

# BMJ Open Jandu Yani U 'For All Families' Triple P—positive parenting program in remote Australian Aboriginal communities: a study protocol for a community intervention trial

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## ABSTRACT

**Introduction** The population-based (Lililwan) study of fetal alcohol spectrum disorder (FASD) revealed a high prevalence of FASD in the remote communities of the Fitzroy Valley, Western Australia (WA) and confirmed anecdotal reports from families and teachers that challenging child behaviours were a significant concern. In response, Marninwarntikura Women's Resource Centre initiated a partnership with researchers from The University of Sydney to bring the positive parenting program (Triple P) to the Valley. Triple P has been effective in increasing parenting skills and confidence, and improving child behaviour in various Indigenous communities.

**Methods and analysis** Extensive consultation with community leaders, service providers, Aboriginal health networks and academic institutions was undertaken and is ongoing. Based on community consultations, the intervention was adapted to acknowledge local cultural, social and language complexities. Carers of children born after 1 January 2002 and living in the Fitzroy Valley are invited to participate in Group Triple P, including additional Stepping Stones strategies for children with complex needs. Programme are delivered by local community service workers, trained and accredited as Triple P providers or 'parent coaches'. Assessments for parent coach pretraining and post-training includes their perceived ability to deliver the intervention and the cultural appropriateness of the programme. Carers complete preintervention and postintervention and 6-month follow-up assessments of parenting practices, self-efficacy and child behaviour.

**Ethics and dissemination** Approval was granted by the University of Sydney Human Ethics Committee, WA Aboriginal Health Ethics Committee, WA Country Health Services Ethics Committee and Kimberley Aboriginal Health Planning Forum. Consultation with community is imperative for efficacy, engagement, community ownership and sustainability of the programme, and will be ongoing until findings are disseminated. Anonymous findings will be disseminated through peer-reviewed journals, community feedback sessions and scientific forums.

## Strengths and limitations of this study

- Project is initiated, prioritised and codesigned by Aboriginal leaders and uses a community-based participatory research approach to respond to community demand for family supports.
- Triple P is evidence-based and proven effective for increasing parenting confidence and decreasing difficult behaviours in other Aboriginal and Torres Strait Islander communities.
- Triple P is used for the first time in very remote communities with high rates of prenatal alcohol exposure and fetal alcohol spectrum disorder.
- Continual feedback from an Aboriginal advisory group, parent coaches and community members supports culturally sensitive programme delivery and participant retention in a vulnerable population.
- This is an ambitious study given the complexity of the community (eg, complex language environment, very remote location, historical and current trauma, social disadvantage). Although the findings may be relevant to similar communities, they may not be generalisable to less remote or urban settings.

## INTRODUCTION

Challenging neurodevelopmental and behavioural problems occur disproportionately in Australian Aboriginal children (according to local preferences, the terms 'Aboriginal' and 'local' are used interchangeably to refer to Australian Aboriginal communities). In very remote, predominantly Aboriginal communities in the Fitzroy Valley, Western Australia, data from the Australian Early Development Census and the Lililwan project indicate that 85% of children are developmentally vulnerable in one or more cognitive domains.<sup>1 2</sup> Exposure to early life trauma (ELT) and poor academic outcomes contribute to vulnerability in this population.<sup>3</sup> For Australian Aboriginal children, a

leading cause of intellectual disability is prenatal alcohol exposure (PAE).<sup>4</sup> Alcohol is a teratogen and neurotoxin; exposure in utero can impair fetal brain development. This may result in structural and functional brain abnormalities that characterise fetal alcohol spectrum disorder (FASD) and lead to lifelong learning and behavioural difficulties.<sup>5</sup> Children with PAE, FASD, ELT or a combination of these may have difficulty at school, mental health disorders or substance misuse that impact adult function; resulting in unemployment, involvement in the criminal justice system and reduced quality of life.<sup>4</sup> Carers and teachers living in the Valley report challenging behaviours for most children in the Valley.<sup>6</sup> However, children with FASD consistently exhibited more behavioural challenges than children without FASD, especially in domains of daily living (adaptive function), impulse control and social skills.<sup>6</sup>

Community members of the Fitzroy Valley recognised that significant numbers were suffering harms to their physical and mental health from alcohol misuse. Following an inquiry into the impact of alcohol misuse on the community, they fought for alcohol restrictions in the Valley.<sup>7</sup> The community then partnered with researchers and clinicians to provide the first estimate of FASD prevalence in this region through the population-based Lililwan study.<sup>8</sup> This identified that 55% of children had high risk PAE,<sup>3</sup> and the prevalence of FASD (19%) in children of primary school age, born in 2002–2003, was among the highest in the world.<sup>2</sup> In response to these findings and the reports of challenging childhood behaviours, Marninwarntikura Women's Resource Centre (MWRC) and community leaders initiated a partnership with researchers to bring the evidence-based positive parenting program (Triple P) to carers (parents, family members and others responsible for raising a child) in the Valley.

Triple P is a multilevel system of prevention and early intervention programme that aims to promote positive, nurturing relationships between carers and children.<sup>9</sup> It has been successful in supporting families to develop effective strategies for dealing with a variety of challenging child behaviours and developmental issues.<sup>10</sup> However, any initiative in Indigenous communities needs to take into account the fit with cultural values and the broader psychosocial, biological and historical factors that contribute to physical, emotional and spiritual health.<sup>11 12</sup> This is especially important because current disadvantage and intergenerational trauma can significantly impact on parenting skills and personal coping skills.<sup>13</sup> Unfortunately, such initiatives often fail to achieve their objectives and can exacerbate conditions they were intended to address by imposing demands on the limited resources and capacity of people working and living in remote communities.<sup>14</sup> The present study was undertaken from the perspective that an effective approach to implementation is as important as the intervention used.

Randomised controlled trials show that Triple P is effective in reducing family risk factors associated with

challenging child behaviours.<sup>15</sup> However, mainstream parenting programme have difficulty recruiting and maintaining involvement of disadvantaged parents.<sup>16</sup> Thus, adaptation is integral in effective and sustainable programme implementation.<sup>17–19</sup> Sensitive cultural adaptation can improve family recruitment and retention rates in Indigenous populations,<sup>20–22</sup> leading to positive family outcomes.<sup>11 12</sup> In this protocol, we describe the collaborative approach used in the Jandu Yani U ('For All Families') project to ensure Aboriginal communities are equal partners in project design, codevelopment of a locally tailored programme, implementation, evaluation and dissemination of results.

### Study aims

To assess the effectiveness and cultural acceptability of a collaborative community engagement approach to delivery of Triple P in terms of:

1. Enhancing the confidence, skills and sense of empowerment of local practitioners, through professional training, to offer parenting support to the community.
2. Enhancing carer confidence and capacity to manage complex child behaviours, and increasing their feelings of empowerment.
3. Ameliorating challenging behaviours of children.

### METHOD

#### Design

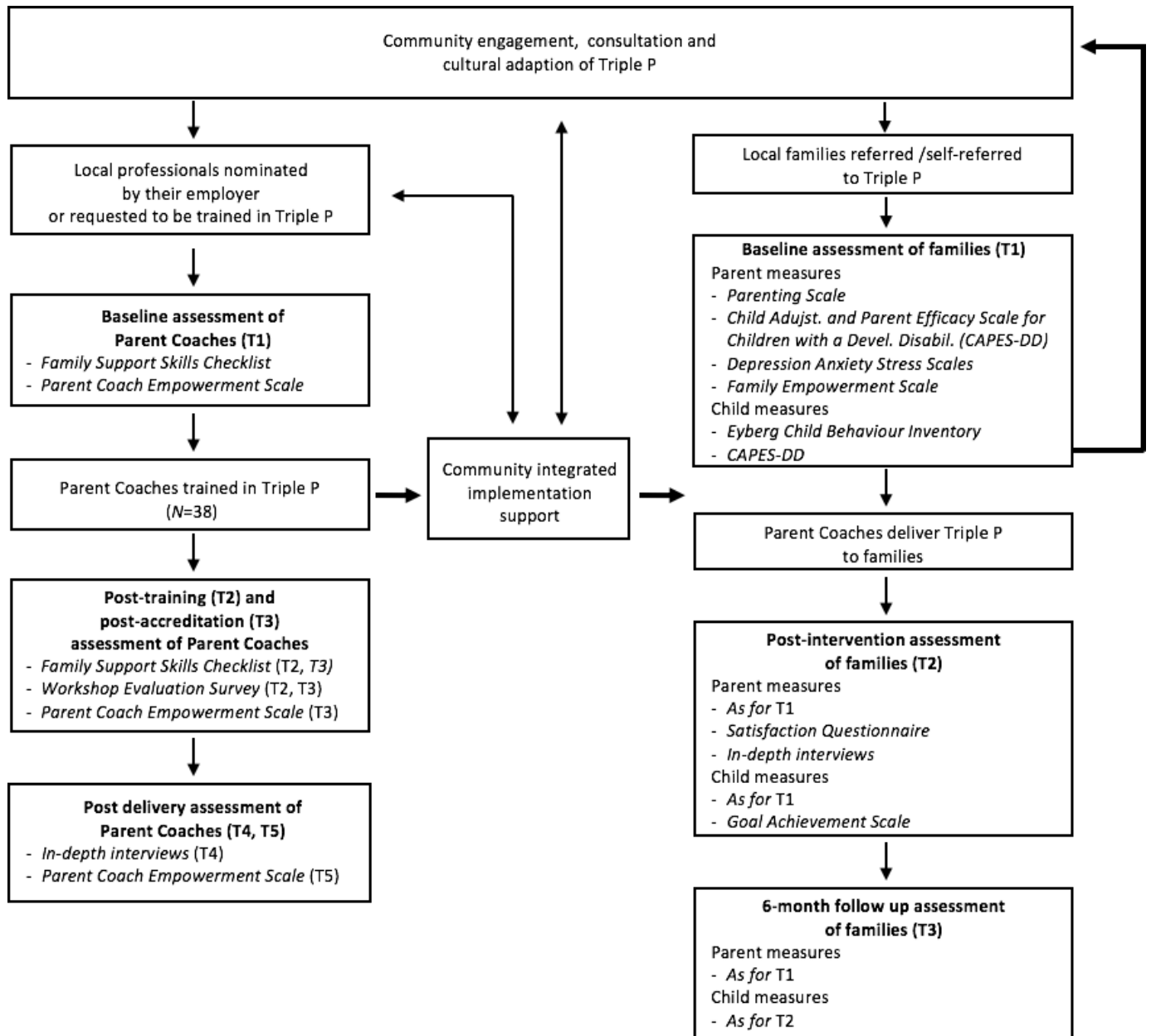
The Jandu Yani U project is a place-based evaluation of Triple P for carers of children with complex needs, implemented in the Fitzroy Valley. The intervention is offered to families by local community workers (parent coaches), trained and accredited by Triple P International (see figure 1).

#### Patient and public involvement

Community (public) involvement was a cornerstone of this research and extensive consultation with members of communities in the Fitzroy Valley was undertaken through all stages of the project. An advisory group consisting of local community members was formed to provide advice on, and codesign all major aspects of the research (see the Consultation section and throughout this protocol paper).

#### Setting

The Fitzroy Valley is located in the Kimberley, ~2500 km north-east of Perth, and Fitzroy Crossing and its surrounding communities are classified as very remote.<sup>23</sup> Of the 3500 people who live in the Valley,<sup>24</sup> 80% are Aboriginal.<sup>2</sup> Following dispossession during the last century, five language groups (Bunuba, Gooniyandi, Nyikina, Walmajarri, Wangkatjungka) were forced to live together Fitzroy Crossing. Local organisations in the Fitzroy Valley are recognised internationally as leaders in forward thinking initiatives including alcohol restrictions and efforts to recognise and eradicate FASD. However, most families are impacted by poverty, experience ELT



**Figure 1** Jandu Yani U protocol study design. CAPES-DD, Child Adjustment and Parent Efficacy Scale for Children with Developmental Disabilities.

and have minimal or inconsistent access to health, adequate housing and other support services.

### Consultation

Extensive consultation with stakeholders and community leaders in the Valley was undertaken over several months, to develop relationships and trust between community leaders and the researchers. This built on long-term relationships between author Elliott and community leaders established during the Lililwan project. To facilitate consultations and the ongoing partnership with the community, an advisory group comprising Aboriginal community leaders from various organisations was established. The advisory group provided crucial input into the local cultural adaptation and implementation

of Triple P and provided advice on: (1) the most appropriate Triple P variants and delivery formats; (2) processes for professional training workshops and family sessions; (3) programme resources for families; (4) community perceptions of and involvement in the research; (5) assessment measures; (6) inviting local community members to be trained as parent coaches; (7) family recruitment processes; (8) trauma informed and culturally appropriate delivery of parent sessions and peer support for parent coaches; and (9) procedures for distributing findings back to the community.

### Timeline

The project is being carried out between October 2014 and June 2019, in four stages. Stage 1 (2014–2016)

involved community consultation, development of culturally appropriate resources and stakeholder engagement. Stage 2 (2016–2017) involved the training and accreditation of parent coaches in Triple P. Stage 3 (2017–2019) involves the roll out of Triple P and ongoing clinical support and peer networking for parent coaches. Stage 4 (2019) involved collaboration on results dissemination to communities. Consultation and collaboration with the community, parent coaches and the advisory group is ongoing to ensure community involvement and ownership of the research, and programme sustainability.

### Participants

Thirty-eight parent coaches (24 Aboriginal) were trained and accredited to deliver Triple P. They include community service providers from local organisations (eg, MWRC (Baya Gawi Early Childhood Learning Unit, Child and Parent Centre, Marulu Unit, Family Violence Prevention and Legal Unit), Marra Worra Worra Aboriginal Resource Agency, Fitzroy Valley District High School and Nindilingarri Cultural Health Services), who were nominated by their organisation or volunteered to attend Triple P practitioner training and deliver parenting support.

Potential family participants include all consenting carers of children born after 1 January 2002 and living in the Valley who attend Triple P sessions. The programme is universally available to all families in the area to normalise and destigmatise parenting support, and ensure the widest possible reach.

### Community navigators

Community navigators are employed to assist with community engagement and relationship building between local families and the research team. They are respected local Aboriginal people, trained and certified in research methods (also part of JYU capacity building approach). They are involved in community engagement, family recruitment and consent, family assessments, translation as required, and provide advice on cultural protocols and cultural training/awareness for the research team.

### Engagement and recruitment

The longstanding relationship with the community built through the Lililwan project was crucial for engaging potential participants. Parent coaches were recruited in two waves: practitioners in the first cohort were recommended through both community members or organisations and practitioners in the second cohort were recommended by community organisations, the first cohort of parent coaches and local families who had heard of or accessed the programme.

Carer engagement entails both organisation referral and self-referral through word-of-mouth or carer-to-carer recommendation, consistent with a community-led snowballing technique. Interested carers are visited by local community navigators who explain the purpose and process of the research. Participant information statements are read aloud in English, or the carer's preferred

language. Once carers understand the project aims, that participation is voluntary, that they can withdraw at any time without penalty, and have all their questions answered, written informed consent is obtained.

### Intervention

#### Positive parenting program

Triple P is an evidence-based parenting intervention system that uses a self-regulation framework to encourage positive and responsive carer-child relationships and teach behaviour management strategies.<sup>9</sup> Triple P is delivered in various formats with increasingly intensive intervention, from level 1 (universal communications strategy) to level 5 (intensive support for families with complex needs). The advisory group recommended the most appropriate programme for Fitzroy Valley families was level 4 group Triple P<sup>25</sup> with culturally tailored resources for Indigenous families including a DVD,<sup>26</sup> workbook<sup>27</sup> and presentation aids.<sup>28</sup> Additional skills from stepping stones Triple P (for carers of children with complex learning needs), with an emphasis on FASD effective strategies<sup>29</sup> were also selected for inclusion. Group Triple P uses active learning strategies (eg, personal goal setting), to teach positive parenting skills that encourage appropriate child behaviour. Parent coaches deliver the content to carers through discussion, visual teaching aids, modelling and role play.

#### Program adaptation and delivery

Adaptation of Triple P implementation for the Fitzroy Valley involves community-based participatory research methods,<sup>30 31</sup> and input from advisory group members, community stakeholders, parent coaches and families. The research team and Triple P authors actively seek and incorporate ongoing feedback into the adaptation and delivery process, with the goal of maintaining programme fidelity while enhancing fit, acceptability and sustainability.

In the absence of evidence suggesting the need for fundamental changes to the content of the original evidence-based programme, the research team and advisory group determined that primarily 'surface structure' changes<sup>32-34</sup> such as resource language and layout, and session processes were appropriate to maximise the programme fit for Fitzroy Valley families while maintaining content fidelity. This flexibly allowed a tailored Triple P approach that is culturally sensitive and trauma informed. Key programme adaptations implemented in the Jandu Yani U project are outlined below.

#### Training and support of parent coaches

Participants received training in the group (level 4) Indigenous Triple P<sup>12</sup> with additional stepping stones strategies as recommended by the local advisory group. Parent coach training was delivered with the community-preferred 'two way learning' philosophy, with one non-Indigenous trainer and Aboriginal implementation consultant, and the training course was increased from

3 to 4 days. This training process is described in further detail in McIllduff *et al* (in prep) describing parent coach outcomes. Approximately 2 months later, a 4-day accreditation evaluation was completed. Following the practical evaluation and written test, participants were accredited as a Triple P provider (parent coach) by Triple P International, through the University of Queensland.

Following training and accreditation, peer support sessions for parent coaches are being facilitated by a Triple P practitioner living in community over extended periods. These sessions provide mentoring and peer supervision to increase parent coach motivation, skills and confidence, facilitate programme delivery and ensure implementation fidelity. Resources and ongoing support by an investigator based in Fitzroy Crossing are available for parent coaches in distress following discussion of their own or others' past or current trauma.

#### Relationship development/family engagement

Local, trusted community navigators engage families, seek consent and administer questionnaires in a supported interview format before and after families' participation in Triple P. Parent coaches engage families by modelling new skills and talking about new ways of seeing and responding to childrens' behaviour.

#### Traditional ways and storytelling

Cultural factors that influence parenting practices are addressed in parent coach peer support sessions and carer sessions by inclusion of personal examples or traditional cultural teaching stories during discussions, modelling or role play. In the community, parent coaches 'plant the seed of new knowledge' (one parent coaches' words) and invite carers to join the programme when they are ready for change.

#### Language level and localisation of programme materials

As literacy skills and language were identified as a potential barrier, programme materials (eg, parent workbook detailing strategies) were revised by a Triple P author to include less text (ie, key take home messages rather than paragraphs) and a lower reading age (from grade 6–7 to grade 1–2). The parent booklet was further refined with help from advisory group members and parent coaches to include locally nuanced terminology and local photographs to enhance engagement and provide a visual depiction of key content.

#### Programme delivery

Barriers to attendance are reduced by utilising a supportive approach of providing a meal, child care and/or transportation depending on families' needs. Community hubs such as the Baya Gawi Child and Parent Centre, community meeting rooms and communal cooking areas are used for group sessions to create trust, comfort and decrease participant drop out. Some families are most comfortable talking informally about the programme in their own space, such as their front verandah. For parent coach confidence and carer comfort, groups are

conducting with small numbers (2–5 carers). Following participation in the programme, families receive a certificate of completion and are offered ongoing support from the parent coaches. An Aboriginal parent coach is always involved in the programming to ensure contextual appropriateness and translation support as needed by families.

#### Support for carers with few resources

One barrier identified by parent coaches was the lack of available resources to enable families to carry out some Triple P strategies at home. In response, parent resources ('parent packs') are provided as needed, including thick paper to create charts, stickers, blue tack and pencils or crayons.

#### Data collection and analysis

Data collection includes mixed quantitative and qualitative methods to assess parent coach and family outcomes. Quantitative data will be analysed for time effects using SPSS V.23 software. Qualitative data will be subjected to thematic analysis using NVivo V.12 software.

#### Parent coach outcomes

As per standard Triple P training procedures, demographic information collected from the parent coaches includes gender, profession, education level, and training and accreditation completion.<sup>23</sup> Parent coach outcomes (table 1) were assessed pretraining and post-training, postaccreditation and during programme delivery; described in detail below.

#### Parent coach self-efficacy

The *Family Support Skills Checklist* contains 25 items, rated on a 7-point scale, adapted from the *Parent Consultation Skills Checklist*<sup>35</sup> to assess parent coaches' self-efficacy (feeling adequately trained), confidence in conducting a family intervention with carers, perceived proficiency in core skill domains (assessment, active skills training, dealing with process issues, clinical application of positive parenting strategies and helping families dealing with local issues) and confidence in engaging carers. Higher values indicate a higher level of perceived self-efficacy.

#### Consumer satisfaction

The *Workshop Evaluation Survey*<sup>35</sup> was administered after both the training and accreditation workshops. This survey was adapted to assess parent coaches' response to training in terms of satisfaction with the content, process, quality, skill development and cultural sensitivity of the training approach on a 7-point scale, higher scores indicating higher satisfaction. Open feedback was also requested.

#### Empowerment

A Parent Coach Empowerment Scale (codesigned by the advisory group and author McIllduff based on Spreitzer's scale<sup>36</sup>) was administered pretraining, postaccreditation and 4 months after delivery of the programme and peer support. This scale was developed to assess parent

**Table 1** Summary of parent coach outcome measures and assessment timeline

Method	Measure	Outcome	T1	T2	T3	T4	T5
Quantitative	<i>Family Support Skills Checklist</i>	Self-efficacy and confidence in conducting family interventions.	X	X	X		
	<i>Workshop Evaluation Survey</i>	Cultural appropriateness, of materials, resources, content and process of training.		X	X		
	<i>Parent Coach Empowerment Scale</i>	Perception of influence in family, community and job position.	X		X		X
Qualitative	<i>In-depth interviews</i>	Acceptability of the research protocol and Triple P, experience of delivering the programme.				X	

T1, pretraining (day 1); T2, post-training (day 4); T3, postaccreditation (4-6 weeks post-training); T4, 2-3 months postaccreditation; T5, 4 months postaccreditation.

coaches' perceptions of their influence in their communities, families and workplaces. Items are rated on a 7-point scale with high scores indicating higher levels of perceived empowerment.

#### Qualitative feedback

Approximately 2 months after accreditation, parent coaches participated in a qualitative assessment designed to explore the cultural congruency of the adapted model of Triple P, including (1) overall acceptability of the research project and Triple P; (2) importance of the aspects of the programme that were modified to achieve cultural congruency; (3) effectiveness of the training and (4) empowerment of parent coaches to make a difference in the community. Semistructured interviews were

conducted with each parent coach (~30–60 min duration) on involvement in programme implementation, knowledge of and experiences with Triple P in the community, and the 'fit' of the intervention with local populations and service delivery contexts. Interviews were recorded and transcribed for analysis using NVivo V.12 software.

#### Family outcomes

A comprehensive battery assessing parent and child outcomes (table 2) was compiled in consultation with the advisory group. The consensus was that assessments should be conducted in an interview format with the assistance of local community navigators to aid the explanation of the questions to participants and be aware of nuances of non-verbal communication. Interview procedures are

**Table 2** Summary of family outcome measures

Method	Target	Measure	Outcome	T1	T2	T3
Quantitative	Carer	<i>Parenting Scale</i>	Use of dysfunctional discipline practices.	X	X	X
		<i>Child and Parent Efficacy Scale for children with Devel. Disabilities</i>	Parent confidence in managing problem behaviour.	X	X	X
		<i>Depression-Anxiety-Stress Scales</i>	Carer depressive and anxiety symptoms and stress.	X	X	X
		<i>Family Empowerment Scale</i>	Perception of influence in family and community.	X	X	X
		<i>Satisfaction Questionnaire</i>	Satisfaction with programme and outcomes.		X	
Qualitative	Carer	<i>In-depth interviews</i>	Acceptability, experience of attending the programme.		X	
Quantitative	Child	<i>Eyberg Child Behaviour Inventory</i>	Frequency and severity of challenging behaviours.	X	X	X
		<i>Child and Parent Efficacy Scale for children with Devel. Disabilities</i>	Issues in different behaviour domains.	X	X	X
		<i>Goal Achievement Scale Thermometer</i>	Visual representation of % achievement of carer goals.		X	X

T1, preintervention; T2, postintervention; T3, 6 month follow-up.

flexible with respect to time and encourage 'yarning' or storytelling to build trust. Community navigators administer the interviews in English or Kimberley Kriol as required. Assessments (table 2) are administered at three time points: preintervention and post-intervention and at 6-month follow-up.

### Parenting style

The 30-item *Parenting Scale*<sup>37</sup> measures problematic parenting styles such as laxness (permissive, inconsistent discipline), over-reactivity (authoritarian discipline, anger and irritability) and hostility (use of verbal or physical force<sup>38</sup>). Carers rate the probability that they use particular disciplinary strategies on a 7-point scale. Higher scores reflect more dysfunctional parenting practices.

### Parenting confidence

Carers' self-efficacy in managing child emotional and behavioural difficulties is measured with the *Child Adjustment and Parent Efficacy Scale for Children with Developmental Disabilities* (CAPES-DD).<sup>39</sup> This is a brief inventory for assessing carers' self-efficacy in managing 16 different emotional and behavioural problems of children aged 2–16 years with developmental disabilities. Higher scores reflect greater confidence.

### Parental adjustment

The short form of the *Depression-Anxiety-Stress Scales*<sup>40</sup> assesses symptoms of depression, anxiety and stress in adults. Carers rate, on a 4-point severity/frequency scale, the extent to which they have experienced a range of symptoms over the last week, with higher scores indicating greater difficulties.

### Empowerment

A *Family Empowerment Scale* (codesigned by the advisory group and author McIluff based on the Spreitzer's<sup>36</sup> scale)<sup>36</sup> was created to assess carers' perceptions of their influence in their communities and their families. Items are rated on a 7-point scale with high numbers indicating higher levels of perceived influence in the corresponding areas

### Child adjustment

The *Eyberg Child Behaviour Inventory*<sup>41</sup> is a 36-item parent-report measure of disruptive behaviour in children aged 2–16 years. Parents rate on a 7-point scale the frequency of disruptive behaviours (intensity scale) and the number of behaviours that are a problem for the parent (problem scale). Higher scores reflect higher rates of challenging behaviour.

In addition to measuring parent confidence, the CAPES-DD<sup>39</sup> includes 24 items relating to prosocial child behaviour, and emotional and behavioural concerns rated on a 4-point scale. Higher scores on summary scales indicate greater levels of child prosocial behaviour, as well as higher levels of emotional and behavioural problems.

### Goal attainment

Personal goal attainment is measured using a *Goal Achievement Scale* (GAS).<sup>40</sup> Developing a GAS helps carers set a specific and realistic outcome goal (eg, to increase an appropriate behaviour), and measures the percentage success or degree of goal achievement from 0% (baseline rate of behaviour, such as listening and following one out of five instructions) to 100% (the specified goal/target behaviour, such as listening and following four out of five instructions). Carers are supported to ensure the goal is realistic (ie, appropriate expectations for the child's age and potential ability) and achievable within a given time. Supported reflection helps carers track how close they are to goal attainment after implementing positive parenting strategies. The scale devised with the advisory group was presented as a pictorial scale resembling a 10cm thermometer with progress marked and measured to convert to a numerical score.

### Consumer satisfaction

A *Satisfaction Questionnaire* was adapted from the *Therapy Attitude Inventory*<sup>42</sup> which measures consumer satisfaction with the quality and cultural relevance of parent training programme. It includes 16 items rated on a 7-point scale, measuring how well the programme met the parent's needs.

### Ethics and dissemination

Approval was granted by the University of Sydney Human Ethics Committee, WA Aboriginal Health Ethics Committee, WA Country Health Services Ethics Committee and Kimberley Aboriginal Health Planning Forum. Formal research partnerships have been formed between the University of Sydney (Brain and Mind Institute, and Discipline of Child and Adolescent Health, Faculty of Medicine and Health) and MWRC; and between the University of Sydney and The University of Queensland. Results dissemination will occur at multiple levels. Locally, progress is shared with families as they work with parent coaches. Anonymised group results will be shared with participating communities through community feedback meetings, and included in scientific presentations and publications.

## DISCUSSION

This project provides the opportunity to address the severe and prevalent child behavioural concerns identified by Fitzroy Valley communities. This has been done by training parent coaches to deliver Triple P to local carers in a tailored way that is sensitive and culturally appropriate and by providing additional support. Although Triple P is perceived as both helpful and consistent with the values of Aboriginal parents,<sup>12</sup> we anticipate that acknowledgment of complex cultural histories through the inclusion of culturally based metaphors and stories from local parent coaches will increase the acceptability and resonance of the programme. Beyond the potential

benefits of Triple P to Fitzroy Valley families, workforce development, through training local community workers to deliver Triple P, is expected to increase knowledge and awareness of behaviour management strategies, increase the capacity of parent coaches to assist families, and support long-term sustainability of the programme once the research project has ended.

Research studies conducted by academic institutions in collaboration with Indigenous community partners can provide evidence of practical approaches to increase effectiveness of programme implementation and community engagement.<sup>43</sup> Moreover, research conducted with very remote Indigenous communities often involves challenges with scientific rigour, research protocol, university policies, ethics, geographical location and funding in the context of limited time, and resources.<sup>44</sup> The key strength of this research is that it stemmed from a local community initiative and followed extensive community consultation towards codesigned research, allowing the community-researcher partnership to balance their different needs and perspectives while focusing on the common agenda of supporting families and the community.

One key barrier to research in remote locations is the cost involved in implementing the partnership and adapting the project to the local context. However, it can be argued that past failure to make these connections and adaptations has perpetuated health disparities. It is only through implementing interventions with appropriate resources devoted to collaboration, recruitment, engagement, intervention support and long-term community driven programme sustainability, that the needs of vulnerable families can be met.<sup>45 46</sup> This research will provide short-term and long-term benefits to the community, through capacity building of local parent coaches and community navigators and ongoing delivery of culturally appropriate, positive parenting support for carers. Contribution to the limited literature examining processes of community engagement and programme adaptation for successfully implementing evidence-based programme in predominantly Aboriginal communities is imperative. Given that neurodevelopmental and behavioural problems are disproportionately evident in Australian Aboriginal children and youth, the successful and enduring implementation of programme such as Triple P have potential to improve the lives of young people in remote Indigenous communities Australia wide, and could provide a model for Indigenous communities internationally.

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**Contributors** EA and CM (UQ doctoral candidate) are research officers on the Jandu Yani U project and have made a significant contribution to the coordination of the project, including data collection and analysis, and development of this paper. KT is an associate investigator on the project and has contributed to the design of the project and programme resource revisions. JD and ST represent MWRC and have provided input into the local tailoring of the research design and conduct of the intervention. EJE and SE are chief investigators on the project and are responsible for the conception and management of the project. All authors have contributed to the drafting of this paper and have approved the final version.

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**Competing interests** The Triple P—positive parenting program is owned by The University of Queensland (UQ). The university, through its main technology transfer company UniQuest Pty Ltd, has licensed Triple P International Pty Ltd (TPI) to publish and disseminate the programme worldwide. Royalties stemming from this dissemination activity are distributed to the Parenting and Family Support Centre, School of Psychology, Faculty of Health and Behavioural Sciences, and contributory authors. No author has any share or ownership in TPI. Karen Turner is a contributory author and receives royalties from TPI.

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