Received: 19 January 2022 | Revised: 2 March 2022 | Accepted: 9 March 2022

DOI: 10.1111/cdoe.12743

COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY WILEY

SYSTEMATIC REVIEW

Building an understanding of Indigenous Health Workers' role in oral health: A qualitative systematic review

Brianna Poirier | Sneha Sethi | Joanne Hedges | Lisa Jamieson

Australian Research Centre for Population Oral Health, Adelaide Dental School, University of Adelaide, Adelaide, South Australia, Australia

Correspondence
Brianna Poirier, Australian Research Centre for Population Oral Health, Adelaide Dental School, University of Adelaide, Adelaide, SA, Australia.
Email: brianna.poirier@adelaide.edu.au

Abstract

Objectives: Indigenous health workers (IHW) play an integral role in the provision of culturally safe care for Indigenous communities. Despite this, IHW involvement in oral health has been limited. Therefore, this qualitative systematic review aimed to build an understanding of IHW insights on oral health.

Methods: Two independent reviewers searched PubMed, EMBASE, Web of Science and Scopus using a pre-established search strategy. Qualitative studies that included IHW illustrations about oral health were considered. The search was not limited by geographic setting. Included articles were critically appraised with the Joanna Briggs Institute appraisal tool for qualitative studies.

Results: The search identified 1856 articles eligible for inclusion; a total of 10 articles were included. Four synthesized findings were identified during the meta-aggregation: oral health challenges in community, systemic barriers limiting IHW ability to support oral health, benefits of IHW involvement in oral health and avenues to increase IHW involvement in oral health.

Conclusion: The prioritization of Indigenous leadership in oral health has the potential to address many of the current challenges Indigenous communities face. Future works need to determine the capacity of IHW to provide oral health care and explore opportunities to create specific oral health roles for IHW.

KEYWORDS
dental public health, health promotion, Indigenous health, Indigenous health worker, oral health

1 | INTRODUCTION

Colonization has had, and continues to have, such pervasive impacts on Indigenous peoples' well-being that the United Nations definition of Indigenous peoples centres around the idea of historical continuity with lands prior to invasion of colonial societies: 'Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them'.[1] The destructive impacts of government practices and societal continuance of colonization, assimilation and racism against Indigenous peoples' well-being are evidenced by the similar poor health outcomes experienced by Indigenous peoples globally.[2,3] The forcible removal of Indigenous peoples from their lands, prohibition of cultural practices and languages, and destruction of

families through various child removal policies has understandably had profound influences on Indigenous well-being.[4,5]

Oral health is one of the many facets of well-being that has suffered due to the impacts of colonial policies, structures and ideologies with recent reports highlighting the persistence of oral health inequities experienced by Indigenous peoples.[6–8] Oral health presents a myriad of challenges for Indigenous communities that span individual, family, community and systemic factors.[9] Inaccessibility of oral health services,[10–12] racism,[11,13,14] experiences of dental and medical trauma,[15] limited knowledge,[9,12,13] financial costs associated with dental care[12,13,16] and competing priorities[11,16,17] are some of the many factors that work together to create substantial barriers to establishing and maintaining oral health for Indigenous peoples.

Due to their foundation of colonial and biomedical values as well as limited appreciation for holistic understandings of well-being, mainstream health services often fail to adequately meet the needs of Indigenous peoples.[18] This inability of mainstream services combined with the importance of Indigenous self-determination has, in some instances, resulted in the creation of alternate models of care. Countries like Australia have established Aboriginal Community Controlled Health Services (ACCHS) to address the shortcomings of existing mainstream health services.[19] Community-controlled services overcome issues of Indigenous exclusion from governance structures, which is a key indicator of institutional racism.[20,21] Indigenous health workers (IHW) were a catalyst for the establishment of ACCHS in Australia due to their success in advocating for community needs and their leadership in culturally appropriate health promotion and education.[22–24] There is a large body of evidence supporting the role of IHW in improving service provision and health outcomes for Indigenous peoples, ranging from health promotion to disease management.[25,26] IHW are becoming an increasingly qualified workforce and are responsible for the provision of a range of health services from primary, secondary and tertiary to community-based prevention programmes.[27–31] IHW provide cultural brokerage between mainstream health services and Indigenous patients as well as between Western and Indigenous understandings of well-being.[25,27,32,33] The use of IHW builds on familiar relationships of trust, which are imperative to holistic identification of patient needs, utilization of health services and appointment attendance.[34,35] While sometimes challenging, IHW navigate their availability and visibility as a health worker in their community seamlessly between professional and personal roles.[36] IHW describe this aspect of their role as imperative to the provision of quality health care, an importance poorly understood by their non-Indigenous peers.[36] This difference in understanding is one example of the misalignments between dominant cultures understanding of health and Indigenous paradigms of well-being, highlighting the foundational role of IHW in Indigenous health. Community members in Alaskan Native communities have been successfully trained as dental assistants and provide more consistent and culturally safe services, particularly in remote areas with traditionally sporadic dental care[37,38]; this service model has also been recommended for Canadian Inuit communities.[39]

Despite the important role IHW play in Indigenous well-being, the utilization of IHW in oral health promotion or care provision has been sporadic and poorly defined. This in part could be due to a lack of oral health training, the view of oral health as a more specialized skillset, and existing colonial or racist values that impact the value associated with IHW involvement in mainstream health services. However, given the continuing and increasing burden of oral diseases experienced by Indigenous peoples, oral health models of care must be modified in a way that prioritizes equitable service provision that aligns with Indigenous values and best meets the needs of Indigenous patients. Although many authors have called for the incorporation of IHW in oral health, it is critical to inform decisions about IHW inclusion in oral health with IHW perspectives. Currently, there is no existing synthesis of IHW perceptions of their role or involvement in oral health. Therefore, this qualitative systematic review and meta-aggregation sought to build an understanding of IHW insights on oral health and their potential role in this space.

2 | MATERIALS AND METHODS

This qualitative systematic review has been registered with PROSPERO (CRD42021287563) and the Joanna Briggs Systematic Reviews register (Appendix S1). A prior search of the PROSPERO register revealed no similar studies. This qualitative systematic review is reported in alignment with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines[40] and the Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) statement[41] (Appendix S2).

2.1 | Positionality

Self-situation of researchers is essential in qualitative works, as researcher subjectivity influences the interpretation of the research outcomes. This review has been driven by aspirations to highlight the voices of IHW and to illustrate individual perspectives regarding oral health promotion. The primary reviewers (B.P and S.S) have been involved in various collaborations with ACCHS and have had opportunities to build valuable relations with IHW. A desire to synthesize existing perspectives of IHW regarding oral health within the literature was recognized with the aim to identify future oral promotion strategies and policy actions. Both the primary reviewers are non-Indigenous researchers: B.P has extensive qualitative experience with community-engaged scholarship in the context of Indigenous health in Canada and Australia, and S.S is an experienced oral pathologist with significant experience working with Indigenous populations in Australia. The supporting research team consists of Indigenous and non-Indigenous scholars with valuable experience in the field of Indigenous health research.

2.2 | Identifying studies for inclusion (inclusion/exclusion listed at end)

The reviewers used a pre-established search strategy,[42] which involved using terms (and their related variants) describing the population of interest, the phenomenon being researched, as well as the included study designs. Two investigators (B.P and S.S) independently screened the literature for eligible articles using PubMed, SCOPUS, Web of Science and EMBASE databases from inception until 26 October 2021. The search was tailored as per the requirements of individual databases (Appendix S3).

In the search for published studies, the reviewers utilized the option to run 'related' searches, which led to identification of similar studies. Manual bibliographic skimming for each study, relevant to our topic of interest, was performed, to ensure a thorough literature search. Titles and abstracts were independently screened by both reviewers, to ascertain eligibility with those considered relevant by either investigator proceeding to a full-text review. Both investigators fully screened all articles to evaluate the adherence to the predefined inclusion criteria:

- The study focused on IHW views, experiences, perspectives and barriers regarding oral health.
- Findings contained personal illustrations or first-person accounts of IHW experiences.
- The study was qualitative or mixed methods (with clear qualitative illustrations)
- Oral health was the subject of interest
- The publication was available in English
- The publication was available in hardcopy or in downloadable form
- The paper was published prior to 26 October 2021

Exclusion criteria

- IHW reflections on oral health training programmes
- Non-Indigenous perspectives on the involvement of IHW in oral health
- Quantitative studies

Any disagreements between the two reviewers were resolved by a third reviewer (L.J.). Although efforts to minimize publication bias were made, the reviewers do identify the limitation of exclusive English language literature, which could have resulted in loss of data recorded in Native languages. Additionally, the inclusion of all grey literature could have provided additional findings for the study and decreased possible impacts of publication bias.

2.3 | Critical appraisal

There are several validated tools for the purpose of appraisal of studies; this review used the JBI (Joanna Briggs Institute) System for the Unified Management, Assessment and Review of Information (SUMARI) critical appraisal tool.[43] The JBI tool was chosen due to its comprehensiveness, high sensitivity to validity and focus on congruity.[44] The JBI critical appraisal tool includes questions evaluating a wide range of factors ranging from agreement between research philosophies, methodologies and analytical findings to researcher positionality statements.[43]

2.4 | Data extraction and synthesis

Data were extracted in two phases, with the first phase using the JBI data extraction tool, which included study characteristics. The second phase included comprehensive extraction of identified data (illustrations, first person narratives) by the reviewers. Where community illustrations were collated together with IHW perspectives, only IHW perspectives were extracted and synthesized in meta-aggregation. The findings from the second phase were scored independently by the reviewers utilizing JBI SUMARI as 'Credible', 'Not Supported' or 'Unequivocal'; the final score for each finding was dependent on inter-reviewer agreement. The final synthesis of the findings was performed manually by reviewers, by writing all findings on a white board and labelling common phrases and concepts and generating categories. Common categories were grouped, and association with other themes was explored in the context of oral health promotion. The step of manual assortment of findings was performed to enable clear visualization and appropriate categorization of collected data; this also prevented repetition and overlap of similar concepts in different categories. These categories were transferred to the JBI SUMARI tool, and each finding was placed within the appropriate category. These categories were then placed to fit a conceptualized model with overarching synthesized findings, which clearly reflected and outlined the findings from each individual study.

3 | RESULTS

The systematic search identified 2052 articles, of which 196 were duplicates, leaving 1856 unique articles eligible for inclusion. Thirty-two articles were retrieved for full-text review; during this process, 22 were removed, primarily due to a lack of representation from IHW. A total of 10 articles were included in this qualitative systematic review (Figure 1).

3.1 | Study characteristics

The included papers were published between 2003 and 2021; seven studies were from Australia,[11,45–50] two were from the United States,[37,51] and one was from Canada[52] (Table 1). Included papers ranged in study design, from mixed methods[45] to semi-structured interviews studies,[11,37,50,51] and focus groups including yarning.[48–50,52] The methodology included content

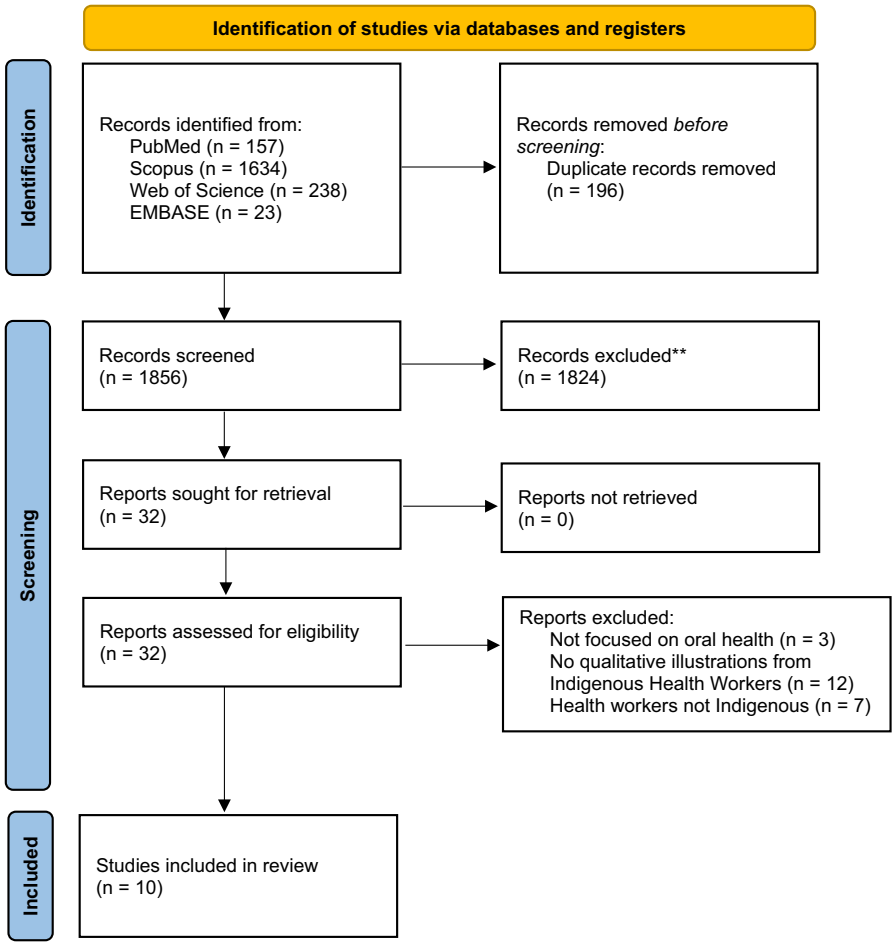

FIGURE 1 PRISMA flow diagram[40]

analysis[47,49–51] and thematic analysis.[11,37,46,52] IHW from the included studies represent Aboriginal and Torres Strait Islander communities,,[11,45–50] Alaskan Native communities[37,51] and First Nations communities.[52]

3.2 | Critical appraisal

The inter-reviewer score for the critical appraisals was 8.6, demonstrating a high level of agreement between reviewers (Appendix S4). There was poor performance across most studies with regard to researcher positionality and addressing the influence of researchers on study outcomes (Appendix S5). No studies were excluded solely on the basis of appraisal scores.[43]

3.3 | Meta-aggregation findings

From 181 illustrations, 22 categories were generated and aggregated into four synthesized findings (Appendix S6). The four synthesized findings include oral health challenges in community, systemic barriers limiting IHW ability to support oral health, avenues to increase IHW involvement in oral health care and benefits of IHW involvement in oral health (Figure 2).

3.4 | Oral health challenges in community

Unsurprisingly, due to IHW investment in community well-being, many of the findings related to oral health challenges in communities from IHW perspectives. Many oral health services were described as inaccessible for community members, due to transportation issues, long distances, waiting lists, costs and priority of emergency dental needs among services.[11,37,45,46,48,52] Many IHW expressed frustration about the waiting list for public dental services, citing a minimum of 12-month delay, which forced many community members to avoid dental services because they were not able to afford private care.[11,45,46,48] IHW explained how the high number of patients and limited available services meant that many patients only saw dental practitioners for treatment or pain management rather than prevention.[11,45,46] Providing transportation for patients was a core practice for many Indigenous health services[45,46,48]; however, this was not always built into mainstream dental services or was possible for services located a considerable distance away, even for dental emergencies, 'As far as an emergency, you could be stuck here for days… And that's another thing, we're landlocked, you know. If the weather's bad, no dentist. And everything is cancelled because they've gotta move on to the next village'.[37]

Limited knowledge about general oral health hygiene and diet was identified by IHW as consequential contributors to community

TABLE 1 Characteristics of included studies

Author	Methods for data collection and analysis	Country	Phenomenon of interest	Setting/context/culture	Participant characteristics sample size
Campbell et al.[45]	Mixed methods (online survey and semi-structured interviews)	New South Wales, Australia	Exploration of the oral health care experiences and activities of ACCHSs to inform policy and program decision-making	Aboriginal Community Controlled Health Services (Aboriginal and Torres Strait Islander communities)	Purposive sampling N# – 9
Chi et al.[51]	Semi-structured interviews and content analysis	Alaska, USA	Develop a conceptual model of dental care delivery in Alaska Native Communities centred on dental therapists	Alaskan Native communities	Snowball sampling N# – 19
Durey et al.[11]	Semi-structured interviews, focus groups and thematic analysis	Western Australia, Australia	Investigating Aboriginal Health Workers' (AHWs) perceptions of barriers and enablers to oral health for Aboriginal people	Aboriginal health workers (Aboriginal and Torres Strait Islander communities)	N# – 35
Kong et al.[48]	Yarning in focus groups, thematic analysis	New South Wales, Australia	Explore the perceptions and experiences of Aboriginal health staff towards oral health care during pregnancy	Aboriginal health workers (Aboriginal and Torres Strait Islander communities)	N# – 14
Kong et al[46]	Interviews, inductive thematic analysis	New South Wales, Australia	Explore whether oral health was an important consideration for Aboriginal and Torres Strait Islander women during pregnancy, whether and strategies that would be appropriate to use in a new model of care	Aboriginal and Torres Strait Islander communities	N# – 3
Kong et al.[47]	Participatory action framework, focus groups, content analysis	New South Wales, Australia	Develop and pilot test the model of care, Grinnin' Up Mums & Bubs, to train Aboriginal Health Workers to promote oral health among Aboriginal and Torres Strait Islander pregnant women	Aboriginal and Torres Strait Islander communities	N# – 7
Senturia et al.[37]	Semi-structured interviews and thematic analysis	Alaska, USA	Describe strengths and barriers to paediatric dental care for children living in remote Alaska villages from the perspectives of the community and the healthcare system	Alaskan Native communities	N# – 19
Shrivastava et al.[52]	Interviews, focus groups and thematic analysis	Quebec, Canada	Perspectives of Cree communities and primary healthcare providers regarding the barriers and enablers of relational continuity of oral health care integrated at a primary healthcare organization	First Nations communities	N# – 26
Vaughn et al.[49]	Focus group, content analysis	Northern Territory, Australia	Explore the oral health related worlds of carers of Aboriginal children on Groote, Eykndt	Aboriginal health workers (Aboriginal and Torres Strait Islander communities)	Purposive sampling N# – 6
Walker et al.[50]	Semi-structured interviews, focus groups and content analysis	Queensland, Australia	Explore factors operating at the level of the clinic and the community which influence the development of the oral health role of Indigenous Health Workers	Aboriginal health workers (Aboriginal and Torres Strait Islander communities)	N# – 21

(Continues)

dental needs,[11,37,46,48-51] 'Lack of education on the importance of teeth and… how to take care of teeth. It was kind of a mentality… Well, my parents have no teeth. My grandparents have no teeth. So, I-know-I'm-gonna-have-no-teeth type of thing[51]'. Limited oral health awareness related not only to knowledge about oral health-promoting behaviours, but also availability of oral health services. For instance, one IHW was not aware that there was a local Indigenous service that offered dental care.[46] Related to limited oral health awareness, some IHW reflected on the impacts of the loss of traditional knowledges, 'Yeah, and this is how it went off-track and the introduction of a Western diet, and when you think about why people choose the bottle over the breast and, you know, what they put in, it's because of what's going on…and you need to capture that from Aboriginal people. Um, some of that you can see how some people do know here, and how it's okay to regain that knowledge, because the same way why other knowledge hasn't been passed down, this is, you know, the same reason. So that, I think, is really important'.[48]

IHW reflected on the low priority of oral health[11,50] among more urgent concerns, 'I have got three holes in my teeth, cavities, and I cannot afford to go to the dentist. Because my money is going on things that I think are more important like my house, power, everything else, food'.[11] Movement of family members between different houses and sharing of resources was also related to ability of individuals to maintain oral hygiene practices, 'Something to do with lots of people sharing your house and not much private ownership of stuff. And even if you left your toothbrush in the bathroom, who do you know has used it? You can't presume because it is yours and you leave it somewhere that no one is going to use it or play with it or it is going to end up outside. So that is pretty hard for people'.[11] Normalization of poor oral health among community led to a mentality of no pain, no problem for some.[11,48,49] IHW reflected on the commonality of self-managed oral health pain among their patients, 'A lot of people I come across they are happy to just continuously eat pain killers like they are going out of fashion… I've met a lot of people in the community who go 'oh well, my gum is hurting and I am just going to take pain killers' where they should be replacing them with antibiotics'.[11]

IHW described the negative association of institutional racism and associated trauma with oral health services,[11,37,45,48] 'That [institutions] goes hand in hand [with racism]'.[48] One IHW related assimilation policies to confidence in accessing services and asserting one's dental needs or desires, 'Back in the day you weren't allowed to [talk to anyone]… Doesn't matter if you were Stolen (part of the Stolen Generations[1]) or not. Yeah, you just weren't allowed to. It was part of the white law at the moment. You know what I mean?[48]' Particularly, concerns of child removal prevented community members from bringing children in for routine checks, 'you could go in there with your child and you could go out without your child[11]'. Dental-related trauma was described as an intergenerational experience, where parents and grandparents shared their own dental experiences with others, 'You know people here have really strong memories…. People have horror stories of 40, 50 years ago of, you know dental work without anaesthesia and stuff. And so I think it does, it is, it does get passed down the whole historical trauma comes out'.[37]

Related to institutional racism, IHW identified aspects of mainstream dental services as culturally insensitive.[11,46–48,52] Little consideration for family needs at dental services was highlighted as a large challenge for parents needing to take children for dental care and the associated costs of bringing the entire family along for the day or having to find childcare.[11] IHW from northern Quebec stressed the importance of local languages in health services, noting that, 'Nobody has ever done any work on language in dental to look at what Cree terms are, equivalent for English terms[52]'. IHW shared experiences of dental providers not being understanding or empathetic of the complexities of oral health for Indigenous peoples, 'Aboriginal people, when they walk into the dentist, it is that shame factor and they think they are being judged by the dentist, you know, 'when was the last time you saw the dentist?' 'Do you brush your teeth? and "Your teeth aren't healthy". And these are adults – "And your gums aren't healthy" so the dentist is telling adults. And the adults are going home thinking "well, do I send my child there?"'.[11] Shame was described by IHW in terms of accessing oral health services and day-to-day behaviour for patients,[11,46,48] 'Some people that we spoke to did this [covers mouth with hand]. Covered their mouth when they were talking to us'.[48]

3.5 | Systemic barriers limiting IHW ability to support oral health

Limited oral health funding was identified as a barrier to IHW oral health support,[45,46,52] 'We just don't have enough funding to deal with the demand'.[45] Limited funding also translated to a lack of oral health resources, with IHW discussing the need for educational materials to share with community to increase awareness. Some IHW described their efforts to share oral health knowledge with families, despite limited training in this area, 'Well I do the teachings even if the pamphlets are not there, from what I remember, I do teach the parents to really work on the health of the child'.[52]

Workforce challenges identified by IHW included lack of staff funding, poor staff retention and the need for formal oral health training.[37,45,47,48,50] Stories of Indigenous health services training staff only for them to leave and go to a higher paying job were common, 'To pay people properly…that's an ACCHS struggle… If we want to keep someone who is competent and qualified we'd struggle because they really get very little money'.[45] IHW stressed the need for formal oral health training, 'I think it's true that you have a lot of Aboriginal health practitioners that work rurally. So maybe it could be something that could be put in with the training of the Aboriginal health practitioner'.[47]

Finally, inadequate models of care were discussed as systemic barriers to IHW support for oral health services, including service impermanence, differing models of care, a focus on acute problems

[1]The Stolen Generations is a term used to describe assimilation policies in Australia that forcibly removed Aboriginal and Torres Strait Islander children from their families from 1910 to 1970s, although similar policies and practices took place before and after these times.[53]

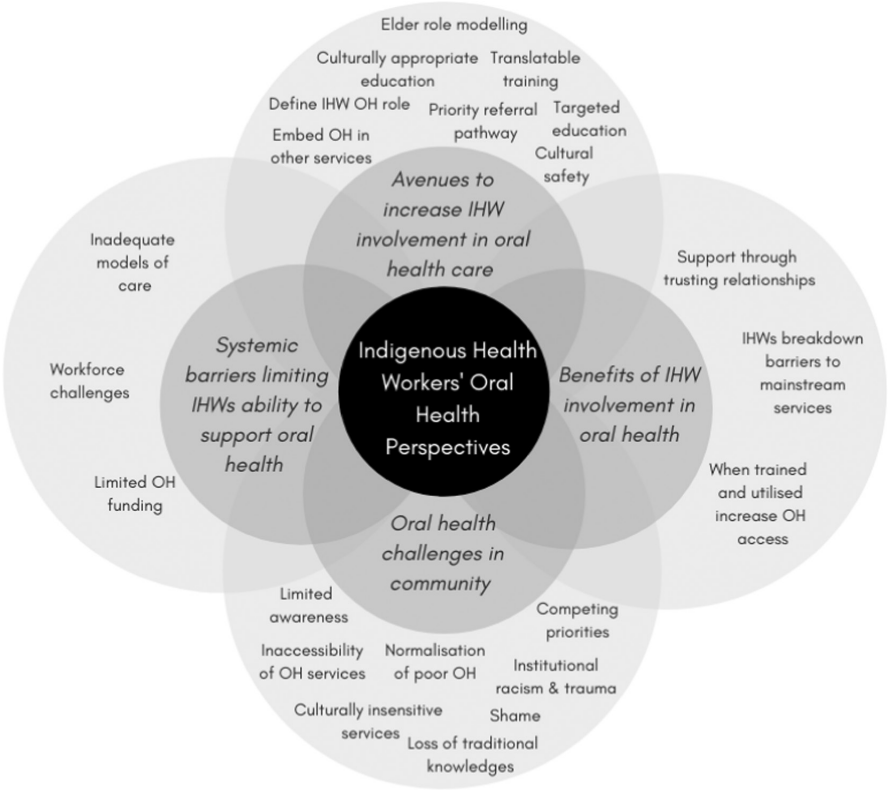

FIGURE 2 Conceptual model of Indigenous Health Workers' perspectives on oral health

and restrictions on qualifying for care.[11,45–48,52] Service impermanence where services irregularly come in and out of communities were described as disempowering for IHW and inconsistent with principles of ACCHS.[45] Many IHW did not qualify for public dental care because their income exceeded the eligibility threshold.[47,48] Not only were IHW frustrated in terms of their own access but also their patients' access, 'I wasn't eligible to go in the public [dental] system because I was working at the time, so therefore I did not have the Health Care Card… [for the public dental service] you have to [be] on either a Health Care Card or Pension Card. So for everyone else—even if you're working, like you could be working but still be low income, but still not be able to [be put on] cards, you can't access the dentist'.[46] The fragmented nature of public dental care and the tendency to focus on acute problems rather than preventive strategies was concerning for IHW. Differing models of care and understandings of well-being restricted IHW ability to support their patients' oral health, 'We obviously work under policies and guidelines, um – we're always competing with - what is culturally safe and appropriate versus policies that we've got [to] work under. So we're always adapting to make it work in regards to what we're allowed and what we know within ourselves as Aboriginal people what is actually appropriate to do'.[48]

3.6 | Avenues to increase IHW involvement in oral health care

Although many community challenges and systemic barriers were identified by IHW, several avenues to increase IHW involvement in oral health care were also discussed. Proposed solutions included targeted education, prioritization of cultural safety in oral health promotion, the creation of priority referral pathways, Elder role modelling, incorporation of oral health screening into other services, defining the IHW oral health role, culturally appropriate education and translatable training opportunities.

Providing relatable and targeted education or health promotion campaigns that were accessible to different groups, such as mothers, was important to IHW.[11,46,47,49] Considering oral health promotion as more than just paper pamphlets was discussed as critical to increase engagement, understanding and follow-through on knowledge. Culturally appropriate education, described by IHW as pictorial, grounded in local context, and delivered face to face, increased usefulness of oral health information for community members,[11,46–48] 'I find a lot of those pictures that really show abnormal to normal – they sort of hit home. And too much writing in a pamphlet - you just need something on a small pamphlet that is to the point'.[11] IHW stressed that face-to-face interactions were most effective, particularly in regional areas with unstable Internet connections.

The creation of a priority referral pathway, particularly for pregnant women, was discussed as a potential solution to some of the community challenges and systemic barriers,[46–48,52] 'So I think if you attach the model to your program, that could have several pathways. One into the AMS [Aboriginal medical service], because we do outreach there and we do different pathways and, you know, there's no wait for any Aboriginal child, so why can't we have that for our unborn child and mothers? And then you've got the voucher system, where if you're needing services [the AMS] can't provide, you can get a voucher…into private dental'.[48] IHW also discussed

opportunities to embed oral health screening into other services, including outreach services,[11] schools[11] and antenatal programmes.[48]

Prioritizing cultural safety in oral health promotion through employing local people and providing culturally appropriate care was another avenue described by IHW,[37,51,52] 'Our team believes that the DHA [dental health aides] should be local. They shouldn't be imported. Because we have that connection to our people… we just have a little bit more information than if they brought somebody in to do this job… so it's localized is mainly how they put these DHAs in this position. They have to be from here'.[37] Cultural safety was not only important for patient comfort but also enabled IHW to gather the necessary information to provide the most appropriate care, 'They don't give us much information when you just talk to them in English. But when you communicate in Cree, it's easier for them'.[52] Elder role modelling[11,48] was highlighted as critical in conveying the importance of oral health and preventive habits, 'If we say something, then their grandma says something, they're not going to go say what we say – they're going to listen to their [Elders]'.[48]

Defining IHW roles in oral health was useful for IHW to understand their scope of practices and to build on existing oral health strategies[11,37,48,50,51]; some IHW suggested the creation of a standalone oral health liaison position, 'Health liaison officers are all focused on diabetes and heart disease…where I think oral hygiene needs to have their own specific oral health liaison officers. If you had oral health liaison officers that actually went out into people's homes and out in to the community and have done these assessments and education, imagine how much easier it would be; they are in their home already. They're knocking on the door going into the home, how easy would it be to talk about oral hygiene? Because I know a lot of our mob don't talk about oral hygiene in their homes[11]'. Related to role definition, IHW detailed the need for simple and understandable oral health training.[47] Training that included translatable knowledge and resources was identified as confidence-building and increasing the likelihood of employing new knowledge in practice for IHW, 'I feel more confident to answer questions from now, whereas previously I suppose when it has arisen and they've asked me things that I didn't know I've been honest with them and said, I don't know but let me find out for you'.[47]

3.7 | Benefits of IHW involvement in OH care

Benefits of IHW involvement in oral health included supporting and trusting relationships, breaking down barriers to mainstream services and increasing access to oral health care. Trust facilitates rapport building with community members which was described as invaluable in helping someone along their health journey.[37,48] Acknowledging challenges an individual may have in attending dental appointments, such as making the appointment, travelling to the appointment or finding childcare were things that IHW made sure to include when assisting clients. IHW shared stores about how their relationships helped patients get back on track with a care plan, 'Often, at times, when they're in crisis and they don't answer the phone calls to the nurses, all it takes is one phone call from us and then we're back on board with them…when we contact them they're usually pretty honest with us about what's going on with them'.[48]

IHW also discussed their role in breaking down barriers with mainstream oral health services for community,[37,48,52] 'I guess we're that connector, we're the connecter with a system that is different traditionally to what some of our systems would be or would look like. So we help break down the barriers of, um, an institution which has historically been, um, one that's had a negative attachment to it from past policies and history'.[48] This role extended to advocacy, cultural interpretation and continuity of care for community. When trained and utilized in oral health, IHW directly increased access to oral health care for communities.[37,51] Although limited in scope of oral health practices, IHW helped with preventive care and facilitated the groundwork prior to community members visiting dentists, which allowed dentists to provide care for more complex needs.[51]

4 | DISCUSSION

This systematic review and meta-aggregation included IHW perspectives from 10 articles across three countries. IHW from the included studies highlighted oral health challenges facing their communities, systemic barriers limiting their ability to support oral health, benefits of IHW involvement in oral health and avenues to increase IHW involvement in oral health. Importantly, IHW resonated with the need to clarify their roles in oral health and the opportunities to benefit community experiences of oral health through their involvement. The two studies that had successfully employed IHW as oral health assistants noted an increase in accessibility to oral health care.[37,51]

The challenges communities face in accessing services and maintaining oral health highlighted by IHW in this review echo sentiments of previous works.[9,12,17,39] The involvement of IHW in oral health promotion and service delivery has the potential to address many of these challenges. For example, experiences of institutional racism and cultural insensitivity would be reduced by the inclusion of IHW in oral health care. Service accessibility would increase for community members by addressing service impermanence in rural areas[37,51] and increasing relationality between clients and service providers.[37,48] Studies included in this review noted a loss of traditional knowledges related to oral health. Inclusion of IHW in service delivery has the potential to re-introduce cultural values and knowledges into oral health experiences. Grandmothers and health knowledge keepers in a Canadian study with a Cree Nation utilized cultural childrearing practices to prevent early childhood caries, such as the use of traditional medicines in oral health, provision of traditional foods to children at a young age, promotion of swaddling and breastfeeding.[54,55] Culturally appropriate oral health promotion and education designed and delivered by IHW, such as the inclusion of Elders as role models,[11,48] is more likely to meet the needs of community members and would in turn, increase oral health awareness. Shame is a common experience when accessing dental services for many Indigenous peoples.[11,56] IHW could help address feelings of shame by providing basic dental care and cultural brokage between

their patients and non-Indigenous dental specialists.[37,48,52] Finally, by addressing common challenges to oral health experienced by community members, the normality and acceptance of poor oral health would be reduced. The responsibility to shift the experience and normalization of poor oral health does not solely lie with IHW but their involvement has the potential for profound impacts on community oral health.[37,39] One of the included studies highlighted the potential for a specific health liaison officer role for oral health.[11] The creation of a specific Indigenous oral health liaison officer position in health services would ensure funding for oral health is less sporadic and address some of the funding issues highlighted by IHW in this review.

There are many barriers to IHW involvement in oral health that are beyond the scope of IHW responsibility. One of the biggest systemic obstacles to incorporating IHW in oral health promotion and service delivery is limited training and poorly defined oral health roles.[11,37,48,50,51] Utilizing IHW in a more official oral health capacity with a well-defined scope of practice would increase the ability of communities to establish and maintain oral health, particularly in remote regions. Remote health personnel in Australia have emphasized the need to develop an oral health role for IHW not only because of the cultural benefits to Indigenous communities, but due to the high rates of oral diseases, the impact of oral diseases on general well-being and the benefits of optimal oral health on general health and well-being. Dental and non-dental health personnel have recognized the high costs of emergency dental care to health systems, the burden dental emergencies place on non-dental services in remote areas, the preventable nature of oral diseases, the problematic separation of oral health from other aspects of health and the consequential limited amount of oral health awareness in remote communities.[57] Previous works have demonstrated the power of co-designing oral health promotion training with IHW[47,58,59]; these projects have stressed the need for translatable and understandable training, similar to the findings of this review.

In circumstances where IHW utilization for oral health is not possible, Indigenous representation and leadership in oral health service delivery and provision in mainstream services remain critical to the success of these initiatives. Failing to embrace Indigenous participation and leadership in oral health will further compromise oral health outcomes for Indigenous peoples.[60] While benefits to IHW involvement in oral health were discussed in some of the papers included in this review, this was not the focus for any of the publications, and therefore, the range of benefits is likely understated. Previous works incorporating IHW in other areas of health have identified improved quality of care, provision of culturally safe care, increased awareness and increased appointment attendance.[25,28,29,32,33] IHW are uniquely positioned to evaluate the strengths and shortcomings of community-based oral health programming, which might include leadership in design, implementation, delivery and evaluation stages to ensure the highest benefit for Indigenous communities to improve community oral health.

At a policy level, the inclusion of dental care in universal or public healthcare funding models in Canada, the United States and Australia, and indeed globally, is necessary to begin addressing health inequities among the world's most disadvantage. Countries who fail to include dental services in their medical schemes must recognize the inadequacies of their models in meeting population needs. The World Health Organisation could include oral health as a Core Health Indicator and the United Nations and World Bank could integrate oral health within their health surveillance programmes.[61] While universal dental care is a necessary step in bettering oral health outcomes and experiences for Indigenous communities, it is necessary to highlight that even for health conditions or areas of care where universal coverage is provided, disease and mortality rates remain disproportionate for Indigenous peoples.[2,3,6,62] Therefore, the importance of Indigenous leadership and IHW in oral health promotion and dental care provision cannot be understated. A shift in funding provisions for oral health that supports Indigenous models of care, offers competitive salaries, and sufficient budgetary allotments for oral health education and resources in community-controlled health services is needed. Legislative changes that recognize the importance of IHW in oral health care and permit the involvement of IHW in care provision, would enable a more involved and structured oral health role for IHW, and would ensure formal oral health training for these workers.[37,45,47,48,50] Funding is also required to invest in cultural safety training for non-Indigenous dental teams and specialists that upskills health professionals in a way that increases their awareness of the colonial foundations of mainstream health systems and their ability to critique its limitations and advocate for change. Research programmes could co-design oral health promotion materials with Indigenous communities, as well as cultural safety training for non-Indigenous dental staff. Many programmes have begun this work,[47,58,59] but further advocacy and research that drive mandatory state or national level programmes, rather than initiatives that end with individual projects and funding, are needed.

This systematic review is, to the best of our knowledge, the first to collate IHW perspectives on oral health at a global level. The review complies with all relevant systematic review protocols to ensure transparency of processes and findings. The provision of avenues to address challenges to IHW involvement in oral health is a highlight of this review as it provides specific areas for future research and policy to address. Three of the four components of the conceptual model had illustrations from at least 80% of the included studies. The included studies are from three countries, with the majority being from Australia; this limitation emphasizes the need for more research centring IHW perspectives on oral health in other countries with Indigenous populations. Despite efforts to include all possible terms for IHW in the search string, no uniform definition for IHW exists, and as such, some papers may have been missed during the systematic search.

5 | CONCLUSION

Prioritizing IHW leadership in both community-controlled health services and mainstream oral health services would address many of the barriers to oral health experienced by Indigenous peoples. In order to implement a reflexive and culturally responsive approach

to oral health for Indigenous communities, there needs to be recognition of the limitations of mainstream oral healthcare models in their ability to meet the needs of Indigenous peoples. Acceptance of these inadequacies would create space to pursue work, with Indigenous leadership, that[1] determines the capacity of IHW to provide oral health care, and[2] explores opportunities to create specific oral health roles for IHW. Incorporation of IHW and Indigenous leadership in oral health will improve the quality of oral health care, strengthen oral health programming, raise awareness among communities and contribute to long-term sustainability of oral health.

ACKNOWLEDGMENTS

The research team would like to extend their gratitude to all the Indigenous health workers and practitioners that they have had the honour of knowing and working with on a variety of research projects and whose passions for oral health inspired this piece of work. Open access publishing facilitated by The University of Adelaide, as part of the Wiley - The University of Adelaide agreement via the Council of Australian University Librarians. WOA Institution: The University of Adelaide Blended DEAL: CAUL 2022.

CONFLICT OF INTEREST

None to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available in the supplementary material of this article.

ORCID

Brianna Poirier https://orcid.org/0000-0002-8257-6104
Sneha Sethi https://orcid.org/0000-0002-3571-5298
Lisa Jamieson https://orcid.org/0000-0001-9839-9280

REFERENCES

1. *Declaration on the rights of Indigenous Peoples*. United Nations; 2008.
2. Paradies Y. Colonisation, racism and indigenous health. *J Popul Res*. 2016;33(1):83-96.
3. King MP, Smith AMD, Gracey MP. Indigenous health part 2: the underlying causes of the health gap. *Lancet*. 2009;374(9683):76-85.
4. Durie M. An Indigenous model of health promotion. *Health Promot J Austr*. 2004;15(3):181-185.
5. Richmond CAM, Ross NA. The determinants of First Nation and Inuit health: a critical population health approach. *Health Place*. 2009;15(2):403-411.
6. Jamieson L, Haag D, Schuch H, Kapellas K, Arantes R, Thomson WM. Indigenous oral health inequalities at an international level: a commentary. *Int J Environ Res Public Health*. 2020;17(11):3958.
7. Steffens M, Jamieson L, Kapellas K. Historical factors, discrimination and oral health among aboriginal Australians. *J Health Care Poor Underserved*. 2016;27(1):30-45.
8. Nath S, Poirier BF, Ju X, et al. Dental health inequalities among Indigenous populations: a systematic review and meta-analysis. *Caries Res*. 2021;55(4):268-287.
9. Poirier B, Hedges J, Smithers L, Moskos M, Jamieson L. "What are we doing to our babies' teeth?" Barriers to establishing oral health practices for Indigenous children in South Australia. *BMC Oral Health*. 2021;21(1):1-12.
10. Schroth RJDMDM, Harrison RLDMDMM, Moffatt MEKMDMF. Oral health of Indigenous children and the influence of early childhood caries on childhood health and well-being. *Pediatr Clin North Am*. 2009;56(6):1481-1499.
11. Durey A, McAullay D, Gibson B, Slack-Smith L. Aboriginal Health Worker perceptions of oral health: a qualitative study in Perth, Western Australia. *Int J Equity Health*. 2016;15:4.
12. Kyoon-Achan G, Schroth RJ, DeMaré D, et al. First Nations and Metis peoples' access and equity challenges with early childhood oral health: a qualitative study. *Int J Equity Health*. 2021;20(1):1-13.
13. Durey A, McAullay D, Gibson B, Slack-Smith LM. Oral health in young Australian aboriginal children: qualitative research on parents' perspectives. *JDR Clin Trans Res*. 2017;2(1):38-47.
14. Ben J, Paradies Y, Priest N, et al. Self-reported racism and experience of toothache among pregnant Aboriginal Australians: the role of perceived stress, sense of control, and social support. *J Public Health Dent*. 2014;74(4):301-309.
15. Carstairs C, Mosby I. Colonial extractions: oral health care and Indigenous peoples in Canada, 1945–79. *Can Hist Rev*. 2020;101(2):192-216.
16. Butten K, Johnson NW, Hall KK, Toombs M, King N, O'Grady KAF. Impact of oral health on Australian urban Aboriginal and Torres Strait Islander families: a qualitative study. *Int J Equity Health*. 2019;18(1):1-10.
17. Butten K, Johnson NW, Hall KK, Toombs M, King N, O'Grady KAF. Yarning about oral health: perceptions of urban Australian Aboriginal and Torres Strait Islander women. *BMC Oral Health*. 2020;20(1):1-12.
18. Butler TL, Anderson K, Garvey G, et al. Aboriginal and Torres Strait Islander people's domains of wellbeing: a comprehensive literature review. *Soc Sci Med*. 1982;2019(233):138-157.
19. Campbell MA, Hunt J, Scrimgeour DJ, Davey M, Jones V. Contribution of Aboriginal community-controlled health services to improving Aboriginal health: an evidence review. *Aust Health Rev*. 2018;42(2):218-226.
20. Socha A. Addressing Institutional Racism Against Aboriginal and Torres Strait Islanders of Australia in Mainstream health services: Insights from Aboriginal Community Controlled Health Services. *Int J Indig Health*. 2021;16:291-303.
21. Paradies Y, Harris R, Anderson I. *The impact of racism on indigenous health in Australia and Aotearoa: towards a research agenda*. Cooperative Research Centre for Aboriginal Health; 2008.
22. McDermott RA, Schmidt B, Preece C, et al. Community health workers improve diabetes care in remote Australian Indigenous communities: results of a pragmatic cluster randomized controlled trial. *BMC Health Serv Res*. 2015;15(1):68.
23. Middleton P, Bubner T, Glover K, et al. 'Partnerships are crucial': an evaluation of the Aboriginal Family Birthing Program in South Australia. *Aust N Z J Public Health*. 2017;41(1):21-26.
24. Stamp G, Champion S, Anderson G, et al. Aboriginal maternal and infant care workers: partners in caring for Aboriginal mothers and babies. *Rural Remote Health*. 2008;8(3):883.
25. NATSIHWA. The importance of Aboriginal and/or Torres Strait Islander Health Workers and Health Practitioners in Australia's health system. Canberra, Australia: NATSIHWA; 2019.
26. Schmidt B, Campbell S, McDermott R. Community health workers as chronic care coordinators: evaluation of an Australian Indigenous primary health care program. *Aust N Z J Public Health*. 2016;40(Suppl 1):S107-S114.
27. Abbott P, Gordon E, Davison J. Expanding roles of Aboriginal health workers in the primary care setting: seeking recognition. *Contemp Nurse*. 2008;27(2):157-164.
28. Topp SM, Edelman A, Taylor S. "We are everything to everyone": a systematic review of factors influencing the accountability relationships of Aboriginal and Torres Strait Islander health workers (AHWs) in the Australian health system. *Int J Equity Health*. 2018;17(1):67.

29. Topp SM, Tully J, Cummins R, et al. Unique knowledge, unique skills, unique role: Aboriginal and Torres Strait Islander Health Workers in Queensland, Australia. *BMJ Global Health*. 2021;6(7):e006028.
30. McCalman J, Campbell S, Jongen C, et al. Working well: a systematic scoping review of the Indigenous primary healthcare workforce development literature. *BMC Health Serv Res*. 2019;19(1)767.
31. Jongen C, McCalman J, Campbell S, Fagan R. Working well: strategies to strengthen the workforce of the Indigenous primary healthcare sector. *BMC Health Serv Res*. 2019;19(1):910.
32. Bird M, Henderson C. Recognising and enhancing the role of Aboriginal and Torres Strait Islander health workers in general practice. *Aborig Isl Health Work J*. 2005;29(3):32-34.
33. Violette R, Spinks J, Kelly F, Wheeler A. Role of Indigenous health workers in the delivery of comprehensive primary health care in Canada, Australia, and New Zealand: a scoping review protocol. *JBI Evid Synth*. 2021;19(11):3174-3182.
34. Jones K, Keeler N, Morris C, Brennan D, Roberts-Thompson K, Jamieson L. Factors relating to access to dental care for indigenous South Australians. *J Health Care Poor Underserved*. 2016;27(1):148-160.
35. Wright AL, Jack SM, Ballantyne M, Gabel C, Bomberry R, Wahoush O. Indigenous mothers' experiences of using acute care health services for their infants. *J Clin Nurs*. 2019;28(21–22):3935-3948.
36. Dickson M. "My work? Well, I live it and breathe it": the seamless connect between the professional and personal/community self in the Aboriginal and Torres Strait Islander health sector. *BMC Health Serv Res*. 2020;20(1):972.
37. Senturia K, Fiset L, Hort K, et al. Dental health aides in Alaska: a qualitative assessment to improve paediatric oral health in remote rural villages. *Community Dent Oral Epidemiol*. 2018;46(4):416-424.
38. Chi DL, Mancl L, Hopkins S, et al. Supply of care by dental therapists and emergency dental consultations in Alaska native communities in the Yukon-Kuskokwim delta: a mixed methods evaluation. *Community Dent Health*. 2020;37(3):190-198.
39. Martin D, McNally M, Castleden H, et al. Linking Inuit knowledge and public health for improved child and youth oral health in NunatuKavut. *JDR Clin Trans Res*. 2018;3(3):256-263.
40. Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ (Online)*. 2021;372:n71.
41. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol*. 2012;12(1):181.
42. Petticrew M, Roberts H. *Systematic Reviews in the Social Sciences: A Practical Guide*, Blackwell Publishing; 2006:xv, 336-xv, p.https://fcsalud.ua.es/en/portal-de-investigacion/documentos/tools-for-the-bibliographic-research/guide-of-systematic-reviews-in-social-sciences.pdf
43. Lockwood C, Porrit K, Munn Z, Rittenmeyer L, Salmond S, Bjerrum M, et al. Chapter 2: Systematic reviews of qualitative evidence. In: Aromataris E, Munn Z eds, *JBI Manual for Evidence Synthesis*. JBI; 2020;22–70. doi:10.46658/JBIMES-20-03
44. Hannes K, Lockwood C, Pearson A. A comparative analysis of three online appraisal instruments' ability to assess validity in qualitative research. *Qual Health Res*. 2010;20(12):1736-1743.
45. Campbell MA, Hunt J, Walker D, Williams R. The oral health care experiences of NSW Aboriginal Community Controlled Health Services. *Aust N Z J Public Health*. 2015;39(1):21-25.
46. Kong A, Dickson M, Ramjan L, et al. A qualitative study exploring the experiences and perspectives of Australian Aboriginal women on oral health during pregnancy. *Int J Environ Res Public Health*. 2021;18(15):8061.
47. Kong A, Dickson M, Ramjan L, et al. Aboriginal health workers promoting oral health among Aboriginal and Torres Strait Islander women during pregnancy: development and pilot testing of the Grinnin' Up Mums & Bubs program. *Int J Environ Res Public Health*. 2021;18(18):1-20.
48. Kong AC, Sousa MS, Ramjan L, et al. "Got to build that trust": the perspectives and experiences of Aboriginal health staff on maternal oral health. *Int J Equity Health*. 2020;19(1):187.
49. Vaughn HS, Robinson PG. The oral health-related experiences, attitudes and behaviours of the carers of Aboriginal children of Groote Eylandt. *Int Dent J*. 2003;53(3):132-140.
50. Walker D, Tennant M, Short SD. Listening to indigenous health workers: helping to explain the disconnect between policy and practice in oral health role development in remote Australia. *Health Educ J*. 2011;70(4):400-406.
51. Chi DL, Hopkins S, Zahlis E, et al. Provider and community perspectives of dental therapists in Alaska's Yukon-Kuskokwim Delta: a qualitative programme evaluation. *Community Dent Oral Epidemiol*. 2019;47(6):502-512.
52. Shrivastava R, Couturier Y, Simard-Lebel S, et al. Relational continuity of oral health care in Indigenous communities: a qualitative study. *BMC Oral Health*. 2019;19(1):1-8.
53. Young R. The Stolen generation. *Psychother Aust*. 2009;16:59.
54. Cidro J, Zahayko L, Lawrence H, McGregor M, McKay K. Traditional and cultural approaches to childrearing: preventing early childhood caries in Norway House Cree Nation, Manitoba. *Rural Remote Health*. 2014;14(4):1-11.
55. Cidro J, Zahayko L, Lawrence HP, Folster S, McGregor M, McKay K. Breast feeding practices as cultural interventions for early childhood caries in Cree communities. *BMC Oral Health*. 2015;15(1):1-10.
56. Poirier BF, Hedges J, Smithers LG, Moskos M, Jamieson LM. Aspirations and worries: the role of parental intrinsic motivation in establishing oral health practices for Indigenous children. *Int J Environ Res Public Health*. 2021;18(21):11695.
57. Walker D, Tennant M, Short SD. An exploration of the priority remote health personnel give to the development of the Indigenous Health Worker oral health role and why: unexpected findings. *Aust J Rural Health*. 2013;21(5):274-278.
58. Blinkhorn F, Brown N, Freeman R, Humphris G, Martin A, Blinkhorn A. A phase II clinical trial of a dental health education program delivered by aboriginal health workers to prevent early childhood caries. *BMC Public Health*. 2012;12:681.
59. Pacza T, Steele L, Tennant M. Development of oral health training for rural and remote aboriginal health workers. *Aust J Rural Health*. 2001;9(3):105-110.
60. Marrie A, Marrie H. A matrix for identifying, measuring and monitoring institutional racism within public hospitals and health services. CQ University; 2014.
61. Wang TT, Mathur MR, Schmidt H. Universal health coverage, oral health, equity and personal responsibility. *Bull World Health Organ*. 2020;98(10):719-721.
62. Soares GH, Jamieson L, Biazevic MGH, Michel-Crosato E. Disparities in excess mortality between indigenous and non-indigenous Brazilians in 2020: measuring the effects of the COVID-19 pandemic. *J Racial Ethn Health Disparities*. 2020;2021:1-10.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

How to cite this article: Poirier B, Sethi S, Hedges J, Jamieson L. Building an understanding of Indigenous Health Workers' role in oral health: A qualitative systematic review. *Community Dent Oral Epidemiol*. 2023;51:169–179. doi:10.1111/cdoe.12743