"It's Like a Sinking Ship and you've got a Cup to Try and Save it": A Thematic Account of Health Professionals and Parents Thoughts and Experiences of Childhood Obesity in Aotearoa/New Zealand

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Abstract

The prevalence of childhood obesity is growing at a serious rate globally, and the World Health Organisation states that it is one of the most serious public health challenges of the 21st century. Childhood obesity is now a well-recognised problem in Aotearoa/New Zealand. New Zealand has the third highest rates of childhood obesity among 40 OECD countries, with 1 in 3 children in New Zealand above what is considered a healthy weight range. Consequently, New Zealand's government have made tackling the high rates of childhood obesity a top public health priority by introducing multi-disciplinary weight management programmes across the country. However to date, little is known about how the implementation of childhood weight management programmes is going in practice. Programme evaluations are important to guide programme development and to make sure health interventions are working to their fullest potential for all New Zealanders.

The current study explored key stakeholders (health professionals and parent's) views and experiences of childhood obesity management in a New Zealand context. Health professionals' personal experiences and perceptions were explored, around their management of childhood obesity and the perceived barriers to engaging families in intervention programmes for childhood weight management. Additionally, families' reasons and rationales for declining a referral to a multi-disciplinary weight service were a key focus. A secondary aim of the current research was to produce pragmatic suggestions for the MidCentral District Health Board, to facilitate the implementation of childhood obesity prevention and management initiatives.

A qualitative approach to inquiry was employed for an in-depth exploration of health professionals' and parents' thoughts and experiences. A purposive sampling method was used to recruit participants. Four focus groups were held, comprising 33 health professionals; additionally, face-to-face interviews were conducted with five mothers of pre-school aged children who had been identified as being above the healthy weight range and who declined a referral to a multi-disciplinary childhood weight management service. The interviews were focussed on mothers' thoughts and perceptions of childhood obesity programmes. All transcripts were analysed using an explorative, inductive and data driven approach to thematic analysis.

The interviews and focus groups with key stakeholders generated insights into the difficulties and challenges perceived by health professionals and parents at the individual, organisational and social level, in relation to implementing childhood obesity management. Health

professional's accounts reflected awareness of the broader contextual factors (e.g., availability and accessibility of healthy foods, family culture, and health literacy) and social and emotional factors (e.g., parental knowledge, social norms, family pressures) that could affect family adoption of healthy lifestyle behaviours. The mother's accounts were largely focussed on the social factors affecting their ability to live a healthy lifestyle and the importance of feeling understood by health professionals. The findings from this study identify opportunities for assisting families and health professionals in the management of childhood obesity.

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List of Abbreviations

BMI: Body Mass Index

B4SC: Before School Check

CDC: The Centers for Disease Control and Prevention

OECD: Organisation for Economic Cooperation and Development

CVD: Cardiovascular Disease

DEXA: Dual Energy X-ray Absorptiometry

DHB: District Health Board

HBM: Health Belief Model

NZ: New Zealand

PHO: Primary Health Organisation

WHO: World Health Organisation

Glossary of Māori Terms

Aotearoa   The Māori Name for New Zealand

Whānau   The Māori word for family and extended family

Prologue

Between August and September 2017, I had the wonderful opportunity to complete the practical component of the Health Psychology Masters at Massey (Turitea) Psychology Clinic, Palmerston North. During the six-week practicum, I was heavily involved in a research project (in collaboration with the MidCentral District Health Board (DHB)) exploring a range of health professionals' thoughts and experiences of the Childhood Obesity initiative in the MidCentral region of New Zealand. Eight health professionals were interviewed in their place of work. The discussions provided health professionals with an opportunity to openly talk about what was working well, as well as any barriers they were experiencing in regards to the broader implementation of the Childhood Obesity initiative. The main findings from the audit were reported back to the MidCentral DHB advisory group. From this audit, it was evident that further exploration into the challenges in managing and preventing childhood obesity was needed and there was enthusiasm for further research to be conducted in this area. The current study aims to explore these issues in more depth.

New Zealand's Approach to Managing Childhood Obesity

> "Overwhelmingly, I heard the need for a greater focus on people, how to engage better in designing services together and how to better understand people's need."
> (Jonathan Coleman, Former Health Minister in New Zealand's Health Strategy Future Direction, Ministry of Health, 2016a)

Taking action on childhood obesity is a priority of governments globally; expanding primary health services to deliver or develop referral pathways to provide advice and support on physical activity and healthy nutrition is an important component of comprehensive action (Bell et al., 2014). Acknowledging that a comprehensive national plan was needed to address the high rates of childhood obesity, New Zealand's Government launched its Childhood Obesity Plan (refer to Figure 1) in October 2015; this includes a package of 22 initiatives that aims to prevent and manage obesity in children and young people up to 18-years-of-age in Aotearoa/New Zealand. The package brings together initiatives across government agencies, the private sector, communities, schools, families and whānau and has three focus areas:

- Targeted interventions for those who are obese;
- Increased support for those at risk of becoming obese;
- Broad approaches to make healthier choices easier for all New Zealanders

Figure 1.

Overview of New Zealand's Childhood Obesity Plan. (Ministry of Health (MOH), 2016a)

The childhood obesity plan

Legend:
- Public information
- Physical activity, sports and education
- Health sector actions
- Food industry

Targeted initiatives
1. Childhood obesity health target – B4SC referrals
2. Access to nutrition and physical activity programmes for families eg, Active Families

Increased support
3. KiwiSport will have a greater focus on low participation groups
4. Guidance for weight management in children and young people
5. Guidance for healthy weight gain in pregnancy
6. Gestational diabetes guidelines
7. Referrals to GRx for pregnant women (at risk of gestational diabetes)

Broad population approaches
8. Health star rating promotion
9. Marketing and advertising to children
10. Partnership with industry
11. Information and resources for general public
12. Public awareness campaign
13. Play.sport
14. Physical activity guidelines for under 5s
15. Sport in education programme expansion
16. Prime Minister's Education Excellence Award
17. Teachers' professional learning and development
18. ERO report on schools
19. Health promoting schools
20. Healthy Families NZ
21. DHB healthy food policies
22. Eating and activity guidelines (adults)

Raising Healthy Kids — the New Zealand Health Target for Childhood Obesity

On 30th of June 2016, The Raising Healthy Kids Health Target was implemented as one of the 22 initiatives. This health target is one of two targeted interventions in the Childhood Obesity Plan that focuses directly on obese pre-schoolers and their families. It outlines that "By December 2017, 95% of obese children identified in the Before School Check (B4SC) programme will be offered a referral to a health professional for clinical assessment and family-based nutrition, activity and lifestyle interventions" (MOH, 2017). The health target defines childhood obesity as a Body Mass Index (BMI) above the 98th centile on the NZ-WHO growth chart.

The B4SC provides a comprehensive nationwide screening programme in Aotearoa/New Zealand, offering a free health and development check for four-year-old's. The check is 45 minutes long and is delivered through community-based clinics and visits in pre-schools and kindergartens by trained nurses and vision and hearing technicians (Rajput et al., 2015). The aim of the B4SC is to identify any health, behavioural, social, or developmental concerns that could affect a child's ability to get the most benefit from school, and includes the measurement of height and weight (MOH, 2015). Participation by families is voluntary; however, the most recent survey conducted in 2013/14 found that the B4SC has a coverage rate of 91 percent of four-year-old's nationally (Statistics New Zealand, 2017). Thus, the B4SC provides a unique opportunity to identify childhood obesity among nearly all 4-year-old's in Aotearoa/New Zealand.

MidCentral Local Services: 'BOOST' Multi-disciplinary Team

In 2016 (in response to the government's Childhood Obesity Plan and Raising Healthy Kids health target), the MidCentral District Health Board (DHB) created 'BOOST', a multi-disciplinary team made up of professionals with different health, physical activity and nutrition expertise. The BOOST team provides clinical oversight of referrals and recommends to families and whānau a range of options that they believe is best for the family, including: a referral to Active Families programme delivered by Sports Manawatu; Central Primary Health Origination (PHO) dieticians; Triple P Positive Parenting Programme; Whānau Ora Programme; and other community agencies as needed. Overweight and obese children aged 2 to 15 years are eligible to be referred to BOOST by health care professionals including: B4SC Nurses; General Practitioner teams; MidCentral Hospital (Children's Ward and Paediatricians); and Child Health Community services.

The Issue

At the time of the initial research request from the MidCentral DHB B4SC Childhood Obesity Advisory Group, high decline rates for referral to BOOST were of concern, especially amongst Māori and Pasifika families. Nationally, in 2018, the number of referrals that were declined was 27%; in the MidCentral district alone, 29% of children and their families offered a referral declined over a six-month period (June 2017 – November 2017). Prior to the research period,

low percentages of referrals and uptake from the B4SC meant family and whānau were not receiving the support that was available. The MidCentral B4SC Childhood Obesity Advisory group aimed to increase the number of obese children (and their families) being offered and accepting a referral for appropriate interventions; this research was partly to understand barriers to this occurring from key stakeholders (including families') perspectives.

Figure 2.

The Before School Check referral process in the MidCentral region
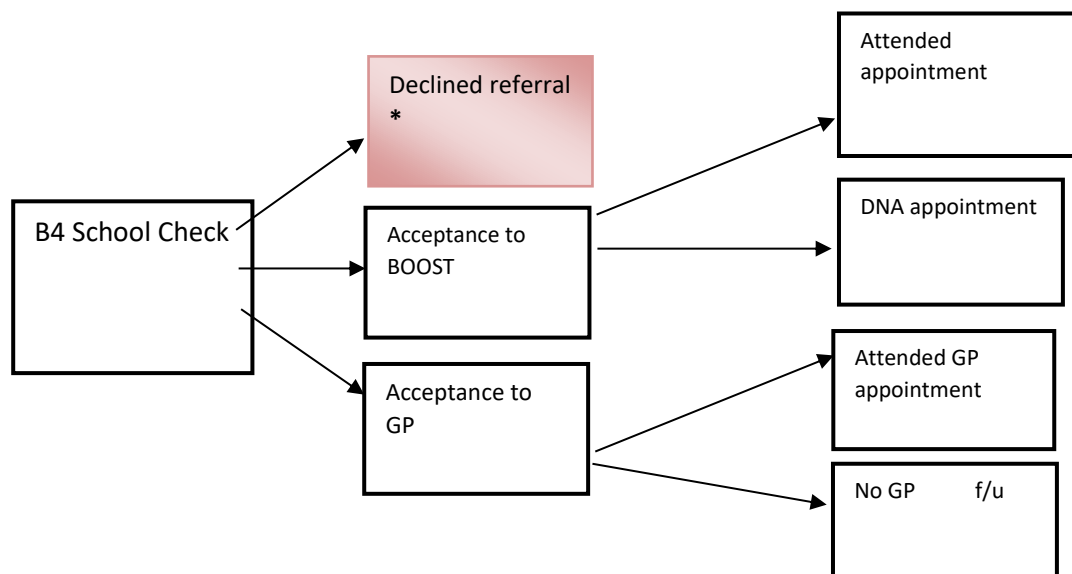
Note. * Interviews to be conducted with parents in this research

DNA = did not attend

F/U = follow up

Healthcare Professional's Role in Managing Childhood Obesity

In 2016, the Ministry of Health's vision for managing childhood obesity stressed the important role that community and primary health care providers have in the management and prevention of childhood obesity, through the introduction of Weight Management Guidelines for 2-5 Year Olds (MOH, 2016b) and Clinical Guidelines for Weight Management in New Zealand Children and Young People (MOH, 2016c). The published guidelines are based on recommendations made by an Expert Committee regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity (Barlow, 2007). The guidelines recommend that

health professionals monitor, assess, manage and maintain childhood obesity in the clinical setting:

Monitor: Health professionals are recommended to measure and monitor the height and weight, and determine the BMI for all children and young people regularly. If the child's BMI is trending towards (or is over) the 91st centile, it is expected that the health care practitioner provide the family or whānau with brief nutrition and physical activity advice.

Assess: The assessment stage involves taking a full history and examination for children and young people with a BMI over the 98th centile to identify co-morbidities, and possible underlying causes or contributing factors of a child's overweight status.

Manage: The management component aims to slow weight gain so the child or young person can grow into their weight.

Maintain: refers to long-term follow up and continual monitoring of growth in order to maintain positive changes and offer further support if needed.

However, there has been evidence to suggest that health professionals practicing within the Manawatu region experience challenges when initiating a conversation with parents regarding their child's weight status. Kenny (2018) conducted an audit that aimed to assess the prevalence of overweight and obese children seen in MidCentral paediatric outpatient clinics and then evaluate whether clinicians documented the BMI, provided advice or referred the children onto other services. Of the 150 children identified as overweight or obese in 2018, 20% of letters for children with raised BMI had a documented BMI, 21% acknowledged the raised BMI, 15% documented a discussion, 5% documented a specific intervention and only 4% offered a referral.

Research Rationale

It is crucial to gain insight into the ways health interventions and programmes translate into practice and how 'real world' factors influence the outcomes of interventions (Peters et al., 2013). In order to strengthen the implementation of childhood obesity services, a greater understanding of service users and providers' experiences and perceptions is required. In New Zealand, this has not yet occurred. Such a description and exploration will allow for identification of factors that facilitate or impede the successful implementation of childhood obesity services in the MidCentral region of New Zealand.

Additionally, by focussing on families who decline a referral to BOOST, it was hoped that we can better understand the perspectives of parents and caregivers who do not take up the opportunity to accept a referral to a childhood obesity service. Involving parent's in the current study and exploring their perspectives and experiences of the service is in line with the current emphasis on a "people-powered" approach to health care (MOH, 2016a). With this knowledge, we can work towards designing services that better meets families and whānau needs, interests and priorities.

Research Aims

This study has been conducted with two **primary aims**:

1. The first primary aim was to explore parents' and caregiver's reasons and rationales for declining a referral to a childhood obesity service along with their experiences of the service.
2. In addition, this study aimed to explore the thoughts and experiences of health professionals in the management of childhood obesity and explore barriers and facilitators to management.

Overview of Thesis Chapters

This thesis is presented over six chapters. Chapter One introduces the issue of childhood obesity, reporting on international and national prevalence rates, the current definition and measurement and health consequences associated with childhood obesity. Additionally, the determinants of childhood obesity and current prevention and intervention strategies are discussed. The research questions and aims have been established, along with an explanation and rationale of the current study.

Chapter Two presents the literature review and explores the current literature surrounding parental barriers to engaging in childhood obesity programmes and challenges faced by health care providers when managing childhood obesity in practice.

Chapter Three describes the overall methodology, which outlines the qualitative research design and justifies the utilisation of such a methodology. The method of sampling, participant recruitment, data collection and use of an inductive approach to thematic analysis are discussed. Ethical considerations, along with a discussion regarding trustworthiness in qualitative research, are also discussed.

Chapter Four and Five presents and explores the data from participant interviews and focus groups. Chapter Four presents and explores health professionals' data and Chapter Five presents and explores the mothers' data. Each interpretation of the data is supported by participant quotes to support the findings.

Chapter Six, the Discussion, summarises the key findings, brings the two analyses together, compares the findings with past literature and considers the broader implications for service users, providers, and government. Recommendations for future research and limitations of this study are also discussed along with concluding remarks.

Chapter 1: Introduction

Childhood Obesity Prevalence and Trends

There is a global concern about the rising incidence of childhood obesity (Abarca-Gómez et al., 2017). Although the prevalence of overweight and obese children is dramatically higher in economically developed nations, it is rising significantly in most parts of the world (Reilly et al., 2018). According to the World Health Organisation, 32 million pre-school children (under the age of five) were estimated to be overweight or obese in 1990, with an increase to an estimated 41 million children in 2016 (WHO, 2016). If the current trends continue to follow the same trajectory, the obesity epidemic is expected to reach 60 million children by 2020 (De Onis et al., 2010).

Childhood obesity is now a well-recognised problem in Aotearoa/New Zealand. In 2010, New Zealand was ranked as having the third highest levels of childhood obesity amongst 40 OECD (Organisation for Economic Cooperation and Development) Countries (OECD, 2012). Additionally, the findings from the latest New Zealand Health Survey (2017/18) indicated that approximately 1 in 8 children (12%) aged 2-14 years were obese and a further 21% of children were overweight. This equates to 1 in 3 children in New Zealand being above what is considered a healthy weight range (MOH, 2018a).

Furthermore, although Māori (New Zealand's indigenous population) and Pasifika children comprise a relatively small proportion of the total population, these ethnic groups are disproportionately burdened by childhood obesity (Stoner et al., 2016). The 2017/18 New Zealand Health Survey found that Māori children aged 2 to 14 years of age were 1.6 times more likely to be obese (compared with non-Maori counterparts), and Pacific children were 3.6 times more likely to be obese (MOH, 2018a).

Additionally, socioeconomically disadvantaged households have a higher likelihood of having overweight and obese children (Anderson et al., 2017). In New Zealand, children living in the most socio-economically deprived neighbourhoods were 2.5 times as likely to be obese as children living in the least deprived neighbourhoods, after adjusting for age, sex and ethnic differences (MOH, 2018a).

Defining and Measuring Childhood Obesity

Defining 'overweight' and 'obesity' is a complex and controversial area (Tyson & Frank, 2018). The way obesity is conceptualised and understood reflects the many worldviews that people in society hold. Some scholars hold the belief that obesity is a culturally and socially defined construct that promotes the values that certain worldviews hold e.g., thinness as the socially desirable (Gard & Wright, 2001; Rich & Evans, 2005). However, the most prevailing conceptualisation of obesity in Western society is one of a medical, economic and public health problem (Medvedyuk et al., 2018; Ulijaszek, 2017).

The World Health Organisation broadly defines obesity as "abnormal or excessive fat accumulation that presents a risk to health" (2018). Body mass index (BMI) is the most widely used, practical and convenient measure of general adiposity (fat) in the clinical environment, and is recommended in guidelines internationally (CDC, 2016; Flegal et al., 2010; Gutin, 2018). BMI is defined as weight (in kilograms) divided by the square of height (in meters).

However, the use of BMI with children is a more recent development (Wang, 2004). Unlike for adults, where BMI provides a way to translate weights at different heights into a common metric, BMI values for children are compared to reference values that are age and sex specific. The Centers for Disease Control and Prevention (CDC) (2018) defines children aged 2 - 19 as overweight if they have a BMI at or above the 85th percentile and lower than the 95th percentile for children of the same age and gender. Children are defined as obese if they have a BMI at or above the 95th percentile. These percentiles and corresponding classifications were based on expert committee recommendations and are shown in Table 1.

Table 1

BMI Categories and classifications in children aged 2-19 years-old (CDC, 2018)

BMI category/cut offs	Clinical classification
< 5th percentile	Underweight
5th-84th percentile	Healthy weight
85th-94th percentile	Overweight
≥95th percentile	Obese

In New Zealand (and other parts of the world), BMI classifications are intended for screening and tracking purposes, rather than a diagnostic tool (Flegal et al., 2010). A particular advantage of using BMI-for-age charts is that they allow monitoring of a child's BMI over time; they also allow the identification of children at risk of obesity because their BMI is increasing more rapidly than would be expected for their age (Rolland-Cachera et al., 2011). Thus, BMI is a feasible tool and has acceptable clinical validity if used appropriately. However, despite the practical nature of BMI as a screening tool for overweight and obesity in children, there are important limitations highlighted in the literature.

BMI is not a direct measure of adiposity and has the potential to over-emphasize the degree that someone is considered to be overweight, particularly in tall lean children (Barlow et al., 2007). Furthermore, no single body fat value, clearly distinguishes health from disease or risk of disease (Power & Schulkin, 2013). Therefore, children and adolescents with a BMI over these cut-off points do not necessarily have clinical complications related to overweight/obesity. Alternative measurements such as underwater weighing, waist-hip ratio, dual energy X-ray absorptiometry (DEXA) and assessment of body fat and skin fold thickness may be more precise, but are far more complex to use, making them impractical for use in everyday clinical encounters (Purnell, 2018).

It is strongly recommended that health professionals rely on BMI as a useful tool that triggers concern and assessment, but they should also recognize that other clinical information influences the need for intervention (Barlow et al., 2007). A holistic health assessment should explore other factors such as: body composition and fat distribution, genetics, physical activity levels, physical fitness, dietary quality, social, emotional, and cognitive development, and engagement in other healthy or risky behaviours before clinically diagnosing a child as 'overweight' or 'obese' (Barlow et al., 2007; Blair et al., 2001; Freedman et al., 2009; Hruby & Hu, 2015).

The Physical, Psychosocial and Economic Consequences of Childhood Obesity

In developed nations, childhood obesity has been described as one of the most serious public health challenges of the 21st century, having been linked to a number of serious short and long-term physical, social and psychological consequences (Reilly & Kelly, 2011; WHO, 2018). As shown in Figure 1, children who are obese are at an increased risk of developing a number of

non-communicable diseases, including; breathing problems (such as obstructive sleep apnea and asthma), joint problems, musculoskeletal discomfort, high blood pressure and high cholesterol (Lakshman, 2012; MOH, 2018b).

Furthermore, childhood obesity is a strong predictor of adulthood obesity, with a concerning eighty percent of obese children remaining obese into adulthood (Freedman et al., 2001; Kelly & Swinburn, 2015). Adulthood obesity is associated with a range of well-known health consequences, such as type 2-diabetes, heart disease, dementia, some cancers, mental illness and chronic pain (MOH, 2018b; Serdula et al., 1993).

Childhood obesity literature consistently provides evidence for physical health consequences; however, in more recent times, childhood obesity has also been linked to a range of psycho-social problems that can significantly affect the quality of life and well-being of children globally (Sagar & Gupta, 2018). Obesity in children and adolescence has been associated with an increased risk of body dissatisfaction, poor self-esteem, anxiety and depression (Erickson et al., 2000). Furthermore, it can have a negative impact on children's learning and academic achievement, which can further impact on their self-esteem and mental wellbeing (Sagar & Gupta, 2018).

Additionally, children and adolescents who carry excess weight are at a greater risk of experiencing weight-based stigmatization (Palad et al., 2019). Consequently, children who carry excess weight can experience negative social experiences (such as limited friendships and opportunities for social interactions) through to bullying, and even an increased risk of suicide (Strauss and Pollack, 2003). Overall, children who carry excess weight have lower self-reported quality of life in comparison to children of normal weight (MOH, 2018b; Rankin et al., 2016).

Lastly, consequences of childhood obesity have extended to health care costs. In 2006, the estimated health care costs of overweight and obesity in New Zealand was NZ$624 million (Stone et al., 2015). Consequently, reducing the prevalence of childhood obesity is one of New Zealand's highest priority public health issues (Anderson et al., 2017).

Figure 3.

Schematic Summary of the Complications of Childhood Obesity (Adapted from Lakshman, 2012)
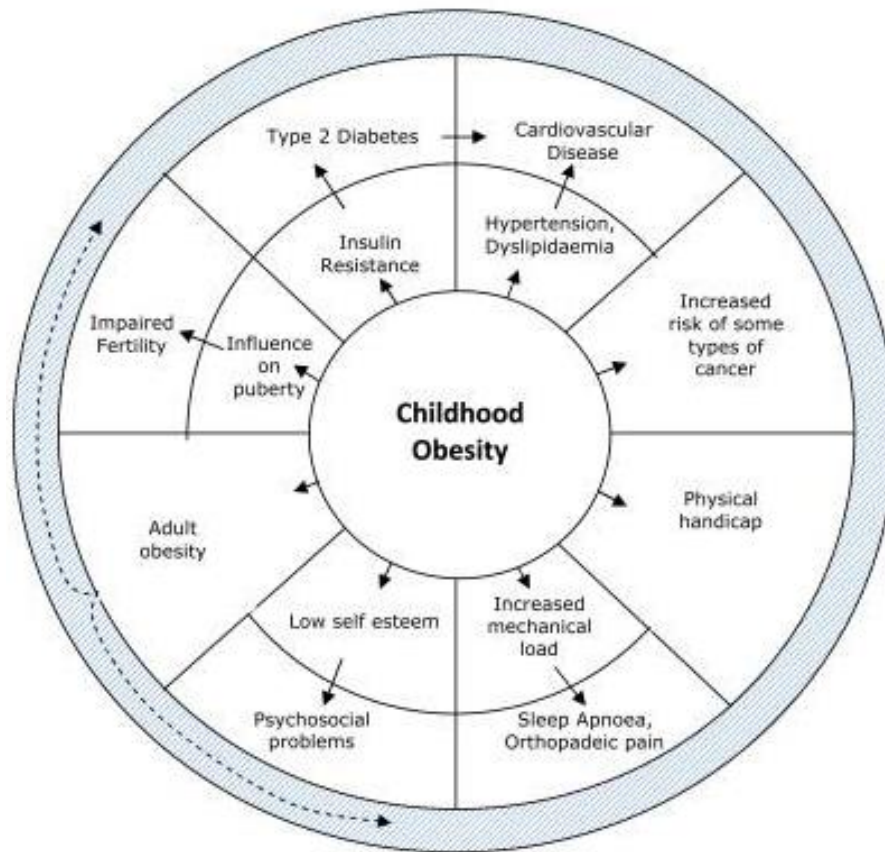
Note. Comorbidities of childhood obesity are depicted in the outer ring with their intermediate processes in the inner ring.

Theorising Childhood Obesity, Determinants and Prevention Strategies

> "The bodies of children are being inadequately adapted to the novel environments we have created."
>
> (Stoner, Matheson, Hamlin & Skidmore, 2016, p. 20)

Until recently, obesity has been addressed as a problem of individual responsibility (Brownell et al., 2010). The dominant biomedical understanding of obesity that informs the basis for most obesity interventions today describes obesity as a chronic energy imbalance, with more calories

being consumed then expended (McLennan, 2010; WHO, 2016). Thus, population obesity is most commonly addressed by targeting individual behaviours and lifestyles. However, to date, this approach has largely failed to address the obesity epidemic and has contributed to the stigmatisation of obese individuals who are held accountable for their lifestyle choices (Rutter et al., 2019; Lang & Rayner, 2012; McLennan, 2010). Additionally, the framing of obesity as a lifestyle disease has the potential to disengage everyday activities from the broader socio-cultural, economic, historical and political contexts in which these practices are situated (Gard & Wright, 2001; Lyons & Chamberlain, 2006; McLennan, 2010).

There is growing scholarly criticism that reductionist understandings of health and illness, as well as the narrow solutions they lead to, discourage the general population from embracing an educated, embodied, and socially-grounded understanding of health (Halfon & Hochstein, 2002). Consequently, policy makers and researchers are now promoting social-ecological approaches to obesity prevention and management (Lyn et al., 2016; Lang & Rayner, 2012).

Social-ecological approaches to tackling obesity have the potential to capture the interconnectedness and complex aetiological factors in the causes of obesity (Boonpleng et al., 2013; Lakerveld & Mackenbach, 2017). For example, the Social Ecological model, as presented in Figure 2, acknowledges individual level factors (such as biology and genetic factors) and psychological factors (such as ones knowledge, motivation and ability) in the onset of obesity (Lakerveld & Mackenbach, 2017). Furthermore, it recognises broader social issues, such as poverty, housing conditions, food security and safety as important determinants in the onset of childhood obesity (Chung & Romney, 2012; Williams et al., 2011).

Early childhood is an important period when children start to be exposed to multiple outside environments other than the family (Stoner et al., 2016). It is now widely recognised that children today are growing up in what has been termed an "obesogenic environment" (an environment that encourages weight gain and obesity) (Kelly & Swinburn, 2015; Lake and Townshend, 2006). Factors such as urbanisation, social trends (e.g., use of transport), increased sedentary lifestyle, greater quantities and availability of energy dense foods have all contributed to the rise in childhood obesity (Kelly & Swinburn, 2015; WHO, 2016).

Furthermore, the cultural context of food and eating has been reported as an important determinant in the onset of childhood obesity (Kumanyika, 2008). Cultural values and norms can influence the perception of a healthy or desirable body weight (WHO, 2016). Some cultures

tend to hold overweight and obese body types in high regard, as they are often considered symbolic of power, beauty, affluence and strength, and a sign of that the child is well cared for (Kumanyika, 2008). Additionally, in many collective cultures, food plays an integral social and cultural role (Nemeth et al., 2019).

Although there has been substantial effort invested in identifying the determinants of childhood obesity, there is still an incomplete understanding of all the drivers and their interactions. However, what is generally accepted is that there is no single cause of childhood obesity, and that a complex array of both downstream and upstream factors are driving changes in weight status at an individual and societal level.

Figure 4.

Ecological Model of Predictors of Childhood Overweight. Adapted from Davison & Birch (2001).
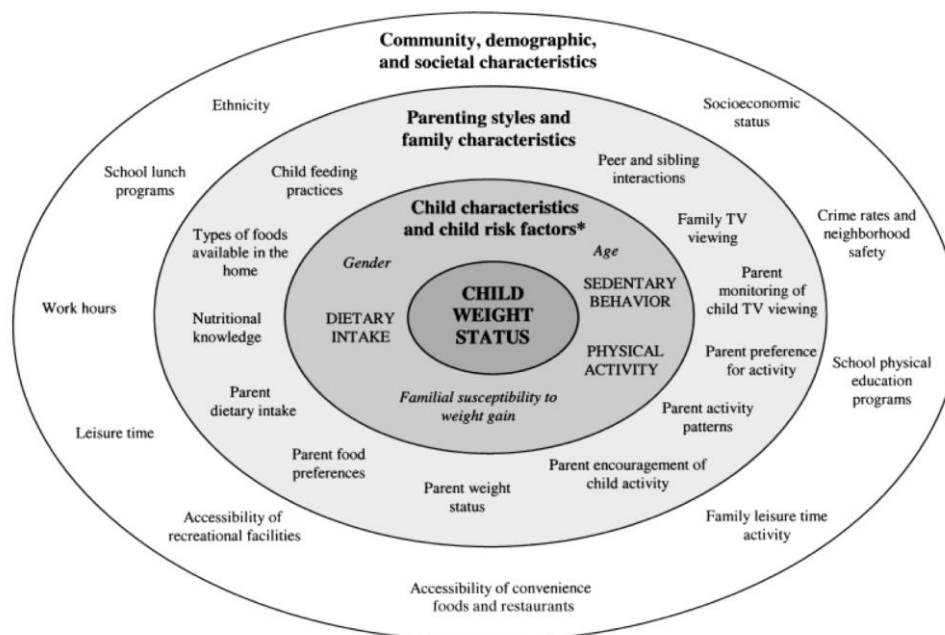
Figure 1 Ecological model of predictors of childhood overweight. ✱=Child risk factors (shown in upper case lettering) refer to child behaviours associated with the development of overweight. Characteristics of the child (shown in italic lettering) interact with child risk factors and contextual factors to influence the development of overweight (i.e. moderator variables). This review is organized around child risk factors and the influence of child family, and community characteristics is discussed for each child risk factor.

In the literature, childhood obesity intervention and prevention strategies are categorised into three broad approaches: "downstream", "midstream" and "upstream". The "upstream" or socio-ecological approach to obesity prevention aims to shape the circumstances and conditions that are the underlying determinants of health in society (Lakerveld & Mackenbach, 2017). Upstream actions within this approach target the food environments, physical activity environments and the broader socioeconomic environments (including taxation, employment, education, and housing), thus indirectly influencing population behaviours.

Sectors that are targeted include all aspects of the food system as well as sectors that influence the physical activity environment. Also included are social and economic issues, with a view towards changing public policy in many areas, including food production, manufacturing and retailing, trade, urban planning, transport, healthcare, education and culture (Wallace & Spear, 2016).

"Midstream" or behavioural approaches to obesity prevention aim to improve population dietary and physical activity behaviour patterns (Lakerveld & Mackenbach, 2017). Midstream approaches will typically be targeted at the settings level, where programmes, social marketing, education, and other initiatives to motivate individuals to change diet and physical activity behaviours can be implemented. These settings may include childcare centres, schools, community and recreational facilities, households, or religious settings.

Lastly, downstream approaches are typically directed towards supporting health services and clinical interventions. In the context of childhood obesity prevention, these are typically individual based, rather than population-based, such as nutrition education and behavioural counselling (Cauchi et al., 2016).

As highlighted in the section above, the strong emphasis on the social determinants of obesity lead to two conclusions: first, interventions for the treatment of childhood obesity are unlikely to succeed if they deal only with the child and not with the child's prevailing environment; and second, if the prevention and management of childhood obesity is to be successful, it will require a whole-of-society approach, with multiple levels of intervention being targeted (as shown in Figure 2) (Hobbs et al., 2015; Kelly & Swinburn, 2015; Lobstein et al., 2004; WHO, 2016).

Figure 5.

Childhood Obesity Levels of Intervention. Adapted from Lobstein et al (2004).
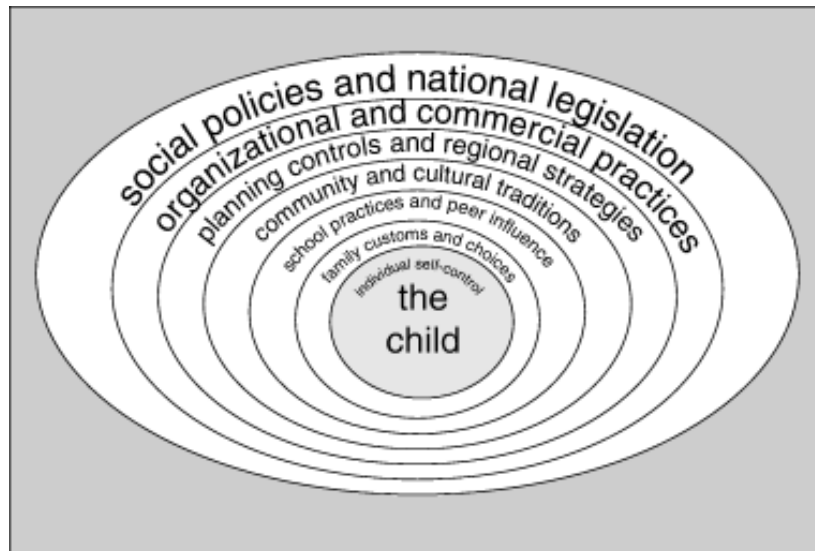
Chapter 2: Literature Review

It is now well recognised in the literature that obtaining participant engagement with public health programmes is challenging despite strong evidence supporting the effectiveness of primary prevention activities (Darker et al., 2018; Kelleher et al., 2017; Rubio-Valera et al., 2014). Chapter Two reviews the literature concerning parents' perceptions of childhood obesity services and health professional's perceived role in managing childhood obesity. Both qualitative and quantitative studies are reviewed to provide a broad account of the literature.

Parents/caregivers

Despite the high prevalence rates of childhood obesity and the well-documented health risks associated with it, engaging families and whānau in childhood obesity services have been reported as challenging (Davidson & Vidgen, 2017; Kelleher et al., 2017). However, parents are key agents of change for health promotion and disease prevention as they play an important role in sculpting the behaviour, knowledge and attitudes of their children from a young age (Arunachalam & Kandasami, 2019; Golan, 2006; Tucker, 2009). Therefore it is important to understand parent's attitudes and perceptions around this issue.

A search of the current and available literature on parental perceptions found a number of key barriers impacting on parent's decisions to attend childhood obesity programmes. Four key themes emerged as being the major barriers, these being: perception and denial of the issue, stigma surrounding excess weight, knowledge around obesity and a number of practical barriers were also commonly cited.

Parental Beliefs Regarding Childhood Obesity

There are a number of studies that suggest that parents often underestimate their overweight or obese child's weight status (Hammersley et al., 2017; Lundahl et al., 2014; Newson et al., 2013; Perez et al., 2015; Rice et al., 2008; Rietmeijer-Mentink et al., 2013; Turner et al., 2016; Vallejo et al., 2015; Vittrup & McClure, 2018).

For example, Rice et al. (2008) found that parents' perceptions of the child's weight and need for medical intervention was the biggest barrier in addressing the child's obesity. In addition, only one in 11 parents responded to a written invitation to discuss their child's weight with a general practitioner in a study done by Banks et al., (2011). When followed up by the researchers, parents who did not respond on the invitation reported that they did not perceive

their children as having a weight problem. Additionally, in the Netherlands researchers reported a similar issue as parents denied that their children were overweight and did not want to discuss weight issues with health professionals, causing weight management programs for childhood obesity management to be less effective (Gerards et al., 2012). A review of 69 articles confirmed these findings and found that over 50% of parents did not regard their children as obese despite their BMI falling outside the healthy weight range (Lundahl et al., 2014).

There were a number of reasons provided in the studies as to why parents perceived their child to not fall within the obese category. The parents' views ranged from not identifying obesity as a serious medical problem, beliefs that the child will overcome the weight issue as they grow older, and identifying that the child has been active or has recently lost weight (Perez et al., 2015; Vallejo et al., 2015; Vittrup & McClure, 2018). Additionally, interview data collected by Perez et al. (2015) brought to light that although parents recognize that their children has a weight problem, they do not regard it necessary to seek help about it.

Stigma Surrounding Excess Weight
Current literature recognises the detrimental impact weight stigma (discrimination towards obese persons) has on the willingness of people to engage in interventions for weight management programmes, particularly for children (Puhl & Heuer, 2010). A prevailing ideology in the obesity literature is that people who are perceived to be overweight are unhealthy and that this is a direct result of an individual's choice (Halse et al., 2009). As a consequence, having a child that is considered to be overweight is commonly seen as a failure on part of the parents (particularly mothers) and has been associated with feelings of stigmatisation, fear and guilt (Doolen et al., 2009; Halse et al., 2009).
Additionally, a study conducted by Turner et al., (2016) reported that parents were concerned that drawing attention to the child's weight by attending intervention sessions, could have a negative influence on the child's psychological wellbeing due to the stigma attached to being classified as overweight. Additionally, Toftemo et al., (2013) found that some parents were hesitant to recognize their young child's weight problem due to their own history with weight issues and not wanting the child to go through similar painful experiences so early on in life. Furthermore, a qualitative study conducted by Grow et al. (2013) found that a number of participating parents said no to a referral for childhood obesity support because they did not

want to be associated with a programme that others could perceive that their child was "fat" and also parents did not want their child to be upset about their weight (p. 6).

Practical Barriers

There were many practical barriers reported by parents in the literature to accepting a referral to a weight management programme for their child. Some of these barriers included a lack of transportation to get to sessions, inconvenient timing and duration of the sessions/programme, work schedules interfered with coming to sessions, difficulties around finding someone to care for their other children and other family commitments made attending sessions challenging and inconvenient. Additionally, most parents reported that prioritizing childhood obesity initiatives was challenging due to competing individual and family demands (Dhaliwal et al., 2014; Banks et al., 2014; Grow et al., 2013; Perez et al., 2015; Rice et al., 2008; Vittrup & McClure, 2018). A further significant barrier was found in Chuang et al., (2015) being a child's low level of support and enthusiasm for the programme.

Healthcare Professional's – Challenges to Managing Childhood Obesity

Healthcare professionals around the world have been assigned a key role in the prevention and treatment of obesity in children, as they are often the initial point of contact that a patient has with the health care system. Specifically, for an overweight and obese patient, health professionals are the first to screen for and diagnose obesity and further treat various health-related conditions. A report produced by the Childhood Obesity Expert Committee (2007) emphasised the influence that health professionals can have on their patients' health behaviours (Barlow, 2007). Despite the responsibility placed on health professionals, evidence from current literature suggests that health professionals have reported feeling ill-equipped to manage patients with obesity and obesity–related comorbidities (Brown et al., 2013; Story et al., 2002). This was particularly salient in the literature on childhood obesity. This section will explore the key barriers found in the literature in the management of childhood obesity by healthcare professionals.

Low-perceived Self-efficacy

Research has found that the way health care professionals relate to and communicate with their patients can have a profound impact on treatment adherence and patient satisfaction (Brown et

al., 2013; Zolnierek & DiMatteo, 2009). Previous research has highlighted that healthcare professional's report a lack of competency in addressing people with obesity. For example, Perrin et al., (2005) conducted a survey that aimed to determine practice-based barriers experienced by paediatricians with respect to treatment of childhood obesity. Of the 356 respondents, only 12% reported having high self-efficacy in treating childhood obesity. Similarly, Jelalian et al. (2003) reported that of a sample of 1,243 paediatricians and family doctors, one-quarter believed that they were either not at all or only slightly competent when addressing childhood obesity, and one in five reported personal discomfort when addressing obesity with the patient.

Knowledge

In the literature, health care professionals have been found to display limited knowledge about the management of childhood obesity. This is supported by a study conducted by Spivack et al (2010) that aimed to explore health care professionals' (80 paediatricians and 7 nurses) challenges in discussing children's weight problems with parents. It was found that one of the major concerns faced by healthcare professionals was insufficient knowledge of the management of obesity and referral options and insufficient knowledge about lifestyle changes such as diet and exercise requirements. Additionally, Kolagotta and Adams (2004) conducted a survey with 287 health care physicians (213 paediatricians and 74 family physicians) and found that the majority of participants were not aware of (81%) or adherent (97%) to national recommendations regarding childhood obesity management. Interestingly, more awareness was associated with more positive attitudes about their counselling ability and the effectiveness of obesity and lifestyle counselling in general.

Discomfort

Discussing weight related concerns with parents and their children is well cited in the literature as a difficult and uncomfortable task for many health professionals as they fear it will have a negative impact on the professional-patient relationship (Lambe & Collins, 2010). Furthermore, many healthcare professionals reported that having a weight problem of their own was a barrier to discussing weight related issues with their patients as they were concerned that their own weight would undermine their credibility and role in health promotion (Blackburn et al., 2015; Blake & Patterson, 2015).

Lack of Time and Resources

A number of studies found that healthcare professionals found it challenging to prioritise the issue of childhood obesity due to a number of factors, including a lack of time and resources. Furthermore, primary care nurses indicated that families who needed lifestyle counselling most, often had very complicated circumstances of which the child's weight problem was not a priority (DiNapoli et al, 2011; Ljungkrona-Falk et al., 2013; Rice et al., 2008; Warren & Hunt, 2017). Additionally, Nurses in primary care and hospitals argue that they are concerned with the child's immediate health needs and discussing weight issues might clash with their actual service rendering and also pose ethical issues (Banks et al., 2011). Lack of access to appropriate resources, such as, up-to-date growth charts was also a barrier reported by health professionals in a study conducted by Klein et al (2010).

Lack of Confidence

Health professionals have also reported a lack of confidence in the effectiveness of interventions for childhood obesity management and that the clinical evidence base supporting the management of obesity is limited (Bradbury et al., 2018; Turner et al., 2016).

Research Rationale

Given the high prevalence of childhood obesity and the negative health consequences associated with it, it is important that interventions for childhood obesity are appropriate and accessible for parents and their children. Although there has been an increase in literature exploring barriers and facilitators to childhood obesity management, to our knowledge this is the first study conducted within a New Zealand context. Additionally, to our knowledge, no other study has looked at both parents and health professional's perspectives in the same study. In light of this gap, the current study aimed to systematically explore health professionals and parents views and experiences and perceived barriers to managing childhood obesity, thereby providing a useful all-round view of the issue in a New Zealand context. It is hoped that exploring and considering the thoughts and experiences of individuals involved in a programme's implementation can shed light on where participant engagement efforts can be improved.

Chapter 3: Methodology and Methods

"Without an empathetic understanding of why people behave as they do, we are unlikely to identify the possibilities for change."

(Green & Thorogood, 2014, p. 25)

Introduction

This study was designed with two main aims in mind. The first aim of the current study was to explore parents' and caregivers' reasons and rationales for declining a referral to 'BOOST'. In addition, this study aimed to explore the thoughts and experiences of a range of health professionals, practicing within the MidCentral region of New Zealand, in the management of childhood obesity. Such an inquiry suggested a qualitative methodology.

In this chapter, I explore the philosophical assumptions underpinning the qualitative research approach and outline the chosen methodology, along with an explanation of the selected methods of participant recruitment and data collection. Following this, the process of thematic analysis is outlined, along with ethical considerations and steps taken to ensure the trustworthiness of this research.

The Qualitative Research Paradigm

Qualitative research is an approach most commonly used for research aimed at exploring and understanding experiences, perceptions, views and opinions that individuals or particular groups ascribe to a topic under investigation (Pietkiewicz & Smith, 2014). Additionally, qualitative research is guided by a set of unique philosophical assumptions concerning the nature of reality (ontology) and the meaning ascribed to knowledge (epistemology) (Crotty, 1998). In this section, I will explore the core epistemological and ontological assumptions underpinning the qualitative approach to inquiry.

The Relationship between the Researcher and the Researched

In traditional quantitative research, the relationship between the researcher and the researched is characterised as value-free and objective (Elshafie, 2013). In contrast, the qualitative researcher aims to 'get inside the participant's head' and seeks to understand how the world is understood and experienced from the participant's perspective (Braun & Clarke, 2013). Therefore, the researcher and participants both play a crucial part in the process of producing knowledge.

Reflexivity

Qualitative research acknowledges that researchers bring their own worldview and set of beliefs to the research process, and that it is impossible to separate the '*me*' from the research (Darlaston-Jones, 2007). Thus, remaining reflexive (by critically reflecting on the influence that our own background, assumptions and biases may have on the research process) is essential when conducting qualitative research (Levitt, 2016).

Sensitivity to Context

Context is central to qualitative research and there is a strong belief that knowledge is historically and culturally specific (Burr, 2003; Haase & Myers, 1988). In the context of the current study, the way parents and health professionals talk about their experiences and perspectives of childhood obesity will likely be shaped by a number of influences, including the cultural, social, and political systems that surround them (Sandelowski, 2004). Therefore, qualitative research does not seek generalization, as it is context bound (Elshaifie, 2013).

Holistic Account

Qualitative researchers aim to develop a complex picture of the topic under investigation (Creswell et al, 2007). This is achieved through identifying the many factors involved in a situation, and unpacking the larger picture that emerges (Patton, 2015). Additionally, qualitative research allows the research to focus on participants' own experiences and what is important to them, therefore providing a holistic account of people's experiences (Sandelowski, 2004).

Unlike a quantitative approach to inquiry - whereby standardised measures are used to fit into pre-determined categories - qualitative research uses open-ended questions to explore the topic. This allows for flexibility to change the questions during the process of research, to reflect an increased understanding of the problem (Creswell et al., 2007). Consequently, the qualitative research paradigm provides the means to seek a deeper understanding and to explore the nuances of experiences not necessarily available through quantification (Patton, 2015).

Given the main aims of the current study, whereby I am interested in parents and health professional's subjective thoughts and experiences of a childhood obesity service, the qualitative approach to inquiry is the most appropriate for answering the research questions.

Ethical Considerations

Once the details of the study had been finalised, the process of gaining ethics approval began. A full ethics application was completed and submitted to the Massey University Human Ethics Committee. Approval for this research project was obtained on the 23/05/2018 from Human Ethics Southern B, Application 18/18 prior to study initiation. The Massey University Code of Ethical Conduct for Research and Teaching involving Human subjects (Massey University, 2017) guided this process. This section will provide a discussion on the following ethical principles that informed this study including: informed consent and right to withdraw, privacy and confidentiality, participant and researcher safety, cultural consideration and reflexivity.

Informed Consent and Right to Withdraw

Informed consent in qualitative research refers to the idea that participants need to be informed regarding the purpose and procedures, as well as the risks and benefits, before study initiation (Byrne, 2001). Participation in this research was entirely voluntary and informed consent was sought prior to participation. Each participant was provided with a detailed information sheet that outlined the aims and objectives of the research, what participation would look like and participant's rights. Additionally, at the beginning of each session, participants' rights were read out to them and time was set aside to answer any questions they had. Participants were informed that they could contact me, my supervisors or the ethics committee if they had any further questions or concerns regarding the current research. All participants signed a consent form prior to participating.

Informed consent with semi-structured qualitative research presents a unique challenge. While the broad topic is known in advance, it is not possible to fully anticipate what specific areas might be discussed. Therefore, informed consent is an ongoing process. The right to withdraw from the focus group or individual interview, to decline any questions, ask for the audio-recorder to be turned off at any point, and to later delete text or amend their transcript were all important elements that were highlighted in the participant information sheet. Additionally, all participants had the right to withdraw from the study up until two weeks after the interview was conducted.

Privacy and Confidentiality

A number of steps were taken to ensure the protection of participants' privacy. Audio-recordings were transferred from the recording device to my password-protected laptop directly following the interview and focus group discussions. Additionally, participants' transcripts were stored securely on my laptop and copies given to my academic supervisors. Consent forms, hard copies of transcripts, and my field notes were all securely stored in a locked filing cabinet that only I had access to. Upon completion of the research project, audio-recordings were deleted.

During the transcription phase, all names (including partners and children) were swapped for randomly selected pseudonyms or a unique participant identifier. Additionally, all other identifying information was removed, such as, mention of place of work/study and names of any organisations. No participant in this study will be able to be identified in the results.

Participant and Researcher Safety

Childhood obesity is a sensitive topic for many and it was essential that safety measures were put in place to minimise and/or eliminate any discomfort experienced by participants. Specific strategies put in place included adopting an empathetic stance, and taking time before the interview to make sure that the participant felt comfortable. Additionally, it was planned that if a participant showed any sign of distress, I would check to see if they wanted to stop the interview and/or for the audio recorder to be turned off. During both focus groups and individual interviews, no signs of distress or discomfort were observed. All participants had the right to decline to answer any questions and this was made explicit prior to the start of the interview.

The individual interviews were conducted at participants' homes; consequently, to ensure researcher safety, a number of safety processes were put in place. My academic supervisors were made aware of when and where each interview was taking place and I made contact with them directly after the interview. Additionally, regular supervision time allowed me to debrief about anything that I felt affected me or wanted to discuss further.

Cultural Consideration

In Aotearoa/New Zealand, Māori populations experience the burden of childhood obesity at a disproportionate rate in comparison to their European counterparts. Therefore, it was important that this research project was respectful and meaningful for Māori, and that the principles of Te Tiriti o Waitangi/The Treaty of Waitangi (partnership, participation and protection) were

applied and upheld throughout the entire research process. Ongoing cultural consultation was sought through the School of Psychology to ensure that the study was designed and conducted in a culturally sensitive and appropriate manner (see Appendix A).

Reflexivity

Practising reflexivity is considered a fundamental expectation in qualitative work (Lazard & McAvoy, 2017). To be reflexive requires critical self-reflection of the ways in which a researchers' social circumstances, assumptions, positioning and behaviour impact on the research process (Lazard & McAvoy, 2017). Consequently, I have written in first person throughout this thesis to acknowledge that I have played an active part in the research process, and that I'm not merely an observer (Krefting, 1991). Additionally, I have kept a field journal where I have written down my personal thoughts, feelings and emerging ideas.

Parent/Caregiver Recruitment

This section outlines the procedure of participant recruitment and data collection in relation to Aim One of the current study.

Sampling Method

To fulfil the current study's aim to better understand parents' and caregivers' reasons and rationales for declining a referral to a childhood obesity service, a purposive sampling approach was used to recruit participants. Purposive sampling is a common approach used in qualitative research, whereby an inclusion criterion is used to recruit information-rich participants who offer the opportunity to provide valuable insights about the topic central to the research. Additionally, participants are characterised by their willingness and availability to share information and insights with the researcher (Denscombe, 2010; Morse, 2007; Moser & Korstjens, 2017). Eligibility criterion for inclusion in the current study included: being a parent or primary caregiver who; had a child who had been identified as overweight or obese by a health care provider; declined a referral to a childhood obesity service; and (for practical reasons) resided in the Manawatu region.

Recruitment

During the process of completing a full ethics application, a meeting was arranged with a small group of Well-Child providers who had been identified as holding key positions for identifying potential participants to take part in this study. In collaboration with the providers, a

recruitment strategy was developed and permission was granted for recruitment to take place within their organisation. Recruitment began once ethical approval was granted.

The team of Well-Child providers were provided with multiple copies of participant information sheets (see Appendix B) and referral forms (see Appendix C). Once they identified parents who met the inclusion criterion, they were asked to inform them about the current study. If potential participants expressed interest in taking part in this study, they were handed a participant information sheet and a referral form that asked for their name, contact number, email address and the best time to be contacted. Well-Child providers were then advised to scan and forward the completed referral form to the researcher.

After a month, no referrals had come through, so it was agreed that additional methods of recruitment would be used, with additional approval gained from the academic ethics committee. Participant information sheets were sent out through a provider portal, which reaches health professionals employed by the MidCentral DHB, with information attached about the study and how they could assist with identifying and recruiting potential participants on the researcher's behalf. Additionally, recruitment flyers (see Appendix D) were distributed around six randomly selected pre-school centres in the Manawatu region. All recruitment flyers were approved by the pre-school centre manager and were placed in a communal area. Eligible and interested participants were invited to contact me by phone or email. However, these methods were also unsuccessful in recruiting participants.

Thus, despite a number of strategies taken to enhance the recruitment process, recruitment for this part of the study progressed slowly. Initially, recruitment was planned to be open for three months (June, July and August 2018); however, by the beginning of August, no referrals had come through. Consequently, the decision was made to extend recruitment for another three months. Five referrals came through in the month of October and all five participants (all mothers) provided written informed consent and were interviewed.

Currently, there are no firm or widely-accepted guidelines regarding the number of participants that should be used for research involving qualitative interviews. However, small sample sizes are generally considered acceptable, as long as they fit the nature and purpose of the study (Braun & Clarke, 2013). Additionally, it has been recommended that the guiding principle for sample size in qualitative research be data saturation, meaning that data should continue to be collected until nothing new (in terms of results) is generated (O'Reilly & Parker, 2013).

However, it is recognised that a number of factors can affect the ability to reach data saturation. The three most influential factors being: available time, resources, and accessibility of participants (Denscombe, 2010; Morse, 2010; Vasileiou et al., 2018). Taken into consideration the duration of a Masters research project, and the resources available to conduct this study, five participants were seen as acceptable.

Sample

Demographic information was collected for all five participants and is presented in Table 1, using pseudonyms. Given the small sample size, demographic information was collected solely to 'describe' the sample and is not used as a variable in this study (Braun & Clarke, 2013).

Table 2

Participant demographic data

Participant	Age range	Ethnic identity	Marital status	Highest level of Qualification	Employment status
Alison	35-44	Māori	Married or in a domestic partnership	Bachelor's degree	Self-employed
Dianna	18-24	NZ European	Single	Diploma	Employed part-time and studying part-time
Shelley	35-44	NZ European/ Samoan/ Māori	Married or in a domestic partnership	Diploma	Unable to work
Rose	25-34	NZ European	Married or in a domestic partnership	High School	Un-employed
Jennifer	35-44	NZ European	Married or in a domestic partnership	Bachelor's degree	Self-employed

Data collection method

Individual Interviews

Semi-structured, face-to-face interviews were the data collection method employed for exploring the five mothers' experiences, reasons and rationales behind saying no to a referral to a childhood obesity intervention. Individual interviews are seen as a particularly appropriate method when the information shared between the participant and researcher is potentially sensitive or confidential (Savin-Baden & Howell-Major, 2013). Additionally, individual interviews are a useful method for eliciting participants own experiences, perceptions, thoughts and feelings on the topic under investigation (Moser & Korstjens, 2017).

Interview procedure

Initial Contact

Once I received the referral form with the details of interested participants, I sent out an initial email thanking them for showing interest in taking part in this study and attached a further copy of the participant information sheet and participant consent form (see Appendix E). Following this, phone contact was made with participants. During this phone call, I checked they had read the information sheet and had a good understanding of the research and whether they had any questions at this stage. A time and location were arranged in which the interview would take place. Directly following the phone call, I sent out an email to participants to confirm the interview time and location, and encouraged them to contact me if they had any questions or concerns leading up to the interview. On the day before the interview, I sent a text to participants to remind them that our interview was scheduled, and to ask them for food and drink preferences.

Interview Setting

The location of the interview was determined by each participant and all interviews were conducted in participants' homes at a mutually agreed date and time.

Interview Process

Upon arriving at the interview location, I greeted and introduced myself and thanked participants for meeting with me. I then outlined the broad aims of the current study and went over the information sheet with participants making explicit their rights. Before we got into the

formal interview, participants were given a $30 'Prezzy' card voucher to thank them for their time. The decision was made to give the voucher at the beginning of the interview to ensure participants did not feel pressured to continue with the interview if they did not feel comfortable in doing so. Participants were also asked to complete a short demographic form (see Appendix F). Once participants were comfortable, consent forms were complete and collected, the interview began.

I used a semi-structured interview guide to refer to throughout the interviews (see Appendix G). The interview schedule was developed with the aim to encourage participants to share their personal experiences, thoughts and feelings. The semi-structured nature of the interviews allowed for flexibility in wording and expansion of questions depending on the interview flow (Galletta, 2013). Initial questions sought to build rapport e.g., would you be happy telling me a little about yourself? These were followed by open-ended questions and related prompts to explore key aspects of the research topic.

A number of steps were taken to ensure that participants felt at ease and non-judged during the interview. I made sure not to interrupt participants when they were speaking and used encouraging prompts and non-verbal cues such as head nods, eye contact and open body language. I also emphasised at the beginning of the interview that I was interested in their experiences and thoughts and that there were no right or wrong responses. The interviews were conversational, with laughter shared between participants and researcher at times.

When I felt the interview was coming to a natural end, I politely asked participants if they had anything else they wanted to add and if it was alright to turn off the recording device. Once the formal interview had concluded, I conducted a brief reflective session with participants and used this opportunity to check my understanding of what was talked about during the interview. All participants were given the opportunity to have their transcripts returned to them; however, no participant felt this was necessary.

The interviews lasted on average 60 minutes and were audio-recorded using a small digital device. I reflected on each interview immediately after. Using my field journal I wrote down how the interview went, how I felt and any points that were raised during the interview that I felt were particularly interesting. As a novice researcher, this step was particularly important in ensuring I was continually improving my interviewing skills and remaining reflexive throughout the research process.

Health care providers participant recruitment

This section outlines the procedure of participant recruitment and data collection in relation to Aim Two of the current study.

Sampling Method

A purposive sampling method was used to recruit eligible health care providers to fulfil aim two of the current study. The inclusion criterion was: To be working as a health care provider in the MidCentral region; and to have some working knowledge and/or experience of Paediatric Weight Management Guidelines for health care providers practicing in Aotearoa/New Zealand.

Recruitment

A separate information sheet for health care providers was developed (see Appendix H) which outlined the purpose of the research, what participating in this research would involve and participants' rights.

A number of recruitment strategies were employed to recruit eligible health care providers to participate in this study. An email was sent to health care practices within the MidCentral region inviting participants to take part in this study. In the email I introduced myself, outlined the main aims of the research and welcomed them to contact me if they were interested in participating or finding out more about the study. One focus group was recruited through this method. We contacted two Integrated Family Health Centers and they agreed to us running a focus group at their practice. Lastly, a member of the MidCentral Childhood Obesity Advisory team assisted me in recruiting one of the focus groups.

Sample

33 participants made up the four focus groups ($n=4$, $n=16$, $n=8$, $n=5$). Participants were: general practitioners, practice nurses, nurse practitioners, well-child providers, paediatricians, a paediatric registrar, health workers and a health administrator. According to Lasch et al., (2010) four to six focus groups are seen as ideal for reaching data saturation. Additionally, it is recommended that the size of the group include between four and 12 participants. This is so that the group is small enough for all members to have an opportunity to talk and share their thoughts, and yet large enough to create a diverse group (Lasch et al., 2010; Onwuegbuzie et al., 2010).

However, for all four of the focus groups, the number of expected participants was unknown until the time of the focus group; it was considered by the researcher and supervisory team that

it would have been discourteous and potentially unethical to exclude some of them from participating.

Data Collection method

Focus Groups

Data was collected from health care providers through the use of semi-structured focus groups and were conducted between July and September 2018. The focus group method places the researcher and participants, with their unique individual identities, together in a shared environment where they are presented with a subject area to be explored in-depth (Merriam & Tisdell, 2015). The main difference between focus groups and individual interviews is that focus groups are characterised by the interaction of the group participants with each other, as well as the researcher. The group interaction is useful in assisting the researcher by participants asking questions of each other and by contradicting and disagreeing with other participants. Additionally, focus groups are seen as a particularly useful method for collecting data when exploring people's knowledge and experiences (Kitzinger, 1995). Given the main aims of the current study, the focus group method was seen as the most appropriate method for collecting data in relation to Aim Two.

Focus group procedure

Focus Group Setting

All focus group sessions were conducted at participants' health care practice during work hours, which was mutually agreed between the researcher, participants and management. Focus groups were conducted either in the staff room, or in a private consultation room. My academic supervisor attended three out of four focus group discussions for support and when appropriate used their experience, skills and knowledge to aid with the facilitation of the group discussions.

Focus Group Process

Upon arrival at the focus group location, I introduced myself to the group, thanked them for meeting with me and explained the broad aims of the current study. All participants were emailed a copy of the information sheet and consent form (see Appendix I) at least a week prior to the focus group session. However, a number of copies were taken to each session and handed out to all participants to familiarise themselves with the study's aims and their rights as participants. Due to time restraints, it was not possible to go over the participant information

sheet in-depth; however, a few key points were highlighted, including that the interview would be sound recorded and how their privacy would be protected. I then asked the group if they had any questions before the focus group began. All participants acknowledged that the study had been satisfactorily explained to them and signed a consent form that was handed to the researcher at the beginning of the focus group session.

A semi-structured interview guide was prepared prior to the focus group to help guide the session (see Appendix J). The guide included a list of open-ended questions that was designed to encourage participants to discuss the topic freely. All four of the focus group sessions were largely guided by participants and what they wanted to focus on and talk about. In this sense, I took on the role of a facilitator by keeping track of the session, but with minimal contribution to the discussion (Breen, 2006).

Reduced researcher influence is a potential benefit when conducting focus groups, as the participants have an active part in creating the research agenda and are given the space to talk about the issues most important and salient to them (Wilkinson, 1998). Participants talked about a range of issues and insights and often would cover other aspects of the interview guide with no prompt from the researcher. Follow up questions were asked throughout the sessions (where appropriate), to either gain clarification from participants or explore a certain point more in-depth.

The focus group sessions were audio-recorded for transcription using a small digital voice recorder, which all participants consented to. Audio-recording the focus groups enabled me to engage with participants and also ensured more accuracy when transcribing the data verbatim.

The duration of the focus group sessions ranged from 10 to 50 minutes. Participants came to the focus group discussions with thoughts they wanted to share and the discussions were very focussed. Additionally, the majority of the time was spent exploring the topic rather than long introductions and icebreakers, since the majority of participants already knew each other and felt comfortable getting straight into the topic.

At the end of the focus group, participants were thanked for their time and offered another opportunity to ask any questions. It was also reiterated that they could contact me or my supervisors at any time in regards to this study. All participants were offered for their transcripts to be returned to them; however, no participants took up this option. Directly after the focus group sessions, a brief reflective session was conducted with my academic supervisor (when

they had also attended). I also wrote notes in my field journal highlighting areas of interest and thoughts and feelings that were evoked during the process.

Trustworthiness in qualitative research

Qualitative research is based on a different set of ontological and epistemological assumptions about social phenomenon than positivist research (Krefting, 1991). Therefore, the conventional notions of rigor, such as reliability, validity, objectivity and generalizability, are not seen as compatible with the goals of qualitative research (Krefting 1991; Savin-Baden & Howell-Major, 2013). Lincoln and Guba (1986) developed a useful parallel criterion that can be used to judge the trustworthiness of qualitative research. In the next section I will provide a description of how I attempted to conduct a trustworthy piece of research based on Lincoln and Guba's (1986) criterion of credibility, transferability, dependability and confirmability.

Credibility

- I used a degree of triangulation whereby I explored multiple informants' perspectives; in the current study, this included parents and health professionals, to gain a deeper understanding of the topic;

- I kept a field journal in which I recorded methodological decisions and their rationales. Additionally, I also kept a record of my personal thoughts, feelings and ideas throughout the entirety of the research process. This allowed me to remain aware of any biases and remain reflexive throughout the research process;

- Regular supervision meetings were held throughout the entire research process to ensure an external check on the research process and to verify emerging ideas. Additionally, my academic supervisors were involved in reading participants' transcripts and checking emerging codes during the data analysis phase;

- I conducted analysis of the whole data set including deviant cases;

- I have retained copies of verbatim transcripts, clear notes on theoretical and methodological decisions and my reflective accounts that can allow an independent audit of the research process if requested;

- Each interpretation of the data has been supported with participants' quotes as evidence of the analysis;

- The findings of this study have been contrasted with the broader literature identifying where the findings are supported, contradicted, or added to the current body of knowledge on the topic.

- This study was granted ethics approval prior to study initiation.

Transferability

Transferability refers to the extent to which findings from one study can be applied in other contexts or to other participants. Lincoln and Guba (1986) suggest that applications to other contexts may be possible in qualitative research, but require a detailed comparison of the receiving contexts with the description of the current study. I have provided a thick description of the research process, including information about myself as the researcher, the research context, processes and participants to enable the reader to decide how the findings from this study may transfer to other contexts (Morrow, 2005). Additionally, this study has been written primarily for those involved in service design and delivery within the child health and well-being services. Therefore, its transferability will, in part, depend on how these groups perceive it, and how it informs their work.

Dependability

Dependability is demonstrated with the use of audio taped interviews and focus groups and all being conducted and transcribed by one researcher. Additionally, interviews and focus groups were all conducted with the use of semi-structured interview questions.

Confirmability

I have provided an audit trail by clearly outlining my methodological decisions and providing clear rationales so to allow readers to authenticate their interpretive inferences of the study's findings. Additionally, during the focus groups and interviews, if there was something I didn't understand or felt like I needed more clarity on, I would ask participants to clarify.

Data analysis

Thematic analysis

The data collected in the current study were categorised into themes using an inductive approach to thematic analysis and was carried out according to the guidelines outlined by Braun and Clarke (2006). Thematic analysis is a useful method for examining the perspectives of different participants, and highlighting similarities and differences within and across the dataset (Nowell et al., 2017). Thus, this method was considered to be particularly appropriate in light of the aims of this present study.

One of the key advantages of thematic analysis is its flexibility (Braun & Clarke, 2006). Unlike many approaches to qualitative analysis, thematic analysis is not tied to any theoretical or epistemological approaches, making it a common method used in clinical and health research. Additionally, thematic analysis has been described as an ideal method for beginner researchers, as it is one of the most accessible qualitative analytic methods and it can be learnt relatively quickly, as there are fewer prescriptions and procedures in comparison to other approaches, such as discourse analysis (Braun et al., 2014). Given this is my first time conducting a project of this scope, thematic analysis is a particularly appropriate method. And lastly, thematic analysis is a useful approach for applied research. The results of the current study will be given back to the MidCentral DHB Childhood Obesity Advisory team, so results need be accessible and easily understood (Braun & Clarke, 2013).

Braun and Clarke (2006) highlight the importance of making epistemological and theoretical assumptions explicit. Due to the lack of literature examining both parents and health professionals' views and experiences of childhood obesity services (especially within a New Zealand context), the datasets were analysed using an exploratory, inductive and data-driven approach to thematic analysis. An inductive approach to thematic analysis allows "research findings to emerge from the frequent, dominant or significant themes inherent to the raw data, without the restraints imposed by structured methodologies" (Thomas, 2003, p.2). It is important to note that themes do not however just 'emerge' but rather I (as the researcher) play an active part in data analysis by making judgements about coding and theme selection (Blaikie, 2007; Nowell et al., 2017). Additionally, as I have engaged with relevant research prior to data analysis and therefore being exposed to relevant theory, initial readings of the data

may have been coloured by this prior knowledge. However, the analysis remains rooted in participant's experiences with a number of steps taken to stay as close to participant's accounts as possible, as will be displayed in the process below.

This research has been conducted within an essentialist/realist framework which aims to report "experiences, meanings and the reality of participants" (Braun & Clarke, 2006, p.81). This study is experiential and is driven by the desire to explore people's own perspectives and meanings and to prioritise this in the reporting of findings. Therefore, an essentialist/realist framework emphasising semantic content of the data was seen as the most appropriate approach when answering the research questions. Analysis of the data then moves from description to interpretation where an attempt is made to unpack the significance of the patterns of the data and their broader meanings about the issue and implications (Braun & Clarke, 2006). This will be elaborated on in the discussion chapter of this thesis.

 I will briefly define Braun and Clarkes (2006) six phases to thematic analysis and provide a detailed description of how I applied these phases to analysing the data for this study.

Phase One: Becoming Familiar with your Data. Phase one of conducting an inductive thematic analysis includes transcribing the data, reading and re-reading the transcripts and noting down initial ideas (Braun & Clarke, 2006).

Following each focus group session and individual interview, I transcribed the audio-recordings verbatim into Microsoft Word. To transcribe the data into written form, the recordings were transferred from the audio recording device to my personal computer and opened with VLC media player. I would slow the speed of the audio recording down and write on average six words before listening back to check for accuracy. I employed a basic transcription convention outlined by Green and Thorogood (2014) to maintain consistency.

Quotation marks were used when a participant quoted another person and non-verbal sounds were transcribed as they were heard, for example 'um', 'aw', 'mmm'. If a participant stopped speaking during a word, or a word was interrupted by next utterance, a hyphen was used in parenthesis (-). Punctuation was used sparingly to improve readability; if at any stage the recordings were inaudible, this was noted on the transcript in parentheses as a replacement for

the word or sentence. The transcripts were then checked for accuracy against the original audio and any corrections were made.

During the transcription phase, all identifying information was removed from the transcripts to respect participant's privacy. The five mothers who participated in this study were allocated a random pseudonym, whereas health professionals have been allocated a unique identifying number (1-33) and when known, their professional title (e.g., General Practitioner, Paediatrician) which is included in brackets after their quoted except(s).

After I had completed transcribing the data, I read and re-read the transcripts multiple times, keeping notes and a record of initial thoughts and ideas that would be returned to in subsequent phases of data analysis.

Phase Two: Generating Initial Codes. Phase two includes coding interesting features of the data across the entire data set and organising the data into meaningful groups (Braun & Clarke, 2006).

Webb (1991) recommends beginner researchers conducting small to medium scale projects adopt a manual approach to coding, as a common fear of using a qualitative data analysis software is that the context of the data will be lost if the researcher begins to work exclusively on the codes in isolation from the text. Therefore, the decision was made to code data manually for this project. To do this, I opened the data set on my computer using Word and created a large margin to the right of the document. Working systematically through the data set, I typed initial codes in the margin making sure I gave full and equal attention to each data item.

To organise the codes, I used a common 'cut and paste' method (Krueger & Casey, 2000) by printing out the entire data set and cutting the transcripts into separate extracts. I then sorted the extracts by putting them together with other examples of the same code. During this phase I followed Braun and Clarkes (2006) advice of coding individual extracts of data in as many different themes as they fit and as many times as deemed relevant. Furthermore, I made sure to include enough context surrounding each excerpt. Fortnightly supervision meetings were held throughout the coding process to allow time to share thoughts and ideas about the data.

After coding the two data sets separately (Mothers and Health Professional's), I then looked across the entire data set, looking for commonalities, tensions and contradictions between the two sets of data. I kept a record of these thoughts in my research journal to aid with analysis.

Phase Three: Searching for Themes. Phase three involved collating codes into potential themes and gathering all data relevant to each potential theme. I did this by starting to organise all codes into potential 'theme-piles'. By the end of this phase, I had a set of themes and sub-themes and extracts of the raw data that have been coded in relation to them. For this current study, Braun and Clarkes' (2006) definition of overarching themes, themes and sub-themes were used. Overarching themes are used to organise and structure my analysis as they encapsulate an idea in a number of themes, whereas a theme captures a common and recurring pattern across the dataset; lastly, a sub-theme develops notable specifics of one theme.

Phase Four: Reviewing and Refining Themes. Phase four includes two levels. The first level involves reading all the collated extracts for each theme, making sure they form a coherent pattern and present as good evidence for that theme. Level two involves a similar process; however, is concerned with the entire data set (Braun & Clarke, 2006).

During this phase, I first reviewed the coded data extracts for each theme and sub-theme to determine if a coherent pattern was apparent. I then read and re-read the entire data set to make sure that the themes fit the data well and to check that I hadn't missed coding any data in the initial stages. At this phase, all themes and sub-themes were discussed and checked with one of my academic supervisors.

Phase Five: Defining and Naming Themes. Phase five involves refining the specifics of each individual theme, and the overall story the analysis tells. It also involves clearly defining and naming each theme (Braun & Clarke, 2006).

During this phase, I wrote detailed analysis for each individual theme, identifying the story that each theme captured, while also considering how each theme fits into the overall story about the entire data set. Once I was happy with my themes and sub-themes, a final thematic map was developed.

I then went back to the collated data extracts for each theme and organised and reorganised them until I was satisfied that the data was ordered in a meaningful way and in a way that best reflected the entire data set. Finally, I revisited the names of each individual theme with the intent to ensure that the words of participants were used in the names to remain true to participant's accounts (Nowell et al., 2017).

In the following chapter, phase six of Braun and Clarke's thematic analysis, the writing up of results will be discussed and explored.

Chapter 4: Findings

Introduction

Once the final themes were established and a final thematic map had been produced, I then began the process of writing up the final report. In the hope to give voice to participants and bring the findings to life, direct quotes from participants are embedded within the analytic narratives and used as evidence of my analysis (King, 2004; Braun & Clarke, 2013). Shorter quotes are woven into the text and longer quotes have been presented in their own separate paragraph and indented from the main text. Furthermore, all quotes are accompanied by a unique identifier that was given to participants during the transcription phase, to demonstrate that various participants were represented across the findings (Nowell et al., 2017).

To aid reader comprehension, filler words, hesitations and repetitions have been deleted from participants' extracts, as they can otherwise make for difficult reading. When editing participant's quotes, care was taken to ensure that removing the filler words would not change the context or meaning of participants talk. An ellipse has been used to indicate where quotes have been shortened or edited (i.e., …).

The findings of the analysis are presented over two chapters. I first present the findings from my analysis of health professional's data and then present the findings from interviews with the five mothers.

Health Professional's

Factors that prevented or interfered with the successful management of childhood obesity in the clinical setting were discussed among health professionals in some depth and was the most prevalent theme in all four of the focus group discussions. Upon analysing the focus group data, it was clear that factors fell into three distinct levels, being: the client-level, organisational-level and the societal-level. Each of these themes is discussed below. Additionally, participants also mentioned motivators and facilitators to managing childhood obesity, which will also be discussed.

Theme 1: Client Level Factors

Sub-theme 1: Fearing Negative Consequences

The majority of health professionals felt that the stigma surrounding childhood obesity and weight management programmes created a significant barrier to initiating and facilitating a conversation with parents and children about weight and lifestyle. Health professionals described childhood obesity as a *"touchy"*, *"sensitive"* and *"awkward"* topic to broach with families. Additionally, the stigma attached to the labels 'overweight' and 'obesity' contributed to the difficulty of framing a discussion about weight with the patient in a positive and constructive light and feared they would upset the family if they initiated a conversation concerning the child's weight status.

> **Paediatrician:** "Sometimes it can be tricky as well if they've been referred for something else and you've identified that there's a problem with their weight and you're trying to build rapport and trust and then you know the negative stigmatisation and association with obesity, the fear that I have is that I'm going to destroy all that rapport that I've built and try get families to be on side with the problem that they've actually come in with so I think to myself I'll deal with that next time."

> **Practice Nurse:** "Some parents get very offended if you ask them what they're kids are doing so I thought how do you tackle this."

> **Nurse Practitioner:** "I can identify it [obesity] as a problem, but to talk about it you're actually not dealing with the child but the child's family so to break it to them and actually tell them that it's not OK, now that's really hard."

> **Registered Nurse:** "How many parents want to hear that their child is obese, and especially looking at them you know you think obese is can't walk or bedridden."

Additionally, some healthcare professionals reported that initiating a discussion on weight was particularly challenging when families did not identify the weight issue themselves or when the child was presenting with issues unrelated to obesity, such as a sore throat. Participants reported that it was very rare for families to come in to an appointment wanting to address the child's weight, making it difficult and sometimes inappropriate for health professionals to bring the issue up *"out of the blue"*:

> **Practice Nurse:** "It's very rare that you see a child come in for that issue, it's always me bringing it up amongst something else...so it's very hard."

Sub-theme 2: Concerns that Parents Would Feel Judged – "Holding the Mirror Up"

Many healthcare professionals acknowledged that children with weight problems tended to have overweight parents. This was perceived as a major challenge for health professionals, as they feared bringing up the issue of the child's weight might be taken as personally criticising the family's lifestyle and/or parenting skills. Furthermore, participants reported not wanting to risk sacrificing the relationship with the family, often putting it into the *"too hard basket"*.

> **Nurse Practitioner:** "Often you look at the parents themselves and they're like their child, so it's like attacking them as well."
>
> **Paediatrician:** "I always find it hard when the parents are obese because it's like they think you're judging them too."
>
> **Paediatrician:** "It can be quite confronting can't it. It's like holding the mirror up to the family as a whole, not just the child."

Sub-theme 3: Health Professionals' Personal Weight Struggles

A few participants acknowledged their own lived experiences with weight issues and viewed this as a barrier to discussing a child's weight and lifestyle with parents as they believed this risked patients pointing out the hypocrisy. Additionally, those who reported having personally struggled with weight demonstrated empathy for the difficulties of weight loss and incorporating a healthy lifestyle into their everyday lives. This resulted in reluctance to raise the issue of a child's weight with parents among some health professionals:

> **Registered Nurse:** "I struggle because I'm like look at me, I'm not exactly the best example of a healthy lifestyle."
>
> **Paediatrician:** "But it isn't easy, I mean I'm sitting here as an overweight individual who knows all the literature and knows that I should move more and eat less and the sort of food I should be eating...it's very hard."

Sub-theme 4: Feeling Ambivalent

*S*ome practitioners expressed feeling conflicted between their professional responsibility of providing non-judgemental care to patients and their responsibility to care for the child's immediate and future health needs. This conflict between their professional roles made raising the topic difficult.

> **General Practitioner:** "I'm caught as a GP between my role as supporting parents and my role as challenging parents. I'm totally caught. So, I've found it very hard to raise the issue basically."

> **General Practitioner:** "It's about trying to address things now knowing that it's preventing for the future but in a supportive and encouraging way. So that's where I'm really torn."

Theme 2: Organisational Level Factors

Sub-theme 1: "The Evidence isn't Great for Good Outcomes"

The majority of health professional reported low success rates, and no single solution or tool that appears to be effective in the management of childhood obesity. Furthermore, many health professionals reported pessimism regarding the effectiveness of current interventions for childhood obesity and this translated into a sense of helplessness in their clinic work.

> **Paediatrician:** "I can't think of any really that has lost weight or altered their trajectory despite being referred to the appropriate organisations and levels of engagement is usually pretty poor."

> **Paediatric registrar:** "Sometimes you know that you won't get to it, and that you won't be able to help. And to be honest, most the time there's not a lot we can do anyway."

> **General Practitioner**: "I think most people in this room struggle because actually we don't have very many good solutions."

Additionally, a lack of clear guidelines on how to manage childhood obesity and lack of clarity around the available services was also reported as a barrier:

> **Paediatrician:** "But the question that remains to be answered is what do we do about the issue and how effective are our interventions after this point."

For many, the task of managing childhood obesity seemed beyond their capabilities and scope, with one GP stating: *"I actually think it's bigger than I am so I've found it very hard to raise the issue basically"*.

Sub-theme 2: Understanding of Referral Protocols and Outcomes

In some instances, participants described a lack of knowledge regarding the referral process and knowledge regarding local services available for families with children who have been identified as overweight/obese. Additionally, some participants mentioned a lack of knowledge about the outcomes of local childhood obesity programmes, with some showing interest in learning more about the services and referral process. For example, one participant stated:

> **General Practitioner:** "What I would like to learn more about is the referral process and also some of the outcomes from that. Sometimes I feel as though I'm just referring because it gets them out of my room.

While another said:

> **Practice Nurse:** "One of the problems I have is I'm not really sure of what the shape of those referral services set for obesity actually look like…If that referral happens, what actually happens to it, I don't really know that very well."

Additionally, there was discussion that they did not have the appropriate tools to be working with families from different cultures which limited the extent to which health professionals felt they could discuss weight related issues with particular families: "*When I worked in South Auckland we had different charts for different ethnicities, we don't have that here, we just have one chart...you know it's wrong we should be having the correct ethnic chart.*"

Sub-theme 3: "It's more about the Presenting Issue"

For the majority of participants, insufficient time to discuss weight related issues with families was one of the biggest perceived barriers. Due to short appointment times, infrequent contact with families and children and the presence of competing demands, a number of health professionals found prioritising childhood obesity during consultations difficult. Participants

also expressed their concern about deviating away from the patients presenting problem and meeting client expectations:

> **Practice Nurse:** "I think we tend to address the acute problem rather than the long-term potential problem, because once again the time restraints that you have. I mean you talk about sweet drinks and diet and things like that, but you don't sort of target it. It's more about the presenting problem."

> **Paediatrician**: "I mean often they have been referred in with other issues and so then there can be time constraints, you're spending all your time on the other issues."

> **Paediatrician:** "A part of it I guess is also that you're mindful of the time. It's not the conversation that you can rush so that's another reason why I'll defer that."

This was found to be particularly true when families presented with complex health and behavioural issues in which the child's weight was perceived as important but not the most pressing issue:

> **Paediatric registrar:** "Often to even tackle obesity which might be problem number five on your list, one through to four needs to be addressed because it may be around the quality of life, the housing or the family structure, or the behavioural issues or developmental concerns, all which play into that. So often even getting to that as something that can be addressed is quite difficult."

Sub-theme 4: Models of Care

A discussion in one of the focus groups about the inadequacies of the current model of care for performing preventative tasks was initiated and led by one GP in particular; however, there was general agreement from other participants. Health professionals reported feeling unsupported at the organisational level to be engaging in preventative health care and reported, "*The biggest barrier is our funding model, it's completely wrong*":

> **General Practitioner:** "It's like everything else, you know fund it and then people might do it. And when you're funded in the way we are currently funded all you're

doing is just seeing a continued turnover of people. It's not a preventative model, we don't keep people well we just deal with them when they're sick."

Theme 3: Societal Level Factors

Sub-theme 1: Childhood Obesity: a Social Issue not a Medical Issue

A number of participants reported that in theory, the clinical setting was the right place to treat and manage childhood obesity, however in reality, participants described it being more complex than this. Additionally, across the focus groups there was a sense that irrespective of practitioner's skills and resources, managing and treating childhood obesity in the clinical setting had limited effectiveness. Many healthcare professionals believed that without changes coming from the top (i.e., government policy), they felt limited by their clinic work and believed that they wouldn't make inroads unless the broader societal issues were addressed. Others reported feeling ill-equipped to manage the problem and questioned their effectiveness because they were up against social issues underpinning obesity, such as poverty and health literacy. This appeared to create a strong sense of resistance from health professionals to take responsibility for themselves and their patients for an issue that they believed was largely society's responsibility.

> **General Practitioner:** "In terms of what is available for families at the moment I fervently oppose to the obesity initiatives for children because I saw it as singling out predominately low socio-economic families with lots of deprivation and telling them they were doing their parenting wrong when actually what is wrong is that as a society we have made the food that is less good for us the least expensive and most available and I think that's criminal and we are killing children as a society."

> **Nurse Practitioner:** "The change should really be coming from the top because if you have 15 minutes in a consultation how much can you really achieve. If you're saying eat fruit and vegetables how useful is that if the family can't even access that"

> **Registered Nurse:** "I think low socio-economic status is a huge thing as well. Barriers to being able to access the healthy side of foods more so there's lots

more packaged and sugary foods and they are likely to not be able to afford to not have that."

Nurse Practitioner: "My concern is the social determinants and the disadvantage that we just see so much of and that's the heartbreak."

Sub-theme 2: A Mismatch between Expectations and Feelings

While some practitioners described obesity as a complex medical condition requiring medical intervention, the majority of participants explicitly questioned whether obesity was a medical problem and thus if the medical setting (and the medical model) was appropriate to be managing childhood obesity. These health professionals expressed the opinion that although obesity had medical implications, it is largely a social problem that may be better tackled outside primary care. Other clinicians described concern about medicalising obesity as demonstrated in the quotes below:

Paediatrician: "I'm not convinced that the medical model is the right way to approach this, I certainly haven't found a consistent treatment or programme that is going to work that sits within the medical model."

General Practitioner: Actually really it's a social issue, and well you're already putting another burden onto an already stretched health care system. And really putting it into health care again do you get good value are we providing value and are we the right people to do it? And the answer to me, in this set up, absolutely not. We're just not the right people to do it."

Paediatrician: "You know there are so many outside influences and we're sort of seeing them one at a time but that's not I think a way to sort of manage this. It's like a sinking ship and you've got a cup to try and save it you know; it's just not working."

Sub-theme 3: Seeking a Paradigm Shift – from Weight to Well-being

Concerns were expressed that a narrow focus on the child's weight (in isolation of broader societal factors) could perpetrate feelings of blame and guilt among families who were already under pressure. Participants felt like there was the potential to cause unintentional harm when

carrying out BMI assessments with children, as it could further blame, stigmatize and marginalise low socio-economic families. Some participants highlighted the importance of a paradigm shift by redirecting the focus to *'the bigger picture'* and recognising the many systemic factors that they considered to come together to create the problem:

> **General Practitioner**: "I definitely don't single out people and say "you're fat" or "your child's fat" because that's actually not generally an individual's responsibility."

> **General Practitioner***:* "I think it's much better if it's wrapped up in the couch of this sort of general healthy living framework as opposed to focussing on obesity as a singular issue."

Sub-theme 4: Normalisation of Obesity

Many health professionals believed that obesity has become the norm in society and as a result parents are no longer recognising the issue. Because of this perceived lack of recognition among parents, health professionals reported that many parents did not see the need for treatment or referral for intervention and health professionals recalled times that they had received push back from parents:

> **General Practitioner:** "As a society we have gotten heavier, people think that it's normal for a child to be overweight or that appears to them to be normal and so they can be quite shocked and even disbelieving when you say actually they're quite heavy for age because around them, they don't stand out amongst their peers or their siblings. So, there is that societal perception shift as well."

Additionally, participants reported that cultural beliefs surrounding childhood obesity acted as a barrier. Health professionals perceived different cultures as having differing perceptions of a healthy weight and found this difficult to discuss without offending or getting off side with families:

> **Practice Nurse:** "I think part of the issue for me is the normalisation of obesity, especially among the different ethnic groups and how some people say "we're just big people" and they kind of normalise it. So that's quite tricky."

> **Registered Nurse:** "We have a lot of parents going on how BMI is a waste of time and inappropriate, especially with our non-European families. A lot of the ones I've had back are about the fact that it's probably genetic, that their families are solid, it's fine we've got no concerns."

Sub-theme 5: A Vision for the Future

The quote that follows highlights the complexity of the role of a health professional. One of the ways that this participant feels they can make a difference (given that they have argued obesity is a societal issue) and a way of looking within some of barriers reported by healthcare professionals in this study, is across systems, communities and levels of care:

> **Paediatrician:** "So, I think we're absolutely the right people to tackle this, but not in the way we think. So, we are the right people to tackle it from if you like top down by you know we have a position in our communities and we should be leveraging that to create regional and societal changes. I don't think we're the right people in the respect of our professional and in office with child and family. This has to be tackled not at any professional level, at primary care, at secondary care, at tertiary care at whatever, what will make a difference is a ground swell of people wanting to make a difference in their own lives, communities wanting to become healthier together and I guess we can facilitate that and encourage and be a part of that movement. But that's where the changes really need to be made. That's not someone else that is our work because we are the communities that we serve."

Theme 4: Facilitators

Sub-theme 1: The Importance of Language

As these quotes illustrate, obesity was a topic that health professionals found particularly challenging to talk about with families. However, many health professionals also discussed a range of strategies that have increased their confidence in raising the topic of obesity and health lifestyle with families. Health professionals perceived these techniques allowed them to address childhood obesity whilst avoiding getting off side with parents. For example, numerous references were made to the importance of using appropriate and sensitive terminology when

initiating and facilitating a conversation regarding a child's weight. Many participants discussed avoiding using the term *"obese"*, with one participant stating: *"I would never use the word obese ever in any health check"*. Participants preferred using phrases such as *"a little out of proportion on the percentile graph"*; *"the red and orange zone"*, and *"heavy for height and age"*. Health professionals found these phrases were a *"gentler"* approach to communicating concern with families.

Sub-theme 2: Useful Tools and Resources

For some, using visual aids was helpful (such as the BMI and growth charts) as the conversations were more objective. Additionally, having the child play was found to reduce the negative impact on the child, and keep the conversation between parents and health professional. A number of health professionals mentioned that they valued gaining a deeper insight into families' worlds and understanding some of the greater needs that may be going on in patient's lives. By doing this, they drew upon aspects of patient-centred care, such as empathy, understanding and acknowledging that patient's needs were holistic (physical, psychological and social) as the quote below demonstrates:

> **General Practitioner:** "I think that also comes back to like the four pillars of health like social, emotional, physical and mental so you know it's about considering the whole person and what health is for them at that time."

Furthermore, health professionals discussed the importance of building and maintaining a strong and trusting relationship with their patients and eventually over time they can have these sensitive conversations, such as discussing weight and lifestyle. However, it was also acknowledged that the therapeutic alliance is not built over just one visit, but requires ongoing interaction and relationship building with families:

> **General Practitioner:** "I guess really that the only advantage we have in primary care in some ways is that we are actually aware of some of the greater needs of the family as a whole because we know them quite well. So, I guess we get an executive feel for when that conversation is right. It's not at every contact by any stretch of the imagination."

> **Paediatrician**: "And I guess there's a problem when you don't know the family or the parents as well. So, first consultation, it might be difficult because you don't know them. But second, third it gets easier."

In particular, frequent references were made to the usefulness of the BeSmarter tool. One of the main reported advantages of the BeSmarter tool is that it's not weight specific. As a result, it enables health professionals to have conversations with families about healthy lifestyles, and addresses holistic ideas of family well-being that are broader than one particular focus e.g., weight. A number of health professionals reported that it enabled them to have tricky conversations with families in a way that families got on board with and felt less judged and targeted:

> **Paediatrician: "**I find BeSmarter in terms of facilitating is really neat because then you can take the conversation away from weight because you can say look these are things that are good for healthy lifestyle for a child of any size and of any weight and you sort of put the weight thing out there, but then you park it and say hey this is going to be good no matter what."

> **Paediatrician***:* "I think for me the most important thing is that the child doesn't feel like there is something wrong with them and so by giving something to the whole family, then actually, this is something we are doing as a family not something that is a problem with an individual child."

> **Paediatric registrar:** "I like that it's a more holistic approach, where it actually says that actually food is OK, it's about addressing all these other things as well, sleep, movement, screen time and time spent with the family and all those sorts of things. Because I think it's equally unhelpful to go to the other extreme from the food perspective as well."

Chapter 5: Findings

Mothers

This section outlines the mothers' key reasons behind their decision to decline a referral to a follow up service for their child's weight. Although the mothers' accounts differed depending on their own individual lives and social contexts, there were a number of similarities in the way mothers talked about their decision. Four key themes emerged from the interviews with the mothers: Theme One, We don't Need this Service; Theme 2, "Fear of Judgement"; Theme 3, "This is a Societal Issue"; and Theme 4, "Service and Delivery Related". Each of these themes, along with corresponding sub-themes is discussed below.

Theme 1: We don't need this Service

Sub-theme 1: "My child's not obese"

All of the five mothers did not perceive their child to be overweight or obese and expressed feeling *"shocked"* and *"taken a back"* when the nurse or healthcare professional mentioned that their child's weight fell into the unhealthy weight range for their age and height. The mothers found ways to dismiss their child being labelled as obese, such as comparing their child to other children of the same age, discussing how physically active they were and their perception of the child's body size. The mothers defined the health of their child using a holistic definition, such as how happy and active their child was. The mothers reported that they would be concerned only if the excessive weight was coupled with a serious health condition or other *"warning signs"*:

> **Dianna:** "I didn't believe she was overweight at either point going into the appointment. I still don't think she is. I'm looking at her and I see her as healthy, she runs around, I know she's eating the right things that she can. To me she's perfectly healthy, just like any of the other kids at her school."

> **Rose:** "You know when I was told that he was technically obese I was just like "yeah, OK, whatever" like you know he's not. He's not overweight, he's completely fine, he's an active, healthy, normal four-year-old boy and I didn't see the point in sending him somewhere for them just to say he's fine."

> **Jennifer:** "It actually made me laugh. I guess to be told he is obese you think in the back of your head that he would just be this basketball or you know this round little fat kid whereas he's not."

Sub-theme 2: Culture and Genetics

Many participants felt as though health professionals made judgements regarding their child's health status without adequate knowledge about the child or the family as a whole. For some participants, being involved in the current study was an opportunity for the *"whole picture"* to be captured rather than just "*two stupid numbers*". For all of the mothers, there was strong distrust in the charts used to measure their child e.g., BMI and weight charts. This was especially true from a cultural and genetic perspective. A few of the mothers reported that their child's weight was a reflection of genetics and cultural aspects and described their kids as *"stock standard"*, *"tall for age"* and *"big boned".* BMI was described as *"far too narrow"* and a focus on health (rather than weight) was more important. A few of the mothers reported that they did not believe BMI measurement said anything about the health status of their child. Additionally, all five participants placed strong focus on the biological determinants and genes that promoted obesity. For some participants, there was awareness that their child was bigger, however this was often quickly dismissed by attributing it to genetics and the *"natural progression"* of the child:

> **Alison:** "I just don't think it takes into account the whole picture of the child. You know which is again why I said yes to you because I was like actually that will capture the whole picture and stress the importance that you need to capture the whole picture of a child and not two numbers."

> **Shelley:** "Well certainly from our experience from a Māori background that for someone who's got a different body shape it doesn't quite work because it doesn't reflect what a little Māori boy would look like necessarily. He has a Māori dad who has got a big bum and big thighs and he's just inherited the big bum and big thighs."

Sub-theme 3: We don't need this Service but other Families do

A few parents distanced themselves from the service by highlighting that there are families out there who needed the service more than they did. Many of the parents had already made

positive lifestyle changes, such as, signing the child up to a sport and increasing fruit and vegetable intake, therefore they did not see the need to accept a referral to a childhood obesity service as they reported having it *"all under control"*.

> **Alison:** "If we had of said yes to this referral, we are taking up a spot for kids who really need it. And also, I think though that there will be a group of kids out there who don't ever turn up to Before School Checks or they don't keep up with Plunket and they really need it, because their kids are really overweight."

> **Jennifer:** "I think maybe there needs to be some focus on accessing the families where obesity is an issue for their kids and helping do like a wraparound service. That would be really important, way more important than seeing my kid."

Theme 2: Fear of Judgement

The fear of judgement was a strong theme throughout the interviews and two distinct sub-themes emerged. The first sub-theme is the fear the mothers shared about themselves and their parenting. The second sub-theme relates to fear they feel for their children.

Sub-theme 1: Fearing Judgement as a Mother

The mothers repeatedly voiced concerns and anxieties about being judged as a parent based on their child's weight; they feared judgement from health professionals and other parents if they were to say yes to a childhood obesity service. This was linked to the mothers taking personal responsibility for their child's health and weight and the idea that the weight of their child reflected there parenting abilities. The mothers reported not wanting to put themselves in a situation where they could be judged or stigmatised and referred to pressures from all angles of life:

> **Dianna:** "My knowledge of dieticians is pretty limited, particularly the knowledge of taking a four-year-old to one. And it's not her fault in my opinion because I'm the one that has to buy groceries, I plan all her activities. So, I feel going to the dietician, there would have been quite a lot of shame put on to me because I'm not doing what is expected. And I'm already doing my best and I feel like they would have told me this needs to be in her diet, and I just can't do it."

Shelley: "I have to say that I was I guess nervous or scared going into the appointment that they were going to make us go to a Nutritionist for something…and I thought well what are they going to tell me that I'm not already doing and I didn't want to get into a situation where they thought we weren't looking after our kid right just because he's a couple of kilos too heavy… I was just worried that there would be a big sledgehammer where you have to now do you know all these things."

Alison: If I wasn't me and if I was worried about what other people were thinking and I felt like I was being judged, that would be huge pressure on a mother or a father who's already trying to do their best or who already know that they can't provide for their kids all this stuff.

Sub-theme 2: Fearing Judgement for the Child

The mothers feared that accepting a referral to a childhood obesity service or even having a discussion regarding weight could be harmful to the child, with many of them against the child being part of the conversation and interventions altogether. Parents were specifically afraid of raising the subject of weight with their child out of fear of causing distress to them, or that involving them in such programmes would be harmful to their self-esteem and body image. For some of the parents they consciously chose not to focus on weight, mainly stemming from their own negative experiences of growing up overweight. The mothers were concerned about the messages that are indirectly being conveyed to their children around weight, food and body image:

Dianna: "A nurse who was shorter and larger than me then told me that she was borderline obese in front of her and she's very smart so she picked up on all of it. I walked out of that appointment with a four-year-old with a body image. I was livid. I still am angry about it."

Shelley: "I don't want him to think that because we come from a larger family, I don't want him to ever think just because some of us are not wearing a size 10 that we are then an awful person. Yes, there are definite struggles from being an overweight person and yes, we should all get thinner, but it doesn't make us a bad person.

Rose: "I was teased at school for being overweight, so I have first-hand experience of it but I mean I just learnt to ignore it in the end. But some don't. I think it's definitely something that needs to be looked at, like the whole bullying thing, especially boys…we already have a pretty shocking suicide rate among teens and males."

Jennifer: "Going back to the media and advertising you know it's you should be this height, you should be this weight, you should look this certain way and it's like "oh my gosh let a child be a child" and especially at four years old, they shouldn't have to worry about having a body image."

Theme 3: This is a Societal Issue

The mothers echoed healthcare professionals concerns that the causes of childhood obesity are largely societal and therefore attending programmes aimed at intervening at the individual level e.g., education around healthy diets, were likely to be unsuccessful: *"what are they going to tell me that I don't already know?"*

Furthermore, participants constructed their own efforts as doing the best they could with the resources they had. The mothers acknowledged that their choices are constrained by a number of broader factors such as the prices of healthy food. Some of the mothers reported feeling fearful that if they were to attend an intervention, they might be asked do things e.g., buy lean meats and fruit and vegetables that were not achievable.

Dianna: "...we grew up pretty hard for cash, so I guess quite a few of our dieting issues come from a long line of dieting issues and being not very well-off people.... it's being able to afford the right stuff, which is probably the main reason I said no to the dietician. Because I know what we're eating is not lean meats, it's not 20 vegetables in one meal, but I can't afford it."

Rose: "We struggle to you know always have enough in the house to get us through to pay day. So, it's hard, we just sort of give him what we can. I mean some nights he has sandwiches for dinner. Sometimes you just have to do what you have to do to get through each week. Food is very expensive, especially for

people who don't have as much to spend on food. I do think they need to look at the healthier options and lowering the prices a bit."

Theme 4: Service and Delivery Related

The delivery of the information regarding the service was important for the Mothers. Participants picked up on the lack of concordance from health professionals and participant's felt as though the nurses were uncomfortable when talking to them about their child's weight. For example, one mother felt as though it was a *"tag on at the end"* and that the nurse was *"non-committal"* about delivering the information.

> **Alison:** I knew something awkward was about to come because her face changed and then her tone went a little weird and she kind of lowered her voice. The whole atmosphere changed and then she led it out like I have to do this because this is government policy. I have to have this conversation with you because the government tells me and then after the conversation she said "look, outside of that conversation, personally if I was you I wouldn't do anything either."

The way information of the program was presented to the mothers was important and impacted on their decision to decline a referral. There was a consistent message that parents did not know what the service 'BOOST' was or what the service could offer to them as a family/whānau. The lack of information provided during the consultation regarding the service meant that the easy option was to turn down the referral:

> **Dianna:** "It's not so much that I didn't want to accept the referral; it was a lack of knowledge of what it was and also a lack of support to accept it. Like, "oh we can refer you to this", to what? Like I said, I didn't even know it was called BOOST until I read your papers. I didn't realise it was a set group, I wasn't given any information at either appointment."

Additionally, practical factors were also considered for some participants. Access issues included issues around transport, the distance to attend appointments, as well as competing responsibilities such as the child's after school commitments.

Rose: "Another thing is trying to get out and do stuff and attend appointments – like putting enough petrol in both the cars is hard."

Chapter 6: Discussion and Conclusion

> "Public health professions today need to think and act ecologically if they are to help reshape the conditions that enable good health to flourish."
>
> (Lang & Rayner, 2012, p.4)

Introduction

The purpose of the present study was to qualitatively explore health professionals' experiences of managing childhood obesity in the clinical environment and to explore the rationales behind parent's decision to decline a referral to a childhood obesity service in a New Zealand context. Five mothers who declined a referral to the childhood obesity service were qualitatively interviewed and four focus groups were conducted with a range of practicing healthcare professionals in the mid region of Aotearoa/New Zealand. An explorative, inductive and data driven approach to thematic analysis revealed several themes that highlight the complex nature of childhood obesity management and prevention in Aotearoa/New Zealand. This study identifies the barriers and facilitators to implementing a multi-disciplinary weight management programme from the perspective of health professionals tasked with implementing the programme and families who are offered a referral and add to the growing body of literature exploring the implementation of childhood weight management programmes/services.

Chapter Six, the discussion, will summarise the main findings, and compare the findings with existing literature and theoretical models. Additionally, the implications of the current study will be discussed along with its strengths and weaknesses, a statement on reflexivity, recommendations for future research and a concluding remark.

Summary of Main Findings

Healthcare Professionals

Health professionals in the current study viewed childhood obesity as an important issue to manage and prevent. However, in support of previous literature, participants described

several factors that prevented successful management of childhood obesity in the clinical setting (Brown et al., 2013; Kolagotta & Adams, 2012; Lambe & Collins, 2010; Perrin et al., 2005; Robin et al., 2009; Spivack et al., 2010). In the current study, these factors fell into three overarching categories being: client, organisational and societal. The main factors that health professionals reported were: a lack of confidence in raising the issue; fear that they would offend and/or get offside with the family/whānau; limited time during appointments; a lack of effective interventions, referral options and appropriate tools and resources to be working with families from different cultures and backgrounds; the need to work with families who are unwilling or unable to address their child's weight issue; and the normalisation of obesity in society. Additionally, this current study found that some health professionals felt ambivalent towards managing childhood obesity in the clinical setting. Furthermore, there were a number of assertions made by participants that childhood obesity is a societal issue and many questioned whether they were best placed to manage childhood obesity. However, there was also recognition among participants that it is important for all healthcare professionals to seek opportunities at all levels and to collaborate with and influence health outcomes at different levels to improve health and well-being. A key motivator was the responsibility to care for the child's immediate and future health needs and to intervene early to prevent more serious health consequences further down the track.

Mothers

Findings from this study suggest several factors influence parents' decisions not to enrol in a childhood obesity programme. Fear of being judged as a mother/parent was a key factor as to why parents in the current study declined a referral to a childhood obesity programme. Additionally, the mothers were not concerned of their child's obesity, and believing that their child will grow out of it were also key factors that contributed to their decision to decline a referral to follow up care. However in conflict with this assertion, all of the mothers feared that discussing weight around or directly with their child could cause emotional distress and self-confidence issues, which implies that the mothers realised that there was a problem with the child's weight. A few of the mothers in this study also mentioned personal issues of struggle, such as the affordability of healthy foods and the cost of petrol to get to and from sessions or after school activities. Furthermore, the mothers perceived that their child being bigger was due to factors outside of their control, such as genetics.

Another key finding was that many of the families had already implemented lifestyle changes, such as, increasing the child's physical activity levels and providing them with a

healthier diet. Because of this, they felt as though they had it under control and had already started to see positive changes such a weight loss.

Mothers in the current study also reported the importance of how the information of the service was communicated by health professionals delivering the information. Some of the mothers would have liked the chance to have taken a broacher home and think about their decision, while others reported the importance of appropriate language and keeping the child out of the discussion. Additionally, some participants observed that healthcare professionals were uncomfortable talking about their child's weight, which in turn made them feel awkward.

A unique perspective emerged from one of the participants who reported that as a family/whānau they were well resourced and they didn't want to take up places in the programme of families that may not have been as resourced.

Comparison with Existing Literature and Theoretical Models

Findings from this study share a number of similarities with previous studies. Consistent with previous research, the current study found that many parents do not recognise or accept that their child is overweight or obese (Hammersley et al., 2017; Lundahl et al., 2014; Newson et al., 2013; Perez et al., 2015; Rice et al., 2008; Rietmeijer-Mentink et al., 2013; Turner et al., 2016; Vallejo et al., 2015; Vittrup & McClure, 2018); are not concerned about their child's weight (Rice et al., 2008) or believe intervention is necessary (Vittrup & McClure, 2018).

Additionally, a lack of parental recognition has been reported as a barrier to recruiting parents for childhood obesity services from the perspective of healthcare professionals (DiNapoli et al, 2011; Rice et al., 2008). This may be in part due to the belief that obesity has become a norm in society, a point that was both highlighted by health professionals in this study and previously outlined in the literature. Additionally, there is currently a "health at every size" movement present in society, which promotes and celebrates body diversity (Penny & Kirk, 2015). This movement may be giving people hope to hold onto and reasons for making sense of their decision not to engage in services aimed to manage and prevent obesity.

As the current study and previous literature highlights, health is shaped by many powerful factors, many of which lie outside the direct influence of the health sector (Kelly & Swinburn, 2015; Kumanyika, 2008; Lake and Townshend, 2006; Stoner et al., 2016). Healthcare professional's accounts in the current study reflected awareness of the broader contextual factors affecting families and whānau health related actions and decisions. The

view that childhood obesity is mainly a social issue (rather than a medical issue) is supported in previous literature. In the literature this has been termed "upstream medicine" (Lakerveld & Mackenbach, 2017; Lam, 2017) in which healthcare professionals acknowledge that an individual's health depends on the social and environmental determinants.

The Health Belief Model (HBM) is a common theory used to explain health-related behaviour (Strecher & Rosenstock, 1997). The HBM defines key factors that influence health behaviours. These factors are: an individuals perceived susceptibility of disease, perceived severity of disease, perceived potential benefits if action is taken, perceived barriers to action, and ones confidence in ability to succeed (self-efficacy). Based on the findings from the current study, all of the constructs of the HBM are useful in understanding why parents in the current study declined a referral to follow-up care. For example, consistent with previous literature, the five mothers who took part in this study did not believe their child was overweight or obese (perceived susceptibility), even after a healthcare professional raised concern regarding the child's BMI being over what is considered a healthy weight range. Additionally, the mothers were not concerned about their child's weight (perceived severity), they did not believe that attending the service would make a difference (perceived potential benefits if action is taken), the mothers mentioned a number of personal barriers that played a part in their decision to decline a referral to 'BOOST' (perceived barriers to action).

Implications

Results from this study have several implications for practice and policy. This study highlights the need for further training and support for health professionals in communication skills (i.e., how to have sensitive conversations with family and whānau), the importance of congruency and motivational interviewing skills. There is great concern among health professionals that discussing a child's weight could have negative consequences on the patient-practitioner relationship highlighting that clinicians need further support to engage with patients about weight in a non-stigmatising and non-harmful way. Offering further training and including it in health education is just one way that health professionals could be further empowered in this area of practice. Furthermore, increased training and awareness of resources to assist with childhood obesity could increase health professional's self-efficacy in addressing and managing childhood obesity in a sensitive manner. Additionally, health professionals should be well informed of referral options to other services. Regular education/information sessions regarding the services available and some of the outcomes of

the services could be a useful strategy for increasing healthcare professional's awareness of support services in their community.

It is important that healthcare professionals find a position in which they are comfortable having a conversation with families regarding healthy weight and lifestyle which is health promoting but not stigmatising or targeting. One suggestion is for DHB's to focus on a values position such as: *"We focus on supporting and enhancing relationships with our families and whānau whilst also promoting health as much as we can".* This could potentially help healthcare professionals have more control and autonomy over how conversations play out with families rather than feeling like they need to hit a target.

Additionally, this study highlights the need for tailored approaches and interventions based on patients' social and cultural priorities. One way of achieving this could be by focussing on the biopsychosocial model, patient-centred care and the social determinants of health in tertiary education. By continuing to develop new approaches to communicating concerns of overweight and obesity during childhood, health professionals can feel more empowered and work collaboratively with parents and families/whānau to prevent and manage childhood obesity in Aotearoa/New Zealand.

Lastly, this study highlights the importance of considering service users' perspectives, experiences, and individual needs. The current programme in New Zealand for managing childhood obesity is largely focussed on the child, potentially neglecting that the child is within a multi-system. Participants in this study highlighted that we cannot see the individual in isolation to their social context; this highlights the importance of embracing a socio-ecological and holistic approach to childhood obesity management. One way to overcome this is by having dedicated health professionals out in the community, delivering health promotion messages and engaging with communities to reduce the burden of childhood obesity and the stigma associated with it.

Study Strengths

This study has a number of strengths. First, we recruited a diverse sample of stakeholders, including: general practitioners, registered nurses, health workers, paediatricians, paediatric registrar, nurse practitioners and patients (i.e., families). In addition, participants had a wide range of experience and specialities providing a thorough overview of the relevant issues.

The use of a qualitative approach also provided the opportunity to delve more deeply into key stakeholder's views and experiences regarding facilitators and barriers to childhood obesity management and prevention, and reveal nuances and tensions that a quantitative approach might not have been able to achieve. Additionally, the open nature of the interviews and focus groups meant health professionals and parents could express and detail their views and experiences and discuss issues salient to them. Furthermore, the current study provided focus and space for key stakeholders to talk about issues important to them. Many participants expressed gratitude for the opportunity to share their experiences and thoughts on the topic at the conclusion of the focus groups and interviews. Lastly, although interview and focus group questions were open-ended and did not explicitly prompt theoretical constructs (due to the inductive nature of the current study), the findings were consistent with past research in this area, lending further credibility to the results.

Study Limitations

Despite these strengths, there are also a number of limitations, which need to be considered when interpreting the results of the current study. Because participants in this study were volunteers, the sample may have been biased towards healthcare providers and parents with a strong interest in childhood obesity and therefore may not represent views of all stakeholders, especially those who are less enthusiastic about childhood obesity. In addition, the findings were drawn from one location (the Manawatu region); therefore, study findings may not fully represent views of all stakeholders in other communities. However, the findings from the current study echo many findings from other studies and therefore could be considered to have broader relevance and transferability to similar programs and communities.

Gathering further demographic details from participating healthcare professionals may have allowed for the identification of unique aspects of participants' roles and more discussion on the similarities and differences across different levels of care (i.e., primary and secondary care). Additionally, interviewing health professionals at their place of work often restricted the amount of time available to conduct the focus group sessions and might have influenced the accounts provided by participants. Focus groups that were longer in duration could enrich the data and the overall findings.

Despite great efforts, recruiting parents to take part in this study was challenging. Five participants are considered a relatively small sample size for qualitative research involving individual interviews and it is likely that data saturation was not reached. However, it is important to highlight that the goal of the current study was to shed light on factors that influence parents and caregivers' decisions to decline a referral to a childhood obesity service, rather than to generalise the study's findings. Therefore, the small sample size should not affect the overall credibility of the current study's findings nor the potential recommendations.

On reflection, there are a few possibilities as to why participant recruitment posed as a challenge. The method of recruitment relied mainly on referrals from health care providers. Despite good intentions, they are a busy group with their own workplace demands and therefore identifying potential participants and informing them about the current study may not have been a priority against competing work demands (Gitlin & Czaja, 2015). Additionally, the current study focussed on parents who declined a referral to a childhood obesity service; consequently, potential participants may not have felt comfortable talking about this topic with a student researcher as they may have perceived me to be aligned with MidCentral Health. Furthermore, they may have seen the interviews as a case of having to explain their decision, and may have not wanted to do that. Lastly, time commitments could have posed as a barrier to recruitment, as parents often face time restraints due to living busy lifestyles.

Reflexivity

As mentioned in Chapter Three, remaining reflexive is essential when conducting qualitative research. As the researcher of the current study, I continually engaged in personal reflexivity throughout the entire research process. I regularly critically reflected upon the ways in which my own background, including my beliefs, interests, values and personal experiences might have influenced the research and the overall findings. Additionally, although I am tertiary educated in the field of health psychology, I have never worked as a practicing health professional. This lack of insider knowledge may have shaped my level of understanding of the language used during the focus group sessions, and my ability to fully understand participant's accounts. Similarly, I do not have children of my own; therefore my interpretation of the interview data may reflect a lack of insider knowledge and experience of being a parent. However, coming to the research as an "outsider" may have allowed for a fresh perspective of the data and generated new insights.

Recommendations for Future Research

Healthcare professionals in this study are pessimistic that current interventions to manage childhood obesity in the clinical setting are effective. Future research should talk to the families who have gone through with the interventions to find out what they liked about it and what the outcomes of these interventions are. Reporting this back to health professionals so they can see some of the outcomes from referrals to other services could potentially lead to more buy-in and a more positive approach to managing obesity in the clinical environment. Additionally, it might help health professionals to feel more empowered, that they are making a difference, and also feel more positive when they present referral options to parents.

Additionally, findings from the current study suggest that healthcare professionals often send congruent messages to families when discussing weight related issues. Future research should explore the ways in which an overweight healthcare professional can discuss healthy lifestyle and weight without feeling hypocritical. Furthermore, research needs to focus on how healthcare professional's struggling with the discomfort of the situation not minimise the potential seriousness of the message when communicating with families.

While additional funding, training and resources might improve the management of childhood obesity in the clinical setting, factors unrelated to practitioner's confidence and ability were also mentioned as a barrier (e.g., affordability of healthy food, the normalisation of obesity in society and the stigma associated with excessive weight). It is likely that the clinical setting can only play a limited part in reducing childhood obesity. A greater focus needs to go into the causes of childhood obesity and the development of effective interventions that can address the social causes of childhood obesity, as well as effective interventions within the clinical environment that compliments broader public health initiatives.

Conclusion

This study adds to the literature by capturing and exploring the perceptions and views of key stakeholders regarding barriers and facilitators when engaging families in childhood obesity prevention and management services. Additionally, it has shed light on the reasons and rationales behind a parent's decision to decline a referral to follow up care for childhood obesity. Continued action is required at all levels to reduce the individual and population

burdens of obesity. Furthermore, we need to continue to provide a voice for key stakeholders, ensuring they have a part to play in the design and implementation of services. Supporting health professionals in their roles will also mean better collaboration and satisfaction for them and their patients. Going forward, we need to continue to build our understanding of what works through research, on-going monitoring and programme evaluation so to ensure we enable, promote and invest in interventions that work for all people in Aotearoa/New Zealand.

Final reflection

Conducting this research has been an extremely worthwhile and fulfilling experience. I am so thankful for the opportunity to grow both academically and personally. Thank you to everyone involved for your unwavering support and belief - I am coming away from this experience with an enriched understanding of myself, childhood obesity, and the inspiring work healthcare professionals do for their patients and the love and care parents have for their children.

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Appendices

Appendix A: Cultural consultation document

MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKENGA TANGATA

8th March 2018

Chairperson
Massey University Human Ethics Committee

Tēnā koe.

re: Patrice Forgeson – An evaluation study of the Childhood Obesity Initiative in Mid Central

This letter is to inform I met with Patrice Forgeson on 4th April 2018 to discuss her proposed research.

Given Patrice will very likely have a high proportion of Māori in her sample, the main points we discussed were ensuring a 'culturally safe' environment be provided for participants during interview. We also discussed appropriate ways of recruiting Māori participants, and I provided guidance on revising her information sheet.

I am confident Patrice has done all she is able to at this stage to ensure the recruitment and methodology of her research ensures equitable and appropriate participation by participants identifying as Māori.

However, should any additional and unforeseen issues arise in relation to Māori participation and participants during the course of the research, I am available to consult with Patrice as required.

Ngā manaakitanga,

N. A Tassell - Matamua

Natasha Tassell-Matamua, PhD
Te Atiawa, Ngāti Makea Arikinui ki Rarotonga

Senior Lecturer, Deputy Head of School
School of Psychology
Manawatū Campus
Palmerston North

Appendix B: Parent/Caregiver Participant Information Sheet

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Childhood Obesity in Aotearoa/New Zealand: An Exploration into Parents and Caregivers Thoughts and Experiences

INFORMATION SHEET

Ko Pirongia te māunga
Ko Waikato te awa
Nō Te Kuiti ahau
Ko Wellington tōku kainga
Ko Patrice tōku ingoa

Kia Ora, my name is Patrice Forgeson and I am studying a Masters in Science majoring in Health Psychology at Massey University. This research project will contribute to the completion of this qualification. This research is supervised by Dr Kirsty Ross, Senior Lecturer/Senior Clinical Psychologist and Dr Don Baken, Research Consultant/Senior Clinical Psychologist at the Massey Psychology Clinic, Palmerston North. This project has the approval of the Mid-Central DHB Childhood Obesity Advisory Group.

What is the project about?

We are interested in talking to families/whānau who chose to say no to a referral to the BOOST service during a Before School Check in the MidCentral region. From these conversations we seek to understand the barriers and concerns experienced by family/whānau and whether improvements are needed to make the 'BOOST' service in the MidCentral region something that families/whanau will feel better meets their needs and is something they would like to take part in.

Who can take part?

All parents and caregivers who have said no to a referral to the MidCentral DHB 'BOOST' service, and are over the age of 16 are invited to take part in this study.

What will I need to do?

Participating in this study is entirely voluntary. If you agree to take part in this study, you will be contacted about arranging a date, time, and location for an interview that is easiest for you. The interviews can take place at your home or at a location in the community that suits you (e.g., public library, Massey University library). The interview will be audio recorded for transcription purposes only. The interview will take about one hour and light refreshments will be provided. Participants will be thanked for their time with a $30 New World voucher at the end of the interview.

Data Management

The main use of the data will be in a Master's thesis; however, there is the possibility of its use for reports to government, publication in academic journals, and for presentations at conferences. Additionally, the findings from this research will be used to inform the Childhood Obesity Advisory Group on recommendations to improve the usefulness of nutrition and activity services in the MidCentral DHB. In all forms of data use, participants will not be able to be identified.

The audio recordings and written transcripts will be stored in password-protected files on my personal computer and will be disposed of five years after the completion of the study. The audio recordings are solely for transcription purposes. You will be given a copy of the transcripts to read, make any changes you want to make, and delete content where necessary, prior to the start of the analysis. If you would like to make any changes, you will have two weeks to complete and return these to me. At the end of this research, a summary of the projects findings will be sent to all participants via email or post.

Participant's Rights

You do not have to accept this invitation.   If you decide to participate, you have the right to:
- decline to answer any particular question;
- withdraw from the study up until two weeks after the interview;
- ask any questions about the study at any time;
- know that the report and information from this project are based on information that will not be able to identify you;
- ask for the audio recorder to be turned off at any given time during the interview;
- have a support person/s present at the interview;
- be given access to the written transcript of your interview and be able to make changes and delete something if you do not want it included it in the analysis;
- be given access to a summary of the project findings when it is concluded;
- be given access to any documents in which data from this study is used.

Project Contacts

For any questions regarding this research project, please do not hesitate to contact myself and/or my academic supervisors:

Patrice Forgeson (Researcher)   Dr Kirsty Ross (Supervisor)
Email: Patrice.Forgeson.1@uni.massey.ac.nz   Email: K.J.Ross@massey.ac.nz

                                                                              Dr Don Baken (Co-supervisor)
                                                                              Email: D.M.Baken@massey.ac.nz

Thank you/Kia ora rawa atu

I appreciate your consideration of this invitation to take part in this study. Please do not hesitate to contact me if you would like further information or if you would like to ask any questions about this study.

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application _18_/_18_). If you have any concerns about the conduct of this research, please contact Dr Rochelle Stewart-Withers, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83657, email humanethicsouthb@massey.ac.nz

Appendix C: Parent/Caregiver Referral Form

Participant Information Sheet

MidCentral DHB Raising Healthy Kids Evaluation

The B4 School Check is being evaluated and your feedback can help us, so we can keep improving the check and make sure the check is a good experience for whānau. We are working with a Master's Student at Massey University and they are collecting the feedback.

What is involved?

1. **A short form** (Please Turn Over) will collect your details and some other information we need.
2. **One face-to-face interview** to take place at a time and location that suits you, sometime in the next few weeks. Patrice from Massey University will contact you to arrange a time. Patrice will ask some questions about today's appointment and the interview shouldn't take longer than 1 hour.

After the interview, you will receive a $30 'Pressie' card voucher as a THANK YOU! For sharing your feedback and helping us improve what we do.

Protecting your Privacy and Confidentiality

All the information you share on this consent form and in the interview will be treated as confidential. The main use of the data will be in a Master's Thesis and a report to the MidCentral DHB on the findings. All your information will be made anonymous and will be combined with other people's information in our reporting.

If you have any questions or wish to know more about this study please contact Patrice via email:

Patrice Forgeson

E: Patrice.Forgeson.1@uni.massey.ac.nz

Yours sincerely,
Patrice Forgeson

MidCentral Raising Healthy Kids Evaluation

Child's Name: _____   **Phone:** _____

Parent/Caregiver Name: _____   **Email:** _____

Child's gender:

○ Female
○ Male
○ Gender diverse

With which group(s) do you most identify?

○ NZ European   ○ Tongan
○ Māori   ○ Niuean
○ Samoan   ○ Chinese
○ Cook Island Māori ○ Indian
○ Other (please specify)

_____

Are you willing to be contacted by Patrice to hear more about this study? (Please circle one)

Yes   No

If you circled yes, please indicate your preferred method for Patrice to contact you:

_____

....

OFFICE USE ONLY

Child's BMI	Referral to GP was:	Referral to BOOST was:	Tools used to help explain child's height & weight:
○ <91st %	○ Accepted	○ Accepted	○ BE SMARTER
○ 91-97 %	○ Declined	○ Declined	○ Sticker Goal Chart
			○ BMI assessment

Please scan and email completed consent form ASAP to: **Patrice.Forgeson.1@uni.massey.ac.nz**

Appendix D: Parent/Caregiver Recruitment Flyers

HEALTH AND WELLBEING
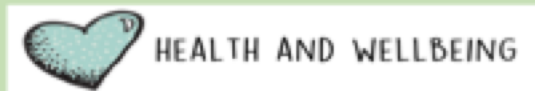
PARTICIPANTS NEEDED

Kia ora, have you recently attended a B4 School Check with your child?

Would you be willing to help me with my research by speaking to me about your experience?

Researcher: Patrice Forgeson
(Postgraduate Psychology Student at Massey University)

I'm looking for...

- **Parents and caregivers** of a child who has been identified as being overweight or obese by a health professional during a B4 School Check or a routine health check-up in the MidCentral region.
- I am interested in **hearing your experiences** of how this conversation went for you.

What does participation involve?

- Participation is entirely **voluntary**.
- Approx. **60 minute interview** at a location most convenient to you and your family/whānau.
- You will receive a **$30 supermarket voucher** in appreciation for your time.

If you wish to hear more about this study or would like to take part, **please contact Patrice via email:**
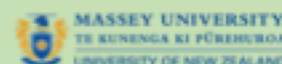
Patrice.Forgeson.1@uni.massey.ac.nz

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 18/18. If you have any concerns about the conduct of this research, please contact Dr Rochelle Stewart-Withers, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83657, email humanethicssouthb@massey.ac.nz

Contact Patrice via email:
Patrice.Forgeson.1@uni.massey.ac.nz

Appendix E: Parent/Caregiver Consent Form

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Childhood Obesity in Aotearoa/New Zealand: An Exploration into Parents and Caregivers Thoughts and Experiences

PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being sound recorded.

I wish/do not wish to have my recordings returned to me.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: .... **Date:** ....

Full Name - printed ....

Appendix F: Participant Demographic Form

Childhood Obesity in Aotearoa/New Zealand: Parents and Caregivers
Thoughts and Experiences

Participant Demographic Survey Form:

What is your age?
- Under 18
- 18-24 years old
- 25-34 years old
- 35-44
- 45-54
- Above 54

With which group(s) do you most identify?
- NZ European
- Māori
- Samoan
- Cook Island Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other (please specify):

How many children do you have?

What is your marital status?
- Single (never married)
- Married, or in a domestic partnership
- Widowed

- Divorced
- Separated
- Other (please specify)

What is the highest degree or level of school you have completed?

- Did not finish high school
- High school degree
- Diploma
- Bachelor's degree
- Master's degree
- Doctorate
- PhD
- Other (please specify)

What is your current employment status?

- Employed full-time
- Employed part-time
- Unemployed
- Full-time student
- Part-time student
- Retired
- Self-employed
- Unable to work
- Other (please specify)

What range best describes your household income?

- Less than $20,000
- $20,000 to $34,999
- $35, 000 to $49,999
- $50,000 to $74,999
- $75,000 to 99,999
- Over $100,000

Appendix G: Semi-structured Interview Schedule

Semi-Structured Interview Schedule

An Exploration into Parents and Caregivers Thoughts and Experiences

- Greet participants and introduce myself
- Offer participants food and drink
- Provide participants with a copy of the information sheet and verbally go through the information sheet
- Talk through the consent process and confidentiality
- Spend time answering any questions
- Participants will be given a $30.00 'Pressie' card voucher to thank them for their time
- Invite participant to complete a consent form if they would like to take part in this study
- Ask participant to complete demographic form (if they are comfortable doing so)

Begin with introductions:

1. Who I am and where I'm from
2. Provide context around the current study
3. If they are happy, ask them to share a little about themselves

Formal questions/topics that will be covered:

- Would you be prepared to tell me why you declined a referral to BOOST?
- Did you have any awareness of where your child was sitting on the growth chart prior to the B4 School check?
- What would have made it easier for you to accept a referral?
- Would you be prepared to tell me about your thoughts on the growth chart system? Do you think it is appropriate?
- What do you see as a good support pathway for your child and family?
- Is there anything happening in yours and your child's life that is more important than their weight?

In conclusion of the formal interview, I will conduct a brief reflective session with participants to check my understanding of what was discussed during the interview. Participants will be asked if they have any further questions and will be thanked for their time.

Appendix H: Healthcare Providers Information Sheet

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Childhood Obesity in Aotearoa/New Zealand

INFORMATION SHEET

Ko Pirongia te māunga
Ko Waikato te awa
Nō Te Kuiti ahau
Ko Wellington tōku kainga
Ko Patrice tōku ingoa

Kia Ora, my name is Patrice Forgeson and I am studying a Masters in Science majoring in Health Psychology at Massey University. This research is supervised by Dr Kirsty Ross, Senior Lecturer/Senior Clinical Psychologist and Dr Don Baken, Research Consultant/Senior Clinical Psychologist at the Massey Psychology Clinic, Palmerston North. This project has the approval of the Mid-Central DHB Childhood Obesity Advisory Group.

What is the project about?

Despite the high prevalence of childhood obesity, engaging families in interventions for its management is challenging due to a number of barriers. We are interested in talking with a range of health professionals' within the MidCentral region to explore their perspectives on factors that they believe might influence a families/whānau decision not to engage in weight management interventions. Additionally, we are interested in hearing your views and experiences of the Raising Healthy Kids Target.

Who can take part?

All health professionals' who conduct regular assessments of a child's growth development in the MidCentral region are eligible to take part in this study.

What will I need to do?

Participating in this study is entirely voluntary. If you agree to take part in this study, you will be contacted about arranging a date, time, and location for an interview that is easiest for you. The interview will be audio recorded for transcription purposes only and will take about 30 minutes.

Data Management

The main use of the data will be in a Master's thesis; however, there is the possibility of its use for reports to government, publication in academic journals, and for presentations at conferences. Additionally, the findings from this research will be used to inform the Childhood Obesity Advisory Group on recommendations to improve the usefulness of nutrition and activity services in the MidCentral DHB. In all forms of data use, participants will not be able to be identified.

The audio recordings and written transcripts will be stored in password-protected files on my personal computer and will be disposed of five years after the completion of the study. The audio recordings are solely for transcription purposes. You will be given a copy of the transcripts to read, make any changes you want to make, and delete content where necessary, prior to the start of the analysis. If you would like to make any changes, you will have two weeks to complete and return these to me. At the end of this research, a summary of the projects findings will be sent to all participants via email or post.

Participant's Rights

You do not have to accept this invitation. If you decide to participate, you have the right to:
- decline to answer any particular question;
- withdraw from the study up until two weeks after the interview;
- ask any questions about the study at any time;
- know that the report and information from this project are based on information that will not be able to identify you;
- ask for the audio recorder to be turned off at any given time during the interview;
- be given access to the written transcript of your interview and be able to make changes and delete something if you do not want it included it in the analysis;
- be given access to a summary of the project findings when it is concluded;
- be given access to any documents in which data from this study is used.

Project Contacts

For any questions regarding this research project, please do not hesitate to contact myself and/or my academic supervisors:

Patrice Forgeson (Researcher)   Dr Kirsty Ross (Supervisor)
Email: Patrice.Forgeson.1@uni.massey.ac.nz   Email: K.J.Ross@massey.ac.nz

                                                 Dr Don Baken (Co-supervisor)
                                                 Email: D.M.Baken@massey.ac.nz

Thank you/Kia ora rawa atu

I appreciate your consideration of this invitation to take part in this study. Please do not hesitate to contact me if you would like further information or if you would like to ask any questions about this study.

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 18/18. If you have any concerns about the conduct of this research, please contact Dr Rochelle Stewart-Withers, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83657, email humanethicsouthb@massey.ac.nz

Appendix I: Healthcare Providers Consent Form

Childhood Obesity in Aotearoa/New Zealand: An Exploration into Parents and Caregivers Thoughts and Experiences

PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being sound recorded.

I wish/do not wish to have my recordings returned to me.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: .... Date: ....

Full Name - printed ....

Appendix J: Semi-structured Focus Group Schedule

Semi-Structured Interview Schedule (Health Professionals)

Childhood Obesity in Aotearoa/New Zealand: An Exploration into Parents and Caregivers Thoughts and Experiences

1. What do you believe are some of the barriers and/or concerns that parents and caregivers face when deciding to accept or decline a referral to BOOST?

2. In your experience, how do parents and caregivers of children who have been identified as obese respond to the conversation concerning their child's unhealthy weight?

3. What are your experiences with having the initial conversation with parents about their child's weight?

4. What do you think could be done to increase the number of families accepting a referral?