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RESEARCH ARTICLE

Addressing childhood obesity in Queensland: Aboriginal and Torres Strait Islander Health Worker perspectives and practices

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Abstract

Issue Addressed: Obesity disproportionately impacts Aboriginal and Torres Strait Islander children compared to non-Indigenous children. Aboriginal and Torres Strait Islander Health Workers (AHWs) in Queensland support the health of Aboriginal and Torres Strait Islander peoples. However, little is known about their perspectives and practices on addressing childhood obesity. The aim of this study was to investigate AHW perspectives and clinical practice behaviours with Aboriginal and Torres Strait Islander children and their families.

Methods: In a cross-sectional mixed-methods approach, a purpose-developed online survey (25 items) was distributed to the AHW workforce in Queensland (~100 AHWs). The survey explored [1] role characteristics, [2] current attitudes and beliefs about childhood obesity, [3] barriers to discussing weight management, [4] clinical practice behaviours and [5] demographic characteristics. Eight AHWs responding to the survey also participated in semi-structured telephone interviews to discuss their survey responses.

Results: Fifty-five AHWs responded and 45 completed the survey. While the majority of respondents (91%) agreed that addressing childhood obesity was an important part of their role, fewer (67%) agreed that obesity was an issue in Aboriginal and Torres Strait Islander peoples. Over half (55%) found it difficult to discuss overweight and obesity with children and families and only 22.5% reported measuring height and weight often. Key themes included a willingness to address childhood obesity, with experience and training being key enablers to discussing the issue. There was a perceived lack of culturally appropriate programs to support AHWs working with families.

Conclusions: AHWs report a willingness to address childhood obesity within their roles, however many find it difficult to raise the issue with families, with even fewer routinely undertaking obesity assessment practices.

So what?: These findings could inform training initiatives for AHWs to optimise screening, identification, referral, and treatment of childhood obesity in Aboriginal and Torres Strait Islander communities.

KEYWORDS
Childhood obesity, clinical practice, health promotion, health workers, indigenous

1 | INTRODUCTION

Aboriginal and Torres Strait Islander peoples traditionally had healthy diets and lifestyle behaviours. Colonisation and dispossession of land resulted in a loss of connection with highly nutritious traditional foods, particularly in urban areas. These effects on the social and cultural determinants of health over several generations are now impacting the health of Aboriginal and Torres Strait Islander children who have disproportionately higher rates of childhood obesity compared to non-Indigenous children.[1] Data from the 2018-2019 National Aboriginal and Torres Strait Islander Health Survey and 2017-2018 National Health Survey indicates that the prevalence of obesity amongst Aboriginal and Torres Strait Islander children aged 2-14 years was 12.7% compared to 7.8% among non-Indigenous children.[2] By 15-17 years, the prevalence of obesity was double that of their non-Indigenous counterparts (17.6% vs 8.6%).[2] Rates of obesity increase disproportionately as Aboriginal and Torres Strait Islander children mature into adults who are 39% more likely to be obese than non-Indigenous adults.[3] Children with obesity are more likely to develop adverse physiological and psychological complications, such as metabolic syndrome, cardiovascular risk factors, depression and reduced quality of life.[4-6] These consequences are amplified within Aboriginal & Torres Strait Islander peoples, with obesity estimated to account for 9%-17% of the total gap in life expectancy compared to non-Indigenous Australians.[7] Approximately 37% of the burden of disease in Aboriginal and Torres Strait Islander peoples is preventable by reducing exposure to the modifiable risk factors of high body mass (8%), lack of exercise (6%), high blood pressure (5%) and high plasma glucose (5%).[8] This highlights a significant health gap that warrants further attention.

The Queensland Health 2016-2026 Aboriginal and Torres Strait Islander Health Workforce Strategic Framework recognised the importance of engaging with Aboriginal and Torres Strait Islander Health Workers and/or Health Practitioners (AHWs) to close the gap in health outcomes for Aboriginal and Torres Strait Islander peoples in Queensland.[9] AHWs are the members of the Aboriginal and Torres Strait Islander health workforce who form the main point of health service contact for Aboriginal and Torres Strait Islander families.[10] Their role is to deliver culturally responsive and comprehensive health promotion, assessment, intervention and treatment services to people aged 0-19 years and their families through hospital and community settings.

Despite the prevalence of obesity in Aboriginal and Torres Strait islander children, the availability of dedicated health services within Queensland to address weight management in this population is limited.[11] The Queensland Government's Child and Youth Health Practice Manual states that is the responsibility of the health workforce to embed frequent, accurate screening for paediatric obesity as a component of core clinical practice.[12] As "cultural brokers", the existing Aboriginal and Torres Strait Islander health workforce within Queensland is well-placed to deliver counselling and provide referrals for families of Aboriginal and Torres Strait Islander children who seek assistance with weight management.[13] Several studies have highlighted the effectiveness of employing AHWs for the delivery of health promotion initiatives and interventions,[14-17] but this group has not previously been studied in terms of addressing childhood obesity in Aboriginal and Torres Strait Islander peoples.

There is no known literature investigating the perspective of AHWs regarding their role, factors impacting weight management, enablers and barriers to addressing obesity in Aboriginal and Torres Strait Islander children. Therefore, this study aimed to [1] explore current attitudes of Queensland Maternal, Child and Youth AHWs towards obesity in Aboriginal and Torres Strait Islander children, [2] identify potential barriers associated with talking about the issue, and [3] assess current practice behaviours in screening, identifying, treating and referring Aboriginal and Torres Strait Islander children for obesity management.

2 | METHODS

2.1 | Study design

The study used a cross-sectional mixed-methods design within a pragmatist framework to understand the perspectives and practices of AHW regarding their role in addressing obesity in Aboriginal and Torres Strait Islander children. Data collection occurred in two stages: [1] a purpose-developed online survey designed to obtain the perspectives of all Queensland AHWs on obesity service provision, and [2] qualitative semi-structured phone interviews with survey respondents who volunteered to provide further detail on their answers. The study was granted ethics approval by the Children's Health Queensland Hospital and Health Service Human Research Ethics Committee (HREC approval number: HREC/17/QRCH/281) and the [blinded for peer review] University Human Research Ethics Committee (Ref No: 2018/807). The Good Reporting of a Mixed Methods Study tool[18] was used to guide study design and the qualitative components adhere to the Consolidated Criteria for Reporting Qualitative studies (COREQ).[19] Given the members of the research team are all non-Indigenous Australians, this manuscript was reviewed for cultural safety by a

member of the Queensland Child and Youth Clinical Network representing Aboriginal and Torres Strait Islander peoples.

2.2 | Surveys

2.2.1 | Online survey development and design

The survey items were developed following a literature review identifying key issues on the topic. To support cultural safety, the survey then underwent two rounds of pilot testing: firstly in 2018 with three AHWs and then following refinements three AHWs tested the survey in 2019. The survey was then endorsed by members of Queensland Health's Aboriginal and Torres Strait Islander Maternal, Child & Youth Health Workers Steering Committee.

The cross-sectional survey comprised 25 items and was managed via the online platform SurveyMonkey Inc. Participants were asked to report the characteristics of their role (Part 1), current attitudes and beliefs about overweight and obesity (Part 2), barriers to discussing weight management (Part 3), clinical practice behaviours (Part 4) and additional demographic characteristics (Part 5) (Table 1). Completion was defined as responding to at least 10 core items (Parts 1-3) within the 25 survey items. Items included multiple choice, categorical and Likert scale options. Some items incorporated skip logic to reduce participant burden and increase relevance (n = 5 questions). For example, those who answered that they 'strongly disagreed that they found it difficult to discuss the issue of obesity' in Part 2 skipped Part 3 (which explored what made it difficult). At the end of the survey, participants were offered the opportunity to provide their contact details to researchers if they were willing to complete a telephone interview to expand upon their survey responses as a form of member checking.

2.2.2 | Sample and data collection

Eligible participants were maternal, child and youth AHWs who were members of the Queensland Child and Youth Clinical Network (QCYCN). The survey was distributed to the entire AHW workforce in Queensland (approximately 100 people) via email by the QCYCN Principal Policy Officer between March and May 2019.

All participants who volunteered for a telephone interview after completing the survey were contacted via phone or email. Non-contact was defined as failure to respond to contact after two phone calls and a subsequent email.

2.2.3 | Data analysis

Survey responses were analysed within SPSS (Version 25.0, IBM Corp.). Following the convention described by Jeong and Lee,[20] Likert scale responses were trichotomised (eg "*Strongly agree*" and *"Agree"* were collapsed into *"Agree"* and *"Strongly disagree" and "Disagree"* were collapsed into *"Disagree"*, leaving *"Neither agree nor disagree"* as the third category; *"Never"* and *"Almost never"* were collapsed into *"Rarely"*, and *"Every time"* and *"Almost every time"* were collapsed into *"Often"*). Data are reported as the number and proportion of total respondents that selected each option. Non-completers (defined as completing <10 core items) were excluded from the analysis.

2.3 | Interviews

2.3.1 | Interview protocol development

To support cultural safety, the semi-structured interview protocol was co-designed and developed by the research team in collaboration with an Aboriginal and Torres Strait Islander Health Coordinator. Discussion topics included perspectives on the importance of Aboriginal and Torres Strait Islander children maintaining a healthy weight, factors playing a role in weight management, perceived difficulty with discussing childhood obesity with families, knowledge and likelihood of referring children to weight management programs and services, training and clinical practice behaviours. The interview protocol was tailored to participants based on their unique survey responses.

2.3.2 | Data collection

Interviews were conducted by telephone at a time and place chosen by participants between March and May of 2019. The senior author (LTW) who is a PhD qualified, female, non-Indigenous, academic dietitian with 25 years of experience in qualitative research, conducted the first interview. With the permission of the participant, the telephone was placed on speaker mode so that another researcher (MB) could attend as an observer while LTW modelled how to conduct a qualitative interview. MB is a female, non-Indigenous dietitian who at the time was completing her honours research in the final year of her dietetics degree. She conducted the remainder of the interviews. Neither interviewer had any prior contact with the participants apart from being named as members of the research team on the participant information sheet. Interviews lasted between 15 and 45 minutes and were digitally audio-recorded after obtaining verbal consent. A copy of the transcript was sent via email to each participant for their comment and/or correction. No adjusted transcripts were received.

2.3.3 | Data analysis

Interviews were transcribed verbatim and thematic analysis conducted manually. One researcher (MB) independently coded the transcripts using NVivo (version 11, QSR International). Coding was undertaken as a reflective and reflexive process, with prior coding adjusted as the researcher encountered new trends and patterns. The coding process was grounded within the overall study aims. Coding was discussed with the senior researcher (LTW) and main themes agreed upon when

TABLE 1 Survey constructs and corresponding items

Survey construct	Survey items	Item topic
Part 1: Role Characteristics	Six multiple choice items	Consent to participate Employment location Role description Length of experience in role Frequency of seeing paediatric clients Main setting in which they usually see these clients
Part 2: Current attitudes and beliefs about overweight and obesity	Three 5-point Likert scale items (strongly agree to strongly disagree)	Attitudes and beliefs towards overweight and obesity Short- and long-term health consequences of paediatric obesity Factors that may contribute to overweight and obesity amongst these children
Part 3: Barriers to discussing weight management	One 5-point Likert scale items (strongly agree to strongly disagree)	Factors that made it difficult for them to talk about overweight and obesity with children and their families *Note that participants who strongly disagreed that it was difficult to discuss weight management in Part 2 skipped Part 3
Part 4: Clinical practice behaviours	Six 5-point Likert scale items (from never to every time) Two yes/no	Screening (ie height, weight, waist circumference) Identification (ie body mass index, growth charts) Treatment of childhood overweight and obesity (ie discussion of weight, nutrition and/or physical activity behaviours) Referral practices Relevant training or professional development received in past 2 y (yes/no)
Part 5: Demographic characteristics	Five multiple choice Two open-ended	Age category Sex Highest educational attainment Geographical setting of the role Further comments Consent to be contacted for an interview

data saturation occurred. No further member checking was conducted with interview participants.

2.4 | Data synthesis

Quantitative online survey data were collected prior to qualitative interviews, however analysis occurred in parallel. Quantitative results describe AHWs perspectives and practices to obesity in Aboriginal & Torres Strait Islander children. The qualitative enquiry explored issues emerging from the survey data in greater depth. The quantitative and qualitative data were then synthesised into a table according to study aims (Table 2).

3 | RESULTS

3.1 | Surveys

Of approximately 100 eligible AHW members of the QCYC who were emailed the survey link, 55 commenced the survey. Forty-five AHWs were classified as completing the survey (Parts 1-3) and were included in the final analysis. The work role and demographic characteristics of participants are shown in Table 3. Respondents were predominantly female and situated within *Major Cities* or *Inner Regional* geographical settings. AHWs were most likely to list their role as "*Health Worker (maternal and/child and/youth)*" (n = 16/45, 36%) or "*Health Worker – Generalist*" (n = 8/45, 18%). They were most likely to have spent 1-5 years in their current role (n = 17/45, 38%), and to see Aboriginal and Torres Strait Islander children as part of their role at least once a day (n = 18/45, 40%).

3.1.1 | Attitudes towards obesity

There was high (80%) agreement with the statement that *"overweight and obesity is an issue in children"*, however only high (67%) agreement that *"overweight and obesity is an issue in Aboriginal and Torres Strait Islander children"*. The majority of respondents agreed that overweight and obesity in Aboriginal and Torres Strait Islander children has *"negative long-term health consequences"* (n = 36/45, 80%) with fewer believing it had *"negative short-term health consequences"* (n = 30/45, 67%). The majority of respondents (n = 41/45, 91%) agreed that addressing overweight and

TABLE 2 Synthesised findings from quantitative and qualitative results of Aboriginal and Torres Strait Islander Health Workers (AHWs) regarding their role, factors impacting on weight management and enablers and barriers to addressing obesity in Aboriginal and Torres Strait Islander children

Study aims	Quantitative results	Qualitative results (n = 8)	Synthesised findings
Aim 1. Explore current attitudes of QLD AHWs towards obesity in Aboriginal and Torres Strait Islander children	**80%** agreed that overweight and obesity in Aboriginal and Torres Strait Islander children had "*negative long-term health consequences*", and **67%** agreed that had "*negative short-term health consequences*" (n = 45) **91%** agreed that addressing overweight and obesity within Aboriginal and Torres Strait Islander children was "*an important part of their role*" (n = 45)	Theme 1: Willingness to address childhood obesity	AHWs recognised overweight and obesity within Aboriginal and Torres Strait Islander families as an issue, and that addressing it is a role of the AHWs
Aim 2. Identify potential barriers associated with talking about the issue	**62%** cited that *"the family might not want to change"* as the main barrier to discuss overweight and obesity with the children (n = 26) **29%** cited "*the child and/or family do not think weight is a problem*" as a barrier (n = 26)	Theme 2: Impact of culture on obesity and nutrition	AHWs find it difficult to discuss overweight and obesity with Aboriginal and Torres Strait Islander families especially because the families might not want to change if they hold specific cultural views at odds with obesity management
Aim 3. Assess current practice behaviours in screening, identifying, and treating obesity in Aboriginal and Torres Strait Islander children	**49%** reported *rarely* discussing weight management with children and their families (n = 39) **49%** and **54%** were most likely to discuss nutrition and eating behaviours *sometimes*, respectively (n = 39) **40%** were *aware* of weight management programs and their likelihood of referring Aboriginal and Torres Strait Islander children for further support, and **50%** agreed they were *likely* to refer children to these services (n = 38) **98%** had *not* received training or professional development on how to assess childhood overweight or obesity (n = 38)	Theme 3: AHWs cannot address obesity on their own Theme 4: AHWs need help and support to perform this role	Weight management is rarely discussed with Aboriginal and Torres Strait Islander children and their families as AHWs felt they had limited training in how to broach the subject. Although AHWs sometimes discuss nutrition and eating behaviours, AHWs believe collaborating with other health professionals is crucial to address the issue. The majority of AHWs were unaware of any programs or weight management initiatives designed for Aboriginal and Torres Strait Islander children and their families

obesity within Aboriginal and Torres Strait Islander children was *"an important part of their role"*.

When asked about factors contributing to overweight and obesity, respondents were most likely to agree with *"children spend too much time watching a screen"* (n = 37/45, 82%), *"the availability of traditional foods is limited"* (n = 35/45, 78%), and "*healthy foods cost more"* (n = 35/45, 78%). Respondents were most likely to disagree with *"it is hard to do physical activity"* (n = 18/45, 40%) and "*there isn't much healthy food and drink available"* (n = 16/45, 36%).

3.1.2 | Potential barriers associated with talking about childhood obesity

Twenty-six (n = 26/45, 58%) respondents said they found it difficult to discuss overweight and obesity with Aboriginal and Torres Strait Islander children and their families. The factors making it difficult are listed in Table 4, with the most commonly cited reason being *"the family might not want to change"* (n = 16/26, 62%) and *"the child and/or family do not think weight is a problem"* (n = 13/26, 29%). Only two respondents felt that addressing obesity was not part of their role.

3.1.3 | Obesity practice behaviours

Frequency of undertaking screening for obesity is reported in Table 5 (n = 40). Less than one quarter of respondents reported that they measured height and weight often and respondents were most likely to report *rarely* discussing weight management with Aboriginal and Torres Strait Islander children and their families (n = 19/39, 49%). Respondents were most likely to report that they discussed

TABLE 3 Role and demographic characteristics of Queensland Aboriginal health workers survey respondents (n = 45)

Role characteristics	Proportion of AHWs (n = 45) n (%)
Health worker (maternal and/child and/youth)	16 (35.6)
Health worker – generalist	8 (17.8)
Health worker – other service	4 (8.9)
Team leader or coordinator	7 (15.6)
Other	10 (22.2)
Time spent in role	
<12 mo	8 (17.8)
1-5 y	17 (37.8)
6-10 y	9 (20.0)
>10 y	11 (24.4)
Frequency of contact with Aboriginal and Torres Strait Islander children	
Daily	18 (40.0)
Weekly	7 (15.6)
Monthly	13 (28.9)
Never	7 (15.6)
Main setting of role[a]	
Hospital	7 (18.4)
Community clinic	10 (26.3)
Home	10 (26.3)
Other	11 (28.9)
Age (y)[b]	
18-34	6 (16.7)
35-44	9 (25.0)
45-54	13 (36.1)
>55	8 (22.2)
Sex[b]	
Male	7 (19.4)
Female	29 (80.6)
Highest educational qualification achieved[b]	
Up to year 12 or equivalent	3 (8.4)
Certificate or diploma	22 (61.1)
University degree	11 (30.6)
Geographical setting of role by remoteness[b]	
Major cities (RA 1)	11 (30.6)
Inner regional (RA 2)	11 (30.6)
Outer regional (RA 3)	9 (25.0)
Remote (RA 4)	1 (2.8)
Very remote (RA 5)	4 (11.1)

[a]Missing = 1 and
[b]Missing = 9 for these data.

both nutrition and eating behaviours and physical activity behaviours sometimes (n = 19/39, 49% and n = 21/39, 54% respectively). When asked about their awareness of weight management programs and their likelihood of referring Aboriginal and Torres Strait Islander children for further support, less than half (40%, n = 15/38) agreed they were aware of these options, while half (50%, n = 19/38) agreed they would be likely to refer children to these services. When asked about whether they had received training or professional development on how to assess childhood overweight or obesity, 98% of respondents selected '*no*' (n = 37/38).

TABLE 4 Queensland Aboriginal Health Workers' agreement with factors contributing to difficulty discussing paediatric overweight and obesity (n = 26)

Statement	Agree n (%)[a]
The family might not want to change	16 (61.5)
The child and/or family do not think weight is a problem	13 (28.9)
The child and/or family isn't interested	11 (42.3)
There are other more important issues to address (or talk about)	9 (34.6)
There isn't enough time during visits or appointments	8 (30.8)
I'm not sure how to help the family change	7 (26.9)
I don't know enough to talk about it	7 (26.9)
I'm afraid of harming the relationship I have with the family	6 (23.1)
There are no local services for me to refer the child or family to for support with weight management	6 (23.1)
I don't know how to talk about overweight and obesity with children and families	3 (11.5)
I don't think it's part of my job/role	2 (7.7)
I don't know how to identify overweight and obesity in children	2 (7.7)

[a]Note that respondents were able to nominate more than one response.

TABLE 5 AHW frequency of obesity practices (screening, discussing, referring) in Aboriginal and Torres Strait Islander children (n = 40)

Obesity practice	Often n (%)	Sometimes n (%)	Rarely n (%)
Measure			
Height	9 (22.5)	13 (32.5)	18 (45.0)
Weight	9 (22.5)	14 (35.0)	17 (42.5)
Waist circumference	5 (12.5)	13 (32.5)	22 (55.0)
Assessment tool			
Body mass index	6 (15.0)	9 (22.5)	25 (62.5)
Others	10 (25%)	10 (25.0)	20 (50%)

3.2 | Interviews

Of 11 survey respondents who agreed to participate in an interview, eight completed interviews and three could not be contacted after three attempts. Interview participants were aged between 25 and 64 years, with four female and four male participants. Three were *"Health Worker – Generalist"* and had spent less than 12 months (n = 3) or 1-5 years (n = 3) in their role. Five participants had regular contact with Aboriginal and Torres Strait Islander children monthly (n = 2), weekly (n = 2) or daily (n = 1). Data saturation was reached, with four overarching themes identified. The themes are listed in Table 6, supported by verbatim quotes identified by participant number.

3.2.1 | Theme 1: Willingness to address childhood obesity

Interview participants expressed that they saw overweight and obesity in Aboriginal and Torres Strait Islander children to be an issue. Some identified the long-term consequences of obesity as a cause for concern, specifically the development of chronic diseases and unhealthy habits that carry over into adulthood. Participants did not find it difficult to discuss the issue with children and their families, with experience cited an as an enabler.

3.2.2 | Theme 2: Impact of culture on obesity and nutrition

Key factors identified as impacting on weight management for Aboriginal and Torres Strait Islander children were habits of the parents and community, specifically cultural views on the acceptability of body fatness in children (Table 6). Influences of colonisation and social determinants of health were also described by participants. They expressed a loss of awareness about preparation and consumption of traditional foods for Aboriginal and Torres Strait Islander children and their families. Several voiced that parents perceived healthy food as expensive and time consuming to prepare and others described how children might see fast food outlets as a place to socialise and spend time with each other, especially if living in an area with limited resources.

TABLE 6 Themes and corresponding participant quotes from Aboriginal & Torres Strait Islander Health Workers and/or Health Practitioners (AHWs) regarding their role, factors impacting on weight management, enablers and barriers to addressing obesity in Aboriginal and Torres Strait Islander children

Theme	Description	Indicative quotes
1: Willingness to address childhood obesity	Overweight and obesity in Aboriginal and Torres Strait Islander children is recognised as an issue by the AHWs Comfort with addressing obesity varied between AHWs-	"Well, it's an issue in regard to child development, and it's an issue in regard to their health in the future because… Aboriginal people are sometimes five times more likely to get chronic diseases than non-Indigenous people because of their lifestyle and you know, dietary factors. [So] it's a big issue around people's lifespans and milestones in their life." – AHW 2 "… I'm sure there are some people that struggle to have these conversations with people. Well, if they'd been trained accordingly, they could feel more empowered to have these conversations…" – AHW 3 "Probably because I'm a bit older… that just comes with life experience… So, I'm very comfortable to get out there and educate people and help our mob to get healthy and live a longer life, I'm absolutely all for it. – AHW 6
2: Impact of culture on obesity and nutrition	Cultural views can impact on weight management and eating behaviours for Aboriginal and Torres Strait Islander children	"I think fat babies in Indigenous families [are] seen as cute. They're fat, they're healthy? But no." – AHW 1
3: AHWs can't address obesity on their own	Importance of AHWs being involved and acting with scope of practice and collaborating with other health professionals to address obesity	"Most programs we would be trying to send our mob to would be people that have got AHWs involved with them… because, it means that our mob are going to be comfortable and they'll follow through… I would be definitely an advocate for my mob. But I'm not a professional nutritionist… [for] a one on one with like a child health situation I would use a clinician to do that and just be there to support the clinician and to help our people…" – AHW 6 "It's going to be a holistic approach to it in regards to allied health… It's not just for any one person to tackle on their own, but GPs, along with dietitians, parents, psychologists, making sure [that] the holistic health of the child is good." – AHW 4
4: AHWs need help and support to perform this role	Limited awareness about programs and lack of weight management initiatives designed for Aboriginal and Torres Strait Islander to refer children and their families	"I've gotta be honest, I've got pretty limited knowledge within women's and children's with the programs that they run". – AHW 3 "Like skills, just do workshops and get my knowledge up, because the community's going to come to me as an advanced health worker because they feel comfortable listening to me, before they'll listen to someone else, aren't they?" – AHW 6

3.2.3 | Theme 3: AHWs cannot address obesity on their own

Interview participants described that acting within their scope of practice was important, emphasising the value of collaborating with other health professionals in order to address a problem as complex as obesity. Several discussed the importance of using sensitive language when discussing the issue of obesity to minimise adverse impacts on the child's self-esteem. They also felt the emphasis should be on holistic long-term behaviour change when addressing the issue with children and their families.

3.2.4 | Theme 4: AHWS need help and support to perform this role

Some participants viewed the provision of information to families on programs and resources to address overweight and obesity as a key part of their role as AHWs. Other participants explained that they had limited knowledge about relevant programs. Some participants raised the issue that they were not aware of weight management initiatives specifically designed for Aboriginal and Torres Strait Islander children and their families. Several AHWs voiced that they felt further training in how to address obesity with children and families would be beneficial.

4 | DISCUSSION AND CONCLUSION

This study is the first to investigate the perspectives and practices of Queensland AHWs regarding their role in addressing obesity in Aboriginal and Torres Strait Islander children. The study highlights that AHWs are aware of the issue of childhood obesity and feel that it is within their role to address it. However, findings also suggest that many are not routinely discussing or assessing childhood obesity for various reasons including lack of adequate training in how to assess and monitor childhood obesity. These results could inform the development of training initiatives for AHWs to optimise screening, identification, referral, and treatment of childhood obesity in Aboriginal and Torres Strait Islander communities.

Most AHWs agreed that overweight and obesity was an issue in children (80%) however they were less likely to agree that it was an issue in Aboriginal and Torres Strait Islander children (67%). This is concerning given that Aboriginal and Torres Strait Islander children experience higher rates of obesity than their non-Indigenous counterparts (13.6% compared to 8% by 2-17 years old),[2] suggesting that there is a disparity between AHWs' views on the importance of addressing childhood obesity and the extent of the issue amongst Aboriginal and Torres Strait Islander children. Interviewed AHWs were more concerned about the issue of childhood obesity, but this may be explained by response bias. Some interviewees felt that they did not often come across overweight or obese children within their role and viewed the prevalence of underweight amongst Aboriginal and Torres Strait Islander children to be an equally or more important issue then obesity. Given the link between low-birth-weight and the development of obesity in adulthood,[21] as well as the increased rates of low-birth-weight infants amongst Aboriginal and Torres Strait Islander peoples compared to non-Indigenous Australians,[22] assessing and discussing weight and growth in children for the prevention of treatment of obesity is critical.

AHWs are well-placed to monitor and assess childhood growth. The *National guide to preventive health assessments for Aboriginal and Torres Strait Islander people*[23] recommends that children have BMI assessed opportunistically and as part of health assessments using appropriate growth charts. Further, the Child & Youth Health Practice manual in Queensland recommends AHWs be involved in discussions surrounding childhood growth, growth chart progressions and the importance of nutrition.[12] This study identified inconsistencies between practice recommendations and clinical practice behaviours of QLD AHWs in relation to screening and identification of paediatric overweight and obesity. Despite state and national guidelines,[12,23] recommending the assessment of anthropometric status (for example plotting height and weight to assess growth) surveyed AHWs reported that they rarely took such measures on Aboriginal and Torres Strait Islander children. These inconsistencies have been demonstrated in similar studies investigating the practice behaviours of Australian primary health care practitioners around screening and identification of childhood obesity.[24-26] Given that almost all (98%) AHWs in this study reported they had received no training or professional development in the assessment and management of childhood obesity within the previous 2 years, an opportunity to improve skill development in these key areas is clear. Improving the capacity of AHWs to provide assessment and advice on healthy growth and lifestyle behaviours is an important health promotion initiative that would support current practice guidelines.

This study found around half of AHWs reported providing basic advice around nutrition and physical activity and/or refer children to relevant services or support to improve lifestyle behaviours. Interviewed AHWs emphasised that collaborating with other health professionals such as general practitioners and dietitians was necessary to provide holistic care for children and their families. These views are reflected in similar studies with Australian primary health care clinicians related to management of childhood obesity.[25] The AHW's in this study recognise that they form part of a broader approach to addressing this issue in Aboriginal and Torres Strait Islander children which has a complex and multifactorial aetiology. Australian policy and guidelines[12,23,27] posit that effective partnerships between mainstream and Aboriginal and Torres Strait Islander health services are critical to improve health outcomes.[17] The literature includes several reports of nutrition interventions that have attempted cultural adaptation for Aboriginal and Torres Strait Islander peoples,[28] such programs are not systemically available..[1,29] To better manage obesity amongst Aboriginal and Torres Strait Islander children, there is a need for accessible and culturally appropriate programs and services addressing weight management.

5 | LIMITATIONS

While the survey achieved a high response rate with a representative sample there are several factors that may have impacted on AHWs' responses to the survey and interviews. impacting on the validity and applicability of this study's findings. Due to the sensitive nature of the topic, it is possible that participants may have been influenced by social desirability bias when selecting survey responses; however, the survey delivery via an online platform may have contributed to participants' perception of anonymity and thus mitigated this risk.[30] The AHWs participating in interviews were self-selected and may have had a particular interest in this issue, potentially introducing bias. Interviewed AHWs generally reported feeling comfortable talking about the issue with children and families, which may have influenced their likelihood of volunteering to participate in interviews. Therefore, it cannot be assumed that the interview findings presented here are representative of the views of all AHWs in QLD.

6 | CONCLUSION

This study highlights the need for increased training opportunities to improve practice skills of AHWs to address overweight and obesity in Aboriginal and Torres Strait Islander children, in addition to

increasing awareness about the extent and implications of the issue. Furthermore, engagement of AHWs in culturally based interventions is recommended, given that their involvement is likely to improve receptivity and effectiveness of weight management interventions for children and their families.[31,32] The outcomes of this study provide useful information to inform the design of effective health promotion initiatives to address overweight and obesity in Aboriginal and Torres Strait Islander children.

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CONFLICT OF INTEREST

Heidi Atkins is the A/Coordinator for the Queensland Child and Youth Clinical Network.

ETHICS APPROVAL

The study was granted ethics approval by the Children's Health Queensland Hospital and Health Service Human Research Ethics Committee (HREC approval number: HREC/17/QRCH/281) and the Griffith University Human Research Ethics Committee (GU Ref No: 2018/807).

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