

Answering the Call: A Scoping Review Investigating Indigenization of Canadian Nursing Schools

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Abstract

***Background:** Within nursing curricula, there are rarely mandatory courses that address the unique health needs and history of the Indigenous population (CINA, 2012; Rozendo, Salas, & Cameron, 2017). Both Western and Indigenous knowledge are essential components of nursing practice, yet often only the former is present within nursing education (Bearskin et al., 2016; Pijl-Zieber & Hagen, 2011 & Zeran, 2016). The availability of Indigenous knowledge in nursing schools supports an environment of culturally safe care, influencing nursing students who learn and practice in traditional Indigenous lands (Rozendo et al., 2017 & CINA 2009). To examine further these claims, a scoping review was used to inquire about the breadth and depth of research within a Canadian context. The **research question:** what is the extent of research evidence informing how Indigenous knowledge in classroom or clinical settings impacts the learning of*

*BScN students? This question was addressed through the **objective:** map out literature regarding Indigenous knowledge in nursing education to understand contextual factors involved with the integration of Indigenous knowledge in nursing. **Methods:** A scoping review as per Arksey and O'Malley (2005) was used to assess the level of integration and implications regarding the integration of an Indigenous knowledge-based course in BScN education within Canadian nursing schools. Articles were analyzed using the Aboriginal Nurses Association of Canada (ANAC)'s (2009) Cultural Competency and Cultural Safety for First Nations, Inuit and Metis Students framework to address the extent that research articles have addressed incorporating Indigenization. **Conclusions:** This scoping review helps to inform the Indigenization agenda in nursing stemming from the TRC's (2012) Call to Action. Four common themes were found, including: the importance of Indigenous voices, Indigenous and Western intersectionality, the lived experience of Indigeneity, as well as barriers to Indigenizing nursing education. Currently a dearth of evidence exists on Indigenization within Canadian nursing curricula and more research needs to be directed to understanding how nursing students engage with Indigenous knowledge.*

Keywords: BScN, Indigenization, Canadian, Curricula, Education

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Glossary

Indigenous: to self-identify as having been part of cultural groups that initially inhabited Canada, including peoples of First Nations, Inuit, and Métis descent (Battiste & Henderson, 2000).

Indigenization: providing a new understanding to Eurocentric education and knowledge systems by bringing elements of local Indigenous languages, beliefs, and ways of being into focus (Battiste & Henderson, 2016)

Indigenous knowing/knowledge: the thoughts and ways of being that encompass past and present knowledge as well as behaviours, which is specific to unique groups of Indigenous peoples (Battiste & Henderson, 2000). It is a fundamental aspect of everyday being that is learned through cultural experiences and practiced because individuals “take on responsibilities with knowing” (Battiste & Henderson, 2000, p.41).

Indigenous nursing knowledge: the various creation stories, traditional healing approaches, languages, traditional parenting, ceremonies, and spiritual values that shape and advance the current context of nursing practices (CINA, 2016).

Introduction

Throughout nursing education, students engage in workshops, classes, and clinical experiences that influence how they think and practice (Brennan & Cotter, 2008). However, disparities exist between the need and availability of cultural safety education within nursing curricula (Rozendo, Salas, & Cameron, 2017). By increasing educational opportunities for nursing students to engage in cultural discourse, students become exposed to historical facts and the lived experiences

of Indigenous peoples, rather than potentially distorted perceptions of the media (Isaacs et al., 2016). This concerns nursing students because within the Canadian Nursing Association's Code of Ethics (2012), nurses are obligated to practice with respect and without cultural discrimination.

In 2012, the Truth and Reconciliation Commission of Canada (TRC)'s Call to Action established a series of propositions to challenge post-colonialism. Post-colonialism refers to the ongoing effects of colonization, in which one typically more economically powerful culture invades and exploits the native inhabitants and resources of a land. This power imbalance is propagated in future generations, sustaining a cycle of cultural abuse. Within Canada's Indigenous peoples, this has resulted in health and social disadvantages (Rozeno et al., 2017).

The TRC's Call to Action (2012) encourages nursing schools across Canada to incorporate a course that provides Indigenous context. A discussion is currently ongoing within nursing academic circles to discuss the ability and need for a response, which creates an opportunity for change. Currently, there are schools in Northern Canada that have previously integrated Indigenous knowing into their schools of nursing. Through increasing knowledge about local Indigenous populations, these schools establish environments of cultural diversity that promote respect for all cultures (Edgecombe & Robertson, 2016). In one school, the similarities between nursing and Indigenous values are emphasized to cross-systemic barriers of colonialism (Edgecombe & Robertson, 2016). In other schools, traditional knowledge is incorporated through student engagement with elders or Indigenous clinical experiences to increase appreciation and understanding of Indigenous cultures (Moffitt, 2016). Many students have reported the necessity of engaging with Indigenous communities since the complexities of care are not always addressed in their education (Brennan &

Cotter, 2008). Since Canadian nursing students provide care to ethnically diverse populations, it is essential that their learning reflects the communities in which they practice.

Methods

Since Indigenous knowledge in nursing is a relatively new concept, a scoping review was selected to examine the extent of available peer reviewed articles and identify research gaps in the current available knowledge about cultural competence and Indigenization within Canadian undergraduate nursing education. This project follows Arksey and O'Malley (2005)'s scoping review methodological framework stages as follows: 1) Identify the research question; 2) Identify relevant studies; 3) Study selection; 4) Charting the data; and 5) Collating, summarizing and reporting the results. This framework integrates an iterative and reflective methodology to assess the depth and extent of research available related to the topic of interest. Through this clear and detailed process, a body of knowledge is reviewed. The research identified using Arksey and O'Malley (2005)'s framework is then analyzed using the key elements described in ANAC (2009)'s framework to incorporate an Indigenous lens.

1. Identify the research question

Through my experiences as an undergraduate nursing student, I have engaged in discussions regarding the value of Indigenous knowledge and experiences; my personal reflections have culminated in this review. I am inquiring 'what is the extent of research evidence informing how Indigenous knowledge in classroom or clinical settings impacts the learning of BScN students?' by examining the current body of literature.

2. Identify relevant studies

Key words were identified relating to the study topic. Search terms included: nurs*, “student nurse”, “nursing student”, “nursing school”, “school of nursing”, know*, “way of being”, perce* feel*, interp*, understand*, chang*, infl*, impact*, alter*, educ*, course, class, clinic*, practice*, curricul*, program, syllabus, "nursing curricula", "nursing program", "nursing education (Higher)", “cultural competency”, “cultural safety”, decolon*, Indigen*, Aboriginal, Métis, Inuit, “First Nations”, and Canad*. Refer to Appendix 1 for specific search strings utilized. Search hits and duplicate removal were recorded in Tables 1 and Table 2. All articles with keywords related to this study were identified using the search engines identified in Table 1 and Table 2, then uploaded to Refworks, an online bibliography generator.

Table 1. Search hits for Search Terms (1) – (10)

Database	Search Hits (1)	Search Hits (2)	Search Hits (3)	Search Hits (4)	Search Hits (5)	Search Hits (6)	Search Hits (7)	Search Hits (8)	Search Hits (9)	Search Hits (10)
Academic Search Complete	2035	808	7	41	762	1073	7966	111	84	744
Biomedical Reference Collection: Comprehensive	1145	286	1	6	75	91	2211	34	22	261
CINAHL Complete	4532	713	2	15	67	82	4373	237	219	631
Complimentary Index	3364	1388	15	81	1226	1627	14449	199	138	1334
MEDLINE with Full Text	700	416	0	7	68	78	3070	44	41	386
ScienceDirect	1650	320	2	8	47	56	2595	75	56	306
Total articles with duplicates removed in TRU DISCOVER	127	268	22	8	78	85	457	71	36	224

Note: Refer to Appendix I for search terms (1)-(10)

Table 2. Search hits for Search Terms (11) – (20)

Data- base	Search Hits (11)	Search Hits (12)	Search Hits (13)	Search Hits (14)	Search Hits (15)	Search Hits (16)	Search Hits (17)	Search Hits (18)	Search Hits (19)	Search Hits (20)
Academic Search Complete	478	785	83	781	22	76	6	22	1469	308
Biomedical Reference Collection: Comprehensive	73	278	22	276	6	236	0	6	482	95
CINAHL Complete	841	650	217	646	24	84	0	24	2158	288
Complimentary Index	388	1366	136	1367	34	149	8	34	1637	657
MEDLINE with Full Text	175	399	42	399	19	43	0	19	556	228
ScienceDirect	297	314	57	317	10	27	0	10	510	107
Total articles with duplicates removed in TRU DISCOVER	204	235	33	238	8	26	9	8	470	139
Total articles with duplicates removed in Refworks for all Search Terms	2816									

Note: Refer to Appendix I for search terms (11)-(20)

3. Study selection

Two reviewers independently assessed the articles in each of the two screening phases using the online screening and review system, COVIDENCE. During the title and abstract screen, the inclusion criteria included: Canadian; peer-reviewed research articles, published within 20 years (1997-2017), written in English, BScN students, education, curriculum, and Indigenous knowing in relation to BScN student learning. In the full text screen, the inclusion criteria included: community engagement strategy, designed/developed by Indigenous peoples, key aspects of the course (othering vs authentic engagement), and inclusivity (Indigenous and non-Indigenous students). My exclusion criteria throughout the study included articles in languages other than English and those with an international focus. Any discrepancies in opinion regarding which articles should or should not be included were discussed and resolved. The screening process is summarized in Figure 1, which ultimately yielded four studies that met the inclusion criteria and screening requirements, as shown in Figure 2.

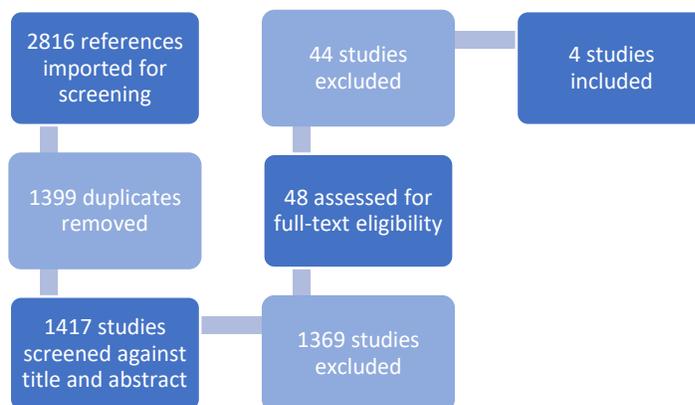


Figure 1. Summary of article screening process, indicating the number progressing through each screening phase as well as the number of articles excluded.



Figure 2. Articles screened and selected. This figure demonstrates the limited number of articles utilized in this scoping review as per the screening criteria.

4. Charting the data

During the full text selection, ANAC's framework for Cultural Competence and Cultural Safety in Nursing education (2009) was selected for article analysis, utilizing the following categories: postcolonial understanding: communication, inclusivity, indigenous knowledge, and mentoring and supporting students for success. Microsoft Word was used to chart the information in Figure 3 through Figure 8. Articles were judged as meeting or not meeting these domains according to the extent to which they referred to each domain, using at least three quotes as evidence.

5. Collating, summarizing, and reporting results

In this scoping review, I explored the integration of Indigenous knowledge in nursing student education. Each of the selected articles was analyzed to understand how it upholds the ANAC (2009) framework according to its five indicators in the results section. These indicators including: postcolonial understanding, communication, inclusivity, Indigenous knowledge, mentoring and supporting students for success. Utilizing ANAC's (2009) framework provides an Indigenous lens to this scoping review. This framework acts as an analytical tool to understand the integration of cultural safety and competence in research. In addition, it defines the standards that nursing education must meet to become culturally safe and competent. While only published peer reviewed research was selected for this study, a discussion regarding concept papers and grey literature was included to comprehensively discuss the movement towards Indigenization that is not reflected by the quantity of articles included in this scoping review.

Table 3. Summaries of articles included in this scoping review as per the inclusion and screening criteria.

Author(s)	Key Points
Rowan et al. (2013)	<ul style="list-style-type: none">• Indigenous students and faculty are underrepresented in nursing schools• While cultural competency and/or safety have been incorporated with positive reactions in most schools of nursing, it is rarely used during student testing to evaluate the effectivity of its incorporation in classroom materials• Educators are interested in learning more about Indigenous cultures such that they can support their students; however, funding to support cultural competence and/or safety is insufficient• Although interventions have been used to support Indigenous students, success in nursing programs is not yet equitable
Zeran (2016)	<ul style="list-style-type: none">• It is important to delegate resources, such as Aboriginal centres and role modelling programs, to overcome the high attrition rates of Indigenous nursing students• Providing opportunities such as the involvement of Indigenous Elders for non-Indigenous nursing students to engage in Indigenous cultures allows them to become more exposed to different ways of thinking and being

	<ul style="list-style-type: none">• Education needs to be inclusive of the holistic nature of Indigenous knowledge to support the learning of Indigenous nursing students, as well as broaden the mindset of non-Indigenous nursing students• Formalized courses can provide an opportunity for nursing students to explore Indigenous history, culture, and health
Martin & Kimpling (2006)	<ul style="list-style-type: none">• There is a wide disparity prevalent between nursing programs that support or challenge Indigenous students and learning• A false belief exists that Indigenous students have increased access to financial and other resources can diminish the development of supportive relationships between Indigenous students and non-Indigenous peers or faculty• Negative learning environments undermine learning for Indigenous students as well as the development of an understanding of cultural safety within non-Indigenous students• Indigenous nursing students face multiple challenges including decreased social and financial support• Racism is still prevalent in some Canadian nursing schools, which needs to be redressed

Bearskin et al. (2016)

- Knowledge is an innate understanding that can be best gained experientially, through interactions with others to allow for deeper connections
- Some knowledge is intrinsic, born from contextual factors such as culture that shape how people learn unique ways of being
- Memories are shared through experience, such as participation and active learning rather than traditional Western learning paradigms
- Both Indigenous and Western knowing have their place in the provision of nursing care
- Knowledge can be found in the experiences of others, which emphasises the importance of learning and valuing others' voices
- Indigenous nursing knowledge is centered on the importance of relationships and communities

Table 4. Defining components of the ANAC (2005) framework used for article analysis

Domain	Definition
Postcolonial understanding	Addresses the historical and ongoing influences of colonialism on the Indigenous population, including factors such as access, inequity, as well as supports.
Communication	Articulates communication as a core component of developing therapeutic relationships and culturally safe care.
Inclusivity	Demonstrates the importance of incorporating and reflecting on Indigenous knowledge as a means of engaging in Inclusive nursing care.
Indigenous knowledge	Incorporating an appreciation for Indigenous peoples that promotes a sense of cultural safety, as well as collaboration with Indigenous communities to promote health and well-being.
Mentoring and supporting students for success	Discusses the values of Indigenous and non-Indigenous nursing mentors and role-models in achieving student success.

Table 5. Application of ANAC framework to: Cultural competence and cultural safety in Canadian schools of nursing:
A mixed methods study (Rowan et al., 2013)

Domain	Indicator or Judgement
Postcolonial understanding	<ul style="list-style-type: none"> - lack of dedicated financial resources to integrate [cultural competence and cultural safety] concepts. - Aboriginal students were academically disadvantaged because of inadequate preparation before College or University - lacked policies or a position statement on cultural competence and/or cultural safety within their school of nursing or institution - indicated that they had policies in place to recruit and retain Aboriginal students. Most, however, lacked or were unaware of policies to recruit and retain Aboriginal Faculty
Judgement	Throughout this article, references were repeatedly made to postcolonialism, which emphasises the significance of this domain within nursing education.
Domain: Communication	- qualitative approach was used involving one-to-one, semi-structured interviews.
Judgement	Although communication was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.

<p>Domain: Inclusivity</p>	<ul style="list-style-type: none"> - educators with knowledge of cultural competence and/or cultural safety were mainly available - but one interviewee, reported having committees, working groups or other bodies within the School of Nursing mandated to address integration of cultural concepts. Furthermore, there was a significant - positive reactions by the institution and the community about the focus of integration were also frequently mentioned by interview respondents. - competence and cultural safety. Most interview respondents identified the Aboriginal population as the primary focus for integration - the majority (33, 89.2%) of survey respondents reported integrating both cultural competence and cultural safety
<p>Judgement</p>	<p>Throughout this article, references were repeatedly made to inclusivity, which emphasises the significance of this domain within nursing education.</p>
<p>Domain: Indigenous knowledge</p>	<ul style="list-style-type: none"> - they want to hear more about what they can do and different ways they can do it ... and they want to learn more themselves about the Aboriginal culture - while most interview respondents indicated that faculty reacted quite positively to the support that they were provided, they also expressed a need for more information

Judgement	Although Indigenous knowledge was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.
Domain: Mentoring and supporting students for success	<ul style="list-style-type: none"> - couple of respondents discussed a more comprehensive, longitudinal support program for Aboriginal students to address academic, social, financial, and personal needs, such as the Access Program. Mentors (staff or Aboriginal students) and advisors or counsellors - Some mentioned the availability of tutors to address specific learning needs
Judgement	Although mentorship was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.

Table 6. Application of ANAC framework to: Cultural competency and safety in nursing education: A case study (Zeran, 2016)

Domain	Indicator or Judgement
Domain: Postcolonial understanding	<ul style="list-style-type: none"> - Western ideology has always played a central role in marginalizing Indigenous people because it structures the way in which individuals understand their experience - being aware of Aboriginal ways of knowing and exploring how society has marginalized Indigenous people can enhance understanding of Indigenous people and ways of looking at the world, as well as acknowledging value in traditional knowledge
Judgement	Although postcolonialism was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.
Domain: Communication	<ul style="list-style-type: none"> - instructors provide a forum to discuss Indigenous world views and perspectives throughout - nursing faculty at UCN are culturally competent educators who value diversity, respect cultural differences among students, and encourage students to maintain their ethnic identity.
Judgement	Although communication was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.
Domain: Inclusivity	- offering a variety of interrelated courses, such as Indigenous history and culture; politics, governance, and justice; community development; and Indigenous knowledge and languages,

	<p>presents students with the opportunity to discover ideologies that endeavour to empower marginalized people</p> <ul style="list-style-type: none"> - the Mamawechetotan Centre and the Ininiwi kiskinwamakewin Centre promote student-centered and student-focused supports and activities in which students are able to value and share Indigenous knowledge, culture, and activities. The centres provide staff and students with opportunities to honour and share cultures, practice cultural beliefs, and promote cross-cultural awareness. - the instructors utilize teaching strategies that incorporate Indigenous ways of knowing. - not only are students exposed to different ways of being and living, they are encouraged to reflect upon their own biases, beliefs, and values in order to transform their ways of being so they are more accepting of diversity. - Indigenous ways of knowing and Western notions of knowledge are explored and integrated throughout the curriculum as learners are exposed to a variety of perspectives, sources, and intellectual traditions. - specifically, the faculty is sensitive to the fact that Indigenous knowledge is holistic rather than diverse, and inclusive of all aspects of life, which provides the foundation for education at UCN.
Judgement	<p>Throughout this article, references were repeatedly made to inclusivity, which emphasises the significance of this domain within nursing education.</p>

<p>Domain: Indigenous knowledge</p>	<ul style="list-style-type: none"> - the nursing faculty is committed to creating culturally responsive curricula to enhance the Indigenous knowledge base and content of programs and supports. - Tradition and Change course, both of which introduce participants to Indigenous traditional teachings through the use of sharing circles, group activities, and other Indigenous cultural practices. - nursing faculty invite Elders into their classrooms to share traditional knowledge of wisdom, beliefs, and values. - cultural competence and cultural safety are threaded throughout the nursing curricula - nursing curricula offers a variety of courses that focus on the Indigenous cultures of northern Manitoba. - the services of the Aboriginal Centres, which are situated on both main campuses. - culturally competent and safe learning environment
<p>Judgement</p>	<p>Throughout this article, references were repeatedly made to Indigenous knowledge, which emphasises the significance of this domain within nursing education.</p>
<p>Domain: Mentoring and supporting students for success</p>	<ul style="list-style-type: none"> - Preparation for Professional Nursing Education, was added to the first year of the nursing program - retired nursing instructor has been retained as an Academic Tutor - student Success Coach

	<ul style="list-style-type: none">- Resident Elders who are respected and honoured by their communities for their spirituality, wisdom, high intelligence, knowledge, life experiences, and teachings.- committed to being approachable, sensitive, and non-threatening educators to enable Indigenous students to excel.- provisions such as the Elders program, counselling program, role modelling program,- a learning environment that embraces positive faculty–student interactions in which there is a caring, sensitive, and committed attitude serves as an incentive for student success.
Judgement	Throughout this article, references were repeatedly made to mentorship, which emphasises the significance of this domain within nursing education.

Table 7. Application of ANAC framework to: Factors shaping Aboriginal nursing students' experiences (Martin & Kipling, 2006)

Domain	Indicator or Judgement
<p>Domain: Postcolonial understanding</p>	<ul style="list-style-type: none"> - these Aboriginal nursing students were uncomfortable voicing their thoughts and feelings to Non-Aboriginal students and nurse educators. - unwitting insensitivity and/or lack of knowledge about the influences of colonialism and neo-colonialism were demonstrated as Non-Aboriginal peoples openly expressed viewpoints that Aboriginal peoples were all the same and had numerous resources available to them. - visible and non-visible Aboriginal nursing students observed and detected racism from individuals, groups, and processes within the schools, hospitals, and community placements - key informants reaffirmed how historical influences of colonialism and neo-colonialism on Aboriginal education continued to shape the disconnection experienced by both these nursing students and nurse educators. - minimal attentiveness to Aboriginal health care issues, nurse educators failed to facilitate nursing knowledge and culturally appropriate care for Aboriginal peoples - most faculty members acknowledged that they had limited preparation and experience teaching Aboriginal nursing students.
<p>Judgement</p>	<p>Throughout this article, references were repeatedly made to postcolonialism, which emphasises the significance of this domain within nursing education.</p>

<p>Domain: Communication</p>	<ul style="list-style-type: none"> - face-to-face interviews with Aboriginal nursing students - Because of different explanatory models interplaying in nursing knowledge and practice, faculty members were unable to convey their messages and expectations in an understandable manner to Aboriginal nursing students.
<p>Judgement</p>	<p>Although communication was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.</p>
<p>Domain: Inclusivity</p>	<ul style="list-style-type: none"> - another study incorporating fieldwork in clinical and community sites is warranted. By incorporating aspects of Aboriginal epistemology into pedagogy and curriculum, nursing education will broaden its scope and capability of providing more inclusive education - recommend that nurse educators collaborate with Aboriginal students, nurses, agencies, and communities to develop a contextual foundation in curriculum development and instructional design. - nurse educators recognized that they required new information and new strategies to connect more meaningfully with these students.
<p>Judgement</p>	<p>Throughout this article, references were repeatedly made to mentorship, which emphasises the significance of this domain within nursing education.</p>

Domain: Indigenous knowledge	- None
Judgement	Indigenous knowledge was not addressed in this article and the ANAC framework suggests this domain needs to be a key element within nursing education.
Domain: Mentoring and supporting students for success	<ul style="list-style-type: none"> - intergroup relations were mired with misunderstandings of equality, fairness, and equity - future nursing research is required to identify how different explanatory models influence student-teacher relationships - formal mentorship programs may enhance Aboriginal nursing students' experiences as most identified that they acquired social and academic support from their peers.
Judgement	Throughout this article, references were repeatedly made to mentorship, which emphasises the significance of this domain within nursing education.

Table 8. Application of ANAC framework to: Mmawoh kamtowin, "Coming together to help each other in wellness": Honouring Indigenous nursing knowledge (Bearskin et al., 2016)

Domain	Indicator or Judgement
<p>Domain: Postcolonial understanding</p>	<ul style="list-style-type: none"> - “We’ve tried so hard to spray our Indianness away just to get by and fit in.” - drawing attention to the interlocking policies of practice and revealing how detrimental Western ways of knowing and being had been inscribed into the flesh of people she worked with - [she] showed me was how nursing’s traditional teaching and learning approaches harmed some Indigenous nurse trainees, because traditional nursing education has not been grounded in the historical context in which Indigenous people live - to counteract the terror of lived residential school experience that affected the people she nursed - “We have become unknown citizens in our own lands, and we have to just keep walking.” - this history of trauma is recognized as factual and historical in Canada - as a Cree/Métis woman who has survived life experiences rooted in violence, residential school, and the child welfare system, and who lives with the effects of intergenerational trauma, I continue to witness many forms of violence that First Nations, Inuit, and Métis Peoples experience - have undertaken nursing practice, regardless of the systemic and historical barriers they faced in providing healthcare for Indigenous people
<p>Judgement</p>	<p>Throughout this article, references were repeatedly made to postcolonialism, which emphasises the significance of this domain within nursing education.</p>

Domain: Communication	<ul style="list-style-type: none">- process of analysis involved a constant movement back and forth from the written text to the shared thoughts and words of the Indigenous nurse scholars- the Indigenous nurses became actively involved through various circles of conversation in generating, positing, sorting, questioning, understanding, and recontextualizing the data in ways that supported my constant assessment of the relationship and connections between emerging knowledge- a combination of protocols, data collection methods, and analysis techniques were used, including participant observation, self-reflexive writing, one-on-one conversations, and research circles of understanding.- a combination of protocols, data collection methods, and analysis techniques were used, including participant observation, self-reflexive writing, one-on-one conversations, and research circles of understanding- I was able to draw on traditional knowledge embedded within key words, and I began to accurately and critically examine the significance of Cree/Métis teachings in my inquiry on Indigenous nursing practice- understanding natural law and relational nursing practice requires attributes that stem from resiliency and strength. It is our duty as Indigenous nurses to be of service and to be responsive to the suffering
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Judgement	Throughout this article, references were repeatedly made to communication, which emphasises the significance of this domain within nursing education
Domain: Inclusivity	<ul style="list-style-type: none"> - the entire community educates nurses, so education comes from a lived experience perspective. This provides a more realistic picture for nurses and student nurses about resiliency and strength among community members, often providing many examples of how power dynamics in relational nursing practice can be neutralized so that clients are driving their own healing and healthcare services delivery - meaning of family as if we “are one,” all related by one bond, one tribe, one Nation, one Mother Earth, this notion of oneness helped me situate the importance of human-centered practice - Indigenous knowledge as well as her advanced nursing knowledge helped her to survive the harsh northern situation of remoteness and limited access to healthcare services. - to learn and to understand what Indigenous nursing knowledge consists of and how this knowledge is infused into the practices of nursing as a means to facilitate and create healing and wellness
Judgement	Throughout this article, references were repeatedly made to communication, which emphasises the significance of this domain within nursing education
Domain: Indigenous knowledge	<ul style="list-style-type: none"> - Indigenous knowledge is inherent in Indigenous ways of being, knowing, and doing; that it can be understood as the anchor that supports the capacity of First Nations, Inuit, and Métis Peoples to lift

	<p>up the work of our Indigenous nursing leaders and sustain health and wellness of Indigenous communities</p> <ul style="list-style-type: none">- mutual reciprocity is honored for the purposes of understanding the spectrum of Indigenous nursing knowledge- in recognizing the attributes and efficiency of “old” knowledge, the Indigenous nurse scholars support the creation of “new” knowledge as a means of improving the understanding of nursing services in Indigenous communities- I had learned was to value the knowledge found in the faces, spaces, and places of Indigeneity. One knowledge system must not be valued over another. We are all part of the human race, and each of us has a unique perspective and context in which we can flourish and contribute to world health- invitation to the village helped me to center my thinking on nursing education and the role of the community in education.- the circularity of knowledge because if knowledge comes from the wisdom and experiences of the people, then memory takes us back to the beginning of knowledge development- recognizes that Indigenous people do not learned Indigenous knowledge from books, but from other people, and through dreams, visions, and genetic memory- over the years she became skilled in ways to ground her nursing care in her own traditional healing knowledge systems.
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	<ul style="list-style-type: none"> - key understandings and meanings of Indigeneity as a way of being. - Indigenous knowledge has always been fundamental to the ways that these Indigenous nurses have undertaken nursing practice, regardless of the systemic and
Judgement	Throughout this article, references were repeatedly made to Indigenous knowledge, which emphasises the significance of this domain within nursing education.
Domain: Mentoring and supporting students for success	- Their families nurtured their spirits so that their backbones became strong. They learned to share their gifts so that the far-reaching branches of knowledge could take root in the minds and hearts of others.
Judgement	Although mentorship was briefly addressed during this article, the ANAC framework suggests this domain needs to be a key element within nursing education, which was not well supported.

Results

Although 1417 articles were screened for this scoping review, only four articles met the inclusion criteria. Each of these articles addressed three to four domains of ANAC's (2009) framework, and no study met all five domains: postcolonial understanding, communication, inclusivity, and Indigenous knowledge, and mentorship/ supporting student success. Except for Martin & Kipling (2006) study, each article partially addressed the five domains. To further this discussion, I include a summary of each article in relation to this framework.

Since Indigenous nursing knowledge is developed between Indigenous peoples, it is through Indigenous nurses that this unique body of knowledge is shared. In Bearskin et al.'s (2011) article, authors reflect on the interrelated nature of their identity as Indigenous peoples and nurses. The developing relationships between researchers is utilized to explore these personal reflections, addressing the communication domain. Indigenous nurses share cultural experiences that center their values, providing the foundations for their nursing practice. One nurse described mentorship as an innate characteristic of her culture because her friends and family shaped her as a nurse. Inclusivity is deeply intertwined within this article, as Indigenous nursing is described as a lived experience that effects all domains of care. Bearskin et al. (2011) describe how Indigenous nursing knowledge helps Indigenous nurses and Indigenous peoples move forward through historical and ongoing trauma. However, these authors also emphasize that Indigenous and Western knowledge each bring unique elements that are essential to nursing practice, supporting holistic cultural safety (Bearskin et al., 2011). This article provides a key understanding of the unique nature of Indigenous nursing knowledge, as well as suggests an appropriate means of sharing in this body of knowledge – through the lived experiences of Indigenous

peoples. For non-Indigenous students, engaging with Indigenous nurses may provide an opportunity to begin to develop their practice in ways that support the well-being of Indigenous peoples.

Canada has a dark history regarding the abuse and attempted assimilation of Indigenous peoples. Martin & Kipling (2006) describe a perpetuated cycle of postcolonialism. Their article thoroughly analyzes the detrimental effects of postcolonialism for Indigenous nursing students. Misperceptions about preferential supports provided to Indigenous nursing students contribute to difficulties developing relationships with faculty and other students (Martin & Kipling, 2006). This suggests the importance of communication in supporting Indigenous knowledge and culture. While nursing educators acknowledged the need for more information to support their Indigenous students, the curriculum itself did not address Indigenous healthcare, or strategies for establishing cultural inclusivity in nursing practice (Martin & Kipling, 2006). Inclusivity was not found in these schools because Indigenous knowledge was neither valued nor considered an element of nursing practice. Additionally, Martin & Kipling (2006)'s study indicated that most Indigenous students felt excluded and alienated. In this article, Indigenous knowledge was not supported, and the impacts on Indigenous students was stifling because these students were denied the right to feel safe expressing their cultural identities in the classroom and nursing practice. Although Martin & Kipling (2006) provide strategies for how to improve detrimental learning environments through collaboration with Indigenous peoples and mentorship programs, their study creates a very challenging perspective on the realities of addressing the Indigenization of nursing education.

Cultural competence and cultural safety are two core components to creating supportive environments. Rowan et al. (2012) address postcolonialism to understand the challenges facing Indigenizing Canadian nursing curricula, such as

insufficient funding and the shortage of Indigenous nurses. However, many nursing schools still engage in activities to counteract these challenges. Support groups for Indigenous students as well as policies and committees were commonly utilized by nursing schools to introduce and maintain cultural competence and safety (Rowan et al., 2012). Through creating policy, schools endeavoured to create an environment that supported cultural competence and safety for all students. Immersion experiences were addressed as a manner of allowing students to be introduced to different cultures (Rowan et al., 2012). In all environments, Indigenous cultures were shown as valuable.

Supporting Indigenization begins by establishing an on-campus culture of inclusivity. Zeran (2016) describes the efforts of one university to engage Indigenous and non-Indigenous nursing students in learning about Indigenous knowledge. Postcolonialism contributed to the design of the nursing program described by Zeran (2016), which influences how courses are taught, as well as the availability of courses related to Indigenous history, culture, and health. Less formalized opportunities to understand Indigenous knowledge includes the involvement of Elders as guest speakers (Zeran, 2016). Through these various experiences, inclusivity is supported as students engage in learning that articulates Indigenous knowledge as a fundamental aspect of nursing knowledge. Zeran (2016) also articulates the value of both Indigenous and Western knowledge within education as it increases the students' exposure to alternative perspectives and ways of being to support their competence as nurses. This school of nursing provides models a future in which nursing curricula holistically embraces Indigenization.

Other literature not included in review process provided a richer depth to the discussion of Indigenization in Canadian nursing schools. Edgecombe and Robertson (2016) and Martin and Kipling (2006) describe faculty or student

engagement with the introduction of Indigenous knowledge and ways of being in nursing curricula. Grey literature often focussed on the interest of nursing students in actively seeking opportunities to be engaged in having Indigenous knowledge in their academic experiences. For example, Martin, Mordoch and Rieger (2016) describes a student-led event to recognize Orange Shirt Day and commemorate the event through the creation of graffiti wall art that captured words and images inspired by the stories of residential school survivors. Some articles reinforced the importance of nursing students experiencing cultural immersion through engaging in traditional practices or Indigenous clinical settings (Mahara, Duncan, Whyte, & Brown, 2011; Pijl-Zieber & Hagen, 2011). Formal education emphasizing Indigenous history, culture, and health is reiterated by Pijl-Zieber and Hagen (2011). Utilizing the wisdom of elders was a common theme echoed in grey literature as well as concept papers (Edgecombe & Robertson, 2016; Kulig & Lamb, 2009; Mahara et al., 2011). The development of access programs for Indigenous students to promote the inclusion of Indigenous knowledge and culture through their presence and shared experiences with peers and instructors was echoed by many articles (Arnault-Pelletier, Brown, Desjarlais & McBeth, 2006; Edgecombe & Robertson, 2016; Kulig & Lamb, 2009; Labun, 2002; Moffitt, 2016; Pijl-Zieber & Hagen 2010). Currently, there is a movement that embraces the concepts of postcolonialism, communication, inclusivity, Indigenous knowledge, and mentorship; however, much of this change has yet to make it to the research.

Limitations

To account for selection bias, two reviewers were utilized as per the Arksey and O'Malley (2005) framework. However, some selection bias may exist: due to the limited pool of Indigenous nurse researchers, an article written by the secondary reviewer Dr. Bourque-Bearskin was included in this study. Only

four articles were selected according to the specific search parameter of this study, which may have excluded some studies that contribute to the understanding of this topic, such as international research that may also inform the importance and relevance of Indigenous knowledge in Canadian BScN education. Since this was a scoping review, it does not assess the rigor of evidence; thus, the quality of included studies is not known, and the findings of this study are not generalizable.

Discussion

Four themes became evident during the full text-review of this study: valuing Indigenous voices, Indigenous and Western intersectionality, the lived experience of Indigeneity, as well as barriers to Indigenizing nursing education. Each of these factors contributed to an understanding of how Indigenous knowledge contributes to the development of supportive learning environments. While more exploration is required, these articles provide direction to understanding how to answer the TRC's Call to Action (2012).

Though a single voice may sometimes be ignored, a collective voice is difficult to silence. For Indigenous nurses and nursing students, the presence and strength of Indigenous voices has acted as an anchor for their practice (Bearskin et al., 2016; Zeran, 2016). Finding connections between cultural origins and nursing practice enhance the learning of Indigenous nursing students. At some institutions, the opportunity to provide curriculum feedback has engaged nursing student voices (Rowan et al., 2013). Through this forum, Indigenous students provide feedback about how they feel cultural competence and safety have been addressed in their nursing education. A policy to support the retention and prevent attrition of Indigenous nursing students also ensures that Indigenous voices are included within nursing programs (Rowan et al., 2013). In Manitoba, one school of nursing offers a mandatory course that introduces learners to traditional

Indigenous knowledge and practices (Zeran, 2016). Thus, non-Indigenous students are also able to initiate an understanding of the relevance of Indigenized nursing. By acknowledging the significance of Indigenous voices within nursing programs, a safe space is created that supports the learning of all nursing students.

Indigenous and Western knowledge have often been perceived as existing on opposite ends of a spectrum. However, Bearskin et al. (2016) emphasizes the balance between Western and Indigenous knowledge within nursing practice, which is echoed by Zeran (2016). Instead of being viewed as opposites, they can be perceived as complimentary elements that support holistic nursing practice. Zeran (2016) describes achieving such a balance through involving a council of elders in academic development. In addition, elective courses are offered that assist students in understanding Indigenous and Western ways of knowing (Zeran, 2016). While the ideal of TRC's (2012) recommendation to ensure health education specifically addresses Indigenous history and health disparities has not yet been met, Rowan et al. (2013) discuss the successful efforts of many nursing schools to incorporate elements of cultural competence and safety. Yet, learning Indigenous knowledge and ways of beings requires more learning than the typical classroom education provides.

An essential aspect of understanding Indigenous nursing knowledge requires a holistic understanding of the values, traditions, and ways of being of Indigenous nurses. Belonging to an Indigenous culture shapes who people are as nurses and how they learn (Bearskin et al., 2016). For Indigenous nursing students, learning their identity as Indigenous peoples is a lifelong endeavour, supported by their community, which is difficult to re-enact for non-Indigenous nursing students. Bearskin et al. (2016), Rowan et al. (2013), and Zeran (2016) describe the importance of Indigenous knowledge as experiential. Through the presence of elders, Aboriginal Centres, and in-class sharing circles, traditional

practices are available for both Indigenous and non-Indigenous students to explore (Zeran, 2016). Themes of cultural safety and competence included from the first to final years of schooling also support this style of experiential learning, in addition to presentations and Indigenous clinical placements (Rowan et al., 2013). Through immersing in Indigenous nursing knowledge throughout their education, students are provided with opportunities to gain a complex understanding of the value of Indigenized nursing. However, myriad barriers still exist that challenge the Indigenization of nursing programs.

On both individual and systemic levels, challenges exist to supporting the Indigenization of Canadian schools of nursing. Financial barriers act on both levels. Indigenous students often face financial limitations that challenge their ability to pursue a nursing education and/or create situations that act as restraining factors to achieving academic success (Martin & Kipling, 2006). Systemically, nursing schools often lack funding to incorporate cultural safety and competence or Indigenous knowledge, even when these concepts are valued by members of the institution (Rowan et al., 2013). Postcolonialism is a systemic level issue that also has individual impacts because it is still evident in both nursing schools (Martin & Kipling, 2006) and communities (Bearskin et al., 2016). Other factors such as decreased availability of social support networks and differences between Indigenous and Western values that create cultural tension are additional barriers experienced by Indigenous nursing students (Martin & Kipling, 2006). The culmination of these factors challenges nursing programs to retain Indigenous voices, promote intersectionality, and create opportunities for sharing Indigenous lived experiences.

Conclusions

Although there were limited articles regarding Indigenous knowledge and healthcare professionals, there was a great degree of variety in populations selected, from dental hygienists to physiotherapists, physicians, and nurses, which indicates an evolving trend of cultural competence in the healthcare field. In this paper, I engaged in a scoping review to learn the extent of research evidence that informs how Indigenous knowledge in classroom or clinical settings impacts the learning of BScN students. My review suggested that incorporating Indigenous knowledge has the potential to change how individuals think and practice as nursing students, as well as addresses the ways in which Indigenization has begun to develop across Canadian nursing schools. In the future, I recommend that studies focus on the student voice to understand how the incorporation of Indigenous knowledge impacts student nursing practice and ways of being. Both Indigenous and non-Indigenous students and instructors alike are currently acting as advocates to promote the incorporating of Indigenous knowing within Canadian nursing curricula. From the prevalence of this conversation across grey, concept, and research articles, it is evident that there is interest and passion for Indigenizing Canadian nursing schools and answering the TRC's (2012) Call to Action.

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Appendix I: Search strings

1 (“student nurse” OR “nursing student” AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

2 (“nursing school” OR “school of nursing”) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

3 decolon* AND (“student nurse” OR “nursing student”) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

4 decolon* AND (“nursing school” OR “school of nursing”) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus)

AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND
Canad*

5 decolon* AND nurs* AND (educ* OR course OR class OR clinic* OR
practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal
OR Metis OR Inuit OR “First Nations”) AND Canad*

6 nurs* AND decolon* AND (Indigen* OR Aboriginal OR Metis OR Inuit OR
“First Nations”) AND Canad*

7 indig* AND nursing AND knowledge

8 ("nursing curricula" OR "nursing program") AND (Indigen* OR Aboriginal
OR Metis OR Inuit OR “First Nations”) AND Canad*

9 (“student nurse” OR “nursing student”) AND (know* OR “way of being”)
AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND
Canad*

10 (“nursing school” OR “school of nursing”) AND (know* OR “way of being”)
AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND
Canad*

11 (“student nurse” OR “nursing student) AND (perce* OR feel* OR interp* OR
understand*) AND (educ* OR course OR class OR clinic* OR practice* OR
curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR
Inuit OR “First Nations”) AND Canad*

12 (“nursing school” OR “school of nursing”) AND (perce* OR feel* OR interp*
OR understand*) AND (educ* OR course OR class OR clinic* OR practice* OR

curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

13 (“student nurse” OR “nursing student”) AND (chang* or infl* or impact* OR alter*) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

14 (“nursing school” OR “school of nursing”) AND (chang* or infl* or impact* OR alter*) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

15 (“student nurse” OR “nursing student”) AND (“cultural competency” OR “cultural safety”) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

16 (“nursing school” OR “school of nursing”) AND (“cultural competency” OR “cultural safety”) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

17 "nursing education (Higher)" AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

18 (“student nurse” OR “nursing student”) AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (“cultural competency” OR “cultural safety”) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

19 (“nursing school” OR “school of nursing AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (“cultural

competency” OR “cultural safety”) AND (Indigen* OR Aboriginal OR Métis OR Inuit OR “First Nations”) AND Canad*

20 nurs* AND (educ* OR course OR class OR clinic* OR practice* OR curricul* OR program OR syllabus) AND (“cultural competency” OR “cultural safety”) AND (Indigen* OR Aboriginal OR Metis OR Inuit) AND Canad*