Feasibility of an Obesity Prevention Intervention in Primary Care Settings:

Perspectives of Primary Care Clinicians and Parents of 2-5 year old children on the Parents and Tots Together Program

by

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ABSTRACT

Feasibility of an Obesity Prevention Intervention in Primary Care Settings:
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Preventing childhood obesity is a public health priority, and primary care is an important setting for early intervention. In this thesis, the perspectives of primary care clinicians and parents of children 2-5 years were explored, on the implementation of an obesity prevention intervention within team-based primary care. Focus groups with interprofessional primary care clinicians (n = 40), and interviews with parents (n=26) were conducted and analyzed using directed content analysis. Clinicians identified several barriers to addressing obesity and related behaviours in this age group, including: a gap in well-child primary care between ages 18 months and 4-5 years, lack of time, and sensitivity of these topics. Both parents and clinicians felt that the trust and existing relationships with primary care clinicians were facilitators to program implementation. Despite barriers to addressing obesity and related behaviours within well-child care, both clinicians and parents expressed interest in obesity prevention interventions in the primary care setting.
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1.0 INTRODUCTION

Prevention of childhood obesity is an important public health priority, given the high prevalence of obesity in Canadian children as young as 2-5 years of age (Canning, Courage, & Frizzell, 2004; Roberts, Shields, de Groh, Aziz, & Gilbert, 2012; Shields & Tremblay, 2010), and the associated health risks when obesity persists in adulthood (Freedman, Khan, Dietz, Srinivasan, & Berenson, 2001; Guo et al., 2000; Monteiro & Victora, 2005; Reilly & Kelly, 2011). While the contributing factors to this high prevalence of obesity in children are many, there are behavioural risk factors that have been implicated. Children’s intake of sugar-sweetened beverages (Dubois, Farmer, Girard, & Peterson, 2007; Monasta et al., 2010), low levels of physical activity (Monasta et al., 2010; Timmons et al., 2012), high levels of screen time (Dennison, Erb, & Jenkins, 2002; Monasta et al., 2010), reduced sleep duration (Sekine et al., 2002; Touchette et al., 2008), and parental responsiveness to children’s hunger and satiety cues (Birch, Fisher, & Davison, 2003; Faith, Scanlon, Birch, Francis, & Sherry, 2004; Fisher & Birch, 1999; Johnson & Birch, 1994) have all been identified as risk factors in early childhood. These behavioural risk factors are amendable to intervention at the family level in the early years, when these behaviours are in development. Effective family-based interventions are needed in order to engage parents in the adoption of healthy weight-related behaviours.

Leaders in the field have expressed a need for systems-wide prevention strategies (Dietz et al., 2015; Summerbell & Brown, 2015) and have identified primary care as an important setting, given the wide population reach and frequent contact with primary care in the early years (Gillman & Ludwig, 2013). However, little is known about the preferences of parents with respect to obesity prevention interventions (Canadian Task Force on Preventive Health, 2015).
Formative research within the primary care setting is needed to understand the current context and resources available to support interventions (Gittelsohn et al., 1999) and to identify preferences of the end users of the intervention; this information can serve to inform the development and refinement of obesity prevention interventions (Dehar, Casswell, & Duignan, 1993).

The Parents and Tots Together (PTT) program is a 9-week structured group intervention that targets parents of 2-5 year old children as the primary agents of behaviour change, and embeds weight-related behaviours within a general parenting skills program (Haines et al., 2012). The intervention includes a concurrent children’s program as a catalyst for parent participation. This universal prevention intervention has been tested in community-based settings in both the United States and Canada and reports high participant attendance and satisfaction (Haines et al., 2012), but it has not yet been delivered within the primary care setting. This study utilized qualitative methods to explore the perspectives of primary care clinicians and the parents of their 2-5 year old patients on an obesity prevention intervention within primary care, through the lens of the PTT program.
2.0 LITERATURE REVIEW

2.1 Prevalence and incidence of overweight and obesity among young children (US and Canada)

Rates of childhood overweight and obesity have been steadily rising globally since the late 1970s. This trend is most evident in developed nations, and most notably in North America where rates of overweight in children up to 18 years have doubled or tripled (Wang & Lobstein, 2006).

Cross sectional data from the National Health and Nutrition Examination Survey (NHANES) surveys identifies high rates of overweight (85th-94th percentile BMI on Centers for Disease Control (CDC) charts) and obesity (95th percentile BMI on CDC charts) in even the youngest age groups. Data from the 2007-2008 survey suggests that over 20% of children 2-5 years were found to be overweight, and an additional 10% were found to be obese by these criteria (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010). Ogden’s group updated these data in 2009-2010, and found that while rates hadn’t increased significantly further, rates of overweight and obesity remained at all-time highs, at 27% and 12% respectively (Ogden, Carroll, Kit, & Flegal, 2012).

In Canada, fewer large, population-based health studies have been performed than in the US over the past forty years. Nonetheless, the trends for childhood weights have been similar. Tremblay et al. found that the rates of childhood overweight in children aged 7-13 doubled or tripled between 1981 and 1996, with similar increases in the rates of childhood obesity (Tremblay, Katzmarzyk, & Willms, 2002). Similarly, in a 2006 review, Wang found that rates of childhood overweight in school-age Canadian children had increased by roughly one percent per year between the 1970s and the 1990s (Wang & Lobstein, 2006). Most recently, Roberts et al. reported on weight data for Canadian children from the 2009-2011 cycle of the Canadian
Health Measures Survey. It was found that 15-20% of 5-11 year olds were classified as overweight, and 8-13% were classified as obese, depending on the criteria used (Roberts et al., 2012).

While the trend of increasing weights is well-established in older children, less has been published in Canada about the weight status of children 2-5 years of age. A 2004 study by Canning and Courage looked at a sample of 4000 3-5 year olds in Newfoundland and Labrador. They found that about one quarter of their sample were classified as overweight or obese (Canning et al., 2004). A later study by Canning retrospectively compared the weights of 3-4 year olds in 2000-2002, to the weights of 3-4 year olds measured in 1987-1989. It was found that the rates of overweight and obesity were significantly higher in the 2000-2002 group of preschoolers (26-36%) compared to those measured in 1987-1989 (17-25%) (Canning, Courage, Frizzell, & Seifert, 2007). Data derived from the latest cycle of the Canadian Community Health Survey in 2004 examined rates of childhood obesity in 2-5 year olds using various criteria (World Health Organization, CDC, and the International Obesity Task Force). Regardless of the criteria used, the rates were found to be high, ranging from 18 to 38% (Shields & Tremblay, 2010). Across all Canadian studies, rates of overweight and obesity range between 18-38%, but most report rates around 25%. Taken together, these findings suggest that similar to our American neighbours, increasing childhood weights are starting as early as the preschool years.

2.2 Cardiometabolic consequences of excess weight gain in childhood

Of particular concern with increased rates of childhood obesity, are the associated short- and long-term health risks. In the late 1990s the Bogalusa Heart Study significantly contributed to our understanding of the short-term cardiometabolic health risks for overweight and obese children. From this epidemiological study of cardiovascular risk factors from birth to 28 years in
the US, several papers were published highlighting the link between cardiovascular risk factors and overweight/obesity in childhood. An analysis of seven cross-sectional studies within the Bogalusa data by Freedman et al. (Freedman, Dietz, Srinivasan, & Berenson, 1999), including over 9,000 children, found that 58% of overweight children had at least one risk factor for cardiovascular disease (either elevated total-cholesterol (T-C), low density lipoprotein (LDL), triglycerides (TG), fasting insulin, or blood pressure (BP)). Additionally, overweight children, compared to those who were not overweight, were significantly more likely to have these risk factors (ranging from 2.4 times more likely for TC, to 12.1 times more likely for fasting insulin).

Another analysis from the Bogalusa Study examined autopsies of participants (n=204, ages 2-39), and found that those with risk factors (BMI, BP, LDL, T-C, TG, HDL as a group) were more likely to have asymptomatic atherosclerosis (Berenson et al., 1998). They also found that the more risk factors a participant had, the greater extent of atherosclerosis. Most recently, a systematic review and meta-analysis of over 40,000 children by Freedman’s group found that these risk measures were significantly poorer in overweight children (compared to children with normal weights), and that the measures worsened with obesity (Friedemann et al., 2012).

A systematic review by Reilly et al. (2003) confirmed the consistency in findings regarding the association between overweight and cardiovascular risk factors in children, across 31 studies between 1973 and 2001. Reilly and Kelly updated this systematic review in 2011, and confirmed a consistency in findings that childhood overweight was associated with adult morbidity (Kelly & Reilly, 2011).
2.3 Causes of Obesity

It is thought that genetic variants may explain up to 70% of the variation in adiposity of children and adolescents (Faith et al., 1999). At least 250 genes appear to be associated with obesity, and a complex interaction appears to occur between these genes to predispose individuals to obesity (Ebbeling, Pawlak, & Ludwig, 2002; Farooqi & Rahilly, 2005). While obesity does appear to be highly heritable, genes alone are insufficient to explain the rapid increase in childhood obesity in a short period. Environmental factors are likely to have played a significant role (Birch & Davison, 2001).

The classic model to explain the development of obesity is that energy intake (calories) exceeds energy expenditure (physical activity, metabolic rate, thermal effect of food). In this model, obesity is a result of an environment that encourages intake of energy dense foods (that are highly available) and sedentary lifestyles that decrease energy expenditure, leading to an excess of circulating metabolic fuels and fat storage (Ludwig & Friedman, 2014). However, newer models are being proposed, in which diet quality and other lifestyle factors (such as inadequate sleep and excessive stress) play a role through alternative mechanisms (Ludwig & Friedman, 2014). In these models, both the food environment and lifestyle factors play significant roles in the development of obesity. Many aspects of the food environment (e.g., food advertising, availability of energy dense convenience foods in children’s environments) are more amenable to change through public policy. However, many behavioural and lifestyle factors are implicated in the development of obesity (such as the home food environment, physical activity, sedentary leisure time, and sleep) and may be amenable to change at an individual and family level.
2.4 Role of intervention in the preschool years

The preschool years, between the ages of 2 and 5 years, appear to be a critical period for the development of obesity. The adiposity rebound usually occurs between 3 and 7 years of age (Cole, 2004), and is a normal phase of growth where a child goes from a period of leanness (low BMI), to an expected increase in BMI that increases along a relatively predictable percentile trajectory to adulthood BMI. An increased risk of later obesity has been noted in children who have an early adiposity rebound (Guo et al., 2000; Whitaker, Pepe, Wright, Seidel, & Dietz, 1998), and this is likely a reflection of these children demonstrating accelerated weight gain relative to their peers (Cole, 2004).

Accelerated weight gain in the early years is of particular concern, as it sets a trajectory of weight gain along a higher growth percentile than a child’s previously established growth pattern, and the growth pattern of his/her peers. This accelerated growth is associated with increased risk of obesity in the preschool years and later childhood (Taveras et al., 2011).

Additional, extensive literature has associated obesity in the early years with obesity later in childhood, adolescence and adulthood (Freedman et al., 2001; Guo et al., 2000; Monteiro & Victora, 2005), suggesting that childhood obesity tends to persist into adulthood.

With respect to treatment of obesity, weight loss interventions in adult populations achieve notoriously poor long-term results. Similarly, while behavioural interventions in later childhood and adolescence of medium to high intensity have shown some effectiveness in curbing BMIs, there is less evidence to support sustained changes in the long term (Whitlock, O’Connor, Williams, Beil, & Lutz, 2010).

The preschool years are also a period in which eating behaviours develop and become embedded. In a review by Birch & Fisher (1998), the authors describe that children’s food
intake is determined by their preferences for certain foods. These preferences develop early in a child’s life, and are amenable to change with early exposure to a variety of foods. If children are exposed primarily to energy dense foods, they tend to prefer those foods. Increased exposure to a variety of foods (e.g., vegetables, fruit), will in turn will increase children’s preference of these foods (Birch & Fisher, 1998).

In addition to the development of food preferences, children may experience negative changes to their ability to self-regulate caloric intake in the preschool years. Children have an innate ability from birth to self-regulate their food intake based on caloric needs (Birch & Fisher, 1998). However, results from experimental research done by Birch & Davison (Birch & Davison, 2001) suggest that this ability may be diminished between 3 and 5 years of age, and that by 5 years of age some children are susceptible to external eating cues (such as portion size offered). Early feeding practices appear to influence children’s eating behaviours as well. As early as 5 years of age, children who experience higher levels of parental control around eating (both pressure to eat and restriction of certain foods) may begin to demonstrate both disinhibition and restraint in their eating, both of which interfere with a child’s ability to self-regulate his/her caloric intake (Carper, Orlet Fisher, & Birch, 2000).

Given the widely-acknowledged difficulties and limited success in treating obesity in childhood, adolescence and adulthood, successful prevention of obesity would be invaluable in reducing rates of obesity. It is critical that prevention interventions should begin in this age group, before early and rapid weight gain occurs, and before unhealthful behaviours become embedded.
2.5 Behavioural Risk Factors Associated with Obesity in Preschoolers

Given the significant increase in prevalence of childhood obesity over a span of approximately 25 years, potential targets for individual and family-level change may be identified by examining which behaviours have changed most over that time period. In a review by Ebbeling, Pawlak & Ludwig (2002), the authors identified a significant increase in sedentary pursuits (e.g., an increase in TV viewing, computer/internet use, video games) and a concurrent decrease in physical activity (e.g., less unstructured daily activities, less physical activity in schools) during the period in which obesity rapidly increased. Ebbeling and colleagues acknowledged mixed evidence with respect to the impact of several specific dietary factors (such as macronutrient distribution), but did identify that increasing intakes of sugar-sweetened beverages that have occurred over this time period may have contributed to high rates of obesity. A later review by Han, Lawlor & Kimm (2010) concurs with the assertion that increased intake of sugar-sweetened beverages is more strongly linked to the development of obesity in children compared to other dietary factors. Han and colleagues lend support to TV viewing and physical activity as key, potentially modifiable risk factors for childhood obesity, and additionally identify short sleep duration as an emerging risk factor for childhood obesity.

Given the lack of a single, dominant behavioural risk factor for childhood obesity, targeting multiple strong risk factors may be a successful approach. The following behaviours appear to be more strongly linked with childhood obesity, and are opportune targets for change in the early years.
2.5.1 Sugar sweetened beverages

Concurrent with the rise in childhood obesity since the 1970s, was an increase in the intake of sugar-sweetened beverages by US children 2-18 years of age (Nielsen & Popkin, 2004). In Canadian preschoolers, intake of sugar-sweetened beverages has been associated with a doubled risk of being overweight (Dubois et al., 2007). Most recently, a review of systematic reviews examining the early life (0-5 years) determinants of overweight and obesity, supported the consumption of sugar sweetened beverages in children under five years of age as a risk factor for later obesity (Monasta et al., 2010).

2.5.2 Physical activity

In a large epidemiological study of Canadian youth (7-11 years of age), physical activity was negatively associated with both overweight and obesity (Tremblay & Willms, 2003). Similar findings have been reported in the US from both cross-sectional and longitudinal data on youth and adolescents (Kimm, Glynn, Obarzanek, Kriska, & et al., 2005; Patrick et al., 2004). Monasta’s review of systematic reviews identified physical activity as an early life risk factor for later obesity (Monasta et al., 2010). A subsequent systematic review by (Timmons et al., 2012) evaluated 7 studies examining physical activity in preschoolers (3-5 years of age), and suggested that higher levels of physical activity were associated with lower levels of adiposity.

Unfortunately, physical activity recommendations for preschool age children are not being met; a systematic review by Tucker (2008) concluded that half of children between 2-6 years of age were not meeting 60 minutes of activity per day of (39 studies between 1986-2007 representing over 10,000 children). Since that time, the Canadian physical activity guidelines for the early years (0-4 years) were published, and recommend a target of 180 minutes per day (play,
games, transportation, and recreation) for healthy growth and development (Tremblay et al., 2012).

2.5.3 Screen time/TVs

One of the proposed reasons for low levels of activity in children of all ages, is excessive screen time (including TVs, mobile phones and video games). The American Academy of Pediatrics recommends that children over 2 years of age get no more than 2 hours per day of screen time (Strasburger, 2011). The Canadian sedentary behaviour guidelines, endorsed by the Canadian Pediatric Society, recommend a stricter limit of 1 hour per day for children 2-4 years (Tremblay et al., 2012).

Screen time has been implicated in overweight and obesity in Canadian children. Data from the 2004 Canadian Community Health Survey found that children (6-11 years) who were exposed to 2 or more hours of screen time daily were twice as likely to be overweight (35%) than their peers watching 1 hour or less per day (18%) (Shields, 2006). This relationship appears to be similar in younger children; a study by Dennison, Erb & Jenkins (2002), found that each additional hour of screen time per day was associated with increased risk of being overweight (OR = 1.06, 95% CI 1.004-1.11). Monasta et al. (2010) identified TV viewing as an early life risk factor for obesity in their review of systematic reviews.

It appears that high amounts of screen time in young children are common. In a cross-sectional study in the US by Dennison, Erb & Jenkins (2002), it was found that the vast majority of 2-5 year olds watched TV regularly. Additionally, many were watching more than the American guidelines of less than 2 hours per day: 40% of 2 year olds, and up to 60% of 4 year olds watched more than 2 hours of TV per day. In a study of WIC participants in the US, it was found that a sample of preschoolers (ages 2-4 years) spent twice as much time in front of screens
(2 hours) compared to time spent in physical activity/active play (42 minutes) (Nelson, Carpenter, & Chiasson, 2006). In a qualitative study of Canadian families by He and colleagues, 71 parents of children ages 2-5 described TV viewing at 1-5 hours per day (He, Irwin, Sangster Bouck, Tucker, & Pollett, 2005).

2.5.4 Sleep duration

Both cross-sectional (Sekine et al., 2002) and longitudinal studies have found an inverse relationship between sleep duration and risk of overweight among children. A study by Taveras et al. in 2008 reported that infants who had less than 12 hours per day of sleep, were more likely to be overweight by 3 years of age (Taveras, Rifas-Shiman, Oken, Gunderson, & Gillman, 2008). This association appears relevant for preschoolers as well. A longitudinal study in Quebec, of slightly older children (ages 2-6) found that children sleeping less than 10 hours per day, were 4 times more likely to be overweight or obese at 6 years than children sleeping 11 or more hours per day, even after controlling for key confounders (Touchette et al., 2008).

Taken together, recent evidence suggests that sugar-sweetened beverages, physical activity, screen time, and sleep duration are strongly linked to obesity risk for young children. These behavioural risk factors should be key targets for obesity prevention interventions. Additionally, these factors are amenable to change at a family or household level, and as such may be best addressed as part of family-based interventions.
2.6 Role of Parents

Parents are important players in child feeding, and have significant roles to play in any childhood obesity prevention efforts. Parents influence childhood obesity risk as role models for healthy behaviours, through their influence via the home environment, their own feeding styles and practices, as well as their general parenting styles.

Parents’ own eating behaviours, patterns and food preferences are influential to their children; the early feeding environment and children’s early exposure to various flavours influences children’s taste preferences (Anzman, Rollins, & Birch, 2010). Parents also influence children’s food environment by virtue of managing what foods enter the home, and what foods are offered to young children (Savage, Fisher, & Birch, 2007). Due to this important influence, Golan has promoted that childhood obesity treatment interventions target parents exclusively. Her work has demonstrated significantly better weight outcomes (15% reduction versus 8% reduction, P<0.03) and drop-out rates (3% versus 30%) when an intervention is targeted solely to parents compared to targeting interventions to children alone, respectively. Golan attributes this in part to the impact of the home environment (Golan, 2006). Additional work by Golan suggests that interventions targeted solely to parents are superior to interventions targeted to both the parents and children together in achieving weight outcomes (significant reduction in percent overweight between the two groups, p=0.02) (Golan, 2006).

Parents’ feeding practices, particularly their responsiveness to their children’s hunger and satiety cues may have a significant impact on the child’s obesity risk. A large body of observational and experimental research in the 1990s and 2000s out of Pennsylvania State University, has established strong links between higher levels of parent control in feeding and
less self-regulation of child eating, which may include overeating, and eating in the absence of hunger (Birch et al., 2003; Faith et al., 2004; Fisher & Birch, 1999; Johnson & Birch, 1994). Additionally, data from the Project Viva prospective cohort, identified that parental control and restriction in child feeding at age 1 was associated with higher BMI z-scores of children at age 3 (Taveras et al., 2006). Early outcome data from the Australian NOURISH trial suggests that providing anticipatory guidance to parents on responsive feeding at ages 4-6 months, is associated with lower BMI for age z-score changes (0.23 vs 0.42, p=0.0009) and lower risk of rapid weight gain (OR=1.5, CI = 1.1-2.1, p=0.014) at 12 months (Daniels et al., 2012). Parents’ feeding behaviours (i.e., restrictive behaviours, and feeding to soothe or reward) have the potential to impact weight outcomes (Faith et al., 2004; Savage et al., 2007).

Emerging evidence also suggests a link between general parenting style and obesity in children. In a systematic review by Sleddens et al., an authoritative parenting style (as compared to an authoritarian, permissive/indulgent, uninvolved/neglectful style), has been associated with healthier habits and lower BMI levels (though studies were primarily cross-sectional) (Sleddens, Gerards, Thijs, de Vries, & Kremers, 2011). Additionally, interventions that target both general parenting skills (promoting an authoritative style), as well as healthy lifestyles, have been shown to be effective in improving weight-related outcomes (Gerards, Sleddens, Dagnelie, de Vries, & Kremers, 2011). However, there are currently few such interventions in existence.

Given the important role of parents in child feeding and the food environment, any obesity prevention and treatment interventions targeting young children should meaningfully engage parents as the primary agents of behaviour change.
2.7 Family-based interventions for childhood obesity in the early years, targeting multiple behaviours

The field of childhood obesity prevention is relatively new, in particular family-based interventional research targeting families with children inclusive of the 2-5 year range. Family-based interventions are those in which parents are the primary targets of the intervention, and responsible for implementing behaviour change strategies.

For the purposes of this review, only interventions with high levels of parent involvement were included (e.g., exclude interventions where parents are only given written materials to take home). A setting-based approach to the literature review was taken, centred on community-based interventions (e.g., childcare, community centres) and primary care-based interventions (e.g., excluding tertiary care/hospital settings). Interventions that are primarily home-based (i.e., the intervention is delivered within the home) were excluded. Additionally, any interventions not reporting on weight outcomes were excluded.

2.7.1 Community-based interventions

A review of evaluated prevention and treatment programs for the 2-5 years age group by Bluford et al (2007) found only two treatment studies where parents were actively involved in the intervention (Epstein, Valoski, Koeske, & Wing, 1986; Ray, Lim, & Ling, 1994). Since that time, two seminal reviews from the Cochrane Collaborative have been published on the treatment of childhood obesity (Oude Luttikhuis et al., 2009) and the prevention of childhood obesity (Waters et al., 2011b), though neither of these reviews were specifically focused on the 2-5 year age group, or on family-based interventions.

In their review of treatment interventions for children and adolescents under 18 years of age, Oude Luttikhuis and colleagues examined RCTs with a minimum follow-up time of six months, and with measured height and weight outcomes (Oude Luttikhuis et al., 2009). The
authors noted that there were no eligible treatment interventions at that time designed for preschool-age children; two studies involving preschool aged children were excluded because they were prevention interventions. Of these two studies, one was not a behaviour-focussed intervention (De Jongh, Binkley, & Specker, 2006), and the other did not report on weight outcomes (McGarvey et al., 2004). Of note, in the interventions they reviewed for older children, they identified the importance of parents in the interventions, and using combined approaches (physical activity, diet, and behaviour components) to enhance program effectiveness.

The Waters review focused on obesity prevention interventions for children under 18 years of age that employed a controlled design (with or without randomization) (Waters et al., 2011a). Included interventions were required to be a minimum of 12 weeks, and report on weight outcomes (with or without behavioural outcomes). As with the previous review, the authors found very few interventions that targeted preschool-age children. Of those studies targeting the youngest groups (0-5 years old: 7 studies, representing 1815 participants), most were childcare-based or school-based. Overall, this age group had the highest effect size on BMI z-scores compared to interventions for older children (-0.26, 95% CI [-0.52 to 0]), though the changes in BMI z-scores were non-significant (P=0.05). The authors noted inconsistency in level of parental involvement across the 7 studies involving children 0-5 years; none of the studies exclusively targeted parents in the interventions. Despite this, the authors propose that higher levels of parental involvement likely contributed to the highest effect sizes observed in this age group.

Since the publication of the Cochrane Review by Oude Luttikhuis and colleagues, a small number of obesity treatment interventions for younger children have been described in the
literature. West and colleagues designed the Group Lifestyle Triple P intervention (West, Sanders, Cleghorn, & Davies, 2010). The intervention was built upon the general parenting, Triple P “Positive Parenting Program,” developed in Australia. Triple P was modified into the “Group Lifestyle” intervention, by integrating strategies for parents on creating a home environment that encourages healthy lifestyle behaviours (e.g., healthy eating, active games, monitoring TV use, reducing soft drink consumption). The 12 week intervention included nine, 90 minute group sessions, and three, 20 minute telephone sessions. Parents of children 4-11 years of age, already identified as overweight or obese were targeted for the intervention. Local sites (primarily schools, but also including a pediatric tertiary care centre and a clinic) were randomized to the intervention (n=52) or the wait-list control (n=49). An analysis of the short-term effects of the intervention (baseline versus immediately post-intervention), found that there were significantly more intervention participants experiencing lower BMI z-scores compared to those in the wait list control condition ($\chi^2 = 13.6$, $p<0.001$).

In 2010, Okely and colleagues described the HIKCUPS intervention, conducted in Australia (Okely et al., 2010). In an RCT trial held in a university setting, families with children 5-9 years old who were overweight or obese were randomized to one of three interventions: 1) parent-focused dietary changes (n=42); 2) child-focused physical activity changes (n=63); or, 3) combined parent-focused dietary and child-focused physical activity (n=60). All three interventions were group-based, and involved 10 weeks of group sessions (2 hours each), followed by 3, monthly maintenance phone sessions with the facilitator (total intervention duration of 6 months). Attendance rates were not reported. It was found that all three intervention groups significantly reduced child BMI z-score at 6 month follow-up, and that these changes were sustained at 12 month follow-up. The authors also found that the two intervention
arms involving parents performed significantly better on BMI z-scores compared to the child-only arm. In a later publication on the HIKCUPS intervention, Collins et al. (2011) found that all intervention groups sustained BMI z-score reduction at 24 month follow-up; again, they found significantly higher reductions in BMI z-scores in the parent-involved arms than the child-only arm.

Most recently, the PEACH obesity treatment intervention was described by Magarey et al (2011). Australian parents of children 5-9 years old (already classified as obese), were randomized to either a healthy lifestyle group (n=84), or a parenting skills plus healthy lifestyle group (n=85). Both intervention arms involved group sessions, targeting parents exclusively. The parenting plus lifestyle group received 12 sessions (4 sessions using the Triple P curriculum, followed by 8 lifestyle sessions); the lifestyle-only group received only the 8 lifestyle sessions. Group sessions lasted 90-120 minutes in length, with each group receiving 4 follow-up telephone sessions. Both groups were able to bring their children to participate in separate activities run by physical activity educators to reduce barriers to participation. Seventy-five percent of parents (in both intervention arms combined) attended at least 75% of the sessions. Both intervention groups were found to have reduced BMI z-scores immediately post-intervention (-0.26, CI = 0.20-0.31, p<0.001), and this reduction was maintained at the 24 month follow-up. While there was no significant difference between groups, the overall reduction in BMI z-score was 10%.

Ostbye and colleagues described immediate post-intervention outcomes from the KAN-DO intervention (Ostbye et al., 2012). The KAN-DO intervention targeted mother-child dyads, where the mothers were overweight or obese (BMI >25), with children in the 2-5 year age range (children were primarily normal weight, with roughly 25% being overweight or obese). KAN-DO differed from other recent community-based interventions in that only 1 group session was
employed; the main intervention components were the monthly distribution of eight kits to mothers, followed by monthly telephone-based coaching sessions (lasting 20-30 minutes). The mailed kits provided information and interactive activities for the children (rewards charts, yoga mats, portion plates, etc.). The telephone sessions utilized motivational interviewing techniques. In an RCT, mothers were randomized either to the intervention (n=200) or the control (n=200). The control condition received monthly mail-outs to mothers regarding reading skills. Participants in the intervention group received an average of 50% of the target 8 phone calls, and only 46% attended the group class. Immediately following the 8 month intervention, no significant differences were noted between groups on BMI z-scores, or key behaviours targeted by the intervention (instrumental feeding, TV snacks, emotional feeding).

Lastly, the Parents and Tots Together Program (PTT), a universal, primary prevention program was implemented in the United States (Haines et al., 2012). This 9-week intervention is based on the Chicago Parent Program (Gross et al., 2009), an empirically evaluated general parenting skills program that promotes an authoritative parenting style. PTT embeds weight-related behaviours into the program through video vignettes, used as a foundation for parent discussions. This higher intensity intervention incorporates key strategies having been associated with effective programs such as: being founded in behavioural theory (Nixon et al., 2012; Sung-Chan, Sung, Zhao, & Brownson, 2013); targeting parents as key agents of change, pairing general parenting with healthy lifestyle topics (Gerards, et al., 2011); and targeting several key behaviours. Results from a pre-post uncontrolled pilot study with 18 families suggest a high level of parent engagement and satisfaction with the program: over 70% of parents attended at least 6 of the 9 sessions. This high attendance rate likely resulted from early formative work that informed the development of the program. Five focus groups were held
with parents of the target population, to identify parents’ key concerns and current practices with respect to child rearing in general, and weight-related behaviours. Results from this formative work suggested that parents were most interested in general parenting support, and that incorporating general parenting skills into an obesity prevention intervention would engage parents more effectively than just obesity prevention alone.

Additionally, the program takes a novel approach of utilizing an engaging, concurrent children’s program as a catalyst for parent participation, as high attrition rates have been identified in other interventions (Knowlden & Sharma, 2012). A randomized control trial of the PTT Program is currently underway.

Overall, there are few family-based obesity interventions described in the literature for children 2-5 years old in community settings. However, the number of such interventions has increased rapidly in the past five years, many of which demonstrate promise with respect to achieving significant improvements in weight outcomes. The majority of the above interventions are targeted to children already overweight or obese, but vary in duration and intensity.

2.7.2 Primary care-based studies

Primary care settings offer a significant opportunity in which to focus obesity prevention efforts. These settings reach large populations, and provide well child care in which screening, anticipatory guidance on health behaviour and referral can be provided.

To date, much of the published literature on childhood obesity in primary care has focussed on documenting and making changes to the clinical practice of individual physicians, such as observational data and interventions to improve physician tracking of BMIs, and provision of anticipatory guidance to parents. Results from self-reported data suggest that
baseline levels of BMI tracking and parental advice on risk factors are low (Klein et al., 2010; Spivack, Swietlik, Alessandrini, & Faith, 2010; Young et al., 2010), and that physicians may not be providing parents with the tools to effect behaviour change in the family (Holt et al., 2011). Attempts to effect changes in the routine office practices of primary care providers (e.g., screening and identification of obesity, counselling on nutrition and physical activity, and referral practices), have also been shown to have limited success (Haemer et al., 2011). Rates of referral to family resources and programming appear to be low (Huang et al., 2011), suggesting that effective interventions must engage and potentially collaborate with primary care physicians to help facilitate referral and uptake. Overall, there has been little demonstration of effectiveness of physician-focussed interventions for childhood obesity prevention and treatment.

Beyond interventions to change physicians’ routine office practices, there exists a small but growing area of research regarding more structured, obesity prevention interventions offered within primary care.

One such example is the LEAP trial, an Australian primary care treatment intervention focussing on 5 to 9 year olds already classified as obese. Of 163 families, half were randomized to receive a series of four, solution-focused consultations with a family physician focussing on nutrition, physical activity and sedentary behaviours; the control group received usual care. Participation in the intervention was high; 60% of the intervention group attended at least three of the four sessions. However, no significant differences in BMI between the intervention and control groups were observed, despite small improvements in parent-reported child nutrition (McCallum et al., 2007). From these results, the authors propose that brief, solution-focused individual interventions delivered by GPs are ineffective at curbing child BMIs. In a later publication, the team identified that this model would be unfeasible if offered universally in
primary care due to the cost of the four additional physician visits; they concluded by suggesting
that a better use of resources might be primary prevention efforts at a community or population
level (Wake et al., 2009).

In 2011, Taveras et al. described the High Five for Kids RCT (Taveras et al., 2011). The
High Five for Kids intervention involved six primary care visits with nurse practitioners,
utilizing motivational interviewing techniques and educational modules and tools matched to
families’ stage of change. In a cluster RCT, Taveras and colleagues recruited children 2-6 years
old already classified as obese, as well as overweight children with at least 1 overweight parent.
Two hundred fifty three families received the intervention; the control group received usual care.
Outcomes targeted included BMI z-scores, reduced screen times, dietary changes (reduced fast
food and sugar-sweetened beverages), and removing TVs from children’s bedrooms.
Unfortunately, attendance at the clinic visits were poor with only about 50% of the intervention
group attending two or more of the six sessions. Despite poor attendance, Taveras found that
parents attending 2 or more visits had children who had significantly less screen time compared
to the control group. Children in the intervention group trended toward lower BMI z-score
increases, though this was not significant (-0.21, CI -0.50-0.07; p=0.15). In a separate
publication, Wright and colleagues found that the High Five for Kids Intervention was also
resource-intensive, with provider-incurred costs (the nurse practitioner visits) being the primary
driver of costs (Wright et al., 2014).

A similar, consultation-based obesity prevention intervention has been described by van
Grieken and colleagues (2013). The “Be Active, Eat Right” intervention was based in well child
care in the Netherlands, and targeted overweight children 5 years of age (children already
classified as obese were excluded, as the primary goal was to prevent obesity). In a cluster RCT,
intervention parents (n=349) participated in healthy lifestyle counselling by healthcare providers (primarily pediatricians) using motivational interviewing techniques; the control group received usual care. Behavioural targets in the counselling sessions included: increasing outdoor active play (1 hour per day), eating breakfast, and reducing sugar-sweetened beverages and sedentary time (less than 2 hours per day). Up to three follow-up counselling sessions were offered to parents (over the course of one year), tailored to the stage of behavioural change of the parents. Results from the study found that on average, the intervention group received an average of only 2 lifestyle counselling sessions (lasting on average 30 minutes). Providers were not universally inviting intervention parents to the initial counselling session due to provider perceptions that the children were not overweight, despite being eligible based on the BMI cut-off inclusion criteria. Additionally, many parents declined the interventional counselling sessions when they were offered (n=211).

An analysis of 2 year follow-up data of the “Be Active, Eat Right” intervention showed no significant differences in weight outcomes between intervention and control groups overall, which may be related to poor attendance, and therefore a low dose of the intervention. In a separate publication, van Grieken and colleagues analyzed behavioural outcomes from the study, and found no significant differences between intervention and control groups on any of the targeted behaviours (van Grieken et al., 2014). Again, it is plausible that this is due to a low dose of the intervention.

The HopSCOTCH trial in Australia (Wake et al., 2012) differed slightly in that it utilized a shared-care model in addition to primary care visits to treat obesity. This RCT targeted families of children 3-10 years old who were already obese. The authors reasoned that since general practitioner-delivered interventions alone have not been sufficient in achieving
outcomes, that adding a shared care component with a tertiary care, multidisciplinary obesity clinic may enable significant outcomes. The intervention group attended a single, multidisciplinary consult from the tertiary care clinic, followed by visits with their GPs every 4-8 weeks over 12 months (using a solution-focussed approach to lifestyle counselling). The control group received usual care. Results from the trial (Wake et al., 2013) found that, while retention was high at 90% for both intervention and control groups (suggesting acceptability of the intervention), no significant differences in BMI were noted between groups after 12 months of the intervention. Similar to other consultation-based interventions, the HopSCOTCH trial suffered from poor attendance; intervention families attended on average only 3.5 visits with their GPs, compared to the recommended 5-11 visits.

An example of a more promising treatment intervention in primary care is proposed by Quattrin and colleagues, who tested the Buffalo Healthy Tots intervention in an RCT (Quattrin et al., 2012). Families with children 2-5 years old already classified as overweight or obese with at least one overweight parent were recruited. Both the intervention and control groups attended a group program, which involved ten, one-hour sessions over a six month period. The group facilitator delivered education on nutrition, physical activity and sedentary time; the group program also included detailed information on portion sizes and daily servings for young children.

The intervention group’s sessions were different in that general parenting (e.g., selective ignoring, time out, praising/rewarding, contracting techniques) and parent-directed behavioural strategies were emphasized (e.g., modeling, self-monitoring, social support, changing the home environment). The intervention group also received additional one-on-one coaching and goal-setting support.
Families in the intervention group experienced significant curbing of BMI z-scores (-0.25, p<0.001) and percent over BMI (-4.1, p<0.002) during the intervention at 6 months as compared to the control group. However, no follow-up data were reported so it is unclear whether these effects were sustained after the intervention was complete. The authors reported attendance rates of 100% in both groups (Quattrin et al., 2012).

Most recently, Martinez-Andrade et al described a randomized pilot of the Creciendo Sanos intervention in Mexico (Martinez-Andrade et al., 2014), which targets children above the median BMI for age (BMI z-scores of 0-3). This intervention is based heavily on the High Five for Kids study (Taveras et al., 2011) with respect to strategies, topics and duration, except that it employed group sessions instead of individual counselling sessions, and included group-based skill building activities (e.g., active play, healthy snack preparation). Formative work was performed by the team (Cespedes et al., 2012), which informed adaptations of the High Five for Kids format to increase acceptability in a Mexican context. The adapted intervention involved 6 group sessions, 2 hours each. The control group received usual care.

The authors noted that attendance for the intervention group was low: only about half of intervention participants attended one or more sessions; however, of those attending at least one session, almost 70% attended 5-6 of the 6 sessions. Transportation time and cost, as well as holding the intervention during working hours, were reported as significant barriers to attendance. Participant satisfaction was high among those who completed follow-up surveys. However, only 55% of the intervention (n=93) and 70% of the control (n=96) families completed 3 and 6 month follow-up sessions. Overall, there were no significant differences observed between groups on weight outcomes. Of note however, is that intervention parents receiving
higher doses of the intervention program (5-6 sessions attended), had children who had fewer snacks, less screen time, and increased vegetable intakes compared to controls.

Similar to the trend in community-based interventions, the number of primary care-based interventions has greatly increased in the past few years. There appears to be a particular increase in the number of structured, primary care interventions. Similar to the community-based intervention, the majority of primary care interventions employ a targeted approach (focussing on children already overweight or obese); no primary prevention, or universal interventions were noted. In contrast to the community-based interventions, few of the primary care-based interventions described in the literature have had success in achieving significant changes in weight outcomes.

2.8 Summary and Comparison of Intervention Studies

Across both community-based and primary care-based obesity intervention studies for young children, the following factors appear to influence the feasibility, acceptability, and effectiveness of the interventions. Of note, the majority of interventions described in the literature are treatment oriented or targeted to high risk groups; very few programs were universally offered or primary prevention programs.

2.8.1 Individual counselling versus Group programs

From the review of interventions, evidence to date does not support individual counselling alone for the prevention of childhood obesity in young children. Individual counselling may in fact not be feasible from a cost perspective if scaled up (provider-related costs). Using group programs could certainly be more cost-effective in considering provider-related costs; a higher intensity program could be provided to larger numbers of families using fewer provider hours. It is also possible that group programs are more attractive to parents, due to peer interactions and
support. The Buffalo Tots Study may be an example of this, in that both the intervention and control groups received a group program, and retention for both groups was 100%. Attendance rates from community-based interventions utilizing group sessions reflect this interest and engagement from parents. The PEACH and PTT interventions, which also utilized group sessions, also reported higher rates of program completion (70-75%). The KAN-DO study, which did not employ group sessions reported participation rates of only 50%. Interestingly, the Buffalo Tots Study, PEACH, and PTT interventions incorporated general parenting skills into the intervention, which suggests that this content is attractive to parents.

2.8.2 Intervention Intensity

Across all studies, the intensity of the intervention varied in both number of contacts, and frequency of contacts. It appears that higher numbers and frequency of contacts in the intervention are associated with efficacy. For example, the Triple P Group Lifestyle, HIKCUPS, PEACH and Buffalo Tots interventions ranged from 12-16 contacts with families and occurred weekly. In contrast, interventions with fewer contacts and less frequent contacts appear to be less effective. The KAN-DO, LEAP and High Five for Kids interventions had fewer contacts (4-12) and often occurred on a monthly basis. A 2011 review of primary care-based treatment programs aimed to identify components of effective interventions reflects these results. While the studies in this review targeted primarily older children, they found that interventions that were more intense (e.g., one contact per week, total of five or more contacts) were found to be more effective than the less intense interventions (Sargent, Pilotto, & Baur, 2011).
2.8.3 Role of Behaviour Theory

Interventions based on behaviour change theory generally have better outcomes than those not utilizing theory. A systematic review of family-based obesity intervention RCTs found that interventions rooted in behaviour theory (e.g., behavioural knowledge around self-monitoring, goal setting, behavioural contracting and relapse prevention on health behaviours) appear to achieve better results than those connected to family systems theory (e.g. considering the broader role of the family, family dynamics and interactions) (Sung-Chan et al., 2013). With respect to behavioural theory, it has been suggested that social cognitive theory and/or social learning theory is the most widely utilized theory, and that interventions founded in this theory have been observed to have significant improvements in at least one outcome measure (Nixon et al., 2012). Interestingly, only the PTT and KAN-DO interventions had an explicitly-stated theoretical basis for the intervention. None of the primary care-based interventions described above identified a behaviour change theory. However, several did describe the counselling approaches used in the individual sessions, such as Motivational Interviewing, and Solution-focused Therapy. Integrating theory-based interventions into primary care settings may increase the likelihood of effectiveness in achieving outcomes.

2.8.4 Role of formative work

It is possible that existing interventions did not sufficiently engage families during intervention design and development, which could lead to development of interventions that are not feasible or acceptable to families, and thus, lead to poor uptake. With poor attendance in the intervention it is difficult to determine whether the intervention itself was ineffective, or whether there was just insufficient dose. This effect is reflected in the results of Creciendo Sanos, High
Five for Kids, where families attending higher number of sessions were more likely to have at least some significant behaviour changes.

With the exception of PTT and Creciendo Sanos, none of the other interventions reported utilizing formative work to inform the design of the intervention. PTT successfully engaged parents through formative work, and experienced high attendance rates. Despite utilizing formative approaches, Creciendo Sanos still suffered from poor attendance. However, additional barriers to attendance were reported, such as transportation time, which could not have been addressed by the intervention (while transportation costs were covered as part of the intervention, distance to the clinic and thus travel time, was still a barrier).

Overall, strategies which may support intervention effectiveness include formative work to inform intervention development, basing interventions in behaviour change theory, increasing intervention intensity, and incorporating group sessions.

2.9 Family Health Teams in Ontario

In Ontario, a relatively new model of primary care has been instituted and expanded over the past ten years. Family Health Teams (FHTs) are a primary care funding model in which groups of family physicians provide enhanced services to their populations, through an expansion of the primary care team. FHT funding allows for the primary care team to be expanded, to include a variety of interprofessional (IP) healthcare providers such as additional registered nurses, social workers, dietitians, psychologists, occupational therapists, and pharmacists. The FHTs are mandated to have a population health focus, and as such organized care and preventative programs are strongly encouraged. Currently, there are 185 FHTs in over 200 communities in Ontario, serving over 3 million Ontarians (Ministry of Health and Long Term Care, 2014).
Considering that reported referral and resource rates by primary care physicians regarding childhood obesity are low (Huang et al., 2011), there may be significant opportunities to collaborate with family physicians and primary care providers to provide programming within the primary care setting, as opposed to referring patients out to other resources (of which there are few for children in the 2-5 year range). Doing so has the potential to capitalize on primary care teams’ existing relationships with families to engage parents in programming within the primary care setting. Also, it has been proposed that having a wider range of resources and interventions available throughout the care continuum would be beneficial (primary through to tertiary) and that providers with access to resources are more likely to screen (Klein et al., 2010).

Given the potential to reach large populations, and the congruence with a preventative focus of healthcare, the FHT model offers an opportune setting in which to test early childhood obesity prevention initiatives.

2.10 Use of Formative Assessment to Inform Intervention Development

As early as the 1960s, a formative approach to intervention development and research has been described in the literature. Scriven defined formative research and evaluation as a distinct process involving the collection of data for continued development and improvement of an intervention (Tyler, Gagne, & Scriven, 1967). In contrast, summative research and evaluation involves an assessment of an intervention’s overall effectiveness in achieving outcomes. In a 1993 review, Dehar and colleagues identified some key benefits and uses of formative research (Dehar et al., 1993). Dehar described how formative research is most useful in the early stages of intervention development, since resources are unlikely to have been committed to a particular
design. Thus, the formative stage of intervention development can be an opportune time to collect data in order to enable intervention improvements, as well as adaptations or refinements.

Formative research is not limited to the design of an intervention, and may involve issues of implementation (Dehar et al., 1993). Gittlesohn (1999) identifies the four principal purposes of a formative assessment:

1. To understand the context for the intervention
2. To identify specific behaviours of concern
3. To learn the determinants of these behaviours
4. To identify resources that are available to the program

A major focus of formative assessment is the appropriateness of an intervention. Formative assessment can help to identify effective recruitment strategies and aid in intervention implementation (Gittelsohn et al., 2006). Common activities involved in formative work include literature reviews, needs assessments, exploratory research, pre-testing of materials and seeking feedback from participants (Dehar et al., 1993).

In formative research, the role of the researcher or evaluator also differs from that of the role of a researcher or evaluator in summative research. In summative research, the researcher is seen as objective, neutral and detached. In contrast, the researcher in formative research is viewed as a change agent, consultant or collaborator (Dehar et al., 1993). As such formative research can help to build relationships between researchers and target populations (Gittelsohn et al., 2006; Vastine, Gittelsohn, Ethelbah, Anliker, & Caballero, 2005). This difference in roles in formative research may have implications with respect to the approach to data collection and engagement with stakeholders. For instance, qualitative methods such as interviews and focus groups can simultaneously provide enhanced opportunities to collect a broad range of
stakeholder opinions and ideas, as well as serve to engage and build relationships with stakeholders.

The PTT intervention was designed based on formative work done in a community-based, urban American setting. Haines (2012) utilized focus groups to engage an ethnically diverse, primarily low income group of parents. The resulting analysis enabled a better understanding of the determinants of the health-related behaviours of the target population (e.g., barriers and facilitators), as well as their contexts and interests. Thus, the PTT intervention was tailored to the target population’s needs and interests.

While PTT is well-tailored to the context of the original target population, it is possible that it may not be acceptable in its current form to a new target population. Gittelsohn (2006) identifies that formative work is often used to make programs or interventions both culturally and geographically appropriate. Therefore, it would be advisable to perform formative research prior to implementing interventions in a new population or setting. While specific behaviours of concern and their determinants have already been identified, formative research in this case will enable a better understanding of the new context for the intervention, and determine what local resources are available.

3.0 STUDY OBJECTIVES

It has been shown that PTT, a family-based obesity prevention intervention offered in a community setting, is feasible and well-accepted by parents of children 2-5 years in the US (Haines et al., 2012). It is uncertain whether and how the PTT program could be feasible if offered in Canadian primary care settings.
The current study is a formative assessment for PTT in FHTs. The primary objective of the study was to explore the perspective of primary care clinicians, and parents of 2-5 year old children, in order to identify the key adaptations and enhancements likely to maximize feasibility (reach, dose and acceptability) of offering PTT in primary care settings.

More specifically, the research aims were to identify:

1) Adaptations to the PTT program that would enhance implementation of the program within the FHT setting.
2) Barriers to implementing the PTT program within the FHT setting.

4.0 METHODS

4.1 Study Design

To achieve the study aims, a qualitative approach to data collection and analysis was utilized. Qualitative approaches allow for a rich understanding of the target population’s opinions, interests and motivations. Quantitative survey approaches are limited in that they are more narrow and specific, and may preclude potential innovations in the adaptation of PTT in FHT settings. As previously identified, qualitative approaches have the added benefit of engaging the target population and stakeholders in the program.

4.2 Recruitment

4.2.1 Study Sites

Given that FHTs span a diversity of communities and locations in Ontario, it is important to collect data from a sample of FHT settings that reflect that diversity as much as possible. Three FHTs had already shown interest in the PTT program and agreed to participate in the
formative study. These three FHTs, described in detail below, represent different populations, geographies, and models of care.

Women’s College Hospital Academic FHT is a single location practice in the heart of urban downtown Toronto. As a hospital-affiliated and academic FHT, there is an emphasis on teaching healthcare professionals; as a result, individual physician practices are often smaller in size than in community FHTs. Likely related to its hospital affiliation, Women’s College Hospital FHT attracts a patient population that expands across the Greater Toronto Area, and is relatively geographically dispersed. Patients travel to the FHT in variety of ways, including walking, driving, or transit. This FHT’s population includes over 18,000 patients, and is served by approximately 30 staff family physicians, 30 resident physicians, and a variety of IP team members (nurse practitioners, registered nurses, dietitians, social workers, occupational therapist, and a pharmacist). Throughout the thesis, this site will be referred to as the academic site.

The second site for the study is the Hamilton FHT, Ontario’s largest FHT. This urban FHT’s population encompasses roughly 280,000 patients, served by 150 family physicians, 135 registered nurses and nurse practitioners, 73 mental health counsellors, 22 psychiatrists, 10 pharmacists and 21 registered dietitians (Hamilton Family Health, 2014). In contrast to the Women’s College FHT, Hamilton is non-academic (in that teaching is not its core mandate), but is experienced in participating in research. The Hamilton FHT also differs from Women’s College in that it has many practice locations across Hamilton, administratively coordinated from a downtown Hamilton office. Given the FHT’s location in an urban centre, public transportation is available to patients to get to the FHT sites. Throughout the thesis, this site will be referred to as the urban site.
The third site is based in Tilbury, and serves a rural community that is geographically dispersed relative to the Hamilton and Women’s College FHTs. The Tilbury FHT employs a variety of healthcare professionals, and includes 6 physicians, 2 nurse practitioners, 2 registered nurses, 1 registered dietitian, 2 pharmacists, and 2 social workers. The Tilbury FHT serves a population of approximately 14,000 patients, 25% of whom live in the town of Tilbury, and 75% live in the surrounding hamlets (a minimum travel time of 10-15 minutes from the clinic). Given the rural geography of Tilbury and the surrounding area, no public transportation exists; transportation has been cited by patients as a barrier to accessing FHT services (Funnell, 2014). Throughout the thesis, this site will be referred to as the rural site.

Representing the different models of care (academic, non-academic), and geographic density of FHTs in Ontario, these three sites provide data that reflect some of the diversity of the FHTs. While it is possible that these sites are susceptible to selection bias, in that one or two local staff had already shown interest in the PTT program, we aimed to solicit diverse opinions through the recruitment of a variety of parent and clinician participants from each site.

4.2.2 Participant Eligibility and Recruitment

To inform the adaptation of PTT for FHTs, both clinicians and parents were recruited. Ethics approval was obtained from the Research Ethics Boards at both the University of Guelph and Women’s College Hospital (Appendices A and B).

A variety of clinicians were purposively approached for the study, in particular those with highest proportions of young families in their practices. These clinicians included: physicians, nurses, nurse practitioners, registered practical nurses, dietitians, social workers and psychologists. Invitations to participate in the study were facilitated by a contact person for each site. Clinician participants were invited to participate through an email sent via the site contact
person. The email outlined the study purpose and processes, and clinicians were instructed to respond via email if interested in participating. Focus group arrangements were facilitated through the site contact person, at a time that was convenient for the clinicians. Clinicians provided written informed consent prior to attending the focus groups, where lunch was provided.

Parent participants were eligible to participate if they were the parent or caregiver of a FHT patient between the ages of 2 and 5 years, and if they were able to communicate in English. Strategies to recruit parenting included: waiting room advertisements, flyers handed to parents at appointments by administrative staff and clinicians (Appendix C). For the Tilbury site, parents were also recruited through an invitation letter sent home with children in the local school, as most children in the school were FHT patients (Appendix D). Flyers instructed parents to respond via telephone, email or text message if interested in participating. Parents provided written informed consent prior to the interviews, and received a $35 gift card in appreciation for their participation in the study.

4.3 Data Collection

4.3.1 Data collection methods

Semi-structured phone interviews were conducted with parents, and focus groups were held with IP primary care clinicians at their respective clinics. In the case of clinician participants, focus groups are preferable to individual interviews. The group dynamics that result from focus groups facilitate the creation or uncovering of a shared perspective on the subject (Thorne, 2008). Given that the research objectives were to find ways to successfully adapt PTT to an FHT setting, it is important to better understand the perspectives and dynamics of the team as whole.
Clinician focus groups were held on FHT premises, and ranged between 30-60 minutes. In order to facilitate clinician participation, focus groups were planned for a time that was anticipated to be convenient (e.g., during lunch, before clinic start, or during regularly scheduled meetings), and a meal was provided.

The majority of clinician focus groups (4 groups in Hamilton and Tilbury) were IP (e.g., a variety of clinicians from different disciplines were present), and others (3 groups at Women’s College) involved a single discipline, based on scheduling feasibility at each FHT site. While it is theoretically possible to have some power imbalances within an IP focus group, it is unlikely to negatively influence data collection, since the topics covered in the focus groups do not fall within one profession’s scope, and the topics are not considered controversial. In fact, IP clinician focus groups may enable some additional inferences about how PTT may be integrated within the IP context of an FHT.

Parent participants were initially offered the choice to participate in either a focus group or an individual phone interview (lasting approximately 30-45 minutes). While it was anticipated to be more time efficient to hold focus groups, slow recruitment and challenges in scheduling made parent focus groups impractical. Parents were instead offered individual phone interviews, which removed some scheduling barriers to participating in the study. In the case of parent participants, holding focus groups would have offered the benefit of creating a shared perspective on the program, and potentially increasing interest in the target population. Conversely, individual interviews offer the benefit of exploring a wide variety of individuals’ opinions more in-depth, without the influence of social pressure (sometimes observed in focus groups) (Thorne, 2008).
All focus groups and interviews were conducted by Nicole Bourgeois between August 2013 and July 2014, and were audiotaped. During the majority of focus groups, a research assistant (RA) assisted by taking detailed notes. A debriefing between Nicole Bourgeois and the RA occurred after each focus group to share notes and perceptions. Contact summary sheets were created after each interview and focus group (Miles & Huberman, 1994). The contact sheets allowed for minor additions to the interview guide, and supported the coding process by providing early ideas for codes.

4.3.2 Sample Size

Sample size in formative research projects vary greatly, and can range from a few focus groups, to full-year projects with multiple stages and methods (Gittelsohn et al., 2006). Given that formative work has already been completed to inform the development of PTT content, and that the current study is narrower in scope (i.e., adapting the program for a clinical setting), a smaller sample size was sought (compared to some larger formative research projects whose aim is to design and develop interventions, trials, and measurement protocols) (Gittelsohn et al., 2006). Also, since the objectives of the study were to adapt PTT to multiple FHT locations, participants were sought from all study sites to enhance generalizability of the results.

At least one clinician focus group per FHT site (4-8 participants) was sought, for a total sample size of 12-24 clinicians. An IP focus group was sought for each site. However in some cases this was not possible and so more than one focus group was held with individual professions at some sites.

The goal for parent recruitment was 10 parents per FHT site, for a total sample size of 30 participants. This sample size for interviews is similar to other formative research studies involving health interventions (Cortes, Gittelsohn, Alfred, & Palafox, 2001; Meade, Calvo, &
Cuthbertson, 2002; Vastine et al., 2005). It was anticipated that theoretical saturation would be achieved at roughly 10 parents per site. However, additional participants would have been sought if necessary.

### 4.3.3 Data Collection Tools

The interview and focus group guides drew heavily from those used in the development of the PTT program (Haines et al., 2012). The original aims of the interview guide were to understand broadly parents’ concerns in child-rearing, and key health practices (physical activity, dietary intake, TV viewing and sleep habits). The original interview guide was adapted to meet the aims of the current study; questions were re-framed to reflect the primary care setting, and were tailored to both clinician and parent groups.

To focus the discussion, we began clinician focus groups with a description of PTT, and outlined topics covered in each week (i.e., physical activity, sleep duration, TV/Screen time, limiting sugar-sweetened beverages, children’s hunger and satiety cues, and alternatives to food as rewards). We then asked about current practices in addressing these weight-related behaviours, and facilitators and barriers to implementing the described program in participants’ primary care setting (Appendix E). We conducted parent interviews similarly, except that the program was positioned as a program to support happy, healthy children (i.e., did not discuss obesity or weight). Questions were also designed to ascertain where parents are currently accessing resources related to general parenting and healthy lifestyles (Appendix F). Questions from the original interview guide regarding format, logistics and recruitment were largely unchanged for the current study.

Both interview guides were reviewed by Dr. Jess Haines, faculty advisor for this study. Given that the original PTT interview guides were reviewed by experts in qualitative research,
and that they have been largely unchanged for this study, no formal pilot-testing was done. However, it was anticipated that additional sub-questions relevant to the overall research question would arise throughout the data collection, as is common in qualitative research; additional questions were incorporated into subsequent interviews and focus groups.

All participants were asked to complete a general demographics form to analyze group descriptive statistics. Demographics forms for parents asked about age, gender, race/ethnic background, and number of children at home (Appendix G). Clinicians were asked about age, gender, proportion of their patients between the ages of 2-5 years, and the number of years they have been in practice (Appendix H).

4.4 Data Analysis

4.4.1 Analytic Approach

Given that the aims of the current study were to explore and describe the potential for adapting PTT for FHTs (more pragmatic and action-oriented), and not to develop theory or describe lived experiences, directed content analysis was chosen as an analytic approach. As described by Berg (2009), content analysis is a qualitative technique typically used to systematically code and interpret textual data from human communications. Textual data derived from communications (interviews, focus groups), are analyzed according to a coding scheme, which includes both a priori and grounded codes and categories in the data.

Since the research objectives were to identify facilitators and barriers to adapting PTT in three FHT sites, the questions lent themselves to an interpretive lens in order to identify any patterns, similarities and differences across sites and participants. As such, Thorne’s interpretive descriptive approach also informed the approach to analysis. While directed content analysis
was used, attention was paid to emergent and inductive codes and categories (not just a priori). Patterns across sites were also analyzed.

4.4.4 Analytic procedures

In order to maximize credibility, attempts have been made throughout the study to enhance transparency, validity, reliability, comparativeness, and reflexiveness (Green & Thorogood, 2009). To maximize transparency, all analytic procedures are documented below.

All interview and focus group audio recordings were transcribed verbatim by an RA into a word document format. Transcripts were imported into qualitative analysis software (NVivo), which was used for all coding procedures. For one clinician focus group, technical difficulties resulted in the recording being lost; for this focus group detailed notes by both Nicole Bourgeois (NB) and the RA were collected and reviewed during a debriefing. Transcripts were cleaned by Nicole Bourgeois during the analysis process to remove any data extraneous to the research question (e.g., introductions). Theoretical saturation was defined as the point at which no new ideas or opinions were emerging from interviews and focus groups. This was assessed by consensus (NB, JH, RA), during the transcription process, at which point data collection ended.

A priori categories, which were derived from the interview guide, were employed to guide and bound the analysis to ensure links to the research objectives. These a priori categories included: 1) current activities and practices in addressing weight-related behaviours and general parenting in FHTs; 2) facilitators to implementation of PTT in FHTs; 3) anticipated barriers to PTT implementation in the FHTs; and, 4) recommendations for implementation in the FHTs.

Within the a priori categories, individual codes were primarily inductive and emergent. Textual data from each focus group and interview were read in depth and subjected to line-by-
line open coding by Nicole Bourgeois, examining for emergent/inductive codes relevant to the research questions (Berg, 2009; Thorne, 2008). As new codes emerged, transcripts were re-read and reviewed for the presence of these new codes. The initial open coding was primarily descriptive in nature, to identify the variations that exist in the data. However some interpretations and inferences of the text were made by Nicole Bourgeois (NB), both as a result of her role as an insider (for clinician focus groups), and as she became more familiar and knowledgeable about local dynamics (Miles & Huberman, 1994). During this process, theoretical notes or memos were created during the open coding process to capture early observations, questions, and interpretations (Thorne, 2008); some memos served to identify new codes which could be examined across all transcripts. During the coding process, the software automatically created category cards which were used to provide evidence from the data for emerging themes, which supports validity of the results and facilitates pattern analysis across sites.

The finalized coding scheme included the primary categories (themes), and the individual codes. Each code in the final coding scheme included a definition to articulate the boundaries of the code (Appendix I). All themes were examined in detail and summarized, including deviant cases to enhance validity.

To assess reliability, a second coder (RA), blind to the coding of the primary analyst (NB), independently coded 25% of the transcripts using the coding scheme. Ideally, two researchers would create independent coding schemes, then merge the two and manage discrepancies in order to maximize validity. However, no other researcher was available with the required skill.
set for this task. As such, an RA acted as a second coder to examine the data set and apply the coding scheme created by Nicole Bourgeois to assess reliability.

Six parent interviews (2 from each site), and three focus groups (1 from each site) were randomly selected and coded by the RA. The coding scheme was treated as flexible, in that the RA was encouraged to include any additional codes and categories that were identified during the coding process; however, no major changes to the coding scheme were recommended.

Average percent agreement of coding between the two coders was calculated by the software; there was a high level of agreement between the two coders for both parent interviews (99.5%) and clinician focus groups (99.3%). A minimum level of coding agreement of 90% is desirable (Miles & Huberman, 1994). While the overall percent agreement was deemed acceptably reliable, all discrepancies were discussed and resolved between NB and the RA prior to analysis.

To check the validity of interpretation, the second coder (RA) was provided with a selection of individual codes for independent interpretation, which was compared to those of the primary analyst (NB). The codes that were chosen required a higher level of interpretation in order to summarize results; the RA was provided with a matrix to support the interpretation (Miles & Huberman, 1994). The matrix outlined the primary questions to answer from the codes, and asked the second coder to review the software-generated category cards to answer the questions. Interpretations were found to be consistent between coders. The RA uncovered a couple of minor site differences in this interpretation, which were integrated into the results.
The process of member-checking can enhance the validity of the results. Due to the extended recruitment phase of the study, member checking with all participants was not possible. However, member checks of results were completed with representatives from each role at the academic site (1 physician, 1 nurse practitioner, and 1 registered nurse). These representatives reviewed results, and confirmed that interpretations reflected their experiences.

5.0 RESULTS

5.1 Participants

A total of seven clinician focus groups were held across the three sites, with a total participation of 40 clinicians. Attendance in the focus groups ranged from 2 participants to 13. It is unknown how many clinicians declined to participate; clinicians were instructed to respond to reply via email to the researcher if interested in participating. However many clinicians simply arrived to the sessions without notice.

All but one focus group was held in person; one focus group was held over the phone. For logistical reasons at the academic site, two of the focus groups consisted of participants from a single profession. All other focus groups were IP, with participants from various professions. As shown in Table 1, the highest participation was from registered nurses (35%), followed by physicians (15%), nurse practitioners (15%), and registered practical nurses (RPNs) (12.5%). Social workers and registered dietitians attended in smaller numbers; however, there are often fewer of these professions employed by FHTs compared to other professions. Number of years in practice varied widely across participants, from less than 1 year to 48 years; the average across all three sites was approximately 15 years. With respect to the number of children ages 2-5 years in the clinicians’ respective practices, half reported that this age group represented at least 10%
of their patients. Nearly 20% of clinicians did not know what proportion of 2-5 year olds were in their practices.

### Table 1: Clinician Demographics

<table>
<thead>
<tr>
<th></th>
<th>All Sites (N= 40)</th>
<th>Academic Site (n=13)</th>
<th>Rural Site (n=13)</th>
<th>Urban site (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age (SD)</strong></td>
<td>41 (13)</td>
<td>43 (12)</td>
<td>39 (15)</td>
<td>42 (11)</td>
</tr>
<tr>
<td><strong>Role</strong> (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>15</td>
<td>31</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>RN</td>
<td>35</td>
<td>54</td>
<td>15</td>
<td>36</td>
</tr>
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<td>NP</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>RD</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>SW</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>RPN</td>
<td>13</td>
<td>0</td>
<td>31</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>0</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td><strong>Mean years in practice (SD)</strong></td>
<td>15 (13)</td>
<td>17 (12)</td>
<td>17 (16)</td>
<td>13 (12)</td>
</tr>
<tr>
<td><strong>Practice population of 2-5 year olds (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10%</td>
<td>33</td>
<td>31</td>
<td>46</td>
<td>21</td>
</tr>
<tr>
<td>11-20%</td>
<td>30</td>
<td>46</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>21-30%</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>31-40%</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>&gt;40%</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Don’t know</td>
<td>18</td>
<td>8</td>
<td>23</td>
<td>21</td>
</tr>
</tbody>
</table>

*MD = physician, RN = registered nurse, NP = nurse practitioner, RD = registered dietitian, SW = social worker, RPN = registered practical nurse, Other includes lab technicians, pharmacists, students.

In total, 36 parent participants contacted us regarding the study; 10 parents did not complete the interview (1 parent had a baby during the study period, 2 parents were too busy to complete the interview, and we lost touch with 7 parents after follow-up emails prior to scheduling the interview). Twenty-six parent interviews were completed across the three sites: 10 interviews from the academic FHT, 10 interviews from the urban FHT, and 6 interviews from rural FHT. Recruitment ceased at the sixth rural interview, as no new opinions were being observed and data saturation was noted.
All but one interview was conducted over the phone; a single interview was conducted in person. Twenty-four of the parents provided demographics data; two parents did not complete the demographics survey (Table 2). All of the parent participants were female. Of those parents who submitted demographic data, 83% identified as white. The average age of parents across all sites was 33 years, with an average of 2 children.

### Table 2: Parent Demographics

<table>
<thead>
<tr>
<th></th>
<th>All Sites (N=24)</th>
<th>Academic Site (n = 9)</th>
<th>Rural Site (n=6)</th>
<th>Urban Site (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age (SD)</strong></td>
<td>33 (5)</td>
<td>33 (6)</td>
<td>33 (3)</td>
<td>33 (5)</td>
</tr>
<tr>
<td><strong>Gender (% F)</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>#Children (mean)</strong></td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Ethnicity (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>83</td>
<td>78</td>
<td>100</td>
<td>78</td>
</tr>
<tr>
<td>Asian</td>
<td>4</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>South Asian</td>
<td>8</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>First Nations</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
</tbody>
</table>

#### 5.2 Overview of Themes

Results are presented in four major themes: 1) current activities and practices of FHT clinicians and patients; 2) facilitators to implementation of PTT in FHTs; 3) anticipated barriers to PTT implementation in the FHTs; and, 4) recommendations for implementation in the FHTs. Within each major theme, minor themes are presented individually for clinician groups and patient groups to facilitate comparison. In some cases, important differences between sites were noted. As such, some results are differentiated by site: urban, academic, and rural. A summary of themes differentiating between parents and clinicians are presented in Table 3.
Table 3: Parent and Primary Care Clinician opinions regarding primary prevention interventions for childhood obesity for 2-5 year old children

<table>
<thead>
<tr>
<th>Clinicians Perspectives</th>
<th>Perspectives Shared by both Clinicians and Parents</th>
<th>Parent Perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current practice: Challenges in addressing weight-related behaviours (Theme 1)</td>
<td>• Gap in well child care 2-5 yrs • Perceived low parental engagement • Lack of time • Sensitive topic • Screening tools</td>
<td>N/A</td>
</tr>
<tr>
<td>Current activities: Information sources for weight-related behaviours (Theme 1)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Facilitators to Implementation (Theme 2)</td>
<td>• Enhancement of services</td>
<td>• Trust &amp; familiarity • Relevance of topics • Peer support &amp; learning</td>
</tr>
<tr>
<td>Barriers to implementation (Theme 3)</td>
<td>• Human resources • Space availability</td>
<td>• Concerns that program may be too long • Transportation &amp; travel time</td>
</tr>
<tr>
<td>Recommendations for implementation (Theme 4)</td>
<td>• Communication to primary care team +/- follow-up</td>
<td>• Format: Preference for in-person rather than online • Recruitment: Clinician Recommendation, Email, mailout, posters/flyers • Timing: Weekday Evenings or Saturday Mornings</td>
</tr>
</tbody>
</table>

5.3 Theme 1: Current activities and practices of FHTs and FHT patients

5.3.1 Clinicians

During the focus groups, clinicians were asked about what their current office practices are with respect to addressing both the weight-related behaviours addressed in PTT (i.e., television viewing, physical activity, intake of sugar-sweetened beverages, sleep duration, and parent responsiveness to hunger and satiety cues), as well as the general parenting topics (i.e. family routines, limit setting, establishing consequences, ignore and distract strategies, etc.) in the 2-5 years age group. No sites reported existing, formalized interventions to address weight-
related behaviours. Most clinicians reflected on their practices within the context of well-child visits. Well-child visits are periodic primary health exams in the early years, which are organized in alignment with vaccination schedules; these visits are often guided by tools such as the Rourke Baby Record (Rourke, Leduc, & Rourke, 2014), and are focused on growth monitoring, developmental assessments, and other items such as vision and hearing screening.

**Weight-related behaviours**

One of the barriers to addressing weight-related topics in the 2-5 year age range appears to be a gap in routine visits in this age group. Across all sites, clinicians described a perceived gap in well-child primary care during these years. This gap in routine care corresponds with the Ontario immunization schedule, and is described to occur between the OHIP-scheduled 18 month visit, and 4-5 years of age, when children require additional immunizations prior to starting school. A clinician at one site described:

“…traditionally we see kids up to the two-year-old because that’s their last inoculation or … eighteen months. So we don’t actually see them…. until they go to school… there’s that gap in their care… traditionally [in] family practice.”

One clinician perceived that this gap in routine visits had contributed to a missed opportunity for addressing weight-related behaviours for one of the families in her practice: “I have a family that comes to mind and they were all on their milestones when they were smaller, and now suddenly they’re like three to eleven and twelve and their weight has just blossomed, upwards.” Several clinicians across the sites reflected a preference to schedule routine well-child visits during this time, but it was not reported to occur routinely. One registered nurse shared “I think… they really should be seen at two and three. And four…every single year.”

One of the reasons for this inconsistency in addressing weight-related behaviours may be related to the screening tools for well-child care used in this age group; not all weight-related
behaviours are embedded in primary care screening tools. At the academic site, clinicians across focus groups described utilizing various age-based tools during well-child care (i.e., the Rourke Baby Records, Nippissing developmental screens, and the Grieg tools for older children). One clinician stated interest in addressing weight-related behaviours, but felt that the topics were only covered in visit guides for older children:

“…the weight-related topics are all stuff that people… would be interested in and we try to promote…the TV stuff comes up for me a lot…. especially because it's on the Grieg and part of your screening with older kids. But I don't think we talk about it as much on the Rourke with the two to five year olds.”

Although many clinicians described addressing some of the topics, none of the participants described addressing all of the weight-related topics addressed in PTT in a routine or anticipatory way. Across, and within sites, there was a lack of consistency in what clinicians are routinely addressing. Instead, what is routinely addressed appears to be determined by individual practice. As one participant said, “I think [Clinician name] is starting to talk more about sugar-sweetened beverages…but probably not everyone.”

Beyond the gap in care between 18 months and 4-5 years, clinicians identified a few additional challenges and barriers to addressing weight-related behaviours during routine visits. Some clinicians felt that parents did not seem fully engaged in the discussion of these topics during well-baby visits for younger children. One clinician reported “I find like half the parents don’t listen to the advice we give to them during those well-baby visits.” Another clinician perceived that addressing some of the behaviours can be a delicate topic: “… parents don’t like to hear that maybe they're doing something you know, wrong I guess. You have to really tread delicately and…you don’t want to get their backs up at all.” She also reported distraction by having the children present at the appointment as a challenge to discussing nutrition related topics with families: “[Parents] bring the two-year-old, and they’re grabbing all your food
models and throwing them all around… trying to open the door nonstop, trying to get out… you don't really get much accomplished.”

**Parenting topics**

Similar to the weight-related behaviours, routine practice around addressing parenting topics varied across clinicians. Most clinicians did not routinely address these topics: “I think our nurse practitioner would do…some of that education … but I don’t think it’s something that is done on a regular basis.” A few clinicians described often asking parents about discipline and limit setting, although they reported addressing these topics when children are under 2 years of age: “…definitely by fifteen, eighteen months, I will ask about limits and discipline and that kind of thing.” Some physicians at the academic site described being less likely to routinely ask about general parenting issues compared to the weight-related behaviours, but would address if parents brought forward issues or concerns to them. Similarly, participants in another group perceived that parents may approach their physicians with concerns about their child’s behaviour, but otherwise that these topics may not be routinely addressed.

Most of the clinicians identified a lack of time as a key barrier to addressing parenting topics in depth during routine visits: “You can’t… do all of that in fifteen minutes… It’s not humanly possible.” Another clinician shared: “basically, I’m looking for red flags because I can’t say ‘Oh yes, you’re doing a good job.’ I just need to find [if] there’s a problem, in my limited time.” However in addition to inadequate time, there may be a reluctance to routinely ask about parenting due to perceptions that these topics are sensitive; one clinician stated “I don’t like to intrude.”
Referring practices to community resources

When asked about current referring practices for community resources on PTT-related topics (both weight-related behaviours and parenting topics), a few clinicians across sites identified some community resources available to their patients. The two primary organizations that clinicians reported referring their patients to were the Ontario Early Years Centres and local Public Health Units. However, some clinicians perceived barriers to accessing these programs including: lack of parental awareness of these programs, transportation challenges, and an inability to attend the programs when offered. And a few clinicians at both the urban and academic sites felt that while there were parenting programs, there was a gap in these programs with respect to addressing the weight-related topics. One clinician reflected that she didn’t know of any programs “focused on obesity in children… but definitely [programs] focused on…parenting.”

5.3.2 Parents

Current resources on healthy lifestyles

Just over half of parents talked about resources that they currently use relating to healthy lifestyles for their children. Of those, several parents reported that they sought information and ideas online (websites, blogs) regarding healthy foods and recipes, and “ways to get [children] to eat”. Although the extent to which parents are currently accessing information on healthy lifestyles from their FHTs appears to vary across sites, some parents at the urban and academic sites reported that they had received advice at their FHTs. This advice appears to be primarily clinician-driven. One parent commented “… some of it has come from … the questions that…the doctors ask you”, referring to the age-based tools for well-child visits. Another parent recalled receiving the advice “eat the fruit…not the juice…drink the water.” There were also a
few parents who reported that they did not regularly use the FHT as a resource for healthy lifestyles, primarily because they “rarely have to see the doctor” and do not come in for regular visits.

**Current parenting or child development resources**

Many more parents discussed resources they are currently using regarding parenting support and child development, than did for healthy lifestyle resources. The majority of parents reported using online resources (websites, blogs, listservs) and social media (facebook, pinterest) as a resource for parenting information. In addition to online resources, several parents across sites reported also utilizing the FHTs, although there was some variation between sites. One parent described frequently obtaining advice from her doctor: “she’s also had four kids so it was like…she knew exactly where I was at.” Similarly, another parent described utilizing the routine well child visits as an opportunity to get advice: “up until now…she’s been having regular check-ups every three months so we kind of save up questions for our family doctor as well.” Another parent, while not having accessed the FHT in the past for parenting support, reported that she would consider asking at the FHT if she had concerns: “in terms of … parenting…strategies and stuff, I haven’t really asked my doctor but I would feel comfortable doing it.”

Of note, one parent reported reluctance to seek support from the FHT on some parenting topics, anticipating judgment on the part of the physician: “…with both of my boys, we bed share, and I know that that’s something that’s very controversial. And …to be truthful it’s not something that I would ever tell my doctor.” Another parent noted reluctance on the part of her physician in giving parenting advice: “there was a lot of not really wanting to go into parenting skills and actual giving of opinions. And, as a parent who wanted opinions and who was trying
to solicit opinions, I was finding there was a really big lack of that.” However, this parent was able to receive this desired support from another clinician: “…eventually I turned to the nurse… and she was the only one who gave me some parenting advice… And it was so helpful.”

5.4 Theme 2: Facilitators of PTT implementation in FHT settings

5.4.1 Clinicians

Perceived benefits of offering PTT in FHTs

During the focus groups with clinicians, we heard several comments that reflected the potential for fit between PTT and the priorities and values at the FHTs. Across sites, we heard that provision of programming and preventive health care aligned well with FHT mandates. Some clinicians thought that the continuity of care offered by the FHT would improve the success of PTT (as compared to other community programs where families may only attend for a short time). One clinician felt that: “…there’s power in having our own staff running it because we know the patients… The longitudinal relationship will come in there”.

Similarly to the continuity of care offered in a primary care FHT setting, clinicians perceived that their patients would be more likely to attend PTT in an FHT because of the familiarity with the location and staff, and patients’ trust in the FHTs. One clinician stated: “they prefer coming to their own clinic…you know their home base, where they know somebody that may be running it, you know?” Another clinician felt that: “…they trust the staff, they trust the nurses, they trust the people here so… that familiarity…that would be … an advantage.”
Features of PTT

Beyond the perceived benefits of offering PTT through FHTs, clinicians reported several features of PTT that they felt would be beneficial to their patients. Across all sites clinicians felt that the topics as outlined in PTT would be “very relevant”, “really beneficial”, and “quite valuable” to their patients.

We also heard that PTT could potentially offer an opportunity to enhance current primary care practice, by building on routine well-child visits. One clinician shared that:

“…We see them for short periods of time and that is effective. However, this [PTT] … sort of spreads out... I see it fanning out to [increase] our ability to reach them in those short visits. ..Like we’re only seeing them for fifteen minutes. How much can we really get accomplished? And there’s a lot to, to do to prevent obesity.”

A few clinicians also anticipated that the peer interactions offered in a group setting would be particularly valuable (as opposed to one-on-one visits). One clinician reflected:

“So is there value, though, to having that information being repeated in a group setting because they often… I think listen to their peers… Not necessarily more so, than, than us [laughs] but I think they get… different messages from [their peers], and maybe more meaningful.”

Across sites, clinicians also felt that the children’s program component of PTT would be very important to program attendance.

Appropriate age for intervention

In almost all of the clinician focus groups, the issue of at what age to address weight-related behaviours was raised. Across all sites, clinicians felt that “patterns of behaviour are set down very early.” Specifically with respect to some of the weight-related behaviours, clinicians felt that “a lot of these habits are already established” by 2-5 years: juice intake, picky eating/refusal of vegetables, and TV/screen time were all felt to be embedded early on.
At a couple of sites, it was suggested that PTT should consider expanding the age range targeted, to include children in the 0-2 year age range as well. One clinician reflected:

“…a lot of kids, they’ll come in between that two and five age group and they’re already obese, right? And …if you would have started right at zero with the information…that might not be the case.”

5.4.2 Parents

*Parent perceptions of FHTs*

The majority of parents identified some benefit and level of fit in having PTT offered in FHTs. Similar to what was heard in the clinician focus groups, parents appear to have a level of familiarity and trust with their FHTs. One parent described: “I feel that when you’re with the family health team… you have a connection to that team. You know they’re there to take care of you so maybe there’s a little bit more feeling of immediate trust. There’s no necessary need to develop rapport.”

Many parents also identified their FHTs as experts, and a credible source of information. One parent thought: “perhaps the reputability…the information is probably going to be better … health professions may be able to provide real in-depth information as opposed to just presenting you with a general broad overview.” Several parents shared similar feelings. Many parents at the academic site reported that the relationship between the FHT and the hospital added an element of authority or prestige: “I think the fact that it’s at a hospital gives it more clout and definitely has a prestige factor to it, so I think it would entice people more … they might be feel it’s more scientifically-driven…and more serious.”

Several parents felt that offering PTT in their FHT would make sense, and fit well. One parent stated “I think this would fit in really well with the stuff they already do offer.” Another
parent felt that she might be more likely to attend a program at the FHT than in the community because of the connection with the FHT team: “I would be a lot more likely to go to my doctor’s office for it.” However, there were a couple of parents who associated the FHT with services such as acute care and vaccinations, and did not associate the FHT with preventative group programs. One parent shared: “I only go there for check-ups.”

*Features of PTT: Topics*

Similar to what was heard in clinician focus groups, many parents across the sites felt that the topics covered in PTT are relevant to them. One parent valued the mix of both parenting and health topics: “I like that there’s kind of …the sleep stuff, the eating stuff…and physical activity. But I also like that there’s the psychological stuff as well in terms of disciplining.” Another parent felt that: “it would be nice to sort of have … a dedicated sort of parenting group or class that … focuses on health issues but also … general issues.” More specifically, parents across sites endorsed several general parenting topics: family routines (in general and in particular for sleep), limit setting, time outs and discipline. On the importance of family routines, one parent stated: “...if parents throw that routine off balance, it’s like scrambled eggs”.

With respect to the weight-related behaviours, parents across sites endorsed the topics covered in PTT. Desire for information on physical activity, limiting TV and appropriate non-food rewards came up frequently among parents. Several parents reported already having adopted some of these behaviours. One parent reported: “personally, I have a pretty general understanding of…TV and…I feel pretty confident in that already.” However, some parents reporting having challenges in these areas and wanting some support:

“… she loves to watch TV and it’s the first thing she says when she wakes up…and she says it before she goes to bed. ‘I want to watch Diego.’ …as parent, I feel guilty because TV is bad and you’re not supposed to do it but there’s been so many times where it’s allowed her to just relax and so that I can cook dinner. … I would love to know strategies.”
Overall, it appears that both parenting topics and weight-related behaviours covered in PTT are relevant to parents, with variation among parents with respect to their level of adoption of these behaviours.

Features of PTT: Value of peer interactions

The majority of parents endorsed a group format for learning. Parents felt that the peer interactions offered through the group format of PTT would be particularly valuable in learning about general parenting and weight-related behaviours. One parent stated:

“…it’s always nice to go with a group though and be able to run situations by other people and kind of get input from other parents and a professional on how you could have handled it or what you should do in the future if it keeps coming up. That’s what I find group things are the best for is … the brainstorming part of it.”

The value of peer interactions, beyond just obtaining different ideas from other parents, may be in reducing the isolation that is sometimes felt by parents. When talking about the PTT program, parents identified that the program could help support connections between parents. One parent identified that “… people don’t necessarily have the community right around them”, and that parents can “feel like they’re the only ones going through…hard times with a toddler that’s just not listening”, and that a program like PTT could help reduce this feeling of isolation.

Parents felt strongly that the children’s program component of PTT would be an important factor for program attendance. Several parents reported that it would be very difficult to attend if they could not bring their children or get childcare support. In addition to the function of childcare that the children’s program provides, parents also identified a variety of benefits of engaging the children in parallel programming. One parent felt that having similar topics addressed could help to get parents and their children “on the same page.” A couple of parents felt that a separate children’s program would allow them the space and attention to do
their own learning. One parent shared: “…if I’ve got [my son] running around and [my other son] on my lap and squirming, I can’t pay attention to anything that’s going on.” Another parent similarly shared “most programs… it’s the children and mothers usually interact…But [in PTT] it’s really great too because you’re… guaranteed at least a little bit of time just for yourself.”

Many parents also liked the idea that PTT presented an opportunity for their children to enjoy some social time with other children. One parent thought: “it will also get kids to bond with other kids.” Another parent similarly commented: “…I may get something out of it but then also…he’s playing for an hour and a bit which is more fun for him. So I think that to me is a major pull.”

5.5 Theme 3: Anticipated barriers to implementing PTT in FHTs

5.5.1 Clinicians

The most prominent barrier to implementing PTT cited by clinicians was the limited FHT staffing resources that would be available to the program. Clinicians across sites were reluctant about participating in PTT as an “add-on” to their current workload. One clinician stated “you can’t ask people to do it extra.” Another clinician shared: “I think that’s another piece that’s important - to figure out how we can do this without it being so resource intensive.” This concern regarding the human resource requirements of PTT was furthered by the length of PTT in its proposed format (9 weeks). One clinician felt that participating in the program would be too much for her colleagues: “that’s a huge time commitment, and that’s on top of their counselling that they’re already doing so… you’re going to stretch it way too thin.” Another clinician shared: “Nine weeks is a long, commitment of time.”
Other potential barriers to implementation related to physical resources. While clinicians at each site were able to identify appropriate physical space in which to hold PTT (conference rooms, waiting rooms), some concerns were voiced about the availability of the space at different times of the day/week. For example at one site, the waiting room was seen as the ideal space to hold the children’s program, but it would only be available in evenings or on weekends when there were no clinics being held. Clinicians at the both the rural and urban sites identified the possibility of using other community spaces such as schools and churches to overcome these barriers. The academic site has ample space and availability of this space.

Beyond possible human and physical resource-related barriers to implementation, clinicians also shared some possible program-related barriers to attending for their patients. Across sites, there were concerns that the duration of the program would deter parents from participating, or would be infeasible for parents to attend all sessions. One clinician shared:

“…my only concern is … getting people to come out for ten weeks. Usually families are very busy and to make that kind of time commitment… even if they did come, you would probably either have a fall off or people missing a lot of stuff …”

Several clinicians felt that a shorter program would be better attended, based on what they had found for some of their FHT programming for adults:

“For diabetes, for chronic disease management … we find that the longer programs, it is difficult retaining people and getting them to come out…. we’ve found that having shorter programs…tends to work better.”

Although issues related to travel and transportation were raised across all sites, the exact nature of the concern differed by site. A few clinicians from the urban site anticipated that transportation costs (e.g., bus tickets) may be a barrier for many of their patients. Clinicians from the rural FHT felt that availability of transportation would be a barrier for some of their
patients who live out of town (as there is no public transportation at the rural site). Clinicians at the academic site anticipated that travel time to the FHT (not availability of transportation, or cost) may be a barrier to their patients, as many patients live in the surrounding suburbs. One clinician stated: “I’m just thinking you might not get a whole lot of people who live outside of 416 wanting to come in the city.” Parking was identified as an issue at both the urban (availability) and academic (availability and price) sites, but not for the rural site.

5.5.2 Parents

Parents’ opinions on the proposed length of PTT varied considerably. Across sites, there were equal numbers of parents who felt that nine weeks would be feasible, and who felt that nine weeks was too long. Between sites, more parents at the academic site felt that the proposed length would be a barrier to attendance, compared to the rural site where more parents felt that the proposed length would be feasible. Regarding the potential benefits to a longer program, one parent at the rural site shared: “…I personally think the consistency [of nine weeks] would be great.” Of the parents who felt that the proposed format was too long, many expressed that it would be difficult to “commit” to a full 9-week program. One parent shared: “sometimes we sign up for things and I barely show up because it just doesn’t work out for whatever reason… I never realized how flakey I could be until I had a baby.” Another parent felt that: “nine weeks, to meet each time, like I would never do it.”

The extent to which transportation availability and cost were foreseen as barriers to attendance varied. Only a few parents (all of whom were from the urban site) felt that the cost of transportation would be a barrier to attending, and that provision of bus tickets would be helpful for them to attend. Most of the other parents (equal numbers from the urban and academic sites) felt that either transportation cost was not a barrier for them, or that provision of transit tickets or
tokens would be useful but not essential for program attendance. Transportation barriers were not brought forward as a barrier by any parents at the rural site.

Another transportation-related potential barrier to attendance is the amount of travel time required of parents in order to get to their FHTs. Travel times cited by parents across sites (whether by public transit, driving, or walking) varied widely, from a 5 minute walk to a 75 min drive. Parents had varying opinions regarding whether their travel time was a barrier to attendance. While a few parents felt that travel time not a barrier to attendance, several parents at both the urban and academic sites felt that it was either a modest or significant barrier to attendance. In general, parents across the three sites who reported a travel time of less than 30 minutes felt that this would not be a barrier to attendance.

Lastly, several parents discussed whether the provision of food as a part of the program would reduce barriers to attendance. The majority of parents felt that the provision of a small meal or snack would be beneficial and would improve program attendance. Of note, several parents felt that the provision of a snack would be more important for the children’s program. Also, several parents felt that the provision of food would be more important if PTT were to be held during the evenings.

5.6 Theme 4: Recommendations for Program Implementation

5.6.1 Clinicians

Program Duration and Logistics

The most frequently-suggested recommendation across clinician focus groups was to reduce the number of sessions in the current format of PTT in order to optimize attendance. One clinician felt that “if you consolidate it into…half as many weeks, that might be a little better.”
A suggestion that was raised in another focus group was to offer PTT in two parts: 4 weeks, followed by a break, followed by an additional 4 weeks. A third suggestion that arose from yet another focus group was to consider offering a condensed “boot camp” format, which would involve offering PTT over a couple of half days, or a weekend.

The logistical issue of when to offer the program was discussed in a couple of clinician focus groups. Clinicians across sites perceived that holding PTT in the evenings or on Saturdays would improve attendance. However clinicians across groups perceived that evenings would be more challenging for parents to attend, given that parents are already busy at those times. In one focus group, it was suggested that if evenings were considered for PTT, that provision of dinner would be important to ensure parent attendance.

**Alternative Formats**

A suggestion was brought forward in an early clinician focus group at the academic site to consider offering PTT in an online format; it was thought to be potentially more accessible to busy parents if it were online, rather than in person. This was anticipated to remove barriers such as transportation, travel time, and be more flexible with respect to timing of the program (if offered in a self-guided format). Level of interest in an online format was asked in subsequent clinician focus groups and parent interviews.

At the other sites however, clinicians held predominantly negative views towards online formats. One clinician reflected: “how much are you really retaining? I did podcasts in university and I zoned out for half of it to be honest, because it got really monotone and really boring.” Another clinician felt that the online program would promote isolation: “… the whole objective of this is collectiveness, togetherness, grouping. We learn from groups like we used to in the old days… Screens create isolation and we don’t want that.” However, clinicians at the
rural site did feel that an online resource could be useful as an adjunct to the program (i.e., for missed classes, or to review material after the program): “it would be nice to know that they could go online and access the information. Because they might really need something specific at one time and they’re not going to run that class…All year long.”

**Recruiting patients**

Across sites, it was felt that a recommendation from a clinician (specifically nurses and physicians) would be effective in encouraging parents to attend. In particular, the 18 month well child visit was viewed as being well attended by the majority of families, and a good opportunity to promote the program. Other options identified in the focus groups included: emailed invitations, mailed invitations from the FHT/physician to parents, waiting room and exam room posters, and waiting room TV monitors. Of note, a physician in one group was reluctant to send a mailout to all parents in her practice without evidence of the effectiveness of such programs first. The rural site was the only site to suggest community-wide recruitment methods such as newspaper ads, and school-based recruitment. It was felt that the majority of community children would be patients at the FHT, and that the FHT would provide programming to children outside the FHT population if there was interest.

**Enhancements**

Across the clinician groups, a few ideas were put forward to add additional topics to the PTT program, such as picky eating, recipe ideas, body image and self-esteem, and division of responsibility with eating. However, there were no patterns across sites, and there were no strong feelings towards adding any particular topic.

The opportunity to integrate PTT with existing FHT initiatives and clinical care was explored by clinicians. Across sites, there was some level of interest in linking PTT back to routine
clinical care in some way. Strategies identified by the different sites primarily involved a communication mechanism with the primary care team and follow-up from the program. For example, primary care teams would want to be notified if there were any families requiring additional resources following PTT (e.g., developmental, behavioural, or other health resources). There was also some interest, particularly from nursing professionals, in being able to follow-up with families after PTT if the families were continuing to have challenges. One clinician at the academic site felt that it would be helpful to have training on, and access to PTT materials to use during individual visits with families: “If…you could take a piece of it, rather than running the whole thing… even in our individual one-on-ones with that age group, if we had the resource binders for each session and all the nurses were oriented to the content… that could be implemented.”

At the urban site, a few clinicians offered to attend the final session of PTT to introduce themselves to families as additional resources following the program. At the academic site, there was also a suggestion to remind participating families to book their child’s 4-6 year well-child visit following the program.

A few groups across sites discussed the possibility of integrating screening tools into the implementation of PTT. At the urban site, one suggestion was to provide the clinicians with a checklist of weight-related behaviours to screen for during regular visits. Another group at the urban site expressed some interest in utilizing a nutrition screen such as NutriSTEP® to identify families at risk and refer to PTT.
5.6.2 Parents

Recommendations for Implementation

While there were many parents who felt that the number of sessions proposed for PTT would not be a barrier, there was an equal number who felt that reducing the number of sessions would be more feasible. Stemming from the clinician suggestions to offer condensed (“boot camp”) or online formats, most parents were asked for their opinions on these formats.

Of the parents asked about the “boot camp” format, most held negative views toward this condensed format (many of these parents were from the urban site). One parent commented: “I don’t think a full day over a couple of hours would be better…what parent or kid really is going to sit around for a full day?” Another parent felt that a condensed format may have a negative impact on the anticipated social support that would be gained through participating in PTT:

“I think that’s a nice way to be able to get to know the facilitator a little bit better and also the other people in the group…which is an advantage… People might feel more comfortable sharing stories or questions with a group that they know a little bit better rather than just an intensive two-day, all day thing where people might… be less apt to… share in that type of setting.”

However despite most parents holding negative views on a boot camp format, there were still a few parents who felt that the format would work well for them, most of whom were from the academic site. One parent suggested:

“… if I’m going to commit to… two hours then pretty much my whole day is dedicated to that because of the time I travel down there and back, there’s not much left of the day, so if I was going to commit for a two hour or three hour session, you know, what’s the difference if it’s four?”

Of the parents asked about online formats, opinions echoed what was heard in clinician focus groups. Many parents across sites expressed negative views regarding online formats as the primary mode for program delivery, and expressed a preference for an in-person format for
programs such as PTT. The main concern raised was the loss of interaction with other participants in an online format; online formats were viewed as “impersonal.” One parent, reflecting on her experiences in taking online courses, described her experience: “…going through the motions, I wasn’t really engaged in it as much.” Similarly, other parents felt that it would be difficult to remember to participate in an online format, and that they would be distracted by factors in their home environments.

Across sites, only four parents preferred an online format to an in-person format; all of these parents were from the urban and academic sites. One of these parents reported: “I have to work Monday to Friday, eight-thirty to four-thirty. My kid is in day care, by the time we get home it’s late… personally [online] would work better for me.”

Some parents felt that a blend of online and in-person sessions may be a viable option to improve program attendance, such as offering a couple of in-person sessions (i.e., first and last sessions, with online sessions in between). However, the parents who expressed an interest in this format were the same parents who already held positive views towards offering a fully online program.

While the majority of parents did not feel that a fully online program would be successful, several parents at both the urban and academic sites felt that it would be helpful to have some online resources (e.g., posted written materials or videos) available in case they were unable to attend a session such as if their child was sick. One parent suggested that it may be helpful to have a complementary online resource for PTT, but have the primary delivery mode be in-person: “… like a repository of… links to various things you can do, like here’s a handbook or whatever. But I think that the actual discussions would probably be more fruitful in person…”
Regarding the logistical issue of when to offer the program, the majority of parents provided some input. Most parents shared a couple of examples of times of day that they could attend; similar to what was heard in clinician groups the most popular timeslots were evenings and Saturday mornings. Preferences for different timeslots did differ somewhat by site. The majority of parents at the academic site felt that Saturday mornings would be easiest for them, with a few reporting that evenings might be a possibility. Parents at the urban site were divided with respect to timing preferences; both evenings and Saturday morning were popular among parents. Similarly for the rural parents interviewed, there were a wider variety of preferences: Saturday morning, evenings and weekday mornings. Across sites, parents reported that evenings would be challenging to attend due to timing of dinner, and being able to put their children to bed on time. For the parents who felt that evenings would be feasible, they preferred to attend the program earlier, before dinner (ranging from 4-6pm).

**Recruiting parents**

The most common recruitment methods suggested by parents included: recommendation from a clinician, email from the FHT, waiting room and exam room posters, and mailouts. Many parents felt that it would promote attendance if a clinician informed them of the program, or recommended the program to them. One parent shared “if [my physician] says … that it’s something that I should consider, I would take that seriously then.” Many parents also felt that receiving a flyer or handout at their appointment would be helpful. One parent did share that while she felt it could be helpful to hear about the program from a clinician, it would be important not to feel that she was being offered the program because she was experiencing challenges: “But then it’s like you don’t want to pressure them into telling them they need help either” Across sites, similar numbers of parents felt that email notices and mailouts would be
effective. A few parents suggested that advertising the free children’s program by professionals would grab parents’ attention and promote attendance. One parent suggested to “[advertise] it as a fun thing to get out of the house and do something fun with your kids. For them to have fun. But, you know, have some alone time as well. Some parent time. Some adult conversation and stuff like that is a big seller for me.”

**Enhancements**

The majority of parents offered some suggestions for additional topics. While the topics suggested by parents varied widely, there were a couple of topics that arose frequently. Food and nutrition topics such as: recipe ideas, healthy snack options, and picky eating were among the most common. One parent suggested having some time to discuss: “some quick recipes or like kid-friendly and tested recipes or, or just even in the group like give homework to the parents…like next time, we’re going to start the session with like a bunch of ideas, we’re going to write them down and then send them to you…so that the brain storming, like you get to contribute and then help other people and then you guys kind of to a follow-up with it. I think that would just be practical.”

A few parents also suggested additional topics such as: ADHD and behaviour, managing the transition to multiple children, preparing for school, and strategies for themselves as parents (work-life balance, maintaining adult relationships).

With respect to how PTT could be integrated with FHT activities, only a few parents identified some opportunities. Similar to what was heard in clinician focus groups, a few parents suggested ways to communicate back to their FHT teams. These parents felt that opportunities to have individual follow-up with clinicians would be beneficial. There was also a suggestion to
have the facilitator collect any parent-generated clinical questions each week, consult with the FHT team, and report back to parents with answers at the PTT session the following week.

Lastly, a few parents suggested that it would be helpful to support PTT content with additional resources: supporting information and tools, as well as links to additional local resources for families. Similar to what was heard with respect to alternative formats, these parents felt that complementary online information would be helpful. One parent commented on her lack of knowledge of age-appropriate community resources: “what do you do in this city with a kid?” Another parent felt that brief complementary resources would be useful: “…there are times when you’re on your cell phone, you’ve got some time on the bus …I have time to read a short article.”

6.0 DISCUSSION

The purpose of this study was to explore perspectives of primary care clinicians and parents of 2-5 year old children on primary care obesity prevention interventions through the lens of an existing intervention, the PTT program (Haines et al., 2012). The results of this formative study are intended to inform key adaptations and enhancements required for the PTT intervention prior to piloting in a primary care setting. We found that overall, both clinicians and parents are interested in such interventions to promote healthful weight-related behaviours. The findings offer insights from two perspectives: insights into current practices in FHTs and parent perspectives with respect to addressing weight-related behaviours, and guidance on obesity prevention interventions in FHTs for families with young children.
6.1 Insights into current FHT practices

While we asked about current practices of clinicians in addressing weight-related behaviours in their 2-5 year old patients, what we heard is that practices vary widely, and that there are opportunities to enhance obesity prevention efforts in primary care practice. The barriers to addressing weight-related behaviours reported by our clinician participants, such as a lack of time (Hearn, Miller, & Campbell-Pope, 2008; Robinson, Denney-Wilson, Laws, & Harris, 2013), competing priorities during well-child visits (Robinson et al., 2013), and sensitivity of these issues (Hearn, et al., 2008) have been similarly reported in primary care settings outside of Canada. Insufficient human resources are a key challenge to implementing interventions in this setting. For physicians and nurses who traditionally provide the majority of well-child primary care, it may not be feasible to address multiple weight-related behaviours in the context of a well-child visit. In fact, research has shown that parent retention of anticipatory guidance declines with increasing number of topics addressed (Barkin et al., 2005); adding topics to an already full well-child visit may not be effective. Increased support and services outside the traditional well-child model of individual visits, such as group-based intervention programs, may help ensure these behaviours are addressed more routinely in primary care.

Our findings suggest that parents and primary care clinicians may be interested in group-based formats for obesity prevention interventions due to peer learning and support. In a review of models of well-child care, Coker and colleagues found that group visits were at least as effective as individual visits (Coker, Windon, Moreno, Schuster, & Chung, 2013). Expanding the role of nurses in well-child care to include group programs, utilizing other members of the IP primary care team (such as social workers, childhood development specialists (Coker et al.,
2013), registered dietitians), and/or partnering with public health (Summerbell & Brown, 2015) could help to overcome human resource-related barriers.

We found that clinicians perceive that tools used to guide well-child care in this age do not include guidance on many weight-related behaviours. Recently-revised versions of these tools, such as the Rourke Baby Record, have included screening items on some topics (i.e., physical activity/sedentary behaviour, sleep habits, and sweetened beverages (Rourke et al., 2014)). However, it is possible that the newest versions have not yet been adopted in some practices. Future research could explore how these revised tools, and others such as NutriSTEP® (Randall Simpson, Keller, Rysdale, & Beyers, 2007), impact clinical care regarding obesity-related behaviours among children.

While the focus of the PTT intervention is to promote healthful weight-related behaviours, the intervention is embedded within a general parenting skills program. As such, we did ask primary care clinicians and parents about current practices in addressing general parenting in primary care. Throughout the interviews, parents expressed much enthusiasm towards these topics, perhaps more so than their interest in the health topics. Several parents expressed a desire to receive general parenting advice from their primary care teams. Our results suggest that some clinicians may be reluctant to provide this information in an anticipatory way; however, most clinicians did report they would refer to additional resources if parents had concerns. We did not fully elucidate the reasons for this reluctance; however, our results suggest that there may be some perception that parenting is a sensitive issue, and less clarity around what is evidence-based. Provision of a program in primary care that addresses general parenting skills may help to fill a gap in primary care services.
6.2 Insights into parent preferences

Limited information exists in the published literature on the perspectives of parents with young children on weight-related interventions (both prevention and treatment oriented). One such study of Scottish parents by Douglas and colleagues recruited parents of 3-4 year old children in community settings and used a formative approach to better understand the preferences of parents regarding weight management programs for young children. While they did find that parents were concerned regarding the weights of their children in the long term, they found that parents were not interested in attending a weight-management program (Douglas, Clark, Craig, Campbell, & McNeill, 2014).

In our study, parents were asked about their perspectives on the proposed intervention, without talking about weight, but instead focusing on the healthful behaviours outlined therein. Likely as a result of this approach, our results differed from those of Douglas et al. Our findings suggest that parents are interested in programs that help support happy, healthy children which include, but are not limited to, healthy weight-related behaviours. Additionally, our findings suggest that parents’ trust in, and existing relationships with, their primary care teams are clear facilitators to program attendance.

Leaders in the field have expressed a need for a systems wide approach to preventing obesity (Dietz et al., 2015; Summerbell & Brown, 2015). The primary care setting, with its wide population reach, focus on prevention, and frequent contact with primary care in the early years lends itself well to promoting healthful weight-related behaviours, as well as the early identification of obesity. While the primary care setting is only one part of such a “systems wide” approach, our findings suggest that parents’ trust and existing relationships with their
primary care teams are clear facilitators to addressing these issues. As such, primary care may be an important setting in which to begin to engage parents in conversations about the importance of healthful weight-related behaviours, and encourage parents to participate in effective programs which address these behaviours.

6.2 Guidance on interventions in primary care for families with young children

Our findings offer some guidance for structured interventions for families with young children in primary care. The most salient, desirable aspects of an intervention from parents’ perspectives included having separate parent and children’s programs, and addressing both general parenting topics and weight-related behaviours. Positioning interventions within a general parenting program has been described by others as a strategy to increase parent participation (Jago et al., 2013) and could be tested in future studies. Based on our parents’ feedback, having separate programs for parents is anticipated to enhance peer learning and support; an engaging children’s program is anticipated to remove barriers to parent participation, as well as promote parent attendance.

Our findings also suggest that while parents are currently engaged in online resources for information on parenting as well as health information for their children, it is unlikely that a formal intervention delivered solely through an online format will be successful. Instead, utilizing online formats as an adjunct to an in-person intervention has the potential to engage parents between sessions. Depending on the online platforms used, they may provide parents with additional opportunities to enhance learning, and facilitate peer support. Future studies should test adjunct online modalities and assess parent interest and engagement.
The recruitment phase for parents in this study was quite extended, despite the use of multiple strategies; scheduling interviews with parents was also somewhat challenging due to parents’ busy schedules. This suggests that engaging this population may be difficult due competing demands on parents’ time. Our findings suggest that a recommendation from a trusted clinician would likely be the most effective recruitment strategy for a future pilot. Promoting the intervention’s favourable features, such as peer support, the engaging children’s programming, and the dual focus on parenting and health, will likely enhance recruitment for a pilot. Future research should track and identify effective strategies to recruit and engage parents in primary care interventions.

6.3 Strengths and Limitations

To our knowledge, our study is the first to describe perspectives of Canadian primary care clinicians and parents of 2-5 year old children on obesity prevention interventions within primary care. Our study helps to address a key gap identified by the recently published guidelines for the prevention of obesity in children and youth from the Canadian Preventive Task Force, which found that little has been published on the preferences of families (Canadian Task Force on Preventive Health, 2015). A qualitative approach allows for additional insights over what may have been gained from more quantitative approaches.

Strategies to enhance credibility of the results were used throughout the study. To enhance validity of the results, illustrative quotes were integrated throughout the results in context of the interviews; deviant cases were also included. A second coder examined a sample of individual codes to validate interpretation; and, the final interpretations were member checked with a sample of participants. In order to maximize reliability, the full data set was
comprehensively analysed; a second analyst coded a sample of the data. Results were also compared between sites to examine for any important differences or patterns.

Despite the strengths of the study, there are some limitations. A first limitation relates to the participants recruited. While we engaged a variety of primary care clinicians from three different settings (urban academic, urban, and rural), we only recruited from the FHT model, which does not reflect the diversity of primary care practices in Canada.

Parent participants self-selected for the study; as such, these parents may have been particularly motivated or engaged in parenting and/or health behaviours already, and may not represent a broader population. Our parents were also not diverse with respect to age, gender or ethnicity despite an extended recruitment phase. Collection of data regarding socio-economic status (i.e., income and education) may have also enhanced the description of our participant sample. Future studies should recruit a wider variety of primary care practices and parents to better reflect a diverse Canadian population, and to support identification of any important differences in the needs of various groups.

A second limitation relates to the approach taken with the focus groups and interview guides, in which participants were asked about their opinions through the lens of the existing PTT program. While this approach was fruitful with respect to gaining specific insights on how to adapt PTT for a pilot in FHT settings, it may have precluded some insights and ideas relating to program design in general.
6.4 Implications for future research and practice

The most immediate next step will be to integrate key insights and findings from the current study into PTT, and pilot the intervention at 2-3 FHT sites. The most salient and practical adaptations to integrate include: 1) a modest reduction in the number of sessions to increase recruitment and retention; 2) development of a post-intervention communication mechanism to primary care clinicians; 3) inclusion of 1-2 additional nutrition-related topics to engage parents (such as picky eating, and affordable recipe ideas); and, 4) creation of complementary online reading materials and additional resources for parents. With a pilot, it would be essential to include robust process outcomes in order to assess participant demographics, identify the most successful recruitment methods, and evaluate participation rates, parent engagement and satisfaction with the program. Preliminary effectiveness data could also be collected through pre-post surveys, in order to determine any positive trends in behaviour change, and determine effect size for a future RCT. Pending success of the pilot, partnerships with communication organizations could be forged to coordinate sustainable program delivery.

Given the lack of diversity of parent participants in the current study, it will be important to assess diversity of participants in a pilot (i.e., age, gender, ethnicity, socio-economic status). If pilot participants were more diverse, a focus group could be held after the pilot to explore these parents’ opinions on the program. If pilot participants were not diverse, further efforts to recruit diverse parents for formative work may be warranted. Similarly, given that the current study only included FHT models, in which primary care physicians are supported by a team of IP health care providers, the needs of clinicians working in different practice models may need to be explored prior to any scaling up of the intervention.
Despite most parents preferring an in-person intervention to fully online interventions, the majority of our parent participants reported engaging in online platforms for information relating to parenting and health information (such as blogs, websites, and Facebook). Given the traditionally high attrition rates in programs, integration of these platforms at varying levels should be explored to assess their impact on parent participation, engagement and retention in programs. Additionally, given that there were a small number of our participants (primarily at the academic site) who preferred a fully online intervention to overcome barriers to participation (i.e., work schedules, travel distance/time), a fully online intervention could be piloted for this population.

While not the focus of the current study, our results did suggest some future directions for research regarding routine primary care practice in addressing weight-related behaviours in young children in Canada. Cross-sectional survey studies could assess the extent to which up-to-date versions of the Rourke Guides and screening tools such as NutriSTEP® are currently in use by clinicians in primary care practices, both within Ontario and nationally. Retrospective studies could explore the extent to which the use of these tools impact clinical care processes (such as the frequency of addressing weight-related behaviours in routine well-child care, and referral rates to programs or interventions).

And lastly, we did hear from clinicians that some weight-related behaviours may already be established by 2 years of age. Studies are needed to identify the optimal timing, and frequency of addressing weight-related behaviours in young children in primary care settings. Without evidence of effectiveness regarding these anticipatory messages, it is unlikely that busy primary care clinicians will adopt these practices routinely.
6.5 Conclusion

Effective, engaging obesity prevention interventions are needed for young children; primary care settings have a wide population reach, at a time when they are already engaged in routine care. While no existing interventions have demonstrated effectiveness, our study provides insight into the preferences of both primary care clinicians and parents, which can inform strategies for obesity prevention within primary care.
7.0 REFERENCES


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doi: [http://dx.doi.org/subzero.lib.uoguelph.ca/10.1186/1471-2431-12-39](http://dx.doi.org/subzero.lib.uoguelph.ca/10.1186/1471-2431-12-39)


doi:10.1080/17477160600586747


doi:10.1002/14651858.CD001871.pub3


doi:10.1002/14651858.CD001871.pub3; 10.1002/14651858.CD001871.pub3


doi:10.1016/j.brat.2010.08.008


8.0 APPENDICES

Appendix A: University of Guelph Research Ethics Board Approval

Notification of REB Initial Approval

Date: 30 May, 2013
To: Ms. Nicole Bourgeois
Re: 2013-0000-E
Feasibility of the Parents and Tots Together Program: Formative Assessment in the Family Practice
Health Centre
Sponsor: University of Guelph
REB Approval Date: 30 May, 2013
REB Expiry Date: 30 May, 2014
Documents Approved:
- Consent form - ICF - Parents ver: 05/29/2013
- Protocol - Detailed Study Protocol ver: 05/29/2013
- Flyer - Recruitment Flyer ver: 05/29/2013
- TRUHS Application Form - Initial REB Application form ver: 05/29/2013

The above named study has been reviewed and approved by the Women's College Hospital (WCH) Research Ethics Board (REB). WCH retains the authority to deny the implementation of REB-approved protocols for reasons other than research ethics; such reasons may be administrative, programmatic, or resource-based in nature. Any additional approvals must be coordinated through the REB, Research Office prior to initiating research.

The quorum for approval did not involve any member associated with this project. If, during the course of the research, there are any serious adverse events, confidentiality concerns, changes in the approved project, or any new information that must be considered with respect to the project, these should be brought to the immediate attention of the WCH REB. In the event of a privacy breach, you are responsible for reporting the breach to the WCH REB and the WCH Corporate Privacy Officer (in accordance with Ontario Health Privacy Legislation - Personal Health Information Protection Act, 2004). Additionally, the WCH REB requires reports of inappropriate/unauthorized use of the information.

If the study is expected to continue beyond the expiry date, you are responsible for ensuring the study receives re-approval. The WCH REB must be notified of the completion or termination of this study and a final report provided. As the Principal Investigator, you are responsible for the ethical conduct of this study.


Approval of this study by the WCH REB entails that this study complies with current legislation as outlined in the Ontario Personal Health Information Protection Act (PHIPA) and all policies and guidelines established by Woman's College Hospital.

Sincerely,

Sue Williams, MSc, PhD, Chair, Women's College Hospital Research Ethics Board
Appendix B: Women's College Hospital Research Ethics Board Approval

**RESEARCH ETHICS BOARD – General**

**REB-G**
Certification of Ethical Acceptability of Research Involving Human Participants

<table>
<thead>
<tr>
<th>APPROVAL PERIOD:</th>
<th>June 28, 2013 to June 28, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>REB NUMBER:</td>
<td>13MY043</td>
</tr>
<tr>
<td>TYPE OF REVIEW:</td>
<td>Delegated Type 1</td>
</tr>
<tr>
<td>RESPONSIBLE FACULTY:</td>
<td>Haines, Jessica (<a href="mailto:jhaines@uoguelph.ca">jhaines@uoguelph.ca</a>)</td>
</tr>
<tr>
<td>DEPARTMENT:</td>
<td>Family Relations &amp; Applied Nutrition</td>
</tr>
<tr>
<td>SPONSOR(S):</td>
<td>N/A</td>
</tr>
<tr>
<td>TITLE OF PROJECT:</td>
<td>Feasibility of the Parents and Tots Together Program: Formative assessment in the Family Practice Health Centre</td>
</tr>
</tbody>
</table>

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human subjects in the above-named research project and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that you adhere to the protocol as last reviewed and approved by the REB. The REB must approve any modifications before they can be implemented. If you wish to modify your research project, please complete the Change Request Form. If there is a change in your source of funding, or a previously unfunded project receives funding, you must report this as a change to the protocol.

Unexpected events and incidental findings must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Responsible Faculty, the safety of the participants, and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-council Policy Statement, 2nd Edition, requires that ongoing research be monitored by, at a minimum, a final report and, if the approval period is longer than one year, annual reports. Continued approval is contingent on timely submission of reports.

**Membership of the Research Ethics Board - General:** S. Banerjee, Community Member; J. Carson, Community Member; S. Chuang, FRAN (alt); K. Chuong, Graduate Student; J. Clark, PoliSci (alt); J. Dwyer, FRAN; M. Dwyer, Legal; M. Elleray; OAC; B. Ferguson, CME (alt); H. Gilmour, Community Member (alt); J. Goertz, CME; B. Gottlieb, Psychology; B. Giguerre, Psychology (alt); S. Henson, OAC (alt); L. Kuczynski, Chair; A. Lauzon, OAC, R. Ragan, Legal (alt); V. Shalla, SOAN (alt); R. Stansfield, SOAN.

Approved:
per
Chair, Research Ethics Board- General

Date: ______________________
Appendix C: Parent Recruitment Flyer

Parents and Tots Together Study

Are you a parent of a child who is 2-5 years old? Are you interested in giving your opinions about a health and parenting program?

You may be eligible to participate if:
- You are the parent or guardian of a child 2-5 years old
- Your child is a patient at the Family Health Team

Participants will receive a $35 grocery gift card for participation.

For more information please call:
519-682-2307 ext 226
OR email at: ptt@uoguelph.ca
OR call/text Nicole at 416-568-4171
Appendix D: Parent Recruitment Letter for Rural Site

August 26, 2014

Dear JK/SK Parents/Guardians,

The Tilbury Family Health Team and researchers at the University of Guelph would like to invite you to participate in a research study.

We want your opinion about a program to support raising healthy, happy kids that we would like to run at the Family Health Team. If you decide to participate, you will be asked to complete a 30 minute phone interview.

You can participate if:

- You are the parent or guardian of a child 2-5 years old, and
- Your child is a patient at the Tilbury Family Health Team

Your choice to participate (or not) will not affect your relationship with the Tilbury Family Health Team, the University of Guelph, or the Tilbury Public School in any way. They will not know whether or not you participate.

You will receive a $35 grocery gift card in appreciation for participating in the study.

If you are interested, please:

- Call/text Nicole at: 416-568-4171,
- OR email ptt@uoguelph.ca
- OR call Charlotte at the Tilbury FHT at 519-682-2307 ext 226

Thank you,

Nicole Bourgeois, RD
Dr. Jess Haines, PhD, MHSc, RD
Assistant Professor, Department of Family Relations and Applied Nutrition, University of Guelph
Appendix E: Clinician Focus Group Guide

1. Introduction: Background Information on the prospective intervention

To get started, I’d like to begin by telling you a bit about the program and what kinds of topics are covered.
- 9wks, 2hrs – parenting support and support around keeping kids healthy
- Program for kids at the same time – covers same health-related topics as the parent session
- Overview of General Parenting and Weight-Related Topics Addressed in PTT intervention; to give a sense of the program content

<table>
<thead>
<tr>
<th>Session</th>
<th>General Parenting Topics</th>
<th>Weight-Related Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Child–centered time</td>
<td>Being physically active with your child as a way to spend child-centered time</td>
</tr>
<tr>
<td>2</td>
<td>Importance of family routines</td>
<td>Sleep: Creating a bedtime routine</td>
</tr>
<tr>
<td>3</td>
<td>Using praise, encouragement and rewards</td>
<td>Alternatives to using food as rewards</td>
</tr>
<tr>
<td>4</td>
<td>Setting and following through on limits</td>
<td>TV: Setting limits on TV and finding alternatives to TV viewing</td>
</tr>
<tr>
<td>5</td>
<td>Establishing consequences</td>
<td>When to use (and not use) consequences: Identifying your child’s hunger and satiety cues</td>
</tr>
<tr>
<td>6</td>
<td>Using ignore and distract strategies</td>
<td>Distract your child from sugar-sweetened beverages: finding alternatives for sugar-sweetened beverages</td>
</tr>
<tr>
<td>7</td>
<td>Using time out strategies</td>
<td>The many benefits of removing TV from children’s rooms: More effective time outs, better sleep and more</td>
</tr>
<tr>
<td>8</td>
<td>Stress management</td>
<td>Indoor and outdoor family-based physical activities as a way to reduce stress</td>
</tr>
<tr>
<td>9</td>
<td>Problem solving skills with adults</td>
<td>Problem solving with partners and other caregivers about child’s health behaviors</td>
</tr>
</tbody>
</table>

- Are the topics covered in the program challenges that you think will fit with the patients in your practice? As a clinician, are these topics you would like your patients to learn more about?
- Is there anything missing in the topics that you think we should include?

2. Current resources for parenting; role of family practice settings regarding parenting topics and skills?

Because the Parents and Tots Together Program is based on parenting and topics, next I’d like to ask you a bit your current practices with respect to parenting advice.

- Are parenting issues something that parents are currently asking you about?
- Do you routinely offer anticipatory guidance on parenting?
- If parents ask you about parenting support, what resources do you typically refer them to?
  o Probes: what kinds of programs are your patients currently attending? What about those programs do parents like? What are they saying?
- Do you know if what the level of uptake is?
- Are there any barriers you find in counseling parents on parenting in the clinical/office setting?
  o Probes – completion of counseling, distraction, childcare as a barrier?

3. Current resources for healthy lifestyle topics in the prospective intervention (i.e. sugar sweetened beverages, sleep, screen time, physical activity)

Next I’d like to ask you a bit about your current practices with respect to healthy lifestyle advice for parents with kids 2-5 years old.

- Do you routinely offer anticipatory guidance healthy behaviours?
- Which health behaviours do you typically address with parents?
- Are there any barriers you find in counseling parents on healthy behaviours in the clinical/office setting?

4. Program Implementation: Format, Logistics, Recruitment

Lastly, we’d like to get your thoughts on what we can do to make the program as easy as possible and increase the likelihood that parents will attend.

Recruitment:
- Are there any features of the Family Practice setting that would increase the chance that parents will attend the program?
- Are there any differences between offering a program here in Family Practice, compared to another setting (i.e. Public Health)?
- What are some ways we can encourage parents to attend PTT at Family Practice?
- What kinds of things would increase referral rates?
  o Probes: EMR reminders, Would you refer? Recommend? Ok to send Team letter to patients?

Logistics:
- Thinking about your patient population, and other group programs you’ve offered before…what do you think would be the most important factors on whether a parent would attend the program or not?
  o Location (how close to home?)
  o Cost (snacks, tokens, parking)
  o Relevance (i.e. they’re currently struggling with the issues addressed by the program)
  o Kids’ program
- Qualities of the facilitator (i.e. non-judgmental, being able to manage group dynamics)

- When do you think we should offer the program so that most parents would come?

Alternative Formats:
- We have heard from some others in the study that maybe an online program would be a good option for some parents. Is this something you think parents would be interested in?
Appendix F: Parent Interview Guide

1. **Introduction: Background Information on the prospective intervention**
   
   To get started, I’d like to begin by telling you a bit about the program and what kinds of topics are covered.
   
   - 9wks, 2hrs – parenting support and support around keeping kids healthy
   - Program for kids at the same time – covers same health-related topics as the parent session
   - Overview of General Parenting and Weight-Related Topics Addressed in PTT intervention; to give a sense of the program content

<table>
<thead>
<tr>
<th>Session</th>
<th>General Parenting Topics</th>
<th>Healthy Lifestyle Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Child–centered time</td>
<td>Being physically active with your child as a way to spend child-centered time</td>
</tr>
<tr>
<td>2</td>
<td>Importance of family routines</td>
<td>Sleep: Creating a bedtime routine</td>
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<tr>
<td>3</td>
<td>Using praise, encouragement and rewards</td>
<td>Alternatives to using food as rewards</td>
</tr>
<tr>
<td>4</td>
<td>Setting and following through on limits</td>
<td>TV: Setting limits on TV and finding alternatives to TV viewing</td>
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<tr>
<td>5</td>
<td>Establishing consequences</td>
<td>When to use (and not use) consequences: Identifying your child’s hunger and satiety cues</td>
</tr>
<tr>
<td>6</td>
<td>Using ignore and distract strategies</td>
<td>Distract your child from sugar-sweetened beverages: finding alternatives for sugar-sweetened beverages</td>
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<td>7</td>
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<td>The many benefits of removing TV from children’s rooms: More effective time outs, better sleep and more</td>
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<tr>
<td>8</td>
<td>Stress management</td>
<td>Indoor and outdoor family-based physical activities as a way to reduce stress</td>
</tr>
<tr>
<td>9</td>
<td>Problem solving skills with adults</td>
<td>Problem solving with partners and other caregivers about child’s health behaviors</td>
</tr>
</tbody>
</table>

- Are the topics covered in the program challenges that you or other parents that you know have as well?
- Is there anything missing in the topics that you think we should include?

2. **Current resources for parenting; is there a role for family practice settings regarding parenting topics and skills?**

   Because the Parents and Tots Together Program is based on parenting and topics, next I’d like to ask you a bit about where you go for parenting advice.

   - Where do you currently go to for support and strategies around parenting?
   - Do you ever talk to your healthcare providers at Family Practice about parenting?
     - If yes, what kinds of information and support do you typically seek from your healthcare providers at Family Practice around parenting?
What features of Family Practice would encourage parents to attend the program here, instead of somewhere else (i.e. Public Health, Community Centre)?

3. Current resources for healthy lifestyle topics in the prospective intervention (i.e. sugar sweetened beverages, sleep, screen time, physical activity)

Next I’d like to ask you a bit about where you go for advice on healthy lifestyle advice for your kids.
- Where do you currently go to for information and support around healthy lifestyles?
- Do you ever talk to your healthcare providers at Family Practice about parenting?
  - If yes, what kinds of information and support do you typically seek from your healthcare providers at Family Practice around parenting?
- Do you think going to a program at the Family Health Team would be any different than going to a program in the community? (i.e. early years centre, public health, library program)

4. Program Implementation: Format, Logistics, Recruitment

Lastly, we know parents are busy and it can be hard to add another event to their week. So, we’d like to get your thoughts on what we can do to make the program as easy as possible for parents to attend.
- What time of year would it best to run this program so that the most parents would be able to attend?
- Is there a particular time of day that you think most parents would be able to attend?
- How do you think parents would want to find out about this program?
  - Probes: A letter or email from your family doctor? To hear about it at a regular check-up (i.e. the 18 month, 2-3 year old visit)?
- How do you think we could encourage parents to participate in this program?
  - Probes: Participation by your family doctor, nurse practitioner or team nurse? Follow-up on the program by your healthcare team at a follow-up visit?
- What do you think would be the most important factor on whether you would attend a program or not?
  - Location (how close to home?)
  - Cost (snacks, transit tokens, parking)
  - Relevance (i.e. they’re currently struggling with the issues addressed by the program)
  - Kids’ program. If there wasn’t a kids program – do you think you would still attend?
  - Program offered by a trusted source (?)
  - Qualities of the facilitator (i.e. non-judgemental, being able to manage group dynamics)
- We have heard from some others in the study that maybe an online program would be a good option for some parents. Is this something you think parents would be interested in?
Appendix G: Parent Demographics Form

In order to learn more about the demographics of the participants involved in this focus group, we ask that you please complete the following information and give it to the focus group leader when you have finished.

There is no need to put your name on it, as we are just interested in the group demographics.

1. Age: ____________________________
2. Gender: □ M □ F
3. Do you think of yourself as…? (Please check all that apply)
   □ White
   □ Black/African American
   □ Asian
   □ South Asian
   □ First Nations/Aboriginal
   □ Other, please specify ______________________________
   □ Don’t know

4. Number of children in your home: _______________________

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Appendix H: Clinician Demographics Form

In order to learn more about the demographics of the participants involved in this focus group, we ask that you please complete the following information and give it to the focus group leader when you have finished.

There is no need to put your name on it, as we are just interested in the group demographics.

1. Age: ____________________________
2. Gender: □ M □ F
3. Role in Family Health Team
   □ MD
   □ RN
   □ NP
   □ SW
   □ Other, please specify ________________________________

4. Number of years in practice: ________________

5. Proportion of patients in your practice 2-5 years old
   □ 0-10%
   □ 11-20%
   □ 21-30%
   □ 31-40%
   □ Other, please specify ________________________________
   □ Don’t know
### Appendix I: Coding Scheme

<table>
<thead>
<tr>
<th>Theme 1: Current Activities and Practices of FHTs and FHT patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participants</strong></td>
</tr>
<tr>
<td>Clinicians</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Parents</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
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</tbody>
</table>
### Theme 2: Facilitators of PTT Implementation in FHT Settings

Major category/theme. Collection of sub-themes that includes facilitators, and level of fit between PTT and FHTs.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Sub-theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinicians</td>
<td>Appropriate age for intervention</td>
<td>Comments regarding the appropriateness of topics for the 2-5 year age group (i.e., comments that some topics should be addressed earlier than 2 years).</td>
</tr>
<tr>
<td></td>
<td>Features of the Program</td>
<td>Comments on the features of, or topics within PTT and their level of fit with FHT population and activities. Includes individual codes of: relevance of topics (overall relevance of the program, relevance of healthy lifestyle topics, and relevance of parenting topics), value of peer interactions.</td>
</tr>
<tr>
<td></td>
<td>Level of fit with FHTs</td>
<td>Level of alignment with FHTs/primary care that could contribute to the success of implementing PTT. Includes individual codes of: fit with goals and values of primary care, fit with the role of FHTs/FHT priorities, enhancement of current practice.</td>
</tr>
<tr>
<td></td>
<td>Trust and familiarity</td>
<td>Having PTT at FHT could offer enhanced continuity of care and/or information compared to community resources. Includes codes relating to the trust and existing relationship between FHT patients and clinicians.</td>
</tr>
<tr>
<td>Parents</td>
<td>Parent perceptions of FHTs</td>
<td>Comments relating to parents’ impressions and perceptions of FHTs, which may influence their interest and willingness to participate in programs at FHTs. Includes individual codes of: credibility, familiarity, trust, fit with FHT programming.</td>
</tr>
<tr>
<td></td>
<td>Features of the Program</td>
<td>Comments on the features of, or topics within PTT. Includes individual codes of: relevance of topics covered in PTT (overall relevance, relevance of healthy lifestyle topics, and relevance of parenting topics), value of peer interactions, children’s program.</td>
</tr>
</tbody>
</table>
### Theme 3: Anticipated Barriers to implementing PTT in FHTs

Major category/theme. Collection of sub-themes involving clinician/FHT-related barriers, and parent-related barriers.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Sub-theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinicians</td>
<td>Limited FHT staffing resources and time</td>
<td>Comments reflecting the limited availability of staffing resources to run PTT in-house.</td>
</tr>
<tr>
<td></td>
<td>Length of the program</td>
<td>Comments relating to program length as currently proposed.</td>
</tr>
<tr>
<td></td>
<td>Onsite physical resources</td>
<td>Comments re: availability of appropriate space at the FHT sites.</td>
</tr>
<tr>
<td></td>
<td>Parking</td>
<td>Comments regarding limited availability/affordability of parking at FHTs.</td>
</tr>
<tr>
<td>Parents</td>
<td>Food</td>
<td>Parent comments related to whether the provision of food would be important to include/remove barriers to attendance.</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>Parent comments re: whether transportation availability would be a barrier to participation.</td>
</tr>
<tr>
<td></td>
<td>Travel Distance to FHT</td>
<td>Parent comments re: whether travel distance/time would be a barrier to participation.</td>
</tr>
<tr>
<td></td>
<td>Length of the program</td>
<td>Comments relating to program length as currently proposed.</td>
</tr>
<tr>
<td>Participants</td>
<td>Sub-theme</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Clinicians</td>
<td>Alternative Formats</td>
<td>Any references to delivering PTT in any mode different from a mode other than a fully in-person, group intervention. Individual codes for: reduced number of sessions, condensed formats, online formats (primary or adjunct), use of materials in individual appointments, drop-in sessions.</td>
</tr>
<tr>
<td></td>
<td>Recruitment strategies</td>
<td>Recommended strategies for recruitment of parents. Individual codes include: clinician recommendation, community-wide recruitment, EMR reminder/flag, clinic/waiting room flyers, mailout, waiting room TVs, FHT websites, when to recruit.</td>
</tr>
<tr>
<td></td>
<td>Enhancements</td>
<td>Various enhancements/additions to PTT that clinicians suggested. Includes individual codes for additional topics, communication mechanisms (i.e., follow-up communication to clinicians, follow-up by clinicians, re-enforcement of PTT messages by clinicians during usual care), integration with screening tools.</td>
</tr>
<tr>
<td></td>
<td>Timing for the Program</td>
<td>Recommendations for when to hold the program.</td>
</tr>
<tr>
<td>Parents</td>
<td>Recruitment strategies</td>
<td>Recommended strategies for recruitment of parents. Includes individual codes for: clinician recommendation, email, FHT phone line, clinic flyers, mailouts, social media, targeted handout from reception, FHT website, word of mouth.</td>
</tr>
<tr>
<td></td>
<td>Alternative formats</td>
<td>Any references to delivering PTT in any mode different from a mode other than a fully in-person, group intervention. Individual codes for: reduced number of sessions, condensed formats, online formats (primary or adjunct), use of materials in individual appointments, drop-in sessions.</td>
</tr>
<tr>
<td></td>
<td>Enhancements</td>
<td>Various enhancements/additions to PTT that parents suggested. Includes individual codes for additional topics, communication back to clinicians, additional resources desired (adjunct materials).</td>
</tr>
<tr>
<td></td>
<td>Timing for the Program</td>
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</tr>
</tbody>
</table>