

‘We walked side by side through the whole thing’: A mixed-methods study of key elements of community-based participatory research partnerships between rural Aboriginal communities and researchers

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Abstract

Objectives: To advance the rural practice in working with Aboriginal communities by (a) identifying the extent of community partners' participation in and (b) operationalising the key elements of three community-based participatory research partnerships between university-based researchers and Australian rural Aboriginal communities.

Design: A mixed-methods study. Quantitative survey and qualitative one-on-one interviews with local project implementation committee members and group interviews with other community partners and project documentation.

Setting: Three rural Aboriginal communities in New South Wales.

Participants: Thirty-seven community partners in three community-based participatory research partnerships of which 22 were members of local project implementation committees and 15 were other community partners who implemented activities.

Intervention: Community-based participatory research partnerships to develop, implement and evaluate community-based responses to alcohol-related harms.

Main outcomes measures: Community partners' extent of and experiences with participation in the community-based participatory research partnership and their involvement in the development and implementation processes.

Results: Community partners' participation varied between communities and between project phases within communities. Contributing to the community-based participatory research partnerships were four key elements of the participatory process: unique expertise of researchers and community-based partners, openness to learn from each other, trust and community leadership.

Conclusion: To advance the research practice in rural Aboriginal communities, equitable partnerships between Aboriginal community and research partners are

encouraged to embrace the unique expertise of the partners, encourage co-learning and implement community leadership to build trust.

KEYWORDS

Aboriginal Australians, alcohol, community-based participatory research, mixed methods, partnerships, rural

1 | INTRODUCTION

Over the past two-and-a-half decades, community-based participatory research (CBPR) has grown to be one of the preferred research approaches when addressing health inequalities, including in rural and Aboriginal communities.¹⁻⁴ CBPR is a collaborative approach that facilitates equitable partnerships between researchers and communities with the primary aim to develop actions to address the communities' priority issues.⁵⁻⁷ CBPR empowers rural communities to address locally identified factors that impact on their health and well-being and use existing strengths to implement solutions.^{5,8-10} It strengthens community capacity to make positive changes and improves program sustainability, both of which enhance the likelihood of achieving positive health outcomes.^{5,8,11}

While much has been written about CBPR, there remains uncertainty on how the participatory processes are implemented in practice at the grassroots level in rural communities as a clear description of these processes is often lacking in the published literature.^{1,12-14} For example, a 2015 literature review of community participation in community development projects with Aboriginal and Torres Strait Islander people in Australia identified that only half of the included publications clearly described the participatory processes that were used in the study and they were described from researchers' perspectives.¹ Documenting the participatory processes used and articulating the key elements of successful participation based on community members' perspectives can advance rural practice by providing practical guidance for future CBPR partnerships with rural and Aboriginal communities.¹⁴⁻¹⁷

This study articulates key elements of three CBPR partnerships between researchers and rural Aboriginal communities and provides practical examples of how these elements were operationalised. The specific aims of this study were to: (a) report community-based partners' perceptions of the extent of their preferred and actual participation in the CBPR partnership; and (b) describe key elements and their practical operationalisations of the participatory processes.

2 | METHODS

This was a mixed-methods study investigating the participatory processes of three CBPR partnerships between

What is already known on this subject:

- Self-determination over research is an essential part in rural Aboriginal health research. Aboriginal communities should be involved in every element of the research process.
- Community-based participatory research is an approach that promotes community ownership over the research by promoting equitable partnerships between Aboriginal communities and university-based researchers.

What this study adds:

- The paper provides an insight into rural Aboriginal community partners' experiences in a community-based participating research partnership, including their preferences for more participation in needs assessment and program development phases, but less participation in the evaluation phase of a research project.
- The key elements of successful community-based participatory research partnerships with rural Aboriginal community identified were unique expertise of researchers and community-based partners, openness to learn from each other, trust and community leadership.
- The paper provides operationalisation of these key elements.

university-based researchers and three rural Aboriginal communities in New South Wales (NSW).

2.1 | CBPR partnerships

The CBPR project was built on an existing research partnership between two chief investigators on the project and the Aboriginal Community Controlled Health Organisation (ACCHO) that services all three communities.¹⁸ The project was initiated in response to a call for expressions of interest for projects evaluating the approaches to reduce injuries

and improve safety in Aboriginal communities by the NSW Department of Health in 2011.¹⁹ Consultations by one of the investigators, using group discussions and one-on-one conversations with community members, service providers and representatives of the ACCHO, identified that reducing alcohol-related injuries and violence was a priority among Aboriginal Australians in the three communities. Community members, the ACCHO and other service providers supported the grant application, which was successful, and the project commenced in January 2014 and finished in December 2016.

In the CBPR project, Aboriginal project coordinators were employed through a competitive recruitment process that included a joint selection panel with researchers and community-based partners. Project-specific implementation committees (ICs), chaired by a local Aboriginal leader, were established in each community. IC members were Aboriginal community members and Aboriginal and non-Aboriginal service providers who were identified by the ACCHO and formally invited by the researchers. The role of the ICs, as specified in a partnership agreement formalised at the beginning of the project, was to: (a) select the most appropriate activities; (b) oversee the implementation of the activities with a focus on optimising their fidelity and sustainability; (c) problem-solve challenges as they arise; (d) ensure that Aboriginal ethical values (spirit and integrity, cultural continuity, responsibility, reciprocity, respect and equity^{20,21}) were respected and incorporated throughout the CBPR project; and (e) contribute to research papers and reports. The ICs met monthly throughout the project's 3-year duration. One

researcher (MS) attended all meetings, and another (AS) attended 25% of the meetings, to allow for more community leadership during meetings.

The ICs, researchers and the project coordinators collaboratively developed a community-based approach with three core components: (a) *improved service delivery* for high-risk families and individuals; (b) *recreational and cultural activities* to alleviate boredom and reconnect community members with their culture and community; and (c) *improved empowerment of community members* to more effectively cope with high-risk situations (eg conflict, periods of unemployment, risk periods for alcohol consumptions). These core components were the same for all three communities, and each community identified and implemented their own specific activities that operationalised these core components based on their unique circumstances (Table 1). Activities were proposed by IC members, researchers, project coordinators or other community members, using a proposal form detailing the activity's aims, target group, time, location and costs. Each IC received \$50 000 from the research funding to implement their selected activities.

2.2 | Participants, data collection and analyses

Partners with more involvement in the project (operationalised as having an active role in organising activities and attending at least 25% of meetings) were purposively sampled

Core components ^a	Community-specific activities		
	Community 1	Community 2	Community 3
Improved service engagement	Case coordination Skill training Engagement officers	Case coordination Engagement officers	Engagement officers
Community activities	Midnight basketball Cultural activities Billiards competition Skate slam Cultural sports day BBQ in the park Family bingo event Movie night Fitness Beyond Barriers At-risk boys group At-risk girls group	Touch football Movie night Cultural activities Boxing classes School holidays program Music night Youth centre jam sessions Indoor basketball Beauty classes	Movie night Country music Community meeting Cultural activities Night basketball Hip-hop dancing Indoor soccer Talent quest Outdoor movie Touch football day
Improved empowerment	Family well-being	Family well-being	Family well-being Self-esteem program

TABLE 1 The suite of activities implemented in each community

^aCore components were used to provide standardisation of the program across the three communities to facilitate comparison in the evaluation; however, within each core component each community could implement community-specific activities that were in line with their community's priorities, resources and strengths.

to participate in one-on-one (IC members) and group (other partners) interviews: 22 IC members (Figure 1) and 15 other community-based partners (Figure 2). Interviews took place 2-3 months before the end of the project funding period.

The 22 IC members completed a self-report participation survey, which measured their preferred and actual levels of participation across four project phases: needs assessment, development, implementation and evaluation. The 7-point participation scale (Box 1) was based on an adaptation of Pretty's typology,^{22,23} which was further adapted for Aboriginal communities by the authors¹ and approved by the ICs. The self-report surveys were entered into an Excel spreadsheet, and scores were averaged for each community and presented in a spider diagram.¹⁰

Following completion of the survey, phone interviews were conducted with 22 IC members by an independent non-Aboriginal interviewer to avoid potential bias in responses due to the existing relationships between the researchers and IC members. Interviews covered IC member's roles in the project, their perceived participation (prompted by their answers on the self-report survey), their perception of the project's impact on their

community, the project's successes and the aspects of the project that could have been improved. On average, interviews lasted 35 minutes.

One group interview was conducted with other community-based partners in each community by MS. The group interviews followed a topic guide with questions that covered barriers and facilitators to the implementation of activities, perceived effectiveness and community impact of activities in line with project aims, and sustainability of the activities.²⁴ Group interviews lasted on average 56 minutes.

The project documents collected throughout the project comprised minutes of IC and other community meetings (n = 53), research protocol documents (n = 3) and activity proposal forms (n = 18). Minutes of IC meetings and the research protocol documents were written by the researchers or Aboriginal project coordinators and approved by the ICs.

Interviews were audio-recorded and transcribed verbatim. All identifiable information was deleted prior to transcription and analysis. Project documents and all interview transcripts were collated and thematically analysed using

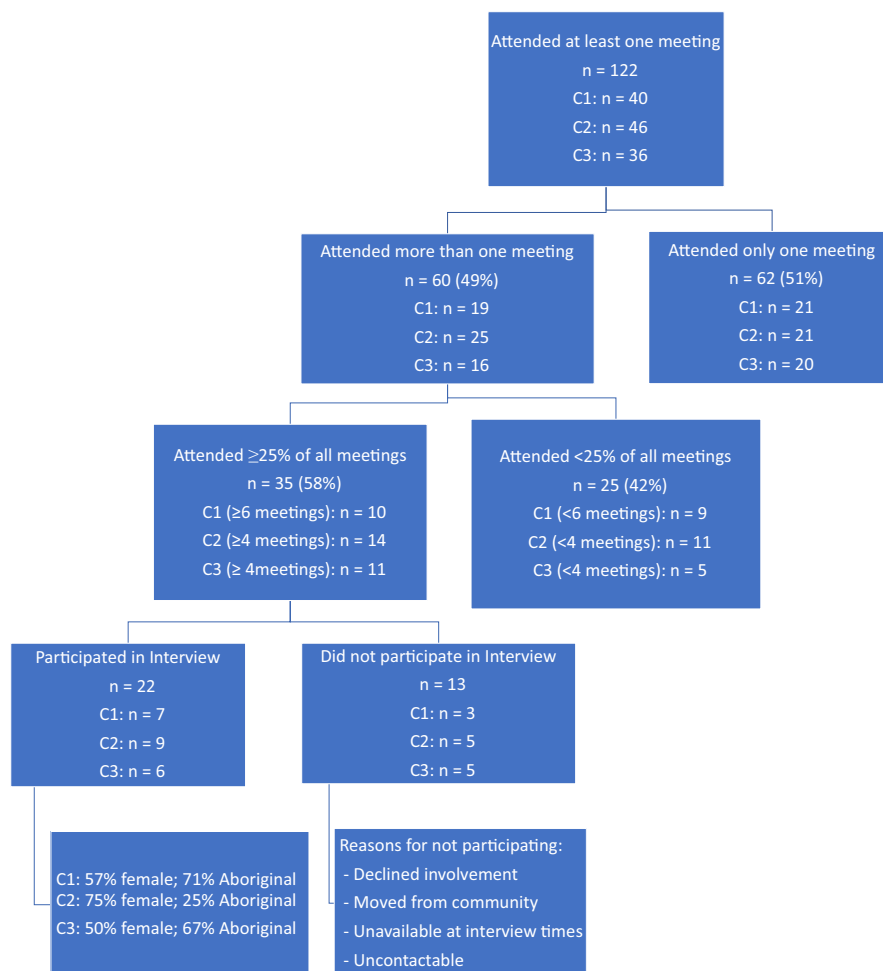


FIGURE 1 Implementation committee member meeting attendance and interviews

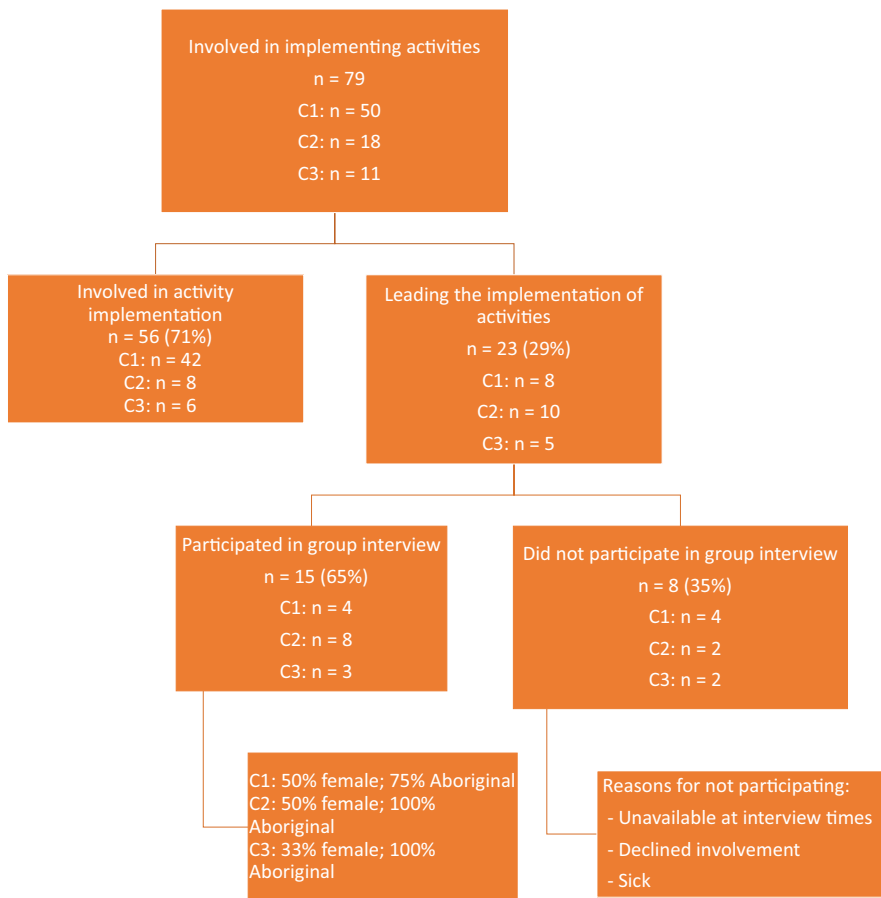


FIGURE 2 Community-based partners involved in implementing and organising activities, and those involved in the group interview

BOX 1 1—7-point participation scale

1. No participation.
2. Passive participation (the community was only informed about the project).
3. Participation by information (information was collected from the community without their participation and without providing feedback).
4. Participation by consultation (information was collected from the community, feedback was given, and further inclusion of the community was sought, based on the researchers' aims and terms).
5. Functional participation (equal collaboration, but based on researchers' terms).
6. Interactive participation (collaboration between researchers and community, based on mutually defined terms).
7. Self-mobilisation (researchers work with the community by invitation from the community, based on community's terms).

on research literature^{1,23,27,28} and five bottom-up codes identified during initial coding (Table 2). MS familiarised herself with the data by reading all transcripts prior to coding the data using the coding framework. MS coded all interviews and documents using this framework, and AM, who had no previous involvement in the project, coded one randomly selected IC member interview from each community (n = 3) as a quality control check. There was a fair inter-rater agreement ($\kappa = 0.51$). Codes were summarised into themes, forming the key elements. Resulting themes were cross-checked and discussed with the ICs during the final meetings in each community.

The Aboriginal Health and Medical Research Council Ethics Committee (No: 987/13) and the NSW Population and Health Services Research Ethics Committee (No: 2014/02/516) approved this study. All participants provided signed informed consent.

2.3 | Ethics approval

The NSW Aboriginal Health & Medical Research Council's Ethics Committee (No: 987/13) and the NSW Population and Health Services Research Ethics Committee (No: 2014/02/516) approved this study.

NVivo 11.^{25,26} A coding framework based on the CBPR literature was created and comprised nine a priori codes based

TABLE 2 Coding framework

Code	Subcode(s)
A priori coded	
i. Project phases	Needs assessment Program development Implementation Evaluation
ii. IC membership	Membership recruitment and retention, Individual and organisational diversity of Members
iii. IC roles	Specific role within IC Ability to fulfil role
iv. Benefits and challenges of participating in the IC	On individual, organisational and project levels
v. Decision-making and power-sharing processes and leadership	
vi. Satisfaction and expectations	
vii. Aboriginal partnership model	The levels of participation Meeting of needs Collaboration (communication, mutual goals, involvement of Aboriginal and non-Aboriginal partners and co-learning) respect (for Aboriginal culture and each other)
viii. Impact of the project	On community, individual and organisational levels
ix. Sustainability	Of partnership, of implemented activities and requirements for sustainability
Bottom-up codes	
x. Differences between the communities	
xi. General comments about the project as whole	
xii. Researchers' activities	
xiii. Skills of the project coordinators	
xiv. Timing of processes	

Abbreviation: IC, implementation committee.

3 | RESULTS

3.1 | Perceptions on the extent of community participation

The three rural Aboriginal communities reported equitable partnerships with researchers across all phases of the project, as illustrated by this IC member's comment: 'We walked side by side through the whole thing' [IC member 2]. Figure 3 shows each communities' preferred and actual levels of participation. Community 1's preferred and actual levels of participation were similar during the needs assessment and implementation phases (level 5—functional participation). In the development phase, they showed a preference for interactive participation (level 6) but perceived there to be functional participation (level 5). Conversely, the community would have preferred functional participation (level 5) during the evaluation phase, but perceived there to be interactive participation (level 6). Community 2's actual participation was lower than their preferred participation across all phases, especially in the needs assessment phase where there was a preference for interactive

participation (level 6) compared with their perceived level of participation (level 4—participation by consultation). In community 3, preferred participation rates (level 4—participation by consultation) were lower than actual participation rates (level 5—functional participation) in each phase.

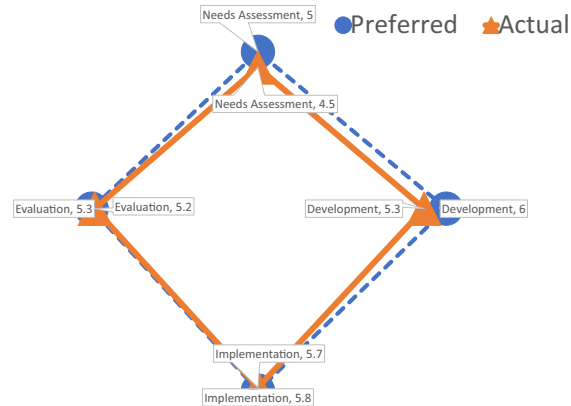
3.2 | Key elements of participatory processes

Table 3 lists the four key elements along with practical examples of how they were operationalised within the three CBPR partnerships.

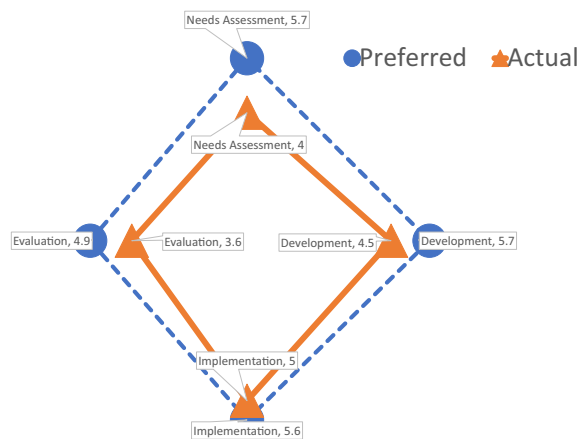
3.2.1 | Complementary expertise of researchers and community-based partners

Implementation committee members, other community-based partners and the researchers contributed unique expertise to the project, which was used to optimise the project

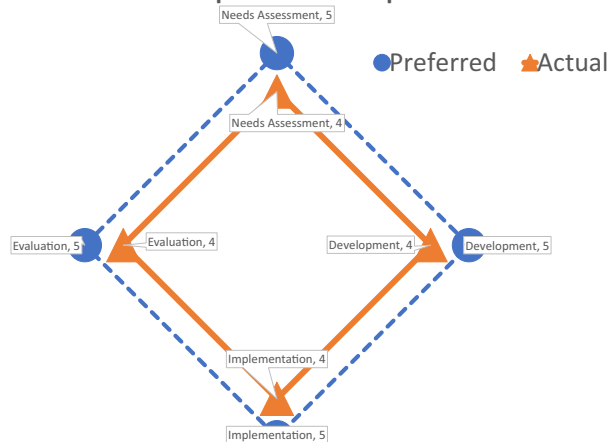
CBPR partnership 1



CBPR partnership 2



CBPR partnership 3



Levels of participation (see Box 1 for detailed descriptions)

- 1 = No participation
- 2 = Passive participation
- 3 = Participation by information
- 4 = Participation by consultation
- 5 = Functional participation
- 6 = Interactive participation
- 7 = Self-mobilisation

(Pretty 1995)

FIGURE 3 Preferred and actual levels of participation and the sustainability of the community-based participatory research project in the three communities

and provide benefits to the communities (eg through collection and access of localised data on community safety, identification and delivery of evidence-based interventions). Researchers brought in expertise about data collection, analysis and evidence-based programs:

That first section was more a lot of the work the university did ... collecting the data from

police, hospitals. You know, like it was a lot of ... real solid statistical data-

IC member 12

The evaluation we see as being really the realm of the New South Wales uni and [the project coordinator], so you know,

conducting the surveys, compiling the information and then disseminating that info and then it would be [...] brought to the table at the implementation committee meetings just to show us some current updates at the time -
IC member 11

[Midnight Basketball] was a suggestion that came from the researchers when the Implementation Committee were talking about that the kids needed to have some kind of activities. So, it was really good that they had the knowledge of this particular program -
IC member 17

Implementation committee and other community members contributed their knowledge regarding local issues and strengths and programs that would work well in their community:

When we first started off sort of trying to identify the issues, that was easy enough because we were all – we're a group of people with a lot of skills and sort of being out in the community a lot-
IC member 3

Us knowing the community and what the issues and the needs were –
IC member 2

3.2.2 | Openness to learning

Openness to learning from community and research partners was essential to successfully integrate the unique expertise of everyone to benefit the project. This openness was present among the research partners towards community partners:

You could see that they were very open to learn what the local issues and what people's thoughts were about the local issues-
IC member 20

This was also present among the community partners towards each other and the research partners:

[...]us also being open to what the researchers thought on that ... I just think that, that's the best way to approach things, and like I said, you learning from one another.-
IC member 2

It was just a matter of tapping into everyone's knowledge and skills of what was going on in the community, where the issues were, and whether it was youth or whether it was alcohol with the elders -

IC member 3

Open and transparent communication and regular contact (eg weekly phone calls and monthly meetings) between the research and the community partners was identified as a prerequisite to learn from each other:

The communication was excellent, and it was always, I guess, open and transparent, so that was, it was really positive -

IC member 4

3.2.3 | Trust

Interviewees commented that there was less-than-optimal involvement of the broader Aboriginal community in the early phases of the project because of initial mistrust towards research partners from some community members, based on numerous community consultations in past projects, without resulting in tangible benefits to the community:

The community has been consulted and consulted over the years and time and time again, and sometimes they just go ..., we've already told people this stuff ... what are we doing this stuff for? -
IC member 6

The employment of local project coordinators and implementation of activities appeared to improve trust within the community, strengthening overall community engagement, because community members could see that the proposed ideas were translated into activities and benefits.

Things happening has been the catalyst for better community engagement-
IC member 6

It's been that shift from, you know, talking about stuff to actually things happening, and people seeing the value in what's was going on -
Group interview 2

3.2.4 | Local community leadership

Local community leadership was achieved by sharing decision-making with the ICs:

TABLE 3 Key elements of participatory processes in community-based participatory research, recommendations and practical examples for implementation

Key elements	Learned lessons/Recommendations	Practical examples for operationalising key elements
Complementary expertise	Embracing and combining the unique expertise of community and research partners is important for successful participatory processes	• Research partners analysing police and hospital data and presenting to community, community partners providing input based on local knowledge • Community partners proposing activities, research partners identifying evidence base for proposed activities. Research partners proposing evidence-based programs, community partners identifying whether they will work in their community
Openness to learn	Research partners have to show openness to communities' knowledge and vice versa. Provide a platform that promotes learning by researchers and community partners sharing their expertise and integrate into new knowledge for action	• Transparent, open and regular communication, for example through the establishment of project ICs in each community that held monthly meetings • Weekly telephone calls with local workers
Trust	Spend time and funding on implementing approaches that builds trust between the research and community partners and provide direct and concrete benefits to the participating communities	• Regular contact through weekly phone calls, fortnightly teleconferences and monthly meetings • Employing local community members on the project • Implementing community-based activities and • Presenting data back to the community
Local community leadership	Processes should be put in place to transform a researcher-initiated project into a community-led project and empower the community by sharing financial decision-making with local project committees and employing local community partners	• Local project ICs had decision-making power in the project, such as deciding which community-based activities to fund • Local project coordinators employed full-time to manage the day-to-day activities of the project in their local communities

Abbreviation: IC, implementation committee.

[The researchers] really handed the reins over to the Implementation Committee ... the decisions would be made at that meeting -

IC member 11

Employing full-time Aboriginal project coordinators and casual community-based research assistants was an essential element in the participatory processes.

It's very important to have a community member, because you can't have an out-of-towner come in to a community and tell them how you're going to organise or run things without notifying the community -

Group interview 1

The day-to-day management of the project by the local coordinators allowed the community to have direct governance over the project and strengthen research capacity in the community. Being in the community facilitated the data collection by attending and recruiting from community activities and awareness of the whereabouts of community members for follow-up. The coordinators and community research assistants had strong connections to their community enabling trust among participants to complete surveys with them,

rather than with non-Aboriginal researchers. The project coordinator ensured that the project was community-led, activities were implemented, and the community was engaged in the project:

Since [project coordinator has] come on board, there's been lots of involvement from the community, through all the different activities. And now people are engaging with these things-

IC member 8

But once we did get [the project coordinator] employed, we started to make some really good ground -

Group interview 1

4 | DISCUSSION

This mixed-methods study identified that community partners in three CBPR partnerships perceived their level of participation to be moderate to high. To the authors' knowledge, this was one of the first studies to also measure the community partners' preferred level of participation and identified discrepancies between the preferred participation and actual

participation. The preferred participation of community partners was between functional participation and interactive participation, identifying a lower preference for participation in certain project phases, based on available skills, particularly evaluation. The actual reported participation of community-based partners ranged from participation by information to interactive participation. Reflecting the unique characteristics of each community, participation levels varied between communities and across project phases within the communities, as also identified in previous research.^{1,7,13,23,29,30}

This study identified complementary expertise, openness to learning, trust and local leadership as key elements for the participatory processes. Complementary expertise of research and community partners is important for equitable CBPR partnerships in rural communities because they typically address complex, multifaceted issues.^{7,27,30,31} The CBPR partnerships in this study addressed alcohol-related harms, requiring expertise related to health, crime, program implementation and evaluation, social and youth work, education and employment. Identifying and using the expertise that each partner brings to the project were beneficial to establish an equitable partnership. The CBPR partnerships in this study equally respected the expertise of community and research partners, rather than prioritising research expertise; for example, community partners' expertise about program implementation and research partners' expertise about evaluation were equally respected. This study provided practical examples of what this core value of CBPR identified by Israel et al³² can look like and how partners will be involved in different ways, depending on their expertise and skills. Our study showed that not only the extent of participation but also community partners' preferred participation varied across the project phases, in line with partners' expertise and skills. Identifying skills that can be contributed to the partnership helps to explain why not all partners were meaningfully engaged on an ongoing basis. As the project shifted its focus over the 3 years, different skills are needed from different partners, causing some partners to drop in and out of the partnership.³⁰ For example, a shift away from employment skill-building activities to diversionary activities meant that employment agencies and vocational education providers no longer joined the conversations. While community-based partners should be involved in all aspects of the CBPR project, this study indicated that the partners' area of expertise influenced their roles and extent of participation in the CBPR project.

An openness to learning from each other's expertise can help generate new knowledge to inform action to address the identified issues, which is the primary aim of the CBPR partnerships.⁷ Co-learning has long been identified as a key principle of CBPR.^{4,7} This study confirmed that co-learning was also an essential element in the rural Aboriginal CBPR partnerships. Practically, the study showed that co-learning between research and rural Aboriginal community partners was facilitated through regular interactions and a general attitude from both sides that the others' knowledge and skills are important. In this

sense, CBPR partnerships can contribute to decolonisation by providing a means to integrate Indigenous knowledge into the research processes and valuing Aboriginal community partners' expertise to the same extent as research partners' expertise.^{17,33}

Building trust between researchers and communities is an essential element of ethical research with Aboriginal people^{14,17,20} and partnerships more generally.^{30,34} Mistrust towards researchers can exist in Aboriginal communities because of past research that has provided little or no direct benefits to, or even harmed, the participating communities.^{33,35-37} Initial mistrust existed in rural Aboriginal communities in this study, but integrating processes and actions with direct benefit to the community helped build the trust in the partnerships and broader community. This is in line with the primary aim of CBPR partnerships to develop actions, rather than generating new scientific knowledge.³¹ This study highlighted that developing and implementing community programs and providing employment opportunities contributed to building the communities' trust, as direct benefits of the project to the community were clearly visible.

While this study identifies mistrust between community and researchers, there are also complex layers of mistrust between groups within communities and lateral violence that can impact on researcher-community relationships. Researchers should be aware of kinship relationships within communities and aim to build relationships with the different groups so that their research does not worsen divisions within communities by preferencing one group.^{38,39} Further research into lateral violence and how researchers and communities can address this in participatory research would be beneficial.

Promoting community leadership provided additional direct benefits to the community and contributed to trust between community and research partners. Like in most research with Aboriginal communities, the CBPR partnerships were initiated by the researchers,⁴⁰ but the participatory process of enhancing community leadership contributed to the project becoming community-led, as identified in previous studies.^{7,41,42} This was operationalised by employing local coordinators and establishing local ICs with decision-making power over the way research funding was spent. This created meaningful partnership by shifting the traditional financial power imbalance that can exist between researchers and communities because researchers generally receive, and are responsible for allocating, research funds.^{37,43}

4.1 | Methodological considerations

The purposive sample selection could have resulted in bias towards more positive responses. The use of an independent interviewer and phone interviews aimed to reduce this bias by increasing a sense of anonymity among the participants.⁴⁴ It was important to the aims of this study to interview those

partners who had been involved in most of the project, as they would be able to provide the most meaningful feedback about the participatory processes.

Using meeting attendance as a crude measure for engagement with the partnership might not have provided the best benchmark, firstly, because some partners simply could not attend the meeting at the times they were held and, secondly, because there were other ways partners contributed to the partnership outside of formal project meetings, for example by other activity-related meetings, relationship-building activities and informal conversations. These ways of engagement were not documented. For a more complete picture of ongoing engagement, future research should try to monitor how and in which phases partners engage with the partnership and when different skills are needed.

Another limitation of this study was that the extent of community participation was only measured once. Participants sometimes had difficulty remembering events that took place 2 or 3 years earlier. Given the variation in the level of community participation across project phases, future research evaluating participatory processes could benefit from implementing multiple points of evaluation throughout the project.⁴⁵ This would address participants' difficulties with remembering critical phases of the project, reduce participants' time commitment and capture feedback from those partners who reduce their involvement in the partnership in later project phases. It might minimise the possibility that variation in reported levels of community participation is a consequence of variation in reporting, as opposed to actual levels of participation. In terms of measuring community partners' preferred participation, this would also be beneficial to take place at the start of a partnership to give partners an opportunity to shape the partnership.

5 | CONCLUSIONS

This study was one of the first to practically outline the key elements and their operationalisation of participatory processes that can promote meaningful partnership between research and rural Aboriginal community partners. Specific participatory processes depend on the communities, the nature of the issues addressed and the expertise of the partners involved. This research outlined ways in which CBPR partnerships can integrate expertise, openness to learning, trust and community leadership to facilitate participatory processes and build partnerships. Practically, this included regular communications (face-to-face, phone and email), local decision-making power (eg about funding allocations and priorities) and direct and concrete benefits to the communities (employment of community members, access to funding to implement program and access to data).

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DISCLOSURES

Authors Bonita Byrne, Jamie O'Neill and Ronald Bamblett were the Aboriginal project coordinators on the CBPR project described in this paper. They were also participants of the focus groups as community members who were leading the implementation of project activities.

AUTHOR CONTRIBUTIONS

Conceptualisation, M.S. and A.S.; methodology, M.S., A.S. and A.W.; formal analysis, M.S., A.M and A.W.; resources M.S. and A.S.; writing-original draft preparation, M.S.; writing-review and editing, M.S., B.C., A.M, A.W. and A.S.; visualisation, M.S.; supervision, B.C., A.W and A.S.; project administration A.S.; funding acquisition, A.S. All authors have read and agreed to the published version of the manuscript.

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REFERENCES

1. Snijder M, Shakeshaft A, Wagemakers A, Stephens A, Calabria B. A systematic review of studies evaluating Australian indigenous community development projects: the extent of community participation, their methodological quality and their outcomes. *BMC Public Health*. 2015;15(1):1-16.
2. Wallerstein N, Duran B. Community-based participatory research contributions to intervention research: the intersection of science and practice to improve health equity. *Am J Public Health*. 2010;100(S1):S40-S46.
3. Bainbridge R, McCalman J, Tsey K, Brown C. Inside-out approaches to promoting Australian Aboriginal wellbeing: evidence from a decade of community-based participatory research. *Int J Health Wellness Soc*. 2011;1:13-28.
4. Wallerstein N, Duran B, Oetzel J, Minkler M. *Community-Based Participatory Research for Health: Advancing Health and Social Equity*. San Francisco, CA: Jossey-Bass; 2018.
5. Wallerstein N. *What is the Evidence on Effectiveness of Empowerment to Improve Health?* Copenhagen: WHO Regional Office for Europe; 2006.
6. Wallerstein N, Duran B. Using community-based participatory research to address health disparities. *Health Promot Pract*. 2006;7(3):312-323.
7. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev Public Health*. 1998;19(1):173-202.
8. O'Mara-Eves A, Brunton G, Oliver S, Kavanagh J, Jamal F, Thomas J. The effectiveness of community engagement in public

- health interventions for disadvantaged groups: a meta-analysis. *BMC Public Health*. 2015;15(1):129-152.
9. Milton B, Attree P, French B, Povall S, Whitehead M, Popay J. The impact of community engagement on health and social outcomes: a systematic review. *Community Dev J*. 2012;47(3):316-334.
10. Rifkin SB. Examining the links between community participation and health outcomes: a review of the literature. *Health Policy Plan*. 2014;29(suppl 2):ii98-ii106.
11. Cornell SE. *Indigenous Peoples, Poverty and Self-determination in Australia, New Zealand, Canada and the United States*. Tuscon, AZ: Native Nations Institute for Leadership, Management, and Policy; 2006.
12. Clark L, Ventres W. Qualitative methods in community-based participatory research: coming of age. *Qual Health Res*. 2016;26(1):3-4.
13. Nitsch M, Waldherr K, Denk E, Griebler U, Marent B, Forster R. Participation by different stakeholders in participatory evaluation of health promotion: a literature review. *Eval Program Plann*. 2013;40:42-54.
14. Dadich A, Moore L, Eapen V. What does it mean to conduct participatory research with Indigenous peoples? A lexical review. *BMC Public Health*. 2019;19(1):1388.
15. Gwynn J, Lock M, Turner N, et al. Aboriginal and Torres Strait Islander community governance of health research: turning principles into practice. *Aust J Rural Health*. 2015;23(4):235-242.
16. Kendall E, Sunderland N, Barnett L, Nalder G, Matthews C. Beyond the rhetoric of participatory research in Indigenous communities: Advances in Australia over the last decade. *Qual Health Res*. 2011;21(12):1719-1728.
17. Huria T, Palmer SC, Pitama S, et al. Consolidated criteria for strengthening reporting of health research involving indigenous peoples: the CONSIDER statement. *BMC Med Res Methodol*. 2019;19(1):173.
18. Clifford A, Shakeshaft A, Deans C. Training and tailored outreach support to improve alcohol screening and brief intervention in Aboriginal Community Controlled Health Services. *Drug and alcohol review*. 2013;32(1):72-79.
19. NSW Department of Health. *Aboriginal Injury Prevention and Safety Promotion Demonstration Grants Program*. Sydney, NSW: NSW Department of Health; 2011.
20. National Health and Medical Research Council. *Ethical Conduct in Research with Aboriginal and Torres Strait Islander Peoples and Communities: Guidelines for Researchers and Stakeholders*. Canberra, ACT: Commonwealth of Australia; 2018.
21. National Health and Medical Research Council. *Keeping Research on Track II: A Companion Document to Ethical Conduct in Research with Aboriginal and Torres Strait Islander Peoples and Communities: Guidelines for Researchers and Stakeholders*. Canberra, ACT: Commonwealth of Australia; 2018.
22. Pretty JN. Participatory learning for sustainable agriculture. *World Dev*. 1995;23(8):1247-1263.
23. Wagemakers A, Corstjens R, Koelen M, Vaandrager L, van't Riet H, Dijkshoorn H. Participatory approaches to promote healthy lifestyles among Turkish and Moroccan women in Amsterdam. *Promot Educ*. 2008;15(4):17-23.
24. Saunders RP, Evans MH, Joshi P. Developing a process-evaluation plan for assessing health promotion program implementation: a how-to guide. *Health Promot Pract*. 2005;6(2):134-147.
25. QSR International Pty Ltd. *NVivo Qualitative Data Analysis Software Version 11*. Doncaster: QSR International; 2012.
26. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101.
27. Butterfoss FD. Process evaluation for community participation. *Annu Rev Public Health*. 2006;27:323-340.
28. de Crespigny C, Emden C, Kowanko I, Murray H. A 'partnership model' for ethical Indigenous research. *Collegian*. 2004;11(4):7-13.
29. Naylor P-J, Wharf-Higgins J, Blair L, Green L, O'Connor B. Evaluating the participatory process in a community-based heart health project. *Soc Sci Med*. 2002;55(7):1173-1187.
30. Seaton CL, Holm N, Bottorff JL, et al. Factors that impact the success of interorganizational health promotion collaborations: a scoping review. *Am J Health Promot*. 2018;32(4):1095-1109.
31. Minkler M, Wallerstein N. *Community-based Participatory Research for Health: From Process to Outcomes*. San Francisco, CA: Jossey-Bass; 2011.
32. Israel BA, Schulz A, Parker E, Becker AB, Allen AJ III, Guzman JR. Critical issues in developing and following CPBR Principles. In: Minkler M, Wallerstein N, eds. *Community-based Participatory Research for Health: From Process to Outcomes*, Vol. 2. San Francisco, CA: Jossey-Bass; 2011:47-66.
33. Smith LT. *Decolonizing Methodologies: Research and Indigenous Peoples*. London: Zed Books; 2012.
34. Jagosh J, Bush PL, Salsberg J, et al. A realist evaluation of community-based participatory research: partnership synergy, trust building and related ripple effects. *BMC Public Health*. 2015;15(1):725.
35. Kinchin I, Mccalman J, Bainbridge R, Tsey K, Lui FW. Does Indigenous health research have impact? A systematic review of reviews. *Int J Equity Health*. 2017;16(1):52-68.
36. Bainbridge R, Tsey K, McCalman J, et al. No one's discussing the elephant in the room: contemplating questions of research impact and benefit in Aboriginal and Torres Strait Islander Australian health research. *BMC Public Health*. 2015;15. <https://doi.org/10.1186/s12889-015-2052-3>
37. Cochran PAL, Marshall CA, Garcia-Downing C, et al. Indigenous ways of knowing: Implications for participatory research and community. *Am J Public Health*. 2008;98(1):22-27.
38. Clark Y, Glover K. Lateral violence in aboriginal communities. In: Shelley B, Riele KT, Brown N, Crellin T, eds. *Harnessing the Transformative Power of Education*. Leiden: Brill | Sense; 2020:304.
39. Byrne B. *Cultures within Cultures: Investigating the Association between Conflict and Alcohol and drug-related Harms in Aboriginal Communities*. Sydney, NSW: University of New South Wales; 2020.
40. Graham VE, Campbell S, West C, Clough AR. Substance misuse intervention research in remote Indigenous Australian communities since the NHMRC 'Roadmap'. *Aust N Z J Public Health*. 2017;41(4):424-431.
41. Singer J, Bennett-Levy J, Rotumah D. "You didn't just consult community, you involved us": transformation of a 'top-down' Aboriginal mental health project into a 'bottom-up' community-driven process. *Australas Psychiatry*. 2015;23(6):614-619.
42. Minkler M, Hancock T. Community-driven asset identification and issue selection. In: Minkler M, Wallerstein N, eds. *Community-based Participatory Research for Health: From Process to Outcomes*, Vol. 2. San Francisco, CA: Jossey-Bass; 2011:153-170.

43. Pyett P. Working together to reduce health inequalities: Reflections on a collaborative participatory approach to health research. *Aust N Z J Public Health*. 2002;26(4):332-336.
44. Sturges JE, Hanrahan KJ. Comparing telephone and face-to-face qualitative interviewing: a research note. *Qual Res*. 2004;4(1):107-118.
45. Wijenberg E, Wagemakers A, Herens M, Hartog FD, Koelen M. The value of the participatory network mapping tool to facilitate and evaluate coordinated action in health promotion networks: two Dutch case studies. *Global Health*. 2019;26(3):32-40.

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