Review

Recommended methodologies to determine Australian Indigenous community members' perceptions of their health needs: a literature review

Rosetta Lillian Smith[A,E], *Sue Devine*[B] *and Robyn Preston*[C,D]

[A]College of Public Health, Medicine and Veterinary Sciences, Division of Tropical Health and Medicine, James Cook University, 1 James Cook Drive, Townsville, Qld 4811, Australia.
[B]College of Public Health, Medical and Veterinary Sciences, James Cook University, 1 James Cook Drive, Townsville, Qld 4811, Australia.
[C]College of Medicine and Dentistry, James Cook University, Townsville, Qld 4811, Australia.
[D]School of Health, Medical and Applied Sciences, Central Queensland University, Townsville, Qld 4811, Australia.
[E]Corresponding author. Email: rosetta.smith@my.jcu.edu.au

Abstract. When addressing disparities in health status of Indigenous Australians, it is necessary to consult with Indigenous people to explore their health needs. The process of improving health outcomes is complex; it requires acknowledgement of underlying cultural and social determinants of health and active engagement of Indigenous people to define the issues and identify solutions. The aim of this study is to explore the most appropriate research methodologies to determine Australian Indigenous community members' perceptions of their health needs. A scoping review was conducted in BioMed Central, CINAHL, Informit Health, MEDLINE Ovid, ProQuest and Scopus databases and Google Scholar for all relevant literature published between 2009 and 2018. Extensive manual searches of reference lists were also undertaken. The limited number of articles relating to needs assessment with Indigenous community members prescribed broadening the scope of the review to include articles that describe methodologies to enhance Indigenous people's engagement in the research process. Twelve papers met the inclusion criteria. Three major themes emerged: (1) the imperative to develop and implement Indigenist research methodologies; (2) participatory action research (PAR) and community-based participatory research (CBPR) as appropriate methodologies to conduct research with Indigenous community members; and (3) yarning or storytelling as a culturally appropriate Indigenous method of data collection.

Additional keywords: colonisation, community-based participatory research, data collection, decolonise, Indigenist, participatory action research, storytelling, yarning.

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Introduction

Since colonisation by British invaders, Australian Indigenous people have suffered from imposition of outsiders' ethnocentric views of their whole-of-life circumstances. In a confidential submission to the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families, it was stated: 'Our life pattern was created by the government policies and are forever with me, as though an invisible anchor around my neck' (Human Rights and Equal Opportunity Commission 1997, p. 4). It is well recognised that the detrimental effects of colonisation still affect the health and wellbeing of Indigenous people worldwide (World Health Organization, Commission on Social Determinants of Health 2007). At the International symposium on the Social Determinants of Indigenous Health (2007), it was agreed that one critical social determinant of health is the effect of colonisation, and that

'colonisation is not simply an historical process - it is ongoing' (World Health Organization, Commission on Social Determinants of Health 2007, p. 30).

In the research process, as a result of outsiders' use of different frameworks and perspectives from which data is collected and interpreted, inappropriate solutions are developed (Kendall *et al.* 2011). When Indigenous people are resourced to collect and analyse data, a far more compelling story will be told and the emergence of genuine Indigenous self-determination in Australia will be seen (Yu 2012).

The continuing health disparities between Australian Indigenous and non-Indigenous people are alarming. Aboriginal and Torres Strait Islander people generally have poorer health outcomes than non-Indigenous Australians, with a shorter life expectancy, a higher child mortality rate and a greater burden of chronic disease (Commonwealth of Australia, Department of

What is known about the topic?

- Application of Indigenist methodologies decolonise the research process when working with Indigenous communities. Participatory action research and community-based participatory research provide opportunities for community engagement, knowledge and skills development.

What does this paper add?

- Yarning or storytelling is the recommended data collection method for research with Indigenous people. Acknowledgement and incorporation of Indigenous ontologies, epistemologies and axiologies is essential for conducting meaningful research with Indigenous people.

Table 1.   Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Peer-reviewed articles	Literature reviews
Discussion papers	
Full-text available	
Australian Indigenous population	Relates to non-Indigenous population
Published between 2009 and 2018	Published more than 10 years ago
Published in English language	Published in language other than English

Health 2017). Multiple, complex factors contribute to these disparities. A combination of general factors, such as education, employment, income, socioeconomic status and health sector factors, for example, limited access to culturally appropriate services or support, contribute to these health disparities (Australian Indigenous Health*InfoNet* 2017). Improving health outcomes is complex and requires acknowledgement of underlying social determinants of health and active engagement of Indigenous people to define the issues and identify solutions. One of the ways of engaging Indigenous peoples is through more involvement in research using culturally appropriate methods of data collection.

Decolonisation of the Indigenous health research agenda is necessary to improve the health outcomes of Indigenous Australians (Sherwood 2010). The United Nations supports this approach, asserting that 'Indigenous peoples must exercise control over all research conducted within their territories, or which uses their people as subjects of study' (United Nations 2008, p. 5). In 2018, the National Health and Medical Research Council (NHMRC) committed to 'place a stronger focus on Aboriginal and Torres Strait Islander methodologies and approaches' (NHMRC 2018*a*, p. 2). One measure of the success of their strategic framework for improving health through research would be 'greater integration of Aboriginal and Torres Strait Islander knowledge and ways of working' (NHMRC 2018*a*, p. 2).

Active involvement of Indigenous people in directing how, what and why research is conducted about them is critical because many political decisions are often made by simplistic interpretations of research data (Smylie and Adomako 2009). It is necessary to work in partnership with Indigenous people as key stakeholders throughout the research process by using culturally appropriate methods that include ethical constructs of respect; reciprocity; spirit and integrity; equality; survival and protection; and responsibility, as determined by the NHMRC guidelines (NHMRC 2018*b*).

Cultural determinants of health are essential to Indigenous wellbeing; they 'encompass factors that promote resilience, foster a sense of identity and support good mental and physical health and wellbeing for individuals, families and communities' (Commonwealth of Australia, Department of Health 2017, p. 7).

Engagement in practices that maintain cultural connections is vital for self-determination and spiritual wellbeing. To address the ongoing concerns about the health of Indigenous people requires active engagement and consultation with Indigenous people. Such consultation needs to be underpinned by best practice principles of Indigenous engagement, as defined by the NHMRC (2018*b*) and the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) (2012) guidelines.

Culturally appropriate methods of consultation and data collection methods for all research with Indigenous people will allow the best feedback from those people and contribute to the best health outcomes. While there is great diversity in Indigenous cultural expression across Australia, the well-recognised definition of Indigenous health, as determined by the National Aboriginal Health Strategy Working Party (Commonwealth of Australia, Department of Aboriginal Affairs 1989), should inform all research approaches with Indigenous people across Australia. Australian Indigenous people view health as:

> not just the physical well-being of an individual, but refers to the social, emotional and cultural well-being of the whole community in which each individual is able to achieve their full potential as a human being thereby bringing about the total well-being of their community [Commonwealth of Australia, Department of Aboriginal Affairs 1989].

'Indigenous peoples' holistic expressions of wellbeing … involves more than just setting health within a social determinants of health framework - it involves the larger context of country' (Weir *et al.* 2011, p. 17). This literature review synthesises the literature to make it more accessible and inform change in the researchers' practice. There are no recommendations for yarning to be conducted by an Indigenous researcher; the reviewed articles indicate that data collection by yarning was conducted by Indigenous and non-Indigenous researchers.

The *Australian Journal of Primary Health* was chosen because we want to advocate for Indigenous people in the research process and influence researchers in their choice of methodologies and data collection methods.

Methods

This study involved a systematic search using BioMed Central, CINAHL, Informit Health, MEDLINE Ovid, ProQuest Health and Medicine, and Scopus databases and Google Scholar. Extensive manual searches of reference lists were also undertaken. Search terms included: 'needs assessment' and indig* Australia* (communit* and (indigenous or aborigin* or 'torres strait' or islander*) and (perception* or attitude* or belief* or

knowledge) and (method* or survey* or questionnaire* or yarn* or photovoice or PAR or participatory action research) and (australia* or queensland* or nsw or qld or new south wales or victoria* or vic or tasmania or northern territory or nt); Oceanic Ancestry Group; Australia.mp. and Health Science indigenous; data collection/or 'surveys and questionnaires'; Community-Based Participatory Research/mt [Methods]; indig* and methodolog*; 'find similar to The Yerin Dilly Bag Model of Indigenist Health Research'. A set of inclusion and exclusion criteria was applied, as shown in Table 1, to ensure the search corresponded to the aim of the review.

Due to the limited number of peer-reviewed articles relating to needs assessment in Australian Indigenous communities, search terms were modified. The scope of the review was changed to include articles that describe methodologies to enhance optimum conditions for Indigenous peoples' engagement in the research process. Titles and journal article abstracts were reviewed by the three authors to assess relevance, followed by reading of full-texts before deciding on final articles for inclusion in the review. The primary author is Indigenous; this was important to show an Indigenous focus of the literature review.

Results

Twelve papers met the inclusion criteria and are summarised in Table 2.

Three main themes emerged from the papers reviewed: (1) the need to develop and implement Indigenist methodologies; (2) participatory action research (PAR) and community-based participatory research (CBPR) as appropriate methodologies for researching with Indigenous communities; and (3) yarning or storytelling as a culturally appropriate method of data collection. Each of these themes is detailed below.

Indigenist methodologies

Recognition of the traumatic effects of colonisation on Indigenous peoples and the imperative to avoid further trauma and disempowerment through the research process was a common theme throughout the literature that discusses Indigenist methodologies (Nicholls 2009; West *et al.* 2012; Braun *et al.* 2014; Doyle *et al.* 2017). Nicholls (2009) asserts that to evaluate empowerment and participation in a counter-colonial context critically, the researcher is essentially required to engage in political and relational layers of reflexivity. Although Indigenist research methodologies build on phenomenological, transformative and critical approaches, these approaches are still Eurocentric (Braun *et al.* 2014); however, by allowing Indigenist methodologies to develop independently, the inadvertent 'colonisation' that occurs when combining them with Western methodologies can be avoided (West *et al.* 2012). Data collected by colonising methods usually dismisses or negates Indigenous knowledge and ways of knowing as they are interpreted against 'settler' standards (Braun *et al.* 2014). Indigenist methodologies take research further along the path of recognising self-determination and supporting Indigenous leadership in the conceptualisation and conduct of research, and in the interpretation and dissemination of research findings (Braun *et al.* 2014). This methodological reform is one way of addressing the power and control struggles between the broader research community and Indigenous peoples (West *et al.* 2012).

Leeson *et al.* (2016) suggest that appreciative inquiry is uniquely positioned as arguably a decolonising agent due to the inherent privileging of positive experiences, along with inclusive and empowering possibilities of the research paradigm. A major difference between Indigenist research methodologies and the Western approach is that they flow from an Indigenous place, a community and tribal knowledge; therefore, caution is necessary in transference of results across Indigenous populations because data reflects the community in which the research was conducted and does not imply that it can be assigned to others (Lambert 2011).

PAR and CBPR

Both PAR and CBPR are recommended as appropriate methods of research with Indigenous communities (Nicholls 2009; Fredericks *et al.* 2011; Braun *et al.* 2014; Doyle *et al.* 2017). These methods capture and incorporate the perspective(s) of the communities that are part of the research and, as such, position them as experts in their own lives and knowledges (Doyle *et al.* 2017). Participatory approaches aim to improve the conditions of the researched (Braun *et al.* 2014). Within the framework of PAR, empowerment processes and models are well situated to bring about change in individuals, organisations and communities (Fredericks *et al.* 2011).

CBPR has many benefits to the community engaged in the research project, as it focuses on local relevance; provides for opportunities to build on the community's strengths and resources; fosters co-learning and capacity-building between partners; attains a balance between data generation and implementation; involves all partners in the dissemination of results; and has a greater propensity to commit to sustainability (Braun *et al.* 2014). Another potential benefit is the prospect of Indigenous community members being trained and actively involved as researchers. Nicholls (2009) advises that 'researchers need to engage with reflexive evaluation of collective and negotiated design, data collection and data analysis to consider interpersonal and collective dynamics during the research process, and any effects that the research may potentially have into the future' (p. 118). This would include data management in the event of a deceased participant.

Yarning or storytelling

The reviewed literature indicates that yarning or storytelling is the single most recommended data collection method with Indigenous Australians (Gorman and Toombs 2009; Bessarab and Ng'andu 2010; Fredericks *et al.* 2011; Lambert 2011; Geia *et al.* 2013; Leeson *et al.* 2016; Wain *et al.* 2016; Doyle *et al.* 2017; Ober 2017). The conversational method used to engage focus groups/talking circles is supported by Lambert (2011) and Braun *et al.* (2014). Indigenous culture is constructed through oral language and forms part of a complex culture; therefore, collecting stories of experience seems to be a valuable way of collecting data (Gorman and Toombs 2009). Geia *et al.* (2013) emphasise the cultural significance of yarning as a method and methodological research practice and suggest that it is 'a very practical way to 'close the gap' on an individual level between the researcher and participant' (p. 14). Leeson *et al.* (2016) support this, stating that given its fluidity, yarning and its focus on relationships demand

Table 2. Summary of reviewed literature

N/A, not applicable; WA, Western Australia

Citation	Study aim	Study design	Setting, participants and sample	Data collection methods	Findings	Key themes
Gorman and Toombs (2009)	Discussion paper to look at some reasons why research has not improved the health of Indigenous Australians.	N/A	N/A	Advocates story-telling.	Looks mainly at narrative enquiry.	Proposes some ideas how methodologies and Australian Indigenous cultures can be better matched. Sets out National Health and Medical Research Council and Australian Institute of Aboriginal and Torres Strait Islander Studies ethical guidelines.
Nicholls (2009)	Discussion paper to identify discursive positions within a collective, and to account for movement, fragility, fluidity and change within collaborative research relationships.	N/A	N/A	Consider inter-personal and collective dynamics to reflexively evaluate negotiated design, data collection and analysis.	Research with Indigenous people often demands participatory and collaborative methods.	The three layers of reflexivity - self, interpersonal and collective - can reframe notions of justice, empowerment and participation within research as a paradigm of relationships that nurture self-determination.
Bessarab and Ng'andu (2010)	Two studies: 1. Explore the gendered experiences of Australian Indigenous women and men growing up in their families. 2. Investigate the Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome policy processes in Botswana.	1. Ethnographic interpretive 2. Case study	1. Perth (urban) $n=16$; Broome (regional) $n=22$; total $n=38$. 2. Botswana Community workers, $n=50$, over a period of 6 months.	Yarning used in both studies based on cultural match of conversation to the cultural processes of both study groups.	Yarning as data collection method established trusting reciprocal relationships. Yielded huge amount of data that meant long hours transcribing.	Researchers found cultural and gendered context of their positioning as female researchers sometimes influenced how they were perceived. When transcribing data, they realised they had missed highly pertinent information by interrupting to bring conversation 'back on track'.
Fredericks *et al.* (2011)	To develop a smoke-free workplace policy	Participatory Action Research. Case study of an Aboriginal community-based smoking project.	Workplace - Victorian Aboriginal Community Controlled Health Organisation. Staff members. Number not specified.	Series of three yarns with staff and two yarns with managers over a period of 4 months. Some issues addressed by emailing policy to staff for comment.	Yarning may be a useful tool to develop other policies that have potential to be sensitive in the workplace or with groups of Indigenous people.	Yarning action research process was part of a framework based on principles of empowerment, respect and inclusivity, rather than on hierarchy.
Lambert (2011)	Defines Indigenous research and explains the methodologies and differences of Indigenous research and other models.	N/A	Research in a community is specific for that community. The data reflects that community. Indigenous peoples' knowledge or epistemology is tribal specific.	Many contemporary Indigenous scholars use narrative and storytelling as a primary method of supporting research objectives and community goals. Also, interviews, focus groups, talking circles and sharing circles.	Examples of how Indigenous Peoples have always engaged in research. Indigenous paradigm comes from the fundamental belief that knowledge is relational and shared with the whole of the natural world.	In Western models, traditionally, the researcher's voice and story is heard, whereas Indigenous methodology is focussed on relationships.

Reference	Aim	Methodology	Method	Sample	Findings	Comments
West *et al.* (2012)	Discussion paper to discuss 'Dadirri', an Indigenous research method and way of life and a vital research framework.	N/A	Dadirri is inner, deep listening and quiet, still awareness. Dadirri means listening to and observing the self as well as, and in relationship with others. It encompasses the role of spirituality in Aboriginal culture.	N/A	Illustrate how Dadirri provides a significant framework for indigenous researchers undertaking liberatory studies that promote change.	Link Dadirri method to other relevant political and critical methodologies – Freire's transformative education process and Habermas's theory of communicative action.
Geia *et al.* (2013)	Discussion paper to extend current understandings of storytelling/yarning and consider importance of including the method(ology) in all research with Aboriginal and Torres Strait Islander peoples.	N/A	Advocates storytelling/yarning as a data collection method. Relates to the cultural significance of yarning.	N/A	Yarning offers a more relaxed approach where people can talk freely about their experiences. It facilitates in-depth discussion resulting in thick description.	Differentiates between yarning and narrative enquiry. Yarning is a very practical way to 'close the gap' on an individual level between researcher and participant.
Braun *et al.* (2014)	Review paper to summarise the general experience of Indigenous people with colonisation and research.	N/A	Discusses oral history, focus groups, in-depth interviews and observation.	Indigenous Elders from selected English-speaking countries, including Australia.	Participatory Action Research and Community-Based Participatory Research are recommended.	Explores approaches to research with Indigenous Elders by review of literature. Includes table showing various methodological approaches.
Leeson *et al.* (2016)	To construct an understanding of prison quality for Aboriginal and Torres Strait Islander women prisoners and custodial staff.	Narrative inquiry	Yarning and appreciative inquiry. Prisoners - individual yarns and small groups of three to six participants. Custodial staff - one or two participants in each session. Individual yarning sessions.	Four women's prisons – two in Western Australia, two in the Northern Territory. Prisoners: Indigenous $n = 64$; non-Indigenous $n = 12$; custodial staff $n = 20$. Snowball and purposive sampling.	Advantage of Appreciative Inquiry with Aboriginal and Torres Strait Islander women is its investment in the inherent storytelling associated with image generation and conveyance of the narrative.	Versatility of appreciative inquiry and prior use with Aboriginal and Torres Strait Islander people suggests the paradigm is suitable for implementation in appreciation of qualitative difference in the experience of incarceration. Appreciative Inquiry can be used as a decolonising agent.
Wain *et al.* (2016)	To present a descriptive study of a method for collecting narratives from Aboriginal Australians in WA regarding their experiences with health care and using these to create open-access.	Phenomenological	Storytelling. To ensure story collection process was culturally appropriate and to provide a feeling of safety, the story provider chose the venue.	Majority lived in rural and remote areas of the Murchison District in Western Australia. Stories relate to experiences across Western Australia from Perth to regional towns and rural and remote settings. Aboriginal people $n = 21$. Recruited by Indigenous Reference Group (members).	Methodology lengthy and labour-intensive; however, afforded a respectful manner for story collection and consent process. These are not stories of an 'inherently disadvantaged population' but rather personal reflections that validate Indigenous Australians' support for change and provide insights into a strong and resilient culture.	Transcripts showed yarn interrupted by researcher when story provider paused to reflect on an important point.

Table 2.   (*continued*)

Citation	Study aim	Study design	Setting, participants and sample	Data collection methods	Findings	Key themes
Doyle *et al.* (2017)	Discusses Indigenist approaches to health research, including knowledges, cultural proficiency using Yerin dilly bag as a metaphor for the holder of core values.	N/A	N/A	Recommend yarning.	Participatory Action Research or Community-Based Participatory Research frameworks are generally strength-based. Rather than identifying an Indigenous 'problem', they capture and incorporate perspective(s) of communities.	Researcher's cultural competence and proficiency will lead to concordance between the research, researcher and researched. Indigenous voices and knowledges are privileged as they are an integral part of what it means to 'be' for Indigenous peoples and communities.
Ober (2017)	Explores place and space of storytelling in research.	Narrative inquiry.	Three examples of research projects: 1. The author is conducting a PhD research project with Indigenous students. 2. Indigenous researchers in the East Kimberley (Western Australia) have also used the 'cup of tea' approach. 3. *Both-ways in Action* project relating to Indigenous education.	Yarning. The Kapati (cup of tea) method of data collection draws on the narrative inquiry approach, which is more culturally inclusive and relevant to Indigenous ways of being, doing and knowing.	Stories make knowledge accessible, alive and real for Aboriginal people as they embed Indigenous epistemologies and ontologies.	Reflecting on their ways of sharing information at home through storytelling around a kapati, researchers could use a similar approach in the research space, especially with Indigenous participants. Kapati time is an integral cultural norm of Indigenous society where kapati signals yarn time. This means catching up with family and community.

researcher reciprocity, making it impossible for the researcher as an objective observer, to sit outside of the data.

In the research process, Bessarab and Ng'andu (2010) identified four distinct types of yarning with each style influencing interview quality, process and outcome:

1. Social yarning is informal, unstructured conversation in which trust usually develops; the researcher is accountable to the participant.
2. Collaborative yarning can involve sharing similar ideas; sharing research findings can lead to new discoveries and understandings.
3. Research topic yarning occurs in un/semi-structured interviews to gather information relating to the research question.
4. Therapeutic yarning occurs when the participant discloses traumatic, intensely personal or emotional information where the researcher's role is to listen empathically; this can empower and support the participant to re-think their understanding of their experience in new and different ways (pp. 40–41).

Yarning is supportive and facilitative of both Indigenous ways of working and knowledge sharing that assists in decolonising, re-positioning and supporting Indigenous knowledges and research methods (Fredericks *et al.* 2011). Many contemporary Indigenous scholars use storytelling as a primary method of supporting research objectives and community goals at the same time (Lambert 2011). Yarning provides a culturally secure place and helps facilitate in-depth discussions that result in thick description (Geia *et al.* 2013). Wain *et al.* (2016) observed that yarning provided a rich source of information on personal experiences that encouraged the story provider to recognise their facilitative role in the research process. Yarning as a data collection tool constitutes a means through which Australian Indigenous ontology (the nature of being), epistemology (the nature, sources and limits of knowledge) and axiology (the nature of values and value judgements) can be prioritised in completing the research (Leeson *et al.* 2016). An important aspect of yarning is to allow the participant's story to flow; where interruption by the researcher to bring the conversation 'back on track' can lead to missing highly pertinent information, as experienced by Bessarab and Ng'andu (2010) and Wain *et al.* (2016).

Discussion

This literature review aimed to explore the most appropriate methodologies to determine Australian Indigenous people's perceptions of their health needs. In her seminal work, *Decolonising Methodologies*: *Research and Indigenous Peoples*, Smith (1999) asserts:

> It is surely difficult to discuss research methodology and indigenous peoples together, in the same breath, without having an analysis of imperialism, without understanding the complex ways in which the pursuit of knowledge is deeply embedded in the multiple layers of imperial and colonial practices [p. 2].

Literature that focuses on research methodologies with First Nations Peoples in North America also discusses the need to decolonise research (Kovach 2009*a*; Lavallée 2009; Ormiston 2010; Rowe 2014). Colonial history has disrupted the ability of Indigenous peoples to uphold knowledges by cultural

methodologies; however, many Indigenous peoples recognise that for their cultural knowledge to thrive it must live in many sites, including Western education and research (Kovach 2009*a*). Lavallée (2009) suggests that when discussing incorporation of cultural protocols into research, a preliminary discussion of colonisation and cultural genocide and the effect that these have had on the people is necessary. 'In keeping with the decolonising notion of an Indigenist research framework, reciprocity also includes the advancement of Indigenous ways of knowing' (Lavallée 2009, p. 36). Ormiston (2010) agrees, stating that decolonisation is about privileging, understanding and sharing our concerns and worldviews. It is paramount for non-Indigenous researchers to recognise that the Indigenous perspective emphasises the interconnectedness of the spiritual, physical, emotional and intellectual aspects of being, whereas the Eurocentric worldview perceives these as disparate and fragmented (Ormiston 2010). Acknowledgement of this difference allows for development of new methodologies that honour Indigenous ways of knowing, being and doing.

It is necessary to develop research approaches that challenge the ongoing colonisation of Indigenous peoples, communities and knowledges, and achieve cultural proficiency by ensuring concordance or congruence between the core values of the research, researcher, and researched (Doyle *et al.* 2017). It has been suggested that the theoretical framework preferred by Australia's Indigenous people is critical theory; a radicalised epistemology in that it is overtly political in intention, it fits the agenda of a liberatory epistemology and advocates for those most oppressed in society (West *et al.* 2012). The concept of Dadirri, as explained by West *et al.* (2012), is a practice of deep listening and acceptance which, in the context of research, is a method that enables working with Indigenous people and allowing their voices to be heard.

In the past, most research was conducted 'on' rather than 'with' Indigenous people. To counter the negative effects of the power imbalance, Indigenous epistemologies and axiologies have informed the undertaking of participatory and collaborative research (Nicholls 2009). Both PAR and CBPR methodologies provide opportunities for Indigenous people to be actively involved in the research process, with inherent benefits to individuals and the community. Engagement of an Indigenous Reference Group (IRG) to guide the researchers in culturally appropriate protocols, behaviours, language and interpretation of data will strengthen the validity of the research process and findings. Wain *et al.* (2016) found that the IRG provided an interface between the epistemological differences and created a foundation from which the Aboriginal narrative resources could be generated, guaranteeing they were true to, and respectful of, Indigenous cultures.

Engaging with Indigenous people in the research process requires sophisticated levels of communication. The reviewed literature situates yarning or storytelling as the most appropriate method of engagement, as it fosters a level of trust and reciprocity in a relaxed manner (Gorman and Toombs 2009; Bessarab and Ng'andu 2010; Fredericks *et al.* 2011; Lambert 2011; Geia *et al.* 2013; Leeson *et al.* 2016; Wain *et al.* 2016; Doyle *et al.* 2017; Ober 2017). Similar data collection methods are discussed in research with other Indigenous populations internationally, including Botswana, Canada and North, Central, South and Latin

America, which support talking/sharing circles, storytelling and conversation as appropriate data collection methods (Bessarab and Ng'andu 2010; Lavallée 2009; Kovach 2009*a*; Kovach 2009*b*; Kovach 2010; Iseke 2013; Summers 2013; Caxaj 2015).

Unique characteristics distinguish yarning or storytelling from other forms of qualitative data collection methods. Yarning or storytelling is an informal, relaxed discussion whereby the researcher gleans answers to research questions, whereas narrative inquiry is more structured to answer specific research questions with the researcher describing the narrator's story. Conversation, a non-structured method of gathering knowledge, is more than an interview because it combines reflection, story and dialogue (Kovach 2009*b*). Storytelling, an ancient practice used by Indigenous persons/cultures, is integral to Indigenous learning within the different spheres of life (Lambert 2011; Geia *et al.* 2013). Ober (2017) concurs, explaining that storytelling is a natural part of life used to inform past histories, kinship structures, beliefs, values, morals, expected behaviour and attitudes. As a method of gathering knowledge based on oral storytelling tradition congruent with an Indigenous paradigm, the conversational method is of significance to Indigenist methodologies (Kovach 2010). Summers (2013) supports this view, stating that personal experiential knowledge is viewed as a sacred expression in Indigenous research and storytelling, and is to be respected as a valid form of data collection that does not require citations for it to be legitimised as an Indigenist methodology.

Bessarab and Ng'andu (2010) and Wain *et al.* (2016) found that the use of yarning or storytelling required more time for the research process than initially planned. Data collection and transcription from recordings were more extensive. In deference to cultural considerations, it is necessary for researchers and funding bodies to factor in potential delays, particularly for research projects in remote Indigenous communities, for the conduct of ceremonies, Sorry Camp, kinship responsibilities, caring for Country and other matters. One of the principles defined by AIATSIS (2012) states that researchers need to recognise that Indigenous individuals or communities may have more pressing priorities that may impinge on the research time frames. Another factor that may impact on the research process that must be taken into account is gender issues. Bessarab and Ng'andu (2010) found that gender, an issue that is always present, can emerge at different times during an interview where it can challenge, confront, distract and place the researcher in an awkward situation.

Limitations

The literature search process was conducted rigorously; however, it is possible that some articles that relate to the literature review question may have been missed. Nevertheless, from the papers that were reviewed, there was consistency in the themes that emerged associated with appropriate methodologies and approaches used in Indigenous research.

Conclusion

The imperative to decolonise research methodologies is evident from the reviewed literature. Acknowledgement and incorporation of Indigenous ontologies, epistemologies and axiologies is essential to this process. Cultural differences between Indigenous people across Australia imply that each location may have their own ways of knowing, being and doing, which will underlie their preferred methods and methodology for the conduct of research. Paramount to the Indigenous research process are consultation, participation and ownership of data, which inherently belongs to the research participants. Primarily, the research is to be for the benefit of the Indigenous people, so it is right and proper for research processes to be culturally appropriate.

Traditionally and contemporarily, Indigenous peoples' principal method of communication is grounded in oral traditions with cultural knowledge, including history and social values, passed on through the generations. This review of the literature demonstrated that yarning or storytelling is the single most recommended data collection method in which to engage with Indigenous people. Yarning and storytelling allow for a reciprocal relationship between participant and researcher that can elicit in-depth information pertinent to the research question/s. The results of the reviewed literature are likely to have applications for Australian Indigenous people living in urban, rural and remote communities.

Indigenist methodologies are steeped in ancient history and must be respected for their intrinsic value in all phases of research projects to enable self-determination for Australian Indigenous people to be realised.

Conflicts of interest

The authors declare no conflicts of interest.

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