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Charles Darwin University

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### A qualitative study

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RESEARCH ARTICLE

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# Exploring differences in perceptions of child feeding practices between parents and health care professionals: a qualitative study

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## Abstract

**Background:** Evidence on child feeding practice is often based on the perspectives and experiences of parents and less that of health practitioners. In this study, we explored child feeding practice in Aboriginal communities in northern Australia from both the parents and health practitioners' perspectives with the aim of informing nutrition improvement programs.

**Methods:** Qualitative research methods were employed. Using semi-structured interviews, parents ( $n = 30$ ) of children aged 2–5 years, and 29 service providers who were involved in the delivery of child health and nutrition programs in the same communities, were asked about child feeding attitudes and practices. Responses were analyzed through inductive and deductive analysis, recognizing that worldviews influence child feeding practices.

**Results:** Sharing food was a central practice within families. Parents highly valued development of child independence in food behavior but were conflicted with the easy access to unhealthy food in their communities. This easy access to unhealthy food and inadequate food storage and kitchen facilities for some families were major challenges to achieving optimal diets for children identified by Aboriginal families and service providers. The responsive style of parenting described by parents was often misunderstood by service providers as sub-optimal parenting when viewed through a dominant western lens.

**Conclusions:** Approaches to support healthy feeding practices and optimal child nutrition require health-enabling food environments. Along with a community-based Aboriginal health workforce, it is paramount that the non-Aboriginal workforce be supported to be reflective of the impact of worldview on their practice, to ensure a culturally safe environment for families where parenting styles are understood and appropriately supported.

**Keywords:** Feeding practices, Aboriginal parenting, Aboriginal worldviews, Child nutrition

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## Background

Gestation to 2 years of age is a unique window of opportunity for the development of child feeding practices that support optimal growth and development [1]. Child feeding practice is defined as the attitudes of and behaviours and techniques used by parents and/or caregivers, to influence a child's food behavior, including the types and amounts of food consumed [2]. Understanding the modifiable factors influencing a child's diet are important not only for parents and families, but also for health professionals interacting with children and families/parents, to help shape diet-related behaviour and optimize growth and development. Based on the amount and quality of parental control of a child's food behavior (demandingness) and the degree to which parents are accepting and sensitive to their children's emotional and developmental needs (responsiveness) [3], feeding practices are traditionally characterized as; i) authoritative (high demandingness and high responsiveness), ii) authoritarian (high demandingness and low responsiveness), iii) indulgent/permissive (low demandingness and high responsiveness) and, iv) uninvolved (low demandingness and low responsiveness) [4–6]. This typology is generally used to assess the association between feeding practices and child health outcomes. The authoritative style, among western populations (within Australia and other westernized populations), has been extensively studied and positive associations with child weight status and psychosocial development with this style of parenting have been demonstrated [5, 7, 8]. The findings of these studies however, may not be generalizable to non-western populations [6, 9, 10].

In Australia, western concepts of child feeding prevail in the health system and can influence the practice of health care practitioners and their notions of good parenting. Health care practice models based on western constructs of health may therefore not be effective in addressing the health needs of non-western populations in Australia [11]. This is particularly pertinent to Aboriginal and Torres Strait Islander families living in remote communities of Australia who due to the high burden of childhood illness experienced, interact frequently with health-care providers early in a child's life [12–15]. An extensive body of literature exists on the importance of health care services aligning with Aboriginal and Torres Strait Islander cultural values and health views. The evidence calls for Aboriginal and Torres Strait Islander ways of knowing and doing to be included in health care systems and processes [16–23].

Health Care in remote Australia is delivered by Aboriginal and Torres Strait Islander health practitioners alongside non-Aboriginal health practitioners. In a study on what constitutes a 'good' remote area nurse from the perspective of Aboriginal people, Dunbar et al. [24]

identified that cultural safety underpinned by respect, relationships and responsibility [25] was a fundamental characteristic of what Aboriginal staff looked for in a remote area nurse. Community members prioritized how the remote area nurse related to them and how in this relationship understanding of culture, history and the community was shown [24]. In an attempt to educate western-educated health professionals working with Aboriginal parents and families in remote Australian communities Kruske et al. [26] documented the experiences and beliefs of Aboriginal families as they cared for their children in the first year of life. They found significant differences in parenting behaviors and child rearing to that of non-Aboriginal Australian families and confirmed characteristics of child rearing previously reported [26–29]. Aboriginal parents valued the agency shown by their children and shared parenting responsibilities with the broader family. The children were active agents in determining their own needs and included in all aspects of community life. Without the Australian health system understanding and supporting this child-led parenting, Kruske et al. [26] posed that health care would fail parents and their children. For effective health care, Kruske et al. [26] concluded that health providers must engage with parents and families on the issue of child development in ways that respect and incorporate Aboriginal parenting frameworks and worldviews.

Limited existing literature on Aboriginal child rearing practices is based on the perspectives and experiences of that of parents and families [26]. There is scant literature on child feeding practice from the perspective of health practitioners. To build on the study by Kruske et al. [26], we aimed to explore existing child feeding practices from the perspective of Aboriginal parents, families and health care service providers in the community. Our purpose was to determine if differences in perspectives of child feeding may be reflected in differing worldviews.

## Methods

Qualitative research methods using semi-structured interviews were employed as we sought to provide new and rich insights in to participants' experiences of child feeding practice and the factors within their 'lifeworld' that influence this [30]. We conducted this study from a social constructionist premise that the understanding of reality is contextually embedded and shaped by worldview and cannot be measured empirically [31]. A social constructionist perspective recognizes how the meanings and interpretations of 'what is real' are influenced by the social, cultural and political forces within an individual's lifeworld. This also means that a researcher cannot "bracket-off" their 'worldview' from the process of data analysis and interpretation [32]. We used a semi-structured interview guide (Box 1) to gain deeper

138 insights into participants experiences and factors influ-  
139 encing their perceptions around child feeding practice.

#### 140 **Setting**

141 The study occurred in the Northern Territory (NT) of  
142 Australia where in 2016, 25.5% of the 228,833 people in  
143 the NT were Aboriginal. Populated areas of the NT, in-  
144 cluding the capital (Darwin), are classified as remote and  
145 about one quarter of people in the NT live in communi-  
146 ties that are classified as very remote (i.e., very restricted  
147 access to services) [33]. The NT is culturally and linguis-  
148 tically diverse, with English often spoken as a third or  
149 fourth language. Political and social structures estab-  
150 lished with European colonization of Aboriginal and  
151 Torres Strait Islander peoples underpin the socio-  
152 economic disadvantage and health inequities experi-  
153 enced by Aboriginal Australians. The median weekly  
154 personal income for people aged 15 years and over in  
155 every remote communities in 2016 was \$525 compared  
156 to \$1052 in Darwin [34]. Indigenous food systems, that  
157 Indigenous Peoples have deep knowledge of and have  
158 lived with for millennia, supplement imported foods.  
159 These foods are sourced through community stores and  
160 through other outlets providing grocery and or pre-  
161 prepared foods in very remote communities, and from  
162 supermarkets and other food outlets in Darwin and  
163 other urban centres in the Northern Territory. Food  
164 prices are high in very remote communities and some  
165 urban centres due to geographical remoteness from sup-  
166 ply centres and high remote food retail business over-  
167 heads [35]. Aboriginal and Torres Strait Islander  
168 children living in remote Australia compared to non-  
169 Aboriginal Australian children experience dispropor-  
170 tionate rates of nutrition-related health conditions [36, 37].  
171 This includes low birth weight, undernutrition, respira-  
172 tory illnesses, ear and skin disease, anaemia and dental  
173 caries. Preventable chronic diseases are also emerging at  
174 a much younger age among the Aboriginal and Torres  
175 Strait Islander population compared to the non-  
176 Aboriginal population [12–15]. Most very remote com-  
177 munities and urban centres have a health service ser-  
178 viced by the government or an Aboriginal Community  
179 Controlled Health Organization. Early childhood learn-  
180 ing centres also exist in these areas. These services em-  
181 ploy Aboriginal and non-Aboriginal staff.

#### 182 **Sampling and recruitment**

183 Recruitment of parents/caregivers and health care prac-  
184 titioners occurred in two stages. In stage one we re-  
185 cruited a convenience sample of parents through the  
186 Pregnancy and Adverse Neonatal Diabetes Outcomes in  
187 Remote Australia (PANDORA) study. PANDORA is a  
188 prospective birth cohort study which examines birth  
189 outcomes among Aboriginal and non-Aboriginal women

with and without diabetes in pregnancy and their babies 190  
[38]. Women recruited to the PANDORA study were 191  
those who attended antenatal clinics in hospital outreach 192  
services in Darwin and Alice Springs in the Northern 193  
Territory and consented to participate. Aboriginal par- 194  
ticipants with children between the ages of 2–5 years 195  
who participated in the follow-up Wave 1 and came 196  
from six specific locations in the NT (including Darwin, 197  
two urban centres and three very remote communities) 198  
were invited by PANDORA study staff (Aboriginal and 199  
non-Aboriginal women) to participate in our qualitative 200  
study between March and July 2016 (at the time of their 201  
participation in Wave 1). In stage two, we approached 202  
health care professionals and early childhood learning 203  
program coordinators in the same six locations and 204  
asked them to nominate key service providers with 205  
knowledge of child health and nutrition. Service pro- 206  
viders (both Aboriginal and non-Aboriginal providers) 207  
were then invited to participate to obtain their perspec- 208  
tives on feeding practices in parallel to parent 209  
perspectives. 210

#### 211 **Data collection**

The interview guide (Additional file 1) informed by Aus- 212  
tralian literature on child feeding practice [39] was de- 213  
veloped to explore participant's experience of child 214  
feeding and contextual influences. A local community 215  
researcher was employed to assist with recruitment and 216  
data collection, including English translation where re- 217  
quired, in two of the six study regions. Interviews were 218  
conducted by AR and the local community researcher at 219  
a mutually convenient time and place organized with the 220  
participant. Interviews were firstly conducted with par- 221  
ents and care-givers. Themes that emerged from these 222  
interviews were then presented to and discussed with 223  
service provider participants to probe their perspectives 224  
of child feeding behavior among the population they 225  
served. 226

#### 227 **Ethics**

The study was conducted in accordance with the Declar- 228  
ation of Helsinki and ethics approval was provided by 229  
the Human Research Ethics Committees of the Northern 230  
Territory Department of Health and Menzies School of 231  
Health Research (HREC 2015–2425) [40]. Prior to con- 232  
ducting interviews, the research team went through the 233  
study information sheet with participants and informed 234  
written consent was obtained. 235

#### 236 **Researcher position**

The research team comprised Aboriginal and non- 237  
Aboriginal Australian researchers. A social construction- 238  
ist perspective recognizes that a researcher cannot rid 239  
themselves of their 'lifeworlds' and therefore needs to 240

241 reflect on how these may influence study findings and  
 242 potential biases or even misinterpretations of the data  
 243 [31, 41]. AR, a non- Aboriginal researcher and lead au-  
 244 thor was raised with an Indian cultural background and  
 245 attained undergraduate university qualifications in India  
 246 and postgraduate qualifications in Australia. AR com-  
 247 menced work in the Aboriginal and Torres Strait Is-  
 248 lander Peoples health context in 2015 and had been  
 249 involved in Maternal and Child nutrition research for  
 250 the past 5 years [29, 42, 43]. Her own cross-cultural ex-  
 251 perience has provided her with a clear view on how cul-  
 252 tural contexts and social structures influence one's  
 253 values, experience and behaviour. AR approached this  
 254 qualitative study with limited pre-conceived assumptions  
 255 on child feeding practice of Aboriginal parents which  
 256 limits researcher biased theories to some extent [44].  
 257 Authors (RK, LMB, LM and JB) contributed their exten-  
 258 sive experience in conducting qualitative research (RK,  
 259 LM, JB) in Aboriginal and Torres Strait Islander Peoples  
 260 health (RK, LMB, LM, JB) and nutrition (LM, JB). Au-  
 261 thors (AR, RK, LMB and JB) were cognizant of the po-  
 262 tential for data misinterpretation being non-Aboriginal  
 263 and worked with authors LM and VP who provided an  
 264 Aboriginal lens to data interpretation. The local commu-  
 265 nity researchers including author VP, assisted AR in the  
 266 field in two locations, by establishing rapport with par-  
 267 ticipants and reflecting with AR on the meaning of par-  
 268 ticipant responses from their perspective.

#### 269 Data analysis

270 Data analysis occurred in two stages. First, parent inter-  
 271 views were transcribed by AR and uploaded into NVivo  
 272 (Version 11) software for data management and coding. A  
 273 set of codes were inductively derived from the data and re-  
 274 fined through verification with a second researcher (RK).  
 275 AR then coded all data. Coded data were summarized,  
 276 and themes identified from summary reports. Second, ser-  
 277 vice provider interviews were transcribed and deductively  
 278 coded in NVivo based according to the themes that  
 279 emerged from the parent interview analysis. RK and AR  
 280 independently coded five randomly selected interviews  
 281 and through discussion reached consensus on the coding  
 282 approach. Central to data analysis was the recognition that  
 283 a parent/care-giver's child feeding practice is likely to be  
 284 strongly influenced by worldview [41]. Authors AR and JB  
 285 drew on their observations and experiences of child feed-  
 286 ing practice in different cultural contexts and knowledge  
 287 shared with them on child rearing from their work and re-  
 288 lationships with Aboriginal experts and considered this in  
 289 relation to the emerging themes and existing literature on  
 290 child feeding practices. Authors LM and VP reviewed  
 291 these interpretations.

#### 292 Results

293 Thirty parents (28 mothers and 2 fathers, mean age of  
 294  $30 \pm 7$  years) with children aged  $3 \pm 1$  year (14 girls and  
 295 16 boys) participated. Among the 29 service providers,  
 296 14 were Aboriginal and 26 were female. Service pro-  
 297 viders included 16 health care practitioners, 4 family  
 298 support service providers, 6 early childhood learning  
 299 program service providers, one Aboriginal Liaison officer  
 300 and an Aboriginal Elder.

#### 301 Family and sharing food is central

302 Most participants lived with one or more extended fam-  
 303 ily member/s (e.g., grandparents, uncles, aunts,  
 304 nephews) and shared meals (either cooked at home or  
 305 ready-made purchased from a shop). The mother or  
 306 grandparents were identified by most as the primary  
 307 influencers of their child's diet and siblings and cousins  
 308 also as significant influencers. While several parents in-  
 309 dicated their child to have unhealthy food only some-  
 310 times, they also commented that these foods were  
 311 wanted by their child when their parent, cousins or  
 312 others were observed by the child to consume these.

313 *"We buy coke, just for me and my partner. Then he*  
 314 *sees us and asks for it. We can't say anything then"*  
 315 *– Parent participant.*

316 School and child care settings were also reported to  
 317 provide meals to the children in attendance. Food  
 318 provision through these settings was seen by service pro-  
 319 viders to provide food security for some families. Service  
 320 providers highlighted food insecurity in association with  
 321 overcrowding (due to inadequate housing stock in some  
 322 communities) as a common issue they had observed that  
 323 prevented availability and access to food for some fam-  
 324 ilies at different times. Community childhood learning  
 325 settings were said by service providers to provide oppor-  
 326 tunity for service providers to talk with families about  
 327 food insecurity issues; rarely however did families raise  
 328 such concerns. In contrast, several Aboriginal health ser-  
 329 vice providers commented on the influence they were  
 330 able to have on healthy eating habits in the community  
 331 through their relationships with parents.

332 *"At lunch time [Mothers] get taken home with a*  
 333 *baby food and usually a hot lunch for the mother.*  
 334 *We do activities like play group, but the food is the*  
 335 *main thing" – Non-Aboriginal participant, Early*  
 336 *learning program manager.*

337 *"I work here [early learning program] and I will al-*  
 338 *ways talk to them [parents] a lot. If your kids are*  
 339 *hungry at home you should come here, we've got*



340 *good food here*” – Aboriginal participant, Health  
341 care provider.

#### 342 Families pleased with child’s appetite

343 The majority of the parents expressed they were “happy”  
344 with their child’s approach to food indicating that their  
345 child ate everything that they were provided. Many par-  
346 ents aspired for their child to be brought up with a  
347 healthy diet.

348 *“It is hard for me to think that I am the one who*  
349 *made him like that [overweight]. I just want my son*  
350 *to eat the right food, makes me feel good”* – Parent  
351 participant.

352 Service providers commented that children were very  
353 comfortable to accept or ask for food from other family  
354 members. While most parents referred to preparing  
355 meals at home daily for their children, service providers  
356 had the view that meals were purchased as takeaway ra-  
357 ther than home prepared due to the lack of cooking  
358 and/or storage facilities in some homes.

359 *“... like it is a lot easier to get the takeaway and buy*  
360 *a pre-prepared meal than buying vegetables and I*  
361 *mean families may not have frying pans or cooking*  
362 *utensils at home it is just convenience.”* Non-  
363 Aboriginal participant, Early learning educator.

#### 364 Highly valued child autonomy

365 Parents implied a high level of autonomy afforded to the  
366 child with respect to child feeding. Children generally  
367 were said to eat when they felt hungry, ate whatever they  
368 liked to eat, and were admired when able to demonstrate  
369 they were capable of feeding themselves. Parents praised  
370 their child’s demonstration of independence such as  
371 their ability to go to the kitchen and serve themselves  
372 when hungry or to go to the fridge and select something  
373 to eat for immediate and/or later consumption.

374 Most parents said that they were generally ‘easy’ (not  
375 strict) with their child’s behaviour and valued their  
376 child’s own decision on when, and what, and how much  
377 to eat. Only a few parents referred to having set meal  
378 times in their family. Several parents specified that their  
379 child could eat anything they chose even if it included  
380 unhealthy food items.

381 *“I am just going to be easy watching him eating. It*  
382 *makes me feel good. Like I am happy the way he is”*  
383 – Parent participant.

384 Parents however also commented on strategies they  
385 used to encourage healthy food consumption and/or re-  
386 strict unhealthy food consumption, such as offering a

different food to one that was not liked, hiding healthy 387  
food in other food items, hiding food from the child or 388  
talking to their children about healthy and unhealthy 389  
food. However, most parents indicated that even if they 390  
did try to create boundaries regarding consumption of 391  
unhealthy food items, sometimes they would give in. 392

*“Because every time I go to the shop, he always* 393  
*wants coke. And I am trying to stop him from drink-* 394  
*ing coke. He cries, he can cry whole day for coke.* 395  
*Mum I want coke, I want coke. I say, you can’t drink* 396  
*it. You can easily get sick. Sometimes he listens.* 397  
*Sometimes he doesn’t. He wants to fight with me.* 398  
*Sometimes I give in...”* – Parent participant. 399

Service providers also had observed that parents in 400  
general responded to a child’s hunger cues, tended to 401  
provide whatever food was asked for, and did not tend 402  
to use persuasion to influence a child’s food intake. On 403  
the other hand, they had also observed parents asking 404  
their child if they were hungry and talking to the child 405  
to encourage them to eat healthy food. Most non- 406  
Aboriginal service providers agreed that parents had an 407  
‘easy’ parenting style and thought there was minimal 408  
emphasis on ‘disciplining’ their children. They described 409  
parenting as child-led and that parents never said ‘no’ to 410  
their child/ren. 411

*“I see it as more of a parenting issue not wanting to* 412  
*say no to a child where it is not helpful towards the* 413  
*child to make their own choices when they are 3 or 4* 414  
*in what they eat, what they don’t eat. So, I see it as* 415  
*more of a parenting issue that parents don’t know* 416  
*how to say no to their children because they don’t* 417  
*want the reaction of saying no”* – Non-Aboriginal 418  
participant, Health care provider. 419

Aboriginal service providers thought that parents 420  
should say ‘no’ to their child/ren and that those that did 421  
were ‘strong’, but that not all showed this same behav- 422  
iour to their child/ren. 423

*I see a lot of things happening with the parents and* 424  
*kids these days. Because kids are really crying for* 425  
*this junk food, but mum can’t give that “you don’t* 426  
*take this” they should give healthy foods. But kids go* 427  
*like mad and cry and what they (parents) do is they* 428  
*buy for that 1 day. “You shall start eating healthy* 429  
*food” that’s all they should talk. Some parents do* 430  
*that. But some don’t* – Aboriginal participant, 431  
Health care provider. 432

Service providers also commented on the younger gen- 433  
eration “not learning the skills of their parents” and/or 434

435 “forgetting their culture” by not being firmer with the  
436 children.

437 *No, it is not our culture. ... when the child cries...  
438 they [parents] should say, no, you can't have that.  
439 Why? Because it is not good for you. That's what the  
440 parents should say to their kid. Talk them into it.  
441 Just talk to them. This is not, this is good for you.  
442 Get some fruit* – Aboriginal participant, Elder.

#### 443 Challenging food environment

444 Service providers commented that healthy foods were  
445 usually expensive and limited in variety in the commu-  
446 nity supermarket and that the unhealthy food items were  
447 often displayed at eye level and made very visible and at-  
448 tractive to children.

449 Service providers reported that tantrums at supermar-  
450 kets were common when children didn't get confection-  
451 ery (lollies or chocolates). Most referred to having  
452 observed parents offering unhealthy food options in  
453 order to make their child stop complaining or crying  
454 about the food they desired. Several commented that a  
455 crying child is considered “shame business” (a situation  
456 that can cause embarrassment or disempowerment [45]  
457 as a child should not be distressed) for the parent and  
458 probably the reason for the parent to easily give in. Sev-  
459 eral parents commented on how they avoided taking  
460 their children to the supermarket to avoid ‘tantrums’.

461 *“I think it is hard. I do think the mothers give up  
462 sooner than later. It is hard, like I have seen children  
463 in the community, and I see them here (clinic) as  
464 well. They don't like their child to be visibly dis-  
465 tressed that is a shame job. So, they do give in easily  
466 because of the shame job”* – Non-Aboriginal partici-  
467 pant, Health care provider.

468 *“But I don't like [him] taking him to the shop. He  
469 might want lollies there. If I want to go to the shop, I  
470 will leave him with his aunty”* – Parent participant.

471 Service providers commented on the social (e.g., do-  
472 mestic violence, gambling) and health issues (e.g., sick-  
473 ness) that impacted some families' abilities to provide  
474 healthy food for their children. Some non-Aboriginal  
475 service providers made judgements of the lifestyle of  
476 families in the communities and attributed issues with  
477 children's diets to laziness; lack of time management,  
478 disciplining of children, and routine; and, questioned if  
479 parents actually followed their professional advice.

480 *“I think there are a lot of answers we want to hear. I  
481 think a lot of mothers talk about feeding that at  
482 breakfast, they really love the things that we like to*

*hear, like Weet bix* – Non-Aboriginal participant, 483  
Health care provider. 484

#### 485 Strengthening child feeding practice

486 Service providers offered a wide range of strategies and  
487 advice on how they thought child feeding practices could  
488 be improved. Aboriginal service providers suggested  
489 strategies where Elders talk to young parents about the  
490 importance of providing the right food to their child/  
491 ren, involving children in activities like bush walks and  
492 other physical activities, families taking their children  
493 back to their homeland during holidays and, positive  
494 role modelling. Strategies offered by both Aboriginal and  
495 non-Aboriginal service providers included disciplining  
496 the child/ren and specifically saying ‘no’ to children,  
497 educating and reiterating to families the importance of a  
498 healthy diet and home cooked meals and, and providing  
499 money management training. Strategies to prevent tan-  
500 trums at the supermarket were also offered.

501 *“They should take kids to the supermarket. Take the  
502 kids with them while going, make the kids busy with  
503 playing then the mother can do shopping. The kids  
504 can come with the mother but make sure the little  
505 kid behave himself. You can tell your kid to behave  
506 himself* – Aboriginal participant, Health care 507  
provider.

#### 508 Discussion

509 The views expressed by parents and service providers  
510 offer insight into the experience and perceptions of child  
511 feeding in the communities involved in this study. Ser-  
512 vice providers were aware of differences in child feeding  
513 behavior to that of Australian western practices and  
514 were aware of the incongruence between child-led par-  
515 enting and an environment that undermined parent as-  
516 piration to guide healthy eating. Several non-Aboriginal  
517 service providers however viewed these differences as  
518 the problem. This demonstrates how different ‘life-  
519 worlds’ can influence perceptions of what is considered  
520 appropriate child feeding practice which may then influ-  
521 ence how culturally safe parents feel when accessing  
522 health care.

523 Notable characteristics of child feeding practices on  
524 which both parents and service providers concurred in-  
525 clude: parents being highly responsive and less demand-  
526 ing with their children, and, highly valuing their child's  
527 autonomy in decision-making. These characteristics  
528 most closely resonate, from a western perspective, with  
529 a highly responsive and low demanding parenting style,  
530 where parents are generally warm and affectionate but  
531 reluctant to enforce ‘code of conduct’ with children [4,  
532 5]. This responsive approach to child feeding along with  
533 an appreciation of child autonomy reflects an Aboriginal

534 collectivist approach embedded in Aboriginal culture  
535 and worldviews [26, 28]. In a collectivist society, individ-  
536 uals are tightly integrated with each other and highly  
537 value the concept of 'sharing' which is quite contrasting  
538 to a western individualist society where loosely inte-  
539 grated individuals prioritize private matters [46]. Based  
540 on a collectivist view, a child born into an Aboriginal  
541 family is likely to learn the concept of 'sharing' early in  
542 life and to develop to be independent and confident  
543 within the extended nature of their family [47–50]. This  
544 enables the child to be autonomous in deciding the  
545 what, when and where in their interactions with parents  
546 and family. Kruske et al. [26] further describes that such  
547 practices reflect on how Aboriginal children are raised  
548 "strong". On the other hand, children born to an indi-  
549 vidualist society are generally regarded as dependent and  
550 helpless and hence taught to follow routines and raised  
551 to follow instruction and be obedient. The worldview of  
552 an individualist society is likely to interpret the highly  
553 responsive and lower demanding behaviour of parents as  
554 potentially leading to negative outcomes for the child  
555 [50]. Hence, when viewed through this lens, such col-  
556 lectivist behaviour may be perceived as different and  
557 problematic, and therefore difficult to accept as also re-  
558 ported by Smith D et al. [51]. They observed different  
559 views on child growth between health professionals and  
560 community members in an Aboriginal community [51].  
561 This was despite the recent literature indicating the ben-  
562 efits of responsive parenting as an appropriate way of  
563 child rearing [52].

564 This distinction in worldview is reflected in the re-  
565 sponse elicited from the majority of non-Aboriginal ser-  
566 vice providers who interpreted their observations of  
567 parenting as an 'undisciplined way of Aboriginal parent-  
568 ing' and 'parents unable to make a decision for their  
569 child'. This parenting approach was viewed as problem-  
570 atic particularly when it was seen to enable children to  
571 easily access and consume unhealthy food items. Abori-  
572 ginal service providers tended to be less critical and  
573 where they had concerns, they provided strategies to  
574 strengthen child feeding practices. This included parents  
575 and family being positive role models, involving children  
576 in community related group activities, and parents guid-  
577 ing a child's food choice. These strategies reflect the col-  
578 lectivist values and world views that promote Aboriginal  
579 children to bond with each other and their extended  
580 family [53]. Support for intergenerational knowledge  
581 transfer was another strategy identified by the Aboriginal  
582 service providers to strengthen child feeding practices.  
583 An ethnographic study that explored factors influencing  
584 food choice in a remote Aboriginal community observed  
585 similar findings regarding the importance placed on  
586 knowledge transfer within families. Aboriginal people in  
587 this ethnographic study expressed disconnect between

588 their knowledge related to their long-established trad-  
589 itional diet and the limited knowledge they believed they  
590 had of the western diet [54]. The interest expressed by  
591 community members in empowering and guiding fam-  
592 ilies to teach their children about the traditional food  
593 system as well as the western diet was highlighted in the  
594 same ethnographic study [54].

595 The existing food environment in the community and  
596 inadequate home infrastructure associated with food in-  
597 security were major challenges to 'positive' child feeding  
598 practices identified by both participating families and  
599 service providers. Service providers referred to the high  
600 cost of healthier food items and easy accessibility of un-  
601 healthy food items they observed. Exposure to an un-  
602 healthy food environment is likely to clash with a  
603 'responsive/low demand' style of parenting, particularly  
604 as young children may not have developed their cogni-  
605 tive capacity to discern between foods that are good or  
606 not good for their health and wellbeing [55]. Environ-  
607 mental cues such as colorful food packaging and brand-  
608 ing in addition to pleasurable taste can interplay and  
609 interfere strongly with children's ability to make healthy  
610 choices [55]. This vulnerability of children to the mar-  
611 keting of unhealthy foods is reflected in Australian gov-  
612 ernment legislation such as the 'Responsible Children's  
613 Marketing Initiative' [56]. Strategies put forward by the  
614 service providers to address these concerns included re-  
615 striction of promotion of unhealthy food items in stores  
616 and in the community, enabling shops to have affordable  
617 and a wide variety of healthy items, and the provision of  
618 community level cooking classes. A systematic review of  
619 dietary interventions for Aboriginal and Torres Strait Is-  
620 lander Peoples [57] of Australia revealed that strategies  
621 including restriction of promotion of unhealthy food and  
622 drinks [58] and implementation of price discounts on  
623 fruits, vegetables, diet drinks and water [59] have shown  
624 positive purchasing patterns in remote Aboriginal com-  
625 munities. Such structural-ecological interventions that  
626 directly address the determinants of food insecurity and  
627 enable healthy food choices, rather than solely educating  
628 parents about healthy eating and feeding practices, are  
629 likely to positively contribute to strengthening child  
630 feeding practices [60–62].

631 Concerns expressed by the parents in relation to their  
632 child's exposure and consumption of unhealthy food  
633 items were not known to service providers (majority  
634 health practitioners). This may be because parents often  
635 present at health services with acute concerns, thus pro-  
636 viding limited health promotion opportunities, and/or  
637 because of limited trust to raise such issues with health  
638 personnel [63, 64]. Researchers involved in Aboriginal  
639 and Torres Strait Islander Peoples health research high-  
640 light the need for Australia's health system to value its  
641 Aboriginal and Torres Strait Islander workforce and



642 provide continuous care, that enables the establishment  
643 of meaningful and trusting relationships, and respects  
644 Aboriginal and Torres Strait Islander Peoples ways of  
645 knowing and doing [63, 64].

646 It is evident that the health practitioners in remote  
647 Aboriginal communities faces an enormous challenge  
648 when confronted with the day-to-day reality of child  
649 health issues that are diet-related but underpinned by  
650 structural issues outside of their realm of control and  
651 clinical training. This research shows a need for the  
652 health workforce and other service providers to be sup-  
653 ported to confront the influence of worldview on prac-  
654 tice. This is critical to providing meaningful services to  
655 families to strengthen and enhance child-feeding prac-  
656 tices [65–67]. Anti-racist frameworks are emerging for  
657 organizations to support their employees to use self-  
658 reflection and confront white supremacy, and to put in  
659 place system-wide anti-racist change [68, 69]. Simultan-  
660 eously, an empowered and strengthened Aboriginal  
661 health workforce within the Australian health system is  
662 critical to promote a culturally informed and appropriate  
663 work environment and the constructive exchange of  
664 concerns and education between Aboriginal families and  
665 health professionals and other service providers [16, 22,  
666 70, 71].

667 The major strength of this study was the involvement  
668 of community researchers (one of whom (VP) contrib-  
669 uted as a co-author) in two of the three very remote  
670 communities who created a safe space for Aboriginal  
671 parents to talk about their child's diet and food behav-  
672 iour with AR and helped with understanding child feed-  
673 ing from an Aboriginal worldview. In addition to  
674 strengthening participant engagement, they tuned into  
675 participant body language and semantics. For instance,  
676 the word 'deadly' may not mean dangerous or to be  
677 avoided, when used by respondents, but rather good and  
678 an accomplishment. The experience of child feeding  
679 shared from the perspective of the non-Aboriginal ser-  
680 vice providers interviewed, may be biased to those fam-  
681 ilies who present to the health service for medical care.  
682 This clinical setting also may limit opportunity for  
683 meaningful discussion between clients and health practi-  
684 tioners on child feeding. The views discussed in this  
685 study are of those interviewed in the participating com-  
686 munities. We acknowledge the diversity of culture and  
687 social norms among Aboriginal and Torres Strait Is-  
688 lander Peoples and communities, and that therefore the  
689 findings may not reflect those of other parents, other  
690 service providers and/or other communities. However,  
691 the purpose of this qualitative research was to gain a  
692 richer insight into perspectives of child feeding practices  
693 and how these may be influenced by worldview. English  
694 was not the first language for some participants and  
695 though the community researchers assisted with

language interpretation, it is likely to have influenced the  
depth of information that parents shared.

## Conclusions

This qualitative study provides insight to Aboriginal and non-Aboriginal worldviews as represented in experiences and perspectives of Aboriginal child feeding practice within several communities. Service providers unanimously stated the need for health-enabling food environments and opportunities for positive role-modelling in the community to support healthy feeding practices and improve child health and nutrition. The responsive/low demand parenting style of parents was misunderstood by some non-Aboriginal service providers as sub-optimal parenting when viewed through a dominant western individualist lens. Such disempowering views suggests the requirement for health services to support their staff who operate in complex and culturally diverse environments to practice culturally safe healthcare. Further, it highlights the importance of the Aboriginal health workforce who can promote Aboriginal ways of knowing and doing. Structures to support service providers confront the influence of worldview on practice are needed to provide culturally safe environments for families.

## Abbreviations

AR: Athira Rohit; HREC: Human Research Ethics Committees; JB: Julie Brimblecombe; LM: Leisa McCarthy; LMB: Louise Maple-Brown; NT: Northern Territory; PANDORA: Pregnancy and Adverse Neonatal Diabetes Outcomes in Remote Australia; RK: Renae Kirkham; VP: Valentina Puruntatameri

## Supplementary Information

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### Additional file 1.

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## Authors' contributions

Conceptualization, LMB and JB; Formal analysis, AR and RK; Funding acquisition, LMB and JB; Methodology, AR and JB; Project administration, AR; Supervision, JB; Writing – original draft, AR and JB; Writing – review & editing, AR, RK, LM, VP, LMB and JB. All authors have read and approved the manuscript.

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**755 Availability of data and materials**

756 The datasets analysed during the current study are not publicly available due  
757 to identifiable information but 'the Partnership's Aboriginal and Torres Strait  
758 Islander advisory group will decide data sharing on reasonable request.

**759 Declarations****760 Ethics approval and consent to participate**

761 Ethics approval for the work was gained from the Human Research and  
762 Ethics Committee (HREC) of the NT Department of Health and Menzies  
763 School of Health Research (HR- 2015-2425). Written informed consents from  
764 participants was obtained.

**765 Consent for publication**

766 Not applicable.

**767 Competing interests**

768 The authors declare that they have no competing interests.

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