PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Systematic review of Indigenous Cultural Safety training interventions for health care professionals in Australia, Canada, New Zealand and the United States.
AUTHORS	Hardy, Billie-Jo; Filipenko, Sam; Smylie, Diane; Ziegler, Carolyn; Smylie, Janet

VERSION 1 – REVIEW

REVIEWER	Anika Sehgal University of Calgary, community health sciences
REVIEW RETURNED	14-Mar-2023

GENERAL COMMENTS	Firstly, thank you to the authors for undertaking research in this very important field. This research highlights the glaring gap of evaluation seen across much literature concerning Indigenous populations. There are a few areas which may require further development: The abstract should have the following headings: objective, methods, results, conclusion. In the methods, there are two 'rounds' to determine inclusion which results in the wording "secondary inclusion criteria" being used twice, could you re-word this to perhaps "additional inclusion criteria" or "supplementary inclusion criteria", something to differentiate the initial phase that already uses the wording secondary inclusion criteria. The synthesis section is excellent and the application of a critical decolonizing lens is exemplary. There should be a discussion of your strengths and limitations in this paper. Strengths should highlight the use of the WLHQAT and Indigenous authorship. Exclusion criteria stated that interventions at the organizational level were excluded, however system-level impacts were then discussed as gaps. It could be argued that system-level impacts require interventions at both the provider and organization level as organizations themselves are often enablers of poor adherence. Perhaps this is a limitation that should be discussed. As a reader, I am left curious as to what "evidence" would suffice to prove that cultural safety interventions are in fact working? For example, would there be some sort of external evaluation of healthcare providers' knowledge/skills/adherence or would there be some indicator located within the Indigenous patient population such as continuously seeking different providers? While the role of

	community engagement is discussed, it remains unclear, especially to those readers who are not familiar with the field of Indigenous health, how we can truly know that these interventions are successful. Outlining some possibilities would significantly strengthen the paper.

REVIEWER	Larry Leung The University of British Columbia, Faculty of Pharmaceutical Sciences
REVIEW RETURNED	08-Apr-2023

GENERAL COMMENTS	The authors have explained both the strengths and limitations of this study. I would suggest articulating the exact role of the Indigenous scholars involved, as well as an acknowledgement that a systematic review, by nature, is quite colonial in nature. What search terms were used for the systematic review - global differences in the terminology used - e.g. Indigenous vs. Aboriginal. vs. Native Americans, depending on region. Line 256 How was a critical decolonizing lens used - the explanation does not seem to imply how this is decolonizing in nature? How did that actually impact the study inclusion? I didn't find this section to be clear enough. How did you contextualize Indigenous ways of knowing and being through the application of Western methodologies. I understand the principle drawn here, but it doesn't match what was actually done. More clarification on the authors roles might be helpful and how the 5 R's principles changed or didn't change the critical lens that was taken in this review. A footnote describing the differences in terminology might help with readability - Indigenous vs. Aboriginal, as the article is using them interchangeably. It's tough to both do a systematic review by western standards, but also provide commentary on what needs to change. I wonder if there's an opportunity in the discussion to hear more about the author's conclusion. There is an interesting cross-section of authors here and understanding that this entire process is colonial/western in nature, what does their "decolonizing lens" think about the studies presented. Further explanation on the SOuthwest Ontario Aboriginal Health Access Centre data extraction tool would also be interesting to hear more about - how does this differ to conventional methods?

REVIEWER	Sophie Carlisle King's College London, Health Service and Population Research
REVIEW RETURNED	19-May-2023

GENERAL COMMENTS	This is a very interesting piece of work and I enjoyed reading it. I have a few comments and suggestions that I believe will be beneficial in terms of adding a bit of clarity and transparency in the reporting, which I hope the authors consider. There are two main aspects of this review that appear to be missing. Firstly, there is no discussion of the strengths and limitations of this review in the discussion section. Whilst the authors comment on limitations of individual studies, and of the methodologies they use as a whole, they do not comment on any limitations of their own review. Secondly, it appears that there was a systematic review protocol,

	however it is only available upon request from the corresponding author. I suggest making this publicly available, using something like Open Science Framework. Ideally, the protocol should have been pre-registered/published in advance of the review being conducted. This is an example of a limitation of the review and could be mentioned in the discussion. I have a few other minor suggestions and comments: Abstract - The first sentence of the eligibility criteria section doesn't quite make sense. I think it should may read 'included studies evaluated the outcomes' or 'to be included, studies evaluated' or 'we included studies that evaluated'. - I would say that the abstract is quite long and contains a lot of information about methodology that perhaps isn't needed for the abstract. BMJ Open guidance for authors suggests a maximum of 300 words. Introduction - There are several statements here which I feel need references. Some examples include the first two sentences of paragraph two and the third sentence of paragraph four. Methods - The search strategy section states that databases were searched from 2006. Can this date limit be justified in the text please. - What happened if there was not enough information at full text screening to determine inclusion? Were authors contacted to provide information or were studies excluded? - The methods reads like full texts were only acquired for studies where there was not enough information in the abstract for reviewers to determine inclusion. Is this correct? Full texts should be obtained for all potentially included studies to confirm the inclusion decision for those that passed the title and abstract screening stage, and to provide information for studies where inclusion could not be determined in this stage. Could this be clarified please? - The text states that studies were excluded if the majority of learners were Indigenous - could the authors provide the cut-off used for defining 'majority'? - What was the decision to exclude studies with a quality appraisal score of <7 based on? Is this the suggested cut-off by the authors of the tool? Results - It would be good to have a table or figure to show how each study scored in each domain of the quality assessment, as a supplementary file. - Consider adding details to table 1 regarding the demographics of participants (e.g. gender, age, ethnicity) - The table heading of table 3 could be clearer and more descriptive. I was not sure what the table was telling me without finding the in-text description of the table. Supplementary Figure 1 - I'm not sure what the significance is of the '(i)' and '(ii)' - is a key needed? - It would be beneficial to explicitly state the reasons for exclusion separately with the number of studies excluded for each listed, rather than grouping them together or referring to them as primary

	and secondary criteria.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1, Dr. Anika Sehgal, University of Calgary

Firstly, thank you to the authors for undertaking research in this very important field. This research highlights the glaring gap of evaluation seen across much literature concerning Indigenous populations.

• Thank you for your feedback, we agree and think this is a critical issue that will need to be addressed going forward if we are to expect to improve access to quality health care for Indigenous patients and their families across all regions.

There are a few areas which may require further development:

The abstract should have the following headings: objective, methods, results, conclusion.

• We have edited the abstract headings to reflect the recommended structure.

In the methods, there are two 'rounds' to determine inclusion which results in the wording "secondary inclusion criteria" being used twice, could you re-word this to perhaps "additional inclusion criteria" or "supplementary inclusion criteria", something to differentiate the initial phase that already uses the wording secondary inclusion criteria.

• Thank you we appreciate the opportunity to address the repetition in wording and have noted inconsistencies in two sections of the manuscript: methods and the results. We have removed references to screening/screening criteria and replaced it with 'primary' or 'secondary' inclusion criteria.

• In the results section, lines 242-244 on page 15 now reads:

"192 articles were selected for full text review from which 176 were excluded based on the primary inclusion criteria (n=147) or secondary inclusion criteria (n=29)."

• In the methods section, lines 170-171 on page 11 now reads:

"…eliminated articles that upon full reading, did not meet the primary inclusion criteria and two secondary criteria: …"

• We have also included the study screening protocol, Supplementary File 1, which shares more detail.

The synthesis section is excellent and the application of a critical decolonizing lens is exemplary.

• Thank you for your supportive comments, we very much appreciate you sharing.

There should be a discussion of your strengths and limitations in this paper. Strengths should highlight the use of the WLHQAT and Indigenous authorship.

• Thank you, we agree and have now included the following section in the Discussion starting on page 24, line 497-521. We have included additional information in this section as per comments received from other reviewers. The section reads as follows:

“We acknowledge that classic systematic review methods have been developed outside of Indigenous contexts, without explicit alignment to Indigenous worldviews, community requirements, and methodologies. Our team of Indigenous and allied scientists and Indigenous health service leaders built upon existing tailored Indigenous systematic review methodologies(27-29) to implement a method aimed at optimizing relevance for Indigenous peoples through: (1) co- design, co-leadership and co-authorship by leading Indigenous methods scholars and Indigenous cultural safety educators, ensuring that their expertise and knowledge was centred throughout the project; (2) direct involvement of a senior Indigenous scholar and methodologist (JS) in all stages of the review, analysis and synthesis; (3) application of a data extraction tool developed in consultation with Indigenous community partners: the Southern Ontario Aboriginal Health Access Centre (SOAHAC) (Supplementary File 2) and the WLHQAT, a quality appraisal tool that was designed at an Indigenous-led research centre in partnership with Indigenous community members.

The review is limited to ICS programs with evaluations that have been published in the peer review and grey literature and as such, may not have captured the true breadth of existing Indigenous cultural safety training programs and related evaluations. To optimize feasibility and study coherence, we did not include organizational level interventions as for this initial study. Instead, we limited our focus to interventions directed towards health care providers. We do recognize that it is likely that lasting system-level impacts will require interventions that are implemented and evaluated at both the individual and organizational levels and would like to highlight the need for additional research focused on advancing and evaluating system-level interventions. Lastly, the review was conducted over a lengthy period of time due to the required extensive and iterative consultation with community partners and Indigenous study team members in the development and implementation of the final protocol to ensure that we were centering Indigenous worldviews, experiences, and community considerations.”

Exclusion criteria stated that interventions at the organizational level were excluded, however system-level impacts were then discussed as gaps. It could be argued that system-level impacts require interventions at both the provider and organization level as organizations themselves are often enablers of poor adherence. Perhaps this is a limitation that should be discussed.

• Thank you, based on your recommendation, as well as the other reviewers, we have now included a section (see above for the updated text) in the Discussion section where we have included points to this effect, see page 24, line 497-521.

As a reader, I am left curious as to what “evidence” would suffice to prove that cultural safety interventions are in fact working? For example, would there be some sort of external evaluation of healthcare providers’ knowledge/skills/adherence or would there be some indicator located within the Indigenous patient population such as continuously seeking different providers? While the role of community engagement is discussed, it remains unclear, especially to those readers who are not familiar with the field of Indigenous health, how we can truly know that these interventions are successful. Outlining some possibilities would significantly strengthen the paper.

• Thank you for your thoughtful comment, we couldn’t agree more. It will be very important to develop an evidence base for how we can best evaluate these interventions, we think that the focus should be on clinical outcomes for Indigenous patients, which can be measured through file audits, patient interviews and/or unannounced standardized patients alongside evaluation metrics that have been developed in partnership with Indigenous communities and organizations. Our research team has recently completed a randomized trial where we piloted unannounced Indigenous standardized patients as an evaluation tool to measure the efficacy of cultural safety training. The UISPs completed

two survey tools post-visit that evaluated the overall standard of care and communication skills of participants. We think that organizations such as hospitals and professional health training programs will need to apply evaluations that incorporate patient file audits and unannounced standardized patient visits and are currently working on a manuscript to describe this work. We have clarified the potential options as follows, on page 22, line 451-454:

“None of the studies attempted to measure adherence to clinical practice guidelines, a critical outcome measure which is typically associated with provider training outcomes and could be evaluated through the use of standardized patients(56-58), ideally unannounced, or through file audits of clinical care.(59,60)”

Reviewer: 2
Dr. Larry Leung, The University of British Columbia

Comments to the Author:
The authors have explained both the strengths and limitations of this study. I would suggest articulating the exact role of the Indigenous scholars involved, as well as an acknowledgement that a systematic review, by nature, is quite colonial in nature.

• Thank you, we have updated the Discussion section where we have addressed these points, please see the following text which is now starting on page 24, line 497-521:

“We acknowledge that classic systematic review methods have been developed outside of Indigenous contexts, without explicit alignment to Indigenous worldviews, community requirements, and methodologies. Our team of Indigenous and allied scientists and Indigenous health service leaders built upon existing tailored Indigenous systematic review methodologies(27-29) to implement a method aimed at optimizing relevance for Indigenous peoples through: (1) co- design, co-leadership and co-authorship by leading Indigenous methods scholars and Indigenous cultural safety educators, ensuring that their expertise and knowledge was centred throughout the project; (2) direct involvement of a senior Indigenous scholar and methodologist (JS) in all stages of the review, analysis and synthesis; (3) application of a data extraction tool developed in consultation with Indigenous community partners: the Southern Ontario Aboriginal Health Access Centre (SOAHAC) (Supplementary File 2) and the WLHQAT, a quality appraisal tool that was designed at an Indigenous-led research centre in partnership with Indigenous community members.

The review is limited to ICS programs with evaluations that have been published in the peer review and grey literature and as such, may not have captured the true breadth of existing Indigenous cultural safety training programs and related evaluations. To optimize feasibility and study coherence, we did not include organizational level interventions as for this initial study. Instead, we limited our focus to interventions directed towards health care providers. We do recognize that it is likely that lasting system-level impacts will require interventions that are implemented and evaluated at both the individual and organizational levels and would like to highlight the need for additional research focused on advancing and evaluating system-level interventions. Lastly, the review was conducted over a lengthy period of time due to the required extensive and iterative consultation with community partners and Indigenous study team members in the development and implementation of the final protocol to ensure that we were centering Indigenous worldviews, experiences, and community considerations.”

What search terms were used for the systematic review - global differences in the terminology used - e.g. Indigenous vs. Aboriginal. vs. Native Americans, depending on region.

• Thank you for your comments. In the manuscript, page 10, line 153, we refer to Supplemental Figure 2 which provides a detailed description of the search terms we used and they are comprehensive of the global differences in terminology; we do however recognize that some of the databases do use specific terms (eg. Indigenous of North America). The search strategy that we use has been iteratively developed over the past decade by international senior Indigenous scientists and expert librarians. For this project, we collaborated with an experienced information specialist at St. Michael's Hospital (Unity Health Toronto) Health Sciences Library in Toronto, Canada to implement the search strategy and identify any additional search terms (the librarian is listed as a co-author).

How was a critical decolonizing lens used - the explanation does not seem to imply how this is decolonizing in nature? How did that actually impact the study inclusion? I didn't find this section to be clear enough. How did you contextualize Indigenous ways of knowing and being through the application of Western methodologies. I understand the principle drawn here, but it doesn't match what was actually done. More clarification on the authors roles might be helpful and how the 5 R's principles changed or didn't change the critical lens that was taken in this review.

*A footnote describing the differences in terminology might help with readability - Indigenous vs. Aboriginal, as the article is using them interchangeably.

• Thank you for this important question. As a research team comprised of Indigenous and allied scholars and Indigenous cultural safety leaders, we worked collaboratively to carry out the systematic review and applied a decolonizing lens to the synthesis. Typically, systematic reviews apply a positivist paradigm and assume objectivity. Our research team members are expert at applying a decolonizing synthesis lens and do so by reading the text and applying principles as described and applying a lens that identifies and uncovers colonial assumptions, language and bias that may not be implicitly acknowledged in the text. Including a full explanation in the manuscript would be beyond the scope of the paper and we would instead refer the reviewer to the source references. We have not included a footnote regarding terminology as in our experience, the terminology is quite diverse, distinct and would require an extensive glossary to respectfully address it.

We also would like to highlight the application of a quality appraisal tool (Supplementary Figure 3) that was designed by an Indigenous scholar in partnership with Indigenous community partners and utilized in prior, peer reviewed research. The appraisal tool includes measures that appraise not only the quality of the research, but also the inclusion and degree of engagement/involvement of Indigenous community partners in the design, implementation and evaluation of programs and services designed to be used by or for Indigenous communities. The 5 R principles, as foundational principles were applied by all members of the research team, during the iterative narrative approach, where we looked at for instance, how curriculum were developed, implemented and evaluated for those studies that were included. Table 4 on page 13 is one example of how the 5 Rs informed the synthesis. We hope that this clarifies our approach.

It's tough to both do a systematic review by western standards, but also provide commentary on what needs to change. I wonder if there's an opportunity in the discussion to hear more about the author's conclusion. There is an interesting cross-section of authors here and understanding that this entire process is colonial/western in nature, what does their "decolonizing lens" think about the studies presented.

• Thank you for this thoughtful comment – we agree and this is why we have all self-located and identified the Indigenous community partners and collaborators. The 'decolonizing lens' is present throughout the review as the data extraction and appraisal tools were designed and implemented in partnership with Indigenous community members. In particular, the Well Living House Quality Appraisal Tool (WLHQAT) (Supplementary Figure 3) differs from conventional methods in that it

considers methodological rigour, using classic disciplinary standards, while also including an assessment of Indigenous community involvement and relevance – reflecting emerging standards for Indigenous evaluation.

Further explanation on the Southwest Ontario Aboriginal Health Access Centre data extraction tool would also be interesting to hear more about - how does this differ to conventional methods?

• Thank you for your question. We developed the tool in consultation with the Southwest Ontario Aboriginal Health Access Centre in order to centre the priorities, expertise and knowledge of the Indigenous community partners. We have now included the data extraction tool as Supplementary File 2.

Reviewer: 3
Dr. Sophie Carlisle, King's College London

Comments to the Author:
This is a very interesting piece of work and I enjoyed reading it. I have a few comments and suggestions that I believe will be beneficial in terms of adding a bit of clarity and transparency in the reporting, which I hope the authors consider.

There are two main aspects of this review that appear to be missing.

Firstly, there is no discussion of the strengths and limitations of this review in the discussion section. Whilst the authors comment on limitations of individual studies, and of the methodologies they use as a whole, they do not comment on any limitations of their own review.

• Thank you, we agree and have now included the following update in the Discussion starting on page 24, line 497-521. We have also included additional information in this section as per comments received from other reviewers. The text reads as follows:

“We acknowledge that classic systematic review methods have been developed outside of Indigenous contexts, without explicit alignment to Indigenous worldviews, community requirements, and methodologies. Our team of Indigenous and allied scientists and Indigenous health service leaders built upon existing tailored Indigenous systematic review methodologies (27-29) to implement a method aimed at optimizing relevance for Indigenous peoples through: (1) co- design, co-leadership and co-authorship by leading Indigenous methods scholars and Indigenous cultural safety educators, ensuring that their expertise and knowledge was centred throughout the project; (2) direct involvement of a senior Indigenous scholar and methodologist (JS) in all stages of the review, analysis and synthesis; (3) application of a data extraction tool developed in consultation with Indigenous community partners: the Southern Ontario Aboriginal Health Access Centre (SOAHAC) and the WLHQAT, a quality appraisal tool that was designed at an Indigenous-led research centre in partnership with Indigenous community members.

The review is limited to ICS programs with evaluations that have been published in the peer review and grey literature and as such, may not have captured the true breadth of existing Indigenous cultural safety training programs and related evaluations. To optimize feasibility and study coherence, we did not include organizational level interventions as for this initial study. Instead, we limited our focus to interventions directed towards health care providers. We do recognize that it is likely that lasting system-level impacts will require interventions that are implemented and evaluated at both the individual and organizational levels and would like to highlight the need for additional research focused on advancing and evaluating system-level interventions. Lastly, the review was conducted

over a lengthy period of time due to the required extensive and iterative consultation with community partners and Indigenous study team members in the development and implementation of the final protocol to ensure that we were centering Indigenous worldviews, experiences, and community considerations."

Secondly, it appears that there was a systematic review protocol, however it is only available upon request from the corresponding author. I suggest making this publicly available, using something like Open Science Framework. Ideally, the protocol should have been pre-registered/published in advance of the review being conducted. This is an example of a limitation of the review and could be mentioned in the discussion.

Thank you for your important recommendation. We agree with the importance of publicly sharing research protocols. We have now included reference to and access to our study screening protocol (Supplementary File 1), in the methods (page 11, line 177). We are happy to share additional materials upon request. Due to limitations in the size of our team and competing demands

I have a few other minor suggestions and comments:
Abstract

The first sentence of the eligibility criteria section doesn't quite make sense. I think it should may read 'included studies evaluated the outcomes' or 'to be included, studies evaluated' or 'we included studies that evaluated'.

• Thank you for this recommendation and careful read, we have edited the abstract as per the comment below and the sentence is no longer there.

I would say that the abstract is quite long and contains a lot of information about methodology that perhaps isn't needed for the abstract. BMJ Open guidance for authors suggests a maximum of 300 words.

• Thank you for this recommendation; we agree, and it is a reflection of the submission process as we had initially submitted to BMJ. We have now edited the abstract to reflect yours and other reviewer recommendations.

Introduction

There are several statements here which I feel need references. Some examples include the first two sentences of paragraph two and the third sentence of paragraph four.

• Thank you for this recommendation, we agree and have included additional references as follows:

• On page 4, lines 85-87 we have added the following references:

o National Collaborating Centre for Indigenous Health. Reading C. Social Determinants of Health: Understanding Racism. [Internet] Vancouver (CA): NCCIH; 2020 [updated 2020 Sep 08; cited 2023 Jan 6]. Available from: https://www.nccih.ca/495/Understanding_racism.nccih?id=103.
o Allan B & Smylie J, First Peoples, second class treatment: The role of racism in the health and well-being of Indigenous peoples in Canada. (2015). Toronto. The Wellesley Institute
o Harding L. What's the harm? Examining the stereotyping of Indigenous peoples in health systems. 2018.

• On page 4, lines 87-90, we have added the following references:

o National Collaborating Centre for Indigenous Health. Reading C. Social Determinants of Health: Understanding Racism. [Internet] Vancouver (CA): NCCIH; 2020 [updated 2020 Sep 08; cited 2023 Jan 6]. Available from: https://www.nccih.ca/495/Understanding_racism.nccih?id=103.
o Allan B & Smylie J, First Peoples, second class treatment: The role of racism in the health and well-being of Indigenous peoples in Canada. (2015). Toronto. The Wellesley Institute
o Smylie J, Harris RB, Paine S, et al. Beyond shame, sorrow, and apologies – action to address Indigenous health inequities. BMJ 2022; 378:o1688

• On page. 4, lines 110 – 113, we have added the following references:
o Churchill M, Parent-Bergeron M, Smylie J, Fridkin A, Smylie D, Firestone M. Evidence Brief: Wise Practices for Indigenous-specific Cultural Safety Training Programs [Internet]. Toronto: Well Living House Action Research Centre for Indigenous Infant, Child, and Family Health and Wellbeing; 2017 Aug [cited 2022 Jan 06]. 21 p. Available from: http://www.welllivinghouse.com/wp-content/uploads/2019/05/2017-Wise-Practices-in-Indigenous-Specific-Cultural-Safety-Training-Programs.pdf
o MacLean TL, Qiang JR, Henderson L, Bowra A, Howard L, Pringle V, et al. Indigenous Cultural Safety Training for Applied Health, Social Work, and Education Professionals: A PRISMA Scoping Review. International journal of environmental research and public health. 2023;20(6):5217

Methods

The search strategy section states that databases were searched from 2006. Can this date limit be justified in the text please.

• Thank you for this important question. The reason we started in 2006 is that we had previously done a scoping review and found the literature describing and evaluating Indigenous cultural safety interventions emerged in and after 2006. For example, NIH PUB med shows in 2005 there were 3 articles, but none meet inclusion criteria – one described the teaching theory, one evaluates the teachers but not the students, and one describes a number of high-level initiatives. Not surprising since Irihapeti Ramsden published her thesis on Indigenous cultural safety in 2002. We have included the following text on page 10, line 149-150:

“based upon the emergence of literature describing and evaluating Indigenous cultural safety interventions”

What happened if there was not enough information at full text screening to determine inclusion? Were authors contacted to provide information or were studies excluded?

• Thank you for this question, if there was not enough information at full text screening to determine whether the article met the primary and secondary inclusion criteria, the article was excluded from the final sample.

The methods read like full texts were only acquired for studies where there was not enough information in the abstract for reviewers to determine inclusion. Is this correct? Full texts should be obtained for all potentially included studies to confirm the inclusion decision for those that passed the title and abstract screening stage, and to provide information for studies where inclusion could not be determined in this stage. Could this be clarified please?

• Thank you for your comment. You are correct that full texts were obtained for all potentially included studies to confirm the inclusion decision for those that passed the title and abstract screening stage,

and to provide information for studies where inclusion could not be determined in this stage. Full texts were obtained and reviewed for inclusion in two scenarios:
o if the title/abstract met all primary inclusion criteria
o if the title/abstract had insufficient information to assess whether the article did, or did not, meet all inclusion criteria
• The only scenario in which full texts were not obtained was if the title/abstract had sufficient information to conclude that the article did not meet the inclusion criteria. For example, the search word “Indigenous” commonly pulls up articles about molecular genetics. These articles could clearly be excluded.
• We have also now clarified the text on page 11, lines 166-168, to read:

“Full texts were obtained for all studies that passed this title and abstract screening stage and in the event that there was not enough information in the abstract to determine inclusion according to these 3 criteria”.

The text states that studies were excluded if the majority of learners were Indigenous - could the authors provide the cut-off used for defining 'majority'?

• Thank you for your question. Any study where more than 50% of participants were Indigenous were excluded from the final sample of articles.

What was the decision to exclude studies with a quality appraisal score of <7 based on? Is this the suggested cut-off by the authors of the tool?

• Thank you for this question. This senior author of this tool is also the senior author of this paper. The cut of score of <7 is consistent with use of the tool to date and was agreed to by the research team and community partners in this study. The criteria that informed the cut-off was based upon the relevance of the selection to contribute to study aim two, which was to understand which specific training approaches were impactful for whom and in what way – if the score was <7 for the quality/rigour/community relevance of the evaluation of the tool, our team didn’t feel it would be appropriate to draw firm conclusions about impact. That said, we still kept the studies scoring <7 in mind as promising practices.

Results

It would be good to have a table or figure to show how each study scored in each domain of the quality assessment, as a supplementary file.

• Thank you for this recommendation, we have now included a table (3) on page 12, line 197, that lists a range of scores for each study that was appraised.

Consider adding details to table 1 regarding the demographics of participants (e.g. gender, age, ethnicity)

• Thank you for this recommendation. We had initially considered doing so, however, reporting on participant demographics was very heterogeneous – with varying levels of detail between articles included in the sample. We determined after team discussion that adding these details to table 1 would not provide add to the analysis.

The table heading of table 3 could be clearer and more descriptive. I was not sure what the table was telling me without finding the in-text description of the table.

• Thank you, we have updated the title for Table 3 (now 4) to address your comment. The updated title for table 3 (now 4) on page 13, line 199 now reads:

'Table 4 – Summary of Indigenous Involvement in Curriculum Design and Delivery, and Research Activities'.

Supplementary Figure 1

I'm not sure what the significance is of the '(i)' and '(ii)' - is a key needed?

• Thank you – we have updated the language regarding primary and secondary exclusion criteria throughout the body of the manuscript as per your and other reviewer recommendations. This is also reflected in the updated Supplementary Figure 1

It would be beneficial to explicitly state the reasons for exclusion separately with the number of studies excluded for each listed, rather than grouping them together or referring to them as primary and secondary criteria.

• Thank you for this recommendation – unfortunately, we do not have a granular breakdown of the reasons for exclusion as articles were often excluded based upon multiple criteria. The most common reason for exclusion was one of, or a combination of the following:
o The intervention was not a cultural safety specific education intervention
o There was no detailed information regarding the outcomes of the intervention
o The study design was not specific to Indigenous cultural safety in an Indigenous context – eg. broadly applied to BIPOC communities or anti-oppression

VERSION 2 – REVIEW

REVIEWER	Anika Sehgal University of Calgary, community health sciences
REVIEW RETURNED	02-Aug-2023

GENERAL COMMENTS	Thank you to the authors for their thoughtful responses to address the concerns from the initial review. This is an excellent paper that I enjoyed reading. I look forward to its publication. There are a few grammatical suggestions that I have highlighted for the authors below, please note these are all optional: -Throughout the paper, citations should appear before the end of the sentence - i.e. rooted in racist ideologies of white supremacy (6-12). -Synthesis paragraph 2, (ii) Indigenous instructor and community involvement was achieved through iterative discussion of independently identified themes among the authorship team followed by in depth re-examination of the included studies by the first author. The word "in-depth" needs a hyphen. -Study and population characteristics paragraph 2, …including various combinations of surveys, open ended questions, semi-structured interviews. The word "open-ended" needs a hyphen. -Words like "evidence based" "action oriented" "micro level" "Indigenous specific" "full text" "two phased" "in depth" "post intervention" "open ended" "learner focused" "peer reviewed" "system level" "patient focused" "action oriented" should be hyphenated

	-throughout the paper, please be consistent in use of focused or focussed -Under Impactful specific training approaches, strategies, formats or content, line 545 should be “co-design” not “co- design” - no space -throughout the paper, please be consistent in use of Indigenous people or Indigenous peoples, personally I use peoples (plural with s at end) -throughout the paper, please be consistent in use of “healthcare” or “health care” -Under Indigenous community understandings of measures of success, last paragraph “Contributions by local Indigenous communities to study evaluations, were far more limited…” no comma after evaluations -In the concluding remarks section, no dash in the word “carry out” -Under concluding remarks, “analysis and dissemination to ensure that both the training programs and their evaluations meets the dual criteria of excellence in Indigenous health research” should perhaps use “meet” - also this last sentence seems quite long, perhaps it could be two sentences instead.

REVIEWER	Larry Leung The University of British Columbia, Faculty of Pharmaceutical Sciences
REVIEW RETURNED	08-Aug-2023

GENERAL COMMENTS	I appreciate the clear, concise, but thorough comments to each recommendation suggested by the reviewers.

REVIEWER	Sophie Carlisle King's College London, Health Service and Population Research
REVIEW RETURNED	25-Jul-2023

GENERAL COMMENTS	I'd like to thank the authors for all of their work on this revised manuscript. I can see that they have taken on board comments from all reviewers and think the review is much improved as a result. I have just a few minor comments and suggestions: I'd like to thank the authors for supplying the screening protocol, I think this adds to the transparency and understanding of how decisions were made. I'd like to clarify whether this review was registered on Prospero or similar? The Prisma checklist on page 135-6 suggests this information is given on page three but I can't locate it. Similarly the checklist suggests that information on a review protocol is given on page 23 but I can't locate this either. My view is that a screening protocol and review protocol are different things (a review protocol will outline all proposed methodology including eligibility criteria, plans for the synthesis approach, risk of bias tools etc), and it appears the authors did not prepare a review protocol in which this should be stated. There's a bit of inconsistency when it comes to spelling out numbers. For example, page 20 line 270 (first line under the Quality Appraisal heading, the number of studies should be spelled out in full to be consistent with the rest of the paper (three rather than 3). Similarly, line 303 the "6" should probably be written out as "six". On line 408 you have used the numbers "14" but on line 420 you have spelled out "thirteen". Not a big issue, but I suggest checking throughout and being consistent.

	I would also suggest that where you have written the number of studies out in full, you don't need the number in brackets too. So for example, for line 290 the sentence " Two (n=2) studies were qualitative", could just be "two studies were qualitative". Consider a heading i.e., "Strengths and limitations" before the new section on strengths and limitations of the review. There is also an unnecessary quotation mark at the end of line 566.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Dr. Anika Sehgal, University of Calgary

Comments to the Author:

Thank you to the authors for their thoughtful responses to address the concerns from the initial review. This is an excellent paper that I enjoyed reading. I look forward to its publication.

6. There are a few grammatical suggestions that I have highlighted for the authors below, please note these are all optional:

-Throughout the paper, citations should appear before the end of the sentence - i.e. rooted in racist ideologies of white supremacy (6-12).

-Synthesis paragraph 2, (ii) Indigenous instructor and community involvement was achieved through iterative discussion of independently identified themes among the authorship team followed by in depth re-examination of the included studies by the first author. The word “in-depth” needs a hyphen.

-Study and population characteristics paragraph 2, …including various combinations of surveys, open ended questions, semi-structured interviews. The word “open-ended” needs a hyphen.

-Words like “evidence based” “action oriented” “micro level” “Indigenous specific” “full text” “two phased” “in depth” “post intervention” “open ended” “learner focused” “peer reviewed” “system level” “patient focused” “action oriented” should be hyphenated

-throughout the paper, please be consistent in use of focused or focussed

-Under Impactful specific training approaches, strategies, formats or content, line 545 should be “co-design” not “co- design” - no space

-throughout the paper, please be consistent in use of Indigenous people or Indigenous peoples, personally I use peoples (plural with s at end)

-throughout the paper, please be consistent in use of “healthcare” or “health care”

-Under Indigenous community understandings of measures of success, last paragraph “Contributions by local Indigenous communities to study evaluations, were far more limited…” no comma after evaluations

-In the concluding remarks section, no dash in the word “carry out”

-Under concluding remarks, “analysis and dissemination to ensure that both the training programs and their evaluations meets the dual criteria of excellence in Indigenous health research” should perhaps use “meet” - also this last sentence seems quite long, perhaps it could be two sentences instead.

Thank you so much for these edits, we have reviewed and where possible have made the changes as per your recommendation. Specifically,

We have edited the manuscript throughout to read Indigenous peoples (not people) and healthcare (not health care).

We have also edited the final sentence in the Concluding Remarks section to read: “Further research investment, with funds directed towards Indigenous-led agencies and organizations that are leading the work in this field, is required to advance training program evaluation design, implementation, analysis and dissemination. These investments would ensure that both the training programs and their evaluations meet the dual criteria of excellence in Indigenous health research: a) methodological rigour and b) alignment with and connection to local, regional and /or national Indigenous priorities and needs.

We did not edit the location of the citations as we are following the format of BMJ submissions, where citations are located outside of the end of the sentence.

Reviewer: 2

Dr. Larry Leung, The University of British Columbia

Comments to the Author:

I appreciate the clear, concise, but thorough comments to each recommendation suggested by the reviewers.