

Nursing Students' Views on an E-Learning Activity on Clinical Leadership and Ageism: A Cross-Sectional Study

Kelly Baskerville, University of Alberta

Sherry Dahlke, University of Alberta

Kathleen F. Hunter, University of Alberta

Mary T. Fox, York University

Sandra J. Davidson, University of Calgary

Alison L. Chasteen, University of Toronto

Jeffrey I. Butler, University of Alberta

Elaine Moody, Dalhousie University

Lori Schindel Martin, Toronto Metropolitan University



Cover Page Footnote | Note de page couverture

This article is one element of knowledge mobilization from a larger study, Awakening Canadians to Ageism. Funding for this study was received by the Social Sciences and Humanities Research Council of Canada. The team wishes to thank the Awakening Canadians to Ageism advisory group and others who contributed their time and stories to this work. | Cet article constitue un élément de mobilisation de connaissances d'une étude plus vaste. Une subvention de recherche a été obtenue du Conseil de recherches en sciences humaines du Canada. L'équipe souhaite remercier le groupe consultatif Awakening Canadians to Ageism (sensibiliser la population canadienne à l'âgisme) et les autres personnes qui ont offert leur temps et leurs histoires pour ce travail.

The term *nursing leadership* has been widely recognized for decades, but *clinical leadership* is relatively new and has been defined variously by nursing scholars. For some, clinical leadership refers to a manager who directly leads point-of-care nurses (Boamah, 2019; Cook, 2001a). Others emphasize that point-of-care nurses act as clinical leaders in environments with administration that empowers nurses and supports patient outcomes and experiences, quality and safety of care, and collaboration among the interprofessional team (Boamah, 2018, 2019; Mianda & Voce, 2018; Stanley & Stanley, 2018). After conducting a grounded theory study to understand the clinical leadership of point-of-care nurses, Cook (2001b) defined a clinical leader as any “expert clinician involved in providing direct clinical care, who influences others to improve the care they provide” (p. 33). Stanley and Stanley (2018) similarly described clinical leaders as nurses who value, and are passionate about, the delivery of high-quality care.

Clinical leadership is needed daily from *all* registered nurses, and nursing students require guidance on what clinical leadership is, how it is enacted, the context in which it is nurtured, and the skills involved. As an example, clinical leadership can be applied to work with the population most seen in nursing practice, and on the rise, globally—people over the age of 60 (United Nations, 2023). Ageism towards older people is ingrained in nursing culture and nursing education (McAllister et al., 2020; Van Wicklin, 2020), influencing nursing practice. Ageism is defined as negative beliefs and/or behaviours towards individuals based on their age (World Health Organization [WHO], 2023). We developed an e-learning module for an undergraduate baccalaureate nursing clinical leadership course, using real-world scenarios featuring ageism to stimulate learning and develop understanding of clinical leadership and the associated skills. In this paper, we report on an evaluation of students’ perspectives on the module.

Background

Although thinking of point-of-care nurses as clinical leaders is relatively new, researchers have conceptualized the characteristics and key practices of an effective point-of-care clinical leader. Based on a comprehensive review of the literature, Patrick et al. (2011) identified attributes and clinical leadership practices.

Patrick et al.’s (2011) five defining attributes of clinical leaders are clinical expertise, effective communication, collaboration, coordination, and interpersonal understanding. Clinical expertise includes clinical knowledge, competence, and an understanding of how nursing and interprofessional teams work. Effective communication refers to articulating and clarifying information in ways that empower others. Collaboration and coordination focus on how to influence others in nursing and interprofessional teams. Finally, interpersonal understanding pertains to how nurses empathize with others and manage themselves and others to promote evidence-informed patient care. These attributes are enacted in leadership practices.

The five identified transformational leadership practices are challenging the process (thinking creatively and challenging the status quo); inspiring a shared vision (communicating, influencing, and empowering others); enabling others to act (collaboration, and relationship building); modelling the way (setting an example of excellence); and encouraging the heart (recognizing, supporting, and encouraging others) (Posner & Kouzes, 1988). Boamah (2019) tested a theoretical model of transformational leadership and workplace empowerment, using Patrick et al.’s (2011) Clinical Leadership Survey to measure the clinical leadership variable in a survey of registered nurses at the point of care. The authors found that transformational leadership was indirectly associated with a decrease in adverse patient outcomes through a pathway of

structural empowerment and point of care nurse clinical leadership. Similarly, research into nursing leadership of all kinds has highlighted that relationship-focused leadership practices contribute to positive outcomes in the nursing workforce, such as improved health and well-being of nurses, as well as the pivotal role of education in developing leaders (Cummings et al., 2021).

Clinical Leadership for Nursing Students

Scholars have examined the importance of educational development for all types of leaders (Mianda & Voce, 2018). As explained by a concept analysis of nursing students' clinical leadership, educational development starts in baccalaureate nursing programs by providing strong role modelling, employing effective interpersonal skills, and cultivating clinical knowledge (Jack et al., 2022). In developing our clinical leadership module, we drew on Pepin et al.'s (2011) cognitive learning model of clinical leadership for nursing students. The five stages of this model are (a) awareness of clinical leadership in nursing, recognizing the characteristics and actions of leaders, positioning themselves on the path to leadership, and sharing knowledge with colleagues; (b) integration of leadership in their actions by expressing themselves confidently in patient/family circumstances, communicating constructively to other professionals, recognizing personal strengths and limits, and following role models; (c) taking of the lead in patient and family situations, initiating collaboration to enhance patient-centred care and acting as a role model; (d) active leadership within the team by enacting solutions to overlooked problems, adapting leadership style to context, and enhancing team competencies; and (e) embedded clinical leadership extends to the organizational level in organizational decision-making, mobilizing teams, acting as a key resource person, exploring possibilities while questioning established ways, leading change, anticipating problems, and working towards preventing them.

In our clinical leadership and ageism module, we used clinical exemplars of older patients receiving care that was not evidence informed, such as the use of restraints, or staff using elder-speak and ageist language, drawn from our review of the literature presented in Dahlke and Hunter's discussion papers (Dahlke & Hunter, 2021; Hunter & Dahlke, 2023). We provided questions about ways to respond to these situations that would demonstrate clinical leadership. The aim of this study was to understand nursing students' perspectives on whether the clinical leadership and ageism module enhanced their knowledge, confidence, and perspectives about these topics, and whether the module was an enjoyable method of learning.

Method

This study was part of knowledge mobilization for a larger quasi-experimental study that tested the effectiveness of an e-learning module in increasing nursing students' knowledge in working with older people (Dahlke et al., 2021). In the current study, we asked participants about the extent to which the clinical leadership and ageism e-learning module improved their knowledge and confidence to demonstrate leadership by recognizing and addressing ageism. Participant feedback was sought on whether the module was an enjoyable learning experience in order to determine the acceptability of our module for nursing students. We followed the STROBE checklist for cross-sectional studies in our reporting (von Elm et al., 2014).

The Leadership and Ageism Module

The e-learning module takes approximately 45 minutes to complete and has three topics: (a) clinical leadership, (b) ageism, and (c) potential interventions to promote evidence-informed care for older people. Each topic is addressed using evidence-informed literature, videos,

scenarios, and game elements to enhance comprehension. Each topic ends with a knowledge check that contains an interactive case study with questions that draw on all the topics in the module. The Canadian Association of Schools of Nursing (CASN, 2017) entry-to-practice levels of gerontological competencies were used in introducing ageism and the scenarios (see Table 1).

Table 1

Module Details

Content	Education elements	CASN entry-to-practice indicator
Attributes of clinical leaders as identified above (Posner & Kouzes, 1988)	Knowledge checks	
The importance of being a good leader to enhance interprofessional collaboration	Video	
Posner and Kouzes's (1988) five stages of leadership development are discussed	Knowledge check	
Ageism is introduced, highlighting theories that scholars propose may cause ageism and the prevalence of ageism in nursing and health care	Knowledge check	1.1 Recognizes that care of the older person is affected by ageism and societal and personal views related to ageing
Three types of ageism are presented: benevolent, hostile, and institutional (WHO, 2021).	Knowledge checks Videos	1.1 indicator
Three scenarios highlight examples of how each of these types of ageism may be enacted in practice and how a clinical leader could respond	1. A nurse is heard calling an older person <i>dearie</i> and the student is asked questions about what type of ageism it is (benevolent).	1.1 Indicator
	2. A patient is heard calling out and a nurse suggests the patient is just looking for attention (a demonstration of hostile ageism). Participants are walked through options of ignoring the person or looking to meet the unmet need, as well as identifying type of ageism.	1.11 Identifies potential mistreatment

<p>3. A demonstration of institutional ageism is presented in which the student is looking after an older woman who has pneumonia and early onset dementia and is a patient in a nursing home. The night nurse had given the patient Ativan to settle and then restrained the patient in a chair and put her at the nursing station. The student is asked what the patient's restlessness and confusion might have been caused by (delirium from pneumonia and Ativan); next the student works to remove restraints and orient the patient to the bathroom location; finally, the student is asked what their next step would (correct answer: developing an individualized care plan of the patient's needs).</p>	<p>2.6 Identifies the effects of aging on their therapeutic responses to non-pharmacological and pharmacological treatment</p> <p>2.9 Recognizes and responds appropriately to geriatric syndromes such as incontinence, delirium, dementia, depression and falls.</p>
--	--

Last, there is another scenario related to missing a nurse in the staffing complement at the beginning of the shift.

Students work through a series of questions that ask them the steps they would engage in if they were in the situation. For example, they would notify their supervisor, then discuss patients' needs among the existing staff to determine how to best manage patient care with a missing nurse, and provide a leadership role in helping one another and have a team spirit perspective.

We obtained ethics approval from the Health Research Board at the University on Record (REB #Pro00122018). At the beginning of the module, an information letter explained the study and that participation was voluntary, that it would not affect students' grades, and that their teacher would not know whether they had participated. Students who chose to participate received a \$10 gift card, as incentives have been shown to increase participation (Kramer et al., 2009). If students chose to participate in the study, they completed a feedback survey.

Sample and Setting

The study was conducted at a Western Canadian university. Students in a fourth-year clinical leadership nursing course in a large nursing program were invited to complete the e-learning module on leadership and ageism. Completing the module was an optional learning activity, and participating in the study was also optional. Students signaled their willingness to participate in the study by completing the feedback survey.

Measures

We (SD and KH) developed a self-report survey. The survey had three parts. The first part assessed whether the education delivered was acceptable to the learning needs of nursing students (Dahlke et al., 2019), and contained four Likert-type questions (knowledge, confidence, enjoyment, and perceptions of the module in enhancing their ability to demonstrate leadership when they see ageist behaviours in practice) with a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha for this part of the survey was 0.90, indicating that it demonstrated internal consistency (reliability). The second part of the survey included one open-ended question inviting participants to comment on suggestions for improving the module.

The last part of the survey included standard demographic questions.

Data Analysis

Descriptive statistics were calculated using Statistical Package for the Social Sciences (SPSS, version 29) for demographic data and the Likert-type questions about the e-learning activities. Content analysis was used to analyze the responses to the open-ended question (Eto & Kyngäs, 2008).

Results

Sixty-seven fourth-year nursing students out of 167 students participated in the study for a 40.12% response rate. There were no incomplete data. Of the 67 students, 59 identified as female (88.1%) and 8 identified as male (11.9%). The mean age of participants was 24.63 years ($SD = 4.210$), with a range of 21 to 50 years old.

Survey Results

The means of the questions on the survey (see Table 2) indicate that participants felt that the module enhanced their knowledge about leadership and ageism ($M = 4.36$, $SD = .792$), increased their confidence in working with older people ($M = 4.27$, $SD = .730$), found it an enjoyable method of delivery ($M = 4.16$, $SD = .751$), and improved their perceptions about working with older people ($M = 4.16$, $SD = .790$).

Table 2*Feedback Survey*

	<i>M</i>	<i>SD</i>
The learning activity enhanced my knowledge about leadership and ageism when working with older people.	4.36	.792
The learning activity enhanced my confidence about leadership and ageism when working with older people.	4.27	.730
The learning activity was an enjoyable method of learning the material.	4.16	.751
The learning activity improved my perceptions about working with older people.	4.16	.790

Note. Range of scores from 1 to 5 were possible.

Open-Ended Question

Of the 67 participants, 14 provided comments. Ten participants stated they enjoyed the module, three indicated they liked the interactivity, two liked the scenarios, one liked that it was self-paced, and another cited a good level of detail. Six comments suggested improvements, including requests for more videos, games, case studies, and knowledge checks; requests for a greater variety of questions; and a request to have “hands-on experience.” One participant suggested more content on structural barriers (e.g., staffing levels), one wanted more challenging quiz questions, and two reported technical or typographical issues. The feedback has been incorporated into the e-module.

Discussion

Since participation in the leadership and ageism learning activity was optional for the fourth-year nursing students in their final leadership class, and typical response rates for surveys are 20% (Qualtrics, 2024), we were pleased that over 40% of students chose to participate in the e-learning activity and the study. The demographics of our participants are similar to nursing student populations, predominately being female and young adults (Ball, 2023). The study found that nursing students perceived the e-module to be a good method to increase their knowledge and confidence about leadership and ageism. Participants felt the module improved their perceptions about working with older people and found the method of learning enjoyable. We found no studies on e-learning for pre-licensure nurses on aging and leadership, indicating that ours is a novel approach. The only e-learning that we have found combining both leadership and care of older people is a gerontological professional development program for practising health care providers (Fitzpatrick et al., 2021).

Participants in our study found the e-learning activity to be an enjoyable learning method, listing interactivity, case scenarios, level of detail, and the flexibility of pace. Other studies on e-learning had similar findings (Horowitz et al., 2022; Kor et al., 2022). In other research where

participants reported their learning as low, participants specifically requested more videos and case discussions (Incekar & Bahar, 2023). Study participants report increased confidence in applying leadership concepts, which may be related to our use of case studies, with examples of scripting and rationale.

Other scholars report that online delivery methods increase undergraduate and graduate nursing students' confidence in and knowledge of leadership, and support them to become change agents (Horowitz et al., 2022; Merriam et al., 2020). Delivery of e-learning activities on the topic of older people, aging, and bias has been found to have a positive impact on nursing students' perceptions and comfort working with older people (Kor et al., 2022; O'Connell et al., 2020). Our e-learning module combines both leadership and ageism, which sets it apart from other studies. Researchers comparing different formats of education delivery found e-learning to provide comparable gains in student knowledge, perceptions, and self-efficacy on many topics, including medication dosage calculation, responsive behaviours, and heart failure (De Silva et al., 2022; O'Connell et al., 2020; Öztürk & Güneş, 2023).

Our module provides evidence-based instruction about older people at a time when educators with gerontological expertise are frequently not available (Beltran & Miller, 2020). We acknowledge our e-learning module should not be used as stand-alone education in a baccalaureate nursing program but should be part of systematic learning about gerontological competencies and leadership threaded throughout the nursing curriculum. Entry-to-practice gerontological competencies can be used to plan nursing education in classrooms, practica, and e-learning modules (CASN, 2017). In the curriculum at the university in this study, nursing students take three leadership courses, which are scaffolded to build leadership skills and knowledge. The third is the clinical leadership course, making it a good fit for our module, as students can use the practical exemplar of ageism to build both leadership skills and gerontological concepts. The module in this study provides practical strategies that foster enacting Pepin et al.'s (2011) cognitive learning model of clinical leadership for nursing students. It also introduces the importance of small actions in clinical settings that improve patients' care and fosters nursing students' development as transformational clinical leaders (Posner & Kouzes, 1988).

Implications

This research supports a tool (through the module) for Schools of Nursing to incorporate the *Entry-to-Practice Gerontological Care Competencies for Baccalaureate Programs in Nursing* into nursing education (CASN, 2017). Implementation has varied widely; unfortunately, there is evidence that educators perpetuate negative bias with students (Garbrah et al., 2020). Many nursing programs integrate content on older people across the curriculum, but a more direct and applied approach is needed to adequately prepare students to work with this population (Fetherstonhaugh et al., 2022). Faculty have opportunities within leadership courses to foster nursing students' development as clinical leaders who recognize how nursing practice with older people is shaped by contextual factors such as policies, health system values, managerial style, and resource allocation (Hunter & Dahlke, 2023). Exposing nursing students to evidence of ageism may result in improved clinical advocacy, leadership, and decision-making in a broad range of clinical situations involving older people. We suggest that using our e-learning module in conjunction with a practice course would provide opportunities for students to practise leadership skills, particularly with the care of older people. We also suggest that practice courses are excellent opportunities to observe the clinical leadership characteristics of point-of-care nurses and begin the path to students' clinical leadership. Faculty teaching in clinical courses could use conferences

at the end of a clinical day to discuss students' observations of leadership and facilitate an understanding of how evidence-informed practitioners can demonstrate leadership.

Since our study findings indicate that our e-learning module is acceptable to nursing students, our next step is to test the module to determine whether it improves students' knowledge and attitudes about leadership and ageism. The module represents only one component of a comprehensive approach to increasing knowledge and skills in working with older people. The effectiveness of online and asynchronous education on short- and long-term outcomes requires more research to determine the most effective design and customization to situation and learner characteristics (Chonody, 2015).

Limitations

Participants were nursing students in the fourth year of their program, so transferability to students in other stages of training may vary. Moreover, those who were interested in leadership and ageism may have been the ones who chose to participate. Future research should seek to replicate the present study with additional cohorts of nursing students in a variety of schools and examine the transfer of learning into practice settings. Future longitudinal studies would allow researchers to determine retention of students' perceptions of the module over time, including when nursing students enter practice and gain experience working with older people. Future research may assess students' attitudes about leadership and ageism before and after completing the module. Last, although the survey asked specific questions about the content in the module, testing of the measure's validity is warranted.

Conclusion

The aim of this study was to understand nursing students' perspectives about how a module on clinical leadership and ageism enhanced their knowledge, confidence, and perspectives on working with older people, and whether the module was an enjoyable method of learning. Students reported positively about all elements measured, and they liked the learning activity. Delivery of gerontological and leadership concepts in nursing programs is needed and this module provides an option. Our e-learning module is available free of cost.

References

- Ball, W. S. (2023). *Can I become a nurse at age 50+? Age and nursing school*. Nurse Plus Academy. <https://nurse.plus/become-a-nurse/am-i-too-old-for-nursing-school/>
- Beltran, S. J., & Miller, V. J. (2020). Breaking out of the silo: A systematic review of university-level gerontological curricula in social work and nursing programs. *Journal of Social Work Education*, 56(4), 753–778. <https://doi.org/10.1080/10437797.2019.1656689>
- Boamah, S. (2018). Linking nurses' clinical leadership to patient care quality: The role of transformational leadership and workplace empowerment. *Canadian Journal of Nursing Research*, 50(1), 9–19. <https://doi.org/10.1177/0844562117732490>
- Boamah, S. A. (2019). Emergence of informal clinical leadership as a catalyst for improving patient care quality and job satisfaction. *Journal of Advanced Nursing*, 75(5), 1000–1009. <https://doi.org/10.1111/jan.13895>
- Canadian Association of Schools of Nursing. (2017). *Entry-to-practice gerontological care competencies for baccalaureate programs in nursing*.
- Chonody, J. M. (2015). Addressing ageism in students: A systematic review of the pedagogical intervention literature. *Educational Gerontology*, 41(12), 859–887. <https://doi.org/10.1080/03601277.2015.1059139>
- Cook, M. J. (2001a). The renaissance of clinical leadership. *International Nursing Review*, 48(1), 38–46. <https://doi.org/10.1046/j.1466-7657.2001.00040.x>
- Cook, M. J. (2001b). The attributes of effective clinical leaders. *Nursing Standard*, 15(35), 33–36. <https://doi.org/10.7748/ns2001.05.15.35.38.c3027>
- Cummings, G. C., Lee, S., Tate, K., Penconek, T., Micaroni, S. P. M., Paananen, T., & Chatterjee, G. E. (2021). The essentials of nursing leadership: A systematic review of the factors and educational interventions influencing nursing leadership. *International Journal of Nursing Studies*, 115, 1–13. <https://doi.org/10.1016/j.ijnurstu.2020.103842>
- Dahlke, S., & Hunter, K. F. (2021). Harnessing nursing to diminish ageism. *International Journal of Older People Nursing*, 17(2), 1–9, e12417. <https://doi.org/10.1111/opn.12417>
- Dahlke, S., Hunter, K. F., Fox, M. T., Davidson, S., Perry, N., Tamblyn Watts, L., Schindel Martin, L., Butler, J. I., Raymond, C., Chasteen, A., McCleary, L., Boscart, V., & Moody, E. (2021). Awakening Canadians to ageism: A study protocol. *BMC Nursing*, 20(192), 1–10. <https://doi.org/10.1186/s12912-021-00713-0>
- Dahlke, S., Hunter, K., Negrin, K., Kalogirou, M. R., Fox, M., & Wagg, A. (2019). Nursing staffs' educational needs related to working with hospitalized older people. *Journal of Clinical Nursing*, 28(1–2), 221–234. <https://doi.org/10.1111/jocn.14631>
- De Silva, S. R., Gates, M. G., & Waczek, A. D. (2022). Utilization of an online education module and standardized patient simulation experience to improve nursing student learning outcomes with heart failure patients. *Nursing Education Perspectives*, 43(3), 178–180. <https://doi.org/10.1097/01.NEP.0000000000000782>
- Eto, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>

- Fetherstonhaugh, D., Rayner, J.-A., Solly, K., Beattie, E., Harrington, A., Jeon, Y.-H., Moyle, W., & Parker, D. (2022). Teaching the care of older people in Australian nursing schools: Survey findings. *Collegian*, 29(6), 873–879. <https://doi.org/10.1016/j.colegn.2022.02.007>
- Fitzpatrick, J. M., Hayes, N., Ezhova, I., & Naughton, C. (2021). Evaluating a specialist education programme for nurses and allied health professionals working in older people care: A qualitative analysis of motivations and impact. *Nurse Education Today*, 97, Article 104708. <https://doi.org/10.1016/j.nedt.2020.104708>
- Garbrah, W., Kankkunen, P., & Välimäki, T. (2020). Gerontological nurse teachers' abilities and influence on students' willingness in older people nursing: A cross-sectional, correlational survey. *Nurse Education Today*, 90, Article 104461. <https://doi.org/10.1016/j.nedt.2020.104461>
- Horowitz, M. L., Stone, D. S., Sibrian, J., DuPee, C., & Dang, C. (2022). An innovative approach for graduate nursing student achievement of leadership, quality, and safety competencies. *Journal of Professional Nursing*, 43, 134–139. <https://doi.org/10.1016/j.profnurs.2022.10.004>
- Hunter, K. F., & Dahlke, S. (2023). Nurses use of binary thinking contributes to care rationing. *International Journal of Older People Nursing*, 18(3), 1–12. <http://dx.doi.org/10.1111/opn.12538>
- Incekar, M., & Bahar, A. (2023). Opinions of nursing students on online education in the coronavirus disease 2019 pandemic: Qualitative research. *Journal of Education & Research in Nursing*, 20(2), 171–177. <https://doi.org/10.14744/jern.2021.52077>
- Jack, K., Bianchi, M., Dilar Pereira Costa, R., Grinberg, K., Harnett, G., Luiking, M. L., Nilsson, S., & Scammell, J. M. E. (2022). Clinical leadership in nursing students: A concept analysis. *Nurse Education Today*, 108, 1–7. <https://doi.org/10.1016/j.nedt.2021.105173>
- Kor, P. P. K., Liu, J. Y. W., & Kwan, R. Y. C. (2022). Exploring nursing students' learning experiences and attitudes toward older persons in a gerontological nursing course using self-regulated online enquiry-based learning during the COVID-19 pandemic: A mixed-methods study. *Nurse Education Today*, 111, Article 105301. <https://doi.org/10.1016/j.nedt.2022.105301>
- Kramer, M., Schmalenberg, C., & Keller-Unger, J. L. (2009). Incentives and procedures effective in increasing survey participation of professional nurses in hospitals. *Nursing Administration Quarterly*, 33(2), 174–187. <https://doi.org/10.1097/NAQ.0b013e3181a10db6>
- McAllister, M., Ryan, C., Dodd, L., Goldenberg, M., & Brien, D. L. (2020). A thematic literature review of innovative strategies to prepare nursing students for aged-care. *Nurse Education Today*, 87, 104355. <https://doi.org/10.1016/j.nedt.2020.104355>
- Merriam, D., Cody, A. J., Fisher, J. M., & Nirelli, P. A. (2020). Developing system-level awareness through virtual clinical learning. *Nursing Education Perspectives*, 41(1), 61–62. <https://doi.org/10.1097/01.NEP.00000000000000417>

- Mianda, S., & Voce, A. (2018). Developing and evaluating clinical leadership interventions for frontline healthcare providers: A review of the literature. *BMC Health Services*, 18(747), 1–15. <https://doi.org/10.1186/s12913-018-3561-4>
- O’Connell, B., Guse, L., & Greenslade, L. (2020). Does restructuring theory and clinical courses better prepare nursing students to manage residents with challenging behaviors in long-term care settings? *Gerontology and Geriatrics Education*, 41(1), 85–99. <https://doi.org/10.1080/02701960.2018.1428573>
- Öztürk, H., & Güneş, Ü. (2023). Effect of blended learning on nursing students’ medication dosage calculation skills. *Teaching and Learning in Nursing*, 18(2), 263–268. <https://doi.org/10.1016/j.teln.2022.07.005>
- Patrick, A., Laschinger, H. K. S., Wondg, C., & Finegan, J. (2011). Developing and testing a new measure of staff nurse clinical leadership: the clinical leadership survey. *Journal of Nursing Management*, 19(4), 499–460. <https://doi.org/10.1111/j.1365-2834.2011.01238.x>
- Pepin, J., Dubois, S., Girard, F., Tardif, J., & Ha, L. (2011). A cognitive learning model of clinical nursing leadership. *Nurse Education Today*, 31(3), 268–273. <https://doi.org/10.1016/j.nedt.2010.11.009>
- Posner, B. Z., & Kouzes, J. M. (1988). Development and validation of the leadership practices inventory. *Education and Psychological Measurement*, 48(2), 483–496. <https://doi.org/10.1177/0013164488482024>
- Qualtrics. (2024). *How to determine sample size*. <https://www.qualtrics.com/experience-management/research/determine-sample-size/>
- Stanley, D., & Stanley, K. (2018). Clinical leadership and nursing explored: A literature review. *Journal of Clinical Nursing*, 27(9–10), 1730–1743. <https://doi.org/10.1111/jocn.14145>
- United Nations. (2023). *Leaving no one behind in an ageing world: World social report 2023*. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undesapd_2023_wsr-fullreport.pdf
- Van Wicklin, S. A. (2020). Ageism in nursing. *Plastic Surgical Nursing*, 40(1), 20–24. <https://doi.org/10.1097/PSN.0000000000000290>
- von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., Vandenbroucke, J. P., & STROBE Initiative. (2014). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for reporting observational studies. *International Journal of Surgery*, 12(12), 1495–1499. <https://doi.org/10.1097/EDE.0b013e3181577654>
- World Health Organization. (2021). *Global report on ageism*. <https://www.who.int/teams/social-determinants-of-health/demographic-change-and-healthy-ageing/combating-ageism/global-report-on-ageism>
- World Health Organization. (2023). *Ageism*. <https://www.who.int/health-topics/ageism>