Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework

A Thesis Presented to the

School of Kinesiology

Lakehead University

Supervisor: Dr. Erin Pearson

Committee Members: Dr. Taryn Klarner and Dr. Heather Boynton

In Partial Fulfillment of the Requirements

For the Degree of Master of Science Kinesiology

2026

Acknowledgements

I would like to recognize the collaboration and dedication of all members associated with the Healthy Kids Family Program and beyond. I am incredibly grateful to have been a part of a program that prioritized social connection, play, safety, and community wellness, and I met many people who inspired me throughout this journey. I would like to thank Joanna Carastathis, Rachel Bayes, and Jackie Knough for their insight, compassion, and leadership throughout my graduate school journey.

I would also like to thank my supervisor, Dr. Erin Pearson, for her unwavering support, understanding, reassurance, and respect. This project was incredibly important, not just for me as a student, but for a greater community in our city, and her trust in me helped me to be successful professionally but also personally. Thank you for your belief in me and for letting me be a part of this meaningful, truly important work.

I am very grateful for my committee members, Dr. Taryn Klarner and Dr. Heather Boynton, both of whom excel in their respective fields and shared integral feedback with me that helped to deepen my learnings throughout this study. Your insight and guidance strengthened my understanding of my data, and this would not have been possible without both of you. Thank you so much! I would also like to thank Dr. Alison Thompson, external examiner, for her thoughtful review of this work.

Finally, the time, insight, and experiences shared with me from participants was the most joyous part of this study. It meant so much to connect with and listen to what is fundamental in servicing communities, and the trust placed in me was not taken for granted. I thank you so much for participating and sharing your experiences with me. This is truly for you.

Abstract

Background: Families living in equity-deserving communities experience disproportionate barriers to engaging in health-promoting behaviours such as healthy eating and physical activity due to intersecting social determinants of health. Community-based health promotion programs are well positioned to address these inequities; however, there remains a need for comprehensive, real-world evaluations. The RE-AIM Framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance), is a robust tool for evaluating community-based initiatives, yet its application within family-focused, equity-oriented interventions remains under-represented.

Purpose: The purpose of this study was to conduct a summative evaluation of the Healthy Kids Family Program (HKFP), a four-week, community-based health promotion program delivered in equity-deserving neighbourhoods in Thunder Bay, Ontario. Guided by the RE-AIM Framework, this study aimed to assess the utility, impact, and sustainability of the HKFP as a model for fostering health behaviours in families and children.

Method: A pragmatic mixed methods case study design was employed, using a combination of quantitative and qualitative data collected from 2021 – 2025. Involving a priori and new data and in-line with the RE-AIM Framework, this entailed an assessment of the: (1) Reach associated with the target population; (2) Effectiveness of the program; (3) Adoption by program providers and resident participants; (4) Implementation fidelity with respect to anticipated versus actual program delivery; and (5) Maintenance of program-related outcomes among recipients over time. Quantitative data were obtained from validated health measurement tools assessing health behaviours, self-efficacy for nutrition, and quality of life via two summary scores involving Physical and Mental health. These surveys were administered at baseline, immediately post-

intervention, and 6-weeks post-intervention across 11 iterations of the HKFP. Analysis of Variance (ANOVA) testing, dependent t-testing, and descriptive statistics were employed to analyze quantitative data to examine changes over time. Qualitative data were derived from multiple sources including semi-structured interviews with program participants and staff, as well as program documentation including program fidelity notes, and were analyzed using reflexive thematic analysis. Data sources were triangulated and organized deductively via RE-AIM dimensions to provide a comprehensive evaluation of the program and its impact.

Results: Data from 60 participants were obtained from HKFP assessments. Participant demographics revealed that the majority who participated were female (n = 52), aged 22-48 years (M = 35.52), with a mean monthly income of $3,396. Results for Reach showed that the HKFP engaged primarily female individuals across diverse areas of Thunder Bay, though participation was influenced by structural barriers including childcare and scheduling conflicts. Significant improvements were noted in Effectiveness. Quantitative results indicated a significant increase in Self-Efficacy for Nutrition scores between baseline (M = 3.43, SD = 0.89) and follow-up (M = 3.93, SD = 0.72), $p < 0.001$, $\eta^2 = .11$. No significant improvements in health behaviours or quality of life took place. Assessment of Adoption revealed that the HKFP was supported through strong community partnerships and collaboration. Implementation revealed that program delivery was shaped and adapted by both facilitators to engagement (i.e., supportive environments and resource access) and barriers to engagement (i.e., duration of program session, pandemic-related restrictions). Regarding Maintenance, participants shared that they applied knowledge learned through program delivery into their daily lives; however, longer-term sustainability was influenced by ongoing structural challenges. Qualitatively, participation in the HKFP was described by participants as influenced by contextual barriers including conflicting

schedules, transportation, and childcare. Qualitative findings obtained from HKFP participant interviews (n = 7) highlighted themes related to structural barriers (i.e., childcare, financial constraints), social support and community (i.e., peer connection, sense of belonging), as well as empowerment and increased confidence in health behaviours (i.e., self-efficacy and feeling capable of making change). Other qualitative findings obtained from the administrative team of the HKFP (n = 3) contextualized the realities of program offerings and described the importance of collaboration between organizations offering health promotional programming.

Conclusion: This study demonstrated the importance of employing a robust, well-rounded framework when considering study design, specifically when working with equity-deserving communities. For example, statistically significant gains were made in self-efficacy related to nutrition, which may be attributed to the program's emphasis on skill-building, resource access, and supportive learning environments. Qualitative findings suggest that a meaningful shift in perception surrounding healthy eating took place. They also highlight the importance of contextualized measures of success that extend beyond traditional behavioural outcomes to include empowerment, feasibility, and sustainability. The HKFP represents a promising model for community-based health promotion in equity-deserving communities, because the program offerings provided an opportunity for participants to learn information and make informed decisions surrounding their health. Future research should prioritize strategies to enhance long-term maintenance, including longer or tapered intervention sessions over time, address structural participation barriers including transportation, childcare, and conflicting schedules. This study demonstrated that short-term, community-based health promotion programs can produce meaningful impact for an equity-deserving community through gains in self-efficacy and health behaviour framing, even in the absence of immediate, measurable behaviour change.

Table of Contents

List of Appendices

List of Tables and Figures

Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework

Introduction

Engagement in behaviours such as physical activity, eating nutritious foods, and maintaining mental well-being is widely recognized as conducive to leading a healthy life (World Health Organization [WHO], 2024). However, recent reports have highlighted a concerning national decline in these health indicators, especially among children (Government of Canada, 2024). This demographic is particularly important to consider, as behaviours learned during early development often shape long-term health outcomes and habits in adulthood (Wray et al., 2020). Compounding this issue are systemic barriers to accessing health-promoting programs and services, such as socioeconomic status within populations, which are factors that are often beyond an individual's control (Government of Canada, 2024). A closer examination of health determinants prevalent in equity-deserving neighbourhoods further revealed a critical gap in services and resources, thereby underscoring the need for targeted interventions (Government of Canada, 2024; Minority Rights Group, 2020).

This thesis explores the utility of a community-based health promotion research project, the Healthy Kids Family Program (HKFP), as it relates to delivery, engagement, and outcomes experienced among the parents and caregivers (herein referred to as caregivers) who participated (Pearson, 2021). This evaluation is guided by the RE-AIM Framework, a robust tool for assessing real-life, community-based health programs across five dimensions: Reach, Effectiveness, Adoption, Implementation, and Maintenance (Glasgow et al., 1999). The culmination of this study is a summative evaluation of HKFP to determine its strengths and weaknesses, contributions to the population of interest, and potential as a health promotion

program model for families living in equity-deserving neighbourhoods. This is achieved through analysis of both qualitative and quantitative data.

The Health of Canadians: A Snapshot

According to the WHO (2024), health is not only the absence of illness, but the fulfillment of and contentment toward an individual's mental, physical, and social well-being. Key health behaviours that support this fulfillment include regular physical activity, consuming a healthy and balanced diet, and getting enough sleep (Alvarez et al., 2019). Lack of engagement in such healthy behaviours can expose individuals to long-term illnesses or chronic diseases (Government of Canada, 2023). In fact, Statistics Canada (2023) reported that 45% of all Canadians live with at least one significant chronic condition, highlighting the importance of addressing this issue. Since the onset of the COVID-19 pandemic, the health of Canadians has become increasingly compromised by intersecting barriers that disproportionally affect specific populations (Anderson et al., 2023; Government of Canada, 2024; Statistics Canada, 2024).

Equity-Deserving Populations

Equity-deserving populations are characterized by their lack of access to resources when compared to other groups of society, often due to systemic discrimination (Government of Canada, 2022; 2024). These groups include minority populations, characterized by inequal treatment regarding social status, among other SDH, which comprised 22.3% of Canadians in 2016 (Minority Rights Group, 2020). Those facing food, housing, and job instability are also considered equity-deserving (Minority Rights Group, 2020). Persistent systemic inequities contribute to higher rates of discrimination and poverty within these communities, reinforcing cyclical disadvantage (Lacey et al., 2021). Furthermore, rising costs of healthy living essentials such as nutritious food and healthcare have resulted in 45% of equity-deserving populations

reporting financial strain and a less hopeful outlook on life (Statistics Canada, 2024). Without equitable access to resources and services that support healthy living, these communities are exposed to compounded risk factors that undermine long-term health outcomes in both physical and mental health.

Underserved populations experience constraints on their ability to engage in health behaviours, many of which are outside of their control (Government of Canada, 2024). These barriers include, but are not limited to, socioeconomic status, physical and social environments, access to health services, inequities in healthy child development, as well as non-modifiable factors like genetics (Anderson et al., 2023). Such disparities are shaped by the social determinants of health (SDH): interconnected social, economic, environmental, and personal factors that shape health trajectories (Government of Canada, 2024; Marmot & Wilkinson, 2006). For example, a systematic review vetted by multiple researchers to ensure robustness revealed strong associations between chronic health conditions and adverse SDH such as poverty, housing instability, and food insecurity among families (Davey et al., 2020). The study concluded that SDH directly contributed to higher incidence rates of chronic illness, limited access to health services, and a decrease in family quality of life (Davey et al., 2020). Basic living needs, including secure shelter, nutritious food, stable social and industrial environments, and equitable access to resources, form the foundation for healthy living (Government of Canada, 2017). It is difficult to achieve and maintain a healthy lifestyle when these basic needs are unmet and compounded further by persistent barriers shaped by intersecting life circumstances.

Risk factors, defined as habits or facets of one's life that promote adverse health outcomes, are broadly categorized into three domains: factors that cannot be changed (e.g.,

genetic disposition); behavioural factors (e.g., personal attitudes and beliefs); and environmental influences (e.g., outside sources such as community infrastructure and resources) (Government of Canada, 2023). When combined, these factors can exacerbate susceptibility to illness, especially in marginalized populations (Government of Canada, 2024). For instance, in 2022, 18.7% of Ontarians reported food insecurity at a moderate or severe level (Statistics Canada, 2024), a crisis compounded by inflation and rising costs of living, disproportionately burdening homes with children (Choi & Ramaj, 2024). While socioeconomic status does not exclusively dictate health outcomes, caregivers living in equity-deserving communities must navigate dual responsibilities: safeguarding their own health while ensuring the well-being of dependent children (Wray et al., 2020). Inequities surrounding food accessibility, safe housing, and recreational activities promoting physical activity, creativity, and education can jeopardize a child's long-term health trajectory, perpetuating intergenerational cycles of disadvantage (Wray et al., 2020).

Health, Children, and Families in Equity-Deserving Communities

Canada is currently facing a crisis regarding children's health (Government of Canada, 2023). Families and their health are negatively impacted when access to resources is limited (Government of Canada, 2024). A study focused on socioeconomic status and the health of kindergarten-aged children (5-7 years) reported that children living in equity-deserving communities were more likely to have developed adverse health conditions, pre-diagnosed or other that would interfere with the child's ability to succeed, by the time they start school when compared to their counterparts living in higher-income neighbourhoods (Janus et al., 2024). Indeed, another study conducted in Ontario recognized that living in equity-deserving communities deprived of health resource access was associated with an increase in congenital

heart disease at birth (Miao et al., 2023). As of 2021, 1.4 million children in Canada were reported as food insecure; a critical determinant of physical and cognitive development and a catalyst for developing chronic conditions such as obesity (Janus et al., 2024; Tarasuk et al., 2023). Furthermore, a study by Anderson et al. (2023) suggested that children living with food insecurity were at greater risk for developing mental health disorders, thereby emphasizing the need for intervention strategies targeted at reducing food insecurity and optimizing health outcomes in this population. According to Public Health Ontario (2024), key risk indicators for children aged one to four include parental mental health struggles, stress of the caregiver, and experiences of death and/or separation of a caregiver or sibling, all more prevalent in underserved communities.

Families living in equity-deserving neighbourhoods have reported increased rates of physical and gang violence, and a lack of safe spaces for children and families to enjoy recreational activities (Farias et al., 2024). Adverse experiences such as violence and the death of a loved one have a range of negative effects on a child's development and coupled with a lack of safe spaces, result in lower rates of physical activity in this demographic (Farias et al., 2024). Compounding these issues, after-school programs, critical for fostering social and physical engagement, are often not readily available to families and children living in equity-deserving communities (Farias et al., 2024), leaving basic needs such as shelter, safety, and nutrition chronically unmet (Raine et al., 2013).

Adverse SDH profoundly disrupt behavioural development in children, limiting their agency to make healthful decisions (Rhodes et al., 2020). The adverse determinants similarly experienced by caregivers also influence children's health directly and indirectly (Raphael, 2010). For example, the impacts of social determinants that adults in equity-deserving

communities face include a lack of education and employment, social support, and healthy working conditions, which are considered indirect influences for children (Raphael, 2010). Direct influences on children can include responses to stressors and the caregiver's emotional involvement in the child's life (Raphael, 2010). Coupled with the child's social and physical environments, these determinants can make healthy development challenging and may solidify behaviours not conducive to a healthful lifestyle in adulthood (WHO, 2024). Access to healthy eating, physical activity, and mental health resources in communities with scarce resources are necessary to produce just and equitable health outcomes (Government of Canada, 2023).

Children, Family Dynamics, and Health Behaviours

As children grow, interactions with their environments build the foundation for engagement with and perceptions of health behaviours spanning nutrition, physical activity, and mental well-being (Public Health Ontario, 2024). Behavioural development, including emotional regulation, problem-solving, and relationship building (Ogundele, 2018), is heavily influenced by familial settings where caregivers act as primary decision-makers and role models in the household. For instance, according to a scoping review conducted by Rhodes et al. (2020), that focused on various health reports to understand Canadian children and the role that family plays in their development, revealed that children frequently internalize responses to stress, structure or lack thereof in the form of regular, daily routines, and modeled behaviours witnessed in their home setting. Other concepts related to decision-making, such as self-efficacy, relate to an individual's perceived capability in achieving goals, typically regarding physical activity and healthy eating (Godrich et al., 2019). Self-efficacy in the individual is imperative for beginning to engage in or modify health behaviours (Godrich et al., 2019). Someone with high self-efficacy may feel more prepared to turn intentions into actions and attain specific health goals; self-

efficacy in children can be positively impacted when seen in a caregiver (Godrich et al., 2019). Conversely, low self-efficacy has been tied to vulnerability to poor mental health and is negatively impacted by SDH such as food insecurity (Godrich et al., 2019). These findings were gleaned from survey responses of 5281 fifth-grade students (10 and 11 years of age) participating in the Canadian Children's Lifestyle and School Performance Study (Godrich et al., 2019).

Social networks, or how well-connected one is to the people and opportunities around them, can positively impact the development and maintenance of a child's health (Nevard et al., 2021). When children establish supportive relationships and gain access to health-encouraging activities such as sport and healthy eating programs, they are more likely to continue those behaviours into adulthood (Wray et al., 2020). However, systemic inequities often restrict such opportunities, forcing caregivers into pragmatic but suboptimal choices, such as relying on less nutritious yet affordable foods at mealtimes which can negatively influence the child's perception of healthy eating. Nutrition in childhood is essential; an energy-rich diet contributes to the development of cognitive capabilities, such as moral reasoning, and proper bone and muscle growth (Saavedra & Prentice, 2023). Challenges in securing food often stem from regional food scarcity, an inability to afford healthful foods, or a lack of knowledge of nutrition (Rhodes et al., 2020) and can inhibit a child's ability to focus and participate in normal activities such as school and recreational activity (Saavedra & Prentice, 2023). Low nutrition literacy - the ability to understand and make appropriate decisions on what to consume for one's health (WHO, 2024) – further exacerbates these disparities. Critical to addressing this gap is educating families on accessing, preparing, and selecting healthful foods, while acknowledging systemic barriers that hinder equitable outcomes (Nutrition and Food Literacy Canada, 2023).

In addition, physical activity has been identified as a cornerstone of healthy living; however, it is insufficiently prioritized among children. Despite its recognized importance, a 2016 global study revealed that 81% of children from 146 countries did not meet recommended physical activity levels (Guthold et al., 2020). In response to demands of the WHO (2024), governments have been encouraged to implement dual strategies incorporating policy-level changes as well as individual-based approaches to improve rates of engagement in physical activity (Vanderloo et al., 2025). In Canada, ParticipACTION, a non-profit organization dedicated to providing health education and promoting physical activity, tracks national progress (Vanderloo et al., 2025). Recent reports revealed that only 39% of Canadian children are meeting physical activity guidelines: this includes moderate-vigorous levels of physical activity such as organized sport and active transportation whereby modes of travel do not rely on a vehicle (PartcipACTION, 2024). Due to sedentary behaviour, over half of Canadian children are at an increased risk of negative physical and mental health implications, including chronic diseases such as obesity and mood disorders (Hinkley et al., 2014). Lack of healthy behaviour establishment in childhood will inform an unhealthy future trajectory; as such, it is important that families are aware of the risks that physical inactivity can impose (Wray et al., 2020). Considering the proportion of Canadian children who are not meeting recommended metrics for healthy development, these findings underscore the need for health-promoting services to support families in equity-deserving communities.

Health Promotion

At its core, health promotion is rooted in the principle that all people and communities should have the agency and resources to improve their well-being (Public Health Ontario, 2019). Since its inception in 1986, the Ottawa Charter for Health Promotion has served as a

foundational framework, advocating for equitable healthcare access for all (Government of Canada, 2017). The Charter outlines five key action areas: 1) building healthy public policy; 2) creating supportive environments; 3) strengthening community actions; 4) developing personal skills; and 5) reorienting health services (Government of Canada, 2017; WHO, 2025). These actions aim to help individuals increase control over and improve their health while endeavouring to minimize known disparities in accessibility (Government of Canada, 2017; WHO, 2025). By prioritizing education and policy, the Charter established a blueprint for advancing equity in marginalized communities, including children and families (Government of Canada, 2017).

Effective health promotion can incorporate multiple dimensions of wellness, including physical, emotional, spiritual, and environmental factors (Stoewen, 2017). Focusing on health promotion through empowerment and developing healthy habits such as maintaining a nutritious diet and exercising are encouraged for all populations. However, a known challenge for equity-deserving populations in accessing health programming is the disparity in resources available; employment-tied healthcare plans, urban/rural divides, the built environment, and transportation gaps are a few of the barriers faced (Caron et al., 2024). To disperse resources more equitably, targeted initiatives have emerged to address inequities in equity-deserving communities, especially for children who may not have access to physical activity opportunities, healthy food options, and/or social connectedness (Government of Canada, 2023).

Health Promotion Programming

Health promotion initiatives aim to amplify health autonomy by bridging resource gaps and decreasing disparities in health opportunities and education (Caron et al., 2024). Equitable access to these services in underserved communities can directly improve health outcomes for

families while mitigating risk for chronic illness (Caron et al., 2023). Rhodes et al. (2020) acknowledged the importance of the family setting in shaping healthy habits for individuals. Yet, further consideration of social and environmental factors, such as SDH, is necessary to provide a comprehensive understanding of family impact on the development of healthy habits, including physical activity and sleeping (Rhodes et al., 2020). Health promotion programs can incorporate dimensions of educational, recreational, environmental, and economic structures to support children and families living in equity-deserving communities (Green et al., 2004).

In Canada, programs are offered at the national, provincial, and municipal levels (Government of Canada, 2024). For example, Ontario's EarlyON centres provide safe, inclusive spaces for children and families to engage in play and physical activity, while promoting community connectedness and health knowledge (Government of Canada, 2024). Centres are staffed by child development professionals, and offer flexible hours on weekdays, evenings, and weekends to accommodate families with diverse needs (Ontario, 2024). Virtual programming is also available for those facing transportation barriers who desire to connect with the program from home, a reality those in equity-deserving communities often face (Ontario, 2024). This community-based approach, which tailors services to local needs, has demonstrated success in reducing inequities such as lack of access to transportation and/or childcare (Raine et al., 2013). An Alberta-based study, for instance, found that residents who received health programming in their community over the span of three years reported a heightened sense of social belonging to the community as well as a self-reported increase in fruit and vegetable consumption compared to a control group (Raine et al., 2013).

In community-based programming, one primary goal is to provide resources that enable individuals and groups to become more autonomous in their health decisions. Considering the

rise in cost of living, particularly for families, and the reported increase in the need for food services, identifying context-specific needs within a community is essential to ensure programs effectively address gaps and promote healthy living (Statistics Canada, 2024). When planning community-based programs, the sociocultural factors of the community are typically identified and addressed through tailored program offerings. Incorporating valuable input from community residents can strengthen the intended impact of a program as expertise in what is needed for a community can only come from the lived experiences of its residents (Bader et al., 2023; Public Health Ontario, 2024). A dual approach, or reviewing evidence-based practices in similar scopes and incorporating frameworks developed to plan and evaluate program success, is vital and imperative to ensure program success (Public Health Ontario, 2024). Research underscores this principle: a study of Canadian and American health promotion programming showed positive impacts on health outcomes, particularly when initiatives emphasized safer communities (Williams-Roberts et al., 2015). Similarly, a study in England targeting underserved populations through community-based health services lowered emergency calls and hospital admissions, yielding an estimated savings of $533,000 per year (Downing et al., 2020). Additional evidence highlights the efficacy of physical activity programming when offered in safe, accessible community spaces with a focus on inter-generational participation (Schroeder et al., 2017).

Health Programming for Families

Health promotion programs encompass various parameters, including specific topics or a thematic intervention focus, target population or priority demographics, and evaluative tools to assess success of programming (Kowalski et al., 2018). For families in Canada who need equitable health interventions, common topics of program offerings encompass foci such as obesity prevention/treatment, healthy eating, support for cognitive or physical disabilities, and

health literacy (Government of Canada, 2023). Interventions targeting gaps, such as providing programs traditionally inaccessible to marginalized populations, advance equitable access to health initiatives (Holtrop et al., 2019). For example, a pre-test, post-test study in Australia assessing the utility of the *Healthy Mothers Healthy Families Program*, a one-day workshop for mothers of children with a disability (n = 71), revealed significant improvements in mental health symptomatology, wellbeing, and lifestyle goals for participants. Mothers also reported increased quality of life for their child with a disability (Bourke-Taylor et al., 2022). However, loss to follow-up was identified as a limitation for reasons such as lacking resources to register and attending a workshop that requires childcare. Online delivery was recommended as a potential avenue to attenuate this barrier (Bourke-Taylor et al., 2022). Similarly, the *Healthy Dads Healthy Kids Program* was a 9-week nonrandomized prospective trial also in Australia, focused on supporting fathers with overweight/obesity (n = 189) to improve their own and their children's physical activity and dietary habits. The intervention was delivered in low to middle socioeconomic areas. Weekly sessions focused on various health topics with discussions involving weight management, healthy eating, strategies to enhance family life, and the influence of fathers and healthy fathering (Australian Government, 2025). Overall, a significant reduction in fathers' weight was observed at post-intervention which was maintained at the one-year follow-up. Improvements to children's (n = 306) z-BMI scores and various lifestyle behaviours for the duos were also highlighted such as increased participation in physical activity, and improved relationships with nutrition, including consumption of more whole foods and understanding the implications of over consumption on weight management (Morgan et al., 2019). The authors noted the high adherence rate of participants and recommended that future

studies identify systems and factors required to sustainably deliver the program in underserviced communities (Morgan et al., 2019).

To understand family and contextual issues for those experiencing childhood obesity and improve programming, Lappan et al. (2020) conducted interviews with 16 low-income, single, female parents who had at least one child with overweight or obesity. These conditions are often associated with lower socioeconomic status and experienced in equity-deserving populations (Government of Canada, 2024). Thematic analysis revealed that parental desire to address health-related concerns for their children was strong, while opportunity was limited. Their study highlighted the importance of the advocacy-centred approach, wherein equity-deserving individuals are engaged as stakeholders in program planning and implementation with respect to their communities (Lappan et al., 2020). These findings reinforced the importance of understanding the unique needs of a community while ensuring cultural relevance to provide equitable services appropriately (Lappan et al., 2020).

Strengthening autonomy and health literacy through targeted workshops and activities structured to nurture and enhance life skills in healthy eating, physical activity, and mental health has also been recommended (Government of Canada, 2023). For example, this framework is applied by the *Community Action Program for Children*, which supports children and their families through community kitchens, outreach and home visits, and drop-in groups for children (Government of Canada, 2023). Notably, both the mother- and father-focused studies suggest that attrition rates may rise due to insufficient post-program support and follow-up (Bourke-Taylor et al., 2022; Morgan et al., 2019). Further complicating engagement, a study involving a 4-week lifestyle intervention for children with obesity and their parents revealed that while parents were cognizant of and prioritized their child's health needs, their own participation in the

program lagged that of their child, illustrating a discrepancy between intention and action (Burke et al., 2015). Another important optic that can impact access is the consideration of the individual or family's geographical location.

With the understanding that health behaviours such as diet and physical activity shape wellbeing, it is also understood that pressures beyond an individual's control can impact the ability to participate in healthy behaviours. Notable gaps in health services for equity-deserving communities have included the non-existence of programming in underserved neighbourhoods, as well as childcare and transportation issues, especially considering geographical location, that impact participation rates (Lappan et al., 2020). Furthermore, engagement in health behaviours from an early age is understood to be conducive to maintaining life-long health habits (Public Health Ontario, 2024). When assessing the health of Canadian children, there is an evident disparity in health indices, and, as mentioned by Bourke-Taylor et al. (2022), development in children is typically shaped by their caregivers, making it imperative that the whole family is a part of the process. As seen in the study conducted by Burke et al. (2015), many parents understood the need for the intervention for their child but perhaps did not fully realize their role in it. By identifying gaps in services and recognizing the need for health-promoting services in equity-deserving communities, it is evident that programs supporting physical activity, nutrition, and mental health are not only desired, but necessary (Government of Canada, 2023). Another important element that can impact access to services is geographical location. Living in more rural and remote communities introduces intersectional challenges tied to resource distribution and service availability that must be considered when designing and implementing health promotion interventions focused on equity-deserving populations (Morgan et al., 2019).

Health Programming in Thunder Bay

Thunder Bay is an isolated Northwestern Ontario city with a population of 123,258 residents and is 2550 square kilometres in size (Government of Canada, 2025; Statistics Canada, 2021). Currently, the Thunder Bay District Health Unit (TBDHU) services upwards of 146,000 people, spanning 235,531 square kilometres (TBDHU, 2025). A recent report from TBDHU (2025) that examined household income in contrast to the cost of rent and healthy food in the district revealed that an average household of four relying on Ontario Works receives a monthly income of about $3000 and has monthly rental payments approximating $1900, which do not include hydro, heat, water, transportation, childcare, insurance, and other expenses associated with living well. The average monthly cost of food for this household structure is $1227.85; 41% of the monthly income (TBDHU, 2025). With rental and food costs alone, this family structure would already be facing a deficit of $100 a month. The report also indicated a disproportionate increase in severe food insecurity, from 4.8% to 7.4% between 2022 and 2024 (TBDHU, 2025). This financial strain is also compounded by geographic constraints: unlike Southern Ontario, where densely populated areas facilitate access to neighboring services via transit systems, Thunder Bay's remoteness renders resource-sharing impractical (Ontario HIV Epidemiology and Surveillance Initiative [OHESI], 2021). The district's expansive square-kilometer service area creates substantial travel barriers for residents, highlighting a stark contrast to the interconnected infrastructure of regions like the Greater Toronto Area (TBDHU, 2024; OHESI, 2021). These conditions underscore the unique operational challenges faced by Thunder Bay and its surrounding communities and need for innovative health promoting approaches. The Thunder Bay region has reported higher rates of chronic disease when compared to other provincial and national averages. For example, Thunder Bay has experienced obesity rates of up to 38.3%,

which is 13% higher than provincial average, and mood disorder rates of 11.6%, while national averages report 8.8% (Statistics Canada, 2019). Evidence suggests that health programming in equity-deserving communities is positively impacted when approaches are based in empowerment and ensuring participant's voices are heard while shaping health services in their communities (Prince et al., 2012).

The Healthy Kids Family Program

In response to an identified need for health promotion-based programming in equity deserving neighbourhoods within Thunder Bay (Pearson et al., 2017), the Healthy Kids Family Program (HKFP) was developed by a collaborative of community partners focused on children's health. Grounded in a Socio-Ecological Model (Bronfenbrenner, 1977; Kilanowski, 2017) and utilizing an Asset-Based Community Development (ABCD) approach (Kretzman & McKnight, 1996), the purpose of the HKFP was to: 1) provide caregivers of children aged 12 and under in equity deserving neighbourhoods with health-related knowledge and skills; and 2) enhance parental self-efficacy to access neighbourhood services for themselves and their children (Pearson, 2021). To achieve these objectives, a four-week education-based program was offered on 11 occasions within purposefully selected equity-deserving communities between 2021 (Pearson 2021) and 2025. The repeated format was intentional to allow new neighbourhood residents to register while providing more time for those interested to consider enrolling.

Each HKFP iteration of the program involved a 90-minute session delivered weekly to caregivers in person or virtually by a content expert employed at the TBDHU and/or organizations in the Thunder Bay Community. Modality was dictated largely by pandemic-related restrictions; however, uptake trends and staffing capacity also determined delivery format over time (Pearson, 2021). Content associated with the four sessions focused on key program

pillars including mental health/parenting, nutrition, physical activity, and smoking prevention/cessation. Topics specific to each pillar were mainly pre-determined and based on previous lifestyle focused studies conducted with equity-deserving populations (Morgan et al., 2019; Mikkelsen et al., 2016; Lawlor et al., 2020). Time was also allotted within each session to allow participants to ask questions specific to their needs and situations. Sessions followed a standardized structure that included: a 15-minute topic introduction, two 30-minute subtopic discussions, and a brief brain/body movement break to allow participants to stretch their legs and reduce information fatigue (Pearson et al., 2021). A detailed breakdown of session parameters is as follows.

Mental Health. For the session involving mental health, topic experts predominantly employed at TBDHU led discussions on topics surrounding parental and childhood mental health, childhood development, and parenting using information from the "Triple P Positive Parenting Program" (TBDHU, 2026), which was developed by Matthew Sanders (2023). For example, behavioural and coping skills, information from the Circle of Security program (Cooper et al., 2009), as well as personal barriers and readiness to change were explored. Participants discussed specific online resources available through the TBDHU and in the community, including how to navigate the website. Contact information for further supports was also shared.

Nutrition. Participants worked with a dietitian from the TBDHU, who provided didactic information on the benefits of healthy eating, such as an introduction to Canada's Food Guide (Government of Canada, 2025) alongside tips and tricks related to childhood diets. Concepts such as eating healthy on a budget (e.g., couponing), purposeful shopping, and options for substituting more nutrient-dense foods into families' regular diets were discussed. Conversations

about picky eaters, how to introduce new foods to children, and the feeding roles and responsibilities of caregivers and children at mealtimes were held often. Prior to this session, participants received a meal kit which was provided in person or dropped off on their doorstep by a HKFP staff member if the session was delivered online. For in person sessions, participants utilized a commercial kitchen, located at the site of programming. Through guided instruction, participants then worked with the dietician to create a meal for their family using the ingredients provided. During this process, the dietitian provided factual knowledge on the ingredients and steps associated with the cooking process while allowing time for discussion. Participants were encouraged to ask questions specific to their context or environment so that tailored adaptations could be made to the process as needed. Involving their children and other family members and sharing their own stories and tips were also promoted during this interactive demonstration.

Physical Activity. A physical activity expert from the TBDHU shared information about movement specific to children and families with a focus on Canadian recommendations. In line with Canada's 24-hour movement guidelines (Canadian Society for Exercise Physiology, 2025), sedentariness and screen time behaviours were also discussed given their propensity to lead to adverse health effects. In addition to providing evidence-based information, the expert led participant discussions on movement opportunities available in the city. Common barriers to being active as shared by participants were dissected by the group and collaborative brainstorming was encouraged to mitigate or remove the challenges presented (e.g., equipment availability, cost, inclusivity). Meeting people where they are, having "fun," and the notion that physical activity can look different to everyone were stressed. Thinking about physical activity as more than structured exercise – such as walking, playing with kids, and activities of daily living – was also emphasized.

Smoking Cessation. Experts from the TBDHU provided education surrounding commercial tobacco and vaping. General information was relayed such as percentages and demographics of smokers in Canada, health risks, and cigarette/vape ingredients. Common reasons for smoking and addiction (i.e., nicotine) were also discussed. An overview of the types of smoking devices, various nicotine products (e.g., pouches), how to recognize signs of smoking in youth, and laws related to vaping (e.g., fines associated with supplying to someone under 19; fines vaping on school property) were shared. To enhance interactivity, participants were presented with several cessation options and discussed strategies in relation to quitting barriers (e.g., daily routines/habits, friend groups, locations) and personal circumstances.

Evaluation of the HKFP

Evaluation of such programs is essential for understanding impact and outcomes and for securing subsequent funding for long term sustainability of the program. To determine the utility of the HKFP for promoting healthy living and engagement in neighbourhood programming, a series of validated measures were distributed at baseline (pre-program) and immediately following the 4-week intervention (post-program). Variables assessed included demographics, lifestyle behaviours, self-efficacy for behaviour change, physical/food literacy, and quality of life. Open-ended survey questions were also integrated to assess goals, program learnings, and intention to use neighbourhood services. Individuals who participated in the HKFP were also invited to complete the measures 6-weeks post-intervention to assess persistence of change (see quantitative procedures section for more details). Consistent with previous studies targeting health promoting behaviours in equity-deserving populations (Giles et al., 2014; Resnicow et al., 2000), to encourage participation and recognize the time and contributions provided by

participants, incentives in the form of grocery store gift cards were provided for each of the four sessions attended, and for participating in the six-week follow-up assessment.

To determine the degree to which community-based health promotion programs such as HKFP are effective at eliciting real-world impact, it is important to apply a comprehensive evaluation tool. The RE-AIM Framework, developed by Russell E. Glasgow and colleagues (Glasgow et al., 1999), provides a structured approach to evaluating health promotion programs by integrating five dimensions: Reach, Effectiveness, Adoption, Implementation, and Maintenance. This framework addresses gaps in traditional public health evaluations, such as lack of transferability of outcomes in a practical setting, by emphasizing applicability and generalizability in a real-life setting, ensuring interventions are both impactful and sustainable (Glasgow et al., 1999; Holtrop et al., 2021).

The RE-AIM Framework

Since its inception, the RE-AIM Framework has evolved to prioritize flexibility, recognizing that equal weighting across dimensions is unnecessary and that it functions best as a guiding tool alongside other evaluation measures (Glasgow et al., 2019). Additionally, the use of qualitative and quantitative methods within an evaluation can help strengthen the conclusions drawn in relation to the framework and data collected (Glasgow et al., 2019). For example, Burke et al. (2015) demonstrated RE-AIM's utility in evaluating a community-based summer camp for children with obesity, where qualitative data revealed participant empowerment despite modest quantitative outcomes. Specific details pertaining to each dimension in relation to how they fit within community-based programming are detailed below.

Reach

Reach is described as individual-level participation and can be evaluated through attendance records and demographic data to determine the degree to which programs engage their target population (Glasgow et al., 1999). When considering the recipients of public health interventions, understanding the characteristics of the participants is vital for ensuring that programming reaches those who need it. Because purely quantitative metrics (e.g., attendance records) may overlook contextual barriers such as transportation access, childcare needs, or safety concerns, a combination of quantitative and qualitative data can be used to confirm representativeness and capture perspectives of multiple key informants (Holtrop et al., 2021, 2018). For example, interviews conducted for a pilot study in Thunder Bay found that threats of violence and drug use in underserved neighbourhoods directly impacted resident's ability to prioritize health programming (Pearson & Pearson, 2024). Threats to safety and security make it difficult to realize other needs associated with healthy living and, therefore, may not be a priority for residents (Lawlor et al., 2020). When program providers overlook the disadvantages faced within these communities, alongside lifestyle influences that hinder engagement, poor attendance is often misinterpreted as indifference to health behaviour change – which may not be the case (Lawlor et al., 2020). Qualitative methods, such as interviews with community stakeholders, are essential to contextualize these challenges and avoid misrepresenting low attendance as disengagement (Holtrop et al., 2021).

Reach is an important point of evaluation for stakeholders and partnering agencies; for many, attendance and clear results of change among participants is what informs these programs and proves their utility in the community (Glasgow et al., 2019). Although, qualitative methods have been considered less robust and trustworthy on their own, and stakeholders often desire

quantitative measurements to have concrete, numbered results (Glasgow et al., 2019), research using the RE-AIM Framework advocates for both types of evaluation to answer the why's and how's of participant engagement (Glasgow et al., 2019).

Effectiveness

Effectiveness is the second dimension Glasgow et al. (1999) labelled as well-researched in the scope of public health program evaluation. This facet focuses on the extent to which health interventions achieve desired outcomes, including biological metrics (e.g., disease risk reduction) and behavioural outcomes (e.g., improved quality of life; Glasgow et al., 1999). Studies evaluating Effectiveness have shown that results were greater (e.g., improved adherence) when the intervention was customized to meet the individual needs of each participant, depending on ability (De Mej et al., 2010). For example, having physical supports and equipment in place so that individuals of varying walking abilities can partake in an organized event such as sports or games (De Mej et al., 2010).

While quantitative outcomes such as disease risk factors dominate this dimension, qualitative data – such as post-program surveys for participants, employees, and stakeholders – provide critical insights into participant satisfaction, attitudes, and unanticipated benefits (Glasgow et al., 1999; Yang et al., 2022). Post-program interviews with participants and other informants are contextual pieces of data that illuminate what was actually gleaned from the intervention (Glasgow et al., 2019). Moreover, qualitative methods that capture participants' lived experiences can yield useful insights into program impact. For instance, a health initiative enabling five individuals to autonomously access healthcare, despite financial constraints, demonstrates how empowerment and improved access, though small in scale, can hold greater significance than quantitative metrics alone (Kenney et al., 2023).

Adoption

Adoption assesses the degree to which communities, health departments, and individuals incorporate a program in professional practice and/or personal life (Glasgow et al., 1999). For example, a study focused on Korean American women involved examining the rates at which early breast and cervical cancer screening tools were being utilized (Maxwell et al., 2008) and listed Adoption as its secondary outcome. The researchers concluded that participants were more likely to participate in screening services, increasing early detection and preventive measures for illness (Maxwell et al., 2008). Despite its importance for showing uptake, this dimension remains underreported, with limited data on long-term commitments from partner organizations (Compernolle et al., 2014). Successful adoption hinges on clear and communicative channels of interaction, role delineation, and stakeholder feedback from planning to evaluation (De Meiji et al., 2010). Municipal planners, community organizations, and policy makers are just some of the key informants that aid in the decision to continue a program for participants (Holtrop et al., 2021).

Implementation

Implementation involves evaluating fidelity - the extent to which a program is offered as intended - to program protocols and adaptability to real-world challenges (Glasgow et al., 1999). Implementation can be assessed at the individual and program levels (Pinheiro-Carozzo et al., 2021). Measures of participant adherence to a given program and delivery of the program itself by employees are essential for ensuring fidelity (Pinheiro-Carozzo et al., 2021).

Fidelity is important for ensuring an audited account of what was offered during programming versus what was proposed during the planning phase (Glasgow et al., 1999). It is important for the evaluation team to realize that since not everything will go to plan,

documenting and commenting on the modifications made mid-offering and how they may have influenced outcomes is important (Glasgow et al., 2019). For example, a study using the RE-AIM Framework to evaluate a family-based substance use program for adolescents noticed that 79% of all changes made to the dynamics of the program came from group consensus and were determined by number of participants and lack of time (Pinheiro-Carozzo et al., 2021). Other changes included additions in programming, offering culturally relevant education, and limiting participant group sizes (Pinheiro-Carozzo et al., 2021). Challenges such as conflicting schedules in multi-level organizations highlight the need for flexible timelines (6-12 months) to accurately assess Implementation (Pinheiro-Carozzo et al., 2021).

Implementation can be difficult to evaluate robustly. Pinheiro-Carozzo et al. (2021) suggested that fidelity checks within program offerings were insufficient to ascertain truth when speaking with families of children with a history of substance use. Conversely, the creators of the RE-AIM framework stated that adaptations made to programming, changes to or unanticipated costs to run the program, and program sustainability initiatives such as seeking additional funding aid in evaluating Implementation (Glasgow et al., 2019). Glasgow et al. (2019) also explored the timelines for evaluating these dimensions; Implementation may need anywhere from six months to a year to be accurately recorded depending on the length of the intervention. Other major barriers to assessing Implementation included lack of communication and clarity in roles, and since most employees have multiple projects or responsibilities outside of the one program, the demands those roles hold (De Mej et al., 2010).

Maintenance

Maintenance assesses long-term program effects on outcomes from participants, usually 6 or more months after intervention, and is often the least reported dimension of the framework.

(Yang et al., 2022). A multitude of obstacles affect the Maintenance of a program. For example, relapse in a given behaviour is a common and to-be-expected outcome at the individual level, especially when working with populations predisposed to higher risk factors (Lehning et al., 2016). Strategies like transportation reimbursements and childcare support can mitigate participant attrition, while institutionalizing a program into routine practices within an organization enhances longevity (Kwan et al., 2019; Pinheiro-Carozzo et al., 2021). Like Implementation, Maintenance requires a lengthy timeline (i.e., 2 years) to fully evaluate and understand the impact and longevity a program can have (Glasgow et al., 1999). Further research at the community level assessing the integration of policies over time and how stable they become is identified as an important step for this dimension (Glasgow et al., 2019).

Organizations and research that have implemented the RE-AIM framework reported a more directed and concise evaluation, and that the use of quantitative and qualitative data meant a more collaborative approach between all members of the team (Kenney et al., 2023). Researchers have stated that Reach proved useful to help contextualize the vulnerable population with whom they were working; the framework also helped to clarify socio-economic status, geographical location, and why they did or did not attend programming (Kwan et al., 2019). When considering equity-deserving populations, many studies highlight the importance of using qualitative methods to uncover the *how* and *why* of traditionally quantitative measures (Holtrop et al., 2018; Holtrop et al., 2021; Kwan et al., 2019). In sum, the RE-AIM Framework is particularly valuable for evaluating community-based health promotion programs due to its comprehensive and equity-oriented approach and has been successfully used to evaluate community-based health interventions in the past (Glasgow et al., 2019).

Limitations of the Literature

Existing research highlights persistent gaps in health service accessibility for equity-deserving families and children, alongside concerning national health indicators for this demographic (Government of Canada, 2024; Minority Rights Group, 2020; Statistics Canada, 2024). The pronounced disparities in health outcomes among residents of Thunder Bay—particularly those in underserved neighbourhoods—underscore the urgent need for targeted health promotion interventions (Pearson, 2017; Statistics Canada, 2019). Evaluating established programs like the HKFP is important for yielding critical insights into effective health promotion strategies and areas requiring refinement for future implementations.

From an evaluative standpoint, methodological gaps exist in the literature focused on the use of the RE-AIM Framework in the context of health promoting interventions for equity deserving families. The Reach dimension remains underdeveloped in qualitative terms, limiting contextual understanding of participant engagement beyond quantitative metrics (Holtrop et al., 2021). While researchers advocate for mixed methods approaches to capture nuanced program impacts (Holtrop et al., 2018), few studies have comprehensively integrated qualitative insights to elucidate barriers, motivations, and lived experiences of participants involved in programs such as HFKP. Furthermore, the sustainability of community-based health initiatives remains underexplored, particularly regarding long-term institutional adoption and policy integration (Isokuortti et al., 2024). By applying the RE-AIM Framework to assess HKFP, this study seeks to address these limitations, offering a structured evaluation of the program's real-world applicability and potential as an expanded model for health promotion in equity-deserving communities.

Study Purpose

The overarching purpose of this study was to undertake a summative evaluation of the 4-week HKFP using the RE-AIM framework to determine its utility as a community-based health promotion program for caregivers and their families living in equity deserving neighbourhoods. Using a combination of quantitative and qualitative approaches involving a priori and new data, this entailed an assessment of the: (1) Reach associated with the target population; (2) Effectiveness of the program; (3) Adoption by program providers and resident participants; (4) Implementation fidelity with respect to anticipated versus actual program delivery; and (5) Maintenance of program-related outcomes among participants over time. It was expected that this comprehensive evaluation would provide valuable insights into the overarching effectiveness of HKFP, as well as logistical issues associated with implementing a program of this nature in equity deserving communities.

Method

Study Design

This project used a pragmatic mixed methods case study design to explore the HKFP and its utility as an education-based health promotion program for caregivers living in equity-deserving neighbourhoods. This approach typically allows for individuals, communities, organizations, and/or a specific program to be investigated within specific parameters (Kowalski et al., 2018). An important facet of this design was the collection of in-depth data, which is often achieved by seeking out multiple sources of information from various stakeholders and typically comes from many forms of data generation, such as interviews, document analysis, and observation (Braun & Clarke, 2019; Kowalski et al., 2018). In line with this strategy, a combination of mixed methods data were collected between 2021 and 2025 from HKFP

participants as well as post-intervention from program participants and administrators. The RE-AIM Framework is a commonly used, robust tool for evaluating the strengths and weaknesses of a health promotion program and was applied to guide the analysis with its five dimensions (Glasgow et al., 1999).

This study incorporated qualitative and quantitative data, which is why a pragmatic worldview was adopted as an additional guiding framework (Kowalski et al., 2018). Because these data inform one another, pragmatism relies on the incorporation of study designs and questions based on what works, and what is available to the researcher (Kowalski, 2018). This means that relevant information and data specific to the case at hand (i.e., HKFP) could be incorporated comprehensively (Kowalski et al., 2018). Kowalski et al. (2018) described quantitative measures as a way to collect data untouched by extraneous variables, including human interaction, which helped to contextualize a broader picture of participant experience. Braun and Clarke (2006) described thematic analysis as a valuable method of examination by establishing qualitative analysis through rigorous reviewing of datasets, creating common patterns or codes, and relating them to larger themes across datasets as they relate to the study purpose and supporting frameworks. This study aimed to draw out complexities and social nuances through a combination of the subjective responses shared along with objective measures collected to provide a thorough understanding of this program and its impact over time (Kowalski et al., 2018).

Participants

The predominant participants of this study were the caregivers enrolled in HKFP. To participate in the HKFP, inclusion criteria required that participants were caregivers of children aged 0-12 years old who resided in pre-determined equity deserving Thunder Bay

neighbourhoods and spoke English. To ensure and uphold confidentiality of all study participants, the pre-determined neighbourhoods (i.e., Westbridge, Ashgrove, Dunhaven, and Winston), as well as the names of the participants have been anonymized using pseudonyms. To promote inclusion individuals who did not reflect the Western ideal of a nuclear family (i.e., family structured by a mother, father, and children) were also accepted (Griffith et al., 2024; Pearson, 2017), as were those who lived outside of the targeted neighbourhoods and wanted to participate. Recruitment for the HKFP integrated approaches identified previously as successful for equity-deserving populations including meeting face-to-face, partnering with local family-led organizations like childcare and activity centres, as well as passive means, such as flyers. Thus, HKFP participant recruitment involved strategies including flyer distribution via door-knocking and social media, advertising in target neighbourhood schools, and asking community partners to share the information in their patient/client networks. As the program became a more established and trusted resource in the community over time, snowball sampling, by which participants themselves referred others to the program, took place (Kowalski et al., 2018; Pearson, 2017).

For this study, caregivers interviewed as part of assessing the Effectiveness dimension were eligible to participate if they completed one or more HKFP iterations and at least two of the three assessment timepoints (Pearson, 2021). Recruitment involved an email being sent directly to each eligible HKFP participant from 2021 and 2025 inviting them to participate in a post-program interview to share their experiences (See Appendix A). Interested individuals were invited to email the student researcher to arrange a mutually convenient time to hold the discussion.

Sample Size

Anticipating sample size within equity-deserving populations can be unpredictable due to competing and contextualizing factors within an individual's life (Naz et al., 2022). Based on local data detailing population sizes of identified neighbourhoods in Thunder Bay and related demographics, it was determined that 96 residents who identified as caregivers would be recruited to participate in the HKFP over four years (Pearson, 2020; Statistics Canada, 2019). In total, 79 participants were recruited originally to participate in HKFP between 2021 and 2025. In line with previous qualitative studies conducted in underserved populations (e.g., Bourke-Taylor et al., 2022; Davey et al., 2020), it was estimated that 7-12 participants would be recruited for the semi-structured interview research component meant to support the Effectiveness evaluation construct in line with the RE-AIM Framework. Regarding saturation, Braun and Clark (2019) argue that it is a nuanced factor that can be met when considering the redundancy of data shared by participants; that is, the more similar sentiments shared, the more the data should be considered rich and saturated (Braun & Clark, 2019).

Procedure

Healthy Kids Family Program

To ascertain the impact of the program over time, participants who enrolled in the HKFP sessions completed a baseline assessment prior to beginning the four-week program. Baseline sessions were held within the week prior to the first session, during which participants met with a member of the HKFP evaluation team to review the program purpose, its risks and benefits, and other ethical details. Once informed consent was obtained, participants were then asked to complete a series of validated questionnaires and open-ended questions to assess demographics, lifestyle behaviours, psychological indices, and the program experience (Pearson, 2021). These

same evaluation metrics were similarly completed at the end of the four weeks, and then through a follow-up six weeks after program completion (Pearson, 2021). Delivery methods were dependent on the modality used for the HKFP and aligned with the COVID-19 mandates at the time of implementation. Therefore, participants completed these assessments in person with a member of the evaluation team, or online through an accessible link (Pearson, 2021).

Quantitative variables assessed at these time points included physical activity, sedentary behaviour, nutritional self-efficacy, smoking status, and quality of life (See Appendix B). The questionnaires took approximately 30 minutes to complete, and a grocery store gift card (i.e., $25 to Walmart) was presented to the participant upon completion of each session, as well as at the 6-week follow-up (Pearson, 2021). Ethical approval for this study was obtained from the Lakehead University Research Ethics Board (#1468970) (See Appendix C).

One-on-One Interviews

The purpose of collecting responses from the participants with the use of an established interview guide was to draw out meaningful information on not only the utility of HKFP but to also understand health behaviours in the daily life of the participant and their families (See Appendix D and explained below). Upon confirming an interest to participate, a meeting was scheduled between the researcher and participant. Interview location varied depending on the participant's preference, and meetings lasted 45 to 60-minutes, depending on what was shared. At the start of the interview, the student researcher and participant went over the letter of information and oral consent script and form together (See Appendix E). This outlined what was to be expected, potential benefits and risks associated with participating, and parameters around anonymity and confidentiality should they choose to participate in the study. At the outset of the interview, participants completed a demographic questionnaire orally with the student researcher,

who filled in the written answers verbatim (See Appendix F). Subsequently, the semi-structured interview was then conducted and recorded using the Zoom feature or a recording device belonging to the student researcher. Using a semi-structured interview guide, the student researcher asked each question and any associated probes organically, allowing the participant time to reflect and respond how they see fit. During this time, it was expected that the questions would guide the interview, but that the participant would provide additional informative anecdotes should they feel comfortable. Individuals were advised that they could withdraw from the study and rescind their data, up to the point of interview completion. Once each question was answered to the satisfaction of the participant and student researcher, the interview concluded.

RE-AIM Dimensions: Measures and Data Analysis

In addition to the quantitative measures completed by HKFP participants during the three assessment timepoints, a demographic survey was filled out by interview participants to provide context for the population and cross-reference consistency in answers from previous research assessments. These data, in combination with the post-program interviews, were used to assess the utility of HKFP in line with the RE-AIM dimensions. Details specific to each facet are outlined below.

Reach

Reach, as it relates to HKFP, was assessed by noting the rate at which participants signed up for and attended programming, recorded as a percentage of total program sessions. This was completed by using attendance records compiled during programming and comparing census demographics of Thunder Bay to participant demographics to determine representativeness. Inquiry records about the program, alongside recruitment strategies employed, were also reviewed to determine optimal approaches for studies of this nature. Reach additionally was

assessed qualitatively via the interview guide through open-ended questions such as *"What facilitators/barriers to participating/accessing in the HKFP did you experience, if any?"*

Data analysis for this section involved the creation of ratios to understand Reach as it relates to demographic characteristics. Values were examined within and across iterations. In addition, interview data were analyzed inductively wherein themes emerge organically from the data (additional details found below; Kowalski et al., 2018).

Effectiveness

To assess the effectiveness of HKFP, a combination of quantitative and qualitative data was used. First, variables assessed during the program assessments were reviewed across three time periods using descriptive statistics and through the use of inferential statistics as a repeated measures analysis of variance (ANOVA). This type of measurement is used when comparing data collected at least two separate time points, from the same participants, and is of value to determine potential outcomes related to an intervention (Kowalski et al., 2018). A study conducted by Weiss et al. (2020) reported positive increases across time in knowledge surrounding general health, nutrition, and food preparation based on health program offerings for an equity-deserving population with the use of a dependent t-test (also known as a paired samples t-test) however they only compared between two time points. With our approach, if a significant main effect of time is detected, post-hoc tests between the time points were computed. Specifically, health behaviours (i.e., physical activity, nutrition, screen time), and psychological constructs (i.e., self-efficacy for nutrition, quality of life, and collective efficacy) were assessed and are explained below.

Quantitative data. Data were collected prior to, immediately following, and six weeks following the HKFP. Each measure is described below.

Health Behaviour. Data were derived from responses provided as part of the three assessment timepoints. Types of questions asked included categorical yes or no responses, such as *"Do you engage in physical activity?",* multiple choice-type questions such as *"How much time would you say you spend sitting in a typical 24-hour period?",* and open-ended questions such as *"How many cups of water do you drink in a typical day?".* Additional areas of inquiry included fruit and vegetable consumption, food insecurity related to financial strain, and sedentary habits. Additionally, participants were asked to report on their smoking habits; a "yes/no" scale question was used to gauge cigarette use. Inferential statistics were used to gauge responses and examine changes across time and differential statistics were used to compute averages across timepoints.

Self-Efficacy for Nutrition. This 11-item scale is used to assess self-efficacy for overcoming barriers to nutrition (e.g., travel, fast food). Questions are ascribed from the work of McAuley and Mihalko (1998) and rated on a Likert-type scale ranging from 0 ("No Confidence at All") to 100 ("Completely Confident"). This scale demonstrates good reliability (Cronbach's alpha often > 0.80; Lassetter et al., 2018), while its Likert-type scale and confirmatory factor analysis allows for consideration of barriers to eating healthy, including temptation or emotional eating (Parcel et al., 1995). Questions such as *"I am able to consume fruits and vegetables in most of my meals"* and *"When I feel hungry, I am able to choose healthy food over less healthy options"* assess how confident individuals are that they could overcome challenges to eating a well-balanced diet.

The 12-item Short-Form Healthy Survey (SF-12; Ware & Keller, 1996) is used to gauge perceived health status and quality of life of participants (QualityMetric, 2025). It is often noted that despite its concise format, this tool is particularly useful in decreasing respondent burden,

making it an ideal tool to incorporate when time with participants may be limited (Soh et al., 2021). A validated and well-established quality of life measure, the SF-12 is comprised of 12 questions covering 8 health dimensions and produces two summary scores encompassing mental health and physical health, and is a commonly-reported tool used when assessing equity-deserving communities (Cronbach's alpha often > 0.83; Kangwanrattanakul, 2025). The survey assessed quality of life through questions focused on mental health, physical and social functioning, general health, and physical and emotional roles in facets of one's life (QualityMetric, 2025). A study conducted by Burdine et al. (2000), one of the first to employ the tool as a research instrument, used populations involved in previous community health initiatives to administer the SF-12. Results produced on the health status of communities were meaningful indicating that the SF-12 is a tool fit for most populations. Specific to equity-deserving populations, a study focused on food security and resident wellbeing in underserved communities in Ottawa, Ontario, determined lower self-reported scores of mental and physical health in populations facing food-insecurity than populations who were not (Rizvi et al., 2021).

Qualitative Data. Second, the qualitative component used to assess Effectiveness involved exploring perspectives on HKFP involvement post-completion through the use of a semi-structured interview guide (See Appendix D) which was developed by the student researcher in line with the RE-AIM framework dimensions and informed by the variables assessed (RE-AIM, 2025; Chan et al., 2022; Pearson, 2021). The opening section included general questions involving things like activities enjoyed by their families. Subsequent sections dove more specifically into facets of the HKFP and how the content has impacted the participants and families. For example, some questions included: *"Based on your experience, what ingredients are needed to make a program like HKFP successful?", "How do you use what*

you learned during these sessions at home?", and follow-up questions such as *"How have your families responded?"*

As is common in qualitative research, this study used a combination of deductive apriori categories (i.e., the RE-AIM Framework) and inductive (themes that are organically generated through the data) analytic approaches (Kowalski et al., 2018). An inductive approach was particularly essential for ensuring that the results of the study were not based in bias or presumptions of the researchers, rather, that themes emerged based on what was important to and identified by the participants (Kowalski et al., 2018). Analysis for the interview component involved phases of examination as outlined by Braun and Clarke (2006) through thematic analysis. Transcription of all audio-recorded interview sessions were transcribed verbatim with Microsoft transcription software. From there, the student researcher further cleaned the data via anonymizing and adding punctuation to ensure proper evaluation of responses may take place. Transcripts were imported into Atlas.ti to promote data management and organization. Use of this software also supported the creation of codes, or experiences shared that relate to frameworks associated with this study (i.e., RE-AIM, SDH). Themes emerged, inductively, as patterns across datasets as a result of coding. Relevancy of emergent themes were based on saliency: the frequency or how often a concept or idea is brought up across participants (Kowalski et al., 2018). While ensuring rich and detailed responses, it is often noted that participant numbers are essential in providing warranted and meaningful results (Kowalski et al., 2018). Considering recruitment and pragmatism, it is worth noting that various facets impact participation, including demands on the participant and whether the participants are accessible (Braun & Clarke, 2019). It was of utmost importance that the outcomes of this study were rooted in the lived experiences of the participants, and trustworthiness, or the integrity of the

researcher's endeavours to ensure accurate reporting, were highly considered (Kowalski et al., 2018). For example, the HKFP was a real-world application that was measurable through survey responses over time. The research team regularly assessed the consistency and neutrality of findings based on the researcher's interpretation of participant responses (Kowalski et al., 2018). Documenting all processes with an audit trail and reflections from the researcher were implemented as part of ensuring reflexivity. Additionally, member checks were encouraged during the interview process by the researcher echoing participant responses and seeking confirmation (Kowalski et al., 2018).

Adoption. Adoption was assessed by focusing on the settings and staff who delivered the intervention (RE-AIM, 2025). Data was gleaned through existing program notes and interviews held previously with administrative team members of the HKFP (Pearson & Pearson, 2024) to create a descriptive account of these program facets. Analysis involved the use of these pre-existing data, which was also conducted using a mix of inductive and deductive tactics similar to this study, to better understand setting characteristics and involvement experiences.

Implementation. Implementation, at the individual level, was assessed by the rate at which the participant utilizes the resources or tools provided (RE-AIM, 2025). This dimension was assessed through the data provided through participant post-program interviews (e.g., *"What has HKFP given to you that you may not have achieved without the program, if anything?" and "Can you describe any changes in your health habits or otherwise you are planning to make/have made now that HKFP is finished?"*). At the setting level, an analysis of program fidelity took place to create a descriptive summary using notes taken during the HKFP administrations to document adaptations made to program content and delivery over time (e.g., ethics amendments, timing of the intervention).

Maintenance. To understand the degree to which HKFP has become immersed into both routine organizational practices and participants' lives, a combination of pre-existing interview data conducted with HKFP administrators (i.e., those organizational representatives who helped to develop and implement the program; Pearson & Pearson, 2024) and interviews with program participants were used. Those who were invited to participate in the on-on-one semi-structured interviews had completed the program at varying timepoints since 2021. This means that an array of follow-up timeframes were represented from 6-weeks to three + years. Given Maintenance is defined as long-term program effects on outcomes from 6 or more months after intervention contact (RE-AIM, 2025), this range provided a diverse overview of related experiences (Pearson, 2021).

To promote comprehensiveness and serve as an organization tool, a logic matrix was created to show a detailed overview of data that were analyzed and/or collected, how it related to the RE-AIM Framework, and what method of analysis took place.

Figure 1

Healthy Kids Family Program Evaluation Logic Matrix

RE-AIM Dimension	Data Type	Data Source	Evaluation Component	Method of Analysis
Reach	Quantitative	HKFP records, census data	Enrollment and attendance rate of participants	Descriptive statistics and creation of ratios
	Qualitative	Participant interviews	Barriers/facilitators to participation	Thematic analysis (Braun & Clarke, 2006)
Effectiveness	Quantitative	Pre-, post-, 6-week follow-up surveys	Changes in health behaviours, self-efficacy	Descriptive statistics, repeated measures ANOVA
	Qualitative	Semi-structured interviews	Participant experiences of change	Thematic analysis (Braun & Clarke, 2006)
Adoption	Qualitative	Pilot project – semi-structured interviews (Pearson & Pearson, 2024)	Uptake by delivery staff and partners	Thematic analysis (Braun & Clarke, 2006)
Implementation	Qualitative	Semi-structured interview, field notes	Use of HKFP resources (i.e., knowledge gained), fidelity of program offerings (notes from HKFP administrations)	Thematic analysis (Braun & Clarke, 2006); descriptive statistics
Maintenance	Qualitative	Semi-structured interview (time since HKFP completion may differ 6 weeks – 3 years for participants)	Sustainability of behaviour changes	Thematic analysis and across time

Results

A mixed-methods approach was used, integrating quantitative and qualitative data from survey responses, interviews, and public records to evaluate the utility of the HKFP. An overview of participant demographics for both HKFP participants and interviewees is presented below. Results were then structured and organized according to each dimension of the RE-AIM Framework.

Demographics for Healthy Kids Family Program Participants

Between November 2021 and March 2025, 116 individuals inquired about HKFP, of which 94 were assessed for eligibility. Ninety-one were subsequently enrolled in the program.

Following cleaning, 17 incomplete data sets (i.e., only one of the three assessments was completed) were identified, all of which were omitted from the analysis. Fourteen individuals attended more than one program iteration; thus, to ensure comparability with one-time attendees, only data from their initial enrollment session were included. Thus, 60 individuals who completed at least two of the three assessments were included in the analysis. Participants ranged in age from 22 to 48 years (M = 35.52, SD = 6.21), with 37 and 42 being the most frequently reported ages. The majority identified as female, and primarily as European Canadian, with English as their first language.

Participants resided across Thunder Bay; however, postal code analysis revealed that many lived centrally within the municipality (See Appendix G). The majority resided within urban neighbourhoods on both the south and north sides of the city, while a smaller proportion lived in surrounding rural areas, including communities to the north, south, east, and west of Thunder Bay. Housing information collected included the number, ages, and sex of household members. Fifty-six participants provided this information, reporting an average of 1.64 children per household.

Participants (n = 36) also reported their average monthly income, which ranged from $0 – $36,000 ($M$ = $3.396.39, SD = $5,874.90). Twenty-four participants (40%) did not provide income information while educational attainment was reported by all participants (n = 60). The largest proportion held a college diploma (n = 20), followed by a university degree (n = 18). Others reported completing high school, trade school, or having some high school (n = 4), college, or university experience. For additional details on participant demographics, see Table 1.

Table 1

Healthy Kids Family Program Participant Demographic Characteristics (n = 60)

Characteristic	*n*	%	*M*	*SD*	Range
Age (years)	60		35.52	6.21	22-48
Gender Identity					
Female	52	86.70			
Male	8	13.30			
Race/Ethnicity					
European Canadian	33	55.00			
Aboriginal	12	20.00			
Asian	4	6.67			
Latin	4	6.67			
Chinese	2	3.33			
Persian	2	3.33			
Peruvian	1	1.67			
First Language					
English	48	80.00			
Spanish	5	8.30			
Farsi	2	3.30			
Mandarin	2	3.30			
Filipino	1	1.70			
Bangla	1	1.70			
Ukrainian	1	1.70			
Area of Residence (Thunder Bay)					
P7B – Central	17	28.30			
P7E - Westbridge	16	26.70			
P7C – Central South	11	18.30			
P7A – Central North	10	16.70			
P0T – Rural Northeast	2	3.30			
P7J – Rural Southwest	2	3.30			
P7G – Rural North	1	1.70			
P7K – Rural West	1	1.70			
Children per household	56		1.64	.99	1-7
Monthly Income	36		$3396.39	$5874.90	$0-36000
Education Level	60				
Some high school	4	6.70			
High school	6	10.00			
Some college	8	13.30			
College diploma	20	33.30			
Some university	3	5.00			
University degree	18	30.00			
Trade school	1	1.70			

Demographics for HKFP Interview Participants

From our email recruitments, ten HKFP participants expressed interest in the interview portion study, of whom seven completed the interview process. Ages ranged from 27 to 43 years, with the majority identifying as female (n = 6). Most lived in a family household that consisted of caregivers and dependent children. While some participants had moved to their current residence within the last five years, others had lived in the same home and community for more than a decade. The majority took part in the February 2025 iteration of the HKFP, though one participant had engaged in three separate program iterations over time. Interviews took place from June to July of 2025. Table 2 provides a detailed summary of interview participant demographic information.

Table 2

Interview Participants Demographic Information (n = 7)

Participant	Age (years)	Gender Identity	Household Make-up	Length at Current Address	Program Iteration
Caitlyn	43	Female	3 adults, 1 child	17 years	Feb 2025
Sofia	39	Female	2 adults, 2 children	5 years	Feb 2025
Elena	43	Female	3 adults, 1 child	17 years	Feb 2025
Mei	39	Female	2 adults, 1 child	8–9 years	Multiple (2021–2025)
Tala	32	Female	3 adults, 1 child	2–3 years	Feb 2025
Jorge	41	Male	Lives alone	3 years	Nov 2021
Amina	27	Female	3 adults, 2 children	4 years	Feb 2025

Reach

Housing information collected from the HKFP participants was compared to census data for the Thunder Bay region. Analysis of the postal code distribution indicated that program reach was greatest in the Central Thunder Bay neighborhoods. Based on an estimated 5920 prospective families (Statistics Canada, 2021) in the four neighbourhoods identified a priori, approximately

1.57% were reached through the HKFP. This percentage was calculated based on the number of households actually targeted divided by the total number of prospective families (including household dynamics consisting of two-caregiver and single caregiver structures) in the four neighbourhoods. Pandemic and practical realities changed eligibility parameters for participants; participants who were interested who also identified as a caregiver were considered eligible to participate, regardless of area of residence. See Table 4 for neighbourhood specific involvement.

Table 3

Targeted Family Households Versus Households Reached in Thunder Bay Neighbourhoods

Neighbourhood (Postal Code)	Family Households (Targeted)*	Families Participated (Reached)	% of Target Reached
P7B – Central	2,775	17	0.87
P7E – Westbridge	3,145	16	0.70
P7A – Central North	4,220	11	0.26
P7C – Central South	3,275	10	0.31
P0T – Rural Northeast	4840	2	0.04
P7J – Rural Southwest	895	2	0.22
P7G – Rural North	2,330	1	0.04
P7K – Rural West	1,085	1	0.09

**Note.* Census reports retrieved from Statistics Canada (2021).

From interview results several barriers and facilitators to participation that may have affected Reach in HKFP were identified. These categories are detailed below.

Facilitators to Participation

Recruitment for the HKFP was largely done through online and community-based channels. Four participants reported discovering HKFP through social media, primarily Facebook, while one was made aware about it through their child's school, and another through a personal recommendation.

"My friend sent me the link… I thought it would be nice to do with them." (Amina)

Three participants described their primary motivation for enrolling as a desire to gain more knowledge related to the program's content.

"…any kind of knowledge…for me, it was literally just all learning aspect." [Elena]

"[I wanted] to gain more knowledge and to interact with other parents." [Sofia]

"It [participating] was more about figuring out resources after I moved here." [Tala]

In addition to learning new information, two participants reported that the grocery store gift cards were also a welcomed incentive to join.

"Well, when I was doing the program, the gift cards meant a lot 'cause it helped with groceries, but also there is a lot of good information about like keeping my [child] active." [Tala]

"… the gift cards were awesome at the end, 'cause who does not want a gift card for food when it's so expensive? … but … what was the reason of really being, 'Hey, you know, like, we can go get a gift card!' It really, it [joining] turned into a lot of knowledge [learned from the program]." [Mei]

One participant who attended three iterations of the program explained that their ongoing participation was motivated by the welcoming environment, meeting new people, and sense of community connection.

"I kept going back because it was a judge-free zone…" [Mei]

Barriers to Participation

Four participants described challenges that limited their ability to engage fully in the HKFP. The most common barriers included scheduling conflicts in the evening, which often overlapped with family responsibilities, and difficulties securing childcare, even when sessions

were delivered online. These factors made it challenging for some participants to participate as consistently or attentively as they would have liked.

> "*Just the timing [was a barrier], really... if we're working late, sometimes I find that there's an overlap with other activities going on, and we can't make it out all the time.*" *[Sofia]*
>
> *"Maybe asking people what nights worked for them… just in case people couldn't make it on Tuesday night." [Elena]*
>
> *"Sometimes like my scheduling… transportation, scheduling… [makes it hard to participate." [Jorge]*
>
> *"Or even like in person might be better... have some childminding like how [similar organization] people do... like my kid would have no interest in sitting there listening to a slideshow about smoking." [Amina]*

Effectiveness

Effectiveness of the HKFP was evaluated by examining participant's physical activity, water intake, sedentary behaviour, smoking status, and perceived quality of life through the SF-12's Mental Component Summary (MCS) and Physical Component Summary (PCS) taken from survey data (see Table 5). A series of repeated measures ANOVA testing were conducted to analyze each variable across the three time-points: baseline, post-intervention, and follow-up. Participants' perspectives on effectiveness based on the interviews are also reported below.

Physical Activity (n = 30)

A one-way repeated measures ANOVA did not yield significant changes in participants' self-reported physical activity habits across the three assessment timepoints (baseline, post-intervention, follow-up), $F_{(1.24, 35.97)} = 0.47$, $p > .05$, $\eta^2 = .02$. Descriptively, mean physical

activity decreased from baseline (M = 347.57, SD = 1072.57) to post-intervention (M = 253.00, SD = 461.86) and further at follow-up (M = 181.33, SD = 145.19). The linear trend across time was not significant ($p > .05$), and variability in scores was high, particularly at baseline.

Water Intake (n = 36)

Water intake did not change significantly across the three time points using a one-way repeated measures ANOVA, $F_{(1.49, 52.16)} = 2.22$, $p > .05$, $\eta^2 = .06$. Descriptively, mean water intake increased from baseline (M = 4.08, SD = 3.28) to post-intervention (M = 5.17, SD = 3.73) and was maintained at follow-up (M = 5.22, SD = 3.11). The linear trend across time was not significant ($p > .05$).

Sedentary Behaviour (n = 46)

Sedentary behaviour, measured as average daily sitting time, was captured using three ranked response categories: 1 = 5 hours or less, 2 = 5-8 hours, and 3 = more than 8 hours. A one-way repeated measures ANOVA test yielded no significant results in changes in sedentary behaviour across the three timepoints, $F_{(2, 90)} = 1.55$, $p = .217$, $\eta^2 = .033$. Linear testing proved non-significant, and although sedentary time decreased slightly from baseline (M = 1.70, SD = 0.76) to post-intervention (M = 1.60, SD = 0.72), time spent sedentary was maintained at follow-up (M = 1.54, SD = 0.69).

Smoking Status (n = 53)

Smoking behaviour was assessed dichotomously (1 = yes, 2 = no). A one-way repeated measures ANOVA test displayed no change in participants' responses over the three timepoints, with mean and standard deviation values remaining the same from baseline, post-intervention, and follow-up (M = 1.80, SD = .40). Results suggested that participants remained consistent in their smoking status, meaning there was no increase or decrease in smoking habits.

Table 4

Health Behaviour Indices for Participants Across Three Timepoints

Health Behaviour Outcome	Baseline *M* (*SD*)	Post-Intervention *M* (*SD*)	Follow-up *M* (*SD*)	Mean Difference (Baseline-Post)	Mean Difference (Baseline-Follow-up)
Physical Activity (minutes/week, *n* = 30)	347.57 (1072.57)	253.00 (461.88)	181.33 (145.19)	-94.57	-166.24
Water Intake (cups/day, *n* = 36)	4.08 (3.28)	5.17 (3.73)	5.22 (3.11)	+1.09	+1.14
Sedentary Behaviour (time sitting, *n* = 46)	1.70 (0.76)	1.5 (0.72)	1.54 (0.69)	-0.13	-0.16
Smoking Status (1 = Yes, 2 = No, *n* = 53)	1.80 (.40)	1.80 (.40)	1.80 (.40)	0.00	0.00

The 12-Item Short-Form Health Survey

The 12-Item Short Form Health Survey (SF-12) assesses health-related quality of life across two composite domains: the Physical Component Summary (PCS) and the Mental Component Summary (MCS; Ware & Keller, 1996). These subscales provide complementary indicators of participant's perceived physical and mental well-being throughout the program. A one-way repeated measure ANOVA examining changes in PCS scores revealed no significant effect of time, $F_{(2, 86)} = 0.57$. $p = 0.570$, $\eta^2 = .013$, indicating stability in perceived physical health. In contrast, although changes in MCS scores were not statistically significant, $F_{(2, 86)} = 2.37$. $p = .099$, $\eta^2 = .052$, mean values showed a slight upward trend from baseline ($M = 37.92$,

SD = 12.14) to the 4-week assessment (*M* = 40.57, *SD* = 11.58), which remained stable at follow-up (*M* = 40.68, *SD* = 10.57). See Table 6 for descriptive statistics associated with the SF-12.

Self-Efficacy for Nutrition

The Self-Efficacy for Nutrition survey is an 11-item scale used to assess ability to overcome barriers associated with nutrition habits (McAuley & Milhalko, 1998). A repeated measures ANOVA indicated a statistically significant effect of time on nutrition self-efficacy, $F_{(1.66, 68.26)} = 4.86$. $p = .015$, $\eta^2 = .106$. Given the significant overall results, post-hoc t-tests were conducted to examine pairwise differences between the three time points. Results revealed a significant increase in self-efficacy scores between baseline (*M* = 3.43, *SD* = 0.89) and follow-up (*M* = 3.93, *SD* = 0.72), $p < 0.001$, $\eta^2 = .11$. These findings suggested a moderate-to-large improvement in participants' confidence to make healthy, nutritional choices over time, particularly between baseline and follow-up.

Table 5

Means, Standard Deviations, Repeated Measures ANOVA results for PCS, MCS, and Self Efficacy for Nutrition Surveys (n = 45)

Measure	Baseline *M* (*SD*)	Post-Intervention *M* (*SD*)	Follow-up *M* (*SD*)	*F*	*p*	Partial η^2
PCS	47.56 (9.12)	47.30 (9.86)	48.57 (8.48)	0.57	.570	.013
MCS	37.92 (12.14)	40.57 (11.58)	40.68 (10.57)	2.37	.099	.052
Self-Efficacy for Nutrition*	3.43 (0.89)	3.55 (0.95)	3.93 (0.72)	4.86	.015	.106

**Note. n* = 42.

Participant Viewpoints Related to Effectiveness

Thematic analysis of participant interviews revealed that the program's perceived effectiveness was driven by two central themes: the development of healthier family routines and

a growth in self-efficacy built through peer-based social connections. Evidence of such changes emerged through discussions surrounding facilitators and barriers to participation, if what was shared in program delivery was meaningful in daily life, and how unexpected outcomes of program participation shaped participants' experience with the HKFP. A descriptive summary of these themes and related subthemes, supported by participant quotes, is presented below.

Building Healthy Family Routines: "Effectiveness"

Physical Activity. This subtheme emerged overwhelmingly across participants, many of whom shared how the program supported them in building healthier, more active family routines. Four participants shared that they had recently incorporated new forms of physical activity into their families' daily lives, emphasizing both enjoyment and togetherness.

> *"We got bicycles so we can start doing that more together as a family." (Caitlyn)*
>
> *"It [the HKFP] helped us gain in starting to make a list of activities that we should try doing every day, like instead of taking the bus, let's try to walk here." (Sofia)*
>
> *"I take the stairs at work now and try to stay active instead of sitting when I get home." [Elena]*
>
> *"…we go walk a lot. It has become like a family thing — calming, stress relief, and one-on-one time." [Mei]*

Healthy Eating. Participants also discussed adopting healthier eating practices and reframing mealtimes as opportunities for family connection and learning. Five participants noted experimenting with new recipes, introducing different foods, and involving their children in meal preparation. Specifically, they explained that they began to treat cooking meals as an opportunity to spend time with their family and were introduced to alternative methods to incorporate healthy foods based on dietary guidelines.

"We have tried out some different stuff [foods] that we normally would not have after learning new recipes from the nutrition part." [Mei]

"I have the kids help me with cooking and baking… they're learning you can eat some things differently." [Sofia]

"I'm trying to change the way I cook things, going more with what today's food guide shows…" [Elena]

Increase in Self-Efficacy: "Effectiveness"

Confidence Built Through Social Connections. The HKFP program sessions served as a supportive space for participants to share knowledge, exchange experiences, and discuss parenting challenges in a judgment-free environment. Five participants described how connecting with peers who faced similar life circumstances enhanced their sense of confidence and capability in both parenting and health-related behaviours.

"Hearing other people's stories and how they're struggling with parenting, you kind of relate and you share stories and we kind of made a connection toward each other and [it] kind of helped." [Caitlyn]

"I'm not the only one struggling with certain things. It was not embarrassing to ask a question because I knew somebody else was going through the same problem." [Elena]

"Hearing someone else say they're going through the same thing makes you feel better and more confident that you can parent this way." [Mei]

"Even just hearing others' examples helped me see there's no one right way to parent… It made me feel more confident that I was doing OK." [Tala]

> *"I felt like I was the only one in this position [parenting] and nobody else, you know, could relate to me, but like, No, it's like 99% of the population that can relate to me, and it was really nice to see that." [Sofia]*

Adoption

Adoption at the setting-level was reflected in the integration and endorsement of the HKFP by multiple community organizations spanning multiple sectors, including Our Kids Count, The District of Thunder Bay Social Services Administration Board (DSSAB), TBDHU, Lakehead School of Kinesiology, and the City of Thunder Bay. All iterations of the HKFP were intended to be delivered in-person, three times annually, in four pre-selected neighbourhoods with designated, in-kind spaces. Subsidized housing units were provided by DSSAB for two of the neighbourhood locations, and a local community centre was made available by the City of Thunder Bay for the other location's offerings. Each space was equipped with recreational areas and toys for children, child-minding services provided by the City of Thunder Bay, a fully equipped, safety-certified kitchen, and electronic equipment (e.g., projector) to share information. Additional materials for program participants were supplied through the TBDHU (i.e., resource binders with information on topics deemed relevant for the intended population – See Appendix G; food kits for cooking demonstration; snacks).

Adoption was not uniform across all intended organizations. For example, some initial core contributors who planned to provide expert-led programming had to withdraw involvement due to pandemic-related restrictions, mandates, and organizational limitations that occurred throughout the program's tenure. In response, the HKFP team relied more heavily on the TBDHU, which continued to supply professionals with expertise in the four program pillars.

Participants overwhelmingly credited successful program delivery to the collaborative partnerships across community organizations.

"The partnerships definitely helped expand what opportunities were available to the community…" [ID3]

"It just enriches the program to have partners…" [ID1]

Success of program delivery was also owed to the ability for workers to be flexible and adaptable when organizing community-based programs.

"…I don't think I've worked in any…community programming job where there hasn't been some like abrupt left turn." [ID1]

"I'm proud of the staff that have remained consistent and committed to see it through" [1D3]

Despite these strengths, program providers identified staffing challenges as a persistent barrier to consistent delivery. High turnover rates, staff absences, and management changes were described as sources of frustration that disrupted continuity and stability in programming.

"For program delivery, I think one of the biggest challenges we had…was staffing…staff turnovers that made it difficult to deliver programs…" [ID2]

"We had so many staffing challenges, we had at every level, like we had turnover in managers…sick leave…removed from program…it was really challenging for a long time" [ID1]

Implementation

Programs Offered

The HKFP was offered three times a year starting from late 2021 to early 2025. Mode of delivery was impacted by government mandated social gathering restrictions in relation to the

COVID-19 pandemic, during which in-person sessions shifted to an online-delivery method through the application, Zoom. During the pilot project that informed this study, one participant shared their employees' concerns in response to the pandemic. This also supported their decision to switch programming to online methods.

> *"…Our team really worked together to like overcome those issues and help people [staff] through anxiety [in relation to the pandemic and cleaning]…We switched our program to virtual…" [ID1]*

In February 2022, no participants registered for the in-person HKFP offering. To address this, HKFP organizers switched programming to be delivered via Zoom to make attendance more feasible. As the HKFP progressed, attendance rates improved as the offerings shifted to mostly online as opposed to meeting in-person. See Table 3 for attendance rates and mode of delivery.

Table 6

Program Offerings (n = 11) and Attendance Rates by Iteration of the HKFP

Program Iteration	Attendance/ Iteration	Physical Activity	Mental Health	Smoking Cessation	Nutrition	Delivery Format
November 2021	4	4	4	3	3	In-person
February 2022	4	4	2	4	4	Online
February 2022	4	4	4	3	3	Online
October 2022	2	2	2	2	2	In-person
November 2022	8	7	8	6	8	Online
February 2023	6	6	5	6	6	Online
September 2023	3	2	2	2	3	In-person
November 2023	9	8	9	8	9	Online
February 2024	14	14	14	14	13	Online
October 2024	7	6	6	7	7	Online
February 2025	17	11	14	12	17	Online
Total		67	70	67	75	

Facilitators to Engagement

Participants identified several features of program delivery that enhanced engagement, particularly those involving interactive or visual components. Two participants shared that the

demonstrations and multi-modal teaching approaches were especially helpful for maintaining attention and supporting learning.

"I liked that they [HKFP presenters] had different modes of showing the information…not just talking about it, but showing what to do." [Mei]

"It was very helpful to actually see somebody cooking it [nutrition session] and follow along" [Elena]

Participants were provided with ingredients to follow along during the nutrition session – either in person, or virtually during a dietician-led cooking demonstration from the TBDHU. According to participants, this hands-on component was widely appreciated, as it allowed families to actively engage with content using step-by-step instructions while preparing a meal together.

"Having the ingredients dropped off was helpful, especially if you didn't have time to go get groceries or didn't have everything." [Tala]

"You gave the stuff for us to do it with - it was great for people to be able to cook healthy meals together." [Amina]

"The ingredient drop-off and doing it together gave you a meal you might not have cooked before." [Elena]

Barriers to Engagement

Barriers to participation related to session pacing, length, and relevance. One participant noted: *"It [the nutrition session] was too fast paced for me trying to follow along virtually" [Mei].*

Conversely, others relayed that sessions exceeding 90 minutes felt too long, especially for those without childcare, a feature not available during virtual programming. Some disengaged

when topics felt less personally applicable, particularly sessions focused on smoking cessation and prevention. While a few participants found this content informative, others felt it lacked relevance.

> *"The smoking topic wasn't really relevant… maybe tack it onto health instead of a whole session." [Mei]*
>
> *"Not really [helpful]… like helpful for someone else probably. I'm not a smoker, so it didn't have a huge impact." [Tala]*
>
> *"It gave me a different perspective on it, even though I don't smoke anymore - it was good to see how others were learning about it." [Sofia]*

Participants also identified opportunities to strengthen program content, particularly within the parenting and nutrition sessions. Two participants emphasized the need for greater attention to financial literacy, including budgeting strategies and affordable eating options for the family.

> *"…maybe adding to that nutrition part [session] is find out where local to get cheaper food. So I know like I'm doing the… I'm, I'm doing the Good Food Box, but what else is out there? Where can I get like milk products or dairy products? Where can I get grains? Where can I get meats that are, that are cheaper than what's at the grocery store?" [Elena]*
>
> *"Add budgeting to the food one… how to eat healthy on a set budget and stretch a dollar." [Mei]*

One participant, having attended multiple iterations of the program, highlighted the need for more inclusive content related to parenting children with differing abilities. While iterations did not address this explicitly, later sessions became more inclusive as participants shared personal experiences, strategies, and stories.

"Some things could have been touched on more, like the difference between parenting a regular child and one with special needs… at least it was touched on this time [later iteration of HKFP]." [Mei]

Discovery of Health Resources

A notable outcome of participation was increased awareness of locally available health-focused resources and programs. Many participants explained that prior to the HKFP, they were unaware of available many supports within Thunder Bay.

"The list of resources is super helpful because it's not always easy to know where to look." [Tala]

"I didn't know there was a whole smoking unit at the health unit, so that was cool." [Amina]

Some participants noted that they shared these resources within their social networks, extending the program's reach.

"…knowing about the men's only one [program] … I passed it on to my [loved one].

"*Knowing that was out there, I'd never heard of it before, so knowing that was out there, I had it saved on my phone and I've been passing that one around." [Elena]*

Maintenance

Building a Foundation of Healthy Practices: "Maintenance"

With respect to the recommended timeline of at least six months post-program completion, this assessment of the Maintenance section may be interpreted as early phases of the dimension. Although most participants were only five months post-program, evidence of maintenance at the individual level was strongest in sustained nutrition and physical activity routines. Many participants shared that what they learned through the course of the program

encouraged them to continue to establish healthy habits. Encouragement of such habits was supported by participants exploring food substitutions (for picky eaters and/or dietary restrictions), fostering a sense of community when cooking, and navigating grocery shopping despite high prices. Five participants described integrating lessons learned from the HKFP into their daily practices and sharing them with others.

> *"I use what I learned [in the program] all the time, and I share it with friends — it helps to tell people in the same situation, and they're really starting to adapt to it too." [Sofia]*
>
> *"We eat more balanced now, just small changes, but I try to keep it up…I started a little cooking hour with my friends using the recipes from the program." [Elena]*
>
> *"Food prices make it hard, but now I look for more fiber and lactose-free options for my son — I've learned to plan for that [from the HKFP]." [Mei]*
>
> *"It [the HKFP] gave me good food information, especially with a child who struggles with eating — we use it every day." [Tala]*
>
> *"The egg cups [from the nutrition session] are still my breakfast." [Amina]*

Knowledge Applied in Real Life. Participants also reported applying program knowledge in broader contexts, including the workplace and community. Four participants shared that the information they learned through the HKFP bolstered their health decisions and advocacy behaviours while three discussed strategies used daily to ensure their best health and the health of their loved ones.

> *"I'm using what I learned as a tool [at work]. I can [share] about vaping now." [Caitlyn]*
>
> *"Learning about thirdhand smoke made me feel valid… I want a smoke-free property." [Mei]*

Setting-Level Maintenance: Realities of Communities

Those on the administrative team for the HKFP who participated in the pilot study shared the realities of working with a community that is consistently underserved. All three participants shared similar sentiments regarding safety from violence and other barriers that may impact a participant's ability to engage in programming over time.

> *"I don't think I've worked in any…community programming job where there hasn't been some like abrupt left turn…Why didn't we have any kids at this program? Oh, it's because there was, you know, an overdose death and there was a shooting…that's why people aren't coming. It's not because of what we're doing." [ID1]*
>
> *"[In relation to challenges in evaluation and program delivery]…A lot of other social issues, systemic issues going on in the neighbourhoods, um, you know, threats of violence, gang activity…" [ID2]*
>
> *"I keep saying like in our, in our programs, I'm like they these like young staff become social workers and they're not but because of that trust and like the kids just like look up to them and develop these like hardcore relationships…we're starting to see that we need a little bit more. Ok. Get that [professional] in… And then they [the professional] talks to them [participants]…Ok, you need counseling, you need addictions help, you need something else. They have that ability to be able to do that. And so I just, I really hope that we could build something like that in to these programs in like high needs areas more." [ID3]*

Discussion

Using the RE-AIM Framework, the purpose of this study was to conduct a summative evaluation of the four-week HKFP to explore its utility as a community-based health promotion

program for families residing in equity-deserving neighbourhoods. Incorporating both qualitative and quantitative approaches was an essential methodological step in collecting rich, meaningful data to represent the participants' lived experiences (Holtrop et al., 2021). While statistically significant changes across most quantitative outcomes were limited, qualitative findings provided insight into how and why participants experienced improvements. In particular, participants described positive shifts in their ability to support healthier family routines and reported increased self-efficacy related to health behaviours. Notably, positive quantitative changes were observed in nutrition-related self-efficacy, and these findings were reinforced by qualitative evidence which also demonstrated improvements in routine-building, parental confidence, and the development of social support and connection among participants.

Minimal statistically significant gains are not uncommon when working with equity-deserving populations, where broader life circumstances and competing demands can influence the extent to which participants are able to fully engage with program delivery and behaviour change efforts (Farias et al., 2024; Holtrop et al., 2021). These contextual realities are therefore an important consideration when interpreting program outcomes thus necessitating the need to collect qualitative data…. Further qualitative exploration revealed positive perceptions of program delivery, with several participants providing sentiments of regret that the HKFP was no longer being offered. Collectively, these findings highlight the perceived value of the program and point to several areas that warrant further discussion, in line with the organization of the RE-AIM Framework.

Reach

Program reach was modest compared to census-based estimates of the Thunder Bay zonings and families who reside in them (Statistics Canada, 2021). The greatest reach was

observed in Central Thunder Bay (P7B) and Westbridge, which aligns with the neighbourhood hub locations identified as equity-deserving during the HKFP's preliminary planning processes. Furthermore, the HKFP engaged participants across a range of ages, income levels, household structures, and cultural backgrounds, suggesting that the program was accessible to a diverse population of participants.

While only 1.57% of the prospective population was reached, it is integral to consider the contextual and structural barriers that influence participation rates within equity-deserving communities. Structural barriers including childcare availability, transportation access, and work schedules, frequently constrain participation and are commonly cited in community-based health promotion research when interpreting a program's reach (Holtrop et al., 2021; Rhodes et al., 2020). For example, a qualitative study focused on the perceptions of service providers of community-based health promotion programs revealed that threats to safety and security in a community negatively impact prospective participants' ability to engage with programming, highlighting the importance of considering broader social disadvantages when evaluating reach (Lawlor et al., 2020). Factors that facilitated and inhibited participation in HKFP are described below.

Facilitators to Attending Programming

Qualitative findings revealed that effective recruitment channels included social media platforms and partnerships with local organizations which helped to boost program awareness. This included collaboration with organizations such as Our Kids Count (OKC), as well as the dissemination of program details through local school boards. These approaches are particularly important, as engagement is often facilitated by working with familiar and trusted community institutions. In fact, multiple studies emphasize that key outcomes of a program, including reach,

are influenced by how a program is conceptualized within the realities of a given community (Lawlor et al., 2020; Williams-Roberts et al., 2015). As such, future community-based program planning should prioritize partnerships with trusted, like-minded organizations to boost credibility and foster engagement. This approach proved beneficial for the HKFP through collaboration with agencies such as OKC, who already had an established presence within the community. Planning efforts should also include the consideration of community-specific risks that may act as barriers to participation; proactively identifying and mitigating these challenges can further enhance program credibility and support higher participation rates among equity-deserving populations (Lawlor et al., 2020). Such risks, along with other barriers such as childcare and transportation, may have been mitigated by the program's hybrid modality. Indeed, attendance for the program's online sessions were highest, with qualitative results revealing that the online sessions were more feasible for participants' busy schedules.

Participants shared through the qualitative interviews that they were primarily motivated to participate in the HKFP to gain knowledge surrounding health behaviours and locally available services, access resources that would benefit themselves and their families, and connect with other caregivers facing similar life circumstances. One participant explained that their reason for attending multiple iterations of the HKFP stemmed from experiencing the program as a "judge-free zone" [Mei], reinforcing the value of social connection and psychological safety in supporting engagement (Caron et al., 2023).

Incentives in the form of grocery store gift cards, provided as an acknowledgement of participation, were described as facilitators rather than primary motivators, by different participants in their interviews. Participants noted that the gift cards helped ease some of the financial pressures associated with rising food costs and supported access to food. At the same

time, many participants emphasized that the knowledge gained through the program, such as child nutrition guidelines, was also a valuable outcome. Taken together, these findings suggest that incentives may have enabled participation rather than drove it. Similar findings have been reported in other like studies, which indicate that caregivers in equity-deserving communities often value family health but face structural limitations, and that incentives can reduce participation barriers without undermining the participants' intentions and motivations (Godrich et al., 2019; Rhodes et al., 2020).

Barriers to Attending Programming

Barriers to participation experienced by participants largely related to scheduling conflicts such as work commitments and childcare responsibilities. Qualitative findings revealed that overlapping obligations such as working later shifts, evening routines with family and children, and extra-curricular activities limited participants' ability to attend sessions consistently. When the program was offered in-person, the HKFP provided on-site childcare services so that caregivers could fully engage with the program. However, transportation remained a barrier, and the program attempted to mitigate this through taxi and bus vouchers.

A systematic review by Solis-Cordero et al. (2022) highlighted limited research on the effectiveness of online program delivery specifically for caregivers of children and called for further study, although the authors concluded that remote program delivery was more effective than no intervention. Many interview participants attended the HKFP during periods of online delivery, during which different barriers emerged. Participants shared that attending sessions virtually from home limited their ability to engage fully as competing demands, such as childminding and household responsibilities, persisted despite the flexibility of remote participation.

Overall, findings related to Reach suggest that although the HKFP engaged a modest proportion of the eligible population, the program was successful in reaching families aligned with the intended target demographic: those residing in equity-deserving neighbourhoods with dynamic family structures that included children. In line with the RE-AIM Framework, Reach was assessed using mixed methods which allowed for examination of not only attendance metrics, but also who participated, how they were recruited, and the contextual factors that shaped engagement (Glasgow et al., 1999; Holtrop et al., 2018; Glasgow et al., 2019). This assessment revealed that many of the participants identified as female, reported low annual income, and spoke English. This approach provided a more nuanced understanding, demonstrating that engagement was influenced not only by level of interest or motivation, but also by competing caregiving and employment that were oftentimes beyond the control of both the program providers and participants alike (Lawlor et al., 2020; Williams-Roberts et al., 2015). As observed in other community-based initiatives (e.g., Kwan et al., 2019; Burke et al., 2015), trusted community partnerships and the provision of incentives remain common and often effective facilitators to support engagement and should be considered in future programming.

Future planning and delivery of community-based health promotion programs should continue to incorporate qualitative assessments of Reach to avoid misinterpretation of attendance rates. Meaningful evaluation is strengthened by approaches that account for structural and social realities and value participant experience alongside quantitative indicators (Glasgow et al., 2019; Kwan et al., 2019; Holtrop et al., 2021).

Effectiveness

Effectiveness encapsulated multiple indicators of participants' health behaviours, including physical activity levels and self-efficacy related to nutrition and physical activity.

Participant responses demonstrated a positive change from baseline to follow-up in nutrition related self-efficacy, which represented the study's strongest quantitative outcome and indicated meaningful shifts in participants' perceived abilities to engage in healthy eating behaviours. Interpretation of effectiveness outcomes is presented below using both quantitative and qualitative findings.

Physical Activity

Quantitative analyses did not yield significant changes in self-reported physical activity across the three timepoints and there was a variety of physical activity scores recorded High variability in responses may be attributable to multiple factors. Participants were asked to report the number of minutes they engaged in physical activity per week; however, responses varied widely, and some values (e.g., "2") suggested potential ambiguity in how the question was interpreted, such as reporting hours rather than minutes. Furthermore, physical activity had the lowest response rate of all quantitative measures (n = 30). It remains unclear whether this variability reflects misunderstanding of the question being asked, or whether additional clarification may have improved response accuracy. Research examining health literacy in equity-deserving populations has shown that misunderstandings are most common in measures requiring numerical recall, abstract framing (i.e., "typical week"), and time estimation (Cho et al., 2020). Recommended improvements include the use of concrete examples of movement, such as requesting that the participant reflect on time spent walking, cleaning, or playing with children, and simplifying recall periods by asking participants to reflect on movement in the previous day rather than a "typical" day or week (Cho et al., 2020; Rhodes et al., 2020). Consistent with RE-AIM applications, the use of mixed methods is strongly recommended to triangulate and contextualize quantitative results (Glasgow et al., 2019), outlined below.

While quantitative results were non-significant, qualitative findings suggested that participants experienced a more nuanced shift in their relationship with physical activity after participating in the HKFP. Participants described reframing physical activity as family-based and began to recognize informal movement as legitimate physical activity, a core concept emphasized during the HKFP's physical activity session. Examples included family walks within the neighbourhood and viewing household chores as a form of movement. This reframing may enhance confidence and emphasize family connection but may not be fully captured by quantitative measures that focus primarily on intensity and duration (Cho et al., 2020). Similar work with equity-deserving populations has highlighted an incongruence between how participants' conceptualize physical activity and how some surveys define exercise, often resulting in underestimation of meaningful informal movement such as walking, household tasks, and caregiving (Prince et al., 2012). These findings underscore the importance of careful vetting of measurement tools, or the use of multiple instruments, as employed in the HKFP, to better capture overall program utility. Naz et al. (2022) argued that misunderstanding survey items reflects limitations of the measurement tool rather than participant failure, and highlights misalignment between instrument design and contextual realities.

Sedentary Behaviour

No significant changes were observed statistically nor descriptively over the three time points regarding sedentary behaviour, with time spent sitting remaining relatively stable. Existing literature suggests that sedentary behaviour can be influenced by a variety of factors, including caregiving responsibilities, employment demands, and housing conditions, all of which are unlikely to change substantially over the course of several weeks (Glasgow et al., 2019). Contrarily, the observed maintenance of sedentary behaviour in the data, which was collected

throughout the COVID-19 pandemic, may reflect a resilience to the broader increase in sedentary time reported during the height of pandemic-related restrictions (Atkinson & Norris, 2023). A study conducted by Sallis et al. (2023) identified the lack of physical activity interventions during the pandemic as an under-studied area and emphasized the need for virtual strategies to mitigate sedentary behaviour during such periods of restricted mobility. Similar to the adaptations made by the HKFP, recommended strategies included telehealth and group-based programming focused on movement (Sallis et al., 2023).

Taken together, these findings suggest that short-term community-based interventions may have limited capacity to reduce sedentary behaviour without targeted, context-specific strategies. Future programming may benefit from incorporating explicit sedentary behaviour reduction components, such as brief movement prompts, family-based activity breaks, or low-burden strategies designed to interrupt prolonged sitting within caregiving and home environments (Atkinson & Norris, 2023; Sallis et al., 2023). Ongoing evaluation using mixed methods is recommended to capture both behavioural shifts and participant perceptions of feasibility, ensuring that sedentary behaviour interventions are both realistic and responsive to the lived experiences of equity-deserving families (Glasgow et al., 2019; Holtrop et al., 2021).

The 12-Item Short-Form Health Survey

Health-related quality of life was captured quantitatively using the SF-12 and subsequent PCS and MCS domains. Physical Component Summary scores did not yield statistically significant results, which is commonly observed in shorter interventions, but remained stable throughout data collection. This stability is notable given the broader challenges associated with the COVID-19 pandemic. Evidence from studies conducted during this period have suggested that disrupted routines and heightened stress impacted on how participants interpreted survey

items and may have contributed to health scores that differed from non-pandemic conditions (Ruotolo et al., 2021).

All MCS scores were nonsignificant, a modest upward trend was observed and aligned with qualitative findings. During the interviews, many participants consistently described the HKFP as a space that fostered peer connection, a well-established contributor to mental wellbeing (Raine et al., 2013). Although these changes were not captured quantitatively, the qualitative findings provide important insight into mental wellbeing among caregivers who may have been experiencing stress or social isolation (Holtrop et al., 2018). A study focused on participant perceptions of the SF-12 noted that some items are oddly worded or clustered in ways that cause confusion (Penton et al., 2022). The study also revealed that examples given in the SF-12 (See Appendix H) altered the respondent's perception of their physical capabilities, and that while they felt they could go for a walk or vacuum, they do not golf and therefore begin to question their ability (Penton et al., 2022). These findings reinforce the importance of qualitative data in interpreting effectiveness outcomes by contextualizing what health means to participants.

Self-Efficacy for Nutrition

Quantitative analyses of self-efficacy for nutrition yielded statistically significant results indicating that participation in the HKFP was associated with increased confidence in healthy eating. Participants reported greater perceived ability to overcome barriers related to nutrition across the three time points. This finding is particularly noteworthy, as self-efficacy is often considered an early indicator of sustained behavioural change (Reicks et al., 2018). Such changes in perceived ability may have been of necessity; many equity-deserving communities were impacted by reduced work hours, increases in food costs, and reduced access to healthy foods during the pandemic (Agurs-Collins et al., 2024). The basic need for nutrition may have

encouraged families to become more resilient, as seen qualitatively, by substituting foods based on budget and fostering family-time by cooking and preparing meals with children.

The significant effect of time was accompanied by a moderate-to-large effect size (η^2 = .11), indicating that the observed change was not only statistically significant but also meaningful in practical terms (Davis et al., 2022). Clinical significance is especially relevant in community-based interventions, where even modest improvements may carry meaningful implications in the presence of socioeconomic barriers (Bader et al., 2023).

Follow-up analysis revealed that increases in self-efficacy from baseline to the 6-week follow-up were maintained beyond the completion of the four-week program, suggesting that participants continued to apply or reflect on program content after the four-week intervention ended. Similar conclusions were drawn in a long-term study conducted by Zanbar and Nouman (2020), who found that stronger perceptions of self-efficacy enhance motivation and adherence, particularly when reinforced through vicarious learning, verbal praise, and shared accomplishments. Recommended strategies to support maintaining and improving self-efficacy include self-monitoring (i.e., keeping a nutrition journal), especially when assessment periods are brief (Zanbar & Nouman, 2020).

In equity-deserving contexts, improved nutrition self-efficacy may reflect greater confidence in modifying dietary guidelines to align with family preferences, financial limitations, and time constraints (Agurs-Collins et al., 2024). This interpretation is supported by qualitative responses in which participants described enhanced confidence in meal planning, preparation, and making healthier substitutions within their means. Prior research further suggests that incorporating group-based, interactive elements, such as shared cooking

experiences used in the HKFP, can foster discussion, feelings of belonging, and sustained engagement (Kwan et al., 2019).

Despite nonsignificant changes in several other health-related behaviours, the observed increase in nutrition-related self-efficacy aligns with existing literature positioning self-efficacy as a precursor to longer-term behavioural change (Agurs-Collins et al., 2024; Zanbar & Nouman, 2020). Taken together, these findings suggest a foundational shift that supports the HKFP's potential for long-term impact and represents a meaningful indicator of the program's overall utility.

The HKFP produced meaningful psychosocial shifts in behaviour perceptions across multiple facets of health. In line with the RE-AIM Framework, Effectiveness was assessed using a combination of quantitative health indicators and qualitative to better understand how program content was applied within the realities of daily life (Glasgow et al., 2019). The non-significant and significant quantitative findings align with other studies on shorter interventions delivered in equity-deserving populations, and underscore the importance of evaluating programs through lenses of relevance, feasibility, and capacity-building for behaviour change (Compernolle et al., 2014; Holtrop et al., 2019).

Adoption

Program planners for the HKFP established partnerships with multiple organizations throughout Thunder Bay that shared aligned goals and had existing community connections. These partnerships were central to building trust within communities and boosting awareness of what the program offered. Similar to findings reported by Burke et al. (2015) in a RE-AIM focused study involving a 4-week lifestyle intervention for children with obesity and their

parents, organizations that supported access to recreational spaces, expertise, and other material resources positively influenced the HKFP's delivery capacity.

Consistent with real-world community settings, adoption for the HKFP was dynamic and at times unpredictable (Zanbar & Nouman, 2020). Organizational limitations, most notably those related to COVID-19 restrictions, led some partners to withdraw services when continued involvement was no longer feasible. Rather than reflecting program weakness, these fluctuations illustrate the realities of community-based program delivery, particularly in contexts characterized by staffing instability and unclear role delineation. The HKFP administrative team noted high staff turnover as well as gaps or redundancies in resources stemming from ambiguity in partner responsibilities (Pearson & Pearson, 2024). Similar findings have been reported in other adoption-focused evaluations, where lack of role clarity has been associated with partner attrition over time (Kwan et al., 2019).

Despite variability in organizational engagement, the HKFP maintained a meaningful presence within the community for both partner organizations and participating families, particularly during the pandemic. Although multi-level organizational collaborations can be difficult to maintain due to staff scheduling and differing pay rates, the HKFP sustained adoption through flexible partnerships and real-time adaptation program planning (Clark et al., 2023). The program's continued delivery, supported by increased reliance on stable partners, highlights its capacity to adapt within constrained systems while preserving core program objectives.

Implementation

Programs Offered

Program planning for the HKFP was shaped by intentional, community-based design, and the need for ongoing adaptability in response to emerging barriers, including the COVID-19

pandemic. While initially designed for in-person delivery, shifting public health restrictions and staff safety concerns necessitated a transition to an online modality. While in-person delivery modalities are often associated with increased social interaction and knowledge retention (Gross et al., 2022), attendance increased once delivery shifted to online programming. Although studies show that in-person modalities may increase such factors, the realities for this demographic showed that flexible and more convenient access to virtual programming enabled them to attend while feeling in-control of the rest of their daily routines.

Flexibility in program delivery was essential, as many changes were not always anticipated. A study examining adaptations to program delivery within a community-based substance use program involving teenagers using the RE-AIM Framework concluded that 79% of adaptations made to program delivery (i.e., removal of part of a presentation, adding a mindfulness activity) were driven by time constraints, group consensus, and participant numbers (Pinheiro-Carozzo et al., 2021). Similarly, while some changes were mandatory for the HKFP (i.e., moving to an online modality to comply with pandemic-related restrictions), others emerged in response to participant preferences and needs, including providing time for participant-led discussions. These adjustments reflected responsiveness rather than deviation from program intent.

Facilitators to Engagement

Interactive and hands-on components of program delivery, such as cooking demonstrations, visual aids, and ingredient provisioning, were consistently identified by participants as important facilitators of engagement. These findings mirror other health promotion studies demonstrating that experiential learning enhances engagement and comprehension (e.g., Schroeder et al., 2017). Notably, the nutrition sessions were the most well-

attended component of the HKFP, which could be attributed to its high level of interaction between participants and program providers, and the immediate applicability of the content.

Barriers to Engagement

Some participants reported limitations related to relevance, as well as pacing and length of particular sessions. Many participants in the qualitative interview shared that they were non-smokers, and as such were not as interested in the smoking cessation session. These findings highlight the importance of maintaining fidelity to core program components while also ensuring to tailor sessions to the needs of the participants. Despite lower perceived personal relevance, interactive discussions during the smoking cessation sessions showed increased awareness of smoking-related risks, modalities of smoking, and cessation strategies. These discussions were participant-led, and it was revealed through fidelity notes that although the topic was not directly applicable to all participants, meaningful conversations took place surrounding health behaviours more broadly.

Overall, findings related to Implementation reveal that the HKFP was delivered as intended with respect to its core components: healthy eating, physical activity, mental health, and smoking cessation. Meaningful adaptations were made with respect to participant needs and contextual constraints, which aligns with Glasgow et al. (2019) and their recommendation that Implementation be measured not by rigidity, but by a program's ability to overcome unanticipated challenges in delivery.

Maintenance

Individual-level Maintenance

At the individual-level, maintenance was observed through participants' qualitative responses which included sustained application of nutrition-related knowledge, establishing and

continuing engagement in family-based routines and activities, and ongoing sharing of resources within their social networks. Although it is common for individual-level Maintenance results to be minimal when assessment timeframes are shorter in duration (i.e., six months or less), these findings suggest that the HKFP may have supported the development of confidence and foundational behaviour, rather than short-term compliance with the program and its content (Glasgow et al., 2019). Furthermore, many participants shared their wishes for continued programming, solidifying the HKFP's impact and role in their family's lives.

Setting-Level Maintenance

At the setting-level, maintenance was described to be constrained by systemic challenges including neighbourhood safety concerns, gaps in service-provision, and housing instability. Administrative team members emphasized that fluctuations in attendance and engagement were often linked to acute events experienced by the community rather than program relevance or quality. Despite these challenges the HKFP demonstrated considerable setting-level maintenance by operating across multiple years amid interruptions, staffing changes, and delivery adaptations. Much of this can be attributed to the HKFP being embedded in existing systems such as the TBDHU, City of Thunder Bay, and OKC, which enhanced stability and resilience to such disruptions in service (Kwan et al., 2019).

By adjusting supports in response to emerging barriers (i.e., providing on-site childcare, or tablets for online data collection), the HKFP demonstrated sustainable efforts to maintain access and participation (Glasgow et al., 2019). Although maintenance literature often emphasizes the need for longer follow-up periods to confirm sustained behaviour change (Glasgow et al., 2019; Holtrop et al., 2021) the HKFP's ability to persist, adapt, and remain

relevant within a complex system highlights its capacity to meaningfully operate within an equity-deserving community over time.

Strengths and Limitations

A primary strength of this study was the application of the RE-AIM Framework, which enabled findings to be contextualized beyond outcome-based measures and captured the real-world delivery of a community-based program. Additionally, the use of a mixed-methods approach allowed for data to inform one another. This approach supported examination of feasibility and clinically meaningful outcomes relevant to equity-deserving communities (Glasgow et al., 1999).

Another key strength of the HKFP was its adaptability to real-world constraints, as documented through fidelity notes and the program's ability to maneuver to online delivery. The use of qualitative methods further strengthened interpretation of the program's effectiveness by providing rich, detailed accounts of participant experiences that helped contextualize and explain quantitative outcomes further.

Some limitations should be noted. The relatively short intervention duration and assessment follow-up period limited the ability to detect change in behaviours such as sedentariness and physical activity, which are heavily influenced by environmental and structural constraints that are unlikely to shift over brief timeframes (Rizvi et al., 2021). Additionally, external disruptions, including the COVID-19 pandemic, posed substantial challenges to program planning and delivery. While the HKFP program adapted in response, factors outside the control of the program including heightened stress, disrupted routines, and evolving public health restrictions may have impacted overall program engagement and effectiveness.

Finally, as commonly seen in equity-deserving communities, reliance on self-reported quantitative measures posed additional limitations. Lack of clarity in some survey items may have resulted in sincere but inaccurate responses and could have contributed to variability in response rates across measures. Although data imputation, an approach often used to strengthen incomplete datasets (Li et al., 2016), was considered for variables with missing data, the researcher instead interpreted missing data as meaningful in the context of the study population. Consistent with prior research focused on equity-deserving populations, missing data can provide real-life, potential insight into patterns of participant engagement (Penton et al., 2022). Careful consideration of missing data is warranted and may be of value to future researchers conducting community-based health promotion programs in a similar context (Holtrop et al., 2021).

Recommendations for Future Studies

Future iterations of the HKFP or similar programming should consider extending program duration and strengthening follow-up supports to facilitate maintenance of behaviour change. For example, a study focused on the application of the RE-AIM Framework in various community-based studies found that long-term assessment (i.e., more than 6 months) displayed attrition from health habits gained immediately following the intervention when assessed again a year later (Kwan et al., 2019). These assessments provide integral information, including which programs fit into daily life rather than those that worked only during structured delivery (Kwan et al., 2019). From an evaluation standpoint, continued application of the RE-AIM Framework will expand on what is already currently available in the literature. This framework can be used in planning, implementing, and assessing community programs; future studies may integrate the framework to help pragmatic planning and delivery of content (Holtrop et al., 2021). Assessments revealed statistically significant improvements in nutrition self-efficacy, suggesting

that longer intervention timeframes may be useful for amplifying this positive change further. Moreover, research in the health behaviour change domain suggests that modifications to self-efficacy are a necessary precursor to actual habitual change and related physical changes (references). Through its focus on …, this study demonstrated that the HKFP offered a valuable and responsive model for community-based health promotion in equity-deserving neighbourhoods. Despite setbacks related to the pandemic, the HKFP's adaptability allowed for programming to continue. Future considerations of online delivery modes should include the use of breakout rooms to further support group discussions and enhance cohesion, as well as endeavour to offer the programming at different times to support conflicting schedules.

Conclusion and Future Considerations

This study provided a comprehensive examination of the HKFP to assess its utility as a community-based health promotion program for families living in equity-deserving neighbourhoods. Guided by the RE-AIM Framework and grounded in a pragmatic mixed methods design, this study moved beyond strictly outcome-based results and examined how, for whom, and under what conditions a short-term community-based health promotion program can generate meaningful impact for participants. Collectively, these results highlight the value of participant-centred and contextually responsive programming, while underscoring the realities that shape engagement and sustainability in equity-deserving communities.

While large, immediate changes in health behaviours were limited, the program demonstrated positive and meaningful impacts through improvements in nutrition-related self-efficacy, reframing of health behaviours, and strengthened social connection among those participating in the program. From a quantitative standpoint, a modest proportion of the estimated eligible population was reached by the HKFP. Qualitatively, it was understood that

Reach was most successful in the neighbourhoods that were purposefully targeted, and that structural barriers were real obstacles impacting a participant's ability to engage. Childcare, transportation, neighbourhood safety concerns, and conflicting obligations are some of the factors that must be considered when assessing Reach. The qualitative findings make clear that lower attendance does not necessarily reflect a lack of interest in the program, and the HKFP was successful in reaching families who were both willing and able to participate within these realities. Furthermore, based on quantitative measures taken for the HKFP, 13 datasets were identified to be repeat participants, suggesting that the HKFP was a positive experience. Statistically significant results were produced through analysis of the dimension Effectiveness, proving the impact of the HKFP to be a positive one with respect to self-efficacy and social connection. Adoption of the HKFP proved meaningful for many organizations in Thunder Bay, however, pandemic-related restrictions limited the potential for collaboration. Implementation, from a participant perspective, was flexible and responsive to participant needs. Adaptations made were for the betterment of participants and program delivery overall. Maintenance, although light in evidence, demonstrated some qualitative signs that behaviour changes were becoming foundational for some participants in their daily lives, and further analysis timeframes may have yielded more significant changes.

Future iterations of the HKFP or similar programming should consider extending program duration and strengthening follow-up supports to facilitate maintenance of behaviour change. For example, a study focused on the application of the RE-AIM Framework in various community-based studies found that long-term assessment (i.e., more than 6 months) displayed attrition from health habits gained immediately following the intervention when assessed again a year later (Kwan et al., 2019). These regular check-ins can provide integral information,

including which program elements fit into daily life in the absence of a formal intervention (Kwan et al., 2019). Thus, more frequent assessments or booster sessions may be appropriate in this context to enhance feelings of support and prevent relapse. From an evaluation standpoint, continued application of the RE-AIM Framework will expand on what is already currently available in the literature. This framework can be used in planning, implementing, and assessing community programs; future studies may integrate the framework to help pragmatic planning and delivery of content (Holtrop et al., 2021). Assessments revealed statistically significant improvements in nutrition self-efficacy, suggesting that longer intervention timeframes may be useful for amplifying this positive change further. Moreover, research in the health behaviour change domain suggests that modifications to self-efficacy are a necessary precursor to actual habitual change and related physical changes (references). Through its focus on …, this study demonstrated that the HKFP offered a valuable and responsive model for community-based health promotion in equity-deserving neighbourhoods. Despite setbacks related to the pandemic, the HKFP's adaptability allowed for programming to continue. Future considerations of online delivery modes should include the use of breakout rooms to further support group discussions and enhance cohesion, as well as endeavour to offer the programming at different times to support conflicting schedules.

For researchers, this evaluation reinforces the importance of utilizing mixed method study designs, especially when working with equity-deserving communities, to contextualize and enrich quantitative findings. For community organizations alike, this study highlights the importance of collaborative communication, clear delineations in roles, and flexibility in offering programming. Interactive elements such as cooking classes and peer discussions were central to participant engagement, along with multiple facilitating factors such as providing transportation,

childcare, and tailoring content based on participant wants and needs. These findings support the importance of mixed methods to prioritize not only outcomes but also lived experience and capacity-building habits. Health is nuanced, many factors impede one's ability to achieve optimal health, and the assessment of the HKFP proved its utility in the early stages of behaviour change in an equity-deserving community.

References

Agurs-Collins, T., Alvidrez, J., ElShourbagy Ferreira, S., Evans, M., Gibbs, K., Kowtha, B., Pratt, C., Reedy, J., Shams-White, M., & Brown, A. (2024). Perspective: Nutrition health disparities framework: A model to advance health equity. *Advanced Nutrition, 15*(4). https://doi.org/10.20935/AcadEng7320

Alvarez, E., Qutob, M., Mbuagbaw, L., Lavis, J., Lokker, C., Walli-Attaei, M., Samaan, Z., Sutton, A., Singh, J., Feeny, D., & Fortuna, J. (2019). Feasibility and implementation of a healthy lifestyles program in a community setting in Ontario, Canada: Protocol for a pragmatic mixed methods pilot study. *BMJ Open, 9*(10). https://doi.org/10.1136/bmjopen-2019-031298

Anderson, K. K., Clemens, K. K., Le, B., Zhang, L., Comeau, J., Tarasuk, V., & Shariff, Z. S. (2023). Household food insecurity and health service use for mental and substance use disorders among children and adolescents in Ontario, Canada. *CMAJ, 195*(28). https://doi.org/10.1503/cmaj.230332

Atkinson, F. H., & Norris, A. (2023). A health behaviour pandemic: The COVID-19 pandemic has impacted the physical activity, sleep, and sedentary behaviour of already-struggling Canadians. *Heliyon, 9*(8). https://doi.org/10.1016/j.heliyon.2023.e19005

Australian Government. (2025). *Healthy dads, healthy kids.* Australian Institute of Family Studies. https://aifs.gov.au/research_programs/evidence-and-evaluation-support/cfc-program-profiles/healthy-dads-healthy-kids

Bader, B., Coenen, M., Hummel, J., Schoenweger, P., Voss, S. & Jung-Sievers, C. (2023).

Evaluation of community-based health promotion interventions in children and adolescents in high-income countries: A scoping review on strategies and methods used. *BMC Public Health, 23*(845). https://doi.org/10.1186/s12889-023-15691-y

Bayes, R., Johnson, D., Hadley, A., & Pearson, E. (2025, January 22). *Fostering inclusive joy: The "I Love To" Program in Thunder Bay* [PowerPoint slides]. Thunder Bay District Health Unit. https://docs.google.com/presentation/d/1VUI-MpZUClugn8jRJXBhfufwWQB5ctfL/edit#slide=id.p1

Bourke-Taylor, M. H., Joyce, S. K., Grzegorczyn, S., & Tirlea, L. (2022). Mental health and health behaviour changes for mothers of children with a disability: Effectiveness of a health and wellbeing workshop. *Journal of Autism and Developmental Disorders, 52.* 508-521. https://doi.org/10.1007/s10803-021-04956-3

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(*2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V. & Clarke, V. (2019). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health 13*(2)*,* 201 – 216. https://doi.org/10.1080/2159676x.2019.1704846

Bronfenbrenner U. (1977). Toward an experimental ecology of human development. *American Psychology, 32,* 513–531. https://doi.org/10.1037/0003-066X.32.7.513

Burdine, N. J., Felix, R. M., Abel, L. A., Wiltraut, J. C. & Musselman, J. Y. (2000). The SF-12 as a population health measure: An exploratory examination of potential for an application. *Health Services Research, 35*(4), 885 – 904. https://doi.org/10.20935/AcadEng7320

Burke, M. S., Shapiro, S., Petrella, J. R., Irwin, D. J., Jackman, M., Pearson, S. E., Prapavessis,

H., & Shoemaker, J. (2015). Using the RE-AIM Framework to evaluate a community-based summer camp for children with obesity: A prospective feasibility study. *BMC Obesity, 2*(21). https://doi.org/10.1186/s40608-015-0050-8.

Canadian Society for Exercise Physiology. (2025). *24-hour movement guidelines.* https://csepguidelines.ca/guidelines/children-youth/

Caron, M. R., Noel, K., Reed, N. R., Sibel, J., & Smith, J. H. (2023). Health promotion, health protection, and disease prevention: Challenges and opportunities in a dynamic landscape. *AJPM Focus, 3*(1). https://doi.org/10.1016/j.focus.2023.100167

Cho, M., Lee, Y., Lim, S., & Lee, H. (2020). Factors associated with the health literacy on social determinants of health: A focus on socioeconomic position and work environment. *International Journal of Environmental Research and Public Health, 17*(18). https://doi.org/10.3390/ijerph17186663

Choi, H. K., & Ramaj, S. (2024). Living arrangements and housing affordability issues of young adults in Canada: Differences by nativity status. *Canadian Review of Sociology, 61*(1). https://doi.org/10.1111/cars.12462

City of Thunder Bay. (2024). *Children and youth programs.* Thunder Bay. https://www.thunderbay.ca/en/recreation/children-and-youth-programs.aspx

Clark, R., Gaber, J., Datta, J., Talat, S., Bomze, S., Marentette-Brown, S., & Gagnon, C. (2023). Understanding collaborative implementation between community and academic partners in a complex intervention: A qualitative descriptive study. *BMC Health Services Research, 23(*1), 606. https://doi.org/10.1186/s12913-023-09617-y

Compernolle, S., De Cocker, K., Lakerveld, J., Mackenbach, J. D., Nijpels, G., Oppert, J., Rutter,

H., Teixeira, P. J., Cardon, G., & De Bourdeaudhuij, I. (2014). A RE-AIM evaluation of evidence-based multi-level interventions to improve obesity-related behaviours in adults: A systematic review (the SPOTLIGHT Project). *International Journal of Behavioral Nutrition and Physical Activity, 11,* 147. https://doi.org/10.1186/s12966-014-0147-3

Cooper, G., Hoffman, K., & Powell, B. (2009). *Circle of Security Parenting: A Relationship Based Parenting Program: Facilitator DVD Manual (Version 5.0).* Spokane, WA: Circle of Security International.

Davey, B., Sinha, R., Lee, J. H., Gauthier, M., & Flores, G. (2020). Social determinants of health and outcomes for children and adults with congenital heart disease: A systematic review. *Pediatric Research, 89*(2). 275–294. https://doi.org/10.1038/s41390-020-01196-6

De Meij, J. S. B., Chinapaw, M. J. M., Kremers, S. P. J., Van der Wal, M. F., Jurg, M. E., & Van Mechelen, W. (2010). Promoting physical activity in children: The stepwise development of the primary school-based JUMP-in intervention applying the RE-AIM evaluation framework. *British Journal of Sports Medicine, 44(*12), 879. https://doi.org/10.1136/bjsm.2008.053827

De las Nueces, D., Hacker, K., DiGirolamo, A., & Hicks, L. S. (2012). A systematic review of community-based participatory research to enhance clinical trials in racial and ethnic minority groups. *Health Services Research, 47*(3 Pt 2), 1363–1386. https://doi.org 10.1111/j.1475-6773.2012.01386.x

Downing, J., Rose, C. T., Saini, P., Matata, B., McIntosh, z., Cornerford, T., Wilson, K., Pemberton, A., Harper, M. L., Shaw, M., Daras, K., & Barr, B. (2020). Impact of a community-based cardiovascular disease service intervention in a highly deprived area. *Heart, 106*(5), 374 – 379. https://doi.org/10.1136/heartjnl-2019-315047

Farias, L., Hellenius, M., Nyberg, G., & Andermo, S. (2024). Building a healthy generation together: Parents' experiences and perceived meanings of a family-based program delivered in ethnically diverse neighbourhoods in Sweden. *International Journal for Equity in Health, 23*(1). https://doi.org/10.1186/s12939-024-02271-8

Finan, H. P., & Griffiths, R. R. (2021). Effects of Psilocybin-assisted therapy on major depressive disorder: A randomized clinical trial. *The Journal of the American Medical Association, 78*(5). https://doi.org/10.1001/jamapsychiatry.2020.3285

Giles, E. L., Robalino, S., McColl, E., Sniehotta, F. F., & Adams, J. (2014). The effectiveness of financial incentives for health behaviour change: Systematic review and meta-analysis. *Plos One*, *9*(3), 1-16. https://doi.org/10.1371/journal.pone.0090347

Glasgow R. E., Vogt T. M., & Boles S. M. (1999). Evaluating the public health impact of health promotion interventions: The RE-AIM framework. *Am J Public Health, 89*(9). https://doi.org/10.2105/ajph.89.9.1322

Glasgow, E. R., Harden, S. M., Gaglio, B., Rabin, B., Smith, M. L., Porter, G. C., Ory, M. G., & Estabrooks, P. A. (2019). RE-AIM planning and evaluation framework: Adapting to new science and practice with a 20-year review. *Frontiers in Public Health, 7,* 64. https://doi.org/10.3389/fpubh.2019.00064

Godrich, L. S., Loewen, K. O., Blanchet, R., Willows, N. & Veuglers, P. (2019). Canadian children from food insecure households experience low self-esteem and self-efficacy for healthy lifestyle choices. *Nutrients, 11*(3). https://doi.org/10.3390/nu11030675

Government of Canada. (2017). *Ottawa charter for health promotion: An international*

conference on health promotion. Canada. https://www.canada.ca/en/public-health/services/health-promotion/population-health/ottawa-charter-health-promotion-international-conference-on-health-promotion.html.

Government of Canada (2023, December 29). *What we heard: 2023 roundtables on healthy living in Canada.* Canada. https://www.canada.ca/en/public-health/services/publications/healthy-living/what-we-heard-2023-roundtables.html

Government of Canada (2026, January 27). *Community action program for children (CPAC).* Canada. https://www.canada.ca/en/public-health/services/child-infant-health/supports-programs-pregnancy/community-action-prenatal-child-health-program.html

Government of Canada (2017. March 11). *How healthy are Canadians?* Canada. https://www.canada.ca/en/public-health/services/publications/healthy-living/how-healthy-canadians.html

Government of Canada. (2025, December 23). *Economic profile: Thunder Bay (CA), Ontario.* Canada. https://www.canada.ca/en/immigration-refugees-citizenship/campaigns/immigration-matters/local-economies/thunder-bay.html.

Government of Canada. (2025, October 22). *Food and Nutrition.* Canada. https://food-guide.canada.ca/en/

Green, L. and Kreuter, M. (2004) *Health program planning: An educational and ecological approach* (4th Edition). McGraw Hill, New York.

Griffith, M. D., Efird, R. C., Baskin, L. M., Hooper, W. M., Davis, E. R. & Resincow, K. (2024). Cultural sensitivity and cultural tailoring: Lessons learned and refinements after two decades of incorporating culture in health communication research. *Annual Review of Public Health, 45,* 195 – 212. https://doi.org/10.1146/annurev-publhealth-060722-031158

Gross, G., Ling, R., Richardson, B., & Quan, N. (2022). In-person or virtual training?: Comparing the effectiveness of community-based training. *American Journal of Distance Education, 37*(1), 66 – 77. https://doi.org/10.1080/08923647.2022.2029090

Harrison, R., Blickem, C. & Vassilev, I. (2019). Asset-based community development: Narratives, practice, and conditions of possibility: A qualitative study with community practitioners. *SAGE Open, 9*(1). https://doi.org/10.1177/2158244018823081

Holtrop, J. S., Rabin, B. A., & Glasgow, R. E. (2018). Qualitative approaches to use of the RE-AIM framework: Rationale and methods. *BMC Health Services Research, 18*(1). https://doi.org/10.1186/s12913-018-2938-8

Holtrop, J. S., Estabrooks, P. A., Gaglio, B., Harden, S. M., Kessler, R. S., King, D. K., Kwan, B., Ory, M. G., Rabin, B. A., Shelton, R. C., & Glasgow, R. E. (2021). Understanding and applying the RE-AIM framework: Clarifications and resources. *Journal of Clinical and Translational Science, 5*(1). https://doi.org/10.1017/cts.2021.789

Isokuortti, N., Julkunen, I., Jäppinen, M., Pasanen, K., & Nikula, I. (2024). Features and outcomes of community–academic partnerships in social work: a scoping review. *European Journal of Social Work, 27*(6), 1178 – 1200. https://doi.org/10.1080/13691457.2024.2309526

Janus, M., Brownell, M., Reid-Westoby, C., Pottruff, M., Forer, B., Guhn, M., & Duku, E. (2024). Neighbourhood-level socioeconomic status and prevalence of teacher-reported health disorders among Canadian kindergarten children. *Frontiers in Public Health.*

Kangwanrattanakul, K. (2025). Psychometric properties of the 12-item short form health survey version 2 among general Thai samples: A Rasch analysis. *Journal of Pharmaceutical Policy and Practice, 18*(1). https://doi.org/10.1080/20523211.2025.2551224

Kenney, R. R., Klocko, R. P., Manheim, C. E., Mog, A. C., & Young, J. P. (2023). Applying RE-AIM to evaluations of veterans' health administration enterprise-wide initiatives: Lessons learned. *Frontiers in Health Services, 3*. https://doi.org/10.3389/frhs.2023.1209600

Kowalski, K. C., McHugh, T. L. F., Sabiston, C. M., & Ferguson, L. J. (2018). *Research methods in kinesiology*. Oxford University Press.

Kilanowski, F. J. (2017). Breadth of the Socio-Ecological Model. *Journal of Agromedicine, 22*(4), 295-297. https://doi.org/10.1080/1059924X.2017.1358971

Kretzman, J., & McKnight, J. P. (1996). Assets-based Community Development. *National Civic Review*, *85*(4), 23-29. https://doi.org/10.1002/ncr.4100850405

Kwan, B. M., McGinnes, H. L., Ory, M. G., Estabrooks, P. A., Waxmonsky, J. A., & Glasgow, R. E. (2019). RE-AIM in the real world: Use of the RE-AIM framework for program planning and evaluation in clinical and community settings. *Frontiers in Public Health, 7.* https://doi.org/10.3389/fpubh.2019.00345

Lacey, K. K., Briggs, Q. A., Park, J. & Jackson, S. J. (2021). Social and economic influences on disparities in the health of racial and ethnic group Canadian immigrants. *Canadian Journal of Public Health, 112,* 482 – 492. https://doi.org/10.17269/s41997-020-00446-8

Lappan, N. S., Carolan, M., Parra-Cardona, J. R., & Weatherspoon, L. (2020). Promoting healthy eating and regular physical activity in low-income families through family-centered programs: Implications for practice. *The Journal of Primary Prevention, 41,* 503-528. https://doi.org/10.1007/s10935-020-00612-1

Lassetter, J. H., Macintosh, C. I., Williams, M., Driessnack, M., Ray, G., &Wisco, J. J. (2018). Psychometric testing of the healthy eating and physical activity self-efficacy questionnaire and the healthy eating and physical activity behavior recall questionnaire

for children. *Journal for Specialists in Pediatric Nursing, 23*(2). https://doi.org/10.1111/jspn.12207

Lawlor, R. E., Cupple, E. M., Donelly, M., & Tully, A. M. (2020). Implementing community-based health promotion in socio-economically disadvantaged areas: A qualitative study. *Journal of Public Health, 42*(4), 839-847. https://doi.org/10.1093/pubmed/fdz167

Lehning, A. J., Smith, R. J., & Kim, K. (2016). "Friendly" initiatives: An emerging approach to improve communities for vulnerable populations. *Journal of Policy Practice, 16*(1), 46–58. https://doi.org/10.1080/15588742.2015.1125331

Li, P., Stuart, A. E., & Allison, B. A. (2016). Multiple imputation: A flexible tool for handling missing data. *Journal of the American Medical Association, 314*(18). https://doi.org/10.1001/jama.2015.15281

Marmot, M. & Wilkinson, R. (Eds.). (2006). *Social determinants of health* (2nd ed.). Oxford University Press. https://doi.org/10.1093/ije/dyl121

Maxwell, E. A., Jo, M. A., Chin, S., Lee, K. & Bastani, R. (2008). Impact of a print intervention to increase mammography screening among Korean American women enrolled in the National Breast and Cervical Cancer Early Detection Program. *Cancer Detection and Prevention, 32*(3), 229-235. https://doi.org/10.1016/j.cdp.2008.04.003

McAuley, E. & Mihalko, S.L. (1998). Measuring exercise-related self-efficacy. In J. L. Duda (Ed.), *Advances in Sport and Exercise Psychology Measurement* (pp. 371-380). Morgantown, WV: Fitness Information Technology Inc.

Miao, Q., Dunn, S., Wu Wen, S., Lougheed, J., Yang, P., Davies, M., Lavin, C., Walker, M.

(2023). Association between maternal marginalization and infants born with congenital heart disease in Ontario Canada. *BMC Public Health, 23*(790). https://doi.org/10.1186/s12889-023-15660-5

Mikkelsen, B. E., Novotny, R., & Gittelsohn, J. (2016). Multi-level, multi-component approaches to community-based interventions for healthy living: A three-case comparison. *International Journal of Environmental Research and Public Health, 13*(10), 1023. https://doi.org/10.3390/ijerph13101023

Minority Rights Group. (2020). *Canada.* Minority Rights. https://minorityrights.org/country/canada/.

Morgan, J. P., Collins, E. C., Lubans, R. D., Callister, R., Lloyd, B. A., & Plotnikoff, C. R. (2019). Twelve-month outcomes of a father-child lifestyle intervention delivered by trained local facilitators in underserved communities: The Healthy Dads Healthy Kids dissemination trial. *Translational Behavioural Medicine, 9*(3), 560-569. https://doi.org/10.1093/tbm/ibz031

Naz, N., Gulab, F., & Aslam, N. (2022). Development of qualitative semi-structured interview guide for case study research. *Competitive Social Sciences Research Journal, 3*(2), 42-52. https://cssrjournal.com/index.php/cssrjournal/article/view/170

Nevard, I., Gellatly, J., Brooks, H., & Bee, P. (2024). Conceptualizing the social networks of children of parents with serious mental illness: A thematic analysis. *Frontiers in Psychology, 15.* https://doi.org/10.3389/fpsyg.2024.1383532

Nicholson, M. L., Schwirian, M. P., & Groner, A. J. (2015). Recruitment and retention strategies in clinical studies with low-income and minority populations: Progress from 2004-2014. *Contemporary Clinical Trials, 45*(1). 34-40. https://doi.org/10.1016/j.cct.2015.07.008

Nutrition and Food Literacy Canada. (2023). *About Nutrition and Food Literacy in Canada.* Nutrition and Food Literacy. https://www.nutritionandfoodliteracy.org/

Ogundele, O. M. (2018). Behavioural and emotional disorders in childhood: A brief overview for pediatricians. *World Journal of Clinical Pediatrics, 7*(1). https://doi.org/10.5409/wjcp.v7.i1.9

Ontario HIV Epidemiology and Surveillance Initiative. (2021). *Technical notes: Health regions.* Ontario HIV Epidemiology and Surveillance Initiative. https://www.ohesi.ca/technical-notes/health-regions/

Ontario. (2026, March 5). Find an EarlyON child and family centre. Ontario. https://www.ontario.ca/page/find-earlyon-child-and-family-centre

Ontario Agency for Health Protection and Promotion (2023). *Early years risk indicators using data from the Canadian health survey on children and youth 2019.* Public Health Ontario. https://www.publichealthontario.ca/-/media/Documents/C/24/chscy-early-years-risk-indicators.pdf?rev=65eca27e8cea4c858f2e8e448ee285cf&sc_lang=en

Our Kids Count. (2016). *About us.* Our Kids Count. https://www.ourkidscount.ca/about-okc/

Parcel, G.S., Edmundson, E., Perry, C. L., Feldman, H. A., O'Hara-Tompkins, N., Nader, P. R., Johnson, C. C., & Stone, E. J. (1995). Measurement of self-efficacy for diet-related behaviours among elementary school children. *Journal School of Health, 65*(1), 23 – 27. https://doi.org/10.1111/j.1746-1561.1995.tb03335.x

ParticipACTION. (2024). *2023 – 2024 Impact Report: Moving Canada into action.* https://www.participaction.com/about/our-impact/.

Pearson, E., Harvey, J., Hurley, M., Holla, V., Mushquash, A., & Te Hiwi, B. (2017). Blucher

Windsor Picton partnership: Using the RE-AIM Framework to evaluate a neighbourhood-based health promotion project: Final report. *Centre for Rural and Northern Health Research.*

Pearson, E. (2021). Healthy Kids HOME (Health on the Move for Equity) Program: Examining the Feasibility of a Neighborhood-based Service Model for Health Promotion in Vulnerable Children and Families (PHAC) [Research ethics application]. Lakehead University.

Pearson, E., & Pearson, H. (2024). Exploring the wins and challenges of implementing Healthy Kids HOME: A community-based health promotion program [Unpublished manuscript]. Department of Kinesiology, Lakehead University.

Penton, H., Dayson, C., Hulme, C., & Young, T. (2022). A qualitative investigation of older adults' conceptualization of quality of life and a think-aloud content validation of the EQ-5D-5L, SF-12v2, Warwick Edinburgh mental wellbeing scale, and office of national statistics-4. *Value Health, 25*(12). https://doi.org/10.1016/j.jval.2022.04.1735

Pinheiro-Carozzo, N. P., Murta, S. G., Vinha, L. G., da Silva, I. M., & Fontaine A. M. (2021). Beyond effectiveness of the strengthening families program: A scoping RE-AIM-based review. *Psicologia: Reflexão e Crítica, 34*(1), 16. https://doi.org/10.1186/s41155-021-00182-z

Pitonyak, S. J., Souza, K., Umeda, C., & Jirikowic, T. (2021). Using a health promotion approach to frame parent experiences of family routines and their significance for health and well-being. *Journal of Occupational Therapy, Schools, & Early Intervention, 15*(4). https://doi.org/10.1080/19411243.2021.1983499

Prince, S. A., Kristjansson, E. A., Russell, K., Billette, J-M., Sawada, M. C., Ali, A., Tremblay,

M. S., & Prud'homme, D. (2012). Relationships between neighborhoods, physical activity and obesity: A multilevel analysis of a large Canadian city. *Obesity, 20*(10), 2093-2100. https://doi.org/10.1038/oby.2011.392

QualityMetric. (2025). The SF-12v2 PRO Health Survey. QualityMetric. https://www.qualitymetric.com/health-surveys/the-sf-12v2-pro-health-survey/.

Raine, D. K., Plotnikoff, R., Schopflocher, D., Lytvyak, E., Nykiforuk, I. J. C., Storey, K., Ohinmaa, A., Purdy, L., Veugelers, P., & Wild, C. (2013). Healthy Alberta communities: Impact of a three-year community-based obesity and chronic disease prevention intervention. *Preventative Medicine, 57*(6). https://doi.org/10.1016/j.ypmed.2013.08.024

Raphael, D. (2010). The health of Canada's children: Part II: Health mechanisms and pathways. *Pediatric Child Health, 15*(2). https://doi.org/10.1093/pch/15.2.71

Resnicow, K., Braithwaite, R., Ahliwalia, J., & Dilorio, C. (2000). Cultural sensitivity in public health. *Health Issues in the Black Community,* 516-542. San Francisco: Jossey-Bass.

Rhodes, E. R., Guerrero, D. M., Vanderloo, M. L., Barbeau, K., Birken, S. C., Chaput, J., Faulkner, G., Janssen, I., Madigan, S., Masse, C. L., McHugh, T., Perdew, M., Stone, K., Shelley, J., Spinks, N., Tamminen, A. K., Tomasone, R. J., Ward, H., Welsh, F., & Tremblay, S. M. (2020). Development of a consensus statement on the role of the family in the physical activity, sedentary, and sleep behaviours of children and youth. *International Journal of Behavioural Nutrition and Physical Activity, 17*(74). https://doi.org/10.1186/s12966-020-00973-0

Rizvi, A., Wasfi, R., Enns, A. & Kristjansson, E. (2021). The impact of novel and traditional food bank approaches on food insecurity: A longitudinal study in Ottawa, Canada. *BMC Public Health, 21*(771). https://doi.org/10.1186/s12889-021-10841-6

Robinson, R. S. (2014). Purposive sampling. *Springer.* https://doi.org/10.1007/978-94-007-0753-5_2337

Ruotolo, I., Berardi, A., Selitto, G., Panuccio, F., Polimeni, A., Valente, D. & Galeoto, G. (2021). Criterion validity and reliability of SF-12 Health Survey Version 2 (SF-12v2) in a student population during Covid-19 pandemic: A cross-sectional study. *Depression Research and Treatment.* https://doi.org/10.1155/2021/6624378

Sallis, F. J., Adlakha, D., Oyeyemi, A., & Salvo, D. (2023). Public health research on physical activity and COVID-19: Progress and updated priorities. *Journal of Sport and Health Science, 12*(5). https://doi.org/10.1016/j.jshs.2023.04.002

Sanders, M. R. (2023). The Triple P system of evidence-based parenting support: Past, present and future directions. *Clinical Children and Family Psychology Review, 26*(4), 880 – 903. https://doi.org/10.1007/s10567-023-00441-8

Schroeder, K., Ratcliffe, J. S., Perez, A., Earley, D., Bowman, C., & Lipman, H. T. (2017). Dance for health: An intergenerational program to increase access to physical activity. *Journal of Pediatric Nurses, 37.* https://doi.org/10.1016/j.pedn.2017.07.004

Soh, S., Morello, R., Ayton, D., Ahern, S., Scarborough, R., Zammit, C., Brand, M., Stirling, G. R. & Zalcberg, Z. (2021). Measurement properties of the 12-item short form health survey version 2 in Australians with lung cancer: A Rasch analysis. *Health and Quality of Life Outcomes, 19*(157). https://doi.org/10.1186/s12955-021-01794-w

Solis-Cordero, K., Duarte, L., & Fujimori, E. (2022). Effectiveness of remotely delivered parenting programs on caregiver-child interaction and child development: A systematic review. *Journal of Child and Family Studies, 31*(11). https://doi.org/10.1007/s10826-022-02328-8

Statistics Canada. (2019, October 22). *Census metropolitan area of Thunder Bay, Ontario.* Statistics Canada. https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00014/cma-rmr26-eng.htm.

Statistics Canada. (2023). *Census Profile* [table]. 2021 Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E (accessed October 23, 2025).

Statistics Canada. (2024, September 4). *Canada at a glance: Health.* Statistics Canada. https://www150.statcan.gc.ca/n1/pub/12-581-x/2023001/sec8-eng.htm

Stoewen, L. D. (2017). Dimensions of wellness: Change your habits, change your life. *The Canadian Veterinary Journal, 58*(8), 861 - 862. https://pmc.ncbi.nlm.nih.gov/articles/PMC5508938/.

Tarasuk, V., Li, T., & St-Germain, F. A. (2021). Household food insecurity in Canada. University of Toronto. https://proof.utoronto.ca/wp-content/uploads/2022/08/Household-Food-Insecurity-in-Canada-2021-PROOF.pdf.

TBDHU. (2026, January 16). Triple P Positive Parenting Program. Thunder Bay District Health Unit. https://www.tbdhu.com/health-topics/parenting/triple-p-positive-parenting-program.

TBDHU. (2025, October 20). Programs & Services. Thunder Bay District Health Unit. https://www.tbdhu.com/about-us/programs-services.

Vanderloo, M. L., Bruijns, A. B., Kuzik, N., Stone, E., & Tremblay, S. M. (2025). Impact of the ParticipACTION report card on physical activity for children and youth in Canada: 2015-2024. *Journal of Exercise Science & Fitness, 23*(2). https://doi.org/10.1016/j.jesf.2025.01.005

Williams-Roberts, H., Jefferey B., Johnson, S., & Muhajarine, N. (2015). The effectiveness of healthy community approaches on positive health outcomes in Canada and the United States. *Social Sciences, 5*(3). https://doi.org/10.3390/socsci5010003

Weiss, L., Quint, E., Leto, C., Redrovan, A., Fernandes, M., Lamourt, K., Edgar, C. & Reso, A. (2020). Evaluation of an integrated health promotion program for a low-income urban population: Findings and lessons learned. *Public Health Nursing, 38*(4), 571-578. https://doi.org/10.1111/phn.12839

World Health Organization (2024). *Exploring behaviours.* WHO. https://www.who.int/europe/activities/exploring-behaviours.

Wray, A., Martin, G., Ostermeier, E., Medeiros, A., Little, M., Reilly, K., & Gillard, J. (2020). Physical activity and social connectedness interventions in outdoor spaces among children and youth: A rapid review. *Health Promotion and Chronic Disease Prevention in Canada, 40*(4). https://doi.org/10.24095/hpcdp.40.4.02

Yang, W., Liang, X., & Sit, C. H. (2022). Physical activity and mental health in children and adolescents with intellectual disabilities: A meta-analysis using the RE-AIM framework. *The International Journal of Behavioral Nutrition and Physical Activity, 19*(1), 80. https://doi.org/10.1186/s12966-022-01312-1

Zanbar, L., & Nouman, H. (2020). Predictors of self-efficacy among resident of low-income neighbourhoods: Implications for social work practice. *Sage, 21*(3). https://doi.org/10.1177/1468017320911503

Appendix A

Email Invitation Template

School of Kinesiology
t: 807 343-8544 ext. 8481

Lakehead UNIVERSITY

Dear (insert name),

My name is Hannah Pearson; I am a MSc student at Lakehead University studying health promotion and behaviour change in the Department of Kinesiology. As part of my studies, I will be completing a research project evaluating the Healthy Kids Family Program and would like to invite you to participate. Given your experience with the Healthy Kids Family Program, your insight and opinions are of the utmost value and may help to identify opportunities for meaningful growth in program offerings for future participants.

Involvement will entail a brief one-on-one interview with me, asking about your experiences. This can take place in-person or virtually depending on your preference. I have attached a letter of invitation, which details more on the reasoning for this study as well as what would be expected of you as a participant. I appreciate any time and consideration you provide.

Should you have any questions, please don't hesitate to reach out.

I look forward to hearing from you!

Warmly,

Hannah Pearson

hkpearso@lakeheadu.ca

(807) 631-5018

Appendix B

Healthy Kids Family Program Questionnaire

Healthy Kids Family Program Questionnaires

To be completed pre- and post-intervention and 6-weeks following completion.

To create your unique ID number, please use the first letter of your first name, date of birth [1-31], first initial of the town /city of your birth, and the last two digits of your phone number.
For example, Taylor was born on December 31st in Thunder Bay and her phone number ends in 00. ID = T31T00

ID Number: _____

1. What are the first three letters of your postal code? _____

2. What is your age? _____

3. Gender (female, male, gender diverse): _____

4. What is your first language? _____
    a. What language is spoken most often in your home? _____

5. How do you identify your ethnicity?
   European-Canadian ___ Aboriginal ___ African-Canadian ____ Asian-Canadian ____
   Indo-Canadian ____ Other _____

6. How long have you lived at your current address? _____

7. How many people live in your household? _____
    a. What are their ages? _____

8. How many of your children are currently attending school in person? _____
    a. How many of your children are currently attending school on-line at home? _____

9. Approximate *monthly* household income: _____
    a. How many people in your household are supported by this income? _____

10. Please check all of the options that best describe your level of education:
    Some high-school ☐ High-school Diploma ☐
    Some College ☐ College Diploma/Certificate ☐
    Some University ☐ University Degree ☐
    Trade/Vocational School ☐ Other: _____

11. Please check the box that best describes your current relationship status.
    Single ☐ Married ☐ Common-law Partnership ☐ Dating/In a relationship ☐

12. How would you describe your Employment Status?
    Employed full-time ☐ Self-employed ☐ Retired ☐ Military ☐
    Employed part-time ☐ Unable to work ☐ Stay at home parent ☐
    Out of work (looking) ☐ Out of work (not currently looking) ☐ Student ☐
    Other (please describe) _____

13. If you are currently working, how long have you been employed in your current job?
    ___Years ____Months

Please answer questions 14-54 plus the SF-12 below if you did <u>not</u> complete the "neighbourhood survey" distributed in your area during the week of _____. If you <u>did</u> complete the neighbourhood survey, please skip ahead to question 55.

14. What is your main mode of transportation (e.g., car, bus, walking, other)? _____

15. How often do you have access to a car?
    Never (I don't own/lease a car) ____
    Sometimes (I can borrow one from a friend or family member whenever I need it) ___
    Always (I own/lease a car) ____

16. Do you engage in physical activity (e.g., go for walks, participate in an exercise class/ sport)?
    Yes _____ No ____
    a. If yes, how often each week (in minutes)? _____
    b. If yes, what is your preferred type(s) of activity? _____

17. How much sleep do you feel that you typically get in a 24-hour period?
    c. I get less than 5 hours of sleep
    d. I get less than 5-7 hours of sleep
    e. I get 7 to 9 hours of sleep
    f. I get more than 9 hours of sleep

18. How would you describe the quality of your sleep in general?
    g. Good
    h. Fair
    i. Poor

19. How much time would you say you spend sitting in a typical 24-hour period (not including sleep)?
    j. 5 hours or less
    k. 8 hours or less
    l. More than 8 hours

20. On a school or workday, how much of your free time did you spend watching television or a screen on any electronic device while sitting or lying down?

a. 2 hours or less per day
b. More than 2 hours but less than 4 hours
c. 4 hours to less than 6 hours
d. 6 hours to less than 8 hours
e. 8 hours or more per day
f. Was not at work or school
g. RF (refuse to answer)
h. DK (do not know)

21. On a day that was not a school or workday, how much of your free time did you spend watching television or a screen on any electronic device while sitting or lying down?
    a. 2 hours or less per day
    b. More than 2 hours but less than 4 hours
    c. 4 hours to less than 6 hours
    d. 6 hours to less than 8 hours
    e. 8 hours or more per day
    f. RF
    g. DK

22. Have you ever seen or heard of Canada's Food Guide?
    a. Yes
    b. No
    c. RF
    d. DK

23. On average, how many fruits and vegetables would you say you eat in a typical day? ___

24. On average, how many cups of water (standard measuring cup) would you say you drink in a typical day? _____

25. What is your drink of choice during meals? _____
    a. Between meals? _____

26. How many standard sized sugar sweetened beverages do you drink in a typical day (e.g., juice, non-diet pop, energy drink)? _____

27. When thinking about what you eat in a typical day, how much would you say is (values should = 100%):
    m. Protein (e.g., meat, fish, beans/legumes, eggs) ____%
    n. Fruits/vegetables (e.g., leafy greens, broccoli, apple) ____%
    o. Grains (e.g., pasta, bread, oatmeal, rice) ____%
    p. Snack foods (e.g., crackers, cookies, chips, muffins) ____%

28. Within the past 6 months, did you ever worry whether your food would run out before you got more money to buy more? Yes ____ No ____

29. Within the past 6 months, was there ever a time when the food you bought just didn't last and you didn't have money to get more? Yes ____ No ____

30. Within the past 6 months, did you or others in your household cut the size of your meals or skip meals because there wasn't enough money for food? Yes ____ No ____

31. Do you smoke cigarettes? Yes ____ No ____
    a. If yes, please complete table below.

Note: For annual follow-up surveys, the following questions will be added:

31a. At the present time, do you smoke cigarettes every day, occasionally or not at all?
    a. Daily
    b. Occasionally
    c. Not at all
    d. RF
    e. DK

31b. In the past 30 days, did you smoke any cigarettes?
    a. Yes
    b. No
    c. RF
    d. DK

31c. In the past 6 months, did you smoke any cigarettes?
    a. Yes
    b. No
    c. RF
    d. DK

32. Do you use cannabis/marijuana? Yes _____ No ____
    a. If yes, what forms do you use (check all that apply)
       smoke ____ vape _____ oil _____ pill/capsules _____ edibles ____ other ____
    b. How often do you normally use cannabis (please complete table below)?

33. Do you consume alcohol? Yes _____ No ____
    a. How often do you normally consume alcohol (please complete table below)?

Tobacco	# per day	# per week	# per month (if less than one per week)	# of times per year (if less than one per month)
Cigarettes				

Vapes				
Cannabis	# of times per day	# of times per week	# of times per month (if less than once per week)	# of times per year (if less than once per month)
Smoke				
Vape				
Oil				
Pills/Capsules				
Edibles (e.g., gummies)				
Other				
Alcohol	# of drinks per day	# of drinks per week	# of drinks per month (if less than once per week)	# of drinks per year (if less than once per month)
12 oz bottle/can/glass of beer or cooler				
5 oz glass of wine				
1.5 oz of liquor or spirits				

Collective Efficacy/Neighbourhood Cohesion

Instructions: Please rate how much you agree or disagree with the following statements.

34. "People around here are willing to help their neighbours"

Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

35. "This is a close-knit neighbourhood"

Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

36. "People in this neighbourhood can be trusted"

Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

37. "People in this neighbourhood generally don't get along with each other"

Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

38. "People in this neighbourhood do not share the same values"

Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree

Health Related Quality of Life - SF 12

SF-12 Health Survey

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. **Answer each question by choosing just one answer.** If you are unsure how to answer a question, please give the best answer you can.

1. **In general, would you say your health is:**

☐1 Excellent ☐2 Very good ☐3 Good ☐4 Fair ☐5 Poor

The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	YES, limited a lot	YES, limited a little	NO, not limited at all
2. **Moderate activities** such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.	☐1	☐2	☐3
3. Climbing **several** flights of stairs.	☐1	☐2	☐3

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	YES	NO
4. **Accomplished less** than you would like.	☐1	☐2
5. Were limited in the **kind** of work or other activities.	☐1	☐2

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	YES	NO
6. **Accomplished less** than you would like.	☐1	☐2
7. Did work or activities **less carefully than usual**.	☐1	☐2

8. **During the past 4 weeks, how much did pain interfere with your normal work (including work outside the home and housework)?**

☐1 Not at all ☐2 A little bit ☐3 Moderately ☐4 Quite a bit ☐5 Extremely

These questions are about how you have been feeling during the past 4 weeks.
For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks…

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
9. Have you felt calm & peaceful?	☐1	☐2	☐3	☐4	☐5	☐6
10. Did you have a lot of energy?	☐1	☐2	☐3	☐4	☐5	☐6
11. Have you felt down-hearted and blue?	☐1	☐2	☐3	☐4	☐5	☐6

12. **During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?**

☐1 All of the time ☐2 Most of the time ☐3 Some of the time ☐4 A little of the time ☐5 None of the time

Neighbourhood Services and Programs (questions to be adapted for follow-up surveys)

39. Are you aware of any programs offered for children and families in your neighbourhood currently? If yes, please describe them.

40. If you are aware of any programs, how did you hear about them? For example, a flyer, neighbour, friend, on-line, etc

41. What types of programs or facilities do you or your family members currently access in your neighbourhood (e.g., recreation centres, parks, skating rinks, other)? Please describe.

a. How often do you access these in a typical month?

42. What types of new programs/services would you like to see offered for children and families in your neighbourhood? – for example, related to physical activity, food, mental health, or other areas?

43. What would make you want to participate in programs offered in your neighbourhood?

44. What would prevent you from participating in programs offered in your neighbourhood?

45. What does healthy living mean to you?

Note: The following questions pertain to the oldest child living in your home who is 12 years old or younger. Please work with your child to answer the following questions.

Age of child: _____

46. How many servings of fruit do you USUALLY eat each day? (A 'serving' is 1 medium piece or 2 small pieces of fruit or a cup of diced pieces.) This includes all fresh, dried, frozen, and tinned fruit.

a. I don't eat fruit
b. 1 serving or less
c. 2 servings
d. 3 servings
e. 4 servings or more

47. How many servings of vegetables do you USUALLY eat each day? (A 'serving' is half a cup of cooked vegetables or 1 cup of salad vegetables.) This includes all fresh, dried, frozen and tinned vegetables.

a. I don't eat vegetables
b. 1 serving or less
c. 2 servings
d. 3 servings

e. 4 servings
f. 5 servings or more

48. How much soft drinks, juices, or sports drinks do you USUALLY drink (e.g. juice, Coke, Lemonade, Gatorade)? (one can of soft drink = 1 ½ cups)
a. I don't drink soft drinks
b. Less than one cup a week
c. About 1-3 cups a week
d. About 4-6 cups a week
e. About 1-2 cups a day
f. About 2-3 cups a day
g. 3 cups or more a day

49. How much water do you USUALLY drink each day? This can be plain tap water or bottled water. (1 average bottle = 2 cups)
a. I don't drink water
b. Less than one cup a day
c. About 1 to 2 cups a day
d. About 2 to 3 cups a day
e. About 3 to 4 cups a day
f. About 4 cups or more a day

50. How often do you eat french fries, wedges, or potato chips?
a. Never or rarely
b. Less than once a week
c. About 1 to 2 times a week
d. About 3 to 4 times a week
e. About 5 to 6 times a week
f. About once a day
g. 2 or more times a day

51. How often do you have meals or snacks, such as burgers, pizza, chicken fingers, or fries from places like McDonalds, Arby's, Pizza Hut, KFC, Little Caesar's, or local take-out places?
a. Never or rarely
b. Less than once a week
c. About 1 to 2 times a week
d. About 3 to 4 times a week
e. About 5 to 6 times a week
f. About once a day
g. 2 or more times a day

52. How many times a week do you usually eat your meal at night in front of the television or a screen?

_____days a week
OR
_____I rarely / never eat in front

53. Over the past 7 days, on how many days were you engaged in moderate to vigorous physical activity for at least 60 minutes (this can be accumulated over the entire day, for example in bouts of 10 minutes) each day?

a. No days
b. 1 day
c. 2 days
d. 3 days
e. 4 days
f. 5 days
g. 6 days
h. 7 days

54. On weekdays how much time do you usually spend watching television (TV)? _____ hours _____minutes

Stages of Change Measure

Item	Question	Yes	No
55.	I am currently physically active.		
56.	I intend to become more physically active in the next six months.		
57.	I currently engage in regular physical activity (for activity to be regular, it must add up to a total of 30 minutes or more per day and be done at least five days per week. For example, you could take one 30-minute walk or take three 10-minute walks for a total of 30 minutes).		
58.	I have been regularly physically active for the past six months.		

Self-Efficacy for Physical Activity

How confident are you right now that you could do physical activity three times per week for 20 minutes if:

	Not Confident										Very Confident
59. The weather was bothering you	0	1	2	3	4	5	6	7	8	9	10
60. You were bored by the program or activity	0	1	2	3	4	5	6	7	8	9	10
61. You felt pain while being physical active	0	1	2	3	4	5	6	7	8	9	10
62. You had to be physically active alone	0	1	2	3	4	5	6	7	8	9	10

63. You did not enjoy it	0	1	2	3	4	5	6	7	8	9	10
64. You were too busy with other activities	0	1	2	3	4	5	6	7	8	9	10
65. You felt tired	0	1	2	3	4	5	6	7	8	9	10
66. You felt stressed	0	1	2	3	4	5	6	7	8	9	10
67. You felt depressed	0	1	2	3	4	5	6	7	8	9	10

Self-Efficacy for Healthy Eating

How much to you agree with each of the following statements?

1 2 3 4 5
Strongly disagree Strongly agree

68. I am able to consume fruits and vegetables in most of my meals.
69. I am able to eat a variety of healthy foods to keep my diet balanced.
70. Based on my knowledge of nutrition, I am able to choose healthy foods at restaurants and from stores.
71. I am able to modify recipes to make them healthier.
72. I am able to choose recipes based on nutritional value.
73. If I choose to indulge in unhealthy food, I am able to appropriately compensate later.
74. When I feel hungry, I am able to easily choose healthy food over less healthy options.

Access to Collective Efficacy

How much to you agree with each of the following statements?

1 2 3 4 5
Strongly disagree Strongly agree

75. I do not ask for practical help from the people around me even when I need it.
76. I do not ask for emotional help from the people around me even when I need it.
77. I find it difficult to accept that I may need help from others.
78. I don't expect support from people around me because they have problems of their own

Open-ended questions (baseline):
79. By attending this program, I hope to learn more about…
80. By attending this program, I hope to gain skills such as…
81. Topics I would like to see covered in this program include:
82. Things that help me learn include:
83. Now that the program is starting, I plan to access services in the neighbourhood hub.
Yes ___ No___ Maybe___
84. Any other comments on the program?

Open-ended questions (post-completion):

79. Since completing this program, I have learned new information about…
80. Since completing this program, I have gained new skills such as…
81. The part of this program I enjoyed most was …
82. I liked this part because…
83. The part of this program I liked the least was …
84. I did not like this part because
85. For future programs like this, I would (change, keep the same)…
86. Over the past four weeks, I have accessed services/programs in the neighbourhood hub ___ times.
87. Now that the program is complete, I plan to access services in the neighbourhood hub. Yes ___ No___ Maybe___
88. In the hub, I would like to see more programming related to…
89. Any other comments on the program at this time?

Open-ended questions (6-week follow-up):

79. Over the past two months, the information I've used most from the program has included…
80. Over the past two months, the skills I have used most from the program have included…
81. The part of this program I remember most was …
82. The part of this program I remember least was …
83. Over the past eight weeks, I have accessed services/programs in the neighbourhood hub ___ times.
84. I plan to access services in the neighbourhood hub in the future. Yes ___ No___ Maybe___
85. In the hub, I would like to see more programming related to…
86. For future programs like this, I would (change, keep the same)…
87. Any other comments on the program at this time?

Thank you for completing this survey.

Appendix C

Ethical Approval for Amendment

Date: March 25, 2025

To: Dr. Erin Pearson, Primary Investigator

From: Dr. Claudio Pousa, Chair, Research Ethics Board

Subject: Approval of Amendment for REB Romeo #1468970

Thank you for your request for amendments for your project titled "Healthy Kids HOME (Health on the Move for Equity) Program: Examining the Feasibility of a Neighbourhood-based Service Model for Health Promotion in Vulnerable Children and Families (PHAC)".

Your request to add one-on-one interviews conducted among Healthy Kids Family Program participants is acceptable to the Research Ethics Board. Thank you for providing the supporting documentation.

Please continue to advise us of any future changes to your research project.

Appendix D

Interview Guide for Study: "Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework"

General Questions

1. When did you last participate in the Healthy Kids Family Program (HKFP)? *(Note: confirmation from the demographic questionnaire).*
    a. How many times have you participated in the program since it began (i.e., offerings)?

2. How would you describe "Healthy Kids Thunder Bay?"
    a. What does Healthy Kids mean to you? Your family?

3. What kinds of extracurricular or wellness promoting activities do and your child(ren)/family participate in outside of school (e.g., sports, programs, clubs)?
    a. How often?
    b. What do you like about these activities?

4. What helps you and your family participate in these activities (i.e., sports, wellness programs, health appointments)?
    a. What makes it hard for you and your family to participate in these activities?

Section Two: Healthy Kids Family Program

5. What made you want to sign up for the HKFP?
    a. How did you hear about HKFP?

6. What were your initial goals when you signed up for HKFP?

7. To what extent did the HKFP meet your expectations?
    a. In general?
    b. When considering your goals (for you and your family)?

8. Thinking back to the nutrition session with the dietitian – What did you find most helpful/useful about that part of the program specifically? Why?
    a. What did you find the least helpful? Why?
    b. What factors (positive or negative) impact your family's ability to eat healthy?

9. Thinking back to the physical activity session – What did you find the most helpful/useful about that part of the program specifically? Why?
    a. What did you find the least helpful? Why?
    b. What factors (positive or negative) impact your family's ability to be active?

10. Thinking back now to the smoking prevention and cessation presentation – What did you find most helpful/useful about that part of the program specifically? Why?
    a. What did you find the least helpful? Why?

b. If this information was applicable to someone in your home, what things help or prevent them from quitting or cutting down?

11. Thinking back now to the session on mental health and parenting – What did you find most helpful/useful about that part of the program specifically? Why?
    a. What did you find the least helpful? Why?

12. How do you use what you learned during these sessions at home (e.g., physical activity, nutrition, mental health, smoking cessation)?
    a. How have your families responded?

13. How does what you've learned at Healthy Kids Family Program about health, behaviours, and parenting make you feel?
    a. Probes: ability, confidence, knowledge

14. Can you now describe any changes in your health habits or otherwise that you have *already made* since participating in the HKFP?
    a. In your children/family members?

15. Can you describe any changes in your health habits or otherwise you are *planning* to make now that HKFP is finished?
    a. What's important to you about these changes?

16. What has HKFP given to you that you may not have achieved without the program, if anything?
    Probes: What helped specifically (e.g., social supports, handouts)?; knowledge, confidence to access other programs, skills

17. What barriers or negative effects of participating in the HKFP did you experience, if any?
    a. How do you think these barriers can be addressed and/or avoided for future participants?

18. Based on your experience, what ingredients are needed to make a program like HKFP successful?
    a. What is important to parents and caregivers?

19. Based on your HKFP experience, what recommendations do you have for improving health promotion programs like this in your neighbourhood?

20. What was the #1 thing that you got out of the HKFP?
21. Is there anything about HKFP that we haven't discussed today that you would like to share before we wrap up?

Appendix E

Letter of Information and Consent

Letter of Invitation for the Healthy Kids Family Program: "Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework"

Dear Healthy Kids Family Program Participant:

You are invited to participate in an extension of the Healthy Kids Family Program titled, "Exploring Involvement Experiences of a 4-Week Lifestyle Program for Parents and Caregivers." The project is being conducted by Hannah Pearson, MSc candidate, under the supervision of Dr. Erin Pearson, Associate Professor, both from the School of Kinesiology at Lakehead University.

The purpose of this particular project is to explore the experiences of those who participated in the Healthy Kids Family Program on one or more occasion. As a current/former Healthy Kids Family Program participant who has attended at least 2 of the 4 sessions, your experiences are valuable and may help us to identify what is working well and where improvements can be made for programs like this in the future.

WHAT IS REQUESTED OF ME AS A PARTICIPANT?

If you choose to participate and provide the completed consent form, a convenient time will be arranged for a 30-45 minute interview with the student researcher, in-person or over Zoom. To facilitate our ability to review and recall the data accurately, all sessions will be recorded, and password protected. Questions will ask about your experiences with the Healthy Kids Family Program such as what you learned, what benefits and challenges you experienced related to the program, and what suggestions you have for future improvements. Please know that your participation is entirely voluntary.

WHAT ARE THE RISKS AND BENEFITS?

There are no anticipated risks or harms that could come to you through project involvement. In the event that you experience discomfort related to the questions being asked, please know you are not required to answer all of the questions and can withdraw from the study at any time without penalty. Your anonymous views shared through this project will be used to inform future studies, grant applications, and planning related to similar health promotion and community-based program offerings.

HOW WILL MY CONFIDENTIALITY BE MAINTAINED?

Your participation in this study is confidential. A unique identification number will replace your name during data collection to protect anonymity throughout the process. All information provided by you will be secured on a password protected computer and made accessible only to

the research team. Interviews will be analyzed using pseudonyms where applicable in order to maintain participant anonymity.

WHAT WILL MY DATA BE USED FOR:
The data collected will be reviewed using a thematic analysis to summarize and explain common thoughts expressed across participants. By participating in this research, you agree that your anonymous results may be used for scientific purposes by the researchers listed here. The results of the study will be reported without identifying you personally and without financial gain.

WHERE WILL MY DATA BE STORED?
The completed responses will be stored on a password protected computer belonging to the student researcher and Erin Pearson for a minimum of 7 years per Lakehead University policy. After 7 years, all data will be shredded and/or deleted.

HOW CAN I RECEIVE A COPY OF THE RESEARCH RESULTS?
A detailed summary of findings from the research can be made available to you upon your request. Please indicate on the following page if you wish to receive a summary of the research results.

WHAT IF I WANT TO WITHDRAW FROM THE STUDY?
You can withdraw from the research project at any time and without penalty. Additionally, if you wish, you can rescind information collected prior to your exit.

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at 807-343-8010 ext. 8283 or research@lakeheadu.ca.

Thank you for your consideration.

Sincerely,

Hannah Pearson, MSc Candidate, Research Assistant
School of Kinesiology, Lakehead University
E-mail: hkpearso@lakeheadu.ca

Erin Pearson, Associate Professor, Principal Investigator
School of Kinesiology, Lakehead University
E-mail: espearso@lakeheadu.ca

Consent Form for Participation in the Study "Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework"

I _____ have read and understand the information provided and agree to participate in the research project.

I understand the following:

- ✓ The letter of invitation and details of the project
- ✓ That the interview session will be audio recorded for data collection purposes
- ✓ I can withdraw from the project at any time and may decline any questions
- ✓ I understand any potential risks and benefits associated with the study
- ✓ That the data will be securely stored by the research team
- ✓ The research findings will be made available to me upon request
- ✓ That the research team has a duty to disclose information to the appropriate authority should I another person has been or is at risk of being harmed
- ✓ I give permission for my anonymous data to be published and shared publicly
- ✓ I agree to participate

I would like to be sent a summary via e-mail of the findings of the research upon completion.

☐ Yes ☐ No

Name: _____

Date: _____

Signature: _____

Appendix F

Demographic Questionnaire for Study: "Health Equity in Action: Assessing the Impact of the Healthy Kids Family Program Using the RE-AIM Framework"

ID Number: _____

1. What are the first three letters of your postal code? _____

2. What is your age? _____

3. Which best describes your gender identity?
    a. Female
    b. Male
    c. Non-binary/two-spirit/other
    d. Prefer not to answer

4. How long have you lived at your current address?

5. How many people live in your household?
    a. What are their genders and ages? _____

6. When did you participate in the Healthy Kids Family Program? (check all that apply):

___ November 2021
___ February 2022
___ October 2022
___ November 2022
___ February 2023
___ September 2023
___ November 2023
___ February 2024
___ October 2024
___ February 2025

Appendix G

Resource Binder for HKFP Participants: Local Services Available to HKFP Participants

Online Nutrition Resources

Healthy Kids Family Program | Nutrition Session

Phone Line

Telehealth Ontario 1-866-797-0000 or 1-866-797-0007 (TTY)

- Mention that reason for call is "food and nutrition advice"

Trusted Online Nutrition Information

www.unlockfood.ca Answers to nutrition questions

www.guelphfamilyhealthstudy.com/nutrition Nutrition advice for families

www.food-guide.canada.ca/ General nutrition advice and recipes

Recipe Ideas

www.unlockfood.ca/en/Recipes Great Kid-friendly Recipes

www.cookspiration.com/ Recipes separated by meals or snacks

www.guelphfamilyhealthstudy.com/cookbooks Free Cookbooks

Appendix H

Excerpt from the SF-12

SF-12 Health Survey

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. **Answer each question by choosing just one answer**. If you are unsure how to answer a question, please give the best answer you can.

1. **In general, would you say your health is**:

☐1 Excellent ☐2 Very good ☐3 Good ☐4 Fair ☐5 Poor

The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	YES, limited a lot	YES, limited a little	NO, not limited at all
2. **Moderate activities** such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.	☐1	☐2	☐3
3. Climbing **several** flights of stairs.	☐1	☐2	☐3