CSIRO PUBLISHING

SPECIAL ISSUE | REVIEW
https://doi.org/10.1071/PY22020

Australian Journal of Primary Health

LA TROBE UNIVERSITY

# Improving cultural competence of healthcare workers in First Nations communities: a narrative review of implemented educational interventions in 2015–20

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## ABSTRACT

**Background.** Cultural competency is often promoted as a strategy to address health inequities; however, there is little evidence linking cultural competency with improved patient outcomes. This article describes the characteristics of recent educational interventions designed to improve cultural competency in healthcare workers for First Nations peoples of Australia, New Zealand, Canada and the USA. **Methods.** In total, 13 electronic databases and 14 websites for the period from January 2015 to May 2021 were searched. Information on the characteristics and methodological quality of included studies was extracted using standardised assessment tools. **Results.** Thirteen published evaluations were identified; 10 for Australian Aboriginal and Torres Strait Islander peoples. The main positive outcomes reported were improvements in health professionals' attitudes and knowledge, and improved confidence in working with First Nations patients. The methodological quality of evaluations and the reporting of methodological criteria were moderate. **Conclusions.** Cultural competency education programs can improve knowledge, attitudes and confidence of healthcare workers to improve the health of First Nations peoples. Providing culturally safe health care should be routine practice, particularly in places where there are concentrations of First Nations peoples, yet there is relatively little research in this area. There remains limited evidence of the effectiveness of cultural education programs alone on community or patient outcomes.

**Keywords:** Aboriginal, access to care, cross-cultural issues, cultural competence, cultural safety, First Nations, Indigenous, narrative review.

**Received:** 4 February 2022
**Accepted:** 29 March 2022
**Published:** 15 June 2022

**Cite this:**
Rissel C *et al.* (2023)
*Australian Journal of Primary Health*, **29**(2), 101–116.
doi:10.1071/PY22020



## Introduction

Internationally health disparities and marginalisation, including barriers to health care, for First Nations people impacted by ongoing colonisation is well documented (Pulver *et al.* 2015; United Nations Department of Economic and Social Affairs 2015; Anderson *et al.* 2016; Australian Institute of Health and Welfare 2020). First Nations people, in countries such as Australia, Canada, New Zealand and the USA, have particular needs for culturally competent health care because of historical and intergenerational trauma (Pulver *et al.* 2015).

Cultural competence is a broad concept, which includes strategies to improve access to health services and health outcomes for diverse peoples (Clifford *et al.* 2015). It is defined as the ability to understand and interact effectively with people from other cultures. It is often promoted as a strategy to address health inequities, although evidence linking cultural competence to patient outcomes is scarce and of relative low quality (Horvat *et al.* 2014).

A range of frameworks exist for health worker training in First Nations' cultural education, including cultural awareness, cultural competence, transcultural care, cultural safety, cultural security and cultural respect (Downing *et al.* 2011). They differ in their relative focus on individual versus system change, and on a focus for health workers to

understand their own culture versus that of another. In Australia, the term 'cultural responsiveness' is recommended by the organisation, Indigenous Allied Health Australia, referring to strengths-based, action-orientated approaches that enable Aboriginal and Torres Strait Islander people to experience cultural safety (Indigenous Allied Health Australia 2019).

First Nations cultural training for staff has been recognised as essential by government, numerous healthcare organisations, tertiary education facilities and extended training programs. In Australia, these organisations include, for example, the Federal Government, state governments and medical organisations (National Aboriginal and Torres Strait Islander Health Standing Committee 2016; Northern Territory Health 2016; Indigenous Allied Health Australia 2019; The Royal Australian College of General Practitioners 2020). In jurisdictions with a high proportion of First Nations people, such as the Northern Territory of Australia, where approximately 30% of the population is Aboriginal or Torres Strait Islander peoples and 70% of health system users are Aboriginal or Torres Strait Islander peoples (Li *et al.* 2011), healthcare workers are a priority for cultural training and education.

A review of undergraduate allied health, medical and nursing student cultural training highlighted the variety of approaches to cultural training, including face-to-face delivery along with blended learning combining a placement in an Indigenous setting, stand-alone placements and digital learning (Francis-Cracknell *et al.* 2019). The evidence has consistently demonstrated that work placements in Aboriginal health increased understanding and awareness of Aboriginal culture, promoted deeper understanding of the complexities of the determinants of Aboriginal health, increased awareness of everyday racism toward Aboriginal Australians, and enhanced student desire to work in Aboriginal health (McDonald *et al.* 2018). Undergraduate training should be a necessary minimal level of preparation for the workforce, but varies by discipline and location, and effective and ongoing professional education is also needed.

A number of recent systematic reviews of the effectiveness of First Nations cultural training for health service or patient outcomes have been conducted (Downing *et al.* 2011; Clifford *et al.* 2015), with some looking at specific health areas such as dental or diabetes care (Forsyth *et al.* 2017; Tremblay *et al.* 2020). These reviews have found relatively few papers where First Nations cultural training was implemented or evaluated well. Most concluded that although there is a lack of strong evidence of effectiveness, positive outcomes are apparent in terms of positive changes to health professionals' knowledge, attitudes and confidence providing culturally safe care to First Nations patients, assessing patient satisfaction, and improving access to health care (Clifford *et al.* 2015).

This review is important because with a considerable investment by government and organisations into cultural training and education, current evidence of its effectiveness is needed. The most comprehensive reviews were last published in 2015, allowing for new evaluation research to be published since that time. This study sought to identify new evidence of effectiveness of cultural training for healthcare workers, using quality evaluations that included pre- and post-education program measures, to allow changes in outcomes to be demonstrated.

## Methods

Consulting with a qualified librarian, we confirmed access to the same databases used by Clifford *et al.* (2015), as we sought to replicate this approach. These were MEDLINE, The Cochrane Library – Reviews and Trials, Scopus, CINAHL, Sociological Abstracts, PAIS Index, PsycINFO, Campbell Library, with the Informit databases incorporating AITSIS – Indigenous Studies Bibliography/ATSIHealth – Aboriginal and Torres Strait Islander Health Bibliography/APAIS-ATSIS/, FAMILY – Australian Family and Society Abstracts Database/ Indigenous Peoples Collection.

Grey literature sources manually searched included MedNar – North Grey Literature Collection. An Australian search included Indigenous HealthInfoNet (https://healthinfonet.ecu.edu.au/); Closing the Gap Clearinghouse (https://aifs.gov.au/projects/closing-gap-clearinghouse); NSW Ministry of Health, Aboriginal health (https://www.health.nsw.gov.au/aboriginal/pages/default.aspx). A Canadian search included The National Collaborating Centre for Indigenous Health (https://www.nccih.ca/en/); and National Aboriginal Health Organization (https://www.naho.ca/). A New Zealand search included Maori Health (https://www.health.govt.nz/our-work/populations/maori-health). A United States search included American Indian Health (https://www.ncai.org/policy-issues/education-health-human-services/health-care). The search terms used are listed in Table 1.

### Study selection

The abstracts of studies published since 2015 up to May 2021 ($n = 2115$) were manually examined by the first two authors from July to October 2021, and any disagreements about study inclusion were resolved through discussion. After removal of duplicates ($n = 360$) and removal of ineligible studies, 93 full-text articles were reviewed (Fig. 1). Studies were included if they evaluated a structured educational intervention strategy designed to improve cultural competence in healthcare professionals for First Nations peoples of Australia, New Zealand, USA or Canada. Studies were excluded if they focused on non-English or culturally diverse populations (because the focus of this analysis was on First Nations peoples), or the evaluation did not have at least a post-intervention component or did not adequately report outcomes of the evaluation. Studies were also excluded if they described a service delivery model without an explicit cultural awareness/safety component, even if they

**Table 1.** Search terms used.

| Category | Terms[A] |
|---|---|
| Health care worker | 'Health professional[A]' OR 'health care provider[A]' OR 'health worker[A]' OR 'health[A] administrator[A]' OR 'health workforce' OR nurse[A] OR doctor[A] OR 'allied health worker[A]' OR 'medical practitioner[A]' OR 'health services' OR 'primary care' OR 'private practise' OR 'community health' OR hospital[A] |
| First Nations | Aborigin[A] OR Indigenous OR native OR Inuit OR Maori OR Torres OR 'first nation[A]' OR ethnic OR Immigrant OR migrant OR 'culturally and linguistically diverse populations' OR 'vulnerable populations' OR 'diverse' |
| Cultural competence | 'Cultural competence[A]' OR 'cultural sensitivity' OR 'cultural safety' OR 'cultural security' OR 'cultural awareness' OR 'cultural literacy' OR 'cultural respect' OR 'cultural framework' OR 'cross-cultural' OR 'Inter-cultural' OR 'cultural difference' OR 'Inter-racial' OR racism OR discrimination OR competence |
| Intervention | Indicators OR measures OR Intervention OR policy OR policies OR program[A] OR evaluation OR training OR assessment OR strategy OR strategies OR 'Indicators of cultural competence' |
| Outcome measures | 'Health service outcome' OR 'population health outcome' OR 'equitable access' OR 'health disparit[A]' OR 'patient satisfaction' OR 'health care quality' OR 'health care delivery' OR 'clinical competence' OR 'outcome assessment' OR 'health indicator[A]' |
| Context | Australia OR Canada OR USA OR 'New Zealand' |

[A]A qualified librarian assisted with the search using these terms in the various databases.

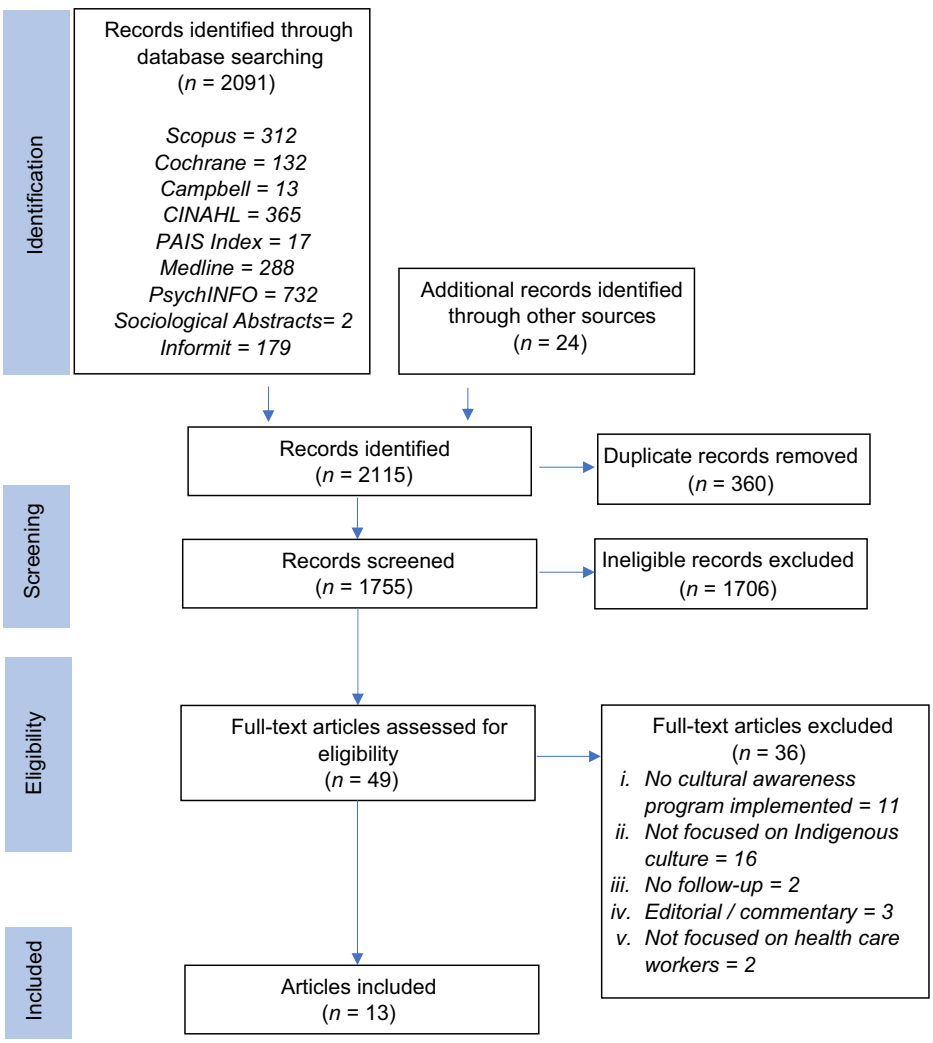


**Fig. 1.** PRISMA flowchart summarising the search and selection of studies.

integrated First Nations cultural competence principles into the delivery of health care. Further, we excluded most studies focused on undergraduate student populations because the students were not yet health professionals and are a distinct population in their own right and did not include follow-up evaluations (e.g. Delbridge *et al.* 2017; Svarc *et al.* 2018). Five papers (four as part of an on-going research program) collected follow-up outcome data and were included (Hunt *et al.* 2015; Thackrah *et al.* 2015*a*, 2015*b*, 2020; Thackrah and Thompson 2018). Due to the heterogeneity between the studies, we performed a systematic review with narrative synthesis. A narrative or traditional literature review is a comprehensive, critical and objective analysis of thecurrent knowledge on a topic (Jahan *et al.* 2016) that relies primarily on the use of words and text to summarise and explain the findings of the synthesis.

As described in Table 2, data were extracted from the included studies using criteria related to the intervention type and components, the study population and setting, sample size, study design, outcomes measured and intervention effectiveness. To enable comparisons with Clifford *et al.* (2015), the methodological quality of studies was assessed using criteria from the Dictionary for the Effective Public Health Practise Project Quality Assessment Tool for Quantitative Studies by rating them as weak, moderate or strong by CR and LL for selection bias, study design, confounders, data collection and withdrawal and dropouts (Table 3) (Jackson 2007).

### Ethics approval

Ethics approval was not required as all data are from publicly available publications.

## Results

After full-text review, 13 articles were included in the study (Table 1). Most studies were from Australia ($n$ = 10) with two from Canada and one from the USA. The cultural education intervention included undergraduate tertiary education (Hunt *et al.* 2015; Thackrah *et al.* 2015*a*; Withall *et al.* 2021), cultural immersive experiences (Thackrah *et al.* 2015*a*, 2017, 2020), and professional development workshops, some over several weeks (Liaw *et al.* 2015; Renault 2015; Durey *et al.* 2017; Crowshoe *et al.* 2018; Lewis *et al.* 2018; Freene *et al.* 2021).

Positive outcomes of the cultural education interventions were improved attitudes and knowledge (Hunt *et al.* 2015; Thackrah *et al.* 2015*a*, 2017, 2020; Crowshoe *et al.* 2018); better self-rated confidence in culturally safe practices (Durey *et al.* 2017); enhanced perceptions of social policies implemented to 'improve' Aboriginal people, and self-reported changes in health professionals' behaviours and skills (Freene *et al.* 2021); higher levels of cultural strategic thinking (cultural quotient) (Liaw *et al.* 2015) and cultural competence scores (Renault 2015).

Overall, where reported, participants of cultural education programs enjoyed the experience of participating (Lewis *et al.* 2018). Only one study examined the impact of the intervention on patient outcomes and found slightly better health risk factor recording (Liaw *et al.* 2016).

One study reported initial increases in student and staff knowledge and attitudes towards Australian First Nations peoples, but this declined over time (Thackrah *et al.* 2015*a*). Another study found that undergraduate cultural training was difficult to incorporate into their professional practice (Withall *et al.* 2021). Few studies had a long follow-up period. The quality of the papers was generally weak or moderate, with no studies using a control group, most using convenience samples, and few following up participants after the intervention period (Table 2). The study by Liaw *et al.* (2015) was the strongest methodologically, followed by Durey *et al.* (2017) and Thackrah and Thompson (2018).

## Discussion

The cultural education programs included in this narrative review demonstrate short-term improvements in healthcare worker knowledge, attitudes and confidence working with First nations peoples. The learning experience was generally very positive. Only one of the studies included here examined the impact of cultural education programs on patient outcomes (Liaw *et al.* 2015) and this is the area where more attention is needed. Overall, the papers included in the review were strong on the importance of cultural education, but used weak methodology to demonstrate impacts. This is consistent with previous research (Bainbridge *et al.* 2015; Clifford *et al.* 2015).

The majority of papers were from Australia, which is in contrast with a previous review that reported the majority of papers from the USA, New Zealand and Canada (Clifford *et al.* 2015). It is possible that there is an increase in attention to cultural safety in Australia, where it perhaps has been relatively neglected for many years. A program of research in Western Australia has also influenced the present study findings with several related papers following up the effects of cultural training commencing during undergraduate education (Thackrah *et al.* 2015*a*, 2017, 2020; Thackrah and Thompson 2018).

A previous review (Bainbridge *et al.* 2015) identified 20 relevant papers, with five types of interventions and approaches to improve culturally competent healthcare delivery to First Nations populations. These were: reforming health service and systems; greater access to health care; greater cultural competence of the health workforce; training health and medical students; and developing culturally

**Table 2.** Articles included in the review.

| References | | | Population | | Intervention description | | | | Outcomes | | Conclusions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Primary Author, Year of publication, Country** | **Study type/ design Qual/ Quant/Mixed methods** | **Stated aim of manuscript(s)** | **Target cultural group** | **Sample size and key characteristics** | **Intervention name and stated aim** | **Intervention description** | **Setting and mode of delivery** | **Theory of intervention design** | **Outcome measures** | **Main results** | **Author key conclusions** |
| Crowshoe, 2018, Canada | Pre-post design, with 3-month follow-up evaluation | To describe the implementation, evaluation, and physician educational outcomes of an Indigenous health-based continuing medical education (CME) workshop developed for family physicians. | Indigenous populations in Canada (First Nations, Inuit, and Metis people). | 32 family physicians serving Indigenous populations on three sites in Northern Ontario. | Educating for Equity (E4E) project – the workshop was designed as a continuing medical education intervention for family physicians providing care to Indigenous populations in Canada. | The 8-h workshop aimed to: (1) describe key social factors that affect Indigenous diabetes outcomes; (2) demonstrate culturally attuned approaches to building therapeutic relationships with Indigenous patients with type 2 diabetes; (3) identify and demonstrate methods to address discord in the docto–rpatient relationship stemming from marginalisation of Indigenous people in health care and society; and (4) demonstrate culturally informed ways to support Indigenous patients with type 2 diabetes. Learning was designed to be problem-based, interactive, reflective, and in small groups. | The workshops were delivered on-site to three primary care clinical sites in Northern Ontario. | The E4E team developed the Addressing Social Contexts of Indigenous type 2 Diabetes Care with Indigenous Patients Framework ('Framework' hereafter). The Framework provides a conceptual map, specific clinical recommendations of social and cultural factors that influence diabetes and diabetes care with Indigenous patients. | Preworkshop and postworkshop surveys contained identical five-point Likert-scaled Social Cultural Confidence in Care Survey statements. The purpose of the survey was to capture participants' change in knowledge, attitude, and approach to social and cultural factors related to health care with Indigenous patients with diabetes. | Participants reported high satisfaction with all aspects of the workshop. Reporting improved understanding of socioeconomic ($P = 0.002$), psychosocial, and cultural factors ($P = 0.001$), participants also described adapting their clinical approach to more actively incorporating social and cultural factors and focusing on patient-centred care. | A one-day workshop can change attitudes and knowledge in the short term. |

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**Table 2.** (*Continued*).

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| Durey, 2017, Australia | Mixed-methods using pre and post workshop online surveys, and one delivered 2 months later | The aim of this paper was to evaluate whether participating in a workshop improved the confidence of radiation oncology health professionals in their knowledge, communication and ability to offer culturally safe health care to Aboriginal Australians with cancer. | Aboriginal Australians. | 39 radiation oncology health professionals completed pre-workshop surveys. | A 2-h workshop: working together to improve cancer care for Aboriginal and Torres Strait Islander Australians. | The workshop used theory, case studies and group discussions to explore barriers and facilitating factors to delivering culturally safe care to Aboriginal people with cancer. Participants were introduced to social and cultural determinants of health and power differentials underpinning theories of white racial privilege following colonisation. | Two sites dedicated to cancer care in Perth, Western Australia. | The overarching principle underpinning the workshops was how Aboriginal and non-Aboriginal Australians can work together to improve health care for Aboriginal Australians. | 14 items related to culturally safe practice with a four-point rating scale where participants rated their self-perceived confidence from not at all confident (0), a little bit confident (1), fairly confident (2), and extremely confident (3) | This study demonstrates that attendance at one workshop about respectfully relating to Aboriginal patients with cancer was effective not only in increasing health professionals' confidence in applying culturally safe practices, but also appeared to translate knowledge into better care for Aboriginal patients with cancer. Improvements were evident immediately following the workshop and were sustained 2 months later. | Provision of culturally safe care for Aboriginal patients with cancer increases health professionals' confidence, knowledge, of their culture and leads to more respectful relationships. Partnerships between Aboriginal and non-Aboriginal stakeholders with feedback from the community are integral to improving the service, practice, and increased access to those services. In cancer care, it is important that these factors be taken into account. |

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**Table 2.** (*Continued*).

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| Freene, 2021, Australia | An 18-week mixed-methods feasibility study was conducted | The two aims were to: (1) evaluate the feasibility of a centre-based women's Aboriginal and Torres Strait Islander cardiac rehabilitation program in a non-Indigenous health setting; and (2) investigate a combination of strategies to improve cultural safety in a non-Indigenous healthcare setting. | Aboriginal and Torres Strait Islanders. | 8 Female Aboriginal people who were aged 24–68 years. | '*Yeddung Gauar*', meaning 'Good Heart'. The aim was to see if recruritment rates and adherence of Aboriginal people in the program was increased due to cultural sensitivity of the health professionals. | Yarning circles, and group interviews, which included structured phone interviews as to their attitudes of the health service. | Multidisciplinary team and an Aboriginal and/ or Torres Strait Islander Health Worker (AHW) at a university health centre in Canberra. | That the intervention increases cultural safety in the service. | Qualitative feedback from participants, and adherence to the weekly sessions. | There was a significant change in health professionals' perception of social policies implemented to 'improve' Aboriginal people, and self-reported changes in health professionals' behaviours and skills. Themes were identified for recruitment, participants, health professionals and program delivery, with cultural safety enveloping all areas. | The Yeddung Gauar cardiac rehabilitation program enabled female Aboriginal and Torres Strait Islander participants to attend a gender-specific evidence-based cardiac rehabilitation program, for the primary and secondary prevention of heart disease. This program was effectively delivered in a non-Indigenous health service by engaging in strategies that improved health workforce cultural safety and resulted in positive health outcomes. Trust was a major theme for recruitment and adherence of participants. The Aboriginal Health Worker was a key enabler of cultural authenticity, and the flexibility of the program contributed greatly to participant perceptions of cultural safety. This review assisted in a non-Indigenous health service understanding some of the strategies for cultural safety, which could lead to improved health outcomes. |

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**Table 2.** (*Continued*).

| References | | | Population | | Intervention description | | | | Outcomes | | Conclusions |
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| Hunt, 2015, Australia | A mixed-methods prospective survey | To gain insight into students' perceptions of Indigenous people and determine whether the course learning and teaching strategies implemented improved students' learning outcomes and attitudes towards Indigenous people and Indigenous health in Australia. | Undergraduate nursing students. | 502 nurses at a large multi-campus university in New South Wales, Australia. Most were born outside of Australia and were bi-lingual. Only seven were Aboriginal and only 32 had experience working with Australian Indigenous people. Most 424 (84.5%) had no awareness of health issues of the Australian Indigenous population. | An undergraduate unit of study related to health issues of Australian Indigenous peoples. | This dedicated unit of study consists of face-to-face tutorials and lectures. A range of topics are explored related to the historical, political and social aspects of Indigenous health. These aspects are taught in relation to the contemporary healthcare issues of cultural competence, cultural safety, racism, equity and access. | Students enrolled in nursing in the school of nursing and midwifery, which is a multi campus school, with a large University in Western Sydney. | Undergraduate education. | (1) A increase in the knowledge and interest and confidence in working with Australian Indigenous peoples. (2) A siginificant decrease in negative attitudes towards Australian Indigenous people. | Qualitative increased knowledge and understanding of Indigenous history, impact of past events and government policies on the health status of Indigenous Australians. An appreciation of the injustices of the past, which increased their awareness of the health disparities and needs of Indigenous Australians. | By completing one unit of study soley dedicated to Indigenous history, culture and health, statistically significant attitudinal change towards Indigenous Australians, participants' knowledge, intent to work with Indigenous Australians and confidence in caring for them increased significantly at follow up. Based on the participants' responses to open-ended questions, four key themes emerged: (a) understanding Indigenous history, culture and health care; (b) development of cultural competence; (c) enhanced respect for Indigenous Australians' culture and traditional practices; and (d) enhanced awareness of the inherent disadvantages for Indigenous Australians in education and health care. |

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| Lewis, 2018, USA | No evaluation | The purpose of this paper is to present a brief training program for mental health professionals who work with Indigenous clients. | Indigenous mental health clients. | n/a | 90-min training program. | This brief training is meant to increase knowledge and empathy and disrupt biases and stereotypes about Indigenous people. | Mental health services. | Improve knowledge, awareness and skills. | n/a | Positive feedback from participants and administrators. | Short workshops can be well received by participants. |
| Liaw, 2015, Australia | A multi-methods and multi-perspective pre-and-postintervention pragmatic study | The aim of this study was to examine the impact of Ways of Thinking, Ways of Doing (WoTWoD) on cultural respect, health checks and risk factor management for Aboriginal patients in general practice. | Australian Aboriginal and Torres Strait Islander peoples. | 10 general medical practitioners and their practice managers. | Ways of Thinking, Ways of Doing (WoTWoD) aimed to promote cultural respect, as measured by a cultural quotient, and culturally and clinically appropriate care of Aboriginal patients, as measured by Aboriginal health checks done and management of risk factors. | The program included a cultural respect workshop, practice support from a cultural mentor and a toolkit to guide activities to embed cultural respect into routine practice. | General practice settings, with multi-mode intervention strategy delivery. | The Ways of Thinking and Ways of Doing (WoTWoD) Cultural Respect Program is a *trans*-theoretical approach to harmonise the many (similar) conceptual frameworks applied to Aboriginal and cross-cultural health in Australia. It draws on the theoretical domains and cultural intelligence frameworks; existing Australian developments in cultural respect, safety and competence; a review of successful Aboriginal programs; and comprehensive consultations with Aboriginal communities, health professionals and policymakers. | The cultural quotient (CQ) is a measure of three distinct capabilities:<br>• cultural strategic thinking (CST)<br>• cultural motivation (MOT)<br>• cultural behaviour (BEH)<br>A 54-question assessment provides an overall CQ score as well as a score for each of the three capabilities. | Medical practices improved their readiness to provide culturally appropriate care to their Aboriginal patients, including:<br>• displaying Aboriginal posters, flags, and brochures in the waiting room.<br>• registering for Indigenous Practise Incentive Payment (IPIP).<br>• liaising with Aboriginal organisations and encouraging staff to undertake Aboriginal cultural training.<br>Individual practice staff improved their cultural strategic thinking. | The WoTWoD combined many personal, professional and organisational strategies into a logical 'bundle' of mutually reinforcing activities to embed cultural respect in practice with encouraging improvements in staff cultural quotient, Aboriginal health checks and management of clinical risk factors. Cultural respect, service and clinical measures improved after implementing WoTWoD. Qualitative information confirmed and explained improvements. |

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| References | | | Population | | Intervention description | | | | Outcomes | | Conclusions |
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| Renault, 2015, Canada | Pre and post education design | To see if cultural competence educational intervention increases knowledge and cultural competency among care co-ordinations and nurses in a home care agency. | Indigenous Canadians. | 15 registered nurses in home care or organisations. | The intervention was a 1-h class on cultural competence. | One-hour class on cultural competence. | Home care organisation education. | Critical social theory was used. | Knowledge of cultural competence. | There were statistically significant improvements in cultural competency scores. | |
| Thackrah, 2015*a*, Australia | Pre and post education design | To explore midwifery students' knowledge and attitudes towards Aboriginal people, and the impact of the Aboriginal unit in their program. | Australian Aboriginal women. | 44 midwifery students at a Western Australia university. | A core undergraduate Aboriginal Health course. | The unit was used as a frame of reference for the concepts of cultural safety and cultural security. These concepts, with their emphasis on the recipients of care and the importance of Aboriginal cultural values in health service delivery, were reinforced throughout 12 two-hour tutorial sessions across the semester. | University undergarduate learning. | Cultural safety principles should impact upon professional practise. | Responses to a series of statements about perceptions of their knowledge regarding Aboriginal issues; their attitudes towards Aboriginal Australians using an attitude thermometer; and indicated their expected involvement with Aboriginal patients in the future. They also responded to 16 statements about Aboriginal health used in previous medical student studies. | There was a positive shift in first-year students' knowledge and attitudes towards Aboriginal people and evidence that teaching in the unit was largely responsible for this shift. However, responses in subsequent years showed a significant decline in knowledge about Aboriginal issues, attitudes towards Aboriginal people and the influence of the unit on their views. | Although significant improvements in knowledge and attitude were demonstrated in the short term, maintenance of these changes requires vertical integration of content and reinforcement throughout the undergraduate program and ongoing professional development. |

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| Thackrah, 2015*b*, Australia | Qualitative – Semi structured interviews. | To describe midwifery students' insights on promoting health to Aboriginal women in remote Australia following a supervised clinical placement. | Australian Aboriginal women. | 7 female mature-aged students who completed a clinical placement on the Ngaanyatjarra Lands between 2010 and 2013. | The nursing placement addressed the national competency standards for the midwife and required culturally safe practices. | A clinical placement and immersion program on the Ngaanyatjarra Lands between 2010 and2013. | A remote setting in Western Australia, Kiwirrkurra, 850 km West of Alice Springs. | Immersion programs can provide rich learning experiences. | Self-reported indicators of culturally respectful health care and delivery and promotion of health. | Students appreciated that models of health promotion that recognise the 'strengths, assets and capacities' of Aboriginal community members are more likely to succeed. Recognition of cultural protocols, local languages and contexts were paramount to the establishment of meaningful relationships. | Midwifery students had a rare opportunity to work in this area. Students learn about huge distances, prevelance of chronic diseases and shyness associated with women's business. Lessons learnt were about working respectfully with Aboriginal women. Asking and listening and knowing the cultural factors that contributed to the acceptance of the health messages. Students also recognised the importance of local contexts and cultural protocols, and the necessity to adapt their approach to meet the Community needs and ways of doing things. |

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**Table 2.** (*Continued*).

| References | | | Population | | Intervention description | | | | Outcomes | | Conclusions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Primary Author, Year of publication, Country** | **Study type/ design Qual/ Quant/Mixed methods** | **Stated aim of manuscript(s)** | **Target cultural group** | **Sample size and key characteristics** | **Intervention name and stated aim** | **Intervention description** | **Setting and mode of delivery** | **Theory of intervention design** | **Outcome measures** | **Main results** | **Author key conclusions** |
| Thackrah, 2017, Australia | Qualitative – Semi structured interviews. | This article reports on the first stage of a proposed longitudinal investigation into the impact of remote placements on clinical practice and employment choices. | Australian Aboriginal adults. | 24 health science undergraduate students in Western Australia. | Clinical placement and cultural immersion in a remote Aboriginal community. | Some instruction in Aboriginal health and cultures, then a 4-week placement, with collaborative learning and team-based work practices for interprofessional education. | Mt. Magnet is located 342 km east of Geraldton and 560 km north-east of Perth. Intervention was a work integrated clinical placement. | Immersion programs can provide rich learning experiences. | Self-reported indicators of culturally respectful health care and delivery and promotion of health. | Participants were positive about the benefits that accrued from interprofessional collaboration. Three themes emerged from the findings: the sociocultural and geographic authenticity associated with the experience; the importance of community connections established; and the application of learnings to clinical practice. | The interprofessional placement offered students a unique opportunity to experience how isolation, socioeconomic disadvantage and cultural factors conspire to produce health inequities in remote Australian settings and to observe how communities respond to their circumstances. |
| Thackrah, 2018, Australia | Multiphased mixed methods. Use of surveys, observations and interviews | To integrate all findings from previous research (4-year mixed-methods study) on the preparation of midwifery students to provide culturally secure care to pregnant and birthing Aboriginal women. | Pregnant and birthing Aboriginal women. | The undergraduate study population comprised students in their first, second, and third year of a direct entry midwifery program ($n = 44$). | The aim was to explore the concept of a culturally secure practice in midwifery education and its application in service provision for Aboriginal women. | The intervention included undergraduate training, and cultural immersion as part of clinical placement. | University in Western Australia, and some students had a 2-week clinical placement immersed in the Ngaanyatjarra Lands. | Cultural safety principles should impact upon professional practise. | Knowledge and attitudes about culturally respectful work with Aboriginal women. | There was a statistically significant increase in students knowledge about Aboriginal history, culture and health on completion of the unit. self-reported attitudes towards Aboriginal people, as measured by an attitude thermometer, were more positive upon completion of the unit. Staff reported that their attitudes towards Aboriginal people increased. Students became aware of remote issues related to midwifery and about protocols about women's business. | Optimisation of receptivity to Indigenous Australian content and opportunities for remote placements contributed to students' developing cultural capabilities with implications for all health professional training. Remote clinical placements were highly valued (e.g. for protocols, interaction, and midwives' own learning, communication and relationship building). |

(*Continued on next page*)

**Table 2.** (*Continued*).

| References | | | Population | | Intervention description | | | | Outcomes | | Conclusions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Primary Author, Year of publication, Country** | **Study type/ design Qual/ Quant/Mixed methods** | **Stated aim of manuscript(s)** | **Target cultural group** | **Sample size and key characteristics** | **Intervention name and stated aim** | **Intervention description** | **Setting and mode of delivery** | **Theory of intervention design** | **Outcome measures** | **Main results** | **Author key conclusions** |
| Thackrah, 2020, Australia | Qualitative, semi structured interviews. | To determine whether previous attitude change observed, and the impact of the placement was sustained over time and contributed to a more informed, culturally respectful workforce cognisant of Aboriginal women's needs. | Australian Aboriginal women. | 14 nurses and midwives who were either students or had recently graduated and participated in cultural awareness training in 2012–14. | Campus learning and rural placements. | Undergraduate campus learning and remote Central Australian placement. | 2-week clinical placement on Ngaanyatjarra Lands. | That a remote placement would increase students knowledge of Aboriginal issues. | Knowledge and attitudes about culturally respectful work with Aboriginal women. | Exposure to Indigenous content and settings during training had an enduring impact on participants' midwifery practice; most felt better prepared to provide culturally safe care, build respectful relationships and advocate for improved services for Aboriginal women. | Gains from the placement were significant, long-lasting and positive for maternity provision to Aboriginal people. |
| Withall, 2021, Australia | Qualitative – Semi structured interviews. | To explore how a specific group of nurses and midwives view the impact of cultural safety training on their practise. | Aboriginal and Torres Strait Islander peoples. | There were 10 nurses and midwives. | Undergraduate nursing courses – Indigenouse health for nurses/ midwives. On completion, students were expected to be able to describe the personal, professional and structural elements of cultural safety and be able to apply them to practice. | A focus on enhancing the understanding of the health of Aboriginal and Torres Strait Islander Australians within a cultural safety framework in the context of history, society and culture and Aboriginal models of health. | University undergarduate learning. | Cultural safety principles should impact upon professional practise. | The use of cultural safety principles in participants' practice, and the extent to which they were applied. | Participants struggled to describe how they incorporated cultural safety principles into their practice. Feelings of fear about working with Aboriginal patients were lessened for some. Some respondents were able to provided culturally safe health care. | The undergraduate cultural safety training provided a foundation to participants for working with Aboriginal and Torres Strait Islander patients. For many of the participants, the training appeared to alleviate initial fears about working in Aboriginal and Torres Strait Islander health. It should only be considered a starting point, and ongoing training is necessary. |

n/a, not applicable.

**Table 3.** Quality assessment of included papers.

| Publication [Year] | Selection bias | Study design | Confounders | Data collection | Withdrawal and dropouts |
|---|---|---|---|---|---|
| Crowshoe 2018 | Weak | Moderate | NR | NR | NR |
| Durey 2017 | Moderate | Moderate | Moderate | Strong | Moderate |
| Freene 2021 | Weak | Moderate | Weak | Moderate | Weak |
| Hunt 2015 | Moderate | Moderate | Moderate | Moderate | Moderate |
| Lewis 2018 | Weak | NR | NR | NR | NR |
| Liaw 2015 | Moderate | Strong | Strong | Strong | Strong |
| Renault 2015 | Weak | Moderate | NR | Moderate | NR |
| Thackrah 2015*a* | Weak | Moderate | NR | Moderate | Moderate |
| Thackrah 2015*b* | Weak | Weak | NA | Moderate | NR |
| Thackrah 2017 | Weak | Weak | Strong | Moderate | Weak |
| Thackrah 2018 | Moderate | Moderate | Moderate | Moderate | Moderate |
| Thackrah 2020 | Weak | Weak | Moderate | Moderate | Moderate |
| Withall 2020 | Weak | Weak | Moderate | Moderate | NR |

The quality of each paper is assessed as strong, moderate, or weak (or NR, not reported; NA, not applicable) for each of these criteria.

tailored health interventions. The effectiveness of these interventions was variable. This present narrative review focused on cultural education, but comparison with the earlier review demonstrates that little has changed in how training is received, accepted or valued over time.

Changing any health service delivery practice is complex, and this applies equally to changes to improve cultural safety for First Nations peoples. Initial and basic training is fundamental, but needs to be followed up with ongoing professional development, systems and policies that reinforce new practices, and requires systematic leadership to champion change (Freeman *et al.* 2019; Allen *et al.* 2020).

Several studies reporting primary healthcare service delivery models support what has been found in this review. They were not included in the review because they did not explicitly engage in cultural awareness or safety education; however, these programs revealed impressive outcomes in several areas – multidisciplinary work, community participation, cultural respect and accessibility strategies, preventive and promotive work, and advocacy and intersectoral collaboration on social determinants of health (Durey *et al.* 2016; Freeman *et al.* 2016; Goss *et al.* 2017; Kildea *et al.* 2018; Sabbioni *et al.* 2018; Freeman *et al.* 2019). These models of care interweave evidence-based western treatment, traditional native healing and rural cultural facilitation (Goss *et al.* 2017), and apply the principles of First Nations cultural competence in the delivery of health services and demonstrate positive health outcomes (e.g. Freeman *et al.* 2019).

Focusing on the short-term impacts of cultural education limit the ability to link cultural competence education to patient outcomes. Given the potential impact of primary healthcare services with cultural competence integrated at many levels, there needs to be a to shift from attending a training day or a course to a much more comprehensive approach, including practical applications of cultural safety in everyday practise.

### Strengths and limitations

A strength of this study is the recency of the literature reviewed, using similar methodology as previous work, and focusing specifically on the impact of cultural education of healthcare workers. This restriction of scope is also a limitation. By focusing on outcomes, we have not examined factors that could contribute to attaining these outcomes, or examined other impacts that were not measured (Allen *et al.* 2020 2022). Other limitations include the low number of papers included in this narrative review, which limits the ability to make conclusions about the effectiveness of cultural education.

## Conclusions

There is a strong rationale for cultural education of healthcare workers; however, there remains limited evidence for impact of cultural education alone on patient outcomes. Cultural education training by itself may not be adequate to deliver better patient outcomes.

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**Data availability.** The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

**Conflicts of interest.** The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Declaration of funding.** The project was supported by a 2020 Flinders Foundation Health Seed Grant.

**Consent for publication.** Not applicable.

**Acknowledgements.** The authors thank Leila Mohammadi, Librarian at Flinders University, for her assistance with database searches.

**Author contributions.** CR, CR, AW, BR and MB conceived of the study. CR and LL reviewed all the papers. CR drafted the manuscript and all authors contributed to the writing, editing of the manuscript, and approved the final version. All the authors except for ChR and AW are First Nations people. LL and ChR designed and conducted the review. All other authors contributed to the interpretation of the findings and the writing of the manuscript.

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