



Indigenous Australian perspectives on the perinatal period: Social well-being, culture and early infant attachments

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ABSTRACT

Objective: Although social factors and culture are significant determinants of health in Aboriginal and Torres Strait Islander peoples, little is known academically about key interpersonal and social experiences of this population during the perinatal period, or how early attachments are formed through culture. This study addressed this gap in the literature.

Methods and measures: A reflexive thematic analysis approach was applied to the data gathered from focus groups ($N = 14$) held with Aboriginal ($N = 7$) and Torres Strait Islander ($N = 7$) mothers and their kinship systems.

Results: Five prominent interpersonal and social themes were identified: maternal-fetal attachment, infant-kinship attachment, caretaking roles/shared caregiving, traditional adoption, and ceremonies and rites of passage. Characteristics of maternal-fetal attachment were aligned with the construct in non-Indigenous literature. Post-utero, caretaking/shared caregiving roles such as 'big mum/dad' and 'small mum/dad' were identified. Ceremonies and rites of passage were understood to cement cultural roles within the kinship system, and the role of the maternal uncle was highlighted. A cultural obligation to help raise the child for biological mothers' other siblings, known as 'mums' and 'dads', was identified.

Conclusion: Discussion is centred around the necessity for 'grass roots' research from the perspectives of Aboriginal and Torres Strait Islanders, and on suggestions for future research in further exploring the themes derived from this research.

1. Introduction

It is well known that social support and social well-being throughout the perinatal period, defined as the period from conception up to 12 months of age (Centre of Perinatal Excellence, 2017), can buffer against maternal anxiety and depression (Dubber et al., 2015; Keyes, 1998; Li et al., 2017; Sufredini et al., 2022). Maternal social and emotional health can subsequently impact infants' short-term and long-term health and developmental outcomes (Misri and Kendrick, 2008), and some researchers suggest that mothers' social environment is just as important in predicting infant outcomes as biological factors (Jutte et al., 2010). From a developmental perspective, what an infant learns from its social and emotional world in these early years will form the base of its core beliefs and resilience throughout life (Masten and Barnes, 2018).

Although current research has begun to investigate this population through exploration of Indigenous voices and co-design methodologies,

such as the Aboriginal Families Study (Brown et al., 2015; Brown et al., 2019) or complex trauma and perinatal support through Healing the Past by Nurturing the Future (Clark et al., 2020), unfortunately, it remains that the vast majority of other research on maternal social well-being and social experiences is based on WEIRD (Western, Educated, Industrialised, Rich, and Democratic) populations (Henrich et al., 2010; Oliveira and Baggs, 2023) and little is understood academically about the key social and interpersonal experiences of Aboriginal and Torres Strait Islander women during the perinatal period, or how early attachments are formed through culture and the kinship system. Note that the words "Indigenous" and "Aboriginal and Torres Strait Islanders" are used interchangeably throughout this research.

The determinants of social and emotional well-being differ between Western and Aboriginal and Torres Strait Islander culture (Zubrick et al., 2010). In mainstream Australia, the concept of mental health is

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generally viewed from a clinical perspective, with a focus on an individuals' ability to function in their environment (Zubrick et al., 2010). In Aboriginal and Torres Strait Islander populations, this concept is generally broader and incorporates culture. This includes interpersonal relations and kinship systems, spirituality, ancestry, community, and land and sea (Social Health Reference Group for National Aboriginal and Torres Strait Islander Health Council and National Mental Health Working Group, 2004), and these indicators of well-being do not occur in isolation (Zubrick et al., 2010; Social Health Reference Group for National Aboriginal and Torres Strait Islander Health Council and National Mental Health Working Group, 2004). As such, culture plays an essential role for Aboriginal and Torres Strait Islander peoples (Gee et al., 2023; SNAICC, 2010), and is central to identity (SNAICC, 2010). Collectivism is core to Australian Indigeneity (Maher et al., 2021), and therefore, social cohesion is what binds Indigenous culture together and deviation and disharmony is what undermines it (Jenson, 2002). Indicators of social cohesion, therefore, help to assess strength in collectivist cultures, and these indicators are defined by measures of belonging, inclusion, and involvement. Kinship systems, based on social cohesion, are the very fabric of Aboriginal and Torres Strait Islander culture on which other connections intertwine.

High-functioning kinship systems can support cultural resilience for both Indigenous mothers and Indigenous infants. Having resilience in culture, or 'cultural resilience', is defined as more than a person's internal strengths and ability to overcome adversities throughout life, but also includes tradition, culture, community relationships, and connection to land (Lane and Hems, 2016; Waugh and Koster, 2015). This resilience has been shown to attenuate mental ill-health in Indigenous Australians (Westerman, 2003), as well as moderate the impact of trauma exposure and symptom severity later in life (Gee et al., 2023). It is well understood that in addition to the need for reconciliation (Bringing Them Home, 1997), Aboriginal and Torres Strait Islander peoples continue to suffer various forms of racism in everyday life, with lower indicators of well-being, health, and life expectancy (Australians Together, 2023; Smallwood et al., 2021), and no improvements in key maternal, newborn and child health indicators (Roe et al., 2020); therefore, interventions to promote strength in culture and cultural resilience are very important (Masten and Barnes, 2018).

With these issues in mind, there is a need to identify prominent and important social and interpersonal experiences of Indigenous mothers during the perinatal period. The collectivist, community-minded values of Indigenous mothers are likely to add weight to an already-known association between maternal social experiences and maternal and infant health. Little is known in published academic literature, however, about the prominent or most important forms of social connection and support for Indigenous mothers. Consequently, the aim of this paper is to explore Aboriginal and Torres Strait Islander perspectives on mother and infant social well-being, culture, and early attachments throughout the perinatal period, allowing a bottom-up approach from our participants to guide the research.

2. Materials and method

2.1. Philosophical perspective

A constructive-interpretive epistemological approach was adopted through the interpretivist paradigm (Goldkuhl, 2012). This recognises that prior knowledge is integrated with new insights discovered through social discourse and experience to explore, investigate, and construct new knowledge (Jonassen, 1999). This was combined with ontological critical realism (Haigh et al., 2019), with the acknowledgment that our perceptions can be influenced by our beliefs and expectations, however complex and inherent, to form what we understand as reality. In line with our epistemological approach and philosophical perspective, a qualitative research design was employed with validity addressed through practical utility for the applicability of the research findings

(Ronkainen & Wilshire 2021, pp. 22–24). This approach to validity considers ontological plausibility as the guiding principle of mirror imaged validity (Ronkainen & Wilshire, 2021). A 'critical friend' approach (Smith and McGannon, 2018; Sparkes and Smith, 2014), which involves a series of meetings between authors to discuss and provide critical feedback, was adopted for methodological soundness, providing an opportunity for themes and sub-themes to be evaluated, re-named, or re-ordered. This process allowed for insight into the factors that contributed to each theme and sub-theme, and for the data to be best represented. A reflexive thematic analysis was then undertaken on the data (Braun and Clarke, 2006, 2019, 2021).

Conducted through an English-speaking perspective, this research was conducted by a middle-aged Aboriginal (Yorta Yorta) researcher and mother as a part of her fourth-year psychology honours research, with the second author being her supervisor and COREQ guidelines (Tong et al., 2007) where followed. It is important to note that reality is subjective in nature and impacted by individual differences in language, culture, history, and life experiences (Dijkstra and Fleming, 2023). Thus, it is impractical to aim for objectivity in qualitative research (Thompson and Thompson, 2023). With this recognition in mind, the author engaged in reflexive, reflective, and thoughtful self-aware analysis, striving for an intimate understanding of the data collected. It is important to note that the author, being an Aboriginal woman and mother herself, grew up disconnected from her culture as a child of domestic violence and with a transient mother that continually relocated her, but later integrated with Aboriginal and Torres Strait cultures as an adult to raise her children. As such, her subjective views have the potential to influence the analysis process, although great care has been taken to avoid this. Ethics approval was granted by James Cook University's Human Research Ethics Committee. Application ID: H9059.

2.2. Participants

Mothers ($N = 14$) who identified as either Aboriginal ($N = 7$) or Torres Strait Islander ($N = 7$) and their Aboriginal and/or Torres Strait Islander partners, family, or kinship members participated in this study (overall sample size $N = 19$, with a total of $N = 14$ focus groups). Participants were either still pregnant with their first child ($N = 1$), in the perinatal period ($N = 11$), pregnant and still in the perinatal period with another child ($N = 1$) or had lost a baby ($N = 1$). In one focus group, the pregnant mother did not participate for cultural reasons, but her biological mother and biological cousin (cultural sister) did on her behalf. Participants were recruited through snowball sampling and word-of-mouth connections within the researcher's network across Townsville, North Queensland. An open invitation to the participants close kinship system members was extended through the participant, and as such, it is impossible to define non-participation of kinship members, however, no participants dropped out at any time during or after the research took place. The first author provided morning tea or baked goods as a reciprocal gratitude honorarium for participation. Only two males participated in the focus groups as family/kinship members; the rest were female. During the data collection process, many participants had their children present, and the first author obtained a BlueCard (working with children), and police check to ensure ethical considerations were met prior to conducting the research.

2.3. Data collection

Individual focus groups were held at the perinatal mothers' home or in a park, as per the preference of each participant. Five of the focus groups consisted of the perinatal mother and a kinship member, partner, or family member, while the remaining nine included only the perinatal mother in an unstructured interview. Qualitative data were captured on two separate recording devices for each focus group or interview to ensure recording clarity and quality, with the better-quality recording retained in a secure location by the principal researcher following the

transcribing process. No field notes were collected, and repeat interviews were not carried out, although the first author conversed many times with some participants to clarify the meaning of cultural words and their intended cultural application to a sentence, with the final transcript being read by two participants for feedback (both Torres Strait Islanders) prior to submission. The average duration of a focus group or interview was one hour, and collectively produced 100 pages of 12-point single spaced text. Our approach to data collection was guided by the principle of data saturation, meaning the point at which no new information was emerging (Clarke and Braun, 2013), and the principle of information power (Malterud et al., 2016). Continuing beyond this point would likely yield no relevant novel information (Sparkes and Smith, 2014). We acknowledge that the approach to reflexive thematic analysis and data saturation consistency has been questioned (Braun and Clarke, 2019), and note the subjective nature of data interpretation, claiming no ‘final’ range of Indigenous perspectives on the perinatal period. While entirely possible conducting further interviews may yield potentially novel results, the point of data saturation became pragmatically shaped by resources and time restraints. However, interviews had begun to repeat themselves at which point sufficient data was collected to construct a practical narrative of the results (Saunders et al., 2018). All participants were provided with an information sheet, and an informed consent form was signed prior to conducting each focus group.

While focus groups are traditionally a means of discussing a topic in general to allow participants and their kinship members significant involvement in driving the discussions around important social factors, culture, and early infant attachments throughout the perinatal period, some questions were asked in a semi-structured format to facilitate the researcher’s ability to investigate different interpersonal and attachment constructs, and aspects of early cultural learning and integration. Data from this study were obtained from ‘information rich’ focus groups with perinatal mothers and their close kinship members, and in the case of our traditional adoption focus group, with only two close kinship members and not the biological mother (for cultural reasons).

2.4. Data analysis

A reflexive thematic analysis was conducted in line with Braun and Clarke’s (2006, 2019) guidelines through our interpretivist approach, using the six-step process to identify and analyse the data. All audio-recordings were transcribed verbatim into MS Word 365 Enterprise by the first author, replacing any names, streets, or suburbs with pseudonyms to protect the identity of participants, and then imported to NVivo version 1.7.1 (1534) by the first author. In NVivo, the author (JM) familiarised herself with the responses, creating initial codes with semantic similarity and clustering analogous codes to develop broader themes to allow for latent meanings. The author then made reflexive and recursive changes where needed through the reviewing of codes, themes, and sub-themes. A critical friend approach was then implemented so the first author’s supervisor could provide critical feedback on theme labels and content (Sparkes and Smith, 2014). An inductive standpoint was implemented (data up) to analyse the data and the findings are reported below.

3. Results

The analysis resulted in five main themes being identified and explored: (1) maternal-fetal attachment (2) infant-kinship attachment (3) caretaking roles/shared caregiving, (4) traditional adoption, and (5) ceremonies and rites of passage. Table 1 depicts the themes, definitions, and example codes for each theme.

3.1. Maternal-fetal attachment

Most participants reported that previous interactions and affiliations with their unborn child was a memorable event for them. Mothers

Table 1 Themes, definitions, and example meaning units.

Theme	Definition	Example meaning unit
Maternal-fetal attachment	Interactions and affiliations between the mother and infant while in utero, including naming of baby, attributing of features, imagining of personality, and interactions during the perinatal period	Yep, I talk to myself a lot, so I talked to bub too. Yeah. His features and what he'd come out looking like, yeah. Not really. It was more of a learning curve with the eldest, with her sister. Ah, okay, if she's going to be this type of girl then probably her younger sister is going to follow in her footsteps and be that type of girl too.
Infant-kinship attachment	Interactions between the infant and the kinship system including the formation of attachments, cultural roles and social cohesion within the system, and the learning of cultural stories and language	How I bond with Bub isn't really any different to how they would like, they just come in and pick her up and feed her or burp her or nurse her or change her, yeah. Yeah, yeah, we do that already [live in and out of each other's houses]. So, it's good. It is good. It's really good. Um, my little big brother, he goes by big dad in our little family.
Caretaking roles	Who is involved in the general caretaking, including cooking, cleaning, and looking after baby	I treat them as I would treat my own kids. They'll always be fed like my own kids. You know. It's everything like that. So, the small mums will always help out. Always. There's a no-given grey area there. They have a cultural obligation to raise the child also, and the <i>Nunai</i> or the newly formed <i>Awa</i> [maternal uncle], that's welcomed the child into the family, now has a different role to the child, and advocates for the child and spends a lot of time with the child.
Traditional adoption	How traditional adoptions are conducted and what contributes to attachment	Ella [adoptive mother] is given the authority here, to speak in the space of her child. So, even before the baby is born, Ella is the mother. So, any questions in regards to the baby, is directed at Ella, and it can seem disrespectful if we are directing questions in regards to the child without Ella here. So as soon as the child came out she [adoptive mother] cut the cord, she sat back, and she opened up her shirt, and the baby was placed here [on her chest]. Even if you have your own kids, that one is special, cause that was a blessing. You keep that one closer. You don't let that one out of your sight.
Ceremonies and rites of passage	Engagement in ceremony or rites of passage, and how these impact on attachments, kinship structures, and social cohesion	Yes, with the placenta, we took it to, um, my mums, my big mums' house, at Bowen Street, and we put her placenta in the ground there. So, we just buried his placenta. Had a small ceremony, buried the placenta there and planted a tree on top. But the person

(continued on next page)

Table 1 (continued)

Theme	Definition	Example meaning unit
		that was actually running that little ceremony was John, and John was like, probably 15 at the time, holding his boy. Because he was <i>Awa</i> [maternal uncle]. So, at the age of 15 and holding his boy, and going, and had a little speech ready "Welcome to <i>Wulgurukaba</i> and <i>Bindal</i> people, we're here for burying my boys <i>kapor</i> [placenta cord] here, at <i>Wulguru ...</i> " It was his <i>Awa</i> 's [maternal uncles] that were standing on the coconut mat cutting his hair. So, it becomes like a men's circle.

explained that they sometimes imagined the fetus' features or personality, they sang the fetus cultural songs, read or talked to them, or imagined what life would be like after they were born. The four mothers who did not comment on maternal-fetal attachment had various prominent events: (1) a pregnancy that the baby was declining in weight and very few kicks were felt, (2) a pregnancy following a recent miscarriage, (3) an unknown pregnancy that was discovered one week prior to delivery, and (4) the traditional adoption pregnancy (meaning an adoption that was conducted through legally recognised traditional cultural practices of adoption and not western adoption methods). Of those who did report strong maternal-fetal interactions and affiliations, time was spent thinking about the future, "Yeah. His features and what he'd come out looking like, yeah." with others echoing this sentiment "So, it was very exciting, and I was really nervous to see what features she would have."

Interestingly, more than half of the participants reported singing to their fetus. With the mothers reporting that just over one third of these were the fathers singing and not the mothers. One participant reported that it was family and kinship members singing to the fetus and not her (the mother). In most instances, baby had been named before he or she was born. Of those that did not name baby in utero, two participants consciously chose to wait, one participant did not know she was pregnant until a week before birth, one participant's baby was born prematurely at 26/27 weeks and did not survive, and the final participant was a traditional adoption pregnancy and name of baby data was not collected.

3.2. Infant-kinship attachment

Interactions and affiliations between the infant and the kinship system were highly referenced across all focus groups, except one, where the participant and her partner were living away from her community, and her partner was 'white'. In this instance, both parents did stay with them for the first several weeks post-birth and they did plan to return to her community in a years' time. Cultural and kinship roles primarily identified were big mums, small mums, aunts, uncles, godparents, cousin-brothers (usually just known as brothers), cousin-sisters (usually just known as sisters), and grandparents.

One Aboriginal participant, while explaining white-ways/biological cousins, stated that "my mum has all these cousins which I call Aunty" while explaining her white-ways/biological Aunty as "But my mum's sister, that's more like my mum", stating she calls her mum, too, with another participant echoing this "he would be calling, you know, my sisters 'mum'". Several other participants agreed with this sentiment, from both Aboriginal and Torres Strait Islander cultures.

Another participant stated that "not even blood" was essential when calling someone Aunty, and that it was more about the role they play in

caretaking, nourishment, spiritual growth, culture, and the level of contribution to the child's overall growth and well-being. This was echoed by most of the participants, particularly for the role of aunty and uncle. From a Torres Strait Islander participant's perspective, a big mum is described as "that's my mum's eldest sister, her daughter" and these roles contributed to social cohesion when discussing big mums and social ordering:

"Inside a kinship system there's a lot of respect for Eldest. Eldest of the family holds quite a lot of weight. So, for example, a meeting won't start unless the eldest arrives, or something like that. The Eldest has to be there and there are certain people that have to be there, they're part of this decision-making process."

Other participants described the roles of mums and dads as "Mothers' siblings become small dads and small mums", "So, bub knows my sisters as mums as well", "So, with both of my brothers and probably my cousins as well, the older, like male cousins, she'll refer to them as dad and they'll play the father role just as my sisters and female cousins do for her", and "My little big brother, he goes by big dad in our little family".

The maternal uncle was identified by half of the participants, with three participants specifically mentioning the strong cultural role of the *Awa* or *Nunei* [maternal uncle] "in Torres Strait Islander culture the mother's brother is a very important role, like, he's one of the most important people", "His biggest influences will be his uncles and my uncles", and "My brothers and cousins. Brothers mainly, cause it's a cultural thing". One participant explained "my attachment to my *Awa* [maternal uncle] is very big" and "my children are always over [t]here". One Torres Strait participant mentioned that "... he has cultural authority also. He can overrule my mum and dad" when discussing cultural approval for future marriage.

All of these participants agreed that part of the *Awa* or maternal uncles' role, was to bring the boys through rites of passage, be a guide, or to advocate for the child. One participant explained the depth of the attachment to the maternal uncle with "It's the worst thing in the world when you lose your *Awa* [maternal uncle]. No matter what age you are, you lose your *Awa* [maternal uncle], your entire system has gone down. You are shut down when you lose your *Awa* [maternal uncle]."

Learning of cultural stories while in utero or post-birth was mentioned by most participants, meaning that parents and kinship members regularly engaged in the telling of cultural stories (including creation stories) to the fetus and infant as they grew, and teaching of cultural languages during the perinatal period was mentioned by four participants.

3.3. Caretaking roles

When discussing caregiving roles and shared caregiving, one Torres Strait Islander participant said, "They helped with the feeding, they helped with washing the cloth, but mainly my mum was telling me what she used to do, so I had to follow what she did", while one Aboriginal participant explained the caretaking social cohesion roles as "They'll call you over, you'll get all treated the same. Like, each kid is considered your kid" and this was echoed in Torres Strait Islander culture with comments like:

"... when she grows up, there shouldn't be any difference between how I care for her or nurture her or emotionally connect with her to how my sisters, yeah, or cousins do, because she will see us all as that equal mother or father role, or *Aka* [grandmother/older lady] role."

Another (Torres Strait) participant echoed this:

"So, small dads and small mums. So, the small mums will always help out. Always. There's a no-given grey area there. They have a cultural obligation to raise the child also, and the *Nunai* [maternal uncle] or the newly formed *Awa* [maternal uncle] (both meaning the same

thing), that's welcomed the child into the family, now has a different role to the child, and advocates for the child and spends a lot of time with the child."

The *Awa's* [maternal uncle] role was again identified as contributing to the caretaking with "So, there's a lot of that financial support. There's a lot of that moral support. Emotional support is given, but especially on the *Awa's* [maternal uncle], cultural obligation, the cultural support." One participant explained the shared caregiving role of the *Awa* [maternal uncle] as:

"... So there's a lot of the caregiving that's being shared, and if the *Awa* [maternal uncle] has a partner, the baby may even go to the *Awa's* [maternal uncle] house for a couple of hours, or for a night, or for an evening, if the mother wants to have time out. You know, with the partner, with the baby's dad. So, they do take on a role of caregiving also, and providing for the child. So, you might see *Awa* [maternal uncle] may drop around with *Kimby's* [disposable nappies] or milk, just out of the blue, and say "Here, I bought this for my boy". So, they do also contribute financially to the child."

When discussing infants and children, several participants either mentioned or agreed with the sentiment that "They call this house greedy, because apparently, we don't share him around. We don't share him enough apparently" and that you are considered "Yeah, greedy with the baby" if you did not share your baby around so that he/she can spend time with kinship members and their households.

While one participant summed up the difference in family structure as "So, we still have like the nuclear family structure, it's just got a lot more people involved in it, not just a single person and each of us rules", another suggested otherwise "So, yeah, I guess that's just explains how, what, how close Indigenous families are. You know, it's not just nuclear, right?" followed with "And you know, my mum's siblings are essentially my children's grandparents as well. So, yeah, we're not in shortage of people who love our children."

Most participants mentioned living with family during the perinatal period, or having kinship members living with them, with statements like "Ah, at the time I was living under mum's roof. Still am", "Well, [be]cause I had my cousins kids at the time", and "Ah, my dad, cause I live with my dad". Although, in one case both parents had only come to stay temporarily in the birth parents' apartment to help in the weeks immediately after birth, the remaining majority were long-term arrangements.

3.4. Traditional adoption

In one focus group, discussion centred on how traditional adoptions were conducted. The following comments highlight key features of these adoptions:

"And when it comes to children, when it comes to children now, Rosemary couldn't have any kids. So, one time, at New Year's Eve, we had a New Year's Eve party, and we all had children, and she said to us, at the back steps. She was standing at the back steps of my Aunt's house, and she said to all of us who were sitting at the back "You all know that I want a child, when are you all gonna give me a child? I want you to think about it because I've been there for you guys. I can't have kids. All my sisters, you're all aware of this. You know this. Give me a child. So, I can be a mummy too." And to see her say that, no one spoke, we were all very emotional when she said that, because we had kids, and she couldn't have any. And then my sisters have given her children. So that's how close we are. We're very, very close. So, it's not like, uh, a cousin twice or third removed, you know. It's my sister. Even in adoption, we adopt from family, and these ways have been in place in our country for thousands of years."

which was followed by

"Just another example of two of my cousins on mum's side. They'd agreed to, one sister had agreed to hand over the baby to another cousin sister. So, when she was having the baby, as soon as the baby came out, the sister cut the cord and the baby was placed on her [adoptive mothers'] chest."

When asked how traditional adoptions generally occurred, it was explained as "Through bloodline. Traditional adoption is mainly through bloodline". The normalisation of traditional adoption was suggested through comments like:

"Some sisters can't have kids. Your own sister will give them a child and that's considered normal, and, sometimes, you can be seen as greedy if you have plenty of children and your sister is walking around without a child. It can be frowned upon. Like, families can actually say to you "What's wrong with you, give your sister a child, you've got five. You can see that your sister's upset, that she's walking around and she [is] trying for a baby and it's not happening. Help her."

This statement was met with voices of agreement from the focus group and supported by comments like "Cause the child won't go anywhere" and "Still in the family". It should be noted however, that traditional adoptions do not only occur in instances where women cannot have children, and the gifting of a child is considered a great blessing.

Cultural adoptions were seen to be important in cementing kinship attachments and connections, with participants discussing a recent failed adoption:

"You see, Rosemary was promised a child, prior, by one of our brothers. She was promised a child, and she was heartbroken when he couldn't hand the child over. Because his partner at the time, who isn't from our culture, did not want to give the baby over and he wanted to. To strengthen that bond between him and Rosemary."

This was followed shortly after with:

"Because it's like well, you know, that's when I went to Peter and said to him "You promised that baby. You didn't hand that child over. Don't make those kind of ways, [be]cause they're all white people ways. When you make a promise, you hand that kid over. I said "Don't do that to any of us girls. We're your sisters. Treat us with respect."

One participant in the focus group summed up their perspective on the differences in culture between theirs and mainstream Australia, as "You know. So, we're not control freakish in that way. Where, you know, a lot of non-Indigenous people need to have control over their children."

3.4.1. Attachment in traditional adoption

Infants who were adopted through traditional adoptions were understood to be held in deep regard and great love, and the attachments no different to those of biological children, or perhaps even stronger. During pregnancy and in the labour ward, contributors to attachment in traditional adoption were seen in comments such as "So, Maree, for example, goes to get scans for the baby. Those scans will be handed over to Rosemary", "So, she [biological mother] will not talk about it. Rosemary [adoptive mother] is given the authority here, to speak in the space of her child.",

"So, even before the baby is born, Rosemary [adoptive mother] is the mother. So, any questions in regards to the baby is directed at Rosemary, and it can seem disrespectful if we are directing questions in regards to the child without Rosemary here."

"Everyone will be there to witness the handing over of the child."

Everyone”, “And we give her [adoptive mother] gifts for the baby that’s coming into her life”, “So as soon as the child came out, she [adoptive mother] cut the cord, she sat back, and she opened up her shirt, and the baby was placed here [on her chest].”, with another participant and adoptive mother stating “Even if you have your own kids, that one is special, cause that was a blessing. You keep that one closer. You don’t let that one out of your sight.”, with another participant echoing this “Just like, a, we’ve adopted, from Paul’s sister, and she means the world to me. She’s my heart. More than my own kids. She’s my blessing.”

In another focus group, not specifically focused on traditional adoption, one participant mentioned “But I’d be worried if he was too far away, and not knowing, you know, culture” when bringing up and discussing the thought of traditional adoption from her own womb.

3.5. Ceremonies and rites of passage

3.5.1. Burying of the placenta

Several participants mentioned the burying of the placenta, with comments like “... we plant it in the ground and we, you know, like you put a plant on top. So, like a coconut tree”, this was further clarified by another participant, in another focus group, with “So, we just buried, we just buried his placenta. Had a small ceremony, buried the placenta there and planted a tree on top”, and similarly by another participant “Yes, with the placenta, we took it to my mum’s, my big mum’s house and we put her placenta in the ground there”, while three other participants, from three different focus groups, agreed that “No. We didn’t go the traditional way with that one”.

One participant, while discussing another recent placenta burial, demonstrated an *Awa*’s [maternal uncle’s] speech and attachment to the infant as:

We were all born [in] Townsville, so we’re going to bury the *kopor* [cord] here in the front yard” He’s holding his son [biological nephew] the whole time, so that’s from birth. So, we form those things [roles and attachments], and we have ceremonies to cement them. That’s what ceremony is for, to cement those roles.”

One participant discussed the meaning of the placenta burial tradition as “Attachment. Attachment to family, attachment to kinship, attachment to country, attachment to land”, stating that “Because they say wherever your *kopor* [cord] is buried, or wherever your placenta is buried, you’ll go back there”.

Interestingly, one participant mentioned being encouraged (culturally motivated) to take the placenta home for consumption, stating it was for “Something to do with strength or something like that”, although she did not have the stomach for it and did not take the placenta when leaving the hospital.

3.5.2. Rites of passage: first haircut

One rite of passage mentioned by several participants was the first hair cutting as a rite of passage from babyhood into boyhood “... the first haircut, on his second birthday”, “So, yes, but the uncles, they did, the ones that were close to me, they were the ones who did that. Cut his hair”, and “... my brothers and cousins. Brothers mainly, cause it’s a cultural thing. My little big brother, he goes by big dad in our little family”, while another participant explained it in more depth:

“So, as soon as the child gets older and they start talking about cutting the child’s hair, about three or four, that’s when the *Awa*’s [maternal uncles] are actually planning things and they pay for a lot of the stuff. So, things like birthday parties, an *Awa* [maternal uncle] might be the one that’ll buy the cake, but his *Nunei Apu* [maternal uncle’s partner] will be the one, his partner will be the one running stuff.”

While discussing the differences between Torres Strait Islander culture and Western ideologies around the intended arrival of a new baby, one university qualified academic participant stated “We don’t base that

on possible outcomes. There [are] no possibilities there. The baby’s coming and you’ve got a role to play in your kinship system. You already know what role you have”, with another echoing this exact sentiment with “Already in place. Yep. Already in place.” How these roles were cemented through ceremony was explained as “it was his *Awa*’s [maternal uncles] that were standing on the coconut mat cutting his hair. So, it becomes like a men’s circle”, “everyone’s there to witness the rite of passage, but like, the mother’s sisters will be the ones cooking and will have his feast ready”, and “his *Awa*’s [maternal uncles] that are actually the MC, one *Awa* [maternal uncle] is an MC, and he will call the other *Awa*’s [maternal uncles] to come up and cut the boys locks off his hair”, while another said “People know what role they are playing, but they have ceremony to cement the role, within that kinship system, where the child sits”.

3.5.3. Tombstone unveiling

While engaging in thoughts about, and interactions with, her fetus that describe the maternal-fetal attachment construct, such as singing to her fetus, imagining his/her features, and what her role as a new mother would be like, one participant who had lost her child at 26/27 weeks gestation discussed her attachment to her baby as “But I went into premature labour, and he passed away. So, I already had a strong bond with him and that was my first born”, echoing this strong bond between the fetus and the kinship system with:

“So, I had to have someone on dad’s side come. So, dad’s brother who was like a father to me also, he was there. So, when we talk about bonding with the child, sometimes the grief and loss also pretty much covers the bonding to the child also. So, it wasn’t just me that was very, very upset but my older sister, older cousin sister and [she] travelled from Cairns. She cried the whole way when they told her, [be]cause she was really looking forward to the baby also. So, my extended family, all my mother’s sisters were very upset, I had all my brothers there, they were beside themselves because they were the *Awa* [maternal uncle] to the boy. Because it was a boy *pickaninny* [small child/baby] too, it was a male child, they felt that loss very deep. It was a very deep loss for them. You know, my brothers were there when we were saying goodbye. My brothers didn’t take it very well. They were very distraught. I was distraught, but I kind of tried to, I guess, comfort my brothers more, simply because they were very distraught at his loss, [be]cause they were going to be *Awas* [maternal uncles] and play that cultural role and they just didn’t get that opportunity.”

The infant’s tombstone unveiling/opening was described as “So, we’re gonna have a tombstone unveiling, to let go of my grief and to say that’s enough.” Tombstone unveilings and the ceremonies around these are a very kinship-oriented and cultural affair “I won’t be in charge of making the decisions. All of his siblings will be making the decisions for him”, and “So, his sister[s], Emma, Louanna and Thelma together with all their first bloods. First bloods meaning the first, their first cousins, they will all be making decisions around what they want for their brother.” Importantly, the participant explained this deep loss as:

“A piece of them missing. And, you know, tribal ways, on that side of my family, my mother’s side of my family, we have a tribal flower, which is called *Wakul*, and it grows wild on our country, and it’s a purple flower. But the thing is, is that it has roots. It’s just one big vine and it has purple flowers, but it has roots. So, when you pull up that vine, you pull up the entire vine, and it has all different purple flowers on it and roots. So, the way that my mother says things from her tribal side is this: ‘When you grab *Wakul* and you pull him, you don’t just pull one, you pull every one of us up together. Because we are one.’”

4. Discussion

An abundance of research has demonstrated that mothers' experiences in the perinatal period are critical in shaping short-term and longer-term maternal mental health, family functioning, and infant development (Dubber et al., 2015; Huang et al., 2004; Keyes, 1998; Li et al., 2017; Masten and Barnes, 2018; Misri and Kendrick, 2008; Sufredini et al., 2022). Very little of this research has been undertaken with a focus on Aboriginal and Torres Strait Islander mothers and their kinship systems; however, given the centrality of community and social identity among Aboriginal and Torres Strait Island populations, it is plausible that social experiences of mothers and infants in these communities are associated with numerous health, developmental, and functioning outcomes. The aim of this study was to offer a broad exploration of Aboriginal and Torres Strait Islander perspectives on mother and infant social well-being, culture, and early infant attachments throughout the perinatal period.

Interpersonal experiences and social well-being in Indigenous communities helps to foster community members' cultural resilience (Lane and Hems, 2016; Waugh and Koster, 2015). For mothers and infants, the perinatal period represents a vulnerable time when social experiences can significantly undermine or promote cultural resilience (Masten and Barnes, 2018; Ussher et al., 2016). Culture is central to identity in Aboriginal and Torres Strait Islander populations (SNAICC, 2010), an identity that commences its formation through these early interactions in the perinatal period, and the kinship system and ceremony are a large part of that.

We found that there were multiple caregiver roles identified as part of traditional child-rearing practices, which was in line with Lohoar et al. (2014) and Ryan (2011), and that these all contributed to culture, social health, and well-being (Healing Foundation, 2021; Lohoar et al., 2014; Ryan, 2011). Moreover, a cultural 'obligation' to help raise the child was highlighted for 'big mums' and 'small mums' (mothers' female siblings and their female children and cousins, with 'big' or 'small' referring to age ordering), as well as for 'big dads' and 'small dads' (mothers' male siblings and male cousins) in a fatherly role. Another role identified was the *Awa's* [maternal uncle], for example, in bringing over *Kimby's* [disposable nappies] or milk and holding the baby (culturally defined as his son) during rites of passage and ceremonies intended to cement these roles within the kinship system. Summarily, these roles indicated the level of biological proximity (but not always) matrilineally and the level of contribution as well as age ordering (most often) towards the infant and were accompanied by an increasing level of caretaking on the base of regularity. Some of these contributions included looking after the infant for a period of hours to days, taking the infant to ceremonies or celebrations as if they were the primary caregiver, or just regularly visiting and engaging in caretaking roles such as feeding, burping, nursing, or even just interacting and playing.

It is noteworthy that permission to take the infant/child for a period of time was not needed from the birth mother or father, with the birth mother reflecting her feeling at the time as "She's (al)right, she's with my younger sister. She's with her small mum" and this was considered normal. Importantly, several participants mentioned that the biological parents were considered 'greedy' if they did not welcome these contributions and interactions and share the baby with other households in their close kinship system. These findings were similar to those for traditional adoptions, where you were considered 'greedy' if you were walking around with several children and your sister (culturally defined) had none, and you had not offered to give her a child. This highlighted the difference in worldviews around infants and children, and the importance of the close kinship system as a network of essential support, shared caregiving, and social cohesion throughout the perinatal period and beyond, existing to bind culture together.

Many of the wider kinship attachments appeared to be cemented through ceremonies and cultural roles (Akkus et al., 2017). Some of these ceremonies, such as the burying of the placenta (Davidson, 1985;

Owen and Miller, 2021; Pol, 2021), were found to signify attachment to individuals, community, and to land, with a belief that 'wherever your cord is buried, you will return' (Focus Group 2). [Welcome to Country \(2020\)](#) suggest that ceremony and kinship attachments contributed to connection to country, and our findings on the significance of the placenta burial support this.

Understanding the differences in worldviews is vitally important, if we are to meet the efforts of reconciliation ([Bringing Them Home, 1997](#)) highlighted in the Human Rights Bringing Them Home Report, and these differences between Aboriginal and Torres Strait Islander cultures and mainstream Western ideologies presents a significant issue for intervention efforts that primarily focus on the maternal-fetal bond or primary caregiver attachment constructs. In line with our findings and reconciliation efforts, it is recommended that these intervention efforts take into consideration the wider kinship system and the roles identified here, in addition to the recognition of colonial injustices that continue to impact through trauma and forced removals ([Bringing Them Home, 1997](#)). Other studies have found that there are differences in expressions of sensitivity and caregiving behaviours in Aboriginal and Torres Strait Islander cultures ([Healing Foundation, 2021](#); [Lohoar et al., 2014](#); [Ryan, 2011](#)), and the strengths of these relationships and kinship attachments needs to be the focus of intervention efforts that include kinship members and not only the primary caregiver. Social well-being and infant-kinship attachments are an important process for both perinatal mother and infant, in both fostering social cohesion in the kinship system and community and developing a strong sense of culture for the infant within the kinship system itself. Growing up strong in culture allows an infant to build cultural resilience, an internal toolkit for adversity resilience and mental health later in life.

4.1. Limitations

It is important to note that this study was conducted in Townsville, North Queensland where 9.0% of the population identifies as either Aboriginal (6.8%) or Torres Strait Islander (1%), or both (1.3%) ([Australian Bureau of Statistics, 2021](#)) and generalisation to other areas should be cautioned. We acknowledge that qualitative work's data saturation is contentious and that more interviews would likely have yielded new or different perspectives, particularly across different regions of Australia, and we recommend that the perspectives of participants in this study are further explored, including larger sample sizes than this honour's year project permitted with time constraints. Finally, the researcher was unknown directly to five of the participants (snowball sampling) and being a very personal, high-risk topic due to historical ethical transgressions around assimilation, child removals, and similar policies, this may have prevented more open discussions. However, the researcher reduced this limitation by engaging in an extensive rapport-building process prior to each focus group session.

5. Conclusion

In conclusion, the results from this study provided some insight into Aboriginal and Torres Strait Islander perspectives on social well-being, culture, and early infant attachments, and how close kinship members' shared caretaking roles are constructed in the perinatal period. When assessing attachment, mental health, and well-being for early intervention, we know that culture significantly impacts test validity ([Westerman, 2003](#); [Westerman and Dear, 2022](#)), with [Keller \(2016\)](#) suggesting that constructs of attachment are a pancultural need but a cultural construct. This same pattern occurs worldwide ([Choate and Tortorelli, 2022](#)). For these reasons, it is important that we as academics, scientists and psychologists work together with Aboriginal and Torres Strait Islander populations, from the ground up, not just listening, but listening to understand the worldview and cultural differences around our infants and attachments. This is vital, if we are to adhere to our commitment to not inflict harm on others through our professions.

Although some researchers have suggested a social determinants framework over a biomedical framework in addressing the health inequalities for Aboriginal peoples (Greenwood and de Leeuw, 2012), many proposed frameworks do not consider the importance of social well-being, social cohesion, and early cultural attachments in this population. Given the differences between Aboriginal and Torres Strait Islander cultures and Western society, and the larger interconnected constructs of well-being that do not operate in isolation (Social Health Reference Group, 2004; Zubrick et al., 2010), this research from the perspectives of Aboriginal and Torres Strait Islander participants has helped to understand and explain these early key interpersonal, social and well-being constructs of culture and early infant attachments in more depth.

In mainstream (Western) literature, significant attention is given to one-to-one attachment constructs in the perinatal period (e.g., maternal-fetal/infant attachment; infant security attachment). When Indigenous mothers discuss attachment during the perinatal period, however, concepts of connection involving the whole kinship system are focused upon. As Lohar et al. (2014) state “conventional academic wisdom can be incompatible with traditional Aboriginal knowledge systems” (p.1). Future research is encouraged on the many elements of kinship connection identified in this study. Specifically, work is needed to unpack the key contributions of each kinship member to maternal and infant functioning, and to explore avenues to promote high-functioning kinship groups for Indigenous mothers and children. For far too long, Aboriginal and Torres Strait Islander voices have been left out of the conversation. Only when we listen to these voices will we be able to provide ethical and adequate support to these families through intervention efforts designed to maximise on the strengths of social well-being, cultural attachments and cultural resilience.

CRedit authorship contribution statement

Jodie A. Mottram: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **James A. Dimmock:** Writing – review & editing, Supervision.

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There are no relevant financial or non-financial competing interests to declare.

Conflict of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

The data that has been used is confidential.

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