The Impact of Indigenous Cultural-Safety Education Programs:
A Literature Review

by
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ABSTRACT

*Background:* Indigenous-awareness education programs have been implemented in healthcare organizations to improve culturally-safe healthcare practices across Canada. Although many education programs have supported healthcare providers to understand cultural-safety, it is also important to evaluate these programs and ensure that cultural-safety knowledge is translated effectively into practice with Indigenous peoples.

*Methods:* Five systematic reviews were initially identified through a scoping review to understand the current body of evidence on cultural-safety education. Using systematic methods, a review was then conducted to identify evaluations of cultural-safety education programs that incorporated quantitative methods and were published in academic journals between 2009 and 2019. Medline, CINAHL, and PsycINFO databases were used. In total, 215 studies were identified and screened; full text articles were assessed for 27 studies; 14 studies that met all inclusion criteria were then selected for final review.

*Results:* Five systematic reviews found variability in evaluation methods, pedagogical approaches, and student experiences and outcomes across studies that evaluated cultural-safety education interventions. The overall quality of the 14 included studies was fair, encompassing pre-post, cross-sectional and longitudinal quantitative designs, as well as mixed methods using qualitative components in some cases. A number of evaluation tools were used to report on outcomes related to culturally-safe practices. Across the studies, outcomes were described in knowledge, attitudes, perceptions, confidence, communication, collaboration, empathy, cultural competency, cultural capability, “cultural desire” and student engagement with Indigenous health opportunities. Changes in participant behaviour and practice were also described through the educational outcomes summarized. This review contributes to the literature by comparing quantitative outcomes across the available studies, and by summarizing Indigenous methods and teaching where these were available.

*Discussion:* Cultural-safety education evaluations have been previously criticized for their lack of rigour. As the studies included in this review did not use the most rigorous designs, more research using randomized controlled trials is needed to assess the impact of cultural-safety education, including how knowledge is applied in practice. Future studies could also make more use of qualitative techniques, as seen in the mixed-method studies summarized in this review, to examine how participants may reflect and critically examine their roles in creating culturally-safe environments for Indigenous people.

*Conclusions:* For all healthcare providers, learning how to provide culturally-safe care with Indigenous patients is a lifelong journey. Future research should explore and support Indigenous-led approaches in developing new interventions and evaluation measures. Academic and healthcare institutions also need to ensure that students and providers are not only equipped with knowledge about cultural-safety but also able to apply their knowledge to improve the healthcare experiences of Indigenous patients.

*Keywords:* Cultural-safety; cultural competency; Indigenous; education; evaluation
ACKNOWLEDGEMENTS

I respectfully acknowledge that I have written this paper on the traditional and unceded territories of the xʷməθkwəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish), Sel̓íl̓witulh (Tsleil-Waututh), and Kwikwé̓l̓əm (Kwikwetlem). It has been an honour to learn from the resilience of the Coast Salish peoples who are stewards of the land and who have resisted historical and modern colonialism. I also recognize the Kwantlen First Nations and Métis Nation, on whose lands I was born and currently live.

Thank you to Dr. Charlotte Waddell, Mr. Vishal Jain, and the Fraser Health Aboriginal Health Team for accompanying me on this learning journey, one that has had a profound effect on my life, personally and professionally. I appreciate your encouragement and support, especially throughout obstacles I encountered. Thank you to Simon Fraser University’s Faculty of Health Sciences staff for providing an engaging space for learning and growth.

Lastly, thank you to my husband, Julian, family, friends, Master of Public Health (MPH) peers, and colleagues, for supporting me and uplifting me throughout this journey. You were all a source of light and inspiration when I needed it most.
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INTRODUCTION

Indigenous peoples around the world have endured and resisted consequences resulting from colonization, including health and social inequities. Adverse health outcomes have been arisen from the historical loss of traditional lands, languages, leadership and traditions (Mills, Creedy, and West, 2018). Throughout this history, weaknesses and complexities within the Canadian healthcare system have also influenced Indigenous peoples’ health and well-being (Greenwood, 2019). For example, Indigenous people have reported many experiences of racism at the healthcare service delivery level (Allan and Smylie, 2015). The onus is therefore on healthcare policymakers, authorities and practitioners to integrate Indigenous perspectives (O’Neil et al., 2016) and to transform healthcare systems and services to establish culturally-safe environments and the provision of culturally-safe care (Greenwood, 2019).

In response to the Truth and Reconciliation Commission of Canada (TRCC), various education programs have been implemented across healthcare organizations to improve culturally-safe practices in Canada (2015). Cultural-safety is “an outcome based on respectful engagement that recognizes and strives to address power imbalances inherent in the healthcare system…where people feel safe when receiving care” (First Nations Health Authority, accessed 2019 February 12, p. 5). Yet the process whereby healthcare leaders and providers may learn about cultural-safety involves more than simply acquiring knowledge. Rather, understanding cultural-safety involves a deeper appreciation of the history of colonialism and its past and present influences on the health of Indigenous peoples (Guerra and Kurtz, 2017). This process includes the ability to translate knowledge into a process of building positive relationships with Indigenous people and communities, through which culturally-safe approaches are enacted to
reduce health inequities experienced by Indigenous people within the healthcare system (Guerra and Kurtz, 2017).

The TRCC’s recommendation 23 calls on all levels of government to provide cultural-competency education for all healthcare professionals (TRCC, 2015). To bring about changes in service delivery, Indigenous cultural-safety education has been offered to increase knowledge and awareness (Greenwood, 2019). One prominent local example is the San’yas Indigenous Cultural-Safety Course, which was developed by BC’s Provincial Health Services Authority in partnership with multiple individuals and organizations — as an online program to strengthen self-awareness and partnerships between service providers and Indigenous people (Provincial Health Services Authority, accessed 2019 February 12). Clinical placements and practicums have also been offered in many healthcare settings to provide students with first-hand experience in working and collaborating with Indigenous people, as they prepare to become practitioners or leaders (Isaacson, 2014).

Supporting healthcare providers to translate knowledge into practice is another phase of learning that requires additional strategies and support. Although many education programs have emphasized an increased understanding of cultural-safety, previous research has emphasized the importance of ensuring that knowledge is translated effectively into practice (McGough, Wynaden, and Wright, 2017). More specifically, McGough et al. have recommended that organizations work with Indigenous people to develop strategies that inform and empower staff to apply cultural-safety knowledge in practice (2017). As universities also embed cultural-safety education, it is imperative that initiatives are grounded in Indigenous knowledge (West et al., 2017).
Internationally, new studies have documented the importance of cultural-safety education for healthcare providers. A systematic review by Mills et al. discussed the diverse pedagogical approaches that have been used to teach Indigenous concepts and ways of knowing, including the diverse evaluation methods that have been used to measure outcomes (2018). A systematic review by Clifford et al., (2015) also discussed how evaluation methods assessing the impact that cultural-safety education has on Indigenous patient experiences and outcomes are inconsistent and need to be improved (Clifford et al., 2015).

Systematic reviews have also documented the lack of methodological rigour for evaluating education interventions and have noted that interventions have failed to support healthcare providers to apply their knowledge (Pitama, et al., 2018). Many education interventions have also failed to incorporate Indigenous perspectives in the design of evaluations (Pitama et al., 2018). Therefore, researchers have advocated for the development of Indigenous-led indicators and methods to measure cultural-safety across organizations (Muise, 2019).

This review contributes to the literature as quantitative outcomes will be individually described, Indigenous methods and teachings will be summarized, and components used in educational interventions will be compared. To further examine the impact of cultural-safety education and how it is evaluated, including its influence on healthcare provider practice, this review used systematic methods to: (1) identify and critically appraise published evaluations of cultural-safety education programs in Australia, New Zealand, Canada, and/or the United States (US); and (2) summarize the approaches used in these studies to support healthcare providers to put knowledge into practice, beyond just acquiring knowledge.
DEFINITIONS

Indigenous

“Indigenous” will be used to describe “individuals and collectives who consider themselves as being related to and/or having historical continuity with ‘First Peoples’, whose civilizations… predate those of subsequent invading or colonizing populations” (Allan and Smylie, 2015, p. 1). In this paper, “Indigenous” will interchangeably refer to First Peoples, First Nations, Métis, Inuit, Aboriginal, Torres Strait Islander, Māori and Native Americans — to allow discussion of studies from Australia, New Zealand, Canada, and the US, where these terms are used. Notably, however, no universal definition has yet been chosen or accepted to describe Indigenous peoples around the world (Barlett, Madriaga-Vignudo, O’Neil, Kuhnlein, 2007).

Cultural-Safety

“Cultural-safety” emerged as a concept in New Zealand from Ramsden, a Māori nurse, who recognized a pattern of discriminatory attitudes and practices in healthcare interactions. Ramsden conceptualized cultural-safety as addressing power relationships between healthcare providers and those receiving care, including the structural and institutional conditions in which these relationships occurred (Ellison-Loschmann, 2003). Ramsden explains how “the enactment of cultural-safety is about the nurse while, for the [patient], cultural-safety is a mechanism which allows the recipient of care to say whether or not the service is safe for them to approach and use. Safety is a subjective word deliberately chosen to give power to the consumer” (Ramsden, 2002, p.6). Thus, the healthcare provider’s role is to create an environment in which culturally-safe care can persist, yet the outcome of cultural-safety can only be determined by the patient’s experience.
In addition to cultural-safety, various terms have been created to describe how culture should be recognized within healthcare services, such as “cultural awareness”, “cultural sensitivity”, “cultural humility” and “cultural competency” (Brooks-Cleator, Phillips, and Giles, 2018). Emerging terms such as “cultural desire” and “cultural capability” have also been developed to place more emphasis on the motivation to be respectful of cultural diversity and the application of knowledge in healthcare delivery (West et al., 2016; Isaacs et al., 2017). The following working definitions will be used in this capstone:

- **Cultural Awareness:** Cultural awareness encompasses the understanding of cultural differences, values, beliefs and perceptions (Downing, Kowal, and Paradies, 2011).

- **Cultural Sensitivity:** Cultural sensitivity acknowledges the need to respect the diversity and differences among cultures and individuals (Brooks-Cleator, Phillips, and Giles, 2018).

- **Cultural Competency:** Cultural competency requires awareness, knowledge and skills so that cultural factors can be considered and managed in relation to healthcare services (Downing et al., 2011). Cultural competency also requires self-awareness and self-reflection (Downing et al., 2011).

- **Cultural Humility:** Cultural humility embodies self-reflection and self-awareness (Isaacson et al., 2017). It requires an understanding of “personal and systemic biases” and a commitment “to develop and maintain respectful processes and relationships based on mutual trust. Cultural humility involves humbly acknowledging oneself as a learner when it comes to understanding another’s experience” (First Nations Health Authority, accessed 12 February 2019, p.5).
• **Cultural Capability:** Cultural capability is an emerging notion that focuses on the future and the application of knowledge and skills in practice (West et al., 2017).

• **Cultural Desire:** “The desire to practice in a culturally-competent manner that motivates a healthcare professional to seek the knowledge [and] skills…of cultural competency” (Isaacs et al., 2016).

“Cultural safety” has recently been the preferred term for education programs due to its explicit emphasis on the power relations between service providers and users (Allan and Smylie, 2015). “Cultural safety” challenges the service provider to consider their role within this power dynamic and how it affects their ability to provide safe care and to foster safe environments (Allan and Smylie, 2015). For the purposes of this paper and to align with contemporary terminology, “cultural-safety” will be used interchangeably to encompass cultural competency, cultural sensitivity, cultural capability, cultural awareness, transcultural and cross-cultural.
METHODS

A literature review was conducted to identify studies on cultural-safety education programs in healthcare settings, including educational settings. Peer-reviewed papers describing empirical evaluations were identified using systematic review methods, and studies were critically appraised regarding the evaluation rigour and methods. Systematic reviews are comprehensive reviews of the literature “with the goal of reducing bias by identifying, appraising, and synthesizing all relevant studies on a particular topic” (Uman, 2011). Systematic review methods were therefore selected to explore variations in education practices and to highlight areas for new research in this field. The Cochrane Handbook for Systematic Reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement informed this review (Higgins and Green, 2011; Moher et al., 2009). The focus was also to critically examine studies that empirically evaluated cultural-safety education interventions. Therefore, a theoretical framework was not used to guide this review. Furthermore, a “full” systematic review typically requires a research team to verify searches and decisions throughout the review process. As this capstone was an individual project, systematic review methods were used to identify and critically appraise studies, but not all steps and team perspectives were incorporated that a full systematic review would require.

In undertaking this review of literature, I acknowledge that I am a non-Indigenous woman who was born and raised in a colonial setting. I understand that my lens and social position is accompanied by bias situated within colonial teachings and perspectives. Thus, I have approached this learning journey with self-reflection, carrying with me and privileging the important wisdom and teachings that I have learned from local Coast Salish peoples I have been honoured to encounter along the way. I have also learned from the review process of a previous
systematic review, conducted by a team of Indigenous and non-Indigenous researchers, who began by situating themselves within the space of their work and maintained a reflective and respectful approach while contributing to the review (Mills et al., 2018).

Prior to commencing this review, I conducted a scoping review of literature to understand the current body of evidence on cultural-safety education. Through searching CINAHL, Medline, PsycINFO, and Google Scholar, I identified four systematic reviews on cultural-safety interventions (Truong, Paradies, and Priest, 2014; Clifford et al., 2015) and cultural-safety education (Mills et al., 2018; Pitama et al., 2018) in healthcare. I also searched the Cochrane database and found one systematic review on cultural-safety education for health professionals (Horvat, et al., 2014). Systematic reviews were read to understand the scope of the literature and to identify where this literature review could make an added contribution. To ensure original studies were included in this review, the list of studies included in previous systematic reviews were also examined. Data sources from these systematic reviews were also reviewed to identify common databases searched and international search terms used, which informed the search strategy.

**Search Strategy**

The following databases were searched for this review: CINAHL, Medline and PsycINFO. Search terms included: (Indigenous OR Aboriginal OR Inuit OR Métis OR First Nations OR Torres Strait Islander OR Native Americans OR Maori) AND (randomized control OR trial OR evaluation OR survey) AND (cultural-safety OR cultural sensitivity OR cultural competency OR cultural awareness OR transcultural OR cross-cultural) AND (education OR education OR curriculum or learn*).
Searches were also limited to studies published in academic journals. Searches were also limited to the timeframe between 2009 to 2019 to capture recent studies and build upon previous systematic reviews (Truong et al., 2014; Clifford, et al., 2015; Pitama et al., 2018; Horvat et al., 2014; Mills et al., 2018). Five systematic reviews included literature from 2000 to 2017; however, only three reviews focused exclusively on Indigenous health studies. Many studies identified through this literature review were also captured in recent systematic reviews by Pitama et al. (2018) and Mills et al. (2018) but this review was able to capture findings from three studies (Muir-Cochrane et al., 2018; Svarc et al., 2018; Roche, 2014) that were not included in previous reviews.

**Inclusion and Exclusion Criteria**

The inclusion and exclusion criteria were applied while screening the titles and abstracts for 215 studies, which generated a shortlist of 21 articles (see Table 1). The inclusion and exclusion criteria were then applied while reviewing the full-text descriptions of the studies. As well, this cultural-safety review focused on studies that used quantitative evaluation methods to understand participant outcomes on a basic level. Given the time constraints of this capstone, qualitative studies were not included in this review. But given that Indigenous ways of knowing are incorporated in many qualitative methods, qualitative results from mixed study designs were also summarized.

Titles were screened and articles were excluded if they were not relevant to this topic. Abstracts of studies were manually examined and were included if they incorporated cultural-safety education for healthcare professionals or students and incorporated a quantitative evaluation method.
**Table 1. Inclusion and Exclusion Criteria**

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural-safety education implemented with healthcare staff or students</td>
<td>To understand the effect of cultural-safety education in healthcare practice</td>
</tr>
<tr>
<td>The study has implications for Indigenous health</td>
<td>To understand how to improve culturally-safe care for Indigenous patients</td>
</tr>
<tr>
<td>Evaluation of the intervention used quantitative methods and reported on results</td>
<td>To understand if educational interventions had impact on a basic level</td>
</tr>
<tr>
<td>Studies were published in peer-reviewed journals from 2009 to 2019</td>
<td>To incorporate recent studies and build upon previous systematic reviews</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exclusion Criteria</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The study did not evaluate the intervention after the education occurred or evaluation data were not reported</td>
<td>To understand the effect of the educational intervention on participants</td>
</tr>
<tr>
<td>The study only used qualitative methods to evaluate the education intervention</td>
<td>Time constraint of this capstone</td>
</tr>
</tbody>
</table>

Although RCTs are typically considered to be the gold standard for assessing the effectiveness of interventions, this review also took into consideration the strength of other research designs that incorporated Indigenous methods and perspectives. Therefore, longitudinal, mixed method, and pre-post study designs formed the basis for this review.

The searches yielded 289 studies, then 74 duplicates were removed (see Figure 1 for Preferred Reporting Items for Systematic Reviews and Meta-Analyses [PRISMA] flow diagram). Of the remaining 215 studies, 188 were excluded after reviewing titles and abstracts because they were not related to the topic or did not report empirical observations on the effects of cultural-safety education on healthcare providers (see Figure 1 for main reasons for exclusion). After reviewing the full text for remaining 27 studies and applying inclusion and exclusion criteria, 14 were included in this review. Two of the 14 were hand selected from scanning reference lists of included studies (Thackrah, Thompson, and Durey, 2015; Hunt et al.,
Reference lists from the identified systematic reviews were also searched; however, no additional studies were identified.

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flow Diagram
Assessment Criteria

Each study was assessed using a quality assessment scoring guide that was developed for this review (see Table 2). Longitudinal studies were weighted more heavily as they have more power over pre-post and cross-sectional surveys and can reveal patterns over time. As sample sizes varied for education evaluation studies, those with over 50 participants were awarded 1.0 point. To ensure bias was minimized, studies with response rates of greater than or equal to 50% for surveys and attrition rates of less than or equal to 20% for longitudinal studies were awarded 1.0 point. Various measures were used across each study. Therefore, if reliability and validity was calculated or reported, 0.5 points were awarded.

Table 2. Quality Assessment Criteria

<table>
<thead>
<tr>
<th>Quality assessment criteria</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Study design</td>
<td>Pre-post survey or cross-sectional survey</td>
</tr>
<tr>
<td></td>
<td>Post-survey only = 0</td>
</tr>
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<td></td>
<td>Pre-post survey = 0.5</td>
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<td></td>
<td>Pre-post survey + follow-up survey = 1</td>
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<tr>
<td></td>
<td>Longitudinal or randomized controlled trial</td>
</tr>
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<td></td>
<td>2</td>
</tr>
<tr>
<td>Sample size</td>
<td>n &lt; 20 participants</td>
</tr>
<tr>
<td></td>
<td>n = 20-50 participants</td>
</tr>
<tr>
<td></td>
<td>n &gt; 50 participants</td>
</tr>
<tr>
<td>Response rate for surveys</td>
<td>≤ 50%</td>
</tr>
<tr>
<td></td>
<td>≥ 50%</td>
</tr>
<tr>
<td>Attrition rate for longitudinal studies and randomized controlled trials</td>
<td>≥ 20%</td>
</tr>
<tr>
<td></td>
<td>≤ 20%</td>
</tr>
<tr>
<td>Documented reliability of a measure</td>
<td>Did not document for measures used</td>
</tr>
<tr>
<td></td>
<td>Documented for measures used</td>
</tr>
<tr>
<td>Documented validity of a measure</td>
<td>Did not document for measures used</td>
</tr>
<tr>
<td></td>
<td>Documented for measures used</td>
</tr>
<tr>
<td>Incorporated Indigenous perspectives and input into the</td>
<td>No</td>
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<tr>
<td></td>
<td>Yes</td>
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<tr>
<td>delivery or construction of the education intervention</td>
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<td>-------------------------------------------------------</td>
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<tr>
<td>Potential points (total)</td>
<td>7.0</td>
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<tr>
<th>Quality Rating</th>
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<tr>
<td>5.6-7.0</td>
<td>Very good</td>
</tr>
<tr>
<td>4.2-5.5</td>
<td>Good</td>
</tr>
<tr>
<td>2.8-4.1</td>
<td>Fair</td>
</tr>
<tr>
<td>1.4-2.7</td>
<td>Poor</td>
</tr>
<tr>
<td>0-1.3</td>
<td>Very Poor</td>
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RESULTS

This review built on previous systematic reviews on cultural-safety education (see Figure 2 for timeline of these reviews). Systematic reviews highlighted the variability of evaluation methods, pedagogical approaches, and student experiences and outcomes for cultural-safety education interventions (Pitama et al., 2018; Mills et al., 2018; Clifford et al., 2015). Three systematic reviews summarized and evaluated studies on cultural-safety education for health professionals and students with an Indigenous focus (Pitama et al., 2018; Mills et al., 2018; Clifford et al., 2015), while two focused on cultural-safety education as it relates to many cultures (Horvat et al., 2014; Truong et al., 2014).

Figure 2. Systematic Review Timeline

The overall quality of the previous systematic reviews was good. Search strategies, study selection, and study retrieval were comprehensive across all previous reviews. Data extraction
and analysis approaches were reported in all previous reviews. Tools such as the Medical Education Research Study Quality Instrument (MERSQI) and a quality checklist from health-evidence.org were also used to assess the comprehensiveness of study reporting and study quality (Pitama et al., 2018; Clifford et al., 2015). As RCTs are considered the gold standard for evaluating interventions, the systematic review by Horvat et al. (2014) was the highest quality as they only incorporated studies using this method. RCTs featured in Horvat et al. (2014) were not included in this review as the research did not have healthcare implications for Indigenous peoples. The remaining systematic reviews incorporated other quantitative, qualitative, and mixed method designs (Pitama et al., 2018; Mills et al., 2018; Truong, Paradies, and Priest, 2014; Clifford et al., 2015).

This capstone review differed from previous systematic reviews as quantitative education outcomes were individually summarized. This review also summarized Indigenous intervention methods such as talking circles, yarning circles, and storytelling that facilitated participants undergoing reflection and critical thinking, which were not summarized in previous systematic reviews. Furthermore, this review was the first to compare educational components (e.g., journaling, group discussion) across the studies. Given that systematic reviews by Horvat et al. (2014) and Truong et al. (2014) summarized cultural-safety interventions across many cultures, this capstone review aligned with more recent systematic reviews, which focused on evaluating cultural-safety education as it applied to Indigenous populations. This capstone review also fulfilled a recommendation by Clifford et al. (2015) to compare cultural-safety education learning methods (e.g., experiential learning, lectures) with participant outcomes.

A total of 14 studies met the inclusion criteria for this review: one longitudinal (Roche, 2014); two cross-sectional (Smith et al., 2015; Isaacs et al., 2016); four pre-post (West et al.,
and nine mixed methods, which included a pre-post or post-components (Isaacson, 2014; Hunt et al., 2015, Durey et al., 2017; Svarc et al., 2018; Fleming, Creedy, and West, 2017; Walton, 2011; Jamieson et al., 2016). Ten studies were based in Australia, three in the US, and one in Canada. As this review aimed to identify effective educational approaches, quantitative results from evaluations will be summarized in this section, as will qualitative results from mixed-methods studies.

Majority of the studies evaluated outcomes for healthcare students. Outcomes were evaluated for students in: nursing (Muir-Cochrane et al., 2018; Isaacson, 2014; Hunt et al., 2015; Isaacs et al., 2016; Walton, 2011); midwifery (West et al., 2017; Thackrah et al., 2015); pharmacy (Roche, 2014); medicine (Smith et al., 2015) and occupational therapy (Jamieson et al., 2016). One study evaluated outcomes for dietetics graduates (Svarc, 2018) and another evaluated outcomes for midwifery academics (Fleming et al., 2017). The two studies also evaluated staff outcomes across multiple health professions in hospital settings (Chapman et al., 2013; Durey et al., 2017).

In-class instruction was the dominant method of education delivery. Three studies also offered experiential learning opportunities in the form of clinical or practicum placements working directly with Indigenous communities and organizations (Smith et al., 2015; Isaacson, 2014; Svarc et al., 2018). As well, three studies incorporated virtual and/or online learning components (Muir-Cochrane et al., 2018; Thackrah et al., 2015; Roche, 2014). The study by Muir-Cochrane et al. (2018) used virtual tools as the primary mode of instruction. The study by Thackrah et al. (2015) incorporated the use of videos to deliver course curriculum; however, in-
class lectures were the main teaching method. The study by Roche (2014) allowed students to use web-conferencing to complete the course elective if they lived far away from the university.

*Table 3. Summary of Education Components*

<table>
<thead>
<tr>
<th>Study</th>
<th>In-class</th>
<th>Online</th>
<th>Placement/Practicum</th>
<th>Tutorials</th>
<th>Case Studies</th>
<th>Group Reflection</th>
<th>Journaling</th>
<th>Talking or Yarning Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>West et al. (2017)</td>
<td>X</td>
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<tr>
<td>Roche (2014)</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Smith et al. (2015)</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Chapman et al. (2013)</td>
<td>X</td>
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<td></td>
<td>X</td>
<td>X</td>
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<td></td>
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<tr>
<td>Muir-Cochrane et al. (2018)</td>
<td>X</td>
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<td>X</td>
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<td></td>
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<tr>
<td>Isaacson (2014)</td>
<td></td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Hunt et al. (2015)</td>
<td>X</td>
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<tr>
<td>Durey et al. (2017)</td>
<td>X</td>
<td></td>
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<td>X</td>
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<tr>
<td>Svarc et al. (2018)</td>
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<td>Isaacs et al. (2016)</td>
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<td>Jamieson et al. (2016)</td>
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<td>Walton (2011)</td>
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*Participants from Walton (2011) were given the opportunity to write a reflection paper.*
A systematic review by Pitama et al. (2018) noted the evolution of Indigenous involvement in course curricula, which historically did not incorporate such input or guidance. Privileging Indigenous voices by involving Indigenous teachers and having Indigenous people lead curriculum development was indicated across many of the studies included in other previous systematic reviews as well (Mills et al., 2018). Eleven of the 14 studies clearly reported the involvement of Indigenous academics, community members, leaders and healers, who led or assisted with the education. Four studies had Indigenous and non-Indigenous instructors co-facilitate (Roche, 2014; Thackrah et al., 2015; Fleming et al., 2017; Isaacs et al., 2016). As well, for one study, researchers consulted with Indigenous community members to ensure that resources they were using were culturally appropriate (Muir-Cochrane et al., 2018).

The 14 education interventions covered diverse content (see Table 6 in Appendix 1). Most interventions covered Indigenous history, health issues, social determinants of health, approaches to health and well-being, cultural-safety, cultural competency, racism and equity, among other topics. Many studies focused on providing knowledge from a local context, highlighting the unique challenges of Indigenous people in their community and/or country.

Studies evaluated a variety of outcomes using diverse tools that were previously developed or created for the purpose of the study. Across six studies, nine previously-developed tools were used to assess outcomes such as: self-rated knowledge on Indigenous people, cultural capability, engagement activity, confidence in working and interacting with Indigenous people, attitudes and perceptions towards Indigenous people, empathy, and self-rated cultural competence. Five studies used previously-developed tools with demonstrated reliability and/or validity (Chapman et al., 2013; Muir-Cochrane et al., 2018; Isaacson, 2014; Hunt et al., 2015; Fleming et al., 2017) (see Table 4). For one study by West et al. (2017), researchers developed
and validated their own tool, the Cultural Capability Measurement Tool, using a decolonizing process that privileged Indigenous values and perspectives (West et al., 2017). The remaining eight studies developed their own evaluation tools and were not validated.

Table 4. Summary of Tools Used for Evaluation

<table>
<thead>
<tr>
<th>Study</th>
<th>Instrument</th>
<th>Demonstrated Reliability and Validity</th>
<th>Description</th>
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<tbody>
<tr>
<td>West et al. (2016)</td>
<td>Cultural Capability Measurement Tool (CCT)</td>
<td>Construct validity and internal reliability</td>
<td>30-item tool that assesses level of cultural knowledge and skills</td>
</tr>
<tr>
<td>Chapman et al. (2013)</td>
<td>Area Human Resources Development/Population Health Survey of Participation in Aboriginal Awareness Education Workshop Tool (Mooney et al., 2005)</td>
<td>Face validity</td>
<td>Three sets of questions, including statements about Aboriginal people, assessment on familiarity with Aboriginal people, and attitudes toward Aboriginal people.</td>
</tr>
<tr>
<td>Muir-Cochrane et al. (2018)</td>
<td>Mental Health Nursing Clinical Confidence Scale (Bell et al., 1996)</td>
<td>Internal reliability</td>
<td>20-item self-report scale with psychometric properties. Tool was designed to assess student confidence pre- and post-clinical placement</td>
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<tr>
<td></td>
<td>Kiersma-Chen Empathy Scale (Kiersman et al., 2013)</td>
<td>Internal reliability</td>
<td>15-item instrument composed of cognitive and affective empathy domains</td>
</tr>
<tr>
<td></td>
<td>Cultural Competency Questionnaire (TPB-CCQ) (Levett-Jones et al., 2016)</td>
<td>Internal reliability</td>
<td>30-item instrument developed using Theory of Planned Behaviour, which examines behavioural control, subjective norms, and intention.</td>
</tr>
<tr>
<td>Isaacson (2014)</td>
<td>Inventory for Assessing the Process of Cultural Competence Among Health Care Professionals-Student Version (IAPCC-SV) (Campinha-Bacote, 2007)</td>
<td>Face validity and internal reliability</td>
<td>20-item instrument that measures cultural competence categories (proficient, competent, aware, and incompetent) and five constructs of cultural competence (desire, awareness, knowledge, skills, and encounters).</td>
</tr>
<tr>
<td>Hunt et al. (2015)</td>
<td>Attitude Towards Indigenous Australians</td>
<td>Internal reliability</td>
<td>18-item scale that measures negative attitudes related to collective guilt, empathy, and...</td>
</tr>
</tbody>
</table>
Scale (Pedersen et al., 2004) | racial resentment about Indigenous Australians.
---|---
Knowledge, Interest, and Confidence Scale (Pedersen et al., 2006) | Internal reliability | 3-item measure that determines self-reported knowledge, interest, and confidence working with Indigenous Australians.
Fleming et al. (2017) | Awareness of Cultural-safety Scale (Milne, Creedy, and West, 2016) | Internal reliability | 12-item scale developed a validated through a First Peoples expert group. Measures three factors: cultural application, cultural support, and cultural acknowledgement.

**Risk of bias**

Sampling bias may have been present for all studies that had a smaller sample size (West et al., 2016; Chapman et al., 2013; Muir-Cochrane et al., 2018; Thackrah et al., 2015; Isaacson, 2014; Fleming et al., 2017; Jamieson et al., 2016). Sampling bias may have also been present for students when outcomes were measured for only one professional group, such as nurses (Muir-Cochrane et al., 2018; Isaacson, 2014; Hunt et al., 2015; Isaacs et al., 2016), pharmacists (Roche, 2014), dieticians (Svarc et al., 2018), or midwives (West et al., 2016; Thackrah et al., 2015; Fleming et al., 2017). Furthermore, sampling bias may have occurred in studies involving students enrolled in mandatory courses (West et al., 2017). A research recruitment strategy by Thackrah et al. (2015), which involved researchers approaching potential participants, may also have appealed to midwifery students who were more willing to engage in conversation about Aboriginal health. In summary, the generalizability of results across multiple healthcare interprofessional/student groups may have been affected due to sampling bias.

Response bias may have been present across many of the studies given the characteristics of participants and education completion time. For example, in West et al.’s study (2017), response rate dropped from 77% to 30% at the post-test, a significant loss to follow-up. This may
have resulted because participants who already had positive attitudes towards Indigenous people were more likely to complete the post-survey. In Muir-Cochrane et al. (2018), meanwhile, quick completion of the course or completing the course during one time point may have been an indicator that students did not have adequate amount of time to engage with the material. Students completed four online guided learning journeys at their own pace, which were informed by real cases that captured elements from actual patient stories and required a few hours to complete (Muir-Cochrane et al., 2018). To counteract this form of bias, responses from 29 students who completed the guided learning journeys in under one hour or during one time point were excluded from their analysis (Muir-Cochrane et al., 2018).

In the study by West et al. (2017), response bias may have occurred as students were only given 12 minutes to complete the survey in class. First Peoples’ academics from the Cultural Capability Research Team developed and administered the survey (West et al., 2017). Prior to survey administration, the Cultural Capability Research Team also presented on the research project (West et al., 2017). Although administrators reinforced that the survey was not a test and was optional, participants may have felt urgency to complete the survey, which may have affected their responses (West et al., 2017). Consent to participate in the study was implied if students completed the survey and were asked to create their own identification code to maintain anonymity (West et al., 2017).

In Isaacson’s study (2014), participants were given the option to attend a cultural immersion experience (immersion group), compared to participants who did not have this opportunity (non-immersion group). The immersion group was expected to respond more positively given their interest in the cultural immersion experience. Indeed, participants in the immersion group reported significant increases in levels of cultural competency compared to the
non-immersion group (Isaacson, 2014). Response bias may have also occurred in Isaacson’s study, however, as the researcher knew the participants, which may have influenced the participants’ responses.

Recall bias may have also been present for some studies. In the study by Thackrah et al. (2015), post-survey participants were in their second and third year of university studies. They had to recall their experiences in the Aboriginal Health and Wellbeing Unit, which was a compulsory unit in their first year. The participants who completed the post-survey after their second and third year were less likely than first-year students who completed the survey immediately after the course to rate their knowledge on Aboriginal health as adequate or more than adequate (Thackrah et al., 2015).

**Quantitative Education Outcomes**

**Knowledge.** Increases in knowledge of history and contemporary health issues for Indigenous people was a significant outcome reported across many studies. Thackrah et al. (2015) reported a significant increase in knowledge about the issues facing Indigenous people. After a presentation on cultural-safety, occupational therapy students had increased knowledge scores regarding Aboriginal culture, the Indian Act (sic) and policies, residential schools, determinants of health, and health outcomes (Jamieson et al., 2016). Smith et al. (2015) reported increased confidence in explaining the connection between Indigenous history and health. After education, for example, participants were more likely to agree with statements that recognized the inequities Indigenous people face, such as lack of funding for healthcare (Smith et al., 2015). Hunt et al. (2015) also reported a significant increase in scores on knowledge, interest, and confidence in working with Australian Indigenous people. Furthermore, nursing students from one study were significantly more likely to identify the unique beliefs that an Indigenous person...
may have and the importance of incorporating spirituality and traditional practices into clinical guidelines and treatment (Walton, 2011).

Yet in the study by Fleming et al. (2017), scores increased related to self-assessed knowledge pertaining to cultural-safety but there was no statistical difference between the pre-survey and post-survey. Researchers posited that this was due to participants (midwifery academics) initially overestimating their knowledge on cultural safety and developing a more accurate view of their knowledge after critically reflecting on their own assumptions and knowledge through yarning circles (Fleming et al., 2017). Through yarning circles, participants had the opportunity as a group to “(a) explore their own culture, (b) acknowledge differences between cultures, (c) develop an understanding of the theory of power relations and politics of cultural-safety…and (d) gain an understanding of the experience of [First Peoples]”, including First Peoples midwifery students who they instructed (Fleming et al., 2017, p. 248).

**Attitudes, Perceptions and Confidence.** Improved attitudes and perceptions towards Indigenous peoples were a common outcome across many studies. Svarc et al. (2018) reported significantly improved attitudes towards Indigenous people and higher self-confidence in working with Indigenous people in a culturally-safe manner. Muir-Cochrane et al. (2018) also reported a significant increase in confidence after the education intervention was completed. In addition, Hunt et al. (2015) reported a decrease in negative attitudes towards Australian Indigenous peoples. Yet Fleming et al. found no significant difference for scores related to perceptions of racism, which may be due to the survey questions not being sensitive “to the process of change being undertaken by participants, or that participants had difficulty
recognizing racism” (2017, p. 250). Similarly, Chapman et al. (2014) reported no difference in attitude statements about Indigenous people.

**Communication.** Changes in confidence regarding communicating with Indigenous patients after cultural-safety education were reported across four studies (Thackrah et al., 2015; Durey et al., 2017; Svarc et al., 2018; Smith et al., 2015). Results demonstrated a significant increased perception of midwifery students’ capacity to communicate with Aboriginal patients after the completion of an Aboriginal health unit (Thackrah et al., 2015). Durey et al. (2017) also reported a significant increase in confidence with communication at the two-month follow-up survey after an Aboriginal and Torres Strait Islander workshop. Svarc et al. (2018) reported significantly less apprehension in interacting with Aboriginal people after Indigenous health placements. As well, Smith et al. (2015) reported increase confidence in communicating with Indigenous people after the cultural immersion experience. These findings were verified through pre-post and post surveys that were developed for the purpose of the research studies.

**Collaboration.** Only Durey et al. (2017) self-reported increased collaboration with Indigenous colleagues in delivering care to Indigenous patients.

**Empathy.** Only one study reported significant results for empathy. A significant increase in cognitive and affective empathy towards Indigenous was self-reported in Muir-Cochrane et al.’s study (2018).

**Advocacy.** Only one study, by Jamieson et al. (2016), showed self-reported increases in interest in advocacy and empowerment for Indigenous peoples.

**Cultural Competency.** Cultural competency results varied across studies. Isaacson (2014) reported a significant decrease in cultural competency levels for the immersion group
(n=8) and a significant increase in cultural competency levels for the non-immersion group (n=3). Yet Durey et al. (2017) reported significant increases in confidence with cultural competency items from post-survey completion to two-month follow-up.

**Cultural Capability.** West et al. (2017) reported a significant increase in cultural capability among student participants. Cultural capability is an emerging notion that focuses on the future and the application of knowledge and skills in practice (West et al., 2017). Cultural capability requires students to engage in life-long journey of learning and reflection (West et al., 2017) which encompasses values of respect, communication, safety and quality, advocacy, and reflection.

**Cultural Desire.** One study reported negative results for this variable as a result of cultural-safety education. Specifically, Isaacs et al. (2016) reported significantly lower cultural desire and lower odds of being interested in Aboriginal health among the group that completed the Aboriginal Health and Wellbeing Unit. Cultural desire is ‘the desire to practice in a culturally-competent manner that motivates a healthcare professional to seek the knowledge, skills, and encounters of cultural competency” (Isaacs et al., 2016). This result was unexpected given that these students had an opportunity to be exposed to Aboriginal health curriculum and be taught by Aboriginal lecturers. Although students reported a significant increase in their understanding of Aboriginal health, the unit may have not been taught in an effective manner and/or cultural desire may have been measured too early in a student’s learning journey (Isaacs et al., 2016). Isaacs et al. (2016) also mentioned that lower cultural desire may be attributed to some students ‘switching off” and not wanting to or not feeling comfortable to engage in discussion about Aboriginal health. Isaacs et al. also posited that students may have commenced
the unit with “romanticised notions of Aboriginal health but become disheartened when they learn of the reality that is not only confronting but frustrating” (2016, p. 94).

**Engagement Activities.** A longitudinal study by Roche (2014) employed a unique approach to evaluating the effect of cultural-safety education with pharmacy students by tracking engagement activities of 69 students over for 11 years (from 2003 to 2013). Rocher (2014) documented the various positions, applications, and advanced educational opportunities that students pursued as a result of a learning experience with two elective courses on contemporary Native American life. After completing the elective courses, 11 of the 69 students applied as US Public Health Service Junior Commissioned Officer Student Education and Externship Program and five students became Commission Corps officers, where they had the opportunity to work in economically- and geographically-diverse practice settings, including working with the Indian (sic) Health Service (IHS) and Native American communities (Roche, 2014). Furthermore, 43 of 69 students accepted one or more IHS placements, 17 applied for an IHS residence, and five accepted an IHS or tribal position (Roche, 2014). This study demonstrated the significant impact that a cultural immersion experience can have on the academic and career trajectories of health professionals in education.

**Qualitative Education Outcomes**

Seven mixed method studies incorporated qualitative data collection in the form of: open-ended questions (Hunt et al., 2015; Durey et al., 2017; Jamieson et al., 2016); reflective journals (Isaacson, 2014; Fleming et al., 2017); focus group interviews (Svarc et al., 2018); researcher notes (Fleming et al., 2017); and reflection papers (Walton, 2011). Qualitative data affirmed many of the quantitative findings. Qualitative data were also able to provide insight on the effect that education had on participants. Across the studies, there were various forms of learning that
provided an opportunity for group and self-reflection (see Table 3 for a summary of education components).

Understanding Indigenous history and how it has contributed to present-day health disparities for Indigenous peoples was an important realization for many participants (Hunt et al., 2015). Dietetic graduates from Svarc et al.’s study identified how learning about Indigenous history increased their empathy and cultural understanding (2018). An increased understanding of Indigenous culture and traditional practices also helped many participants recognize the resilience of Indigenous peoples (Hunt et al., 2015). Understanding history, furthermore, increased student awareness of how oppression, racism, marginalization, and disempowerment can significantly impact the quality of patient care (Hunt et al., 2015). In one study, as well, nursing students wrote a reflection paper based on a case study of a 42-year old Native American woman who was a dialysis patient (Walton, 2011). After participating in a presentation on cultural-safety, students expressed concern about being sensitive to their patient’s needs, which included considering family needs and ensuring space was provided for the Indigenous patient and/or their support network to integrate traditional practices before, after or during treatment sessions (Walton, 2011).

Self-awareness and recognizing one’s own biases were important learning experiences for many participants. In the study by Hunt et al. (2015), participants identified how they could develop their understanding of cultural-safety by beginning with awareness of one’s own cultural values and other’s values. Through learning directing from Indigenous peoples, dietetic graduates who completed an Indigenous health placement shared how the experience helped them identify unconscious biases (Svarc et al., 2018). In one study, researcher field notes revealed evidence of “open, honest discussion, trust, and a willingness to participate in
challenging discussions about their awareness of cultural-safety in First Peoples health contexts” (Fleming et al., 2017).

Many studies also identified examples of how healthcare providers could apply the knowledge they gained education in practice. One study — which incorporated open-ended questions in their pre, post, and 2-month follow-up surveys — found that participants experienced a shift from understanding cultural awareness and cultural sensitivity to practicing cultural safety (Durey et al., 2017). At pre-survey, participants viewed Indigenous peoples as homogenous, rather than diverse, noting negative stereotypes in their responses (Durey et al., 2017). After completing a workshop on factors related to delivering culturally-safe care for cancer patients, post-survey responses identified the need for health professionals to treat Indigenous patients with empathy and respect and identified how they could apply what they learned in practice (Durey et al., 2017). Two-months post-workshop, participants identified the importance of respectful communication and how important it was to avoid using medical jargon so that Indigenous patients could understand their healthcare instructions (Durey et al., 2017). Participants also shared how “they were less fearful of saying the wrong thing or saying nothing” and gained confidence and knowledge to help them build relationships with Indigenous patients (Durey et al., 2017, p. 10). Dietetic graduates who completed an Aboriginal health placement also shared how Indigenous people taught them how to interpret non-verbal communication and how to honour moments of silence during communication (Svarc et al., 2018).

A study by Svarc et al. (2018) conducted focus group interviews and identified four themes on how Indigenous health placements could prepare dietetic graduates to practice with Indigenous communities: (1) experiential learning; (2) breaking down stereotypes; (3) empathy through learning with Indigenous peoples; and (4) Indigenous health role models. Moreover,
occupational therapy students who completed Indigenous health education shared that they felt more competency with applying the knowledge they gained in their practice (Jamieson et al., 2016).

**Indigenous Methods and Teachings**

Across the studies, Indigenous methods and teachings influenced qualitative and quantitative outcomes. Indigenous methods and teachings also had the potential to transform learning experiences and support participants to reflect and critically examine their role in creating culturally-safe environments for patients.

Storytelling is a qualitative research method that is commonly used in Indigenous research. The act of storytelling is important in many Indigenous communities and provides a different method of engaging participants to share their experience (Drawson et al., 2017). Results from Muir-Cochrane et al. (2018) align with existing literature that supports the use of storytelling to engage students in their learning on cultural-safety. Nursing students shared how case studies that incorporated patient narratives allowed them to understand how one’s culture impacts and interweaves with their mental health (Muir-Cochrane et al., 2018). As the case studies incorporated patient narratives, students shared how their confidence increased in caring for patients with mental illness as they were able to engage with the case material as if they were treating a patient (Muir-Cochrane et al., 2018). Participants in the study by Smith et al. (2015) also highlighted the importance of incorporating storytelling in Indigenous health education as it can enable participants to understand first-hand the implications history has on Indigenous health outcomes.
To support students to critically reflect and gain deeper understanding, a series of five yarning circles were used in the study by Fleming et al. (2017). Yarning circles privilege Indigenous culture and voice and are considered a culturally-safe research method (Dean, 2010). Yarning circles are also a narrative interactive approach — a way to share stories, information, and knowledge across generations (Dean, 2010). Confidential talking circles were also used in Smith et al. (2015), providing participants with an opportunity to further reflect on what they had learned.
DISCUSSION

The aim of this literature review was to further examine the impact of cultural-safety education and how it is evaluated, including its influence on healthcare provider practice. Using systematic review methods, this review summarized 14 studies that reported outcomes related to culturally-safe practices: knowledge, attitudes, perceptions, confidence, communication, collaboration, empathy, cultural competency, cultural capability, cultural desire and engagement with Indigenous health opportunities. Changes in participant behaviour and practice were also captured across the studies. The overall quality of the 14 included studies was fair (ranging from poor to good) based on selected quality assessment criteria (see Table 5).

The quality of the included studies was a main limitation of this review. As the body of research on cultural-safety education evaluations is still developing, lower-quality designs, such as cross-sectional studies, had to be included in this review. As a result, sampling, response and recall bias may have been prevalent across the studies. Due to time constraints of this capstone, qualitative studies were not included, which was another limitation of this review. Qualitative studies could have provided rich insight on other Indigenous-informed methods, evaluations and tools. Future studies can incorporate more qualitative methods to enrich and affirm quantitative results. Future high-quality qualitative research should also be conducted to understand the perspectives of Indigenous patients on the effectiveness of educational interventions.

Implications for Future Evaluations

As most studies included in this review and previous systematic reviews did not follow participants for long time periods, future evaluations should employ long-term follow-up to assess the ongoing impact of cultural-safety education and how knowledge is applied in practice.
To improve future education evaluations, researchers should continue to publish measures that evaluate the impact Indigenous health education and that have been developed and validated by Indigenous people. These measures need to also be validated in larger, more diverse cohorts. As most studies included in this review reported education outcomes for students, it is also important for future evaluations to be conducted with healthcare staff who are currently practicing and holding leadership positions in healthcare institutions. Yet studies evaluating student outcomes demonstrate the importance of cultural-safety education early in one’s career journey as there were significant positive outcomes for healthcare students who encountered education at various points in their academic journey. Beyond student settings, studies included in this review also evaluated healthcare staff outcomes in emergency and oncology departments. But these studies did not specify the characteristics and ages of the patients they served. Therefore, future evaluations cultural-safety education should be conducted to understand how to improve health outcomes for Indigenous patients in all healthcare settings and across the life course.

Significant outcomes were reported for West et al.’s Cultural Capability Tool (CCT) (2017). In Australia, the Aboriginal and Torres Strait Islander Framework was developed to provide guidance on health curricula and support students to develop cultural capability (West et al., 2017). This framework describes five cultural capabilities: (1) respect, (2) communication, (3) safety and quality, (4) reflection, and (5) advocacy. These cultural capabilities were selected as they contribute to culturally-safe healthcare (West et al., 2017). Based on this framework, CCT’s development was led by First Peoples in Australia to help midwives “move beyond knowledge and understanding, to the transformation of their practice in becoming culturally capable health practitioners” (West et al., 2017, p. 239). West et al.’s study was the only one to
Therefore, future education should incorporate local Indigenous frameworks into the design of education and evaluation tools.

**Implications for Cultural-Safety Education**

Experiential learning, such as practicum and clinical placements, have been demonstrated to be the most influential learning method to transform behaviours and practice (Pitama et al., 2018). The three studies that incorporated experiential learning reported significant improvements in knowledge, attitudes and confidence in working with Indigenous patients (Smith et al., 2015; Isaacson, 2014; Svarc et al., 2018). Dietetic graduates expressed how much they benefited from witnessing their supervisor build rapport with Indigenous community members, which helped them understand how to build relationships and trust (Svarc et al., 2018). Therefore, cultural immersion or experiential learning opportunities, in the form of placements or practicums, show promise for future education.

Virtual and online education also show promise for future interventions. Using virtual learning methods can facilitate a “real-world” learning experience for participants using tools such as videos and podcasts (Muir-Cochrane et al., 2018). Students who completed guided learning journeys online expressed positive responses about the impact of the course on their personal lives and practice (Muir-Cochrane et al., 2018). Future education interventions should consider how to best incorporate the use of technology to increase and improve cultural-safety education opportunities.

Results from Muir-Cochrane et al. (2018) align with previous literature that supports the use of storytelling in curriculum. Incorporating patient stories and perspectives can improve
learning experiences for students entering the health work force (Muir-Cochrane et al., 2018). Especially within mental health practice, incorporating patient stories to foster empathy and awareness of others is important to improve the culturally-safe experiences of Indigenous patients (Muir-Cochrane et al., 2018). Therefore, future cultural-safety education interventions should incorporate storytelling sessions or create case studies based on patient stories to help participants engage with the education material.

Learning Indigenous history and culture from an Indigenous facilitator was found to be highly effective and valuable for participants (Svarc et al., 2018). Yarning circles were also led by an Indigenous person and used to share stories and perspectives (Fleming et al., 2017). Thus, the ability for Indigenous facilitators to incorporate Indigenous methods into education has the potential to further transform future learning experiences. Many studies also incorporated non-Indigenous teachers who co-facilitated education sessions. A systematic review by Mills et al. (2018) specified that having Indigenous instructors for cultural-safety education may not always be feasible as more educational opportunities are offered in the future. Therefore, it is imperative that Indigenous voices and perspectives inform future curriculum design and evaluation, especially when non-Indigenous teachers facilitate education sessions (Mills et al., 2018).

Many studies integrated a self-reflective component within education. Journaling as a data collection method was used to help students reflect (Roche, 2014; Isaacson, 2014). Through journaling, midwifery academics also expressed how they wanted yarning circles to continue as these helped support their growth in cultural-safety and their ability to reflect (Fleming et al., 2017). These studies demonstrate the importance of incorporating opportunities for reflection in cultural-safety education. Reflective components, such as journaling, can also be a method of data collection for future evaluations.
Yet future education interventions also need to consider and address the potential for harm and discomfort. One study by Isaacs et al. (2016) found the potential for the Aboriginal health unit to be harmful for nursing students given that lower cultural desire was an outcome. Nursing students who initially had pre-conceived notions about Aboriginal health, experienced more discomfort after they confronted the reality that many Aboriginal people face with their health (Isaacs et al., 2016, p. 94). Given that cultural desire needs to be learned over a lifetime, students may have also felt discomfort about becoming a more culturally-safe health provider because it may require them to change their attitudes — a process that takes time and may be challenging for some (Isaacs et al., 2016). Discomfort may have also been attributed to students’ inability to practice what they learned as the unit was all classroom-based (Isaacs et al., 2016).

Only three studies provided an opportunity for participants to self-identify as Indigenous (West et al., 2017; Hunt et al., 2015; Roche, 2014). Indigenous students or healthcare professionals may have participated in other evaluations; however, this was not clear across majority of the studies. This is a limitation that needs to be considered for the future education as cultural-safety education may not always be experienced as culturally-safe by Indigenous learners. Discussions about the history and impact of residential schools and colonial policies can also be triggering or re-traumatizing and can incite harmful comments from other participants (Churchill et al., 2017). Therefore, it would be helpful for future education facilitators to be aware of their audiences so that they can prevent and mitigate harmful situations and support Indigenous learners (Churchill et al., 2017). Future consideration can also be given on whether to require Indigenous learners to complete mandatory education on Indigenous health. Many Indigenous learners may already be familiar with the course material and instead, may want to invest their time in another area of learning.
Only one study, with occupational therapy students, reported that at the end of the education intervention, many students still felt that they had more to learn (Jamieson et al., 2016). This demonstrated the recognition of cultural-safety as an ongoing journey that requires constant learning, reflection and practice. Future education should help students realize the importance of embarking on this on-going journey early in their careers so that they can better develop in their awareness and practice of culturally-safe care.
CONCLUSIONS

Establishing a health workforce that can practice culturally-safe care is vital to address health inequities experienced by Indigenous people and to improve patient experiences (West et al., 2017). As noted by Greenwood: “For change to be real and transformative, all parties must enter into long-term relationships [with communities] based on genuine understanding, care, and respect that come from sharing time, space, and knowledge with one another” (2017, p. 185). Therefore, creating cultural-safe environments for Indigenous patients will require healthcare providers to undergo a lifelong journey of learning. Encountering cultural-safety education early — for students — is also crucial in developing future healthcare practitioners who are equipped to practice culturally-safe care. As well, for such transformation to have meaningful impact on Indigenous communities, change needs to be rooted in and to privilege Indigenous values, voices and experiences (Greenwood et al., 2017). Future research can support Indigenous-led approaches in order to conduct more rigorous evaluations and develop and validate evaluation tools and measures. Healthcare and academic institutions need to ensure that healthcare students and providers are not only equipped with cultural-safety knowledge but also able to apply their knowledge to improve the healthcare experiences of Indigenous patients. Last, to achieve transformation across healthcare systems, future education development, implementation and evaluation needs to be led by and needs to privilege the wisdom of Indigenous peoples around the world.
REFLECTION

As a Master of Public Health student, the past two years have been an incredible learning journey where I had the opportunity to challenge myself academically, professionally and personally. Using systematic review methods for this capstone project was particularly uncomfortable. My experience with these methods is scarce, which is why it was a challenge I knew I needed to embark on prior to completing this Master’s. This process helped me to better understand how to critically appraise various study methodologies. This experience also supported my learning with interpreting and summarizing quantitative data, which is an area of research that I do not have as much experience in. Most importantly, this project helped me understand the implications of research and interventions on the healthcare experiences of Indigenous peoples and communities, including the importance of advocating for Indigenous-led approaches in education and evaluation.

My practicum experience with Fraser Health’s Aboriginal Health team prompted my decision to select this topic. As it was my first experience fully immersing myself in the world of Aboriginal health, I was overwhelmed with how to apply my knowledge into practice that it paralyzed me from knowing what was the right or wrong thing to do. For example, throughout MPH courses, I have always learned how important it is to ensure we follow First Nation and Métis protocols when engaging organizations and communities. I kept thinking about all the steps I needed to follow and focused too much on perfecting my approach instead of jumping into the work and organically building relationships. As a non-Indigenous woman that was born and raised in the colonial setting of Canada, I had to challenge and dismantle biases and perceptions I was unaware I had. I had to lean into a space of discomfort to take a step back from my preconceived reality and piece together the full and true history of Indigenous peoples. I also had to become comfortable with being uncomfortable as I realized how much I needed to learn.

I wrestled with the notion of allyship as I wondered what it truly meant to be an ally to Indigenous peoples. I had the opportunity to sit down with Elders and various leaders and stakeholders who worked within Aboriginal Health. They taught me that allyship is manifested through action and is not an identity. Allyship is a lifelong journey where we need to constantly embody diversity, humility, positivity, bravery, gratitude, resiliency and many more.

Reflecting on my experience, I was inspired to think about a health provider’s learning journey and the barriers they may face in translating their knowledge into practice. One day, I came across an Indigenous Cultural-Safety (ICS) debrief circle session that was being hosted by Fraser Health’s Elder-in-Residence and an Aboriginal Health Liaison in Chilliwack. I spontaneously participated in the talking circle. This talking circle was a safe space reflect on what we learned from the ICS course and share any guilt, doubts and insecurities we had. The Elder taught us the importance of approaching everything we do with love and not fear. It was inspiring to witness healthcare staff around me move from a state of fear to love as they talked about how they could play a role in creating culturally-safe spaces for Indigenous patients.

Throughout my MPH journey, I have witnessed how Indigenous methods and teachings can transform learning experiences. I have learned how self-reflection can help one navigate through the labyrinth of discomfort and support them in becoming a better healthcare provider. Most importantly, I have realized that creating a culturally-safe healthcare system involves a lifelong journey of learning, reflection and practice.
REFERENCES


Canada.


## APPENDIX 1

### Table 5. Summary of Included Studies

<table>
<thead>
<tr>
<th>#</th>
<th>Intervention</th>
<th>Quality Score</th>
<th>Sample</th>
<th>Data Collection Methods</th>
<th>Critical Appraisal</th>
<th>Tools/ Measures Used</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>West et al. (2017)</td>
<td>5.0 (good)</td>
<td>n=38 Midwifery students (Australia)</td>
<td>Pre-post survey</td>
<td>Inquired about previous cultural-safety education. To counter small sample bias, researchers employed statistical processes and analysis to ensure rigour (e.g., high communalities and test-retest procedures for internal reliability). Sampling bias (chose students enrolled in the First Peoples’ course, therefore results may not be generalizable). Determined construct validity and internal reliability for tool developed.</td>
<td>Cultural Capability Measurement Tool (CCT)</td>
<td>Comparing pre-post survey results: ↑ self-rated knowledge of First Peoples history ↑ cultural capability (respect, communication, safety and quality, advocacy, and reflection)</td>
</tr>
<tr>
<td>2</td>
<td>Roche (2014)</td>
<td>5.0 (good)</td>
<td>n=69 Pharmacy students (United States)</td>
<td>Longitudinal (11 years)</td>
<td>Data was gathered for 100% of the students who completed the elective courses on Native American cultures and health from 2003 to 2013. Study tracked practicum placements and advanced educational opportunities pursued over 11 years. It was not clear if participated consented to data collection or if data was accessible through the University’s department. No measures were used as data was manually counted for each participant.</td>
<td>No measures were used as data was manually counted for each participant</td>
<td>◊ 11 applied for Junior Commissioned Officer Student Education and Externship Program and 5 became Commission Corps officers ◊ 43 accepted one or more Indian Health Service (IHS) placements ◊ 17 Applied for an IHS residence ◊ 5 students accepted an HIS or tribal position ◊ 3 pursued USPHS Commission</td>
</tr>
<tr>
<td>3</td>
<td>Smith et al. (2015)</td>
<td>4.5 (good)</td>
<td>n=271 Medical students (Australia)</td>
<td>Cross-sectional: Post-survey</td>
<td>Reliability and validity were not tested for evaluation survey. Study lacked statistical rigour and significance was not reported for results. Descriptive statistics were reported.</td>
<td>Evaluation questionnaires developed for the purpose of the study</td>
<td>◊ Able to identify their own cultural values and reactions ◊ Increase confidence in communicating with Indigenous people ◊ Increase confidence in explaining the connection between Indigenous history and health</td>
</tr>
<tr>
<td>4</td>
<td>Chapman et al. (2013)</td>
<td>3.5 (fair)</td>
<td>n=44 Emergency department staff (nurse, allied health, clerk, volunteer)</td>
<td>Pre-post Survey</td>
<td>Recall bias may have occurred as it was suspected that participants may have forgotten their responses from the pre-survey (surveys were completed six weeks apart). Many participants also selected “neutral” for responses to many questions, indicating response bias. Rigid wording was used for the</td>
<td>Area Human Resources Development/ Population Health Survey of Participation in Aboriginal Awareness Education Workshop Tool</td>
<td>Comparing pre-post survey results: ◊ More disagreement with statements on stereotype statements or common misconception ◊ No difference in attitude statements about Aboriginal people ◊ More participants responded that they would ask a patient if they are Indigenous rather than assume</td>
</tr>
</tbody>
</table>
questions, which could have also affected participant responses. Reliability and validity were not tested for the measures developed.

<table>
<thead>
<tr>
<th>Study</th>
<th>Publication Year</th>
<th>Rating</th>
<th>Sample Size</th>
<th>Study Details</th>
<th>Measures Used</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Muir-Cochrane et al. (2018)</td>
<td>3.5 (fair)</td>
<td>n=43 Nursing students (Australia)</td>
<td>Pre-post Survey</td>
<td>Mental Health Nursing Clinical Confidence Scale, Kiersma-Chen Empathy Scale, Cultural Competency Questionnaire</td>
<td>Comparing pre-post survey results: ↑ Increase in cognitive and affective empathy for “consumers” (patients) ↑ Increase in confidence with working with other cultures ↑ Increase in their attitudes towards other cultures ↑ Increase in intention related to cultural competency</td>
</tr>
<tr>
<td>6</td>
<td>Thackrah et al. (2015)</td>
<td>3.5 (fair)</td>
<td>n=44 Midwifery students (Australia)</td>
<td>Pre-post Survey (first year students) and Post-Survey (second- and third-year student)</td>
<td>Used pre-tested and validated items from past medical student questionnaires</td>
<td>Comparing pre-post survey results for first year students: ↑ Attitudes towards Indigenous people were more positive ↑ Increased student perceptions of their capacity to communicate with Aboriginal women and to listen to advice offered Comparing all post-unit responses (first year with second- and third-year), first year students had: ↑ Increase knowledge about issues facing Aboriginal people ↑ More likely to rate knowledge as adequate on Aboriginal history and culture ↑ More likely to agree with statement about lack of Aboriginal health funding ↑ More likely to agree with the statement on how information from the unit changed personal views on Aboriginal health issues</td>
</tr>
<tr>
<td>7</td>
<td>Isaacson (2014)</td>
<td>3.5 (fair)</td>
<td>n=11 Nursing students (United States)</td>
<td>Mixed Methods: Pre-post survey + reflective journals</td>
<td>Inventory for Assessing the Process of Cultural Competence Among Health Care Professionals-Student Version (IAPCC-SV)</td>
<td>Comparing pre-post survey results: ↓ Decrease in total levels of cultural competency (group 1) ↑ Increase in reported levels of cultural competency pre-immersion (group 2)</td>
</tr>
<tr>
<td>8</td>
<td>Hunt et al. (2015)</td>
<td>3.0 (fair)</td>
<td>n=249 Nursing students (Australia)</td>
<td>Mixed Methods: Pre-post Survey (including open-ended questions)</td>
<td>Although the sample size was large, only 26% of the total number of students in the unit completed the survey (attrition bias). Reliability and validity reported for measures used.</td>
<td>-Attitude Towards Indigenous Australians Scale</td>
</tr>
<tr>
<td>9</td>
<td>Durey, Halkett, Berg, Lester, and Kickett (2017)</td>
<td>3.0 (fair)</td>
<td>n=59 (39 completed pre-survey and 25 completed post-survey) Oncology Health Care Staff (Australia)</td>
<td>Mixed Methods: Pre-post survey + 2 months follow-up (online) + open-ended questions</td>
<td>Participants who completed surveys belonged to two different Oncology sites. Response bias was identified with participants who did not complete the post-survey as they were less likely to be confident with cultural sensitivity. Reliability and validity not tested for survey developed. A sensitivity analysis was completed on responses for participants who did not complete the post-survey.</td>
<td>14-items related to culturally safe practice (adapted survey)</td>
</tr>
<tr>
<td>10</td>
<td>Svarc et al. (2018)</td>
<td>3.0 (fair)</td>
<td>n=120 Dietetic Graduates (Australia)</td>
<td>Mixed Methods: Quantitative: Post survey (with control) + focus group interviews</td>
<td>Response rate of 20%. Views reported may represented social desirability bias. Chi-square test was used to compare responses from both groups. Reliability and validity were not tested for the survey used.</td>
<td>Developed a 21-item survey for measuring attitudes and self-confidence</td>
</tr>
<tr>
<td>11</td>
<td>Fleming et al. (2017)</td>
<td>3.0 (fair)</td>
<td>n=13 Midwifery academics (Australia)</td>
<td>Mixed Methods: Pre-post surveys + 2 months follow-up, journals, and researcher notes</td>
<td>13 participants participated out of 18 (high attrition). Smaller sample size but included, however 72% of possible participants participated. Awareness of Cultural-safety Scale is a newer assessment tool (good internal reliability). Therefore, it needs to be validated within a larger sample size. Non-Indigenous researcher recognized limitation of conducting this evaluation.</td>
<td>Awareness of Cultural-safety Scale (ACSS)</td>
</tr>
<tr>
<td>12</td>
<td>Isaacs et al. (2016)</td>
<td>3.0 (fair)</td>
<td>n=220, Nursing students (Australia)</td>
<td>Cross-sectional: Post-survey (with control)</td>
<td>Control group was composed of students who did not complete the Aboriginal Health Unit. Study was taken in one region where the proportion of Indigenous people are low, which may have resulted in</td>
<td>Seven-item questionnaire developed for the study to measure cultural desire</td>
</tr>
<tr>
<td>Study</td>
<td>Score</td>
<td>Sample Size</td>
<td>Methods</td>
<td>Sample Characteristics</td>
<td>Reliability and Validity</td>
<td>Pre/Post Survey Results</td>
</tr>
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</tr>
<tr>
<td>Jamieson et al. (2016)</td>
<td>3.0 (fair)</td>
<td>n=27 Occupational Therapy students (Canada)</td>
<td>Mixed Methods: Pre-post survey + open-ended questions</td>
<td>40% of the students who completed the educational intervention consented to participate in the study (high attrition). Reliability and validity were not tested for the pre-post survey. Significance was not tested for survey items.</td>
<td>Eight-item questionnaire developed for the study to measure knowledge and cultural/emotional response</td>
<td>Comparing pre-post survey results: ◊ Increased knowledge scores regarding Aboriginal culture, Indian Act and policies, residential schools, determinants of health, and health outcomes ◊ Increased interest in advocacy and empowerment for Aboriginal peoples</td>
</tr>
<tr>
<td>Walton (2011)</td>
<td>2.5 (poor)</td>
<td>n=125 Health Sciences and Nursing Students (United States)</td>
<td>Mixed Methods: Pre-post survey + reflection paper</td>
<td>Reliability and validity were not tested for the pre-post test instrument (researchers acknowledged that this was a limitation). Students who participated already had a strong sense of cultural awareness, which may be reflective that many of them have been exposed to Aboriginal health curriculum. Sample may not be generalizable as the sample was majority female and Caucasian.</td>
<td>18-item pre-post test instrument developed to measure beliefs and attitudes</td>
<td>Comparing pre-post survey results: ↑ Most likely responses: - Native American ceremonial activities are beneficial while receiving dialysis treatment - A Native American individual may have a unique blend of personal beliefs - Dialysis education guidelines should incorporate spirituality ↓ Most likely not responses: - Dialysis education guidelines are appropriate for all cultures - A therapeutic dialysis environment must be quiet and private - Burning cedar in a dialysis unit is not appropriate *There were many other results that did not significantly change after the education intervention</td>
</tr>
</tbody>
</table>

◊ Significance of result not determined or reported
* Result was not significant
↑ Significant increase
↓ Significant decrease
## APPENDIX 2

### Table 6. Summary of Cultural-safety Education Interventions

<table>
<thead>
<tr>
<th>#</th>
<th>Intervention and Duration</th>
<th>Duration</th>
<th>Learning Methods</th>
<th>Instructed by (if applicable)</th>
<th>Curriculum Content</th>
<th>Approaches Used to Support Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>West et al. (2017) First Peoples Health Course</td>
<td>2 days</td>
<td>In-class</td>
<td>Indigenous academics from the Cultural Capability Research Team</td>
<td>Course aligned with the Aboriginal and Torres Strait Islander Framework.</td>
<td>Cultural Capability Tool described five cultural capabilities that are required for health care providers to practice culturally safe care.</td>
</tr>
<tr>
<td>2</td>
<td>Roche (2014) Elective courses on Native American life</td>
<td>Two-courses (duration not reported) and 5 days for a cultural immersion experience</td>
<td>In-class</td>
<td>Native American leaders and healers (Plains tribes) and non-Native American practitioners taught the courses</td>
<td>Native American life in urban and reservation environments. Curriculum included cultural traditions, social and health-related challenges, health access disparities, and cultural approaches to health and wellness.</td>
<td>Students wrote reflective journals throughout the cultural immersion experience. Incorporated talking circles to facilitate intimate dialogue and questions.</td>
</tr>
<tr>
<td>3</td>
<td>Smith et al. (2015) Cultural Immersion</td>
<td>2 weeks (course) and 1.5 days for a cultural immersion experience</td>
<td>Two prerequisite lectures and an overnight cultural immersion experience retreat</td>
<td>Indigenous facilitator team</td>
<td>International cultural issues, Australian cultural issues, health status, social determinants of Indigenous health, Aboriginal and Torres Strait Islander historical accounts, cultural identity session, and expressing stories through art.</td>
<td>Talking circles were incorporated to provide an opportunity for students to reflect (confidential).</td>
</tr>
<tr>
<td>4</td>
<td>Chapman et al. (2013) Cultural Awareness Education (6 weeks)</td>
<td>3 x 2-hour workshops over 6 weeks</td>
<td>Face-to-face instruction with case studies, interactive activities, group discussion, and personal reflection</td>
<td>Indigenous facilitator (professional accreditation as a cultural awareness trainer)</td>
<td>Comprehensive overview of Indigenous culture and ideology.</td>
<td>Reflection was incorporated into the sessions and each participant was provided with an opportunity to share reflections following each session.</td>
</tr>
<tr>
<td></td>
<td>Study</td>
<td>Methodology</td>
<td>Description</td>
<td>Interactions</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td>Muir-Cochrane et al. (2018)</td>
<td>Guided Learning Journey</td>
<td>4 guided learning journeys (self-paced)</td>
<td>Virtual learning using audio and video</td>
<td>Consulted with Indigenous and non-Indigenous community members to ensure resources were culturally appropriate</td>
<td>Incorporated storytelling, case study-based learning, and interpretive pedagogy. Four guided learning journeys were developed that provided information on the challenges of being a part of a minority population, which also highlighted each case’s cultural diversity, strength, and resilience. Case studies utilized real narratives from a range of people from different cultural backgrounds (Indigenous, Chinese, and refugees and immigrants).</td>
</tr>
<tr>
<td>6</td>
<td>Thackrah et al. (2015)</td>
<td>Aboriginal health unit</td>
<td>Not reported</td>
<td>Lectures and 12 x 2-hour tutorials</td>
<td>Indigenous and non-Indigenous academics taught the course</td>
<td>Diversity within Aboriginal communities and international comparisons, past policies and practices, social determinants of health, family structures and responsibilities, cultural health beliefs, and professional practice issues. Not reported.</td>
</tr>
<tr>
<td>7</td>
<td>Isaacson (2014)</td>
<td>Cultural immersion experience with the Indian Health Service facility</td>
<td>2-week cultural immersion experience</td>
<td>Experiential learning (resided on the reservation with a faculty mentor)</td>
<td>Members of the Northern Plains reservation actively engaged students throughout the course</td>
<td>Attended community activities and completed an 8-hour clinical practicum placement. Students were encouraged to journal throughout the experience.</td>
</tr>
<tr>
<td>8</td>
<td>Hunt et al. (2015)</td>
<td>Indigenous health subject</td>
<td>Not reported</td>
<td>Face to face tutorials and lectures</td>
<td>Not reported</td>
<td>Factors affecting Australian Indigenous health. Contemporary health issues of cultural competence, cultural-safety, racism, equity, and access were also reviewed. Not reported</td>
</tr>
<tr>
<td>9</td>
<td>Durey et al. (2017)</td>
<td>‘Working together to improve cancer care for Aboriginal and Torres Strait Islander Australians’ Workshop</td>
<td>2 x 2 hour workshops (2 sites)</td>
<td>Presentation, case studies, and group discussion.</td>
<td>Indigenous presenter</td>
<td>Barriers and facilitating factors to delivering culturally safe care, social and cultural determinants of health, and power differentials (theories of white racial privilege). Not reported</td>
</tr>
<tr>
<td></td>
<td>Study</td>
<td>Type of Intervention</td>
<td>Duration</td>
<td>Mode of Delivery</td>
<td>Focus Areas</td>
<td>Outcomes</td>
</tr>
<tr>
<td>---</td>
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<td>-------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10</td>
<td>Svarc et al. (2018)</td>
<td>Aboriginal health placements</td>
<td>Minimum one week (exact duration not reported)</td>
<td>Clinical placement, field trip, or public/community health placement</td>
<td>Not clear but local Aboriginal community members were involved in placements in some way</td>
<td>Not reported</td>
</tr>
<tr>
<td>11</td>
<td>Fleming et al. (2017)</td>
<td>First Peoples Workshop</td>
<td>Two half-day workshops and five yarning circles over 12 weeks</td>
<td>Workshops</td>
<td>First Peoples Professor (mentor) and non-Aboriginal midwifery academic (mentee) facilitated the workshops</td>
<td>First Peoples health professional education, origins and elements of cultural-safety, racism, and relevance of awareness of cultural-safety. A participatory approach was used to facilitate rational discourse opportunities where students can discuss objectively about personal and social beliefs and entice respectful debate among peers. Participants also listened to personal stories privileging First Peoples voices. Yarning circles and journaling were also used to encourage critical reflection and a deeper understanding of First Peoples health and culture.</td>
</tr>
<tr>
<td>12</td>
<td>Isaacs et al. (2016)</td>
<td>Aboriginal Health and Wellbeing Unit (Nursing)</td>
<td>9-hour weekly lectures</td>
<td>Lectures and tutorials</td>
<td>Aboriginal and non-Aboriginal (have been authorized by Elders to teach on their behalf) lecturers</td>
<td>Aboriginal health, current health status of Aboriginal people, social determinants of Aboriginal health, cultural-safety, and community-controlled health services. Tutorials were hosted to allow students to express their views and discuss issues in a respectful manner. The unit also encouraged students to challenge their prejudices and pre-conceived notions, to support students in building their knowledge “brick by brick.”</td>
</tr>
<tr>
<td>13</td>
<td>Jamieson et al. (2016)</td>
<td>Aboriginal Cultural-safety Initiatives: Walking Together Modules</td>
<td>Three one-hour modules</td>
<td>Lectures</td>
<td>Indigenous educator led the sessions</td>
<td>Impact of historical, political, and cultural issues on Indigenous health; connections between past and present government policies/practices on determinants, access, and outcomes of health; and Indigenous concepts of health and healing. Students were given the option to write a reflection paper after the education intervention.</td>
</tr>
<tr>
<td>14</td>
<td>Walton (2011)</td>
<td>Presented research findings from the Prayer Warrior study, an article published about Nephrology, and a Sacred Circle model</td>
<td>One presentation</td>
<td>Lecture</td>
<td>Not clear if the researcher was Indigenous</td>
<td>Research findings from the Prayer Warriors study on dialysis care. Themes included: suffering, honouring spirit, connecting with community, and healing old wounds. Students were given the option to write a reflection paper after the education intervention.</td>
</tr>
</tbody>
</table>
The Impact of Cultural-Safety Education Programs: A Literature Review

SHANTELLE MEDEL, MPH CANDIDATE, SIMON FRASER UNIVERSITY
CAPSTONE PRESENTATION - APRIL 9, 2019
Acknowledgement

I respectfully acknowledge that we are gathered here today on the traditional and unceded territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and Sel̓íl̓witulh (Tsleil-Waututh).

Background

- Indigenous-awareness education programs have been implemented in healthcare organizations to improve culturally-safe healthcare practices across Canada
- Although many education programs have supported healthcare providers to understand cultural safety, it is also important to evaluate these programs and ensure that cultural-safety knowledge is translated effectively into practice with Indigenous peoples
Cultural-Safety

Cultural-safety is “an outcome based on respectful engagement that recognizes and strives to address power imbalances inherent in the healthcare system...where people feel safe when receiving care” (First Nations Health Authority, accessed 2019 February 12, p. 5)

Truth and Reconciliation Commission of Canada (TRCC): Call to Action 23

- The TRCC’s recommendation 23 calls on all levels of government to provide cultural competency education for all healthcare professionals (TRCC, 2015)

- In response to the Truth and Reconciliation Commission of Canada (TRCC), various education programs have been implemented across healthcare organizations and institutions to improve culturally-safe practices across Canada (2015)
Purpose

1. Identify and critically appraise published evaluations of cultural-safety education programs in Australia, New Zealand, Canada and/or the United States (US)

2. Summarize the approaches used in these studies to support healthcare providers to put knowledge into practice, beyond just acquiring knowledge

Systematic Review Methods

- Critically appraise and explore variations in education practices and to highlight areas for new research in this field

- Cochrane Handbook for Systematic Reviews (Higgins and Green, 2011) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2009) informed this review
# Methods

## Scoping Review

## Systematic Review Methods

## Results

## Methods

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural-safety education implemented with healthcare staff or students</td>
<td>The study did not evaluate the intervention after education occurred or evaluation data were not reported</td>
</tr>
<tr>
<td>The study has implications for Indigenous health</td>
<td>The study only used qualitative methods to evaluate the education intervention</td>
</tr>
<tr>
<td>Evaluation of the intervention used quantitative methods and reported on results</td>
<td></td>
</tr>
<tr>
<td>Studies were published in peer-reviewed journals from 2009 to 2019</td>
<td></td>
</tr>
</tbody>
</table>
Methods

- Databases: CINAHL, Medline, PsycINFO
- Searches yielded 289 studies (74 duplicates)
- 188 were excluded from the remaining 215 studies after reviewing titles and abstracts
- Full inclusion and exclusion criteria were applied to the remaining 27 studies
- Fourteen studies were selected for final review

Findings: Overview

- Five systematic reviews found variability in evaluation methods, pedagogical approaches, and student experiences and outcomes
- The overall quality of the fourteen included studies was fair
- Changes in participant behaviour and practice were described through quantitative and qualitative outcomes summarized
- A number of evaluation tools were used to report on outcomes related to culturally-safe practices
Findings: Previous Systematic Reviews

- Cultural competence education for health professionals
  Norval et al.
  05 May 2014
  *international focus

- Experiences and outcomes of health professional students undertaking education on Indigenous health: A systematic integrative literature review
  Mills, Creed, and West
  25 July 2013
  *Indigenous focus

- Interventions to improve cultural competency in healthcare for Indigenous peoples of Australia, New Zealand, Canada, and the USA: A systematic review
  Clifford, McNamara, Bannen, and Fox
  10 March 2015
  *Indigenous focus

- Implementation and impact of Indigenous health curricula: A systematic review
  Biron et al.
  27 June 2018
  *Indigenous focus

Findings: Characteristics of Studies

- Study designs: Longitudinal (one study); cross-sectional (two studies); pre-post (four studies); and mixed methods (nine studies)

- Settings: Australia (ten studies); US (three studies); Canada (one study)

- Participants: Students (ten studies); dietetics graduates (one study); midwifery academics (one study); health care staff (two studies)

- Delivery: In-class (eleven studies); online (three studies); placement/practicum (three studies)
### Findings: Evaluation Tools

<table>
<thead>
<tr>
<th>Study</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>West et al. (2016)</td>
<td><a href="http://www.example.com">Cultural Capability Measurement Tool (CCIT)</a></td>
</tr>
<tr>
<td>Chapman et al. (2013)</td>
<td><a href="http://www.example.com">Area Human Resources Development/Population Health Survey of Participation in Aboriginal Awareness Education Workshop Tool (Mooney et al., 2005)</a></td>
</tr>
<tr>
<td>Muir-Cochrane et al. (2018)</td>
<td><a href="http://www.example.com">Mental Health Nursing Clinical Confidence Scale (Bell et al., 1996)</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.example.com">Kiersma-Chen Empathy Scale (Kiersman et al., 2013)</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.example.com">Cultural Competency Questionnaire (TPB-CCQ) (Levett-Jones et al., 2016)</a></td>
</tr>
<tr>
<td>Hunt et al. (2015)</td>
<td><a href="http://www.example.com">Attitude Towards Indigenous Australians Scale (Pedersen et al., 2004)</a></td>
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<td><a href="http://www.example.com">Knowledge, Interest, and Confidence Scale (Pedersen et al., 2006)</a></td>
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<tr>
<td>Fleming et al. (2017)</td>
<td><a href="http://www.example.com">Awareness of Cultural-safety Scale (Milne, Creedy, and West, 2016)</a></td>
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</tbody>
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### Findings: Quantitative Outcomes

- Knowledge
- Attitudes, Perceptions, and Confidence
- Communication
- Collaboration
- Empathy
- Advocacy
- Cultural Competency
- Cultural Capability
- Cultural Desire
- Engagement Activities
Findings: Qualitative Outcomes

- Understanding Indigenous history and how it has contributed to present-day health disparities for Indigenous peoples was an important realization for many participants (Hunt et al., 2015).
- Self-awareness and recognizing one’s own biases were important learning experiences for many participants.
- Many studies also identified examples of how healthcare providers could apply the knowledge they gained education in practice. For example, a study by Svarc et al. (2018) identified four themes for how to prepare students to practice with Indigenous communities:
  - Experiential learning
  - Breaking down stereotypes
  - Empathy through learning with Indigenous peoples
  - Indigenous health role models

Findings: Indigenous Methods & Teaching

Indigenous methods and teachings had the potential to transform learning experiences:

- Storytelling and incorporating patient stories in case studies allowed participants to engage with education material and helped them understand the first-hand implications history has had on Indigenous health outcomes.
- Talking circles/yarning circles provided participants with an opportunity to further reflect on what they have learned (Smith et al., 2015.)
Limitations

- Quality of designs
  - Sampling, response, and recall bias may have been present across many of the studies
- Exclusion of qualitative studies

Recommendations: Future Evaluations

- Long-term follow-up
- Continue to publish measures that evaluate the impact of Indigenous health education and were developed and validated by Indigenous people.
- Incorporate local Indigenous frameworks into the design of education and evaluation
- Validate measures in larger, more diverse cohorts
- Implement more evaluations with healthcare staff and across multiple healthcare settings
Recommendations: Future Education

- Cultural immersion or experiential learning opportunities
- Virtual and online learning methods
- Incorporating Indigenous methods (storytelling, talking circles, etc.)
- Indigenous facilitators and teachers leading the education journey and informing future curriculum design and evaluation
- Self-reflection and group reflection
- Address the potential for harm and discomfort

A life-long journey of learning, reflection, and practice...
References


