



Djäkamirr: Exploring principles used in piloting the training of First Nations doulas in a remote multilingual Northern Australian community setting

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ABSTRACT

Problem and background: There is growing evidence in First Nations doula care as a strategy to address perinatal inequities and improve maternal care experiences. However, there is no evidence around the approach and principals required to successfully deliver First Nations doula (childbirth) training.

Question/aim: To explore and describe the approach and principles used in piloting the training of First Nations doulas in remote, multilingual Northern Australian community settings.

Methods: Case study with participant interviews to identify principles underpinning our Decolonising Participatory Action Research (D-PAR) approach and training delivery.

Findings: Reflections on our D-PAR research process identified enabling principles: 1) Use of metaphors for knowledge reflexivity, 2) Accommodate cultural constructions of time 3) Practice mental agility at the Cultural Interface, 4) Advocate and address inequities, 5) Prioritise meaningful curriculums and resources, 6) Establish cross-cultural recognition and validity; and 7) Ensure continuity of First Nations culture and language.

Discussion: The success of our doula training pilot disrupts a pervasive colonial narrative of First Nation deficit and demonstrates that respectful, genuine, and authentic partnerships can power transformative individual and collective community change. Our D-PAR approach assumes mutual learning and expertise between community and researchers. It is well suited to collaborative design and delivery of First Nations reproductive health training.

Statement of significance

Problem or issue

In remote, multilingual Northern Australian community settings, there is no evidence around the principles required to successfully deliver First Nations doula training.

What is already known

There is community and Industry demand for developing a First Nations doula workforce to reinvigorate cultural practices and

improve access to care that can produce optimal outcomes.

What this paper adds

Successful doula training requires participatory approaches that are grounded in decolonising principles and community collaboration. First Nations doula training provides opportunities for transformative learning outcomes and shared intercultural understanding.

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Introduction

First Nations women and babies in the Northern Territory (NT) of Australia experience inequitable perinatal health outcomes [1] and limited access to comprehensive reproductive health services. Childbirth services are only provided in four regional hospitals. This exacerbates social, economic, and biophysical inequities for women living in remote areas, who are routinely transferred to birth [2,3] in regional or tertiary services hundreds of kilometres away from their community. The vast majority of these women end up birthing alone in hospital [1] as current health systems do not routinely provide a nominated companion [4].

Routine transfer seeks to improve health outcomes through access to Western medical services, though inadvertently results in profound sociocultural iatrogenesis. Women are systematically disconnected from partners, their other children, community, their primary language(s), and culture. It is well documented that these negative sociocultural impacts result in maternal distress, further contributing to clinical risks and poorer biomedical outcomes [5].

An urgent need to reform maternity services and return healthy childbirth back to First Nations communities has been identified [6]. Emerging evidence suggests that First Nations perinatal outcomes may be improved through health system reforms including increasing First Nation service ownership and control; a First Nations maternity workforce, and continuity of midwifery care throughout pregnancy and childbirth [7–11].

The Australian maternity workforce consists of midwives, obstetricians, and general practitioner obstetricians [12] all of whom become scarce as remoteness increases. The doula industry is an unregulated and growing complementary maternity workforce. They provide skilled companionship and continuity of care to women and families during their reproductive experiences, with the aim of creating positive childbirth experiences. [13] While providing a range of support, education, resources and comfort measures, doulas do not provide medical care or participate clinical decision making. [14] Distinct from dominant culture doula practice, First Nation doulas offer an innovative and promising approach for strengthening capacity in the remote Australian First Nations maternity workforce, improving outcomes and access to continuity of care.

There is evidence that First Nations doulas work in the Western maternity system to reclaim and support cultural practices; maintain sovereignty; strengthen families and minimise impacts from routine evacuation as they assist in returning childbirth to community control [15,16]. The doula industry in Australia offers the freedom to develop decolonising curriculums and pedagogies; and new maternity workforce and employment models that recognise, prioritise and value First Nations knowledges. In complex colonised remote settings with limited maternity health care access, innovation is urgently required to meet the diverse needs of First Nations students, workers, and parturient women; alongside Western maternity services and clinicians.

Building on this evidence, our research project, *Caring for Mum on Country*, sought to address perinatal inequities by increasing the capacity of Yolŋu First Nations women to provide continuity of care for women for their own remote community during pregnancy and childbirth. Our broad objectives were to increase the capacity of Yolŋu to care for women during pregnancy and childbirth; explore strategies to increase reproductive health literacy; and for the community to lead in maternity health services planning [17].

A multicultural and multilingual team of Yolŋu (First Nations) and Balanda¹ female researchers and trainers, piloted the delivery of First Nations doula training in a remote multilingual speaking Northern Australian community. The term doula was exchanged for a First Nations word from the local Yolŋu Matha Djambarrpuyyu language –

djākamirr- meaning ‘caretaker’. Djākamirr (doula) training began in November 2019 and after pandemic travel interruptions, resumed in May 2021 Presented in this article is a case study of the enabling principles of our Decolonising Participatory Action Research (D-PAR).

Background

Our research setting is a First Nations Yolŋu community on a small very remote island in North East Arnhem Land, Northern Australia. Primary health care is provided by a community health centre with one midwife providing only antenatal and postnatal care for around 50 women per year. Due to staffing challenges, there are often prolonged periods with no midwife on-site and maternity care is provided by remote area nurses in phone consultation with district medical officers; or sometimes if during business hours, an on-site general practitioner. Tertiary medical care is accessible only via aeromedical evacuation involving an approximate one-hour flight, or a 20 min flight to a smaller regional hospital.

Women in the region experience one of the highest documented rate of preterm birth in Australia of 18–22% [1,18,19]. In the recent past, numerous eras of local Methodist Mission hospitals provided childbirth care on the island, currently transfer for birth in hospital is standard practice. The regions preterm birth rate has since increased from an average of 13.7% in 1986–1990 [20] to 20.6% in 2015–2018 [1,18,19, 21].

Strong Yolŋu identity and First Nations languages capacity within the community serves as rich sources of cultural diversity with immeasurable educational, historical and heritage value. Regional social complexity is highlighted by services that are unable to respond to people’s identities and languages. Over 90% of the community identify as Yolŋu, and English is the minority language - spoken at home by only 4.9% of the population [22]. Despite this, English remains the language of choice for the delivery of most civic, welfare and medical services as most employees of these services do not have any local language knowledge skills. By default, English is therefore often an essential pre-vocational skill barring many Yolŋu from paid skilled employment.

Methods

Over a four-year period (2018–2022), we used a decolonising participatory action research (D-PAR) approach with multiple community fieldwork sessions spanning several weeks duration. Ethics clearance was obtained from Charles Darwin University Human Research Committee with written community support provided by the local Shire.

While the PAR process usually involves an iterative cyclic process of ‘plan, act, observe and reflect’ [23] we prioritised a relationally responsive Yolŋu process. Yunkarporta & Shillingsworth [24] state that relational responsiveness is achieved through layers of respecting, connecting, reflecting and directing. Respecting and connecting were prioritised creating a strong foundation for the later stages of reflecting and directing. The project’s Yolŋu team led relational processes by introducing and connecting the project to community through ‘warming the ground’ [25] Warming the ground involves the procedural and cultural protocols for gaining community research permission, alongside our internal group processes for developing rapport, respect, relationality, and trust within our small multicultural team. These processes, based on explicit Yolŋu values and ways of being, allowed authentic collaboration with participants and the community in iterative cycles of respecting, connecting, reflecting, and directing [24]. A ‘Research Backbone’ committee, hosted by the local Aboriginal Corporation, oversaw the project, providing feedback and advice.

The djākamirr (doula) training curriculum was informed by formative data collected by senior Yolŋu researcher (ELM), using narrative-based qualitative methods (interviews and group story sharing). Yolŋu perspectives, experiences, history and knowledge around pregnancy, childbirth, and reproduction were explored. Our team visited

¹ Balanda *noun* European non-Yolŋu person.

geographical sites of cultural significance and observed/participated in cultural demonstrations.

Delivery of the djäkamirr (doula) training sessions used a developmental approach [26] Knowledge Experts (trainers) and training participants (students) frequently shared feedback and constant evolving changes to the training content, and approach were made. Training notes with group feedback were collected and kept. After completion of the doula training, participants were invited to share feedback via individual interview and/ or small group discussion.

Participants received a Plain Language Statement, which was explained and discussed in their preferred language by the senior Yolŋu researcher (second author). Informed written consent to participate was collected. Yolŋu Knowledge Experts who participated in the doula training chose to be publicly identified to situate their ancestral knowledge and ownership but for other Yolŋu training participants a pseudonym has been used.

Data was collected in the participants preferred language(s) and occasionally English. Data was digitally recorded (film, photo and dictaphone) and fieldwork notes were taken. Data was translated and transcribed into written English by the senior Yolŋu researcher (ELM) with support from a registered Yolŋu interpreter (RB). Training participant interviews were collected and translated by a non-Yolŋu Balanda research assistant (RBr) fluent in conversational Djambarrpuyŋu, with close support from an experienced senior Yolŋu researcher (RG).

Field notes, whiteboards, filming, and interviews underwent content analysis and critical reflection to identify underlying principles. The research team discussed and compared analysis results until consensus was met.

Results

Two 10-day pilot djäkamirr (doula) training sessions were delivered in the community. This article focuses on the first doula training session in November 2020, where Yolŋu and non-Yolŋu (Balanda) Knowledge Experts co-delivered a Yolŋu curriculum alongside the nationally recognised unit Promote Positive Birth Outcomes.² There were six Yolŋu Knowledge Experts (including ELM, ED, DYB) and two Balanda Knowledge Experts with midwifery and doula teaching and practice backgrounds (SI and RA).

A total of 57 Yolŋu participated in our overall project. Of these, 13 Yolŋu participated in the full package of djäkamirr (doula) training sessions. Of the 13 training participants: all identified culturally and biologically as *miyalk* - the Djambarrpuyŋu word meaning woman. Eleven *miyalk* successfully passed the required government recognised unit assessment. Four *miyalk* participated in training feedback interviews. COVID-19 restrictions precluded any further interviews.

Training participants were almost equally represented from the two moiety groups of this community (Dhuwa n = 7; Yirritja n = 6), representing ten clans, three language groups, nine ancestral homelands, and ranged in age from 21–60 years old. In the Yolŋu universe all humans and objects from the natural world are divided into two complementary subdivisions known as moiety groups. From a Yolŋu perspective these reported cultural affiliations demonstrate rigour with broad community social representation, intergenerational learning, and relational balance between moiety groups.

Fig. 1 demonstrates seven critical principles identified in our D-PAR process that underpin our multicultural research collaboration and doula training approach.

² After undergoing regular five year re-accreditation, this unit is no longer available and has since been replaced with different unit in a newly structured doula course certified for delivery 2023.

Use a metaphor for knowledge reflexivity

To incorporate the rich wisdom of Yolŋu and Balanda knowledges, a Yolŋu identified cultural metaphor was appointed and accountability in recognising both systems applied to everyone, though Yolŋu knowledges were privileged.

We have learnt from this experience that Balanda require constant reminding that their knowledge system is only one way of producing best practice in birthing and understanding the world, as the dominance of this knowledge system with daily life in Australia is reinforced. In everyday experiences where Balanda people and systems are dominant, Yolŋu find their ways of knowing, being and doing are contested, sometimes explicitly silenced, and most often treated as less valid and reliable. Yolŋu live with experiences and consequences of this 'epistemic violence' every day [27].

The Pandanus Mat (Fig. 2) provided a cultural metaphor for knowledge system reflexivity [28]. Though weaving mats is a contemporary practice, women have collected pandanus for processing and fibre work over generations spanning many thousands of years. Ancestors used mats during pregnancy and childbirth, and through the passing of time, woven fibre objects have become gendered with strong links to women, fertility, and birth. Although the Ancestors knew about the naturally occurring vegetable dyes, the available tools and technology made them difficult to use. The fibre needs prolonged soaking and at best boiling to set the colour. Pre-contact, the only options available to the ancestors were rock holes or pools for soaking the pandanus. Due to this environmental context, mats were finished only using the natural beige tones of the dried pandanus.

When Western missionaries arrived on Yolŋu lands in the 1930s, they introduced metal tins, buckets, and axes. These Western tools allowed women to rapidly adapt their weaving practice to incorporate the rich natural colours of vegetable dyed Pandanus. Understanding these historic changes, has allowed our Balanda project team to appreciate the pandanus mat as a Yolŋu metaphor about how Balanda knowledge can be safely integrated and add richness to Yolŋu ways of knowing, being and doing. This integration occurs with total Yolŋu control and agency in the weaving process. The mat's integrated knowledge is produced from the labour and skills of Yolŋu hands and though Balanda contribute their knowledge, a distinctly Yolŋu artefact is produced. Different fibre artists create different designs, showing that all women have similar but different ways of doing things.

We incorporated this metaphor into a framework for understanding reproductive health literacy [28]. In our learning and working spaces, we keep the Pandanus Mat as a physical and explicit reminder for our multicultural team and research participants that Yolŋu and Balanda knowledge systems need space to work together. Training participants and Yolŋu Knowledge Experts, explained the impact of learning this way:

The Yolŋu knowledge stories- dhäwu- had space to come up in the discussions, in the lessons, through sharing, it was very good. It gave us freedom to be free with everything that is around us. Like families, funerals, dreamtime stories, it could come out, instead of just being silent. Instead of keeping our culture and identity silent, we were free to announce it, to speak out! In that way, announcing it, speaking it out is like birthing in the natural realm.

(Goŋdjälk).

Yes, it's showing the weaving of two worlds. It's a good way to talk about our training.

(Dhamandarra).

Accommodate different constructions of time

Time is framed and experienced differently by members of the multicultural research team, the research participants, and the

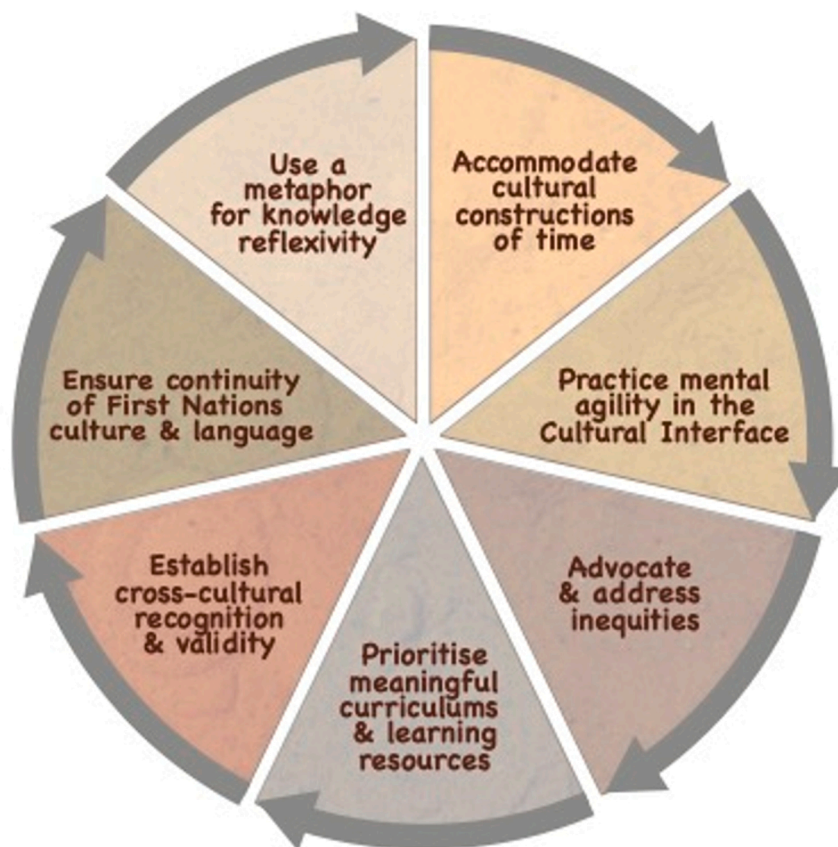


Fig. 1. Seven principles underpinning the D-PAR research collaboration and training approach.



Fig. 2. An example of a Yolŋu woven coloured Pandanus Mat. Artist: Dorothy Marrawungu- Gapuwiyak Culture & Arts. Photo: Pat Josse.

community with whom we collaborated. Working with Yolŋu people on their sovereign land meant understanding that different cultural constructions of time may cause harm or interpersonal conflict [29]; and at

worse can colonise Yolŋu values, ways of knowing, being and doing. We minimised these risks by adding extra spaces in our collaborative work to buffer pressures exerted by dominant Balanda timeframes.; We approached the research by scheduling projects with flexibility, adapting respectfully across Yolŋu and Balanda time zones.

From our experiences, the cultural construction of Yolŋu time is polychronic, cyclic and event related [29,30]. By this we mean, that time is often experienced by Yolŋu through participating in multiple activities and relationships simultaneously. Time is an embodied experience in plentiful supply. Time is felt in relation to the *gurrutu*- kinship cycles, spiritual beliefs about ancestral creation beings and stories, and the seasonal cycles of the natural physical environment. In this paradigm, time is marked and measured by seasonal plant and animal cues (ie.flowering, migration patterns, laying eggs, weather); geographical places and landscapes of ancestral importance; and spending time with relations and participating in social events (ie. deaths, births, clan gatherings, ceremonies) [30]. In some circumstances, such as visiting ancestral landmarks, temporal orientations of the past, present and future can amalgamate into circular regenerative, happening-everywhere-at-once [31] time. These perceptions of time allow Yolŋu patience and much flexibility to participate and address multiple and shifting activities and tasks, always with value placed on human interactions and relationships to each other and the natural world. There is a right season and a right time to teach and give.

In colonised Australia, a different time concept is dominant, that is Western- Balanda time. Balanda time is monochronic, linear, measurable by units and logically predictable. By this we mean, time is experienced incrementally by doing only one thing at one time [29]. Time is an externalised experience, perceived through numerical concepts (ie. minutes, hours, weeks, years) and technology (ie. watches, phones, calendars) that are pervasively used for planning and scheduling. These time-related human behaviours are colonising artefacts and reflect a

temporal orientation towards the future. In this paradigm, time is a finite and precious resource requiring careful management to prevent anxiety. Punctuality and performing tasks are valued over human interactions that build relationships. For many Balanda, this is a normative way of behaving and experiencing the world, often blinding them to other culturally constructed concepts of time [32].

Balanda team members work hard to restrain their scheduling anxiety and prioritise 'making time' in the research schedule to invest in building human relationships. This can be done in many ways such as sharing time together on bush picnics, going skirt shopping, helping relatives with transport, chatting, or sharing family stories. This is an explicit way of demonstrating respect for Yolŋu priorities. Training participant and Yolŋu Knowledge Expert, Goŋdjälk, explains:

Relationships are important. Not only kinship relationships but also sitting down and getting to know each other. Building relationships. At the training we need to know each other spiritually and culturally, not just in the natural realm. We need to know each other's connections to land, totems, ceremonies, kinship etc. We need to know each other's identity.

When we are doing intercultural teaching and learning about the human body and reproductive cycle, we are always careful to limit the colonisation of Yolŋu bodies by imposing only Balanda cultural constructions of time. For example, we explored the lunar cycle and a Western calendar month as valid ways of measuring and understanding female menstruation. We explored topics such as foetal conception and genetics through the lens of regenerative ancestral creation time and reflect on creation stories passed down from Yolŋu ancestors. As Goŋdjälk simply asserts:

It's the story from way back, the dreamtime story, and these stories met each other, from the past and from the present. Past and present knowledges came together.

As a team we know we are working well when we find ourselves shifting and moving through these temporal orientations with comfort and confidence. We understand that sometimes context dictates which cultural construction of time needs to dominate. Just because you are Yolŋu does not mean you cannot work in Balanda time, and vice versa. We bend our time to accommodate each other.

Practice mental agility in the cultural interface

Our collaborative work occurs in contested space between Yolŋu and Balanda knowledge systems, named by Nakata [33] as the 'Cultural Interface'. As a multicultural team we understand that we bring into this space our very different culturally constructed assumptions and knowledge about the World; and how our 'truths' are created and validated. In Western context it is a space complicated by the legacies of colonial power dynamics, medical hegemony, and the profound differences between our cultural and linguistically bound processes of knowledge, truth making and validation. This creates interpersonal tensions and friction as we attempt to understand and operationalise our world(s) through different languages and epistemological lenses. At worst, we create miscommunication and ambiguities that risk distress and conflict, but at best our work can be transformative and liberating as we reach a new (and sometimes shared) understanding about ourselves and each other's worlds. When we share understanding it is like a bubble of knowledge is created from both Yolŋu and Balanda.

In our djäkamirr (doula) training pilot, we explicitly declared that we were all participating as teachers and students learning different things at different times and levels of complexity. One of our group's most exciting, satisfying, and transformational educational experiences was contesting and exchanging our knowledges about the female anatomy and the reproductive system. We reached shared understandings about Balanda and Yolŋu bodies that transformed our beliefs and perceptions about each other but also illuminated important sexed cultural

assumptions underlying our body knowledge. We respect each other's freedom to speak about these sensitive topics.

Knowledge Expert and training participant, Goŋdjälk, explains:

Through our learning, we were free to express ourselves. How we felt was free to come out. Through sharing knowledge both ways, we are breaking something that was silent in the past in the world of knowledge and wisdom. It is giving a freedom for the woman to be free. Men are holding the secret and they don't want miyalk to release the truth. It's about time, we have to do something! We will have spiritual freedom and hope for the future.

Training participant, Alison, also reflects on this transformational learning:

Through this training, I learnt about the uterus and placenta. I was wanting to learn and see what they looked like. It was the first time I learnt about this. It was exciting and I look forward to more training like this. I would like to continue learning and use this training with real pregnant women as now I have more confidence to work as a djäkamirr.

Likewise, training participant, Jane, explains:

I thought I only had one thing, maypal- vagina. I didn't know there was different parts inside. It was good to learn about the different parts inside our body. I knew about the secret part but it was good for me to learn more about what was inside.

One Balanda trainer and researcher (first author) explains how it transformed her perceptions:

Exchanging knowledge with Yolŋu about how Western medicine has named parts of my body- the female body- made me understand it's named from a male gaze and so many bits named after male doctors too. It made me feel envious about the situated knowledge that Yolŋu have about the female genitals and how special and sacred that part of their body is in their culture. We don't have that in my culture- its either sexualised or medicalised.

There is much ongoing mental strain from working in the Cultural Interface [33]: it requires intellectual agility to unpack and own personal assumptions; interrogate knowledge; confront internalised colonial patterns of false superiority and inferiority; and genuinely find humility to accept multiple truths.

Purposely showing your inner-being and revealing who you are, eases some of the tensions we feel when working in the Cultural Interface. It breaks down tacit barriers between knowledge systems and lived experiences, provides insights into each other's unspoken assumptions and when the differences between our epistemologies are at their most vast, we are united by our common human experiences and feelings. Showing your inner-being is often seen as unprofessional by Balanda but it is an important strategy to ensure good relations in the Cultural Interface. We show our inner beings through spending time together, discussing our family and life roles, sharing formative life experiences, laughing, making fun, and inviting each other to attend special cultural events like funerals and research gatherings. To function well in this context, Balanda must have an unflinching commitment to self-reflexivity and an openness to interrogating their unearned power which is a direct consequence of colonisation.

Establish cross-cultural validity and recognition

From the outset, strong Yolŋu leadership demanded that our doula training needed validity and recognition in both Yolŋu and Balanda cultures and knowledge systems. Different training approaches, pedagogies, and options to build the knowledge, skills, and capacity for the Yolŋu women were explored.

We began developing a shared understanding of a doula from a Yolŋu perspective. Through multiple discussions over many months of

knowledge exchange, we began understanding the practice of doulas through the Djambarrpuyŋu word *djākamirr* meaning a caretaker- a person with responsibilities and obligations to support and care. The word doula from Ancient Greek meaning female servant [13,34] has been used in the a Western context to mean a skilled companion during pregnancy childbirth and early parenting. In much the same way, we use *djākamirr* in a Yolŋu context to mean a knowledge custodian and skilled caretaker of pregnancy and childbirth.

To ensure Yolŋu community validity and recognition, Yolŋu history, skills and knowledge are taught by Yolŋu Knowledge Experts. Yolŋu knowledge is embodied, place-based and institutionalised by intellectual property rights and protocols governing who can own, know and share knowledge. For these reasons it is was crucial that Yolŋu Knowledge Experts collaborated with us to both teach Yolŋu knowledge and also to ensure protocols are adhered to. As *Gonjdjälk*, a training participant and Yolŋu Knowledge Expert explains, the training knowledge has deep connections that define her Yolŋu identity:

I particularly like the training because my *djälkiri*- my foundation story, my dreamtime story, my creation story, my tribe's story, my belief story is connected to children, pregnant women, birthing, and everything about babies. In the natural and spiritual realm, it is the story of birthing a nation to the land itself- the creation of Yolŋu people.

Balanda validity and recognition was also ensured by offering government accredited doula training through the Australian Doula College. While the Australian doula industry is unregulated, with multiple private teachers and programs offering diverse doula training experiences and outcomes, the Australian Doula College is the only provider of government accredited training both in Australia and the world. Much like the Yolŋu knowledge system, Australian vocational education training (VET) has institutionalised protocols regarding intellectual property ownership, what can be taught, by whom and how it is assessed. The College partnered with our project to undertake learning outcomes from the government accredited units, alongside the Yolŋu ancestral knowledge curriculum.

While there was overwhelming recognition from the community that the training participants had both re-invigorated Yolŋu, and newly acquired Balanda knowledges, Australian vocational education training has no way to formally assess and recognise the additional Yolŋu-based learning outcomes achieved by participants. For example, there was no recognition for learning outcomes on understanding bilingual intercultural reproductive female anatomy and physiology.

The participants' educational achievements from the pilot were formally recognised in a community graduation ceremony and celebration, in which a longstanding Yolŋu Cultural Authority- Elaine

Guymon (Fig. 3) was inducted as a pioneering *djākamirr* and the newly trained participants celebrated as the upcoming caretakers and custodians of pregnancy and childbirth knowledge. The ceremony attended by over 100 community members and several service providers, used rich multicultural symbols including Yolŋu sacred objects, ceremonial singing and dancing, Balanda training certificates, trophies, gold keys and graduation stoles with First Nations art.

Prioritise meaningful curriculums and learning resources

We used formative qualitative research data, collected from interviews, filming, group storytelling, cultural demonstrations, and historical site visits, to construct the Yolŋu curriculum. Directly reflected were Yolŋu lived experiences, histories, practices, skills, and knowledges shared about pregnancy and childbirth. We loosely mapped the Yolŋu content to topics taught in the government accredited units. There were additional and unplanned topics that students and teachers spontaneously shared as required (See Table 1 examples). In teaching any topic, our decolonising approach began by establishing 'Yolŋu Ancestral Style' and then comparing it to 'Balanda Style'. We explicitly sought to re-invigorate and strengthen Yolŋu Knowledge and caring practices, while balancing participants access to Western medical knowledge.

Educators can nurture Yolŋu learning engagement, topic relevance and rapport by using resources and learning materials in which Yolŋu can see themselves (or similar people). Most learning resources and educational models about pregnancy and childbirth, position white-skinned bodies and medicalised birth settings as normative. It was challenging and often impossible to find meaningful learning resources and materials that reflected Yolŋu bodies, ancestral birth technologies and knowledge. From our formative research we developed learning resources such as videos featuring Yolŋu Knowledge Experts and visual communication tools. The videos used cultural metaphors, explained Yolŋu childbirth history, ceremonial practices, and bush birth technologies. We screened the videos using a portable data projector. Training participant, Joanna, explained that learning resources enhanced the training experience:

It was fun, laughing, sometimes concentrating, and then laughing again, helping, and sharing stories. I look forward to more training. I like how we changed from doing different things, watching movies, using props like the rock size of baby – this made it more interesting. I don't think there needs to be changes to the training. Everyone was manyamak-good and kind, it was manyamak from start to finish.

Table 1

Mapping of Yolŋu knowledge topics and topics in the government accredited unit promote positive birth outcomes.

Yolŋu Knowledge Topics	Promote Positive Birth Outcomes Topics
<ul style="list-style-type: none"> • Yolŋu childbirth & colonisation history • Pregnancy signs & duration • Childbirth Yolŋu style (1st & 3rd stage) • Bush birth technology • Ancestral nutrition • Ethnoanatomy & physiology female reproductive system • Perinatal ceremonies & cultural care • Yolŋu Matha- the caretakers' languages • Ancestral creation stories • Promoting the maternal & infant dyad 	<ul style="list-style-type: none"> • Effective communication • Pre-Labour Body Changes & Induction • Contractions, hormones & fear • Early & established labour support • Uplifting thoughts & reassurance • Transitions, 1st & 2nd Stages • Tearing & episiotomies • Birthplan, birthplace, consent, choice & Law • Cascade of interventions • Complications & unexpected outcomes • Scope of practice & practice tools/ resources
<p>Miscellaneous topics requested by students Tobacco smoking, regional health outcomes, contraception, Western medical roles, and First Nations childbirth culture in other countries.</p>	



Fig. 3. Elaine Guymon inducted and recognised as a pioneering *djākamirr*. Photo credit: Emma Vincent ABC News.

Advocate and address inequities

Often in very remote Australian towns such as our community research site, systemic structural barriers limit the ability of First Nations people to access education, training, and employment. Entrenched social poverty and inequities are perpetuated through systems and processes that are designed to meet the needs and benefit of colonisers-Balanda, and for the most part these are imposed on Yolŋu, further diminishing their agency. The Balanda research team members use the privilege of our research roles and external relationships to advocate with and for Yolŋu, working to expose, reverse and redress the profound level of social, health and structural inequity.

Likewise, we are aware that our doula training cohort experienced difficulties engaging with formal Western education due to entrenched social inequities and the challenges of learning in a foreign language-English. Training participants have no access to public or private transport, experience overcrowding in their houses and food insecurity, limited childcare options, and as a group had variable levels of functional English literacy ranging from extremely high to low. We explicitly planned to address many of these barriers in the delivery of the training and ensure educational access (Table 2). As these training participants explained food and transport was appreciated:

We like to have food throughout the day. We need to eat first and then we can sit and talk.

(Gondjälk).

It was good to get picked up, around 4 pm they would come around and that made it easier to come to training.

(Jane).

Ensure continuity of First Nations culture and language

Our curriculum used the human rights principles of reproductive health literacy where women have the right to ensure the intergenerational continuity of Yolŋu knowledge alongside access to Western medical knowledge [28]. Intergenerational knowledge transmission is an important Yolŋu priority and from the outset we sought to design an approach to achieve this. Senior Yolŋu staff carefully recruited an intergenerational student cohort ranging from respected Knowledge Experts, women with birth experience, and young childless women.

Training participant, Jane, explained how her learning benefited from the Yolŋu Knowledge Experts:

It was good to have the older ladies there for support. They pass their knowledge to us and we can pass it on from generation to generation. This is why I bring my young daughter to the training so she can hear this story. When we go to training my daughter sits there quietly and listens, doesn't share the story with other Yolŋu, but when we get home she asks me about it. I tell her that you can learn more about this when your older, when she finishes school. She is only a young girl but is listening.

Whereas Alison explained the challenges of learning advanced

Table 2
Example of strategies to enable student access and participation.

Access & Participation Strategies
<ul style="list-style-type: none"> • Free training and learning materials • Provision of free nutritious food, drinks, and snacks at training sessions • Free transport to and from training venues • Child/baby Friendly learning environment • Flexibility to student needs- both morning and evening training session offered • Co-delivery of teaching by Yolŋu knowledge experts in Yolŋu Matha languages • Diverse teaching styles to meet different learner needs using anatomical models, audio-visual recordings, metaphors, Yolŋu seasonal calendars, bush technologies, whiteboards, role plays and story telling

higher levels of Yolŋu language and knowledge:

It was a very different understanding [working with the older women]. And there were some words used that I haven't heard before from the older women and I still don't know really what they mean. Big words in Yolŋu Matha. It does make me confused. I don't know their meaning. It was good to hear them though. I want to learn more. More and more.

There was space to share. It is good to learn from the older women. It is good that they were sharing knowledge to younger ones, like I was there. It's good to know what they were doing before [pre-Mission times] and what they got from their Elders when they were younger. It's really good to have that knowledge passed from generation and passing the story of what to do and what will happen. It's good to learn from elders, yo manyamak.

Yolŋu Experts also shared their experiences of intergenerational knowledge transmission:

Getting the deep story and passing on the story to the younger generations for the future before they get pregnant. Teaching them. What happens during pregnancy for a young woman. The other djäkamirr and I tell our granddaughter this story together.

(Dhamandarra).

We felt confident and strong in that. We could capture the deep story and then pass this on to younger women. And sharing the ideas to the next generation, so they can carry out that dhäwu (story) in their life.

(Gondjälk).

Discussion

The Caring for Mum on Country project successfully piloted the training of Yolŋu doulas known in the locally dominant language *Djambarrpuynu* as djäkamirr- the caretakers of pregnancy and birth. This case study demonstrates that our D-PAR approach has underpinned the success of the pilot and proved a highly effective methodology for working in partnership with First Nations peoples. Our project builds upon a transformative post-settlement history of Australian First Nations people and communities using and recommending PAR as appropriate research methodology to address health and educational inequities [35]. Our experience in this project contributes further evidence that a genuine enquiry approach, where mutual learning occurs, is a useful approach for empowering community to begin addressing perinatal health inequities. The methodology is well suited to collaborative design and delivery of First Nations reproductive health training, providing an important gateway entry to further accredited training and maternity workforce participation.

In using our D-PAR approach that incorporates research with mutual learning, we have been able to articulate seven important guiding principles that underpin the success of our project and the doula training pilot. These principles provide insights into successful ways of working, teaching, researching, and learning about reproductive health in a remote multilingual First Nations community. These strategies enable other researchers, educators, and clinicians to explore their own inter-cultural professional practice.

As a multicultural team working in the Cultural Interface [33] our relationally responsive approach is only possible with Yolŋu leadership, expertise, and control of processes, alongside non-Yolŋu colleagues trust, respect, and commitment to following Yolŋu cues and pathways. Commitment to relationally responsive standpoints is essential and there are many barriers to Balanda working well with Yolŋu, or potentially other first Nations groups, to achieve this. For example, most Balanda are novices at Yolŋu ethics and relational processes. Most Balanda are blinded to these processes by the normative positioning of Balanda ways of being and doing in their everyday life experiences combined with the

arrogance of the professional working with others who they do not consider have valuable relevant knowledge.

While our innovative doula training curriculum has met many measures of cross-cultural recognition and validity, not all learning outcomes have been equally recognised in both Yolŋu and Balanda learning institutions. Of note is the lack of recognition of Yolŋu-based outcomes in the Australian VET system. In partnership with the Australian Doula College, we are conducting further research to better understand how these Yolŋu-based cultural and linguistic specific outcomes can be recognised in the VET system and ensure an honest appraisal of Yolŋu djäkamirr skills and knowledge. We recognise these ambitions pursued in the Cultural Interface will certainly be challenged by Western bureaucratic processes, accreditation time cycles and the unique strength of place-based First Nations knowledge systems and protocols, that squash Western academy aspirations of ubiquitous knowledge and universal transferability.

Conclusion

The success of our doula training pilot project disrupts a pervasive colonial narrative of First Nation deficit and demonstrates that respectful, genuine, and authentic partnerships can power transformative individual and collective community change. To meet community aspirations, our next opportunity is to partner with local and regional service providers in redesigning the maternity service to embed the role and practice of djäkamirr. We believe that every pregnant Yolŋu woman deserves the skilled companionship of a djäkamirr who can weave together the rich wisdom of Yolŋu and Balanda knowledges and contribute to improving perinatal outcomes.

Ethical statement

Caring for Mum on Country has ethics approval from Charles Darwin University Human Research Ethics Committee (Application # H18O31).

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Sarah Ireland: Conceptualization, Methodology, Analysis, Investigation, Writing – original draft, Visualization, Project administration, Funding acquisition. **Dorothy Yungirrŋa Bukulatjpi:** Conceptualization, Methodology, Analysis, Visualization, Writing – review & editing. **Evelyn Djoita Bukulatjpi:** Conceptualization, Methodology, Analysis, Visualization, Writing – review & editing. **Renee Adair:** Conceptualization, Analysis, Writing – review & editing. **Rosemary Gundjarŋbuy:** Conceptualization, Analysis, Writing – review & editing. **Yvette Roe:** Conceptualization, Analysis, Writing – review & editing. **Suzanne Moore:** Conceptualization, Analysis, Writing – review & editing. **Sue Kildea:** Conceptualization, Analysis, Writing – review & editing. **Elaine Lāwurrpa Maypilama:** Conceptualization, Methodology, Analysis, Investigation, Writing – original draft, Visualization, Project administration, Funding acquisition.

Declaration of Competing Interest

Renee Adair is the founder and director of the Australian Doula College.

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