The Use of Simulation for Clinical Nursing Faculty Orientation: A Multisite Study

Jennifer Gunberg Ross, PhD, RN, CNE, Associate Professor[a],*,
Kimberly Silver Dunker, DNP, MSN, RN, CNE, CNEcl, Chair of Nursing and
Health Science Department[b], Melissa D. Duprey, EdD, MSN, RN, CNE,
Program Director, Master of Science in Nursing[c], Tracy Parson, DNP, RN,
CNE, Associate Professor of Nursing[d], Dot Bartell, MSN, RN, RNC-NIC,
Clinical Placement Coordinator, Accredited Provider Program Director,
and Assistant Professor of Professional Practice[e], Linda Humphries, DNP,
RN, ACNS-BC, CCRN, Director, Center for Collaborative Practice and
Assistant Professor of Professional Practice[e]

[a]M. Louise Fitzpatrick College of Nursing, Villanova University, Villanova, PA, USA
[b]Department of Nursing and Health Science Department, Pacific Union College, Angwin, CA, USA
[c]College of Nursing & Health Sciences, University of Massachusetts Dartmouth, North Dartmouth, MA, USA
[d]Health and Wellness Sciences Division, Lorain County Community College, Elyria, OH, USA
[e]Harris College of Nursing and Health Sciences, Texas Christian University, Fort Worth, TX, USA

Abstract

Background: Formal preparation and orientation are necessary for clinical nursing instructors to ensure competence and a smooth transition from expert clinician to novice educator. Simulation can be used for clinical nursing faculty orientation to promote role transition. The purposes of this study were to explore the effect of simulation training on clinical nursing instructors' anxiety and self-perceived competence related to clinical teaching, and to identify their perceptions of simulation use.

Method: This study used a multisite, quasi-experimental, pretest/posttest, convergent mixed-methods design. Participants attending orientation at control sites engaged in traditional clinical nursing faculty orientation, while participants attending orientation at experimental sites participated in six Quality and Safety Education for Nurses (QSEN)-based simulation scenarios.

Results: There were significant increases in self-perceived competence and decreases in anxiety for all participants. The authors were unable to find statistically significant differences between the control and experimental groups. Participants had positive perceptions of simulation use for clinical faculty orientation.

Conclusion: There is considerable variability in clinical nursing faculty orientation practices among institutions. Simulation is a feasible strategy for orientation that is well-received by clinical nursing instructors.

* Corresponding author: J.G. Ross. Jennifer.ross@villanova.edu (J.G. Ross).

Introduction

According to the American Association of Colleges of Nursing (2020b) (AACN), the nursing shortage in the United States (U.S.) is critical and remains a growing concern as baby boomers near retirement. To further compound this issue, nursing schools are failing to meet increasing enrollment demands due to nationwide nursing faculty shortages (AACN, 2020a). Despite efforts to increase enrollment, approximately 75,000 qualified students are denied admission to nursing school each year and many nursing schools are running at full or over capacity despite constraints of both limited faculty and clinical sites (AACN, 2020b).

In 2019, a total of 1,637 open academic nursing faculty positions were noted in baccalaureate and graduate programs in the U.S., most of which required or preferred a doctorally-prepared candidate (AACN, 2020a). In addition to the existing vacancies, an additional 134 nursing faculty positions are needed to meet enrollment demands across the U.S. (AACN, 2020a). However, the availability of highly educated, trained educators to assume full-time nursing faculty positions is limited, partially because of limited enrollment in master's and doctoral programs in nursing (AACN, 2020a). Consequently, many schools of nursing are hiring expert nurses to fill part-time clinical instructor (CI) roles to off-set the faculty shortage and accommodate increasing student enrollments (Knowles, 2020). These novice CIs find themselves with clinical expertise, yet they lack the pedagogical knowledge and strategies to meet the competencies required for clinical nursing faculty to effectively teach students (Krautscheid, Kaakinen, & Warner, 2008; National League for Nursing (NLN), 2019; Ross & Silver Dunker, 2019). This juxtaposition of expert clinician and novice educator leaves both the CIs and

students disadvantaged (Owens, 2017; Rodger, 2019). Thus, evidence-based strategies to orient and train these novice CIs are needed to promote competence.

Background

The nursing literature supports the need for formal preparation and orientation to promote competence and successful transition from expert nurse to novice CI (Rogers, Ludwig-Beymer, & Baker, 2020; Ross & Silver Dunker, 2019). Moreover, the literature identifies a variety of ways to train and orient CIs without consensus on best practices (Ross & Silver Dunker, 2019; Stamps, Crockerell, & Opton, 2021). Specifically, there is limited empirical data supporting the use of simulation to prepare novice CIs (Dunker, Duprey, & Ross, 2021; Krautscheid et al., 2008; Shellenbarger & Edwards, 2012; Stamps et al., 2021).

Simulation, as an experiential learning activity, has been used in a variety of professions, most notably military, aviation, and healthcare, to enhance teamwork and collaboration, improve communication, and ensure skill acquisition. Although learning objectives vary among professions, the common denominator for all is the impact of simulation on safety (Aebersole, 2016). Although the nursing education literature supports the effectiveness of simulation as an experiential learning strategy for prelicensure nursing students (Aebersold, 2016), questions remain regarding its use to successfully train CIs (Krautscheid et al., 2008; Stamps et al., 2021). Despite the lack of evidence-based support for simulation use in nursing faculty development, the use of simulation as a faculty development method has been explored in aviation (Byrnes, 2017) and K-12 education (Greenwood & Ewell, 2018; Landon-Hays, Peterson-Ahmad, & Frazier, 2020), with the goal being to educate and validate essential knowledge and skills.

Review of the Literature

Although the possibility of incorporating simulation into clinical nursing faculty orientation and faculty development has been discussed by several authors (Dunker et al., 2021; Krautscheid et al., 2008; Shellenbarger & Edwards, 2012; Stamps et al., 2021), a review of the empirical nursing education literature identified only two research studies exploring the use of simulation for CI preparation and orientation (Crocetti, 2014; Hunt, Curtis, & Gore, 2015).

Key Points
- There is a dearth of evidence supporting the use of simulation for clinical nursing faculty development.
- Clinical nursing faculty orientation practices vary among institutions.
- Simulation is a feasible and well-received addition to clinical faculty orientation.

Hunt et al. (2015) conducted a descriptive study to describe CIs' confidence in teaching clinical nursing students after participation in a simulation that was part of a clinical nursing faculty orientation. The majority of participants identified that the simulation helped them feel prepared for clinical teaching, increased their confidence to foster nursing students' critical thinking, increased their confidence to deal with unsafe situations, and enhanced their ability to provide feedback to students. The participants had generally positive perceptions about the simulation and identified that it was beneficial for preparation as a CI (Hunt et al., 2015).

Crocetti (2014) conducted a pilot study that explored the effect of a four-hour simulation orientation program on obstetric CIs' self-efficacy. Self-efficacy with teaching strategies and confidence in assisting students with specific obstetric clinical skills both increased after simulation. Additionally, the participants were confident that using simulation for clinical nursing faculty orientation would enhance the preparation of new CIs as well as student learning (Crocetti, 2014).

Although simulation has been used as an effective faculty development tool in various professions to ensure competence, there is a dearth of research related to the impact of simulation on CIs. Specifically, recommendations for studies that compare simulation with other clinical nursing faculty orientation teaching strategies have been recommended (Crocetti, 2014), but not conducted. This study sought to fill this gap in the literature.

Purpose

The specific aims of this study were to determine: (a) the effect of simulation training, as compared to traditional clinical nursing faculty orientation practices, on CIs' anxiety related to clinical teaching; (b) the effect of simulation training, as compared to traditional clinical nursing faculty orientation practices, on CIs' self-perceived role competence; and (c) CIs' perceptions of participating in simulation for clinical nursing faculty orientation.

Theoretical Framework

This study was supported by both Kolb's Experiential Learning Theory (Kolb, 1984) and Quality and Safety Education for Nurses (QSEN) (Cronenwett, Sherwood, & Barnsteiner, 2007). Kolb purports that learning is most effective when the learning environment combines the cognitive, affective, and psychomotor aspects of learning (Kolb, 1984). After participating in an active experience, reflecting on one's experience allows the transfer and application of knowledge (Kolb, 1984). In this study, the simulation scenarios allowed the CIs to experience the cognitive, affective, and psychomotor components of various situations that might arise during clinical teaching, reflect on these experiences, and ultimately translate this

knowledge into the clinical setting with nursing students. QSEN is a framework that defines six quality and safety competencies for prelicensure nursing education (Safety, Quality Improvement, Evidence-Based Practice, Informatics, Teamwork and Collaboration, and Patient-Centered Care) (Cronenwett et al., 2007). The QSEN competencies guided the development of the six clinical nursing faculty orientation simulation scenarios.

Methods

Study Design

This study used a multisite, quasi-experimental, convergent mixed methods design with questionnaire variant with two data collection time points (pretest/posttest). As a convergent mixed methods design, the quantitative and qualitative data were collected and analyzed separately using both closed and open-ended survey items, then the findings were integrated in the discussion (Polit & Beck, 2021).

Sample, Setting, and Ethical Considerations

Members of the QSEN Academic-Clinical Task Force developed and executed the study. The research team represented eight schools of nursing from across six states in the U.S. (California, Massachusetts, New York, Ohio, Pennsylvania, and Texas). The selected schools of nursing represent both public (n = 4) and private (n = 4) institutions in a variety of sizes (one small, five mid-sized, and two large institutions).

The Principal Investigator's Institutional Review Board served as the Institutional Review Board of record for the multisite study, which was approved as exempt. A convenience sample of newly hired CIs at the eight participating sites were recruited at the start of their clinical nursing faculty orientation by a member of the research team. Participants were assigned to the control or experimental group based on location; of the eight sites that participated in the study, three comprised the experimental group while the other five encompassed the control group. After recruitment, participants read an information sheet on the first page of the electronic SurveyMonkey® data collection survey and selected "agree" to consent to participate in the study. All data were coded with a participant-selected identification number; no identifying information (including computer IP address) was collected.

Intervention

Members of the control group engaged in the traditional, existing clinical nursing faculty orientation at their place of employment. In addition to the traditional orientation, members of the experimental group also participated in

simulation learning experiences as part of their clinical nursing faculty orientation. The simulation intervention for the experimental group included six scenarios that were developed specifically for CIs based on the QSEN competencies (Dunker et al., 2021). The simulation scenarios took place in various inpatient hospital units (including adult medical-surgical, obstetrics, and pediatrics) to allow CIs from various specialties to relate to the scenarios (Dunker et al., 2021). Each scenario offered a unique student challenge that a CI might encounter during a prelicensure clinical rotation, such as unprofessional behavior, incorrect application of evidence-based practice, student unpreparedness, or student skill supervision (Dunker et al., 2021). Each scenario was designed to run for 20 to 30 minutes, followed by a 30-minute debriefing using the NLN Simulation Innovation Resource Center's (SIRC) guided reflection questions for simulation (Dunker et al., 2021; NLN SIRC, 2015). During the simulation scenarios, participants had an opportunity to rotate through various roles including the CI, staff nurse, patient, family member, nursing student, or observer (Dunker et al., 2021).

Instrumentation

State-Trait Anxiety Inventory™

The Spielberger State-Trait Anxiety Inventory™ (STAI) State Form Y contains 20 four-point rating scale questions (ranging from "not at all" to "very much so") designed to measure current level of anxiety. Total scores for the STAI can range from 20 to 80 with higher scores indicating lower levels of anxiety. The STAI has demonstrated consistently excellent internal consistency reliability (mean $\alpha = 0.92$) (Barnes, Harp, & Jung, 2002). For this study, the STAI was used to measure participants' anxiety related to working as a CI.

Clinical Nursing Faculty Competence Inventory

The Clinical Nursing Faculty Competence Inventory (CNFCI) contains 26 five-point rating scale items (ranging from "unable to perform" to "very proficient") designed to measure clinical nursing faculty's competence in five main areas: general teaching ability, educational intelligence, professional competence, leadership ability, and problem-solving ability (Hou, Zhu, & Zheng, 2011). Total scores on the CNFCI can range from 26 to 130 with higher scores indicating higher levels of competence. In initial psychometric testing, the CNFCI demonstrated excellent overall internal consistency reliability for the total scale ($\alpha = 0.91$) (Hou et al., 2011). For this study, the CNFCI was used to assess participants' self-perceived levels of competence as a CI.

Satisfaction and Self-Confidence in Learning Scale

The NLN Satisfaction and Self-Confidence in Learning Scale (SSCLS) contains a total of 13 five-point rating scale items (ranging from "strongly disagree" to "strongly agree") designed to measure satisfaction and self-confidence with simulation learning. Five questions assess satisfaction with learning, while the other eight questions assess self-confidence in learning. Scores for the satisfaction sub-scale range from 5 to 25 with higher scores indicating higher satisfaction. Scores for the self-confidence sub-scale range from 8 to 40 with higher scores indicating higher self-confidence in learning. The satisfaction sub-scale has demonstrated excellent internal consistency reliability ($\alpha = 0.94$) and the self-confidence in learning sub-scale has demonstrated good internal consistency reliability ($\alpha = 0.87$) (Jeffries & Rizzolo, 2006). In this study, the SSCLS measured the experimental group's satisfaction with, and self-confidence in learning using, simulation for clinical nursing faculty orientation.

Data Collection

Participants were recruited for participation at the start of their clinical nursing faculty orientation. After providing consent, participants completed the pretest which consisted of demographic information, the STAI, and the CNFCI. At the completion of their clinical faculty orientation, participants completed the posttest. For the posttest, all participants completed the STAI, the CNFCI, and answered questions related to the specific details about the format and content of their clinical nursing faculty orientation, while members of the experimental group also completed the SSCLS and three open-ended questions to determine their perceptions of simulation use for clinical nursing faculty orientation. All data were collected using a private SurveyMonkey® account accessible only to the Principal Investigator.

Data Analysis

Descriptive statistics were used to describe the sample, clinical nursing faculty orientation format and content, and satisfaction and self-confidence with simulation learning (SSCLS). Repeated measures analysis of variance was used to identify differences between the groups for anxiety (STAI) and self-perceived confidence (CNFCI) related to working as a CI. SPSS version 25 was used for all statistical analysis.

Conventional content analysis (Hseih & Shannon, 2005) was used to analyze qualitative responses from the open-ended questions. Two of the researchers independently read and coded all open-ended responses, then discussed their findings until a consensus was reached.

Results

Sample

An a-priori power analysis was conducted using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). Using a power level of 0.8, an alpha level set at 0.05, and a small to

medium effect size of 0.35 (Polit & Sherman, 1990), the total required sample size for this study was 52 participants. One-hundred six participants consented to participate in the study. Forty-six participants were excluded from data analysis due to missing data from a full instrument or full data collection point, or omission of a study identification number prohibiting correlation of pre and posttest data. Thus, the final sample size was 60 (control group = 28, experimental group = 32). Participants had an average age of 45.9 years (range = 26-75 years) with an average of 18.58 years (range = 3-54 years) practicing as a licensed Registered Nurse. Table 1 describes the demographics for the sample.

Orientation Format and Content

The majority of participants from both the experimental and control groups engaged in a formal clinical nursing faculty orientation (n = 34, 60.7%) which lasted an average of 4.56 hours (range = 0-16 hours). The teaching methods utilized (Table 2), and content discussed (Table 3), during clinical nursing faculty orientations varied considerably.

Anxiety

The STAI State Form Y demonstrated excellent internal consistency reliability in this sample (α = 0.93). There was a significant decrease in anxiety related to clinical teaching from pretest (M = 65.02, SD = 8.94) to posttest (M = 68.03, SD = 9.16) for all participants (F[1,58] = 6.79, p = .012); however the authors were unable to find a statistically significant difference in the change in anxiety between the control and experimental groups (F[1,58] = 0.124, p = .726).

Competence

The CNFCI demonstrated excellent internal consistency reliability in this sample (α = 0.96). There was a significant increase in self-perceived clinical faculty competence from pretest (M = 103.81, SD = 11.90) to posttest (M = 106.73, SD = 11.99) for all participants (F[1,58] =8.85, p = .004); however the authors were unable to find a statistically significant difference in the change in self-perceived competence between the control and experimental groups (F[1,58] = 0.026, p = .872).

Perceptions of Simulation

Satisfaction and Self-Confidence With Simulation Learning

The NLN SSCLS demonstrated excellent internal consistency reliability in this sample (α = 0.95). Participants

Table 1 Demographic Data of Sample

Variable	n (%)
Gender	
Female	53 (89.8%)
Male	5 (8.5%)
Race	
White/Caucasian	49 (81.7%)
Black/African American	5 (8.3%)
Asian	3 (5%)
Other	2 (3.3%)
Ethnicity	
Not Hispanic or Latino	49 (81.7%)
Hispanic or Latino	2 (3.3%)
Educational Preparation	
Diploma (AD)	2 (3.3%)
Associate's Degree in Nursing (ADN)	8 (13.3%)
Bachelor's of Science in Nursing (BSN)	32 (53.3%)
Master's of Science in Nursing (MSN)	35 (58.3%)
Doctor of Nursing Practice (DNP)	3 (5%)
Coursework in Nursing Education	
Yes	43 (71.7%)
No	14 (23.3%)
Certified Nurse Educator (CNE)	
Yes	4 (6.7%)
No	56 (93.3%)
Prior Clinical Nursing Instructor	
Yes	41 (68.3%)
No	19 (31.7%)
Faculty Employment Status	
Part-time	36 (65.5%)
Full-time	19 (34.6%)
Degree Program Teaching	
Diploma (AD)	4 (6.7%)
Associate's Degree in Nursing (ADN)	17 (28.3%)
Bachelor's of Science in Nursing (BSN)	32 (46.7%)
Clinical Courses Teaching	
Medical-Surgical	41 (68.3%)
Critical Care	10 (16.7%)
Obstetrics	3 (5%)
Pediatrics	3 (5%)
Psychiatric/Mental Health	3 (5%)
Community Health	3 (5%)

Table 2 Nursing Clinical Faculty Orientation Teaching Methods

Orientation Teaching Method	n (%)
In-person group discussion	16 (29.1%)
One-on-one discussion with a faculty member or administrator	16 (29.1%)
In-person didactic learning	15 (25.4%)
In-person audio-visuals	12 (21.8%)
Online didactic learning	8 (14.5%)
Online audio-visuals	7 (12.7%)
Shadowing a clinical faculty member	7 (12.7%)

Table 3   Nursing Clinical Faculty Orientation Content

Orientation Content	n (%)
Job responsibilities and expectations	26 (47.3%)
Course syllabi	25 (45.5%)
Student expectations for clinical	25 (45.5%)
Clinical teaching strategies	23 (41.8%)
Providing constructive feedback to students	20 (36.4%)
Dealing with difficult students	20 (36.4%)
Course assignments	20 (36.4%)
Clinical grading form	18 (32.7%)
Written job description	16 (29.1%)
Faculty member evaluations	11 (20%)
Learning Management System	8 (14.5%)

Table 4   Sample Qualitative Participant Quotes

Qualitative Theme	Participant Quote
Active Learning	"The simulation allowed me to be in a likely clinical situation, to react/respond in that situation, and reflect on how the situation was handled to brainstorm more effective ways to resolve the clinical conflict." "It was a nice learning experience as opposed to listening to a lecture." "The use of simulation with the discussion afterwards was very beneficial. It also provided a change [sic] to be actively learning."
Collaboration	"I liked that everyone participated in the simulation and was given a chance to discuss how they felt about the situation and was able to give other ideas of how to handle certain situations." "I liked being able to see the different scenarios and how instructors respond to situations such as difficult students." "The collaboration of fellow instructors and the objectives attained with each different experience."
Application	"I continue to reflect on how I would respond to the scenarios in the clinical setting." "The scenarios gave real experience to use." "The application of EBP [evidence-based practice] and the way to handle situations when the agency does not implement EBP as taught in the classroom and the need to communicate EBP is a professional and collegial manner and to follow the agency policies and procedures."

were generally satisfied with the use of simulation for clinical nursing faculty orientation (NLN Satisfaction Subscale M = 22.17, SD = 2.88) and were confident in their simulation learning (NLN Self-Confidence in Learning Subscale M = 33.72, SD = 4.91).

Qualitative

Conventional content analysis of the responses to the open-ended items related to the use of simulation for clinical nursing faculty orientation yielded three themes: (a) Active Learning; (b) Collaboration; and (c) Application. Sample participant quotes that illustrate each theme can be found in Table 4.

Active Learning

Participants appreciated the ability to be actively engaged through the "hands-on" and "interactive" learning opportunities that the simulations provided. This active engagement was identified as "enjoyable" and "helpful" (Table 4).

Collaboration

Participants highlighted the benefits of collaborating and networking with both peers and experienced faculty members during the simulations. Specifically, "seeing how other faculty handled situations," "peer interaction and review," receiving "feedback from experienced instructors," and the ability to "hear other instructors' experience[s]" were identified as beneficial aspects of the simulations (Table 4).

Application

Participants repeatedly discussed how "beneficial" the simulation opportunities were, specifically noting that "the scenarios were realistic" which promoted "the opportunity to think about critical thinking" in the transfer of knowledge gained during the simulation into the clinical setting because of how "relevant [these situations were] to clinical teaching" (Table 4).

Discussion

This study was one of the first to explore the use of simulation for clinical nursing faculty orientation. However, due to the variability in the clinical faculty orientation practices for members of the control group, the results from this study must be interpreted with caution. Although the authors were unable to find statistically significant differences between the control and experimental groups in this study, all participants, regardless of faculty orientation modality, demonstrated a significant decrease in anxiety and increase in self-perceived competence. These findings highlight the importance and benefits of orientation programs for CIs regardless of time, format, or content, which is consistent with published literature supporting the need for structured nursing faculty orientations (Rogers et al., 2020).

Previous literature has demonstrated increased confidence for CIs following simulation (Crocetti, 2014; Hunt et al., 2015), but no prior studies have explored the effect of simulation on CIs' anxiety or self-perceived com-

petence. Consistent with the limited existing literature regarding perceptions of the use of simulation for clinical faculty orientation (Crocetti, 2014; Hunt et al., 2015), the qualitative findings from this study demonstrated that CIs responded favorably to the use of simulation for clinical nursing faculty orientation. More specifically, similar to previous findings by Hunt et al. (2015), CIs in this study appreciated the active hands-on learning of the simulations which could be easily transferred to the clinical setting with students.

Though not a direct purpose of this study, descriptive data highlighted the variability in clinical nursing faculty orientations among institutions. Despite recommendations for structured nursing faculty orientations (Rogers et al., 2020), the variability in time, format, and content identified by participants in this study emphasizes the inconsistencies inherent in clinical nursing faculty orientations. Such variability is concerning because it may lead to inadequately prepared CIs, a concern for both novice and experienced educators (Rogers et al., 2020). Inadequate preparation of CIs can negatively impact student learning (Crocetti, 2014), faculty retention (Rogers et al., 2020), and patient safety (Silver Dunker, Manning, & Knowles, 2017). Thus, evidence-based best practices are needed to streamline clinical nursing faculty orientation and ensure adequate preparation to facilitate the transition from clinical nurse to CI.

Strengths and Limitations

This multisite study provided an opportunity to examine the effect of QSEN-based simulations on anxiety and self-perceived competence in CIs who practice in a variety of geographical locations across the U.S. Multisite studies offer many benefits, including addressing potential research gaps related to generalizability and sample diversity (Swartwout et al., 2019). The use of the QSEN competencies to guide the development of each simulation scenario provided a structured and evidence-based framework for clinical nursing faculty orientation that correlates with current nursing education practices.

Despite the multisite design, the study used a relatively small convenience sample. The sample size was impacted by missing and incomplete data, as well as the COVID-19 pandemic, which abruptly halted in-person clinical nursing faculty orientations nationwide in early 2020, thus prohibiting further implementation of the simulations. The small sample size increases the risk for a type II error and decreases the generalizability of the findings. Additionally, data analysis revealed a disparity in clinical nursing faculty orientation practices among the data collection sites that was not controlled for in this study. Thus, confounding variables related to differences in time, content, and format of clinical nursing faculty orientations among institutions may have impacted the findings and, as such, the results of this study must be interpreted with caution.

Implications for Nursing Education

Unexpected findings from this study identified the variability of clinical nursing faculty orientations. As such, evidence-based guidelines are needed to streamline clinical nursing faculty orientations to best prepare CIs to facilitate student learning and promote safe patient care in the clinical setting. Although there are currently no defined best practices for clinical nursing faculty orientation, the participants' positive perceptions of simulation use in this study suggest that simulation is a well-received teaching strategy to provide CIs with hands-on experiential learning to orient them to clinical teaching by offering challenging problem-based situations that allow CIs to practice safe and effective clinical student management.

More specifically, using a QSEN-based approach for clinical nursing faculty orientation provides an evidence-based framework to foster quality and safety in clinical nursing education. The integration of the QSEN competencies into the simulations used for the clinical nursing faculty orientations in this study advanced the use of these competencies as a framework for continuing education, providing an evidence-based structure for the content delivered and a foundation for CIs to promote safe and effective patient care among students (Altmiller & Hopkins-Pepe, 2019).

Future Research

More information is needed about the variability in clinical nursing faculty orientation practices to understand this phenomenon more fully. First, a national descriptive study of clinical nursing faculty orientation practices would provide details about the current state of CI training in the U.S. Additionally, the current study should be replicated with larger, more diverse samples and with consistency in the clinical faculty orientation programs for the control group to better understand the implications of simulation use for clinical nursing faculty orientation. Ultimately, the results from these studies can provide evidence-based support for developing a standard curriculum for clinical nursing faculty orientation.

Conclusion

This study was one of the first to explore the use of simulation for clinical nursing faculty orientation. The findings support that simulation is feasible and well-received by CIs for clinical nursing faculty orientation. Additional research is needed to appreciate clinical faculty orientation practices, to provide support to develop evidence-based guidelines for clinical nursing faculty orientations, and to more fully understand the impact of simulation during clinical nursing faculty orientation on CIs' outcomes.

Declaration of Competing Interest

Acknowledgement

References

Aebersold, M. (2016). The history of simulation and its impact on the future. *AACN Advanced Critical Care*, *27*(1), 56-61. https://doi.org/10.4037/aacnacc2016436.

Altmiller, G., & Hopkins-Pepe, L. (2019). Why Quality and Safety Education for Nurses (QSEN) matters in practice. *Journal of Continuing Education in Nursing*, *50*(5), 199-200. https://doi.org/10.3928/00220124-20190416-04.

American Association of Colleges of Nursing (2020a). Fact sheet: Nursing faculty shortage. Retrieved from https://www.aacnnursing.org/Portals/42/News/Factsheets/Faculty-Shortage-Factsheet.pdf. Retrieved from 11/29/2021.

American Association of Colleges of Nursing (2020b). Fact sheet: Nursing shortage. Retrieved from https://www.aacnnursing.org/news-information/fact-sheets/nursing-shortage. Retrieved from 11/29/2021.

Barnes, L. L., Harp, D., & Jung, W. S. (2002). Reliability generalization of scores on the Speilberger State-Trait Anxiety Inventory. *Educational and Psychological Measurement*, *62*(4), 603-618.

Byrnes, K. (2017). Employing flight simulation in the classroom to improve the understanding of the fundamentals of instruction among flight instructor applicants. *Journal of Aviation/Aerospace Education and Research*, *26*(1), 49-63. https://doi.org/10.15394/jaaer.2017.1623.

Crocetti, J. (2014). Nursing clinical faculty self-efficacy following an orientation using simulation. *Nursing Education Perspectives*, *35*(3), 193-194. https://doi.org/10.5480/12-819.1.

Cronenwett, L., Sherwood, G., & Barnsteiner, J. (2007). Quality and safety education for nurses. *Nursing Outlook*, *57*, 313-322. https://doi.org/10.1016/j.outlook.2007.02.006.

Dunker, K. S., Duprey, M. D., & Ross, J. G. (2021). Simulation strategies used in the transition from expert clinician to novice educator. *Nursing Education Perspectives*, *42*(1), 63-64. https://doi.org/10.1097/01.NEP.0000000000000531.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191.

Greenwood, K., & Ewell, S. (2018). Faculty development through simulation-based education in physical therapist education. *Advances in Simulation*, *3*, 1-12. https://doi.org/10.1186/s41077-017.

Hou, X. J., Zhu, D., & Zheng, M. H. (2011). Clinical nursing faculty competence inventory- development and psychometric testing. *Journal of Advanced Nursing*, *67*(5), 1109-1117. https://doi.org/10.1111/j.1365-2648.2010.05520.x.

Hseih, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288.

Hunt, C. W., Curtis, A. M., & Gore, T. (2015). Using simulation to promote professional development of clinical instructors. *Journal of Nursing Education*, *54*(8), 468-471. https://doi.org/10.3928/01484834-20150717-09.

Jeffries, P. R., & Rizzolo, M. A. (2006). *Designing and Implementing Methods for the Innovative Use of Simulation to Nursing Care of Ill Adults and Children: A National, Multi-Site, Multi-Method Study*. New York, NY: National League for Nursing Retrieved from 11/29/2021 http://www.nln.org/docs/default-source/professional-development-programs/read-the-nln-laerdal-project-summary-report-pdf.pdf?sfvrsn=0 .

Knowles, S. (2020). Initiation of a mentoring program: Mentoring invisible nurse faculty. *Teaching and Learning in Nursing*, *15*(3), 190-194. https://doi.org/10.1016/j.teln.2020.02.001.

Kolb, D. A. (1984). *Experiential Learning: Experience as the Course of Learning and Development*. Englewood Cliffs: Prentice Hall.

Krautscheid, L., Kaakinen, J., & Warner, J. R. (2008). Clinical faculty development: Using simulation to demonstrate and practice clinical teaching. *Journal of Nursing Education*, *47*(9), 431-434.

Landon-Hays, M., Peterson-Ahmad, M. B., & Frazier, A. (2020). Learning to teach: How a simulated learning environment can connect theory to practice in general and special education educator preparation programs. *Education Sciences*, *10*(7), 184. https://doi.org/10.3390/educsci10070184.

National League for Nursing Simulation Innovation Resource Center. (2015). Simulation template. Retrieved from http://www.nln.org/sirc/sirc-resources/sirc-tools-and-tips. Retrieved from 11/29/2021.

National League for Nursing. (2019). Nurse educator core competency. Retrieved from http://www.nln.org/professional-development-programs/competencies-for-nursing-education/nurse-educator-core-competency. Retrieved from 11/29/2021.

Owens, R. A. (2017). Part-time faculty perceptions of their learning needs during their role transition experiences. *Teaching and Learning in Nursing*, *12*(1), 12-16. https://doi.org/10.1016/j.teln.2016.10.002.

Polit, D. F., & Beck, C. T. (2021). *Nursing Research: Generating and Assessing Evidence for Nursing Practice* (11th ed.). Philadelphia, PA: Wolters Kluwer.

Polit, D. F., & Sherman, R. E. (1990). Statistical power in nursing research. *Nursing Research*, *39*(6), 365-369.

Rodger, K. (2019). Learning to think like a clinical teacher. *Teaching and Learning in Nursing*, *14*(1), 1-6. https://doi.org/10.1016/j.teln.2018.08.001.

Rogers, J., Ludwig-Beymer, P., & Baker, M. (2020). Nurse faculty orientation: An integrative review. *Nurse Educator*, *45*(6), 343-346. https://doi.org/10.1097/NNE.0000000000000802.

Ross, J. G., & Silver Dunker, K. (2019). New clinical faculty orientation: A review of the literature. *Nurse Education Perspectives*, *40*(4), 210-215. https://doi.org/10.1097/01.NEP.0000000000000470.

Shallenbarger, T., & Edwards, T. (2012). Nurse educator simulation: Preparing faculty for clinical nurse educator roles. *Clinical Simulation in Nursing*, *8*(6), 249-255. https://doi.org/10.1016/j.ecns.2010.12.006.

Silver Dunker, K., Manning, K., & Knowles, S. (2017). Utilizing a QSEN based clinical orientation checklist as a standard for orientation. *International Journal of Nursing and Care*, *1*(7), 1-7.

Stamps, A., Crockerell, K., & Opton, L. (2021). A modern take on facilitating transition into the academic nurse educator role. *Teaching and Learning in Nursing*, *16*(1), 92-94. https://doi.org/10.1016/j.teln.2020.04.002.

Swartwout, E., El-Zein, A., Deyo, P., Grant, P., Fogle, M., Laughon, D., & Goodwin, D. (2019). Innovative collaborative partnerships to conduct multisite research: Strategies for success. *The Journal of Nursing Administration*, *49*(5), 242-248. https://doi.org/10.1097/NNA.0000000000000745.