is a Veteran accompanied by his wife and child to the VA pain clinic. He is experiencing service-related pain with neurological deficits and PTSD.	• Husband Operation Iraqi Freedom combat Veteran • Wife noncombat Army veteran • Child of Veteran parents
Respiratory disorders: respiratory distress	Students will complete a focused assessment for a Veteran patient experiencing respiratory distress and service-related hearing impairment in an assisted living facility.	• Korean Conflict Veteran
Genitourinary disorders: urinary tract infection	Students will demonstrate patient-centered care for a Veteran patient experiencing urinary retention resulting from an enlarged prostate. He is also showing signs and symptoms of a urinary tract infection in a long-term care facility.	• Combat Vietnam Veteran exposed to Agent Orange.
Endocrine disorders: diabetes type 2	Students will provide patient-centered care to a Veteran patient experiencing type 2 diabetes and related commodities. The patient Veteran status is a significant component of the health history.	• Korean Conflict Veteran
Conflict resolution	Students will demonstrate use of conflict resolution strategies to resolve interpersonal conflict between two long-term care residents. The primary patient has dementia and is fixated on her history as a Veteran spouse celebrating an anniversary.	• Spouse of Korean Conflict Veteran
Mobility	Students will complete an assessment of a Veteran patient experiencing altered mobility secondary to a service-related injury and the impact on activities of daily living, safety, functional and social family health.	• Korean Conflict Veteran

Note. PTSD = post-traumatic stress disorder; VA = Veterans Affairs.

A total score was calculated for the scale excluding the two items regarding the clinical experiences in the VA system. Scores could range from 10 to 50 with higher scores indicating more positive responses. The total mean score was 32.7 (SD = 7.2) at the beginning of the semester and 38.1 (SD = 5.0) at the end of the semester, indicating a significant improvement in confidence and comfort in caring for both Veterans and non-Veterans ($t = -10.7$; $p = .00$). Review of the individual item scores indicated a statistically significant increase in all the scores except for two items: ''I believe that the VA staff members support meaningful clinical rotations for nursing students'' and ''I believe that Veterans would choose health seeking behaviors.'' Although the means of these items increased, it was not statistically significant.

In addition to data analysis based on survey results, simulation facilitators also compiled anecdotal feedback during the simulation debriefing and end of semester course evaluation. Commonalities among student feedback in debriefing referenced how the Veteran-centric simulation experiences had impacted their history assessment to include asking all patients if they are Veterans, and if so, to further inquire about branch of the military, deployments, and combat exposure. Students recognized the potential impact Veteran status and combat history may have on the Veteran's physical and mental health, what further assessment may be necessary, and what resources to provide. Students also shared how they would now be more likely to thank the Veterans for their service and sacrifice. In the feedback from the end of semester course evaluation, numerous students specifically referenced particular Veteran-centric simulations as challenging and significant in facilitating their learning. Improvement in students' critical thinking and ability to recognize changes in patient condition were also noted by simulation faculty.

Limitations

The use of a comparative design may have provided valuable information; nevertheless, a more rigorous

Table 2 Item Means

Item	Mean Before (SD)	Mean After (SD)	*p*
1. I feel confident that my knowledge about caring for Veterans who have served during different wars or conflicts is adequate.	2.78 (1.07)	3.84 (0.733)	.00
2. I feel confident that my ability to communicate with Veterans who have served during different wars or conflicts is adequate.	3.29 (1.10)	3.93 (0.69)	.00
3. I am satisfied that the VA was chosen for my clinical rotation experiences.	3.77 (0.77)	4.16 (0.83)	.00
4. I believe that the VA staff members support meaningful clinical rotations for nursing students.	3.83 (0.73)	3.98 (0.82)	.21
5. I feel confident in my ability to care for Veterans who have mental illness disorders, for example. post-traumatic stress disorder.	2.82 (1.09)	3.47 (0.82)	.00
6. I feel confident in my ability to care for non-Veterans who have mental illness disorders, for example, post-traumatic stress disorder.	2.94 (1.05)	3.61 (0.84)	.00
7. I feel comfortable in my ability to care for Veterans of the geriatric population.	3.45 (1.03)	4.11 (0.62)	.00
8. I feel comfortable in my ability to care for non-Veterans of the geriatric population.	3.63 (1.02)	4.24 (0.63)	.00
9. I feel comfortable in my ability to care for Veterans younger than 35 years.	3.34 (1.02)	3.71 (0.77)	.00
10. I feel comfortable in my ability to care for non-Veterans younger than 35 years.	3.49 (0.93)	3.88 (0.70)	.00
11. I believe that Veterans would choose health seeking behaviors.	3.42 (0.81)	3.50 (0.89)	.22
12. I believe that non-Veterans would choose health-seeking behaviors.	3.57 (0.73)	3.79 (0.74)	.00

Note. VA = Veterans Affairs.

experimental examination would have been stronger. In addition, the obscurity of the tool used in the research may have been a limitation, as the original authors opted not to publish their work, despite establishing reliability and validity of the tool. As a result, the tool was not extensively used with documented reliability and validity. Moreover, it would have been helpful to obtain further input from the students regarding their perceptions using an open-response format. Findings may have also been influenced by students' contact with Veterans outside the simulations, in other classes, or in their personal life. Because the data were collected at the end of the first semester when students had contact with diverse information in a variety of settings, a number of extraneous variables could have affected the results. Finally, attrition due to loss of students during the semester and possibly survey fatigue at the end of the semester may have been another limitation. In anticipation of such potential attrition, the authors had opted for a non-matched design.

Discussion

Findings from this study indicate an increase in the students' perceptions of confidence and comfort caring for Veterans after they completed the first semester of the nursing program. As previously indicated, empirical studies that have evaluated the efficacy of Veteran-centric simulations in preparing student nurses to care for Veterans are scarce in the current literature. This study adds to the body of literature using empirical research to evaluate the effectiveness of simulation in increasing students' awareness of Veteran's health care needs.

Similar to findings from Breitkreuz, Dougal, and Wright (2016) and Fossen and Stoeckel (2016), simulation as a teaching modality has the potential to positively influence students' perceptions of caring for unique patient populations. Although the change in perceptions may not be entirely due to participation in the Veteran-centric simulations, the study results indicate an improvement in the students' perceptions of confidence and comfort caring for Veterans after participating in simulations involving Veteran patients. These results also support the use of deliberate practice to promote the acquisition of skills in other areas besides psychomotor skills.

The results of the National Council of State Boards of Nursing National Simulation Study (Dickinson, Hopton, & Pilling, 2016) indicated 50% of clinical experiences can be replaced by simulation. Although in the program where the research was conducted, simulation is not substituted for clinical hours, designing simulations that provide experiences that are relevant to today's health care system is

important. Integration of Veteran-centric simulation offers an opportunity for all students to engage in providing Veteran-centric care, regardless of their clinical placement. With the large population of Veterans and the majority of this population seeking care outside of the VA health system, it is imperative that nurses in all health care areas be educated and feel confident and comfortable providing Veteran-centric care.

The intent of this project was to improve nursing students' understanding of how to provide Veteran-centric care, with potential to impact practice environments once students complete the program, become licensed, and start practicing in a variety of settings. Future plans are to continue to incorporate Veteran-centric simulations across the curriculum despite the changes in the original partnership. At this point, the program has proven sustainability over time without additional funding sources. In addition, further research is being carried out to examine the influence of Veteran-centric simulations throughout the entire program. The most valuable lesson learned from completing this project was the need to continue providing Veteran-centric simulations, as the learners were positively influenced by these experiences. Throughout the semester, students demonstrated improvement in providing Veteran-centric care based on their acknowledgment of the Veteran's history, including recognition of the Veteran's service and further assessment of potential physical and psychosocial concerns.

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