








RESEARCH ARTICLE

‘Nih Waangkiny Kaadatjiny’: ‘Listening, learning and knowing’: Stakeholders' perspectives about barriers and enablers to delivering a successful physical activity program for older Aboriginal people

Margaret J. R. Gidgup^{1,2}  | Marion Kickett³ | Jacqueline Francis-Coad²  |
Keith Hill⁴  | Josephine Umbella²  | Julieann Coombes⁵  | Rebecca Ivers⁶  |
Nicole Bowser⁷ | Vilma Palacios³ | Anne-Marie Hill² 

¹School of Allied Health, Faculty of Health Science, Curtin University, Perth, Australia

²School of Allied Health, WA Centre for Health and Ageing, The University of Western Australia, Perth, Australia

³Independent Researcher, Perth, Australia

⁴Rehabilitation Ageing and Independent Living (RAIL) Research Centre, School of Primary and Allied Health Care, Monash University, Melbourne, Australia

⁵The George Institute for Global Health, NSW, Sydney, Australia

⁶School of Population Health, University of New South Wales, Sydney, Australia

⁷South West Aboriginal Medical Service Aboriginal Corporation, Bunbury, Australia

Correspondence

Margaret J. R. Gidgup, School of Allied Health, The University of Western Australia, Perth, WA, Australia.

Email: margaret.gidgup@uwa.edu.au

Funding information

Healthway

Handling editor: Courtney Ryder

Abstract

There is limited evidence about how physical activity (PA) programs should be provided for older Aboriginal and Torres Strait Islander peoples. Recently two groups of Aboriginal Elders on Noongar Boodja (Country) in Western Australia participated in the Ironbark PA program.

Issue Addressed: The objective of this study was to explore the views of key stakeholders about the barriers and enablers to delivering a successful PA program and provide feedback for future program delivery.

Methods: The research took a ‘Nih (listening), Waangkiny (learning), Kaadatjiny (knowing)’ approach. The lead researcher, a Noongar Wadjuk woman, conducted semi-structured interviews ($n = 17$) with key stakeholders: Aboriginal and non-Aboriginal workers who assisted to deliver the program, and family and local members of the communities. Data were also collected through weekly program notes and researcher diary entries. Data were analysed thematically.

Results: The overarching theme highlighted that stakeholders felt a sense of building a PA program that was culturally appropriate. They reflected that the program attracted older Aboriginal people because it was designed to make them feel welcomed with a sense of belonging. Five major themes were identified: *Relationships*, *Belonging*, *Program structure*, *Benefits of the program* and *Future planning*. Positive changes observed in Elders' health and well-being were a source of inspiration for team workers.

Conclusions: Key enablers to delivering a PA program for older Aboriginal people are building a culturally strong program that creates a sense of belonging for the participants.

So What?: Practitioners who are planning PA programs for older Aboriginal people should prioritise the development of cultural safety and security.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2023 The Authors. *Health Promotion Journal of Australia* published by John Wiley & Sons Australia, Ltd on behalf of Australian Health Promotion Association.

KEYWORDS

Aboriginal and Torres Strait Islanders, aged, barriers, cultural competence, facilitators, indigenous, physical activity

1 | INTRODUCTION

Physical activity (PA) is vital to maintain health and wellbeing.¹⁻⁴ However, mainstream PA programs are most often developed without reference to those who are different to the dominant perspective and may not be appropriate for older Aboriginal people.^{2,5} Ignoring the need for culturally appropriate services perpetuates marginalisation of vulnerable groups such as older Aboriginal and Torres Strait Islander peoples when they seek to access suitable PA programs.^{5,6} There is an urgent need for older Indigenous people worldwide to become more involved in local community PA programs at all stages of development, to ensure that local Indigenous populations lead the development of suitable programs.^{7,8} Such PA programs give Aboriginal people options to maintain and sustain a physically active lifestyle that can lead to improved health and wellbeing.^{4,9,10}

However, when needing health care older Aboriginal and Torres Strait Islander people are reluctant to engage with mainstream health services, which are designed using a Westernised care model.^{6,8,11} Instead, they feel safer seeking out culturally appropriate health services where they are not made to feel uncomfortable and subjected to ignorance and racism, which is often a humiliating, and sometimes deeply traumatising, experience.^{6,11-13} Distrust in government agencies caused by discriminatory policies has resulted in multiple barriers that prevent access to good health care.¹⁴ Lack of access is compounded by Social Determinants of Health which are known to be the root cause of much poorer health among Aboriginal and Torres Strait Islander peoples compared to Australia's non-Aboriginal populations^{15,16} and older Aboriginal and Torres Strait Islander peoples have a higher prevalence of chronic illnesses.¹⁷ When health care is led by Aboriginal people such as when provided by an Aboriginal Community Controlled Health Organisation it enables access to health programs, reduces racism, and is inclusive. These type of services offer culturally strong models of care that improve health outcomes for Aboriginal people by Aboriginal people.^{9,13}

Loss of family connections, institutionalisation and exclusion from society are some of the impacts of colonisation and unaddressed it is a pattern of ongoing intergenerational trauma.^{8,16,18} This history of trauma includes those older people who form part of the stolen generations.¹⁹ Previous work emphasises that health programs that seek to work with older Indigenous peoples should be implemented within a culturally safe and secure framework and develop a decolonising approach.^{8,20} Taking a decolonising approach assists in prioritising the importance of making a PA program culturally safe and secure for its target group and provides insight into the past and how health care delivery should be implemented with older Indigenous people.^{6,8,20}

We recently translated the Ironbark PA program into Noongar Boodja (means Country) in Western Australia (WA). The Ironbark PA program was designed by Aboriginal communities and researchers in New South Wales (NSW) and showed positive benefits for older Aboriginal people in NSW.²¹ The program delivered consisted of 1 h of functional

exercises that included strength and balance components, followed by a yarning circle.²² Yarning is a way of communicating that allows sharing of information in a culturally safe manner with Aboriginal and Torres Strait Islander peoples.²³ The program demonstrated holistic benefits, with Elders reporting improvements in physical, mental, and social outcomes and improvements in functional mobility.^{22,24} Understanding the Elders' perspectives about the Ironbark PA program was vital, but it was equally important to explore the views of the wider community and program stakeholders, to gain a holistic understanding of how to break down any barriers and build up enablers to expanding the Ironbark PA program or other culturally appropriate PA programs in local Aboriginal communities in South West of WA. This type of evaluation allows organisations to respond to local context, explore the processes and mechanisms, and adapt the original program to achieve best fit with different settings.²⁵ Going out into the community, where the program was delivered, to speak to Aboriginal and non-Aboriginal stakeholders was part of a holistic approach that considered the community perspectives. Being healthy and happy as a community is what defines the meaning of good health for Aboriginal peoples. It is centered around mental, emotional, and spiritual wellbeing and that of their family and is not focused only on the fitness of the individual but rather the fitness of the whole community.^{5,26} Stakeholders who delivered the program could be a valuable source of knowledge to explore barriers and enablers to successfully implementing the Ironbark PA program. These stakeholders could provide feedback about how a culturally appropriate, decolonising PA program for older Aboriginal people was successfully implemented on Noongar Boodja with Aboriginal communities in the South West of WA.

This objective of the study was to explore the barriers and enablers to successfully delivering the Ironbark PA program for older Aboriginal people living on Noongar Boodja from the perspective of stakeholders who assisted in program delivery.

2 | METHODS

2.1 | Design

An implementation science approach was taken to explore the factors (both barriers and enablers) that influence the uptake of effective interventions into clinical practice.^{25,27} Exploring and identifying implementation factors is a means of guiding more widespread delivery of an intervention.²⁵ To understand these influences on the Ironbark PA program and throughout this research we refer in Noongar language to 'Nih Waangkiny Kaadatjiny', which means 'Listening, Learning and Understanding.' This is the Noongar way of learning that begins with respecting diversity in the many voices of the people talking, as key to learning and understanding more. It is a process that is embedded in building relationships over time. These ways of working can be summarised as learning from our Elders, which includes

listening to Elders and respecting culture, practices, and beliefs today that have been heavily influenced by the impacts of history.^{28–30}

2.2 | Ethical considerations

The WA Aboriginal health ethics committee (HE 842) and Curtin University ethics committee (HE 2018-0425) approved the study. Stakeholder participants provided written, informed consent to participate. The study design and procedures were underpinned by the National Health and Medical Research Council (NHMRC) of Australia guidelines for conducting research with Aboriginal and Torres Strait Islander communities.³⁰

2.3 | Brief summary of the ironbark PA program

The Ironbark PA program for older Aboriginal and Torres Strait Islander people is a falls prevention program, that was originally developed in NSW.²¹ In WA it operated as a weekly group consisting of 1 h of exercises, followed by a Yarning Circle and lunch, at a venue that was suitable for the needs of the Elders. Two groups operated in the South West of Western Australia, one in the metropolitan area and one in a regional town. The groups were commenced as part of a research project, which was undertaken by Aboriginal communities, researchers, Elders and health practitioners. Briefly, all partners engaged over approximately 3 years to obtain the project funding and then operationalised the program over approximately 2 years, including providing staff training. More information about this preparation has been reported previously.^{22,24} The aim of the program was to give older Aboriginal and Torres Strait Islander people aged 45+ years an opportunity to participate in a PA program that could help to improve their health and wellbeing. Both groups were led by a team that included the lead Aboriginal researcher (MG) of this study and supported by Aboriginal Controlled Community Health Services. The program evaluations, published previously,^{22,24} found that Elders who participated in the program made significant improvements in physical function and reported positive effects on their social and emotional well-being.

Participants in the Ironbark PA program were referred to as Elders throughout the research. Using the term 'Elders' was done respectfully because the Elders participating in the Ironbark PA Program were accepted in their communities as people of wisdom, knowledge and leadership. They were also referred to as 'Aunties' and 'Uncles' which are respectful titles that are given to Elders who have preserved knowledge and share through 'storytelling' to help to resolve the complexities within the broader community and to advocate for positive change for their community.

2.4 | Researcher standpoint

The lead researcher (MG) is a doctoral thesis candidate, undertaking research training through her University (with a Bachelor of Aboriginal Health), and is well known in her community. She has worked in

Aboriginal services for many years and was experienced in conducting yarning circles and undertaking community engagement. She is accepted as being of Noongar descent by her peers and has built relationships in the community over many years, enabling a highly contextual perspective.³¹ As the lead researcher she had developed relationships with the stakeholders (staff and local communities) over the 3 years that the Ironbark PA Program had been planned and then delivered. This included discussions about what the research entailed and continuous communication about the research procedures and findings. Engagement with each stakeholder during the collection of data was centered around the yarning model of engagement.²³

2.5 | Participants and setting

A purposive sample was drawn from Ironbark PA program stakeholders. Participants interviewed were those stakeholders who could provide rich information through their experiences with the program in the community and were able to discuss the program in depth.³⁴ Stakeholders were Aboriginal and non-Aboriginal health service providers, health workers and research workers who assisted to deliver the program over the 2 years in either the regional or metropolitan area. Local community service providers who referred older Aboriginal people to the program and were regularly able to observe the older Aboriginal person's experiences with the program were also interviewed. Family members who supported Elders to participate in the program were also invited to give feedback. The Elders who had participated in the Ironbark PA program were not interviewed for this study, as they had already provided their feedback and these findings were published previously.²⁴

2.6 | Data collection procedure

Data were collected from multiple sources to understand how the program operated in the communities and to explore the barriers and enablers to program success. Collecting data from multiple sources was a form of method triangulation that enabled meaningful understanding of how the program worked and in what contexts.^{25,34} First, a qualitative interview was undertaken face-to-face with the purposeful sample of stakeholders who were associated with the program. All interviews were undertaken by the lead researcher interviewing each stakeholder alone. Interviews lasted approximately 45–60 min. Interviews were about building a relationship to connect easily with the stakeholders to discuss, listen and learn and understand as much as possible. Each interview was treated like an ordinary non-threatening yarn that you might have anywhere with anyone, except it had areas of focus on specific questions about the Ironbark PA program. At times the yarning would stray away from this topic, but the researcher sought to respectfully revisit unanswered questions in another way when necessary. This was to ensure that she gained a true and rich understanding of the reflections that the stakeholders presented. This approach was underpinned by being confident in her position as an Aboriginal researcher who understood her transparency and

accountability to the community.^{31–33} She took a respectful approach to the procedure, including using time to plan for each interview, with location being decided by each participant (quiet, private setting such as a park or small room in a community centre) and including reciprocity as key elements to successful interviews. Reciprocity was about providing the cost of a lunch or a cup of tea or coffee at a place where the interview could be confidential and comfortable.

Second, data were collected from weekly feedback forms. These forms were completed by the Aboriginal research workers after each program session. The forms provided a short summary about feedback from Elders and their families and the research workers completed a short reflection about the session. Thirdly, the program was interrupted by the COVID-19 pandemic social restrictions. During that time, research assistants completed short reflections about communications they had with the Elders during their regular phone contact. Finally, the lead researcher kept a diary throughout the research, including after undertaking the interviews, which contained her thoughts and reflections about the interview data, the procedure and the program.

2.7 | Interview guide

A short qualitative questionnaire containing open-ended questions was developed and used as a guide for the semi-structured interviews. Questions were designed to explore stakeholder participants' perspectives of the program, including identifying barriers or enablers to how the program was operationalised and how it could be improved for future delivery.

2.8 | Data analysis

Data analysis was completed using a qualitative thematic process led by the lead researcher (MG). The Indigenous theory-principles of research being experiential and highly contextual underpinned the analysis.³¹ The lead researcher was able to draw on her experiences working with Aboriginal people over many years, including her knowledge of her own community, to gain a true understanding about what the community was really saying about the program. Her lead made sure that the findings recognised the strengths the communities and stakeholder participants brought to the research.³⁵

Interviews were conducted until theoretical saturation was confirmed. All interviews were audio-recorded. Half of the interviews were transcribed by the lead researcher (MG) and the other half were transcribed by a professional service. The researcher listened to all interviews and re-read all transcripts several times to familiarise herself with the data. Data from all sources (interviews, lead researcher diary and field notes) were combined using Microsoft Excel (Microsoft Excel, Office 365) and analysed using thematic analysis.³⁶ A deductive approach was undertaken to examine the data for barriers and enablers to program success, using a six-step process described previously.³⁶ The lead researcher and second researcher (MG and JU) then started coding the data, searching through the entire data set. Coding was based on an

implementation framework, which seeks to identify and understand what barriers prevent a program from being successfully implemented and what facilitators support its delivery.²⁵ The overarching codes were 'barriers' and 'enablers' to Ironbark PA program success. Data were searched for words that described stakeholder participants' experiences as a barrier or an enabler, such as enjoyment, challenge, safety, outcomes, feelings. Data that were not able to be mapped to these pre-identified codes were added to the dataset as new codes. A third researcher (AMH) then viewed a selection of the coded data to confirm coding before the analysis progressed. Using a back and forth process, coded data were then grouped into categories, and these categories were then grouped into candidate themes. The lead researcher then examined the dataset to ensure that all coding was included in the candidate themes and the themes represented the data set.

The analysis, including the candidate themes were subsequently presented to a group of local Aboriginal stakeholders (Elders, community, and family members) at a meeting, that included Aboriginal health and research workers who participated in the interviews. They were asked if the results provided an accurate representation of their feedback and participated in a discussion about the themes and whether they represented the overall data accurately. This meeting between researchers, the stakeholder participants and the broader community to discuss the data set and incorporate participants' feedback, aimed to add credibility to the research³⁴ and present the findings in a manner that privileged Aboriginal voices.³¹ After this meeting, the three researchers met to confirm the final analysis.

3 | RESULTS

Seventeen interviews with key stakeholders were completed. The characteristics of the sample are presented in Table 1. Of those interviewed, eight were Aboriginal community members, and of these, six were older Aboriginal people. Aboriginal researchers ($n = 2$), health workers ($n = 2$), and non-Aboriginal researchers, health professionals and program managers ($n = 5$) from both metropolitan and regional sites also participated.

3.1 | Overarching theme—Building a culturally appropriate PA program

Themes and their relationships are summarised in Figure 1. The overarching theme highlighted that stakeholders experienced the Ironbark PA program as positive and successful and felt this was because they were *building a culturally appropriate program*. These perspectives that the program was culturally safe and secure were viewed as key to the program's success. A community stakeholder who reflected on the success of the program commented that '...this is the 21st Century now, but culture still comes into it...' (P12, Aboriginal community member, regional). According to another stakeholder, 'There are obviously the cultural differences that need to be obviously recognised and acknowledged, and I think that when it comes to the stuff like

TABLE 1 Characteristics of the sample.

	Participant (gender ^a)	Role	Time in program	Site
1	Non-Aboriginal health professional (F ^a)	Program delivery	1–2 years	Metro
2	Aboriginal research worker (F ^a)	Program delivery and family member of participant	>2 years	Metro and regional
3	Older Aboriginal community member-Aboriginal (F ^a)	Family member of Elder	>2 years	Metro
4	Younger Aboriginal community member (M ^a)	Community member and family member of participant	1–2 years	Metro
5	Non-Aboriginal health worker (F ^a)	Program delivery	>2 years	Metro and regional
6	Older Aboriginal community member (F ^a)	Family member of participant	>2 years	Metro
7	Older Aboriginal community member (F ^a)	Previous participant in program and family member of both staff and Elders	>2 years	Metro
8	Non-Aboriginal health service manager (F ^a)	Program delivery and other Aboriginal community programs	>2 years	Regional
9	Non-Aboriginal health professional (M ^a)	Program delivery and assists with other community programs	>2 years	Regional
10	Aboriginal health worker (F ^a)	Program delivery	1–2 years	Regional
11	Aboriginal Health worker (F ^a)	Program delivery	1–2 years	Regional
12	Older Aboriginal community member (M ^a)	Manages other Aboriginal community programs in regional community	Long term involvement in community	Regional
13	Aboriginal Research worker and community member (F ^a)	Program delivery	>2 years	Both metro and regional
14	Aboriginal community member (F ^a)	Assists to organise other Aboriginal community programs	Long term involvement in community	Metro
15	Older Aboriginal community member (F ^a)	Participates in and assists to organise other Aboriginal community programs	Long term involvement in community	Both metro and regional
16	Older Aboriginal community member (F ^a)	Participates in and assists to organise other Aboriginal community programs	Long term involvement in community	Both metro and regional
17	Non-Aboriginal health professional (F ^a)	Program delivery and state-based health service provider	>2 years	Both metro and regional

^aF, female; M, male.

this, the cultural aspect of Ironbark has really helped people to keep coming...' (P9, non-Aboriginal health professional, regional).

One stakeholder participant whose father participated in the program linked the program with recognition of Elders' role as cultural knowledge keepers for the community, stating that: '... this needs to be more and needs to be ongoing, this is our Elders, this is our future, this is our history, this is our walking library...' (P6, Aboriginal community member, metropolitan). Program delivery was viewed as building this culturally appropriate approach. One stakeholder participant observed that '...it's about the person running the group, changing the way they run it and being understanding of the cultural differences' (P1 non-Aboriginal health professional, metropolitan) and another stated that '...I think...in regard to communication-wise its culturally appropriate...' (P11, Aboriginal health worker, regional).

Four themes were identified (*Relationships, A sense of belonging, Program structure, Benefits from attending the program*) that could either act as barriers or enablers to building a program that was culturally appropriate. Culturally appropriate programs are about building strong

relationships at places that Elders feel comfortable to attend, with like-minded fellow countrymen and women who are seeking the same social and emotional connections. This holistic approach to the Ironbark PA program delivery accorded with Aboriginal ways of knowing health^{5,26} and was viewed as leading to positive benefits for the Elders. These four themes that were identified explained the stakeholders' experiences and perspectives about enablers to success and barriers that they saw during the delivery of the program. A fifth theme identified was *Future planning for program sustainability*.

3.1.1 | Theme 1—Relationships

- *Sub-theme—Relationships as enablers to program success.*

Trust and understanding

Relationships that created trust and understanding that were developed as part of the program were exemplified as supportive and very

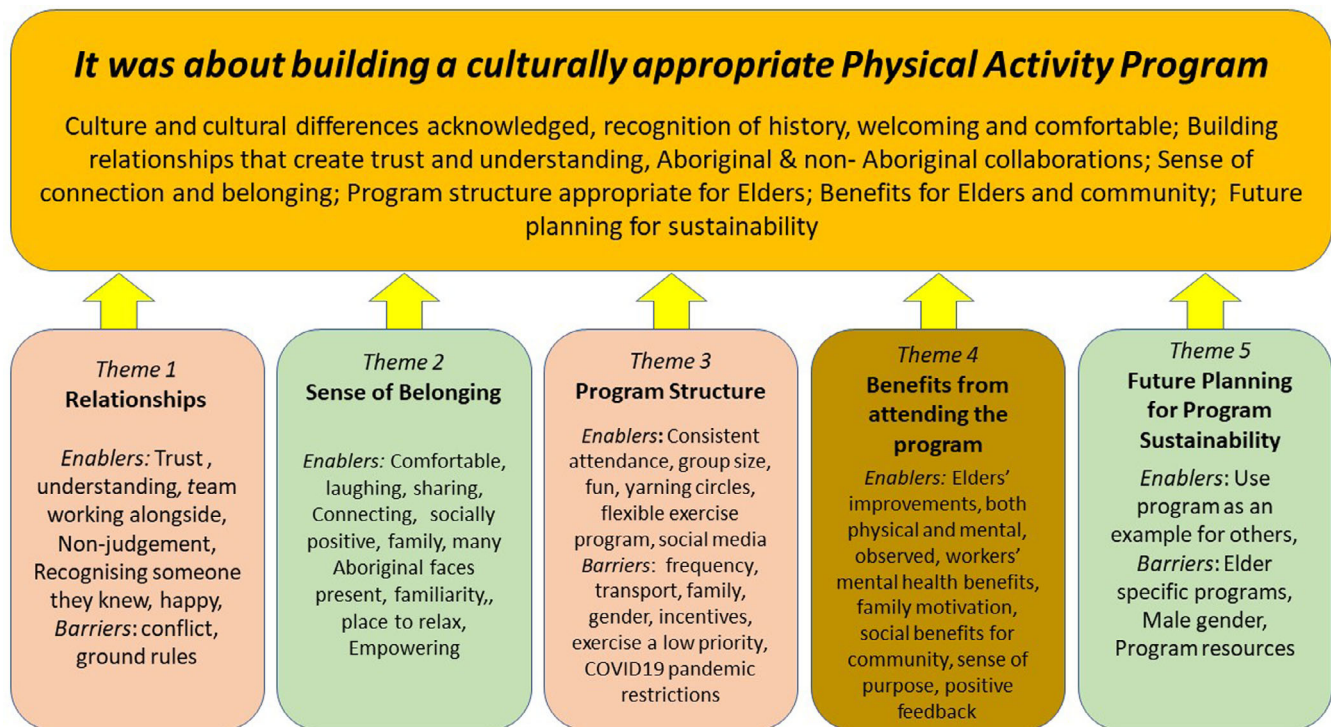


FIGURE 1 'Nih Waangkiny Kaadatjiny' 'Listening Learning Knowing'. A ways of working framework for working with Aboriginal Elders on Noongar Boodja.

important to the Elders. One stakeholder reflected that enduring relationships developed during the Ironbark PA program, stating that '... you're familiar now, yep with those people and it's kind of like we all, as Aboriginal and Torres Strait Islanders, we always hang on to that relationship that we have built...' (P14, Aboriginal community member, metropolitan). A research worker at the metropolitan site was a former local community member and was recognised and embraced by several Elders who were happy to see someone they knew. 'We met (Aboriginal research worker) who mum knew quite well from when she was a lot younger and that made it really fun for Mum to be able to see someone, she recognised...' (P3, Aboriginal community member, metropolitan). These perspectives highlighted the trusting relationship that Elders look for.

One Aboriginal health worker stated that both workers and Elders built relationships as they did the exercises together. 'Because... it gets um trusting, they're (Elders) able to build a trusting relationship with you so you, you're not sitting back and they might think that your judging them more and... feeling that...you're maybe...too good to do the exercises...' (P10, Aboriginal health worker, regional). Another health worker expressed her reflections that the program was about '...making sure everyone is happy and safe'. (P2, Aboriginal research worker, metropolitan).

Team relationships of trust

It was also important to the whole team that the Aboriginal team members considered the program was a workplace that was safe to attend; that it was a place where Aboriginal workers were comfortable

working alongside fellow Aboriginal and non-Aboriginal team members. Non-Aboriginal team members were closely supported by the Aboriginal team members to work together successfully. 'If you do have a non-Aboriginal person attending the group you might have someone like myself, they know that I am part of the team of Aboriginal people...' (P17, Non-Aboriginal health professional, both).

This understanding about creating a trusting space was expressed by another non-Aboriginal health worker who had experience working with Aboriginal clients. 'For the Aboriginal community I think it's really beneficial they have a safe secure environment that they feel non-judgement... I've worked with Aboriginal people before, I've gone to a school with predominantly Aboriginal people going to that school and I'm not unfamiliar with that sort of aspect...' (P9, non-Aboriginal health professional, regional). Another worker commented that Elders '...seemed to feel free and happy, like they belonged in the program...' (P5, non-Aboriginal health worker, both).

- *Sub-theme*—Relationships as barriers to program success

Conflict

While 'Relationships' in most cases were a positive, conversely, in other situations, they could form a barrier. Relationships among Elders were sometimes identified as a cause for concern due to historical family conflict, cultural or gender differences. Staff noticed that some Elders did not attend regularly for those reasons. It was a challenge for some health service providers to manage shaky relationships between the Elders and the service provider. There were

disagreements that needed to be resolved and past experiences in the community that were not positive, both of which led to some Elders initially attending but not returning to the program and some inconsistent attendances. 'Overall, it was a trying session, and it would be good to remind the group of the group rules regarding respect and to be positive and encouraging...' (Aboriginal health worker, weekly feedback form, regional).

3.1.2 | Theme 2—A sense of belonging

- *Sub-theme*—A sense of belonging as an enabler to program success

Belonging

Stakeholders reflected that they were confident that the Elders felt that they 'belonged' in the group. This was expressed by Aboriginal and non-Aboriginal stakeholders. For example, one worker commented that '...we have so many different backgrounds about where we all come from, but at the end of the day I feel that we really feel the connection that we have as a group...everyone feels like they belong...' (P2, Aboriginal research worker, metropolitan). Another worker stated that their experience was that '...people feel like they belong to something, that they can come into a comfortable environment and that it's socially positive as well...' (P1, non-Aboriginal health professional, metropolitan). One worker observed that participants felt comfortable in the group, stating that '...there was lots of laughter. This was followed by everyone making suggestions...' (Aboriginal health worker, weekly feedback form, regional).

A health worker reflected that 'People have been coming together where they haven't necessarily had a space to do that before...' (P8, non-Aboriginal health service manager, regional). Another stakeholder, who was an older Noongar community member and assisted with regular program delivery over the life of the program, reflected that the Elders felt a sense of connecting, and this consequently created a sense of belonging.

'They needed to feel belonging. They needed to connect; they found a place. They found themselves. It was a chance for them to feel as if they belonged, they connected, and they also were empowered...' (P13, Aboriginal research worker, both).

3.1.3 | Theme 3—Program structure

- *Sub-theme*—Program structure as an enabler to program success

The Ironbark PA Program structure (design and delivery) was considered appropriate and was accepted by stakeholders. Feedback from stakeholder interviewees was positive. Stakeholders perceived that the program was relevant and important to the needs of the Elders and the community.

Consistent attendance

Stakeholders observed the Elders' regular attendance and how they connected easily to the weekly PA activities. Regular attendance was perceived as affirming to program success. 'Ten ladies attended today. It was a rainy day, so we started going across the room with indoor warm-up exercises, had laughs doing something different ...' (health worker weekly feedback form, regional). One worker commented that '...everyone is welcomed...which is why I think that they love coming back each and every week.' (P2, Aboriginal research worker, metropolitan).

Group size

There were generally between eight to 12 people participating weekly at each site and both Aboriginal and non-Aboriginal health and research workers concurred that the group was just the right size to provide required support. Comments suggested that if the group was any larger, the Elders' needs might not have been adequately addressed. One interviewee reflected that the 'group was not too large and overwhelming...It was a nice size group. There wasn't too many...' (P3, Aboriginal community member, metropolitan).

Yarning circles

The use of a yarning circle, was viewed as enabling, being observed to be a positive and welcome part of the program that the Elders looked forward to, with one stakeholder commenting '...with my observation ...and what the Elders have shared is the exercise group itself would not have the same value or benefit as combining it with the yarning...' (P17, non-Aboriginal research worker, metropolitan). A worker reflected that 'Yarning when people tell what's been going on in their life. That was a good part.... when people would come out with either a positive or something. The sharing told something about their life...' (P2, Aboriginal research worker, metropolitan).

Flexible exercise program

The way the exercises were flexibly delivered according to the context of the Elders' ability was viewed as encouraging Elders to sustain their engagement in the program. 'He (health professional leading the exercises) also understands the health disadvantages that Indigenous people face, so that's a good thing and that's why he caters to or adapts the exercises...' (P11, Aboriginal health worker, regional).

Another stakeholder stated that Elders could join in because '...if they can't stand, they'll sit down and do exercises. Um, but some of them actually do get up and try and help their knees, which is good...' (P10, Aboriginal health worker, regional). Other aspects of the program were noted to facilitate engagement in the exercises. 'It's literally just the social aspect and the mental aspects (not only the exercise part) of Ironbark), because once that gets sorted that's where things like motivation and things come in' (P9, non-Aboriginal health professional, regional). One worker described her personal positive experience completing the exercises and also observed that the exercises had a positive effect on the Elders' well-being.

'That (Ironbark exercise) was totally... simple stuff that you can actually do. And you could actually see the results for that... 45 minutes exercise and just morning tea (we were) watching their (Ironbark participants) self-esteem go skyrocket, and we empowered them...' (P13, Aboriginal research worker, both).

- *Sub-theme*—Program structure as a barrier to program success

Frequency

The program was only held once per week at a set time, which prevented regular attendance for some Elders. Some Elders had to frequently travel to city hospitals (from regional areas in particular) for medical treatments and ongoing health issues. One health worker reported that: 'I know the week a couple weeks before that we only had three (participating Elders) ...the main thing I know there has been a couple of deaths and just some health appointments that clients attend...' (P11 Aboriginal health worker, regional).

Transport

Transport was available for Elders attending the regional group, which enabled attendance as one worker explained '...it is easy to get people to come because we provide transport to help get them there...' (P8, non-Aboriginal health service manager, regional), but was not available for the metropolitan group. Employment commitments prevented some Elders from participating consistently and in the winter, cold weather was a cause for non-attendance as some Elders chased the warmer weather in distant tropical regions.

Family

Another community reason for Elders not participating was deaths in families. This affected the attendance rate of those family members. 'One of our group members is going through a bit of a tough time with family and other issues the group has shown so much support for her and we wish her all the best...' (P2, Aboriginal research worker, metropolitan). Caring for grandchildren or relatives was another barrier to regular attendances. 'Often, they were unable to come because they were caring for someone who is unwell or caring for a grandchild because the mother or father of the child was not there ...' (P16 Aboriginal community member, both). 'Grand carers that are looking after their grandchildren, so they may not be of the age where they're going to school yet, or it might be school holidays and there's going to be a problem...' (P4, Aboriginal research worker, metropolitan).

Gender

Some Aboriginal and Non-Aboriginal health service providers, workers and local community members identified the need for separate men's and women's groups, because they felt that having men join women in the same group was culturally inappropriate.

'...Only because women's business, men's business. Yeah. And um, you hear... what all girls talk about, at

Ironbark, you know, and I feel like if men were there, then some of them might feel a little bit too uncomfortable...I think that there should be an Ironbark for men, ...' (P10, Aboriginal health worker, regional).

Men and women participating in PA together was not identified as a barrier in the metropolitan group possibly because the Elders were a diverse group of Aboriginal people, some of whom were not traditionally connected to the area or because they were established as Elders who had many years of experience in meeting in mixed gender forums. 'For being in the metro of Perth, I actually thought that we would witness a lot of barriers to having mixed genders groups... and I was very surprised that we didn't. We are working with established groups who are used to mixing so it's not a problem...' (P4, Younger Aboriginal community member, metropolitan).

Lack of incentives

Incentives were not provided for attending the Ironbark program. Men not attending the program was explained by one older community member interviewee as being part of a larger ongoing issue in the community namely; it was difficult to attract men to groups. This participant commented that: 'our men's group have, um, incentives, you know, um, like, um, food vouchers and all that, they turn up for that, but you know, any other things like...health and all that sort of thing, they won't turn up...' (P12, Older male Aboriginal community member, regional).

Exercise not a priority for Elders

Stakeholders' reflected that social activities were more important than the exercises. They felt that the exercise program would not have been successful if the social and community sense of belonging was not present. 'If it's not the exercises (that made Elders come), then why have they kept on coming? And my feeling is that it's a social outing for them during the week. And the exercise is an added benefit' (P8, non-Aboriginal health service manager, regional). Some Elders attended one or two sessions but did not join in the group. While some did not give reasons for non-attendance, Aboriginal health and research workers perceived that Elders were not used to undertaking PA through engagement in formal exercise classes. 'There is a plethora of reasons why exercise isn't a priority for our people, it's not a normal practice...' (P4, Aboriginal research worker, metropolitan).

3.2 | COVID-19 specific barriers and enablers to the program success

A major barrier for ongoing program sustainability was the COVID-19 pandemic in 2020, that caused the discontinuation of the weekly PA program for a period of approximately 6 months. After restrictions were lifted some Elders found it difficult to re-engage with the program, particularly those who had chronic health conditions, with concurrent depression. 'We saw the impact... (during COVID-19 lockdown) we saw the health conditions. We saw... them battling to

come back and to get back...' (P13, Aboriginal research worker, both). A family member interviewee stated that '...since we haven't been going to Ironbark, we haven't really been doing much exercise, which is unfortunate...her lower body part has become quite weak again because we haven't been doing the sit to stand...' (P3, Aboriginal community member, daughter of participant, metropolitan).

Social media enabled group relationships and support: However, weekly feedback from research workers during this period also indicated that even though the group closed for an extended time, the team and Elders found strength in the relationships that developed within the group using social media. 'Elders are always full of info and it's great that the Facebook page that one of the Elders has created... with everyone getting on board and sharing so much its lovely to see so many posts...' (Aboriginal research worker, weekly feedback form, metropolitan).

3.3 | Theme 4—Benefits from attending the program

- *Sub-theme*—Program impact on Elders as an enabler of program success

3.3.1 | Elders' improvements in health and well-being as inspiration

All stakeholder interviewees observed that Elders experienced both physical and psychosocial benefits from attending the program. Positive changes observed in some of the Elders, such as those who began walking to the program venue and home again, were a source of inspiration for the team members. Comments included '...great improvements in them being able to do more than what they have originally been doing...' (P11, Aboriginal health worker, regional) and '...I didn't think it would be this good, but the changes in some of these people it's been amazing.' (P10, Aboriginal health worker, regional).

Some health workers experienced personal mental health benefits, with one interviewee commenting that '...being a part of a program that makes such a difference to so many people's lives give me so much joy and I love making a small difference in this small group...' (P2, Aboriginal research worker, metropolitan).

Family also noticed positive changes and were keen to bring their family member to the group every week. 'I could see a big difference in mum being able to get around a lot easier because she was doing the exercises, like...getting into the car' (P3, Aboriginal family member of a participant, metropolitan). A non-Aboriginal stakeholder interviewee also commented on the purpose that the group appeared to promote in the community. 'No one wants to be at home doing nothing, ... people want to have a purpose and they want to be able to contribute to their community...' (P9, Non-Aboriginal health professional, regional).

3.3.2 | Social benefits

Community members noticed that occasions initiated outside the weekly program became a sustained major benefit for the groups as they continued to maintain the connections that they made with one another. 'And the thing is every time I see him now, cause I was at a funeral last week and all that, now that I've met him, me and him have good Yarns now...' (P14, Aboriginal community member, metropolitan). This extended towards staff in the metropolitan group gaining positive, ongoing connections with Elders.

'I do feel that as a group everyone has general concern about how everyone's life is going and as such, we have a really tight group that really have a great time on the whole and everyone gets results each and every week showing improvement...' (Aboriginal research worker weekly feedback form, metropolitan).

3.4 | Theme 5—Future planning for program sustainability

Stakeholder spontaneously made comments about how the program could continue, although all stakeholders understood that the program was funded for a limited period. These comments regarding the program's future were influenced by their views that the Ironbark PA program had led to significant benefits in their communities. Two sub-themes (*Expansion, Sustainability*) identified how changes could strengthen the program and what it could look like in the future.

- *Sub theme*—Program success could be an enabler for future expansion

3.4.1 | The Ironbark PA program provided an example of how to succeed

The program was viewed positively as being successful, despite known difficulties of engaging older Aboriginal people in such programs. One Aboriginal health worker reflected that '...I actually didn't think that there would be the numbers that are actually there. I thought it would be very less, um, obviously because of, situations and stuff, but, um...yes, I'm very surprised...' (P11, Aboriginal health worker, regional). A community member reflected that future PA programs needed to learn from the Ironbark PA program that ground rules (terms of references) are required to make it work 'You gotta start from right at the beginning...and you have to have it up on the wall...This is the rules and you gotta understand'. (P12, Older Aboriginal community member, regional).

- *Sub-theme*—Lack of program flexibility and options could be a barrier to expansion

3.4.2 | Elder specific programs

Stakeholders who were experienced in delivering health services suggested that more health programs for older Aboriginal people needed to emulate the Ironbark program by being co-designed with older Aboriginal people to better meet their needs. A health professional who assisted to manage the program commented that ‘... We don't necessarily have a lot of programs that look after our Elders... and is specific to our Elders' health...’ (P8, non-Aboriginal health service manager, regional).

3.4.3 | Male specific

There was awareness in both communities that more programs were needed for older Aboriginal men. A community member commented on the need for programs that targeted men, suggesting a positive link with sport could be used. ‘All our people, most of the time, they all played sports. When they get to that age, 35, 40 whatever...and then they work, they don't have anything in between then’ (P15, Aboriginal community member, both).

- *Sub-theme*—Lack of program resources could be a barrier to sustainability

The program did not continue beyond 2 years due to inability of existing services to provide sustainable program support when research funding ceased. Some Elders who were consistently participating in the program expressed their sadness when the research ended, with one Elder commenting ‘...our Ironbark PA came to an end, we don't know why it had to end, but it was disappointing’ (Aboriginal participant comment, researcher's diary).

A stakeholder expressed the view that funding to continue to operate was the main barrier to sustainability: ‘...it was a good program (Ironbark PA). But it gets back to funding. That's the biggest question, it's a good program...’ (P12, Older Aboriginal community member, regional).

4 | DISCUSSION

This study sought to understand stakeholder participants' experiences of the Ironbark PA program delivery on Noongar Boodja in WA. It provides insights into implementation factors, both barriers and enablers, observed when working and engaging older Aboriginal people in a PA program. Overall, stakeholders conveyed that the key enabler to the program being delivered successfully was that the team developed a culturally appropriate space. This was undertaken in a shared ways of working with Elders by placing importance on building strong relationships and creating a sense of belonging. Stakeholders reflected that the success of the program was evidenced by the positive benefits observed, such as social connections, for both the Elders and the communities. The program structure was an enabler to PA

engagement was because it used yarning circles, included flexible exercises and a limited group size. Elders' sustained attendance was viewed as evidence of the suitability of the program structure. Some stakeholders found the consistent attendance surprising, based on their past experiences of program failures in their communities. These reflections are supported by findings that Elders in the two communities who attended the program made significant holistic health improvements including improved functional ability, physical fitness and mental health.^{22,24} Limited studies have evaluated the design and impact of PA programs for older Indigenous peoples.^{20,37,38} Findings were consistent with themes identified in a recent systematic review²⁰ that synthesised evidence worldwide about barriers and enablers to PA programs with colonised Indigenous communities. This review found when delivering PA programs for older Indigenous people, cultural safety and security is a key enabler and colonisation is key barrier to success.²⁰

Taking a decolonising approach to research is a way of working that understand the impacts of history and uses Indigenous leadership to create successful programs.⁷ Other programs that have successfully engaged and worked with older Aboriginal people also describe the shared understanding of team members, together with the Aboriginal community, building a culturally safe space for the Elders.^{9,39,40} Aboriginal and non-Aboriginal team members worked together consistently engaging with the Elders which has also been described in other programs^{6,39} to make the PA program a success. Implications of these findings will help future researchers to understand the importance of knowing about Aboriginal methodologies that highlight the impacts of history and the trauma it caused older Aboriginal people and the sensitivities of knowing how to work with that knowledge. Building trusting team relationships in the Ironbark PA program ensured both Aboriginal and non-Aboriginal health and research workers took a decolonising approach that enabled the program to be delivered successfully.^{31,35}

There were barriers to delivering a PA program to the Elders in the two groups with the majority already living with chronic illness, which resulted in frequent medical appointments, hospitalisation, depression, and needing to move away from the PA program location with variations in health from week to week. Family commitments such as babysitting, lack of transport (in the metropolitan group) and relationships were also intermittent challenges. Programs need to have sufficient funding to offer flexible choice and options for Elders living with chronic diseases.^{5,9,22,37} For future programs, identified barriers would need to be addressed so that the program can be delivered more flexibly in a way that supports Elders who have frequent medical appointments and family obligations.

Listening to local community members and service providers perspectives, indicate that there are some similar perceptions worldwide of barriers and enablers that need resolving if older members of Indigenous communities are to be able to increase their regular participation in PA.^{7,20} More promotion was viewed as important and men were mentioned as needing to be engaged. Stakeholders suggested that men would need other male leaders to encourage attendance and other research has noted that men participated less than women

in a local PA program.⁴⁰ Our findings about barriers and enablers to successful program sustainability are like other studies that have recognised and highlighted common elements of success.^{2,9,41} However, Western health care services historically do not deliver appropriate services for Indigenous populations.^{5,13} Stakeholders commented that the groups were an appropriate size and should not be too large. It is essential to have culturally appropriate service delivery. Adopting 'ways of working' with older Aboriginal people, involves inclusivity, and respectful collaboration while building trust and strong relationships. Programs should provide for single or mixed gender groups and that will address the needs of local Elders, some of whom may have experienced trauma as a child from being forcibly removed from their families, and throughout their lives have been unable to access suitable healthcare supports when needed or experienced racism when they do seek healthcare.^{19,26,42,43}

5 | STRENGTHS AND LIMITATIONS

A strength of this study was that the lead researcher was a senior Aboriginal woman of Noongar descent, who was able to explore feedback from Aboriginal stakeholders in a respectful and culturally appropriate manner. Indigenous theory-principles highlight the importance of research being highly contextual and experiential,³¹ hence her relationships within and her understanding about the community formed a strength of the research. The researcher had family members who were part of the 'Stolen Generations,' which was similar to many Elders' experiences. However, each Elder had different personal experiences of trauma and loss because they grew up in different places and institutions throughout WA and outside of the South West Region. The researcher's personal experience could be a source of bias if she allowed her own views to influence the interviews or the analysis, rather than those of the stakeholders. The researcher had to set aside her own pre-conceptions and ensure that the voices of stakeholders came through in the analysis. This setting aside process, known as bracketing, was done during and after interviews and through researcher journal reflections but was also a process of continually taking accountability for the research and ensuring the final results truly represented the voices of community.^{31,44,45} Stakeholders who were interviewed had developed relationships with the Elders and the research team over the project life of some 3 years and may have felt hesitant to offer a negative perspective about the program. However, the researcher undertook interviews in a confidential manner, asking open ended questions to minimise this potential bias and triangulated the interview data with program data that had been recorded on a weekly basis by Aboriginal health workers. This aimed to improve the credibility of the results.³⁴ Some of the interviewees were younger Aboriginal people and their life experiences were different to those of the Elders who participated in the Ironbark PA program. Their views about the impact of PA on the Elders were insightful, because they were observing the Elders over time, in their communities.

Generalisations cannot be made about the two participating groups of Elders on Noongar Boodja as they do not represent all the

vast Noongar cultural identities living on Noongar Boodja, that have existed for centuries. While the barriers and enablers may not be directly applied to other programs because 'one size does not fit all,'⁴³ our learnings can inform healthcare providers worldwide about understanding the importance of cultural safety, valuing community views and working closely with older Indigenous people when delivering a PA program. In particular, our learnings about what made the Ironbark PA program successful in Noongar Boodja could be used as a basis for discussion between health care practitioners and other communities who are seeking to deliver PA programs for older Indigenous people. Acknowledgement of the Elders and understanding and respecting the diversity of culture in the two groups was an advantage towards building strong relationships. Limitations of the study included the disruption caused by the COVID-19 pandemic which meant we could not interview everyone, including some stakeholders who ceased involvement with the program. Changes in teams over time meant that some workers were no longer available to give feedback and we were not able to interview senior staff at the regional partner Aboriginal Community Controlled Health Service.

6 | CONCLUSION

This study provided insight into the barriers and enablers to delivering a successful PA program for older Aboriginal people living on Noongar Boodja. Stakeholders' reflected that they felt they were able to build a culturally appropriate PA program, making it a place of shared listening, learning and knowing. Local community members and Aboriginal and non-Aboriginal workers experienced the Ironbark program as building strong relationships and creating a sense of belonging for Elders, within an enabling program structure. They observed that the program had benefits for both the Elders and their communities. Feedback suggested that continuing PA programs were needed within the community and that further promotion of the program, particularly for older Aboriginal men, was required. Sufficient resources are required to expand the delivery of culturally appropriate PA programs for older Aboriginal and Torres Strait Islander people.

ACKNOWLEDGEMENTS

The authors would like to thank all community members and organisations who participated in the study. The authors thank all the Elders who participated in the study. Authors acknowledge that this research was conducted on Noongar Country. We respectfully acknowledge the Noongar Nations as the Traditional Owners of Country in the South West of Western Australia (WA), where this research has been conducted. We recognise Indigenous peoples of all Nations' continuing connection to lands, waters, and communities. We pay our respects to all Indigenous Elders past and present. Authors respectfully acknowledge all the Aboriginal and Torres Strait Islander communities and Nations who contributed knowledge to this research. Terms used by the authors: When describing the setting and interviews authors have chosen the words Noongar, acknowledging that there are many different Nations of Noongar people in the South West of WA. The term Aboriginal is used when discussing participants

who included Aboriginal people from more than one Nation. When discussing studies from other countries the authors have respectfully used the authors' descriptions of the participants and their Nations. When discussing Australian studies in general the term Aboriginal and Torres Strait Islanders is used. When discussing research methodology in general, the term Indigenous is used. Open access publishing facilitated by The University of Western Australia, as part of the Wiley - The University of Western Australia agreement via the Council of Australian University Librarians.

FUNDING INFORMATION

This research was supported by a grant from Healthway, Western Australia; (grant no: 31930). Margaret Gidgup is a doctoral candidate supported by the grant. Professor Anne-Marie Hill is supported by a National Health and Medical Research Council of Australia Investigator Grant (EL2 award) and the Royal Perth Hospital Research Foundation.

CONFLICT OF INTEREST STATEMENT

The authors have no conflicts to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The WA Aboriginal health ethics committee (HE 842) and Curtin University ethics committee (HE number 2018-0425) approved the study. Participants provided written, informed consent to participate.

ORCID

Margaret J. R. Gidgup  <https://orcid.org/0000-0002-3921-5354>

Jacqueline Francis-Coad  <https://orcid.org/0000-0002-9892-103X>

Keith Hill  <https://orcid.org/0000-0002-2191-0308>

Josephine Umbella  <https://orcid.org/0000-0001-5636-4565>

Julieann Coombes  <https://orcid.org/0000-0001-7212-8693>

Rebecca Ivers  <https://orcid.org/0000-0003-3448-662X>

Anne-Marie Hill  <https://orcid.org/0000-0003-1411-6752>

REFERENCES

- Belza B, Walwick J, Shiu-Thornton S, Schwartz S, Taylor M, LoGerfo J. Older adult perspectives on physical activity and exercise: voices from multiple cultures. *Prev Chronic Dis*. 2004;1(4):A09.
- Gray C, Macniven R, Thomson N. Review of physical activity among Indigenous people. Perth. *Austr Indig Health Bull*. 2013;13(3):1-9.
- Mills K, Gatton ML, Mahoney R, Nelson A. 'Work it out': evaluation of a chronic condition self-management program for urban Aboriginal and Torres Strait Islander people, with or at risk of cardiovascular disease. *BMC Health Serv Res*. 2017;17(1):680.
- Taylor D. Physical activity is medicine for older adults. *Postgrad Med J*. 2014;90:26-32.
- Barnabe C. Towards attainment of Indigenous health through empowerment: resetting health systems, services and provider approaches. *BMJ Glob Health*. 2021;6(2):1-5.
- Laverty M, McDermott DR, Calma T. Embedding cultural safety in Australia's main health care standards. *Med J Aust*. 2017;20(1):15-6.
- Braun KL, Browne CV, Ka'opua LS, Kim BJ, Mokuau N. Research on Indigenous elders: from positivistic to decolonizing methodologies. *Gerontologist*. 2014;54(1):117-26.
- Sherwood J, Edwards T. Decolonisation: a critical step for improving Aboriginal health. *Contemp Nurse*. 2006;22(2):178-90.
- Dimer L, Jones J, Dowling T, Cheetham C, Maiorana A, Smith J. Heart health: new ways to deliver cardiac rehabilitation. *Aust Nurs J*. 2010;18(6):41.
- Warbrick I, Wilson D, Boulton A. Provider, father, and bro—sedentary Māori men and their thoughts on physical activity. *Int J Equity Health*. 2016;15:22.
- Nolan-Isles D, Macniven R, Hunter K, Gwynn J, Lincoln M, Moir R, et al. Enablers and barriers to accessing healthcare services for Aboriginal people in New South Wales, Australia. *Int J Environ Res Public Health*. 2021;18(6):3014.
- Gatwiri K, Rotumah D, Rix L. BlackLivesMatter in healthcare: racism and implications for health inequity among Aboriginal and Torres Strait Islander peoples in Australia. *Int J Environ Res Public Health*. 2021;18:4399.
- Panaretto KS, Wenitong M, Button S, Ring IT. Aboriginal community controlled health services: leading the way in primary care. *Med J Aust*. 2014;200(11):649-52.
- Peiris D, Brown A, Cass A. Addressing inequities in access to quality health care for Indigenous people. *CMAJ*. 2008;179(10):985-6.
- Zubrick SR, Shepherd CCJ, Dudgeon P, Gee G, Paradies Y, Scrine C, et al. Social determinants of social and emotional wellbeing. In: Dudgeon P, Milroy H, Walker R, editors. *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. 2nd ed. Barton ACT: Robert Garran offices; 2014. p. 93-113.
- King M, Smith A, Gracey M. Indigenous health part 2: the underlying causes of the health gap. *Lancet*. 2009;374(9683):76-85.
- Australian Institute of Health and Welfare. *Australia's Health 2014*. Cat no AUS 178. 2018 [cited 2022 July 21]. Available from: <https://www.aihw.gov.au/getmedia/d2946c3e-9b94-413c-898c-aa5219903b8c/16507.pdf.aspx?inline=true>
- Dudgeon P, Watson M, Holland C. Trauma in the Aboriginal and Torres Strait Islander population. *Austr Clin Psychol*. 2017;3(1):19-30.
- Australian Human Rights Commission. *Bringing them home report of the national inquiry into the separation of Aboriginal and Torres Strait Islander children from their families 1997*. 1997. [cited 2022 Jul 24]. Available from: <https://humanrights.gov.au/our-work/bringing-them-home-report-1997>
- Gidgup MJR, Kickett M, Weselman T, Hill K, Coombes J, Ivers R, et al. Barriers and enablers to older Indigenous people engaging in physical activity. A qualitative systematic review. *J Aging Phys Act*. 2022;30(2):340-52.
- Lukaszyk C, Coombes J, Sherrington C, Tiedemann A, Keay L, Mackean T, et al. The Ironbark program: implementation and impact of a community-based fall prevention pilot program for older Aboriginal and Torres Strait Islander people. *Health Promot J Austr*. 2018;29(2):189-98.
- Gidgup MJR, Kickett M, Jacques A, Weselman T, Hill KD, Coombes J, et al. Translating and evaluating a physical activity program for Aboriginal Elders on Noongar Boodja (country)—a longitudinal study. *Front Public Health*. 2022;10:904158.
- Bessarab D, Ng'andu B. Yarning about yarning as a legitimate method in indigenous research. *Int J Crit Indig Stud*. 2010;3(1):37-50.
- Gidgup MJR, Kickett M, Hill KD, Francis-Coad J, Weselman T, Coombes J, et al. Connecting and reconnecting to a community, with a sense of belonging—exploring Aboriginal elders' perspectives of

- engaging in a physical activity program. *Health Promot J Austr.* 2022; 33 Suppl 1(10):138–49.
25. Greenhalgh T, Papoutsi C. Spreading and scaling up innovation and improvement. *BMJ.* 2019;365:l2068.
 26. Gee G, Dudgeon P, Schultz C, Hart A, Kelly K. Aboriginal and Torres Strait Islander social and emotional wellbeing. In: In Dudgeon PM, Walker H, editors. *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice.* 2nd ed. Barton ACT: Department of the prime minister and cabinet; 2014. p. 55–68.
 27. Bauer MS, Kirchner J. Implementation science: what is it and why should I care? *Psychiatry Res.* 2020;283:112376.
 28. Noongar Boodjar Language Cultural Aboriginal Corporation. Keeping Noongar language alive. 2022 [cited 2022 Jul 18]. Available from: https://noongarBoodjar.com.au/?doing_wp_cron=1659588970.1916749477386474609375
 29. Australian Institute of Aboriginal and Torres Strait Islander Studies. Living languages. 2022 [cited 2022 Jul 6]. Available from: <https://aiatsis.gov.au/explore/living-languages>.
 30. National Health and Medical Research Council. Ethical conduct in research with Aboriginal and Torres Strait Islander peoples and communities. guidelines for researchers and stakeholders. 2018. [cited 2022 July 4]. Available from: <https://www.nhmrc.gov.au/aboutus/resources/ethical-conduct-research-aboriginal-and-torres-strait-islander-peoples-and-communities>
 31. Kovach M. Doing Indigenous methodologies: a letter to a research class. In: Denzil NK, Lincoln Y, editors. *The SAGE handbook of qualitative research.* 5th ed. Singapore: SAGE Publications; 2018. p. 214–60.
 32. Smith LT. *Decolonizing methodologies. Research and Indigenous peoples.* 3rd ed. Manitoba: Zed Books Ltd.; 2021.
 33. Wilson S. *Research is ceremony, indigenous research methods.* Nova Scotia: Fernwood Publishing; 2008.
 34. Liamputtong P. *Research methods in health: foundations for evidence-based practice.* South Melbourne: Oxford University Press; 2013.
 35. Keikelame MJ, Swartz L. *Decolonising research methodologies: lessons from a qualitative research project,* Cape Town, South Africa. *Glob Health Action.* 2019;12(1):1561175.
 36. Braun V, Clarke V. *Successful qualitative research; a practical guide for beginners.* London: Sage Publications; 2013.
 37. Coombes J, Lukaszyc C, Sherrington C, Keay L, Tiedemann A, Moore R, et al. First nation elders' perspectives on healthy ageing in NSW, Australia. *Aust N Z J Public Health.* 2018;42(4):361–4.
 38. Macniven R, Esgin T. Exercise motivators, barriers, habits and environment at an Indigenous community facility. *Manag Sport Leis.* 2020;27:1–12.
 39. Esgin T, Hersh D, Rowley K, Macniven R, Crouch A, Halaki M, et al. The facilitators and barriers to exercise in the Noongar Aboriginal population in Perth, Australia. *Health Promot Int.* 2022;28:1–10.
 40. Macniven R, Plater S, Canuto K, Dickson M, Gwynn J, Bauman A, et al. The 'ripple effect': health and community perceptions of the Indigenous marathon program on Thursday Island in the Torres Strait, Australia. *Health Promot J Austr.* 2018;29(3):46–57.
 41. Durey A, McEvoy S, Swift-Otero V, Taylor K, Katzenellenbogen J, Bessarab D. Improving healthcare for Aboriginal Australians through effective engagement between community and health services. *BMC Health Serv Res.* 2016;16(1):224.
 42. Reid P, Cormack D, Paine SJ. Colonial histories, racism and health—the experience of Māori and Indigenous peoples. *Public Health.* 2019; 172:119–24.
 43. Brooks-Cleator LA, Giles AR. Culturally relevant physical activity through elders in motion: physical activity programming for older Aboriginal adults in the Northwest Territories, Canada. *J Cross Cult Gerontol.* 2016;31(4):449–70.
 44. Tufford L, Newman P. Bracketing in qualitative research. *Qual Soc Work.* 2012;11(1):80–96.
 45. Ryder C, Mackean T, Coombs J, Williams H, Hunter K, Holland AJA, et al. Indigenous research methodology—weaving a research interface. *Int J Soc Res Methodol.* 2020;23(3):255–67.

How to cite this article: Gidgup MJR, Kickett M, Francis-Coad J, Hill K, Umbella J, Coombes J, et al. 'Nih Waangkiny Kaadatjiny': 'Listening, learning and knowing': Stakeholders' perspectives about barriers and enablers to delivering a successful physical activity program for older Aboriginal people. *Health Promot J Austral.* 2024;35(2): 444–56. <https://doi.org/10.1002/hpja.774>