EXPLORING THE PERSPECTIVES OF WEST AFRICAN IMMIGRANT FAMILIES ON ACTIVE LIVING AMONG ADOLESCENT CHILDREN: A GROUNDED THEORY STUDY

A Thesis Submitted to
The Faculty of Graduate Studies and Research
For the Degree of

Doctor of Philosophy
in
Kinesiology and Health Studies
University of Regina

by

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Regina, Saskatchewan
December 2019

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Oluwasegun Bankole Hassan, candidate for the degree of Doctor of Philosophy in Kinesiology & Health Studies, has presented a thesis titled, *Exploring The Perspectives of West African Immigrant Families on Active Living Among Adolescent Children: A Grounded Theory Study*, in an oral examination held on December 5, 2019. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

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Abstract

Accumulating evidence suggests that the risks of inactivity-related problems such as obesity are becoming a population health concern among younger age groups. High income countries show an elevated rate of physical inactivity among children. Low- and middle-income countries are beginning to experience a gradual increase in this trend. Canada is a highly industrialized multicultural society with nearly 22% of foreign-born individuals coming through the immigration process. Recent immigrants tend to experience a decline in their health status, over time as their years in Canada increase (negative acculturation effect). This phenomenon can be attributed to several factors including adaptation to the new sociocultural environment. While a great deal of research has focused on children, there is paucity of research in this area among West African children in Canada. With Saskatchewan being one of the fastest growing populations in Canada, this study sought to gain a deeper understanding of the perspectives of West African immigrant families in Saskatchewan and assess the impact of the sociocultural environment on active living among their adolescent children.

Using purposive sampling, a total of 15 families residing in Saskatchewan were interviewed. Children between 10 to 17 years and their parents were interviewed in each family. A grounded theory methodological approach by Charmaz (2014) was used in this study. This involved an immersion phase, a conceptual phase, and a constant comparative analytical process. The analysis allowed for emergence of themes. Both the children and their parents reported having experiential knowledge of physical activity and benefits. The children and their parents also showed some negative acculturative experiences associated with active living. They reported facilitators of physical activity for the children such as school influence, peer
influence, and parental role-modelling. The children showed an inherent interest in engaging in risky play. Both the children and their parents reported beneficial outcomes of engaging in physical activity together as a family. Finally, parental positive and negative reinforcements was reported in relation to domestic activities. This study contributes to a conceptual understanding of the knowledge regarding internal, external, and transitional factors impacting the active living and well-being of West African children in Canada.
Acknowledgements

I am very grateful to God for his faithfulness, grace, and mercy towards me and my family. I would like to acknowledge the children and parents who shared their thoughts, views, and experiences with me for this project.

My sincere gratitude goes to my supervisor, Dr. Shanthi Johnson, for her excellent feedback every step of the way. I am deeply grateful to you for encouraging and pushing me to develop the right mindset for academic and professional excellence.

Many thanks to my committee members, Dr. Rebecca Genoe, Dr. Twyla Salm, and Dr. Daniel Kikulwe, for their thorough and constructive feedback, which significantly improved my dissertation. Thank you for keeping your doors open to me as I journeyed through my doctoral program. Many thanks also to Dr. June LeDrew, for her guidance during my program. I would also like to acknowledge my mentor from the United Kingdom, Dr. Marcus Chilaka, for his counsel and guidance right from my master’s program.

I would like to acknowledge the Faculty of Graduate Studies and Research, Faculty of Kinesiology and Health studies, and the Canadian Institutes of Health Research, for their financial support through scholarships, graduate fellowships, and travel awards.

Lastly, my heartfelt appreciation goes to my wife, Olabisi, and son, Joseph, for being my inspiration and emotional support. I am sincerely grateful to you, Olabisi, for your sense of understanding and sacrifices, which enabled me to be productive throughout my program. Thank you to my mother Mrs. F. O. Hassan, my family, relatives, and friends for their prayers and moral support.
Post Defense Acknowledgement

Thank you to my external examiner, Dr. Bukola Oladunni Salami, for evaluating my work and for the thoughtful questions asked during my defense. Thank you for the suggestions for future considerations. It was an honour to have connected with you through this means.
Dedication

This dissertation is dedicated to God, who has ordered my steps through this amazing journey. This dissertation is dedicated to my dad, Otunba M.A. Hassan, who encouraged me down this path and has always been a mentor to me.
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1.0 Chapter One: Introduction

1.1 Physical Inactivity and Sedentary Behaviour as Growing Public Health Problems

Physical activity means “any bodily movement produced by skeletal muscles that requires energy expenditure” (World Health Organization [WHO], 2010, p. 52), while active living is referred to as a lifestyle whereby physical activity is valued and incorporated into daily routines (Spidel, Paquette, Marshall, Bell, & McCargar, 2004). Conversely, physical inactivity can be defined as an insufficient level of physical activity below the recommended guidelines—less than 60 minutes of moderate- to- vigorous intensity physical activity (MVPA) per day for children, and less than 150 minutes of MVPA per week for adults (WHO, 2010). Sedentary behaviour is any form of waking activity done in a sitting, reclining, or lying position with an energy expenditure of ≤ 1.5 metabolic equivalents (METs; Tremblay et al., 2017). Studies consistently show trends toward decreased physical activity and active living and increased physical inactivity and sedentariness as major challenges to public health (Tremblay et al., 2014; Trost, Blair, & Khan, 2014).

With over 30% of the world’s population not meeting the recommended physical activity guidelines, accumulating evidence suggests that physical inactivity is a global health concern (Kohl et al., 2012). Physical inactivity has been identified as the fourth leading modifiable risk factor causing a rise in non-communicable diseases such as type 2 diabetes, cancer, and heart disease—also referred to as chronic or lifestyle diseases, across Canada and the world (Public Health Agency of Canada [PHAC], 2013; WHO, 2010). In fact, seven out of ten cases of global mortality have been recently attributed to chronic disease-related conditions (Naghavi et al., 2017). Importantly, insufficient physical activity has a negative effect on
mental health and quality of life (Brown, Pearson, Braithwaite, Brown, & Biddle, 2013; Maher et al., 2016).

In addition, physical activity has implications for other leading modifiable risk factors causing mortality. WHO (2010) identifies the combination of overweight (i.e., having a body mass index within the range of 25 to 30) and obesity (i.e., having a body mass index over 30) as the fifth leading modifiable risk factor causing death—following high blood pressure, smoking, and high blood glucose. All these modifiable risk factors can lead to death from either their single or collective existence in an individual. Nevertheless, physical activity moderates all the aforementioned risk factors. It has been argued that physical inactivity is the greatest public and global health threat thus far in the 21st century (Trost et al., 2014).

Studies have shown that the increasing global health threat from the leading mortality risk factors is partly due to the epidemiologic transition across the world (Gaziano, Bitton, Anand, Abrahams-Gessel, & Murphy, 2010; McKeown, 2009). This epidemiologic transition refers to the substitution of communicable or infectious diseases with chronic diseases as a global health problem (McKeown, 2009). This transition which has been occurring over the last few decades in high-income countries (HICs) is recently being experienced in low- and middle-income countries (LMICs; McKeown, 2009). Furthermore, this transition from communicable to chronic diseases has been attributed to physical inactivity starting earlier in childhood, along with other demographic and social factors such as age distribution, increased industrialization, and changing cultural practices (McKeown, 2009).

About 6.3 of the 7.5 billion people in the world live in the LMICs (World Bank, 2019a). Most of the 6.3 billion living in the LMICs are from African and Asian countries. About one-third of the countries in Africa are from the western part of the
continent (see Appendix J), with Nigeria being the most populated country in Africa, as well as having one of the world’s highest youth population (World Bank, 2019b). West Africa is a region comprising of 17 countries, and with an economy predicted to grow at a strong pace in the years ahead (World Bank, 2019b). In addition, West Africa is experiencing the fastest growth in urbanization in Africa (Bosu, 2015).

There has been a global migration of individuals and families primarily from LMIC to HIC or from low to high resource contexts (e.g., Africa to Canada or rural to urban). This has contributed to the diversity of the population in HICs. The Canadian 2016 Census showed that 21.9% (7,540,830) of the national population are foreign-born individuals who came to Canada through the immigration process (Statistics Canada, 2017). Saskatchewan and the other Prairie Provinces are the fastest growing populations in Canada, and immigrants play a significant role in this growth (Statistics Canada, 2017).

Over 600,000 Africans currently live permanently in Canada and they contribute about 8% to the total Canadian immigrant population (Statistics Canada, 2017). For the first time in 2016, Africa represented the second largest source continent, with recent immigrants of 13.4%, which ranked ahead of Europe and before Asia (Statistics Canada, 2017). Furthermore, approximately 18% (126,160) of African immigrants in Canada, and 28% (3,275) in Saskatchewan are from West Africa (Statistics Canada, 2017).

Studies show that recent immigrants (also referred to as newcomers) in HICs may have a healthier lifestyle than their host counterparts and this has been commonly described as the healthy immigrant effect (Delavari, Sonderlund, Swinburn, Mellor, & Renzaho, 2013). However, this health advantage may diminish as they adapt to living in HICs and possibly become susceptible to an obesogenic
environment. While much of the research has focused on HICs, limited research is available regarding physical activity in LMICs or from minority populations in HICs.

From a life course and population health perspective, physical inactivity is common across age and gender groups starting at an early age, and family has an important role to play in fostering an active lifestyle (Brodersen, Steptoe, Boniface, & Wardle, 2006). The family’s role highlights the importance of early child development as a determinant of health. Research shows that children who are overweight or obese tend to have a high occurrence of chronic disease risk factors that may persist into adult life (May, Kuklina, & Yoon, 2012). In addition, obesity in parents has now been associated with increased physical inactivity among children (Angoorani et al., 2017).

1.2 Physical Inactivity in Canadian and West African Children

Researchers have emphasized that being physically active from early childhood through adolescence may promote an active lifestyle for lifelong benefits (Adeniyi et al., 2016; Paffenbarger, Blair, & Lee, 2001). Yet, the physical activity level of children continues to decline in HICs (Tremblay et al., 2014). In Canada, less than 10% of children aged 5 to 17 years are meeting the minimum recommended 60 minutes of MVPA per day (ParticipACTION, 2016). Indicators such as active transportation, organized sport, and active outdoor play have been recommended by experts as positive active living indicators (Tremblay et al., 2014). Conversely, screen-based sedentary behaviour has been identified as a negative influence on children’s active living (Tremblay et al., 2014). These indicators have been important markers for evaluating physical activity levels within the Canadian population for the past decade.
The trend of physical inactivity and sedentary behaviour in West African countries may not be as high as it is in Canada. For example, studies show that the recommended 60 minutes of MVPA per day are met by 58% of children aged 8 to 11 years in Senegal (Diouf et al., 2016), 37% of those aged 12 to 18 years in Nigeria (Oyeyemi et al., 2016), and less than 40% of those aged 13 to 19 years in Ghana (Ocansey et al., 2016). Many countries in West Africa lack nationally representative data; most of the studies on physical activity among children are from Nigeria, Ghana, and Senegal. However, physical inactivity is gradually emerging as a public health concern among children in this region (Odunaiya, Ayodele, & Oguntibeju, 2010; Onywera, 2010).

Experts in some West African countries such as Nigeria and Ghana are proactively addressing these public health problems before they become a crisis (Ocansey et al., 2016). Researchers reported that the physical activity level of children in Nigeria is decreasing, while their sedentary behaviour is increasing (Adeniyi et al., 2016). They further demonstrated that gender disparities exist among children in Nigeria, as boys were more active than girls (Adeniyi et al., 2016). Researchers have also suggested that the physical activity transition may be due to urbanization, globalization, and increased dependence on technological developments (Bosu, 2015; Odunaiya et al., 2010). These factors may have some implications for the growing childhood obesity and associated chronic diseases in the region. Meanwhile, other driving forces of migration including demographic, economic, and political reasons may be responsible for the unbalanced development across the globe, thereby giving rise to increasing emigration rates (Castelli, 2018).
1.3 Rationale of the Study

It has been recognized that physical inactivity is a common public health problem resulting in chronic diseases particularly in HICs, although, there are indications that it is increasing in LMICs (Bosu, 2015; Tremblay et al., 2014). People migrating from a region of low resources to a region of higher resources with a developed infrastructure may experience significant changes in activity levels and health due to adaptation to the new environment.

Studies show that children’s physical activity engagement may be largely dependent on their families and social support system (Brodersen et al., 2006; Janssen, 2015). However, researchers have observed that parents usually report about their children’s physical activity with bias (Beets, Cardinal, & Alderman, 2010), implying that a deeper understanding of this issue requires the perceptions of both the parents and children.

Studies have also suggested the development of a conceptual framework to better understand children’s physical activity after migration into a new country (Kukaswadia, Pickett, & Janssen, 2014; Ro, 2014). More specifically, researchers have recommended looking into the factors that influence physical activity among immigrant children in Canada (Tremblay, Bryan, Perez, Ardern, & Katzmarzyk, 2006). As immigrants represent a significant population that may impact policymaking in the Canadian society, it is important that empirical evidence contributes to an understanding that may help increase population levels of physical activity within this group.

1.4 Purpose and Research Questions

The purpose of this study was to gain a deeper understanding of the perspectives of West African immigrant families in Saskatchewan and assess the
impact of the sociocultural environment on active living among their adolescent children between 10 to 17 years. This was accomplished by using a grounded theory approach to construct meanings from the actions and experiences derived from semi-structured in-depth interviews with the children and their families. The five research questions addressed in this study included: 1) what does active living mean for West African immigrant families living in Saskatchewan; 2) how is their understanding of active living related to health; 3) how do the families’ perceptions on physical, economic, and social environment impact the active living of their children during pre- and post-migration; 4) how do cultural practices of these families impact their children’s active living and; 5) what model can be constructed from the actions and experiences of West African immigrant families toward their children’s active living?

1.5 Structure of the Study

This study is structured into six chapters including this one which introduces the problem and establishes the rationale and purpose of the study. The second chapter presents the review of literature on physical activity epidemiology with a focus on children. It also describes the opportunities for movement among children, as well as immigrant health and acculturation. The third chapter includes the epistemological world view, the methodological foundations of grounded theory, and applied methods for data collection, data management, and data analysis. The fourth chapter describes the findings as it was constructed by the researcher and the participants in the study. The developed model and meanings created from the findings of the study is discussed in chapter five. The final chapter features the implications for different relevant sectors, and the conclusion on the perspectives of West African immigrant families as it pertains to active living among their children.
Chapter Two: Literature Review

2.1 Introduction to the Literature Review

In this chapter, I describe the relevant literature around physical activity with attention to the research evidence related to the context of study. The literature review has five sections. First, I introduce the movement continuum and define terms. The second and third sections focus on physical activity epidemiology particularly the disease burden and the associated health outcomes among children. Children’s physical activity along with the sociodemographic disparities is described in the fourth section and the environment in the fifth section. In the sixth section, I describe the opportunities to facilitate movement behaviour among children looking at both the Canadian and West African context. The seventh section is about immigrants’ health post-migration and a comparison to their host counterparts. Lastly, I highlight research gaps throughout the literature, some of which are addressed by the research questions.

2.2 The Movement Continuum

Physical activity is defined “as any bodily movement produced by skeletal muscles that require energy expenditure” (WHO, 2010, p. 53). Exercise on the other hand is a “planned and structured activity, which involves repeated muscle contractions with the purpose of improving or maintaining physical fitness, performance, or health” (WHO, 2010, p. 52).

Levels of physical activity have been determined using subjective measures such as questionnaires or recall instruments (Sylvia, Bernstein, Hubbard, Keating, & Anderson, 2014). Objective measures such as direct observations, pedometers, accelerometers, and heart rate monitors have also been recommended (Sirard & Pate, 2001; Sylvia et al., 2014).
In terms of classifications, physical activity can be categorized based on the intensity and level of energy expenditure using the movement continuum behaviours (see Figure 1). The energy expenditure across the continuum can range from 1 metabolic equivalent (MET) when the body is at rest to > 6.0 METs for vigorous intensity activities.

*Figure 1. The movement continuum*

Other common classifications include leisure activities (e.g., recreation, exercise, sports, and dance), domestic activities (e.g., house chores, yard work, and snow shovelling), occupational activities (e.g., paid work-related), and active transportation (e.g., walking and cycling).

The Sedentary Behaviour Research Network (SBRN) clarified that being inactive should be differentiated from being sedentary (Tremblay et al., 2017). As explained earlier, physical inactivity for children was defined as getting below the recommended 60 minutes of MVPA per day, which means engaging in an insufficient level of activity necessary for health benefits.

Sedentary behaviour which has a deleterious effect on health, is a newer concept introduced in the last decade. The inconsistencies in the classification of sedentary behaviour led to SBRN clarifying that it is any form of waking activity done in a sitting, reclining, or lying position with an energy expenditure of ≤ 1.5 METs (Tremblay et al., 2017). Based on this definition, sedentary time will include time spent watching television, using a computer in a sitting position, driving a
vehicle, and lying down. Screen-based sedentary behaviour which includes spending time watching television, or using the phone, computer, tablets, etc., has been the widely used form of assessment among children. No more than two hours of recreational screen time in a day has been widely recommended by public health organizations globally (Tremblay et al., 2014).

Many of the classifications of physical activity aforementioned are encompassed in the definition of active living, which is a lifestyle that incorporates physical activity into daily routines (Spidel et al., 2004). Active living involves habitual physical activity in the forms of primitive (e.g., walking, running, and cycling) and non-primitive choices (e.g. taking the stairs, doing housework, and standing during desk work).

Recent studies are beginning to show that the behaviours on the continuum should be considered collectively rather than independently for optimal health among children (Chaput et al., 2014a). Therefore, an adequate daily mix of the movement behaviours (i.e., the different behaviours identified on the continuum at varying intensities) is necessary for children to achieve optimal health benefits. In addition, the adherence to more than one movement guideline (i.e., guideline for each identified behaviour on the continuum) was shown to produce better overall health outcomes while the benefits of meeting a guideline may be reduced by failure to meet another (Janssen, Robert, & Thompson, 2017). Guidelines have been set for MVPA, screen-based sedentary behaviour, and sleep time; however, there is no specific guideline for light physical activity, which undermines the importance of light physical activity as part of the movement continuum that improves health (Chaput et al., 2014a). These recent research directions may be emphasizing children’s active living under daily categorical guidelines as ways to achieve optimal health.
Physical literacy is another evolving concept that is important for childhood development and lifelong health. The International Physical Literacy Association (IPLA, 2017) described physical literacy as the “motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engaging in physical activity for life.” Being physically literate from childhood has an important role to play in the development of a healthy active lifestyle needed to habitually engage in physical activity for lifelong health benefits. Based on this definition, physical literacy may have a relationship with the environment where children learn and develop movement skills including school, home, and the community. This provide a basis for situating the concept in this study, given that the children’s transition from a pre-migration to a post-migration environment may impact the development of physical literacy factors such as confidence, knowledge, and competence.

2.3 Historical Background of Physical Activity Epidemiology

Before discussing the history of physical activity epidemiology, it is important to establish the purpose of epidemiology and how physical activity is associated with it. Epidemiology looks at the patterns and trends of public health issues. In this case, looking at physical activity epidemiology involves the trend of the relationship between physical activity and its associated health outcomes in the human population.

The history of physical activity can be traced back to the early days of the *Homo sapiens* when the general way of life was focused around primal activities such as gathering, hunting, and scavenging (Paffenbarger et al., 2001). Looking back at the origin of physical activity epidemiology, Aristotle expressed the idea that lack of physical activity can lead to a susceptible human health (Dishman, Heath, & Lee,
Physical activity was promoted as far back as 600 BC as a modality for preventive medicine and improved health (Dishman et al., 2013). Ayurveda, which is an ancient form of medicine that originated in India, also promotes physical activity for improved health (Dishman et al., 2013).

In the 1940s, the root of modern physical activity epidemiology took hold due to the rising concerns over ways to prevent chronic diseases (Blair & Morris, 2009; Paffenbarger et al., 2001). Lack of physical activity was found to be directly associated with coronary heart disease in the 1950s. For example, a British study showed that people with physically active jobs such as bus conductors and postal workers had a relatively reduced heart disease prevalence compared to sedentary workers such as bus drivers (Blair & Morris, 2009). Subsequently, it became evident that physical activity should be incorporated into daily life to effectively reduce or prevent the incidence of coronary heart disease (Paffenbarger et al., 2001).

In the last decade, the focus of research has shifted to the link between sedentary behaviour and chronic diseases. Independent of one’s physical activity level, an excessively sedentary lifestyle is now considered a risk factor for chronic diseases (Tremblay et al., 2011). Physical activity epidemiology has shown an evolutionary trend that consistently attracts researchers’ interests in social sciences and many other areas of disciplines.

### 2.4 Disease Burden of Physical Inactivity

Disease burden can be referred to as the morbidity, mortality, and economic impact of a disease or health problem in a population (Ding et al., 2016). To explain the impact of physical inactivity on mortality, Kohl et al. (2012) reported that 6% to 10% of global mortality from chronic diseases can be attributed to physical inactivity. Approximately five million global deaths that were attributed to chronic diseases
resulting from physical inactivity in 2008 could have been delayed if the inactive people were moderately active (Lee et al., 2012). It was suggested that a 25% improvement from an inactive state to active could prevent over one million premature deaths (Lee et al., 2012). To demonstrate the impact of physical inactivity on some specific chronic diseases, the same study highlighted that physical inactivity alone was the primary cause of 6% of the global burden from heart disease, 7.8% of type 2 diabetes, and 10% of both colon and breast cancers (Lee et al., 2012).

The disease burden attributed to physical inactivity goes beyond poor health outcomes or premature deaths to its impact on healthcare expenditures. Globally, physical inactivity costs the global healthcare system billions of dollars (Ding et al., 2016). More specifically, Janssen (2010) explained that the healthcare expenditures incurred as a result of physical inactivity can be subdivided into direct or indirect costs. First, direct costs are the costs for treatment, care, and rehabilitation of people with diseases associated with physical inactivity. In the U.S., the direct cost to the healthcare system for physically inactive people was 15% higher compared to active people (Janssen, 2010). In Canada, the direct cost of physical inactivity in 2012 was estimated as three billion dollars (Krueger, Turner, Krueger, & Ready, 2014). However, the indirect cost of physical inactivity (6.9 billion dollars) which is the cost incurred due to the productivity loss from disability and premature mortality, was double the direct cost in Canada (Krueger et al., 2014). Overall, an estimated 10 billion dollars of the economic burden in 2012 was attributed to physical inactivity in Canada (Krueger et al., 2014). In addition, Ding et al. (2016) estimated the economic burden of physical inactivity in Africa and North America as half a billion and over 25 billion dollars respectively.
Physical inactivity shares its contribution to the economic burden proportionately with other modifiable risk factors such as smoking, alcohol use, and high blood pressure. In British Columbia, Canada, Krueger, Koot, Rasali, Gustin, and Pennock (2016) investigated three modifiable risk factors (physical inactivity, obesity, and smoking) and concluded that physical inactivity added approximately 18% to the economic burden of the province. Although physical inactivity was the lowest compared to the other risk factors (smoking and obesity), its proportion was still alarming considering the millions of dollars of health costs expended in the province. Given that British Columbia has the lowest prevalence of physical inactivity in Canada, Krueger, Krueger, and Koot (2015) applied the prevalence rate of the province to other provinces and showed for Saskatchewan an estimated $111 and $243 million as direct and indirect costs of physical inactivity respectively.

Physical inactivity is more prevalent in HICs, and the estimated economic burden is high. In LMICs however, there are lower levels of physical inactivity and increasing burden of chronic diseases (Ding et al., 2016). One of the reasons for this trend may be the variations in the types and resourcing of healthcare system used in these countries. For example, the total direct costs associated with chronic diseases in Canada are primarily incurred by the public sector, and in the U.S., they are incurred by both the public and private sectors (Ding et al., 2016). However, these costs are primarily incurred by individual households in many LMICs such as the West African countries (Ding et al., 2016). This may be financially demanding for low- and middle-income households in these countries. Not surprisingly, the global trend of burden from high blood pressure, documented over the last few decades, showed an increasing prevalence in LMICs, with the lowest rates of blood pressure control reported for individuals from sub-Saharan African countries (Geldsetzer et al., 2019).
Given that physical inactivity trend is increasing globally, the associated chronic diseases are major public health challenges, not only to highly industrialized countries but also to economically developing countries.

2.5 Associated Health Outcomes of Physical Activity, Inactivity, and Sedentary Behaviour

The importance of physical activity for health benefits among children ranges from its use in health risk prevention to treatment, rehabilitation, and intervention programs. However, this importance carries great emphasis when the consequences of inactivity and sedentariness are described, thus providing a basis for robust understanding of physical activity epidemiology. The associated health consequences for children are further described in this section.

2.5.1 Cardiovascular disease. Coronary heart disease and stroke are the leading causes of mortality in the world (WHO, 2014). Statistics Canada (2019) described them respectively as the second and fourth national leading causes of mortality following cancer and unintentional injuries. It has been recognized that these deadly diseases are strongly linked to physical inactivity from a young age group. Atherosclerosis, which is a physiological condition leading to cardiovascular disease and characterized by fatty build up in the blood vessels, begins to form the earliest lesions during childhood and adolescence (Shay et al., 2013). In addition, sedentary behaviour, particularly screen time, has harmful effects on various cardiometabolic health indicators such as systolic blood pressure, blood sugar, and body mass index in children (Tremblay et al., 2011).

Using the classifications of movement behaviours (sleep, sedentary, and physical activity), some relationships with cardiovascular disease can be shown. In a day, the hours spent on physical activity may be the lowest; however, it is crucial in reducing cardiometabolic health risks among children compared to the other
classifications (Carson, Tremblay, Chaput, & Chastin, 2016). Even the substitution of MVPA with light physical activity ahead of sedentary behaviour showed lower harmful effects on the cardiometabolic health indicators (Carson et al., 2016). Conversely, the hours spent sedentarily may be the highest in a day, hence, the need for children to consciously balance their daily movement behaviours in terms of substituting sedentary time for movement time.

Knowing that hypertension is a major risk factor for cardiovascular disease, it is alarming that the prevalence of high blood pressure is increasing among children, thereby increasing their potential risk for cardiovascular issues in adulthood (De Moraes et al., 2015). Being sedentary as a child for just two years poses an increased risk of developing high blood pressure (De Moraes et al., 2015). Hypertension is considered a risk factor as well as a cardiovascular disease itself. It is also considered a silent killer because many people who are pre-hypertensive or hypertensive may not be aware until their health deteriorates.

According to the Canadian Health Measures Survey (CHMS; 2012 to 2013), about 5% of children aged 6 to 19 years were considered either prehypertensive or hypertensive (Statistics Canada, 2015). In the US, findings from a large cohort study of children aged 12 to 19 years showed a higher pre-hypertensive prevalence of 14% (Shay et al., 2012). Due to the increasing rates of cardiovascular risk among children, a universal cardiovascular screening for the group was recommended (Bloetzer et al., 2015). However, it was explained through a comprehensive review that the evidence to support screening among children is not enough, and efforts should be directed toward preventive measures such as regular physical activity and healthy nutrition (Bloetzer et al., 2015).
2.5.2 **Type 2 diabetes.** Type 2 diabetes is a serious public health concern, a risk factor for metabolic syndrome and cardiovascular disease, and expensive to maintain clinically (American Diabetes Association [ADA], 2000). The importance of physical activity to type 2 diabetes is both a preventive and treatment intervention. In a Canadian study, Janssen, Wong, Colley, and Tremblay (2013) reported that the frequency of weekly MVPA was directly associated with insulin resistance among children. Therefore, more activities in a week may improve the capacity for body cells to utilize blood glucose thereby increasing insulin sensitivity. Recent research shows that the rate of type 2 diabetes which is also defined as the adult onset diabetes is increasing among children and young adults (Janssen et al., 2013). In LMICs, type 2 diabetes is seriously affecting the economically productive age group of 30 to 45 years, and its burden is worsened not only by late diagnosis but also lack of access to healthcare in these regions (Idemyor, 2010).

2.5.3 **Cancer and immunity.** According to Statistics Canada (2019), cancer has been the national leading cause of mortality for over a decade. In a comprehensive review, the preventive effect of physical activity appeared to be impactful against cell growth abnormality at its initial stage, chronic inflammation, tumour development, and metastasis of cancerous cells (Rogers, Colbert, Greiner, Perkins, & Hurting, 2008). The same review also showed that natural immunity and anti-oxidative effects of enzymes responsible for inactivating free radicals in the body can be greatly influenced by exercise. Physical activity has been positively associated with cancer prevention, particularly colon cancer and hormone-related cancers such as breast and prostate cancer (Rogers et al., 2008).

2.5.4 **Childhood overweight and obesity.** The childhood obesity pandemic which refers to the global increase of the health condition, has gone from a rising
concern to an urgent call for a holistic approach if the current trend is to be reversed (WHO, 2012). Research shows that the global prevalence rate of childhood overweight and obesity in 2013 had increased by 47% since 1980 (Ng et al., 2013). The rates had increased from 16% to 23% in HICs and from 8% to 13% in LMICs. Both physical inactivity and sedentary behaviour contribute to the childhood obesity pandemic. In turn, obesity may also lead to physical inactivity (Rahelu, 2010). From a life course perspective, it is evident that a healthy active lifestyle from a young age may prevent overweight and obesity in childhood, as well as during adulthood (Katzmarzyk et al., 2015; Mei et al., 2016; Onywera, 2010).

Even though researchers have reported inconsistencies in the effects of physical activity interventions alone as a treatment for obesity (Mei et al., 2016), physical development is still largely impacted by living conditions. This was the rationale for a multinational study on 12 countries across five geographical regions (Africa, the Americas, South East Asia, Europe and Western Pacific) with over 6,000 children which emphasized that lifestyle factors, including lack of physical activity and excessive television viewing, were crucial determinants of childhood obesity (Katzmarzyk et al., 2015).

2.5.5 Bone health. Lifelong bone health is largely dependent on the bone development process during childhood and adolescence up to early adulthood, when the peak of bone density is achieved and maintained for the rest of life (Hills, King, & Armstrong, 2007). During the developmental period, skeletal growth involves the acquisition of bone mineral. Besides the normal bone development, physical activity has a role to play in strengthening this skeletal growth. Physical activity may be helpful for bone health among children by preventing loss of bone mineral density and sustaining the functional capabilities including reducing the number and risk of
falls (Warburton, Nicol, & Bredin, 2006). Weight bearing exercises incorporated with recommended dietary intake for calcium and vitamin D may support healthy bone mass development in children and adults (Corbin, Welk, Corbin, Welk, 2013). In a longitudinal study, physically active growing youth of both genders showed a better acquisition of bone mineral content compared to their sedentary peers (Bailey, McKay, Mirwald, Crocker, & Faulkner, 1999). The relationship between sedentary level during childhood and resultant bone loss after growth remains unclear; however, weight bearing exercises are recommended three days or more per week for children as part of the national physical activity guidelines (Canadian Society for Exercise Physiology [CSEP], 2016).

2.5.6 Mental health. In addition to physical health outcomes, physical activity has been well documented as a significant contributor to the psychological well-being of children. Exercise is associated with improved mood, and habitual physical activity may help to reduce anxiety (Martinsen, 2008). A meta-analysis showed that interventions in the form of aerobic exercises are effective in alleviating depressive symptoms (Brown et al., 2013). Independently, excessive television time and screen entertainment showed an increased risk of mental distress in children (Hamer, Stamatakis, & Mishra, 2009).

The literature on the relationship between physical activity and academic performance requires better understanding. Taras (2005) revealed that physical activity may improve short-term academic performance such as concentration, but the long-term effect remains questionable. While an experimental school-based study, carried out over a 4-month period, showed that increasing the physical activity level of children could improve their academic performance (Reed et al., 2010).
More specifically, Maher et al. (2016) reported that numeracy and writing were the only improved components of academic performance associated with high MVPA. In the same study, Maher et al. (2016) also revealed that excessive sedentary time had a strong relationship with high academic performance among schoolchildren. The latter relationship may have occurred because only total sedentary time was determined, without any differentiation between screen and non-screen based. Children spending many hours sitting and studying may have ended up having a high academic performance.

2.5.7 Healthy sleep. Evidence-based research has shown that children aged 5 to 13 years should have at least 9 hours of sleep per night and 14 to 17 years should have 8 hours of sleep (ParticipACTION, 2016). Increased MVPA and decreased sedentary time during the day has been positively associated with sleep duration among children aged 9 to 11 years (Lin et al., 2017). Conversely, adequate nocturnal sleep also has a positive effect on sedentary time, light physical activity and MVPA the next day (Lin et al., 2017). This may infer that adequate nocturnal sleep leads to feeling less fatigued the next day, thereby positively impacting movement capacities. In addition, there is evidence suggesting that when sedentary behaviour increases and MVPA decreases, children’s sleep time also decreases (Carson et al., 2016). Presence of a screen in a child’s bedroom particularly a television, was also associated with low sleep quality, high screen time, and elevated levels of body fat accumulation (Chaput et al., 2014b).

2.6 Children’s Physical Activity and Sociodemographic Disparities

The variations in the distribution of the children’s physical activity in a population can be influenced by demographic factors such as age, gender, and socioeconomic status (SES), as well as social factors such as support system and
cultural norms. These variations are shown among children from a Canadian and West African perspective.

**2.6.1 Age and gender.** Evidence suggests that physical inactivity and sedentary behaviour increase as children grow, making these problems more pronounced at the adolescent stage of life (Brodersen et al., 2007; Odunaiya et al., 2010). A longitudinal study identified the onset of adolescence as a movement transitional stage for children, by showing that 11 and 12-year-olds were commonly characterized with decline in physical activity and increase in sedentary behaviour (Brodersen et al., 2007).

In Canada, the proportion of children that are sufficiently active continues to drop from preschool to adolescence (ParticipACTION, 2016). In West African countries like Ghana and Nigeria, the trend is similar. Studies from both these West African countries showed that adolescent children aged 12 to 18 years were not engaging in sufficient vigorous activities beneficial to their health (Doku, Koivusilta, Raisamo, & Rimpela, 2013; Odunaiya et al., 2010). A Nigerian study showed that adolescent children were less physically active compared to younger children (Olubusola, Obembe, & Faniran, 2013).

Studies have reported that girls are generally less active through adolescence than boys (Dwyer et al., 2006; Biddle & Whitehead, 2008), although, the rate of declining physical activity is increasing among boys as well (Caspersen, Pereira, & Curran, 2000). This decline during the adolescent stage may transcend to young adulthood and remain constant in middle adulthood (Caspersen et al., 2000). There is need to pay attention to questions of why adolescent girls are less active than boys, and why adolescent children generally become inactive.
A commonly reflected factor is the social behaviour of adolescent children within the society. Whitehead and Biddle (2008) explained that adolescent girls are more concerned than boys about their self-presentation in the society. Whitehead and Biddle (2008) further reflected that other priorities such as interpersonal relationships with friends contend with their time for physical activity. Conversely, adolescent boys may engage more in physical activity mainly to improve body appearance and to spend time with the opposite sex (Dwyer et al., 2006).

Early maturity among adolescent girls was also linked to physical activity decline (Davison, Werder, Trost, Baker, & Birch, 2007). This may be due to the normal physiological changes occurring as a result of puberty. Nevertheless, both chronological and biological age may contribute to the variations in physical activity across gender groups. In fact, it was noted that using biological age rather than chronological age to determine gender differences in adolescent children drastically reduced the gap in physical activity levels (Cairney, Veldhuizen, Kwan, Hay, & Faught, 2014). Age and gender were also important determinants for children’s independent mobility, with boys getting more independent time compared to girls (Stone, Faulkner, Mitra, & Buliung, 2014). In addition, children, especially older boys considered streetwise (i.e., competence to identify and deal with challenges in an outdoor environment), are given more freedom of independent mobility which has been shown to promote physical activity (Lee et al., 2015).

2.6.2 Socioeconomic status. Socioeconomic status (SES) is an important determinant of health. However, the association between SES and physical activity has been inconsistent. This may be because SES can be defined in many different ways based on factors such as income, education, occupation, and place of residence. Studies in HICs show that children from low SES tend to participate less in structured
physical activity (Bengoechea, Sabiston, Ahmed, & Farnoush, 2010; Brodersen et al., 2007). This may indicate that children from high SES participate more in structured physical activity possibly because of the financial capacity to enrol their children in sports activities. According to the Canadian Human Activity Pattern Survey conducted in 2010-2011, structured physical activity was low among children from low SES (Matz et al., 2014). The same survey showed that leisure-time physical activity may be high among children of low SES living in rural areas because of perceived safety and available green spaces in close proximity (Matz et al., 2014). A cross-sectional study also showed that although residents from a high SES may have access to walking facilities such as sidewalks, the increase in walking behaviour may depend on the quality of the walking environment (Giles-Corti & Donovan, 2002). As such, researchers have suggested that the environment is an important factor for reducing the gap that exists in physical activity levels among people from high and low SES (Giles-Corti & Donovan, 2002).

In West Africa, a Nigerian study showed that children from high socioeconomic families had higher physical inactivity and obesity rates compared to those from low socioeconomic families (Oyeyemi et al., 2014). However, a more recent study showed that children from higher socioeconomic families engaged more in MVPA and sporting activity but less in active travelling to and from school (Oyeyemi et al., 2016). Similarly, a Ghanaian study showed positive associations between physical activity among children and both paternal and maternal higher education (Doku et al., 2011).

The inconsistency in the association between physical activity and SES among children particularly in West Africa may be a result of a changing trend which is influenced by some factors described using studies from Nigeria. First,
urbanization has been identified as an important factor contributing to this trend (Oyeyemi et al., 2014). Families that are more privileged can acquire urbanized technologies such as automobiles, which have been known to increase the substitution of active time for sedentary time. In addition, lifestyle choices that may increase sedentary behaviour such as screen time are commonly seen among families from high SES. Second, knowledge about physical activity and the level of importance it attracts has also been identified. It was reported that Nigerian children’s knowledge and awareness of the health benefits of physical activity need to be improved (Oyerinde, Oyerinde, Oshiname, & Ola, 2013). Third, Oyeyemi et al. (2014) identified the perceived neighbourhood safety also as an important factor because adolescent children from high-income areas tended to participate less in leisure-time physical activity because of the perceived safety risk factors.

2.6.3 Social support. Parents and peers form a crucial part of the social support system that influences children’s daily lives. A social support system extends beyond parents and peers to include families, siblings, and mentors. Parents, who significantly influence children’s lives, tend to have both enabling and restricting factors on children at the same time. Generally, parenting styles have been subdivided into four categories namely authoritative, authoritarian, permissive, and uninvolved parenting (Hubbs-Tait, Kennedy, Page, Topham, & Harrist, 2008; Jago et al., 2011). These parenting styles are defined using dimensional constructs around control and warmth (Hubbs-Tait et al., 2008). Authoritative parenting involves high control and high warmth, which is characterized by high parental expectations and affection, the use of reasoning in setting limits, and resultant self-reliance in children (Hubbs-Tait et al., 2008; Jago et al., 2011). Authoritarian parenting involves high control and low warmth, characterized by setting of strict discipline and demanding
of obedience, which is associated with children’s dependence on external motivation (Hubbs-Tait et al., 2008; Jago et al., 2011). Permissive parenting involves low control and low warmth, characterized by modest parental expectations along with acceding to child’s demands, thereby causing substandard self-discipline in the child (Hubbs-Tait et al., 2008; Jago et al., 2011). Uninvolved parents are often considered neglectful and lacking responsiveness to child’s demands (Jago et al., 2011).

Other researchers have considered a different parenting style known as hyper-parenting, which is mainly characterized by parents having too much control over their child’s activities. Lee et al. (2015) described that nowadays, many parents tend to set restrictive activity limits for their children, much of which they did not experience during their own childhood. Even the places that parents were freely left to play during their childhood are now been considered unsafe for their children.

Some of the studied hyper-parenting styles include helicopter, tiger mom, little emperor, and concerted cultivation manners of parenting (Janssen, 2015). Ashton-James et al. (2013) and Janssen (2015) described these manners of hyper-parenting as follows: Helicopter parenting is over-controlling children’s activities, even when they may be able to solve situations on their own. Tiger mom parenting involves setting high expectations for the child without leaving room for anything less. Little emperor parenting involves giving attention to every need of the child, even at the expense of overproviding. Concerted cultivation parenting involves keeping children from playtime with friends while showing off that they are more involved in extracurricular activities.

Findings on the parental influence on children’s physical activity have been inconsistent and this may perhaps be attributed to the different types of parenting styles. Researchers have considered the impact of hyper-parenting on physical
activity as negative (Janseen, 2015; Schiffrin, Liss, Miles-McLean, Geary, & Erchull, 2014). In relation to overall health, some studies have shown that helicopter parenting may lead to anxiety and depression, thereby affecting the psychological health of children (Ginsburg, 2007; Schiffrin et al., 2014). However, these studies sampled children in late adolescence (18 to 24 years), which may be limiting, considering that children learn to grow independently at this stage of life.

A differing perspective was shown when overinvesting in children’s activities was positively linked to parental well-being (Ashton-James et al., 2013). This provides a different outlook to the understanding of parental involvement in children’s health, considering that parents’ well-being is equally important. The study showed that when parents invest a lot of financial and emotional resources in their children, they derive a sense of enjoyment from their children’s happiness, which in turn gives the parents a sense of purpose to life (Ashton-James et al., 2013). Studies show that the influence of fathers on children’s physical activity especially daughters is also very significant for both parties. For example, The Dads and Daughters Exercising and Empowered (DADEE) intervention program highlighted that both fathers and daughters achieved increased physical activity levels from the program (Morgan et al., 2015). The DADEE program also showed that the father-daughter relationship has a positive effect on the physical and emotional health of the adolescent girls as well as the quality of parent-child bonding (Morgan et al., 2015).

Parents occupy a distinct position as a primary role model for their children particularly towards developing a healthy active lifestyle (Noonan, Boddy, Fairclough, & Knowles, 2016). In addition, schoolteachers, student teachers, and peer groups represent other influential categories of people that can have a positive impact on children’s physical activity.
There is a paucity of research on the influence of West African parents on their children’s physical activity. However, a few African studies have shown varying perspectives on food availability, good health, and lack of support as important factors influencing African children’s physical activity (Draper et al., 2014; Pulakka, Ashorn, Gondwe, Phiri, & Ashorn, 2015).

2.6.4 Cultural background. Cultural background may account for the enabling or restricting capacity for children to be active. For example, a multi-ethnic qualitative study found that cultural background may be related to enforced discipline on screen time among children (Trigwell, Murphy, Cable, Stratton, & Watson, 2015). Cultural background may also account for some of the disparities in the levels of children’s physical activity participation in school. Evidence has suggested that African children seem to have low physical activity participation and high levels of sedentary behaviour compared to other racial or ethnic groups (Brodersen et al., 2007).

Cultural background may also account for people’s attitude toward physical activity. For example, the multi-ethnic study showed that the sampled East Asian parents considered it a cultural necessity to be active together as a family thereby encouraging role modelling (Trigwell et al., 2015). Cultural beliefs can transcend geographical location as a result of migration. For example, a sample of African immigrants in Australia showed that parents restricted their children’s physical activity participation due to the cultural belief that an increased body weight is attractive and healthy (Renzaho, McCabe, & Swinburn, 2012). This may imply that perceived body image acceptance in terms of body size can be impacted by cultural background and norms.
2.7 Children’s Physical Activity and Environment

This section describes the different environmental settings that influence physical activity behaviour including the built, natural, and social environment. The built environment comprises of land use, urban design, and other infrastructures that combine with human activity within the physical environment where we live, work, and play (Handy, Boarnet, Ewing, & Killingsworth, 2002). Physical activity indicators such as active play and active commuting, as well as interventions directed toward improving active living, are significantly impacted by the environmental features in the society. Attributes of active commuting such as walking, cycling, and use of public transit depend largely on the way the physical environment is set up. Many environmental attributes are associated with active living in Canada, so national and provincial organizations may need to regularly evaluate the impact of areas designed to promote physical activity opportunities in the society.

In terms of the natural environment, a cross-sectional study of urban Canadian children showed that residential areas designed with natural green spaces and treed areas had a favourable relationship with physical activity outcomes compared to plain green areas having non-woody plants (Janssen & Rosu, 2015). This study of 11 to 13-year-old children emphasized that the physical environment that is designed to allow for more adventurous active play may positively influence physical activity participation among children (Janssen & Rosu, 2015). In other words, the treed areas provide a physical environment that allows for activities such as climbing which enable children to utilize various acquired motor skills and perhaps learn to solve problems independently.

Researchers are beginning to explore the social environment as well. These include social network, social cohesion, and neighbourhood safety. Social cohesion
which is the degree of connectedness in the neighbourhood has been associated with
movement behaviours. Research shows that the higher the level of social cohesion in
the neighbourhood, the better the chances of having increased active times and
reduced screen times (Yi, Trinh-Shevrin, Yen, & Kwon, 2016). In addition, living in
a community for a long period (20 years) may improve the level of social
connectedness among people (Yi et al., 2016). Children may build a social
relationship that promotes behavioural modelling, active play, and independent
mobility, when their parents develop trust with one another within the
neighbourhood. In Canada, a longitudinal study among schoolchildren also showed
that social cohesion was associated with being active while social fragmentation
which means instability in social relationships was associated with being inactive
(Pabayo, Janosz, Bisset, & Kawachi, 2014).

The social perceptions and societal settings may interrelate to impact
children’s free active time (Lee et al., 2015). In this context, children may be allowed
in the neighbourhood based on their parents’ appraisal of social interaction among
people living in the society. For example, parents allowing their children to play
independently in the park may depend on the experiences of parents or other
residents in the area as well as the level of trust residents have with one another in the
society. Perception of parents on environmental factors such as land use mix, safety,
or bullying was associated with the chances of children becoming active (D’Haese,
Van Dyck, Bourdeaudhuij, Deforche, & Cardon, 2015). In addition, a qualitative
research meta-study indicated that, parents’ perceptions of safety regarding their
children and the physical environment was a factor in their decisions to allow
children the opportunity to actively play outside (Lee et al., 2015).
People interact with their environment in various ways, and the interactions can impact the health status of individuals. There is insufficient evidence regarding how environmental factors impact physical activity of West African children during pre- and post-migration (Akinroye et al., 2014; Ocansey et al., 2016). However, it is important for the African countries to exploit the rapid growth in urbanization as a means to develop an environment that is supportive of active living. Environmental factors that have been suggested to promptly and positively impact the active choices of Nigerian children include general safety, traffic safety, aesthetics, availability of sidewalks and walkways, and safe recreational facilities (Oyeyemi et al., 2014). The level of daily physical activity for Nigerian children was perceived to be dependent on the walkability and playability of the environment (Akinroye et al., 2014). Furthermore, the identified barriers of walkability among Ghanaian children were lack of access to sidewalks and poor maintenance of sidewalks (Ocansey et al., 2016).

2.8 Opportunities to Facilitate Movement Behaviour Among Children

Given the level of inactivity among children, there has been increased attention to the opportunities available to them. These include organized and unorganized sports, physical education, active transportation, and active play (Tremblay et al., 2014), which are all discussed below.

2.8.1 Organized and unorganized sports participation. Organized sport has proven to be a successful means of increasing children’s physical activity levels because most of these activities are performed at a moderate to high intensity. Unorganized sport participation can equally increase physical activity for children. Unorganized sports can be regarded as any form of unstructured activity which takes the form of sports, for example, recreational soccer and street hockey. Organized
sports may be influenced by factors such as parental SES, gender, and age, considering that children in the higher socioeconomic group are more likely to participate than children in the lower groups (Brodersen et al., 2007). A Canadian study on the National Longitudinal Survey of Children and Youth showed this trend of the socioeconomic impact on participation in organized sports and also showed that boys were more likely to participate than girls (Bengoechea et al., 2010). Findlay, Garner, and Kohen (2009) also reported that Canadian children tend to have their peak participation in organized physical activity during mid-childhood between 9 to 12 years of age, and this tends to decline during adolescence.

Most of the sports participation in Africa is either unorganised or through school based intramural sports (Aluko & Adodo, 2011). In Nigeria, intramurals are called inter-house sports and students participate in these events in a certain period of the academic year. Inter-house sports can be described as a competitive program which involves a minimum of four teams recognized by colours, and assigning of each student to a group to be part of the program. Participation is compulsory. The mandate of this program is fulfilled as each student participates in activities which promote healthy active lifestyle and physical literacy (i.e., developing the knowledge and confidence to engage in physical activity). Sadly, not every school is able to engage in this program throughout the year and not all have facilities, training, or funding for indoor programs. Therefore, unorganized sports are more predominant and upper-class schools provide more organized sport opportunities for children across the year.

2.8.2 Physical education. Physical education is a form of physical and health curriculum in school, which provides children with the opportunity to learn how to engage in physical activities, how to play, interact with each other, and how to
improve their physical fitness. This curriculum generally helps the children become physically literate through a mandatory enrolment with the help of trained teachers and infrastructural school facilities. The duration of physical education over the learning years will normally depend on policy in the countries, and this duration has been linked to some health benefits in children (Datar & Stum, 2004). It was reported that an increase of an hour in the duration of the weekly physical education class showed a reduction in body mass index of overweight kindergarten girls or girls at risk of being overweight (Datar & Stum, 2004). The likelihood of being an overweight adult was also reported to be reduced by 48% through increased physical education and participation in extracurricular activities among children (Menschik et al., 2008).

A study showed that physical education has regional variations (Hardman & Marshall, 2005). For example, it was shown that physical education is taught and examinable in Nigeria, taught but not examinable in Kenya, and taught not as a major subject anymore but as part of a life orientation learning in South Africa (Hardman & Marshall, 2005). The variations highlighted across these countries were attributed to factors such as inadequacy of facilities and trained personnel, and less priority afforded for physical education. Hardman and Marshall (2005) further explained some physical education marginalization experienced in the US due to political priorities and school preferences.

The school environment was associated with physical education enjoyment among children, especially adolescents (Bengoechea et al., 2010). Emphasizing the importance of the physical education curriculum at the secondary school level was recommended by researchers in Nigeria because it was noted that adolescent children
had low physical activity levels, and their physical education classes had ended in elementary school (Odunaiya et al, 2010).

Cummings-Vickaryous and LeDrew (2011) expressed concern that children should not be limited to the school curriculum or organized sports, suggesting that active living experience should be open to all places of imagination. This thought addresses the fact that the physical education curriculum, as well as organized physical activity, may not provide enough options for children to get the needed MVPA on a regular basis. A physical education curriculum depends on school plans, whereas organized physical activity particularly sports, may come at some financial cost to the parents. Therefore, to address the physical inactivity issue, researchers have drawn their attention to some of the other non-primitive physical activity indicators, discussed below.

2.8.3 Active transportation. Active transportation comprises of the different active modes of travelling which include walking, wheel-related activities (cycling, rollerblading, skateboarding, longboarding), skiing, and use of public transit. According to the physical activity monitors of the Canadian Fitness and Lifestyle Research Institute (2010–2011), less than one quarter of Canadian children are actively transporting to or from school. It is becoming more convenient for people to travel around using automobile transit without benefitting from the importance of active commuting. Substituting automobile transit for active modes of getting to places contributes to children’s lack of daily physical activity, and this has been a recent focus for researchers. Buliung, Mitra, and Faulkner (2009) reported that the use of active means of travel to and from school has considerably decreased among Canadian children. Furthermore, school-age active travellers have been shown to have better cardiovascular fitness, healthier body mass index, and more accumulation
of daily physical activity than passive travellers (Davison, Werder, & Lawson, 2008; Faulkner, Buliung, Flora, & Fusco, 2009).

Children’s active transportation may depend on the influential factors in their school, home, and community. In Ontario, some environmental factors such as type of neighbourhood setting, distance and safety of routes to school, parental safety concerns, and independent mobility were associated with walkability to school (Larsen, Buliung, & Faulkner, 2015). Due to the documented reduced independent mobility of Canadian children, recent studies have suggested that community plans and bylaws should consider ways to mitigate parental safety concerns because it is unclear why only older neighbourhoods tend to have unescorted children actively commuting to school (Larsen et al., 2015; Mammen, Faulkner, Buliung, & Lay, 2012). This study’s conclusion represents a research gap that requires a better understanding. Children’s independent mobility may be decreasing, and it may be related to the neighbourhood construct, but it is a factor that can positively influence the healthy active lifestyle of children in Canada. Therefore, it is important to get a good grasp of children’s thoughts and feelings about active transportation to and from school. In addition, it would be interesting to have a more detailed understanding of how parents feel whenever their child is actively commuting and the factors surrounding their thoughts.

Active transportation is still largely utilized by children in Africa as the way to commute from home to school (Ahmadu et al., 2012; Larouche et al., 2014). However, the non-motorized travelling by students in Africa is due to several factors, including regional residential location, parents’ SES, distance to school, and neighbourhood factors (Larouche et al., 2014; Oyeyemi et al., 2014). It is considered as the predominant means of transportation among Nigerian children: 80% of 5 to 11-
year-olds walked to school (Ahmadu et al., 2012). Children in rural regions tend to walk more than those in the semi-urban and urban regions (Ahmadu et al., 2012; Larouche et al., 2014; Oyeyemi et al., 2014). Additionally, children attending schools of higher SES were reported to have a lower rate of active commuting (Larouche et al., 2014). It may be because many affluent parents tend to send their children to boarding school with limited walking opportunities outside the campus or the affluent families own motorized vehicles to transport children from home to school and back. Studies are lacking on whether the active transportation among children from Africa changes with migration to other HICs.

2.8.4 Active play. Active play (also known as physical activity play or active free play) refers to the physical activity that is characterized by games or play activities (Janssen, 2014). Active play is usually unstructured and self-directed by children, although it can take place in a structured setting (Janssen, 2014). Active play has the potential to not only contribute to physical activity levels of children but also render emotional and social benefits (Brockman, Jago, & Fox, 2011). Children’s motivation to perform active play is high, and it is perceived to be enjoyable, prevent boredom, create freedom from parental rules, and provide a break from studying times (Brockman et al., 2011). The opportunities for children to actively play are improved in outdoor settings because they may be more fun for children and may indirectly lead to the development of physical literacy (ParticipACTION, 2015). There are many factors influencing participation in active outdoor play, including age, gender, parental influence, peer influence, and neighbourhood settings.

The IKEA Play Report (2015) revealed that parents explained the most memorable times of playing as a child to be during outside unstructured physical activity such as playing hide-and-seek until the sun goes down, building little dens,
and playing in the woods. Allowing play to be unstructured and self-directed by children in all environmental settings has been recommended for early adolescent children by some researchers in UK (Brockman et al., 2011). However, the major concern arising with self-directed outdoor play is the risk associated with children playing unsupervised. Overcoming fear and anxiety which are characterized with risky play may be helpful for their intrapersonal development (Sandseter & Kennair, 2011).

Although children may be intrinsically exposed to physical injury, it may give them an opportunity to improve their sense of confidence, toughness, and independence (Little & Wyver, 2008). Children who are given freedom to move around may be less sedentary during weekdays or weekends (Stone et al., 2014). Thus, independent mobility is also an important determinant for children’s active outdoor play. In West Africa, leisure-time physical activity may be influenced by active outdoor play time particularly because of the favourable weather. Studies in Nigeria have shown that an estimated 40% of children aged 12 to 17 years engaged in active play after-school and weekends (Adeniyi, Okafor, & Adeniyi, 2011).

Activities that Nigerian children regularly engage in during leisure may include running games, basketball, soccer, suwe (hopscotch—more common among girls), and ten ten (clapping and moving legs to a rhythm). Many of these plays are outdoor activities because of warm weather, and these have been the usual manner in which children spend their leisure time. However, there is no research evidence on how West African children have been able to cope in a new environment where play activities may be different. Furthermore, perspectives of immigrant parents on their children’s experiences during active play have been minimally studied in Canada. A
better understanding of these factors may be necessary in the development of active living plans in HICs with a fast-growing immigration, such as Canada.

2.9 Immigrants and Health

According to the most recent National Household Survey, immigrants constitute 21.9% and 10.5% of the Canadian and Saskatchewan populations respectively, while Africans accounted for about 8% of the total immigrant population (Statistics Canada, 2017). The Canadian population is rapidly growing at a rate higher than any other G7 country and immigration is responsible for up to 67% of the Canadian population growth (Statistics Canada, 2012). The fertility rate in Canada is declining as baby boomers age, and immigration could account for 80% of the population growth by 2031 (Statistics Canada, 2012). The Prairie Provinces have been experiencing the highest growth in recent years. Saskatchewan showed a population growth of 6.3% between 2011 and 2016 which was higher than the national average of 5% (Statistics Canada, 2017). In addition, almost 38% of Canadian children below 15 years of age have an immigrant background (i.e., at least one foreign-born parent; Statistics Canada, 2017).

Immigrants in HICs, whether voluntarily or conditionally, may be impacted by the public health concerns in the region. This leads to acculturation, which is a concept that explains the lifestyle and psychological changes occurring as immigrants tend to adopt the common practices of a new culture and combining them with those of their heritage culture (Kukaswadia et al., 2014). Sam and Berry (2010) described acculturation as the coming together of two cultural groups and individuals. It is a term often used interchangeably with the term adaptation, but adaptation occurs as a consequence of acculturation (Sam & Berry, 2010).
The resultant phenomena associated with acculturation include the healthy immigrant effect and *negative acculturation effect* (Ro, 2014). The healthy immigrant effect suggests that immigrants tend to have a better health status than their host counterparts when they newly arrive in the country (Delavari et al., 2013). The negative acculturation effect simply means that the health of immigrants may decline the longer they reside in the new country (Ro, 2014). Studies have used the time since immigration to measure the acculturation effects. Residing in the host country for less than 10 years has been used to classify recent immigrants or newcomers in HICs (Degelman & Herman 2016, Kukaswadia et al., 2014; Tremblay et al., 2006). This period is important as it may represent the period of transition and immersion into the new social and cultural environment.

Acculturation has been linked to many health consequences, including obesity, cardiovascular risk, smoking, and overall poor physiological health (Kuerban, 2016; Lasseter & Callister, 2009; Wieland et al., 2016). It has also been linked to a decline in psychological health particularly because of increased stressors and inadequate coping resources (Delavari et al., 2013). Degelman and Herman (2016) emphasized the negative acculturation effect by showing that the proportion of new immigrants having a regular family doctor was low compared to their host and non-immigrant counterparts. Perhaps, a high proportion of the host immigrants had family doctors because of health conditions that arose, or they did so because of adaptations due to length of stay.

Researchers have speculated that the cause of the negative acculturation effect relates to the adoption of new cultural norms such as living factors, linguistic factors, interpersonal factors, and health behavioural factors including physical inactivity (Lasseter & Callister, 2009; Vang, Sigouin, Flenon, & Gagnon, 2017). Therefore, it is
the manner of adaptation to the prevalent sociocultural factors that reflects how acculturation affects immigrants. The desire of some immigrants to retain most of their heritage culture and lifestyle habits as a way to prevent health problems has been referred to as enculturation (Lasseter & Callister, 2009), also known as cultural buffering (Vang et al., 2017).

The healthy immigrant effect has been attributed to some of the selective factors of international migration and admission, particularly high educational, financial, and health status (Chen, Ng, & Wilkins, 1996; Vang et al., 2017). In Canada, immigrants undergo a selection process based on a point system that values human capital (Vang et al., 2017). The system is favourable to selected individuals due to factors such as language proficiency, highly skilled work experiences, high educational qualifications, economic productive age group, and less possibility of burdening the healthcare system. However, it is well documented that immigrants face challenges with their education being recognized, obtaining employment at their education level, and accessing health services. Other common challenges that immigrants face include communication, economic integration, learning how to get help for settlement, and having conflicting beliefs (Simich, Beiser, Stewart, & Mwakarimba, 2005).

The advantages of the healthy immigrant effect among recently immigrated adults is well documented, while the effect at childhood and adolescent stage remains unclear (Vang et al., 2017). The indicators of physical activity among children may be uniquely different, although little is known about immigrant children’s active living in Canada.

A systematic review on generational differences among foreign-born and Canadian born children reported some inconsistent relationships based on obesity,
mental health, and asthma, however not on physical activity (Vang et al., 2017). While one study on overweight and obesity showed that foreign-born children had a higher weight status as they grew in relation to their host counterparts (Quon, McGrath, & Roy-Gagnon, 2012); another study indicated that foreign-born children were slower to become overweight and obese (Maximova, O’loughlin, & Gray-Donald, 2011). Similar interpretations were drawn from studies on children’s psychological health (Vang et al., 2017).

In terms of physical activity, the immigrant population in Canada may not be as active as recommended for health benefits (Wieland et al., 2016). Despite the healthy immigrant effect, a Canadian study on adults showed that recent immigrants had low physical activity levels compared to their established and non-immigrant counterparts (Tremblay et al., 2006). Among adults, studies also show that recent immigrants tend to engage in active transportation, home-based exercises, and resistance exercises (Dogra, Meisner, & Ardern, 2010), but less likely to engage in recreational activities relative to non-immigrants (Tremblay et al., 2006).

A Canadian Health Behavioural Survey showed a similar trend on immigrant children having lower physical activity levels compared to their Canadian born counterparts (Kukaswadia et al., 2014). A qualitative study from Australia among African adults also found that the sampled immigrants explained having lower physical activity levels in comparison to the engagements in their home country (Addo, Brener, Asante, & Wit, 2019).

Given that each ethnic group possesses its unique characteristics, ethnic differences may also contribute to the physical activity trend highlighted among recent immigrants. Research shows that these physical activity differences are more noticeable when the two meeting cultures are very different, for example, from LMIC
to HIC or from a low resource to a high resource context (Kukaswadia et al., 2014). This highlights the importance of understanding how West African immigrant children and their families acculturate. Research in this area should be able to focus on showing the factors that surround children’s active choices pre- and post-migration.

2.10 Summary of the Literature Review

The movement continuum encompasses behaviours which range from sleep when the body is at rest to light intensity movement when doing household chores to vigorous intensity when high energy is expended. Physical inactivity and sedentary behaviour are common among children and are associated with negative health outcomes. There are many factors that influence children’s physical activity and they may tend to interrelate with each other. Many opportunities exist for children to incorporate physical activity into their daily routines. Not a lot of research has explored immigrant children in HICs, what factors influence them, and how their physical activity behaviour is impacted in the host country during the acculturation process.
3.0 Chapter Three: Methods

3.1 Introduction

The purpose of this study was to explore the perspectives of West African immigrant families in Saskatchewan and assess the impact of the sociocultural environment on active living among their adolescent children between 10 to 17 years. A qualitative research method is suitable for this project in order to derive an in-depth understanding of the factors surrounding active living among the adolescent children. This involves a deeper understanding of the factors influencing West African immigrants during post-migration and the reasons why recent immigrants have been shown to be less active compared to their pre-migration experiences and their host counterparts. Qualitative research also enables the thoughts, feelings, and beliefs of participants to be extensively studied in relation to children’s physical activity.

Qualitative research has a history that can be traced from human disciplines such as anthropology and sociology, but its utilization has become diversified across many applied fields of practice and all social sciences (Denzin & Lincoln, 2003). It is a continuous process characterized by the use of various methods for the interpretation and social construction of reality (Flick, 2009). Denzin and Lincoln (2003) explain that qualitative research cannot be defined through a fixed set of methods; it is unique in empirical research for its own essential features, which are discussed below.

Central to qualitative research is the idea that it makes sense to produce meaningful knowledge from people’s interactions with the world they live in (Creswell, 2013). There are multiple interpretations in the social context of life. Due to the diversification of our world swiftly changing and researchers continuously faced with socially related challenges, one may conclude that research should go
beyond the use of fixed measurements and deductive methodologies, as positivist quantitative research does (Flick, 2009). Therefore, “qualitative research aims to give privilege to the perspectives of research participants and to illuminate the subjective meaning, actions and context of those being researched” (Fossey, Harvey, McDermott, & Davidson, 2002, p. 723). This means that qualitative researchers seek to understand the interpreted representation of findings as reflective of the participants’ perspective, the information gathered about them, and the social situation from which it was generated (Fossey et al., 2002).

Qualitative research utilizes multiple sources of data and ensures that the sources are used collectively for interpretations. Creswell (2013) categorized the data collection sources into four categories: interviews, field observations, documents, and audio-visual information. These categories highlighted cover a wide range of information; however, other specific sources include focus groups, personal journals, and diaries.

Qualitative research also utilizes both inductive and deductive analytical approaches (Creswell, 2013). By breaking down the data into meaningful units, developing patterns, and forming conceptual categories, the researcher is following a bottom-up approach that is referred to as inductive analysis. Deductive reasoning is utilized within the process as the researcher uses the formed concepts to look through existing or new data for rigour and in-depth understanding.

Finally, qualitative researchers attempt to understand participants’ perspectives of a specific situation in a specific period and they seek to create a complex understanding of that situation as well as the various angles through which the situation can be seen (Creswell, 2013). Hence, there is a holistic grasp of the phenomenon under study.
3.2 Overview of Grounded Theory

Grounded theory has been known to create an overwhelming challenge for graduate students and novice researchers (Jones, 2011). My initial sense of being overwhelmed was slowly alleviated as I read to gain a better grasp of the complexities of grounded theory procedures. Grounded theory involves “systematic, yet flexible guidelines for collecting and analysing qualitative data to construct theory from the data themselves” (Charmaz, 2014, p. 1). Grounded theory can be simply explained as the creation of a principled understanding from the realities surrounding a phenomenon.

Grounded theory is deemed suitable for this project because the study context (i.e., active living perspectives of West African immigrant families in Canada) has been sparsely studied. Grounded theory is also suitable for this project to develop a conceptual knowledge on the area of children’s physical activity engagements during pre- and post-migration. Furthermore, I have chosen grounded theory in order to allow immigrant parents and children to discuss their own perspectives, experiences, and actions in a study area that remains largely unexpressed, and then develop structured meanings from their ways of life.

3.3 Genealogy of Grounded Theory

In the 1960s, Barney Glaser and Anselm Strauss founded grounded theory as a way of developing theory through the grounding of data (Corbin & Strauss, 2008). Through the collaboration of the two social scientists, they developed a systematic method that unearths theory, fits data, and is applicable to world reality (Walker & Myrick, 2006).

The use of qualitative inquiry prior to the origination of the method was diminishing due to the supremacy of positivist quantitative method at the time and
because it was perceived as impressionistic, biased, and unsystematic (Charmaz, 2012). Charmaz (2014), while explaining the positivistic approach at that time, described how quantitative researchers assumed a role that separates their values from the participants’ information and gives a generalizable contribution to the world knowledge. As they consistently created a link between theory and research through hypothesis testing, new theories were barely created.

Grounded theory at that time was created as a qualitative method, but with an attempt to incorporate the strengths of the quantitative approach (Walker & Myrick, 2006). Therefore, the essential systematic and logical approach of positivism is combined with the depth and richness of interpretivism to develop a method that is distinct from other qualitative methods for its methodical pattern of deriving something new (Walker & Myrick, 2006). The method has been taught since then across universities and has evolved through many research studies (Corbin & Strauss, 2008). The method is also warmly welcomed across many disciplines for its rigour and dynamic usefulness (Charmaz, 2014). Due to its positivistic assumptions, quantitative researchers can utilize it in a mixed-methods project, whereas qualitative researchers continue to embrace it for its flexibility and legitimacy (Charmaz, 2014). The flexibility of grounded theory should not be misinterpreted for loss of credibility, but rather as a feature that is importantly needed for the creation of new concepts.

3.3.1 Diverging paths. After their origination of the methods of grounded theory, Glaser and Strauss ended their collaboration. This split however may have resulted in differences in opinion about grounded theory because slightly different versions of grounded theory methods were published by both scientists. They went ahead to make separate publications on their own method but with different perspectives on the pragmatic use of grounded theory. The result turned out to be a
Glasierian approach and a Straussian approach (Stern, 1994). However, they both concurred on the purpose of grounded theory even with their contrasting approaches. They agreed that the theory formed should be reflective of the studied area and that the method should provide proper connections within the concepts, thereby portraying social complexities in the realities of the studied phenomenon (Duchscher & Morgan, 2004). They also agreed that basic grounded theory methods must include data collection, coding, constant comparison, categorization, memo writing, and theoretical sampling (Walker & Myrick, 2006).

The Glaserian approach is more consistent with the original version of grounded theory that was developed by the two sociologists (Charmaz, 2014; Kenny & Fourie, 2014). Glaser emphasized that it is a method of discovery from which categories must inherently emerge from the data. In fact, Glaser believed that researchers should enter the process with a clear mind, even staying free of prior literature. However, the Straussian approach was revised into a more systematic process, producing a highly analytical framework for coding (Kenny & Fourie, 2014). The Straussian approach also evolved with the application of technical procedures for theory creation, committing to the idea that grounded theory is a process of verification (Charmaz, 2014). This led to the argument that there should be a difference between having an open mind and an empty mind (Jones & Alony, 2011).

3.3.1.1 Coding. Coding is the process of analysis that links data collection to theory generation (Charmaz, 2014). The differing perspectives between the Glaserian and Straussian approaches to grounded theory extended to their different procedures for data analysis, particularly the coding process. According to Glaser’s work, coding is divided into substantive and theoretical coding. The former is the first process that is subdivided into open coding and selective coding (Holton, 2007). Substantive
coding is used to create categories and their relationships from the data while theoretical coding is used to develop theoretical categories through the comparison of data with codes and categories (Walker & Myrick, 2006). Glaser provided theoretical coding families, optional for researchers, for relating categories with their relationships and theoretical framework integration (Duchscher & Morgan, 2004). Overall, Glaser believed that theory can only emerge when analysis is done through immersion and constant comparison in a persistent manner (Walker & Myrick, 2006).

From the Straussian approach, there are three phases to the coding process: open, axial, and selective coding (Strauss & Corbin, 1998). Open coding in this approach is similar to Glaser’s in that it involves developing categories and their relationships; however, the Straussian approach asks specific questions of the categories to create dimensions of the relationships within categories (Strauss & Corbin, 1998). In axial coding, a coding paradigm is used to connect categories to the study phenomenon under three parameters: conditions of occurrence, actions and interactions of people, and consequences of their actions (Strauss & Corbin, 1998). Here, there is a structural analysis with the focus to relate and integrate (Walker & Myrick, 2006). Axial coding is central to Strauss and Corbin’s (1998) approach for properly defining the relationships between categories and in connection with other categories. It is similar to Glaser’s theoretical coding but different in regard to the stage in which it is utilized in the process. Axial coding is used to provide more depth and explanatory power to the analysis because it shows connections within each category. However, this stage remains debatable considering the possibility that its early introduction in the process may either extend or reduce theoretical insights (Charmaz, 2014, Walker & Myrick, 2006). The final phase (selective coding) involves developing a core category that connects all the other categories and
properties (Strauss & Corbin, 1998). Contrary to Glaser’s selective coding that occurs in the first phase as a way of breaking down data and creating initial categories.

Strauss and Corbin believed in the use of a coding paradigm as a way of creating categories and their properties, but Glaser strongly contested this methodology (Charmaz, 2014; Walker & Myrick, 2006). He argued that the use of a coding paradigm at the early stage of analysis would only force data into preconceived categories that would interrupt true emergence of theory. He emphasized that the process would not allow researchers to concentrate on what is truly happening in the data. In fact, he said the process is not grounded theory but a completely different method of full conceptual description (Duchscher & Morgan, 2004). Nevertheless, Strauss and Corbin’s publications gained popularity over the years (Charmaz, 2014). Perhaps this was due to the use of more technical procedures that allow for more flexibility, or maybe researchers are concerned with the persistence associated with Glaser’s approach, especially because of the anxiety of being lost in the analysis while seeking theory emergence.

3.3.1.2 The role of deduction. Generally, grounded theory is an inductive approach from its beginning to the end. The whole process is guided by an inductive reasoning from data collection to analysis and then to theory generation (Duchscher & Morgan, 2004). However, imbedded in the process, is a form of deductive reasoning applied during the analysis (Walker & Myrick, 2006). More specifically, it takes place when categories have been formed and researchers seek to verify them through the data at hand or through new data collection, for the purpose of defining the relationships within the categories.

In addressing this type of reasoning, Strauss and Corbin (1998) shared that researchers are continuously going from inductive to deductive reasoning during the
analysis. They explained that during the use of a coding paradigm, dimensions are derived through verification, validation, and deductive thinking. Glaser, not having a different perspective on the use of dimensions per se, explained that a persistent constant comparison of data is the process that ensures verification, only that Strauss and Corbin incorporated a specific pattern that may not allow for a revisit to old data (Walker & Myrick, 2006). On reflection, verification through some form of deductive thinking is required for the validation or saturation of categories before a conceptual knowledge that is grounded in data can be generated.

3.3.2 Criticisms of grounded theory. Despite the methodical usefulness of grounded theory, it has been subjected to some criticisms. Just like any other qualitative research methodology, grounded theory receives criticism for being an inductive process. This comes from the claim that grounded theory analysis is not dependent on existing theories. However, Haig (2007) explained that this criticism is unnecessary because the method requires researchers to develop emergent concepts, which is empirically sound and bridges gaps in knowledge.

Grounded theory has also suffered some criticisms of internal misalignment largely because of the various philosophical perceptions that stem from the methodology (Jones & Alony, 2011). This criticism may be identified as a limitation by researchers with different philosophical views compared to the constructivist approach taken by this study.

Other criticisms that have been highlighted include the limitations of preconceived knowledge and situating the method between theory discovery and construction (Jones & Alony, 2011). Although these limitations may apply to this study as well, evolving contemporary research has sought to address these limitations
for the applicability of grounded theory. In addition, the application of reflexivity in this study helped to moderate the impact of preconceived knowledge on the study.

3.4 Evolving Epistemological Views

The evolving manner of grounded theory method through different epistemological standpoints is discussed in this section. These theories of knowledge are discussed not only to set up an understanding of beliefs but also to establish some philosophical worldviews that draw an inference for the approach taken by this study.

3.4.1 Shift from post-positivism to constructionism. Grounded theory evolved from a post-positivistic realist viewpoint when Glaser embraced the idea that knowledge should solely be derived as an objective reality (Ward, Hoare, & Goat, 2015). The tensions in viewpoints after the original version of grounded theory saw the Straussian approach move from a post-positivist to constructionist grounded theory (Ward et al., 2015). This pragmatic and interpretivist turn aligned with some of the conventional epistemologies in qualitative research such as social constructionism and constructivism which are further discussed.

Social constructionism through the major contribution of Berger and Luckman (1967/1991) in *The Social Construction of Reality* was presented with the contention that reality is socially constructed and that the knowledge of the social world must be seen through the process by which social interaction in everyday life occurs. Social constructionism has been expanding as a theory of knowledge in social science; however, Burr (2015) highlighted some crucial assumptions that are common to this theory: a) taken-for-granted knowledge should be critically explored, b) understanding of reality is historically and culturally specific, c) knowledge is sustained by social processes, and d) knowledge and social action go together.
First, *taken-for-granted knowledge should be critically explored*, is an assumption that invites us to carefully look at the idea that the knowledge of the world we live in is derived from the observation of how nature exists. In this form, social constructionism cautions us to be sceptical of the way we establish reality in our social world. For example, racial distribution has been widely subdivided into categories such as white, black, etc. Social constructionism would critique this notion by establishing that society demands racial classifications be based on fairness and justice for power privileges to be balanced. Therefore, reality is not accepted as a pre-existing nature but as a construction in the social world.

Second, *understanding of reality being historically and culturally specific*, explains that our conceptualization of the world depends on where we are, our history, and what we have been exposed to. For example, the notion of child development may differ across and within geographical regions. Child development within a country may be different from one tribe to the other, with the development dependent on the norms specific to each tribe. In this sense, social constructionism denotes that our ways of understanding the world are specific to historical occurrences as well as the prevailing social and economic settings when the knowledge was established.

The third assumption, *knowledge is sustained by social processes*, informs that social constructionism produces knowledge of the world through daily social interaction between people. Therefore, we understand truth of the social world as a product of consistent social processes as well as continuous engagement of people with each other.

The fourth assumption, *knowledge and social action go together*, means that there are different constructions for various social processes of the world. For
example, the understanding and acceptance of smoking in the society in the twentieth century was different from present. Smoking was formerly accepted in many public places; however, present knowledge of smoking and its health consequences has led to a more restrictive smoking society.

Berger and Luckman (1967/1991) produced a broader and deeper understanding to social constructionism as they advocated that society should be viewed both as an objective and a subjective reality. The former means that the existing knowledge about a phenomenon is present due to the social interactions that produced it. Andrew (2012) explained that as we socially interact, the society also impacts us thereby resulting in habituation and institutionalization. This is because the typical way of life of an individual or people in a society contributes to stock of knowledge. Therefore, through habituation, knowledge is created from repeated occurrences that turns into routines, while the understanding of not only these routines, but also their historical and social processes bring about institutions.

Berger and Luckman (1967/1991) further explained subjective reality through institutionalization under the concepts of externalization (society is a product of humanity) and internalization (humanity is a product of society). In this sense, children’s experiences can be used as an example. Their experience of any situation is dependent on the existing social phenomena and its representation by society (externalization), and as the situations become natural to them, they internalize their understanding of the world as a meaningful and social reality, which exemplifies the concept of internalization. Their own engagements in social processes may therefore legitimize or improve the existing knowledge of situations.

Subjective reality can however be experienced through primary or secondary socialization. On one hand, primary socialization involves the initial orientation of an
individual or child into a society, which Andrew (2012) also perceives as being given an identity and place in a social group. Secondary socialization on the other hand is the process by which the individual who had already experienced a form of socialization now gets inducted into different institutions of the objective reality. In the case of immigrant children, the implication of socialization is important not only because socialization varies from one society to the other, but also due to the process of re-induction into a new world.

Berger and Luckman (1967/1991) further emphasized language as an important part of social constructionism. The daily activities among people can only be constructed from language. Language is a medium of conversation with which people express thoughts, feelings, and ideas existing within themselves or in the world (Burr, 2015). Therefore, it creates a means of constructing concepts that provides knowledge of the way our social world is experienced.

3.4.2 Constructivism. The two terms constructionism and constructivism have often been used interchangeably; however, differences exist between them (Burr, 2015; Ward et al., 2015; Young & Collin, 2004). Constructivism was developed by Piaget and Vygotsky as a learning theory that helps to understand childhood development by individual construction of knowledge (Young & Collin, 2004). The constructivist approach evolved due to an ontological premise that individuals’ construct their worlds through personal and creative thoughtful processes (Andrew, 2012). Although constructionism depends on social interactions for creation of knowledge, constructivism differs because it gives the researcher a dynamic of power in the interpretation of data.

Ward et al. (2015) clarified that the inclusion of “social” as a prefix before constructivism situates it in a social context. Given that knowledge is inseparable
from the social environment and social processes from which it is produced, social constructivism posits that we are capable of constructing reality in the social world through discourse that accounts for our social, historical and cultural contexts (Adams, 2006). Moreover, the reality developed from constructivism, though may be subjectively constructed, tends to become objective reality and taken for granted with time as described in social constructionism (Andrew, 2012).

Consequently, qualitative research assumes that knowledge production is a collaborative construction between researcher and participants (Charmaz, 2014; Flick, 2009; Ward et al., 2015). On this basis, constructivist grounded theory evolved from the constructionist approach. Charmaz (2014) emphasizes “the use of the term ‘constructivist’ to acknowledge subjectivity and the researcher’s involvement in the construction and interpretation of data and to signal the differences between her approach and the conventional social constructionism of the 1980s and early 1990s” (p. 14).

The constructivist approach resonates with me because it aligns with my view that the knowledge produced from my relationship with participants is dependent on my position as a researcher. Therefore, my beliefs and method of inquiry will be better supported using the constructivist grounded theory approach which is further discussed.

3.5 Constructivist Grounded Theory

From the original version of grounded theory, Glaser and Strauss implored researchers to use the method flexibly (Kenny & Fourie, 2014). Kathy Charmaz, a doctoral student at that time who had a first-hand experience with both of them, accepted this invitation by blending contemporary research patterns with the basic principles of grounded theory (Charmaz, 2014). In doing so, she interpreted grounded
theory within a constructivist paradigm (Kenny & Fourie, 2014, p. 6). Corbin acknowledged the idea of applying contemporary research with grounded theory when he stated the following:

There is no doubt that I, Corbin, have been influenced to some degree by the writings of contemporary feminists, constructionists, and postmodernists . . . I want to explain how my approach to analysis has been affected by recent directions in qualitative research, while still retaining most of Strauss’s basic approach to doing analysis. (Corbin & Strauss, 2008, p. 9)

The thread of a constructivist approach to grounded theory can be drawn from Strauss and Corbin’s work (Mills, Boner, & Francis, 2006). They held the ideology that historical moments should be considered when formulating theories and they emphasized the recognition of bias. Mills et al. (2006) also explained that their creation of a conceptual sensitizing paradigm for analysis enables the construction of theory that is more reflective of the participant’s situation in context. Therefore, constructivist grounded theory evolved based on the relativist philosophical assumption that the outcome of the relationship between researcher and participant is collaboratively constructed from subjective meanings (Mills et al., 2006). Charmaz (2014) explained that grounded theories are constructed based on the researcher’s position, perspectives, and involvement in the reality of context, as well as the consideration of participant’s experiences. An objective stance cannot be assumed but rather one should acknowledge their values and subjectivity (Charmaz, 2014; Mills et al., 2006). Essentially, the assumption comes from the idea that realities in our daily lives are diversified with different interpretations, so the perspectives of the researcher are intrinsically part of any meaning derived from the research.
In fashioning her own constructivist grounded theory, Charmaz rejected Glaser’s philosophical principle that theory is purely discovery, establishing that people construct it from their past and present historical involvements with others (Charmaz, 2014). She also considered Strauss’s highly methodical coding pattern to be too descriptive (Kenny & Fourie, 2014). Consequently, she proposed more flexible coding guidelines that raised questions for analytical directions (Kenny & Fourie, 2014). Charmaz (2014) stated, “It addresses many criticisms which are directed at the earlier versions of grounded theory produced by Glaser and Strauss and Corbin, in the sense that, it highlights the flexibility of the method and resists the mechanical applications of it” (p. 13). The approach also adopted the inductive, comparative, and emergent nature of grounded theory (Charmaz, 2014).

I have chosen a constructivist approach to grounded theory because I believe it is the most suitable approach that will allow me to value the information constructed with the parents and children selected for this research. This approach is suitable in addressing my research questions because my position in the research (an international student researcher) can be brought into perspective for the crafting of meaning from immigrants’ experiences. In addition, an upfront detailed explanation of how the research will be ethically conducted is required for ethics approval and academic research. This may not resonate well with other versions of grounded theory that allow the researcher to start a research investigation with an assumption that prior knowledge is not warranted. Therefore, I lean toward the idea that it is strategic to develop conceptual meanings from historical knowledge rather than take the position of a value-free expert in research.
3.6 Research Design

The research framework (figure 2) highlights the design adopted from Charmaz’s constructivist grounded theory approach. It depicts the framework that was applied during the data collection and analysis. Figure 2 also illustrates the subdivision of the analysis into the immersion phase and conceptual phase, as well as the processes involved in each phase.

**Figure 2. Research framework.**

**Immersion Phase**
- Initial data collection
- Purposive sampling
  - Interviewing as participants give informed consent
  - Use semi-structured interview with parents and then children
- Immediate transcribing as data are collected from each family
- Member checking
  - Apply what, when, why & how
- Identify salient codes
- Focused coding

**Conceptual Phase**
- Form categories and sub-categories
- Theoretical sampling
  - Hypothesize categories
  - Abductive reasoning
  - Identify puzzling gaps
  - Set theoretical direction
  - More fresh data collection
- Immediate transcribing
- Member checking
- Code to fill conceptual gaps
- Refine categories
- Further data collection (if necessary)
- Theoretical saturation
  - Trustworthiness of findings

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**Constant comparative analysis and memo-writing**

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**Inductive analysis**

3.6.1 Criteria for selection of participants. All the participants selected for this project provided informed consent. Certain criteria were considered for the selection of participants in this project. Only recent immigrants or refugees with origin from West Africa (see Appendix J) were considered for participation. Recent immigrants were classified by a period of not more than 10 years since arrival in the country (Kukaswadia et al., 2014; Tremblay et al., 2006). A multigenerational
approach was taken to select participants, as it was required to include both a parent and a child from each family. Initially, it was planned to include a guardian or care provider when none of the parents was available; however, at least one parent was available to participate from each family in this study. The age range for selection was 10 to 17 years because this is the period of transition from childhood to young adulthood and children have been shown to be susceptible to physical inactivity at this stage of life. Every child included in this project was able to ambulate with or without assistance. Only families residing in Saskatchewan either in a rural or urban area were eligible to participate. All the participants were able to communicate in English.

3.6.2 Procedure for selecting participants. The participants recruited for this study were drawn through a purposive sampling process. This process ensured that participants with experiences related to the study context were targeted while considering the study criteria. The initial contact with participants was established either via telephone, email or face-to-face contact.

Given the researcher’s position with West African ethnic background, the researcher’s primary contacts were explored first. For wider recruitment, the snowballing nonprobability technique of recruiting participants was used. The snowballing effect started when the initial contacts referred other eligible families as well as through suggestions from community and religious associations. The researcher attended various religious associations within Saskatchewan to connect and recruit participants. After seeking permission from the religious leaders, some of the leaders showed acceptance by making referrals while some included the information in their bulletin announcements. Information regarding the purpose of
the study and participants needed was highlighted using a created poster that was
easily given at various platforms of recruitment (see Appendix E).

Several organizations and community associations that welcome immigrant
members were contacted and a poster was given for display. To recruit non-Nigerian
participants, the researcher connected with leaders of community associations such as
Ghanaian community association and Ivory Coast community association.

3.6.3 Data collection and interview process. The data collection process
began the immersion phase of the research framework as highlighted in figure 3. As
this is the process that sets the direction for the analytic stage, it was designed to
ensure it is rich and representative of its intended purpose. Consequently, the data
collection process was divided into two phases—the eligibility phase and the
interview phase. The first phase was a 5-minute eligibility survey completed by
participants via web-based software known as Qualtrics (see Appendix D).
Participants that successfully completed this survey were given a code for the next
phase which is the face-to-face interview. The eligibility survey served several
purposes for the project. First, it served as a means for participating parents to
provide an initial informed consent for the family. Second, it was used as a wider
recruitment process to select eligible participants for in-depth interviews. Finally, it
helped in the collection of demographic data for the study. Participants who were
unable to complete the survey electronically, were given the opportunity to complete
on paper at the beginning of the scheduled interview.

After the eligibility process, the second phase began with a follow-up for
interview scheduling. To ensure the participants engaged in discussions in a
comfortable setting (Turner, 2010), they were allowed to decide the time and place
for the interviews. Before the scheduled meeting, parents were given the interview
guide in advance and were advised to inform their children (see Appendix C). This process allowed the participants to prepare for the interview and helped with the elicitation of logical responses during the interview process.

At the start of the interviews, participants gave an in-person informed consent by signing paper copies of the forms. Every child who participated also signed an assent form. Semi-structured in-depth interviews were conducted as it allowed for the use of an interview guide which helped the researcher in preparing for the interviews. As suggested by Tracy (2013), generative questions that were non-threatening were considered first (e.g., Tell me about yourself; How would you describe being physically active?). As an ice breaker, these questions helped develop rapport with the participants and made them feel more relaxed. Probing questions and questions that required more thinking were considered in the guiding phase of the interviews. Then sensitive questions were asked toward the end of the interviews. Field notes were taken during the interviews and it was used to capture visual cues, environmental settings, and physical observation of participants. Finally, participants were verbally appreciated, and a pedometer was given to each family as a reward for their participation.

For the purpose of this study, a family is a household consisting of one or more children and either one or two parents. From each family, the parent and eligible children were interviewed separately. When two or more children were eligible from the same family, they were interviewed collectively. Fifteen families voluntarily participated in this research and 31 interviews were conducted. One parent was interviewed twice because his children arrived in Canada only two weeks before the scheduled interviews and were not able to provide much information. Therefore, the parent accepted another interview session to help provide extensive
data representative of his family. In some cases, the parents stayed within the room while the interviews with their children were being conducted; however, the parents showed interest in other home activities at that time. It was initially proposed that the parents be excused as their children are being interviewed to prevent social desirability bias. However, it was observed that the parents felt uncomfortable leaving their children during the interview; particularly because many of the children had never been interviewed before. Therefore, the researcher deemed it appropriate for those parents to be discreetly present during their children’s interviews. Consequently, the researcher advised all the children at the beginning of the interviews to consider the interview as a chat in order to encourage freedom of expression.

On average, each interview lasted for 35 minutes with the children and 30 minutes with the parents. The excitement about the experience for some of the children was reflective of the length and depth of their interviews. Most of the children never had a direct conversation with the researcher prior to the interviews; however, they spoke confidently during the interviews, and responded with more ease as the interviews progressed.

All the interviews were audio-recorded on more than one instrument as a data loss precautionary measure and were immediately transcribed verbatim by the researcher. This also aided the process of getting immersed in the data. The researcher understood that the notion of power control needed to be addressed and shared with the participants. This was done through member checking of data as the transcripts were sent to participants prior to analysing for verification. In this way, participants also had control of the data and the information to be shared. They had one week to verify, alter, or add any information to the transcript. None of the
participants made any changes to their transcripts. Participants also had the right to withdraw their data until the member checking process was completed, at which time the data would have been integrated into the analysis.

Two Skype interviews were conducted with a family that resided in a location beyond the reach for face-to-face interviews. According to Hanna (2012), the use of internet technologies, particularly Skype, is a practical alternative to face-to-face interviews. The interviews were video recorded via Skype, transcribed, and were automatically deleted by the software after one month. The Skype interviews captured both visual and auditory information, were cost-efficient for the researcher, and allowed the researcher to easily observe and take notes of non-verbal cues during the interview. In addition, it was observed that participants were more relaxed during the conversations. However, one noteworthy observation from the outcome was short interview duration due to concise responses. This may have occurred due to several reasons including the personality of participants and the degree to which the participants were relaxed in relation to the researcher’s absence from the room. Although there were some slight technical issues with poor connection, the data drawn from the overall experience was productive.

3.6.4 Ethical considerations. At the beginning of the interview, parents signed an informed consent form, the children signed an assent form, and the researcher signed to confirm the details of the form. The participants were informed that their participation was completely voluntary, and they had the freedom to withdraw from the interview or the research at any time. They were informed that their information will be kept strictly confidential. When any participant was referred by another participant, confidentiality was maintained by making sure that the referrer’s information was not shared with the referred.
The audio recorders used for data collection were kept in a key-restricted safe in the researcher’s residence. Participants were informed of the usage of their information for research and publication purposes. However, their real names were replaced with pseudonyms during the analysis and in the findings. All the children were interviewed with their parents/childcare providers present in the house. Copies of the consent and assent forms are provided in Appendix A and B.

3.6.5 Qualitative analysis. The constructivist grounded theory analytical approach guided the analysis (Charmaz, 2014). NVivo qualitative data analysis computer software was used throughout the analytical process. At every stage of the analysis, constant comparisons and memo-writing was utilized. The data analysis was divided into an immersion and conceptual phase. The immersion phase began during the data collection process. During the interview, I listened with an analytical mind focused on how to apply probes that will guide the data and in turn give shape to the analysis. The organization, self-transcribing, reading, and rereading of the data were part of the immersion phase. This was followed by initial coding to fully immerse me into the data. Each family’s interviews were coded immediately in a simultaneous data collection and analysis process.

During the initial coding, the data was given a phrase by phrase and line by line meaning. Using NVivo, initial codes were created as nodes and coding references were generated for each code. There was a thorough and close inspection of the data at this stage because of its importance in guiding the rest of the analysis. The actions of the participants were captured by coding with gerunds (i.e., coding in the –ing form). Coding for topics was also used to better express some meanings drawn from past experiences. Due to the simultaneous data collection and analysis approach, the initial coding was considered provisionally, and I remained open to any
new insights from the comparative analysis (Charmaz, 2014). At this stage, questions were consistently asked of the data (e.g., What are the consequences of this action? How was this event experienced?), and these guided further data collection and analysis. The initial nodes created in NVivo were further guided by focused coding.

The conceptual phase included focused coding, forming of categories, conceptual sorting, and creation of themes and their features. Focused coding was used as a transition from the immersion phase into the conceptual phase. The focused coding was used as a selective approach that fragmented, organized, and categorized the data under the banner of the identified most recurrent codes (Charmaz, 2014). This method was used to simplify a large amount of data by filtering through the most significant codes. Using NVivo, initial nodes were merged into the most significant nodes. This crucial process helped make sense of the large amount of data that evolved through the data collection and analysis process. Over 3500 coding references created initially were synthesized and guided by the focused codes using NVivo merging. The initial codes that were left unmerged were preserved and used for constant comparisons of data with data and codes with codes as the analysis progressed.

Through conceptual sorting, categories were created as hierarchical nodes in NVivo. The hierarchical nodes were created by moving nodes (representing initial and focused codes) into a new or existing node, forming a tree structure which provided a diagrammatic shape to the analysis. In this process, there was a comparative analysis of focused codes with initial codes, as well as codes with data. This process helped categorize the codes as well as preserve the data.

3.6.6 Theoretical sampling. Theoretical sampling is an important grounded theory method that was utilized throughout the analytical process right from the first
data collection and analysis till data saturation. This method was carried out to better understand questions asked of the codes as well as to define the scope of the conceptually developing categories (Charmaz, 2014). After the analysis of each interview, further data collection was influenced by the gaps identified from the previous analysis through questions asked of the data. To ensure consistency, the interview guide was kept constant during the interviews and theoretical sampling was ensured by including questions and probes that suitably addressed the gaps. Given the participants were all West Africans, theoretical sampling was done by addressing the questions and insights through interviewing other participants. Using a deductive reasoning, the relationship within and among the categories were consistently examined and refined with theoretical sampling. This allowed me to have a close connection with the data even at the latter stage of the analysis. Further, data saturation was achieved as relationships between categories were established, and no new insights were determined from the new data collected. The conceptually refined categories were then synthesized into themes and subthemes for the purpose of explanation of findings.

3.6.7 Constant comparisons. This is also an important procedure used throughout the analysis, ensuring a consistent interaction with the participants through the rereading and reanalysing of the data (Charmaz, 2011, 2014). Using comparative analysis, the following processes were carried out: data were compared with data to develop codes; data were compared with codes; codes were compared with codes for the most salient codes before categories were formed; categories were compared with subcategories, down to codes and data. This process ensured the findings was inherently grounded in the data thereby reducing bias associated with
forceful integration. This was highly probable through a consistent questioning of the data during the comparative process.

3.6.8 **Memo writing, theoretical sorting, and diagramming.** Writing a memo was a way of constantly reflecting on ideas thoughts throughout the analyses. Memos are similar to field note reflections that are used during observations, but they are narrative patterns of the data, codes, and concepts developed throughout the research process. It is an essential strategy in grounded theory because it increases the level of abstraction of ideas and keeps the researcher regularly engaging in analysis (Charmaz, 2014). Memo-writing was done for individual codes via NVivo to keep track of thoughts while the codes were being created. In addition, comprehensive memo was written after the initial coding process, the focused coding stage, and through the conceptual phase of the analysis. Although, memo writing is a form of personal reflexivity, a journal was kept through the research process.

The use of diagram also gave a good snapshot of the data, directed new ideas, and in combination with memos throughout the research process, was helpful for conceptual integration (Lempert, 2007). This process transcended ordinary sorting of data to building connections between conceptual categories (Lempert, 2007). Through diagramming and sorting, conceptual meanings were created to guide the findings of the study.

3.6.9 **Trustworthiness.** As validity and reliability are to positivist research, so is trustworthiness to qualitative research. Trustworthiness is important to ensure the integrity of the research work and it involves dependability and credibility (Carcary, 2009; Graneheim & Lundman, 2004). First, dependability addresses the manner of consistency in data collection and analysis during the research. Dependability was
established using interview guide for data collection, adherence to ethical guidelines, and allowing meanings to be drawn from participants’ point of view.

Second, credibility which is referred to as the assurance of the manner in which the data and analysis represents its purpose (Graneheim & Lundman, 2004), was established using a constant comparative method and member checking. Member checking was done at two stages of the research process. The first process involved member checking of the transcribed data. In addition, member checking was done to verify the themes developed from the analysis. During the latter, the summary of findings (see Appendix K) was shared with the participants and they were asked to answer the following questions: When you look at the themes, do they make sense to you? Do these themes represent an appropriate description of the perspectives you shared during our discussion? The member checking results describing the feedback of the participants on the themes will be discussed in the next chapter.

3.7 My Role as a Qualitative Researcher

Prior to discussing the findings, I would like to explain my role as a qualitative researcher as well as the values and knowledge that shaped this research process. Denzin and Lincoln (2003) illustrated the role of a researcher with the concept of montage, which involves the overlapping of several images to produce a cinematic picture. They explained that the researcher by him- or herself crafts the outcome of the study by utilizing the resources at hand or by reinventing any necessary resource needed for shaping the study (Denzin & Lincoln, 2003). The role of the researcher was also explained with quilting, in the sense that there is a process of editing, stitching, and combining pieces of reality together (Denzin & Lincoln, 2003). The researcher, therefore, produces a complex outcome through a blend of differing perspectives and psychological interpretations. In doing so, the researcher
makes sense of a large amount of data by fracturing them into units in order to develop categories, themes, concepts, or hypotheses that are intellectually applicable.

The role of the researcher is important not only for data collection but also cognitive reasoning and judgement (Flick, 2009). Due to the research–participant relationship, qualitative researchers should engage in reflexivity by reflecting on the self and its influences on the findings of the study (Creswell, 2013).

3.7.1 Personal reflexivity. Reflexivity in this research is used as a link joining the literature and method with the findings derived from the analysis. The reflections involve any cultural background, past experiences, societal position, and values that rendered an interpretive sense to the study in context. Due to my past experiences of moving through different continents for academic purposes, I have developed the sense of approaching subject matters from an international perspective before narrowing down. This explains the reason why my review of literature involved looking at physical activity from a global, Canadian, and West African perspective.

For about a decade and half, I have been accumulating skills and experiences that led to my position as a researcher in this project. With a major interest in health and well-being, I derived the fundamental knowledge on communicable diseases as a problem to clinical health through the attainment of a bachelor’s degree from the area of biological sciences in my home country (Nigeria). With my final project, I explored the inhibitory effect of natural plants on disease organisms.

However, I realized that my interest in health requires not only the development of knowledge around clinical health but also the theoretical and practical application of knowledge on population health. My master’s program introduced me to the knowledge around public health research. Through my thesis, I
gained more experience in the explorative manner of carrying out research in environmental and public health.

It may seem on paper that my master’s approach is different from my first degree, but it strengthened my knowledge on health and gave me an outlook on chronic diseases prevalently affecting the world. With an affinity for curiosity, my master’s degree was attained in another country, United Kingdom. This gave me an experience outside Africa and began to illuminate my knowledge on global health.

After completing my research project on the factors influencing obesity pandemic, I developed an interest to be part of a vast research network addressing the issue of obesity and other chronic diseases across the world. Therefore, I decided that what I needed to do was to provide a significant contribution toward interventional research on chronic diseases and this led to my dissertation area of interest—active living for healthy lifestyle. Additionally, I focused my research around children because of my position as a father and passion for healthy child development. It is my desire to be part of the growing research to improve children’s health.

My position as a researcher has also been strengthened both by my academic and work experience in Regina, Canada. Through a preparatory research methods class, my knowledge of the literature on active living among West Africans and Canadians was strengthened. Additionally, a graded mini project on child and parental engagements in physical activity gave me direct experience in conducting semi-structured interviews, transcribing, and analysing qualitative data. As someone with keen interest in health promotion, I currently work with Saskatchewan in motion and volunteer with the African Canadian Resource Network (ACRN). Through these work experiences, my research management skills were sharpened through processes such as designing research procedures according to work plans,
creating and conducting analytic processes, as well as preparing presentations and reports.

After reflecting on my professional background, my personal values in life may also have an impact on the way I have interpreted data. My personal values such as openness, self-respect, commitment, taking responsibility, and affection for children, have a role to play in my lived experiences and my manner of reasoning in a social environment. Therefore, these values should be reflected upfront as it may provide a sense of understanding and clarification to the research topic as well as the analytical directions taken during the research.

To begin highlighting my personal values, I would like to reflect that openness of the mind gives me the belief that every individual has the ability to make changes in life. As a researcher, I also have the ability to impact change by investigating contexts of life. I also believe in the contribution to philosophical knowledge through my cultural and historical experiences. This explains why I have chosen a constructivist approach to philosophical worldview. As another personal value, self-respect has guided my journey in academic and professional world. This was reflective in the way I presented myself to my research participants. I also believe that the opinion shared by people including children should not be taken for granted because information provides the root of knowledge for any investigation. Being responsible for other people’s information is an attribute that I have cultivated and utilized in the past particularly with respect to ethical principles.

As an instructor or teaching assistant, I developed the attribute of self-respect for students and their thoughts or reflections. I also developed the sense of acquiring new knowledge because a broad range of perspectives is needed for illustrations in these job positions. With this attribute, I was able to carry out a project with the belief
that the perspectives of people are diverse in a social environment. My affection for children as well as people’s well-being, are personal values driving my research. My sense of curiosity made me remain open to any form of knowledge that may be acquired from the investigative and analytical process.

It is also important to discuss my role as a researcher being a West African international active student. I believe that the social environment where I grew up in Africa encouraged physical activity because people feel connected to their neighbourhood right from childhood. Although I have had a welcoming experience in the Western world both professionally and recreationally, the same cannot be spoken of everyone especially with the changing society. Meeting new people has not been difficult for me in this part of the world and this was helpful in initiating conversation with my research participants particularly those recruited via referrals.

Throughout my development from adolescence to young adulthood, I have learned the habit of converting existing resources to active ones, due to limited access to urbanized infrastructure for physical activity. For example, making weights from canned concrete for resistance training, engaging in different forms of calisthenics, and recreational running with peer groups in the neighbourhood, are habits that I developed during my childhood. These activities are characterized by fun, and their independence from technological aid may have strongly contributed to my physical literacy. Therefore, making something out of nothing, and taking responsibility for an active life are also personal values that resonate with me.

I have been a physically active person right from my earliest memory as a child and my interest in active living both as a researcher and a lifestyle may have been highly influenced by my family as well as the social environment I grew up. As an elementary student who would rather have active equipment like balls as reward
for good academic performance, I gradually began to develop as a boy that was regularly engaging in different forms of physical activity. In school, I would run around with friends all through the short and long recesses. At home, I was always engaging in unstructured sports participation with my brothers as well as other older children in the neighbourhood. This led me to participate in the inter-house competition both at my elementary and secondary levels of education. I grew up as an active young child who regularly participated in both recreational and competitive sports. These experiences helped me develop a positive mind-set toward physical activity from a young stage of life. With these experiences, I have become enthusiastically committed to the role of giving my son a physically literate development in life. This commitment is also partly responsible for the drive and passion fuelling my research work.

Being a West African immigrant, it is irrefutable that the interpretations made in this study were impacted by this position. Due to this cultural background, facial expressions that gave meanings during interviews particularly in response to participants’ emotions, were not completely hidden from participants. The data were coded based on my personal experiences as an immigrant from a similar geographical region of origin as the participants. On the other hand, my position as an immigrant also hastened a productive relationship with my participants causing participants to easily reflect on intimate or personal experiences particular in relation to their sociocultural barriers to physical activity. Participants felt relaxed that I had a proper sense of understanding of the angle from which their lived situations are experienced, and they had hopes that this study will help shed some light on their challenges. Consequently, participants hinted that they hope the knowledge derived from this
research may increase awareness to decision makers concerning the issues facing immigrant health.

During the literature review, I adopted an approach that sought to understand the impact of the environment on physical activity of West African and Canadian children because of the predictive reasoning that the change in environment might impact the lifestyle of the participants. This proved important considering that crucial findings related to the environment were discovered. My methodology, grounded theory, requires the development of a unique understanding that is not enforced from preconceived knowledge and my review of literature may have created a bias of interpretation in this regard. However, I believe it is necessary to undergo the literature review process in order to improve my level of insights during data collection and analysis, and also to derive findings that can be discussed in relation to other research in the field. This point of view may be partly due to my academic research background. Additionally, it has been supported by research as a way of learning in qualitative research, specifically grounded theory (Ramalho, Adams, Huggard, & Hoare, 2015). Recognizing the literature review as a separate but not completely ineffectual entity is important. Therefore, journaling and reflexivity was done to address this bias and establish confirmability of the findings of the study. Part of the observation concerning preconceived idea was the influence of weather on physical activity engagements for the families. I had believed that most families would find weather as a hindrance, due to my own personal experience. However, the analysis brought a slightly different perspective for children while most parents had responses similar to my line of thought.

During the research process, I had to adjust to some twists and turns with data collection and analysis. Initially, only participants able to communicate in English
were considered for inclusion. Due to eligibility reconsiderations, both English- and French-speakers were considered for inclusion. To this effect, an addendum which included a translator and signing of a confidentiality agreement was approved by the Research Ethics Board (see Appendix H). Meanwhile, no eligible predominant French-speaking families were found eventually, and the need for translating services was not used in this study. During the data collection, pedometer incentive was used for recruitment, and most parents considered the incentive as exactly what they needed to keep them accountable while most children were excited to use it with their parents.

Many organizations accepted to share the research poster and these included African Canadian Resource Network (ACRN), Regina Open Door Society (RODS), Saskatoon Open Door Society (SODS), Saskatchewan Association of Immigrant Settlement and Integration Agencies (SAISIA), Newcomer Information Centre, Regina Region Local Immigration Partnership (RRLIP), South Central Region Immigration Partnership (SCRIP), and Assemblée Communautaire Franceskoise (ACF). Although most participants were not recruited through these organizations, my networking portfolio was broadened.
4.0 Chapter Four: Findings

4.1 Description of Participants

This study acknowledged the confidentiality of participants, which explains why the demographic information taken was general and done mainly to demonstrate the eligibility of participants. Besides the eligibility survey, some demographic information was drawn from the transcripts as participants introduced themselves at the beginning of the interview. This approach proved important, as participants were in control of the specific demographic information they revealed.

Table 1. Profile for the families

<table>
<thead>
<tr>
<th>Families interviewed</th>
<th>Description (extracted from demographic survey, interview introductions, and observations)</th>
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<tr>
<td>1</td>
<td>Nigerian family. Household of six people with two parents and four children; lived in an urban area; been in Saskatchewan for 7 years; interviewed the father who is married, has a post-secondary degree and working in his field of study in Saskatchewan; wife has a post-secondary degree but not practising in her field; two sons, 11 years of age were interviewed and their hobbies were drawing, reading, and sports. Coded as Pntng1, Chdng1a, and Chdng1b.</td>
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<td>2</td>
<td>Nigerian family. Household of five people with two parents, one grandparent, and two children; lived in an urban area; been in Saskatchewan for two years; interviewed the father who is married, has a post-secondary degree but not practising in his field of study; two children were interviewed collectively; daughter was 13-year-old and her hobbies were singing, reading, and dancing; the son was 11-year-old, and his hobbies were playing videogames, reading, and football. Coded as Pntng2, Chdng2a, and Chdng2b.</td>
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<td>3</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for one year; interviewed the mother who is married, has a post-secondary degree and practising in her field of study; two children were interviewed collectively; son was 12-year-old and his hobbies were reading about astronomy and playing videogames; daughter was 10-year-old and her hobbies were reading books and playing on iPad. Coded as Pntng3, Chdng3a, and Chdng3b.</td>
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<tr>
<td>4</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for four years; interviewed the mother who is married, has a post-secondary degree and practising in her field of study; interviewed a 14-year-old daughter whose hobbies were listening to Korean music, watching TV, playing volleyball, watching basketball, and hanging out with friends. Coded as Pntng4 and Chdng4.</td>
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<td>5</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for less than a year; interviewed the father who is married, has a post-secondary degree and practising in his field of study; interviewed a 12-year-old daughter whose hobbies were reading, writing, dancing, and drumming. Coded as Pntng5 and Chdng5.</td>
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<td>6</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for less than a year; interviewed the father who is married and has a post-secondary degree but not practising in his field of study; interviewed the daughter 11 years of age, whose hobby was dancing. Coded as Pntng6 and Chdng6.</td>
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<td>7</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for 9 years; interviewed the father who is married, has a post-secondary degree and practising in his field of study; interviewed his 11-year-old daughter, whose hobbies were listening to music, singing, and dancing. Coded as Pntng7 and Chdng7.</td>
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<td>8</td>
<td>Nigerian family. Household of four people with two parents and two children; lived in an urban area; been in Saskatchewan for a year; interviewed the father who is married, has a post-secondary degree but not practising in his field of study; interviewed his 11-year-old son who likes to do sports. Coded as Pntng8 and Chdng8.</td>
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<td>9</td>
<td>Ivorian family. Household of six people with two parents and four children; lived in an urban area; interviewed the mother who is married and been in Saskatchewan for six years; interviewed two of her children; the 12-year-old daughter likes drawing and doing sports; the 11-year-old son also likes doing sports. Coded as Pntiv1, Chdiv1a, and Chdiv1b.</td>
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<td>10</td>
<td>Ghanaian family. Household of six people with two parents and four children; lived in an urban area; been in Saskatchewan for four years; interviewed the father who is married, has a post-secondary degree and practising in his field of study; interviewed his 10-year-old daughter who likes nature and being more outside than inside. Coded as Pntgh1 and Chdgh1.</td>
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<td>11</td>
<td>Ghanaian family. Household of five people with two parents and three children; lived in a rural area; been in Saskatchewan for seven years; interviewed the father who is married, has a post-secondary degree and practising in his field of study; interviewed his 11-year-old daughter who likes to read and play. Coded as Pntgh2 and Chdgh2.</td>
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<td>12</td>
<td>Nigerian family. Household of five people with two parents and three children; lived in an urban area; been in Saskatchewan for four years; interviewed the father who is married, has a post-secondary degree but not practising in his field of study; interviewed two children who were 13-year-old son and 11-year-old daughter. Coded as Pntng9, Chdng9a, and Chdng9b.</td>
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<td>13</td>
<td>Ghanaian family. Household of six people with two parents and four children; lived in an urban area; been in Saskatchewan for less than a year; interviewed the father who is married, has a post-secondary degree and practising in his field of study; interviewed two of his</td>
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children, a 13-year-old son who likes soccer and playing videogames, and an 11-year-old daughter who likes to read, skip, and play games. Coded as Pntgh3, Chdgh3a, and Chdgh3b.

14 Ghanaian family. Household of six people with two parents and four children; lived in an urban area; been in Saskatchewan for eight years; interviewed the mother who is married, has a post-secondary degree and practising in her field of study; interviewed her 14-year-old son whose hobby is playing different kinds of sports. Coded as Pntgh4 and Chdgh4.

15 Ghanaian family. Household of six people with two parents and four children; lived in an urban area; been in Saskatchewan for seven years; interviewed the father who is married and also interviewed his 14-year-old daughter who did cross country running and doing volleyball and basketball. Coded as Pntgh5 and Chdgh5.

Note: Pntng – Nigerian parent; Chdng – Nigerian child; Pntiv – Ivorian parent; Chdiv – Ivorian child; Pntgh – Ghanaian parent; Chdgh – Ghanaian child

On average, the family size for the West African families interviewed was five people per household including parents and children. Most families have been in Saskatchewan for a relatively short amount of time. There were nine families who had stayed in Saskatchewan for four years and under, and four of them had stayed for less than a year. The study included families from three West African countries of Nigeria (9 families), Ghana (5 families), and Ivory Coast (1 family). In Saskatchewan, these represent the three West African countries with the highest proportion of immigrants, with Nigeria having 74%, Ghana 16%, and Ivory Coast 2% (Appendix J). It is therefore not surprising that efforts to diversify the West African countries produced families from these three countries. Most parents who participated in the study had post-secondary education.

The age range of children that participated was 10 to 14 years. In most cases, only one child participated in the interview and in five cases, two eligible children collectively participated from the same family. All the children who participated had at least one sibling. Some participants stated at the end of the interview that they hoped the report would be helpful in addressing some of the challenges facing
immigrant families in Saskatchewan. The analysis of the information produced from our discussion was based on my perception that the families were interested in contributing to change.

Table 2. Themes and associated subthemes

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4.2 Good Knowledge of Physical Activity and Benefits

From the analysis, it was observed that the West African families have a good understanding of what physical activity means as well as its benefits. There were four subthemes developed to describe the understanding of the families. These subthemes include experiential knowledge of physical activity, intergenerational perception of physical activity, perceived benefits for parents, and perceived benefits for children.

4.2.1 Experiential knowledge. The interviewed families demonstrated experiential knowledge of physical activity. From the analysis, many parents and children showed their understanding based on observations and past experiences with
school and recreational activities. Experiential knowledge of physical activity was demonstrated in terms of movement. In describing movement, some participants showed their understanding through the different classifications of movement. For example, Chdng9a in defining physical activity said, “Physical activity means when you are moving from one place to another, and you are doing physical stuff such as sports, wrestling, or physical contact.” Pntng5 also stated, “Being physically active to me means being able to exercise your body, either in terms of the job you do or other extracurricular activities outside work. When you are moving your body, you are physically active.”

A number of the children also shared their understanding of physical activity in the context of moving the body. They showed experiential knowledge by supporting their meanings with their experiential examples. Their illustrations comprised of different activities on the movement continuum ranging from light intensity to vigorous intensity activities. Chdng2a stated, “To me, physical activity is like something you do to keep you moving like chores, walking around the neighbourhood, or when you are playing sports, or when you are biking or just jogging.” Chdgh1, also related physical activity to active play by saying, “To me it means like move. For example, playing tag, and hide and seek.”

Another child described physical activity in terms of movement and exercise. “Well it means like exercising and stuff. It’s like stuff you do like when you move your body.” (Chdiv1a). The parents also showed experiential knowledge by describing what it means to exercise with intent. Pntng1 explained that it involves the act of being purposeful. Pntng3 in the same manner included the phrase “being mentally alert” in her definition of physical activity. She described the use of the phrase as highlighting the importance of consciousness in the process of moving the
body. She said, “For me, being physically active means being able to change position, move around, and to be mentally alert as well.” (Pntng3).

Some parents defined physical health instead of physical activity but still showed experiential knowledge. These parents explained being physically active as freedom from physical problems and being engaged in different life events, which would mean being physically healthy. For example, Pntng9 who defined physical health was able to share past experiences that portrayed an understanding of what it means to be physically active.

Well, as a layman, physically active means I don’t have any physical problems. I want to call it being physically right...growing up in Africa; I would say it is imperative that every child in Africa gets active in one way or the other because we walk hundreds of kilometres from one place to another. Here is another parent who defined being physically active as the ability to express oneself during daily activities but showed a good understanding through his experiential knowledge.

By being active, you can express yourself wherever you go...Back home, I’m a soccer player and I’m a track and field person...we have so many activities like yearly youth festival. No matter how old you are, we play soccer, tug of war, and a lot of things. It’s like in weekend, we go for jogging, keep fit; it’s a lot and I cannot mention them all. (Pntgh1)

The families also showed an experiential understanding of some of the benefits of physical activity. They related sociocultural benefit to meeting people in the park. Sleep benefit was described through parents’ observation of early bedtime whenever their children engaged in vigorous physical activity or play. Some parents even described that they strategically get their children active whenever they need
them to have an early bedtime. Emotional benefit was described with the analogy that people do not worry or think about financial needs while currently playing. With mental health benefit, self-esteem was described when the participants described how physical activity helps prevent their children from being timid. These benefits will be further discussed in this chapter.

4.2.2 Intergenerational perceptions. Following the establishment that the families have experiential knowledge of physical activity, there were some generational differences in the perceptions of physical activity and its benefits between the parents and children. All the parents talked little of their interest in going to the gym to get physically active. They described how they were active during their developmental stage and mentioned sports and home activities but rarely talked about getting active through activities in the gym. Most of the parents seemed to be referring to fitness centers that require gym membership when they talked about little interest in gym activities. However, the children described their understanding of physical activity using gym examples in terms of physical education and recess activities. For example, Chdng1a who is an 11-year-old boy was describing how physical education classes held in the gym improves fitness when he said, “Like energized, like physical education at school, and you go to the gym and you get like boosted up, and our heart is supposed to be pumping at the end of the gym class.”

A number of the parents shared their views on physical activity in terms of movement and, in some cases, exercising. The parents were also quick to link their understanding of physical activity to various health benefits especially reduced risk of diseases. However, the children mainly described their views in terms of sports, exercising, and leisure activities. Unlike their parents, the children rarely linked their understanding to health benefits or reduced morbidity. When the children were
prompted for the benefits of physical activity, their descriptions were concentrated on benefits such as fitness, muscle building, and mental benefits. For example, Chdng1a stated, “Physical activity means like sports and something that’s get you boosted up.” Chdng3a also stated, “Physical activity is just like a requirement for me being fit.”

4.2.3 Perceived benefits for children. Different health benefits for the children emerged from the participants’ responses. In terms of physical health benefits, most of the children stated that they benefit by building muscles, getting fit, and feeling energized. Some parents shared some physical health benefits that related to the protection of their children from infectious diseases. Pntng3 stated, “...at times you get infected, but you can still play around, and not become a burden to the parents because of the flu.” Some parents also described reduced risk of obesity and weight management under physical health benefits.

In terms of emotional benefits, some of the interviewed children explained that physical activity helps with clearing their minds and getting rid of worrying thoughts. Chdgh5, who is a 14-year-old girl said, “It helps my mind get rid of other stuff. So, it helps me clear my mind.” It was further described by one of the parents using an illustration that it is almost impossible for people to worry about their financial concerns during the act of physical activity. She stated, “You can’t be running and be thinking about your bill; you can’t be jumping and be playing basketball, and you say oh my insurance.” (Pntng3A). Some of the parents also described mental benefits for their children in relation to building confidence and boosting self-esteem. One parent said:

I think it helps in mental development. Yea, that’s my perception. And it kind of boosts their self-esteem. When you see your children that are engaged in
sports, in a lot of activities that get them engaged physically, they get out there in school and they are not timid. (Pntng2)

Another parent stated:

But I know definitely that being physically active will help them with their mental faculties, mental development, and will build confidence in their minds. (Pntng1)

Several interviewed children associated physical activity with some cognitive benefits. One 14-year-old girl in the process of describing the benefits of physical activity stated that she goes from being energized to an enjoyable feeling from cool down, and to an improved thinking and studying ability.

Well, I guess physical activity to me adds to my brain skills. I don’t know how that relates but whenever I do physical activity, I get energetic. After doing it, I get tired, but I still walk around. So, I try to like walk around because the breeze is like blowing on me. And I just get cooled down and energetic. And whenever I tried to study then, I feel like my brain works better. (Chdng4)

Both the parent and daughter from one family explained how the child derives some cognitive benefits from active play. The child was interviewed first and she specifically associated playing with improved numeracy skills. She said, “Sometimes after playing, my dad will tell me to come and do some maths work and I’ll be able to do it well.” (Chdng6). Then in a separate interview with her father, he provided a similar view on her daughter’s improved cognitive ability regarding academic tasks that occur after an active playing time. He stated, “So physical activity helps them mentally and even academically because when you ask them to come and study after playing, they do it better.” (Pntng6).
In terms of social health benefits, most parents and a few children explained their views around opportunities to meet new people. Some parents described physical activity as an opportunity for children to break screen time and be able to go out and interact with other kids. In some cases, they also related physical activity to some sociocultural benefits as they shared their views on how it helps their children socialize and become integrated into the new society.

Concerning sleeping benefits, most parents shared that their children sleep soundly whenever they engage in some vigorous intensity physical activity. The excerpt below showed how a parent explained sleeping benefits by using a comparison between physically active situations and sedentary times.

You know when children are just sitting in a place, eating, by the time it’s time for them to sleep at night around 11, 12, 1, they say mummy I can’t just sleep. What is wrong with you? I don’t know. They are just there. But when they are physically active during the day, by 9 o’ clock, they are in the bed sleeping. (Pntng4)

It is important to note, that this mother linked her illustration with children’s eating habits. Her emphasis was on sleep, but she stated that her children were usually eating when sedentary. Another parent with three children explained how her children’s physical activity engagement help overcome idleness, encourages more water intake, and indirectly prevents overeating.

…it helps children not to overeat. I have noticed that when children are active even the toddlers, they don’t tend to want to munch everything in the house. They are playing and just remain themselves. But when they have nothing to do, I want bread, next time rice, and out of boredom they eat, not out of hunger. But when we go to the park, the next 3-4 hours there, they are just
taking water. They go with water which is good for their body. You know it just helps them. (Pntng3)

Another child shared a similar example on the association of physical activity with eating habits. In this instance, this 13-year-old girl explained her perception that physical activity is a behaviour that should be simultaneously balanced with healthy eating to achieve optimal benefits.

But I still think that if you need to exercise, then you need to eat a lot too to balance it. Because if you exercise too much, then that is bad, and if you don’t eat, that is bad too. So, if you really want to exercise, you have to balance between two things…eating healthier and exercising. (Chdiv1a)

4.2.4 Perceived benefits for parents. The parents described that seeing their children engage in physical activity gives them some emotional health benefits. In particular, they benefitted through a feeling of delight, and a sense of joy and happiness. They described this in a common statement that “It is a joy of every parent to see their children physically active.” Most parents further emphasized these benefits by stating that seeing their children physically active reduced worry about their children’s health. In fact, the context of less worry was related to economic benefits derived from saving money due to raising active children. In this context, Pntgh1 said, “If they are physically active, you save money in terms of buying the drugs and as they grow you also benefit that your investment is yielding and not going to waste. So that’s the key point.”

4.3 Acculturative Experiences Associated with Active Living

This theme emerged from the transitioning perspectives showed by the families concerning their pre- and post-migration experiences. In particular, the families showed the impact of these experiences on their physical activity
opportunities. There are four subthemes created under this category and they will be further explained.

4.3.1 Nature of activity transition. The participants showed a transition from unstructured physical activity opportunities pre-migration to structured physical activity opportunities post-migration in Canada. In general, the families described their pre-migration active opportunities as either leisure-based or non-leisure-based unstructured physical activity. Physical activity was described as part of their normal everyday routine during pre-migration.

Most parents described their experiences with physical activity largely through non-leisure-based unstructured activities such as active commuting, water drawing, and farming. Unlike the non-leisure-based activities for the parents, the sources of consistent MVPA for their children during pre-migration were mostly leisure-based unstructured physical activity such as active play.

In terms of non-leisure-based unstructured physical activity, walking was one of the ways the families engaged in physical activity as a daily routine. The parents explained how they consistently used walking for active transportation. One parent explained the acculturative experience as it pertains to active transportation by showing the difference in walking distance to transit stops.

Like life back home, to go and get X from Y, it’s going to involve some form of walking. Naturally, it’s always going to be like that. To catch a bus, buses will not come to your doorstep. Like here, you only have to walk 50 meters and at most 100 meters to catch a bus. However, back home, you have to walk about 500 meters or even close to a kilometre, before catching a bus. So that alone lends itself to some physical activity. (Pntgh2)
With respect to post-migration, the parents believed that the nature of activities available for their children are majorly structured physical activity compared to unstructured during pre-migration. They mentioned that they wished their children could be as active as they were during their childhood. One parent explained that this migration transitioning has reduced his children’s physical activity levels. He explained that their pre-migration unstructured physical activity was an integral part of their daily living unlike the experience during post-migration. Active transportation was used again as an example of one of the ways by which daily activity engagements had reduced for their children here in Canada.

You see in Africa, they were so much active than here because of so many reasons. One of the reasons is lack of facility. We lack some facilities in Africa and because of that, the only alternative choice is to be physically active. For example, here when they are going to school here, the school bus picks them from their doorstep and drop them here as well. But when they are in Africa, there is no such facility. When they wake up in the morning and prepare to go school, they have to walk. Though it may not be as far as the way we did during our own time, but they walk to school and back... (Pntng9)

Another form of non-leisure-based unstructured physical activity described was the engagement in activities to meet necessities of life. From the parent’s excerpt above, he ironically described the lack of facilities as an unequivocal reason to engage in utilitarian physical activity back in Africa. Another parent after being probed concerning physical activity for a source of living provided a supportive perspective in terms of engagement in non-mechanized farming to meet life necessities.

We go to farm mostly every weekend and we trek 3-4 km to our farm. When we get to farm, we work or take part in what our parents are doing by
working, cultivating, planting, harvesting and all those things. And that is what I mean by source of living. (Pntng9)

Another parent also showed a similar perspective on non-leisure-based physical activity as a source of living through engagement in domestic duties. In particular, the pre-migration domestic activity described involved sourcing for water as a necessity of life. She stated, “And there were not much machines to help when I was growing up. Like there was no tap water running everywhere so we had to draw water from the well, which I count as one of the activities.” (Pntng4). Another parent explained that they did these activities pleasurably and there was no report of them being compelled or pressurized to do these activities. He stated, “... we practically take care of the hoeing and cultivation of the land, cutting grasses and weeding, and all of that, which we do joyfully, you know” (Pntng1).

The parents further showed from their comparison to post-migration that these types of physical activity engagements are inherent and preferable. For example, one parent described his preference for unstructured physical activity:

In the first place, walking is natural. But gym is kind of structured and it comes with anxiety as to whether you are going to get injured or who’s going to take care of you, who are you going to meet there, how is the person going to accommodate you? (Pntgh3)

He described going to the gym as structured and unnatural, and explained how going to the gym could bring anxiety around competency, safety, and social connections. He was further probed about the opportunities that going to the gym provides and how that may relate to his needs. However, he established a firm position for unstructured lifestyle activities which he is capable of competently engaging in and spoke with disapproval for gym interest.
Like I said most of the activities that are helpful to me are mostly walking and biking... With gym, I don’t have time to go to the gym. Like I said, what am I going to do there? If I have alternatives that I can use to exercise my body, why drive there? It’s like a repetition because I am able to walk and ride my bike. Although this season, you cannot ride or walk as much as summertime. Even that, driving through the cold to the gym is not what I’m used to. So, in terms of physical activity for me, riding and walking is enough for me. There’s no need to go to the gym. (Pntgh3)

It would appear that the children’s pre-migration experiences were predominantly leisure-based, but still an unstructured form of physical activity. Many participants shared that besides the school annual inter-house sports games, their children were mostly engaged in unstructured activities. This 10-year-old girl described her engagement in unstructured active play during pre-migration as leisure-based. She related an activity such as chasing chickens to physical activity and having fun.

Chasing chickens! For some reason I do that. I would play with my little brother and there will be chickens that come to our place and everywhere. And me and my brother would chase them away for some reason. I believe this to be physical activity because the word physical activity means you are active and moving. (Chdgh1)

Some other children also described their pre-migration experiences as being leisure-based and unstructured including outdoor physical activities such as running around and playing games, as well as different forms of unstructured sports. Chdng1b said, “We used to play soccer and sometimes football. Sometimes, I used to just run around.” Chdng9a said, “I used to go outside and play with my friends. Sometimes I
ride my bicycle outside and play soccer with people in my neighbourhood.”

Chdgh3a also said, “...we used to live in a small compound with different families, but we all come together and then we make goal posts and start playing soccer.” They explained how they converted existing resources to active resources by creating games for themselves and using any available equipment for their game requirements.

The data suggests that most children had more opportunities to be active in their African neighbourhood. After probing for their post-migration experiences, most of the children described both structured and unstructured physical activity but mostly through school programs. They explained their involvement in structured activity through physical education and unstructured through recess sessions. Only a few children described being enrolled in sports through school and after-school programs. These few children explained the fun it brought for them to engage in structured activities that include warmups, scrimmages, and matches. One 14-year-old girl shared her experience with volleyball in Saskatchewan. She had joined mainly because her parents encouraged her as well as her friends’ involvement. From her quote below, she described that volleyball eventually became fun for her, though, it was not fun when she first joined because of inadequate playing time. She described that some of the challenges she had to overcome involved getting playing time, developing skills and competence, and finding the game enjoyable. Over time, as she developed the necessary skills, she started enjoying volleyball.

...whenever I play volleyball, I have this joy in me. Because the first year I did it, it wasn’t really fun because the junior girls and senior girls from grade 6-8 were together, and I was in grade 7. And what really happened was they didn’t really let us play as much as the grade 8s. We just sat there and cheered
for them…So it wasn’t really fun for me. I didn’t really like volleyball then...But in grade 8, I served really far... And I was really happy that I got to the back. And I have my friends in it, we cheered for each other, and it was really fun. (Chdng4)

With school recess, some children reported that recess activities were not always entirely unstructured for them. They shared some differences between outdoor recess and indoor recess activities. One 14-year-old boy described that indoor recess held in the gym, when the weather is too cold to go outside, usually has an element of being structured because teachers create rules and supervision that hinders him from exploring activities on his own.

When we are doing recess, they usually want everyone to participate but it doesn’t always work because there are restrictions. Let’s say you are playing dodge ball, you can’t throw the ball as hard as you can because obviously people will get hurt... And the recess is always supervised by one or two supervisors. (Chdgh4)

Another 14-year-old girl described her typical outdoor recess activities as unstructured, and that the indoor activities were mostly sedentary or used for catching up with friends. She stated, “Sometimes we do volleyball circles. Sometimes play tag, not that much but we still do it. Sometimes we play Frisbee. Indoors, most of the time we just sit down and talk or play card games.” (Chdng4)

Most of the children did not show a lot of active opportunities at their home environment post-migration. One 12-year-old girl described that they are constantly trying to find different unstructured ways to be active through existing resources at home. Though they were limited by how active they can get within the house, she
described some benefits from these experiences include creativity and skill development.

Like we play this game. There is a line and I stay on one side and he stays on the other side. So, we use our younger sister’s ball because it’s bouncy. So, we just toss it back and forth, and if it lands on the floor, and I can’t pick it fast enough, then I lose. So, it helps with our reflexes because we have to be fast. In case the ball goes over our head, we have to turn and run quickly to get it before it touches the floor, and we have to throw it quickly to the other person. (Chdng5)

4.3.2 Independent mobility transition. The participants described another acculturative experience that pertained to children’s freedom of movement. They explained that their children had more freedom to move around during pre-migration compared to post-migration. A number of the children also explained that their free play time had reduced since they arrived in Canada. For example, Chdng1a stated, “Well, first of all, I am getting less of free play time because this country is not like socializing like Nigeria.” Chdng1b also said, “Like it’s less, like you can’t relate with anyone like you could back in Nigeria.” Chdg1 also said, “But here since it gets so much colder at night, I come in earlier than I come in back home. I had more time back at home but less time here.”

From the parents’ observations, their children have more free time post-migration but less active playing time and less independent mobility. They also explained that in Saskatchewan, they have more physical activity options but little unrestricted time to engage in those available options compared to their pre-migration experiences. For example, Pntng6 stated, “They have more time here, but the degree
of play they can do is limited because of the environment.” Another parent also stated below concerning the transition from unrestricted time to restricted time.

But I’m just going to say that back in Nigeria, even though we have limited physical activity options, they have a lot of unrestricted time...but I think they would have been much more active over there even though with less things to engage them, unlike here, that they have a lot of things to engage them, but they have limited time to attend to all those things. (Pntng1)

Societal settings and physical environment were described as one of the factors impacting children’s independent mobility post-migration. Below, one of the children explained his transitioning experience relative to independent mobility. In particular, he explained the influence of society on his opportunity to freely engage in physical activity. He also showed that there is a systemic hindrance that prevents accessibility to affordable programs.

There is not much freedom. It’s like you have to go through a system in order to just play certain things or certain sports or do anything. But in Ghana, it’s like there’s freedom and you get to play with each other. I like that. But here they don’t have it, and you have to go sign up for this and sign up for that, before you are able to do that. (Chdgh4)

The parents also explained the impact of societal settings on their children’s independent mobility. In particular, they explained that their children’s engagement here in Canada is dependent on the parent’s availability to supervise and support their children.

Back home your child will ask you, dad we have a match so I’m going to play. If you think it’s not very far from your residence or not a dangerous place, you say okay go ahead. But it cannot happen here because you have to
follow the child to the game and make sure you bring them back safely. That is how things have been structured here. (Pntng9)

Another parent also described how acculturative experience on independent mobility for the children is dependent on the sociocultural settings in Canada.

So, like I keep saying, the environment back home allows children to go out themselves without the parents with them. Children as young as 6-year-olds can go out and play and come back. But here, he requires my guidance to be able to play outside. This kind of expectation that this society requires from me is different from what pertains back home. (Pntgh3)

Another parent also explained the impact of physical and societal settings on his children’s independent mobility. He had more specific emphasis on his children not having the freedom to play aloud, as they would normally in Africa.

Yea back at home, they were very active because we have a very big compound. So, they can go out, play and shout. But here, you hardly shout because since we got here, the next-door neighbour has come here to knock due to shouting. So, I know the kind of play they had in Nigeria, they can’t have that here... In Nigeria, I think they are free and play more than here...In Nigeria, when they shout, nobody will come to knock our door about noise, but we can’t do that here. (Pntng6)

The children also described that they enjoy playing loudly because it gives them freedom. For example, Chdng5 stated, “Sometimes, we try not to make noise because we are living on first floor, they tell us to reduce our noise and playing because of people living on the ground floor.”

Finally, the findings for this subtheme on independent mobility transition showed that the West African children had the freedom to go outdoors and play
without strict supervision while they were in Africa. In Canada, it appears that they require an adult’s supervision for them to be active.

4.3.3 Neighbourhood living transition. All the families described a form of transitioning from communal living back in West Africa to private living here in Canada. Some of the children shared their experience with communal living back in West Africa and how that encouraged them to socialize and be physically active. They described that good relationships among families in the community fostered children’s engagement. Chdg3a stated, “We have a place where we always meet and play with other friends in the area. Our parents know each other so they leave us to go out and play together.” The parents also emphasized communal living as the predominant living style during pre-migration and linked that to daily physical activity for children in Africa. Pntng9 stated, “Back home we live in a way, just like how colonies live together as a family like a communal living.” Pntiv1 also stated, “Back home, you know our neighbourhood, all our kids play together...They exercise every day.” They explained that this type of community organization made it easy for children to be active in proximity to their residential places. Pntng7 stated, “Well one thing I would say is that the community organization is different. For example, back in Nigeria, children can easily play [soccer] in the neighbourhood and won’t need to go far to the park.” Pntng3 also stated below:

And when you are back from school, the neighbourhood is designed in such a way that we live a communal living. So, you join yourself with other children either from the same parent or in the community and you run around the street and do all manner of things together.

The major determining factor for physical activity highlighted by every parent concerning communal living was trust in the neighbourhood. The parents described
that they had no safety concerns when their children were playing in the
neighbourhood because of the belief that every parent in the neighbourhood would
freely maintain watch over the group of children. For example, Pntgh5 stated, “But
it’s easy to just walk to somebody’s house and it’s easy for them to say auntie is three
houses away, take your brothers and go.” The excerpts below highlight how trust as a
determining factor influenced accessibility and convenience of outdoor playing for
the children during pre-migration. One child stated:

Yea, because in Ghana, everyone is always watching each other’s kids. So,
your next-door neighbour could be watching you and your parents will be
okay with that. And it is very safe too because there is always more than one
parent watching you and there are multiple kids there. (Chdgh5)

A parent also said:

Back home, I own these children biologically but in terms of taking care of
them, it’s a lot of people. I can just go to work and tell my neighbour that I am
going out, take care of my child, and vice versa. But here no. (Pntgh1)

In terms of post-migration, the participants showed a completely different
living style and condition. The parent quoted above explained that the trust they had
within the neighbourhood in West Africa cannot be applied here in Canada. The
participants described that they have had to adjust to living privately in Canada. This
was shown to impact their level of trust and affected playing time opportunities for
their children. The parent quoted above also concluded his statement with a strong
phrase that showed the impact of poor neighbourhood social network on their living
style in Canada. This was also observed from most families that were interviewed, as
they described how their experiences so far in Saskatchewan seem to involve keeping
children indoors most times and seasons. Pntgh5 said, “Like I said we are all indoors
most of the year. So, we don’t really interact that much. So that’s the thing.” Parents described their transition to living privately and how it relates to poor neighbourhood social network, which also affected children’s opportunities to be active. One parent said:

But here no. You don’t have anybody to support you in terms of that. I have tried to talk to some neighbours, but their responses are not good. I will not explain much but back home everybody is everybody’s neighbour, and every kid is every parent’s kid...I have been here almost one and half years now; we just wave hands. Nobody pays a visit, and everybody is serious here. Even the summer, everybody is on their own and it’s like we are chasing life. (Pntgh1)

Another parent also stated:

...because of the kind of environment here, most of the children stay indoors. When they come back from school, they have nowhere to go unless you go out for a sporting program...when they come back from school; they may not even step outside until the following morning when they are going back to school. (Pntng9)

The families further described living privately as a societal norm in Saskatchewan. In particular, both children and parents used the language that everyone lives privately. For example, Chdng9a stated, “...there’s pretty much no one outside to talk to...And people always keep to themselves in their homes.” Pntiv1 also said, “But here, you can’t even say hi to your neighbour. Everyone is on his or her own.”

Another factor that was linked to private living in Canada was the physical environment, which was described by the families in terms of apartment living and weather conditions. Pntgh3 stated, “Here we all live in apartments and we hardly see
each other. I don’t even know those who are living here, I only know a few.” Here is Pntng9 describing his perspective on reasons for their transition to living privately.

Unlike [back home], here you don’t even know who your next neighbour is. So those are the little things that make a difference between physically active in Africa and here in a Western country... Probably because of weather condition and environment, here people tend to stay indoor either at home, store, or work.

4.3.4 Dealing with challenges of active living. This is a subtheme of the families’ acculturative experiences, which was constructed to draw meanings from the nature of challenges the participants are faced with during their transitioning experience in Canada. This subtheme also showed the consequences and impacts on active living, as well as the coping strategies the families applied.

4.3.4.1 Physical environment. The first environmental factor described as a challenge to physical activity was the weather influence, which was widely mentioned by all the families. Chdng4 stated, “Nobody wants to do exercise in the winter.” The children essentially described that they barely get active at home during the winter season. Chdng6 stated, “I don’t have much time here because it is cold.” Chdgh1 also stated, “In the winter, we mostly don’t get any opportunity to be active.” Other children who showed interest in outdoor activities considered winter a hindrance. For example, Chdng9a said, “I still wish to go outside and play but I cannot go because of the weather, and people stay indoor more than outdoor.” The parents also described how the weather has been a hindrance for their children to engage in physical activity during post-migration. Pntng9 stated, “But here, even if you want to do it, there is constraint because of the weather condition. So, since my children have been here, it has really had an effect on their way of life.”
Some of the children showed interest in snow activities but their perspectives about these activities were dependent on their parents’ interest and permission to be active in the cold weather. Below is a 12-year-old boy who described he would explore and enjoy snow activities if permitted. He described that:

Sometimes I just ask my mum if we could go outside and play in the snow because I haven’t seen that for majority of my life... but if I ever get the chance, we will just make something like the snow mountain in our backyard, and it will be for the fun of it. (Chdng3a)

Most parents firmly reduced the outdoor playing time for their children during the winter due to health concerns. Pntgh1 said, “We went to market after church and they said that they want to go out and play but I said not in this cold.”

Another physical environmental factor described as a challenge by the participants was neighbourhood space. Many of the interviewed families lived in residential apartments or attached buildings. For example, Pntng3 stated, “They don’t want to throw balls here; they can hit any of these windscreens, they could hit anybody’s door, and that could be a disturbance. So, the environment is so constraining.” Chdng9a also said, “We also live in a place where there isn’t space outside because it is by the roadside...Yea the neighbourhood is also what prevents me because there are more apartments and not much space to actually do something.”

This was a different living condition for them in comparison to their pre-migration lifestyle and was described as a hindrance for their children’s physical activity. As a coping strategy, the parents described their hopes for a better space.

You know the way houses are built here is different...As I said, when they are trying to run around, I’m always cautioning them. So hopefully when we have
our own apartment [house] which is detached, they’ll be free to move around much better. (Pntng5)

4.3.4.2 Social environment. Besides the physical environmental challenges, there were also some social environmental challenges for the West African families. A factor emphasized by more than half of the interviewed families was perceived neighbourhood safety. Most families do not perceive their neighbourhoods safe enough for their children to be active outdoors. Pntng1, while contrasting his African experience stated, “But here, you can’t even leave a child to trek 1km, you’ll be scared that the child might be missing. Pntng3 also described a terrifying experience for her daughter who was playing outdoors in the neighbourhood.

Like the other day my daughter was there in the neighbourhood, and she told me that a guy is in his car trailing them. So, she ran back inside. And she did that [the second time]. So, she knew this guy’s face and the car as well.

The excerpt above speaks about a family who lived in a cul-de-sac neighbourhood. After probing the parent, she explained her willingness to build trust in neighbourhood safety. In doing so, she decided to stay outdoors with the children to supervise their playing time. She described that her experiences supervising the children was also hindered by unknown cars going in and out of the residential area. She stated, “They want it, ask for it every time, but...Sometimes I sit down there while they run around, and tell them stop when a car is coming. Then you tell yourself that it’s obviously not a safe place to play.”

The families expressed that the neighbourhood structure was different from their pre-migration experiences and this seem to be affecting their level of trust. It is important to note that a number of the parents described an evolving trust in neighbourhood safety. They linked evolving trust in the neighbourhood with the
longer time spent in Canada as well as accessibility to safer places. Pntng7, who had stayed in Canada for nine years, stated, “I would say it is evolving and influenced by my living in Canada. Initially, I was not allowing them to play outside by themselves if I’m not there. But the community where I stay now is safe for kids and family.” Another parent while comparing pre- and post-migration experiences stated that granting permission to his children is majorly dependent on safety.

As long as I see a safe space that they can play, I will allow them to play independently. But I wouldn’t do that without my presence standing by to monitor them. Although I don’t do that back at home, here the environment is different, cars are moving here and there. (Pntgh3)

Besides perceived neighbourhood safety, the participants described different types of societal challenges that affected their children’s physical activity participation at school or the neighbourhood. For the children, bullying was a societal factor that posed a challenge for them. Here are some girls describing their experiences with bullying in the school setting.

Well there is this boy at school that is always bugging everyone. But he’s usually bugging me and my brother in my class. If you don’t give him something that he wants, he’ll just keep bothering everyone. He picks on usually the same people. This happens usually during recess and it just gives me a bad mood, I feel sad and most of the times not willing to continue playing. (Chdgh2)

She was meaner since in the class, I’d be the one that has done all my work before everyone. She’d get mad that I’d be done before her so at recess she would always have to find me, get near me, and have to hurt me. (Chdgh1)
The experience described in the excerpt above was deeply hurtful for the 10-year-old girl to the extent that she got emotional during her interview. The thought of the experience brought observable tears to her eyes. I had to stop the interview for a while, as her father and I both comforted her. After this break, she eventually decided that she was willing to continue discussing the experience. This showed her strong will as a coping strategy used to overcome this challenge. As a concerned researcher, I told her that she should not feel obliged to continue this conversation especially after seeing her emotional reactions. This 10-year-old girl said that she would continue the discussion. She described another approach of overcoming this challenge as communicating to her social support network including friends and schoolteachers.

I was still able to be active because I had people around me to help me go through what happened. It happened during recess and when it happens...I spoke to basically my big brother. When it started, I spoke to my big brother, then he told my mum. (Chdgh1)

The children who experienced bullying, did not feel comfortable communicating the incidents to their parents. The participant in the story above, first communicated to her brother who relayed the message to her parent. Another family shared a similar experience of children not feeling comfortable informing her parents. The children were more likely to keep the bullying experience to themselves. Parents, after becoming aware of the incidents, intervened by either counselling their child to report to the teacher or going to the school with the child. Pntng4 stated, “It was the boy that reported about her sister that someone was bullying her sister. But the sister said if I tell my mum, she will go to school and start disgracing me.” Another parent described about his son experiencing bullying at school.
Yes, especially the boy. He said one boy was bullying him in school and he was crying. So, I taught him to go and report the situation to his teacher whenever that happens. I feel like they can’t prevent themselves from being bullied but knowing how to deal with it is the most important thing. (Pntng6)

The parents described bullying as a societal norm. They described it as a challenge that happens in specific neighbourhoods and cannot be stopped. The parents showed that it has a negative impact on their children’s ability to engage in outdoor physical activity. Here is a Pntng1 describing bullying as a challenge in the neighbourhood setting for his sons. He said, “Except you give them courage and say, I am going to stand here with you and see anyone who will bully you. That’s the only time that they might want to just have a change of mind.” Only with the parent’s intervention of being present with them during their outdoor playing time, were the children able to develop the confidence needed to overcome this challenge.

Bullying was described as a challenge that children also dealt with while growing up in West Africa. The observation of these families was that immigrant children tend to lose the mental toughness and independent capacity to deal with bullying themselves after migration.

You know all the bullying we are hearing here today was not a life back in Nigeria. Anybody who harasses you on the field, you sort it out yourselves...Those are normal ways of playing because it doesn’t really cause any big deal. (Pntng1)

Another societal challenge faced by the families was the experience of rejection from neighbourhood residents. About six of the interviewed families shared at least one story of rejection experienced by them, their children, or another family close to them. Some children described how they personally experienced rejection in
the act of seeking a playtime with other children in the neighbourhood. One family particularly described an experience of rejection in the neighbourhood. Chdgh2, who was an 11-year-old daughter stated, “The first time, the girls were playing together, and I asked if I could play and they said, there’s only a certain number of players and so I couldn’t play. Then they ended up inviting somebody else.” While interviewing her father, he stated, “One time she has said that anytime the girls are playing and she goes, they say wait and we will give you a role to play. Eventually they end up leaving her behind, you know.” (Pntgh2). This family did not understand the specific reason for rejection, but it was described as a deceptive way of rejection. For another 14-year-old boy, he was particularly denied participation because of his supposed dominant ability and skills.

It happens all the time. Like I was saying how they say I’m too good. When I say can I join the game? They say you have to get someone else to play or they say you can’t play because you are too good. But it’s not because of that, it’s because they don’t want me to play. So, I’d say it’s okay. I’m probably better than you anyways. (Chdgh4)

Below is another excerpt showing the acculturative context through the comparison with pre-migration experience. The excerpt helped emphasize the consequence for children in terms of losing interest in the socialization benefits achieved through physical activity engagement.

I remember a day they went out in the neighbourhood to play and saw some children playing outside. What we discovered was that immediately the children saw them, they left, and they were left alone. Their intention was to go, meet, make friends, and play with the children. Because if it was in
Nigeria, they would have made friends and started playing with the children...So things like that sometimes may discourage them. (Pntng6)

Similar to the bullying, the parents seemed to accept rejection as a societal norm. They also had some rejection experiences and so they counselled their children to develop mental toughness as a coping strategy. Here is a parent’s counsel to his daughter for mental toughness as a way of dealing with rejection.

She felt some kind of rejection. So, I told her that I’ve been in the same situation, but it doesn’t define who I am. It is bound to happen, and you just face it...You just try to overcome it. I mean there are good people and there are other people that are also wicked, so. (Pntgh5)

Another aspect of societal challenge described by few families was the issue of overgeneralization based on perceived race. Some children were able to share some of their experiences with overgeneralization as it pertains to physical activity participation. In particular, the children described that competency in sports participation was associated with them because of their perceived race. For example, Chdgh4 said, “Yes. It has only happened like three times before. I was playing with my school and they are like, you are only good because you are black.” Chdng4 also said, “With physical activity, it’s mostly that most black people like sports, do you do sports? So that’s kind of the sport-related black person kind of thing. So, yeah.”

Just as it was observed for the other societal challenges, overgeneralization was also accepted by the parents as a societal norm and again, parental counselling was described as a coping strategy. In some cases, the parents counselled their children to strive for excellence in order to have an equal opportunity within the society. Chdng4 said, “Well for my parents, they always tell me that you have to do well. Because if you do better, you’ll be considered as a smart person so you can get
better opportunities.” The following quote demonstrates the counsel parents gave their children in dealing with this challenge:

And not only sports because I tell them that whenever you go into a different environment, you are kind of the odd one out because you have gone there, and you are definitely going to face some challenges. There will be situations and it could be either positive or negative. And you have to learn how to deal with it. (Pntgh4)

It was observed that the children also developed the mind-set of working hard particularly to improve sports skill development. This was a form of internalization of the belief that overgeneralization is a societal norm and it is necessary for them to strive for excellence to overcome the challenge. Chdgh5, who was playing competitive sports, stated, “Because I have always tried to improve my skills, so I don’t usually experience it. When it happens, it is hurtful and makes you want to improve your skills and at the same time it makes you want to stop.” This child showed striving for excellence in order to avoid experiencing overgeneralization within her competitive sports engagements. Chdgh4 also said, “My general belief is that I worked hard to be good. Maybe because I’m black, it helped, and my genes helped. So, it’s like DNA combined with skills, and everything you’ve trained for will make you an unstoppable player.” This child also showed strong commitment for improvement and also internalized the perceived notion that overgeneralization is a societal norm and that his perceived race influences his potential for skill development.

The final social environment challenges were societal stigmas and the legal system. These societal challenges were linked to hindrances with leaving children outdoors in the neighbourhood. They believed that leaving their children to play
outdoors independently without close supervision could result in a legal issue with child protective services. From the parents’ responses, these were concerning issues for them as opposed to their pre-migration experiences, and this hindered them from allowing unsupervised outdoor play for their children. They showed through their responses, that they can be stigmatized as being careless if their children were left unsupervised to play outdoors. They also shared that this could result in someone reporting them to social services or them having troubles with the government. Here is a parent describing his concern regarding the legal system as a hindrance to giving his children independent mobility outdoors. He also showed an acculturative perspective by comparing with pre-migration experiences.

I knew how to manoeuvre around all the vehicles, knew when vehicles are coming that is dangerous, knew my boundary, knew who to talk to on the way, knew who not to talk to, and we succeeded. But here, you can’t even leave a child to trek 1km, you’ll be scared that the child might be missing, the child might injure himself, and the government will be coming after you.

(Pntng1)

Another parent also shared his concerns regarding the legal system as a factor that made him considerably keep his children indoors.

Yea you don’t want to get yourself into any issues with the law, the social welfare and their issues. They’ll pick issues with you when they see that you are not being a good parent to your kids. So why do you get yourself into any kind of issue with the social service all because they say you are not taking good care of your child. It will be difficult for you to get your children back. So, you wouldn’t want to do anything that will lead you to losing your
children to the law. So, the law guides the way you allow your children to go out and engage in physical activity which could be helpful to them. (Pntgh3)

It can be noted from above that the parent spoke about concerns for the legal system in guiding outdoor engagement for the children, and in the same manner, he spoke about guiding the children in a caring and responsible way.

In terms of societal stigma, another parent shared her concern with being stigmatized as irresponsible if her children were left unsupervised. She further described this concern as a societal norm that is negatively affecting children because it prevents them from having an optimal quality of life that comes with exploring outdoors.

Yea, for instance if you allow your 12-year-old to go somewhere with your 6-year-old and something happens, I don’t know how you are going to get out of that. You’ll be titled irresponsible and titled all kinds of names. You might even risk losing your kids. So, with all those things, it makes you have some kind of adjustment. Something that keeps your kids safe and keeps you safe. So that freedom is not really there even though you are supposed to be in a free country...It’s just taking a lot of things from the kids actually. In the long run, it’s taking life out of their lives. It’s not their doing; it’s not my doing; it’s just what it is now. (Pntgh4)

4.3.4.3 Financial resources. This is another unique challenge that most families described as a hindrance to creating physical activity opportunities for their children. In particular, the families have challenges enrolling their children in organized sports. For the children who have keen interest in playing sports competitively, getting the financial resources needed for sports was a major challenge. Both parents and children described their perceptions on dealing with
financial challenges for sports programs. For example, Chdgh4 stated, “Because you have to pay for things to get into things. If your family can’t do that, it becomes a very negative factor for that.” Pntng7 also stated, “The other challenge is getting the children enrolled in registered activities like paying for swimming, hockey, soccer, gymnastics, etc. I mean all those are very expensive, and an immigrant family may not readily be able to afford such.”

This challenge was also linked with skill development for the children. Some of the participants explained that the potential for skill development and athletic success depends solely on securing funding or opportunity to register for organized programs. Chdng3 said, “I guess if we could like afford getting on a team, then maybe we could get better at skills I guess.” Below, one of the few children engaging in competitive sports is emphasizing the link between lack of financial resources and skill development.

I also like to play football. I usually play right hand receiver and if I could, I play safety on defence. And there’s a thing called IMF and I wanted to join it, but it cost so much. Like football is very expensive. So that was one of the things that hit me. And you can’t just get better without training or joining some kind of institute that helps with that. That really just surprised me.

(Chdgh4)

From the previous quote above, a young talented 14-year-old boy helped provide depth on the consequences of financial resources as a challenge. This boy was expecting his skill development to be progressive. From his reflection, it was shocking for him when he realized that his ambitions and skill development will be disrupted due to inability to enrol in organized sports. His mother in a separate
interview also described how prospects for the young talented boy could be truncated due to this challenge.

Here if you really want to go all out and do that physical activity thing, it takes a lot of commitment from the parents. For instance, the basketball that they are playing in school. Whenever they are playing, they still have to pay some amount. And that is still very cheap but if you go and register him for something professional right now, that’s an extra cost. Then all the things that come with it. If you don’t have funding for it, it limits a child that maybe could have been a star in the making. So, let’s say, we are praying it doesn’t happen; but if because of funding we are not able to push him with his basketball, we don’t know what might come out of that. Resource is one big thing and the sports here is really expensive. (Pntgh4)

From the story above, it was noted that the parent was sharing a heartfelt situation about her son. She was not solely expressing that her son’s ambition will be hindered by financial challenges, but she described it in a way to establish that the family was committing a lot of their resources to ensure he plays basketball. She also described in a solemn tone that if their efforts are not enough, it may be devastating for the child. This supports the excerpt from the son who described that it was shocking for him when he realized the cost for the required program. After further probing on what could possibly improve opportunities for him to be active, the boy described that all he wanted was for the financial hindrance to be dealt with so that he can have the right mind-set to improve in skill development. He responded, “...and how the financial aspect can be done to just make people have more freedom so that you could basically get better.” (Chdgh4).
4.3.4.4 Competing priorities for parents. Another challenging aspect that many of the participants showed was time commitment for parents in relation to their priorities. Time commitment was considered a challenge because of the employment commitment of the parents. These commitments prevented them from having the necessary time and financial stability to support their children’s physical activity participation. Some of the reasons that led to competing priorities for the parents were extended working hours, studying and working simultaneously, and career transition. For example, Pntng7 stated:

New immigrant families are trying to settle down and get their career going so it is a total change of life and career. Some parents have to go to school and work part-time to support the family. And they go out in the morning and come back home late in the evening. And that affects the children as well because there is no chance for supervised activity or play.

In terms of parents’ employment conditions, their working hours resulted in lack of time to support their children’s activity engagements. The children themselves stated that parental busy and working schedule prevented them from going outside since the parents have to be around for them to be outdoors. Parental busy work schedule was also linked with increased sedentary time and less outdoor time. Chdng1b in describing his barriers to physical activity stated, “Well, time…is a really big one. Like sometimes we don’t have enough time.” Chdng3a stated, “For the past couple of weeks, it’s just been inside playing computer games, because my mum’s at work…” Chdng9a also stated, “Parents also have to go to work and don’t have enough time to take us outside.” The parents also described how their busy schedules affected the children’s opportunities to be active.
It’s more of the parent having time which we don’t have. My husband finishes from work on a good day at 6, mostly 7 or 8. So it’s just tough...They would have been doing a lot more things, but we don’t have the time at this time.

(Pntgh4)

4.3.4.5 Screen time as a hobby. Several children described using screen devices as their primary hobby. During their leisure time, the first option for leisure was described as watching television and playing on the iPad or their phones. When the children were asked to introduce themselves at the beginning of the interview, some described different sedentary activities including using screen devices as their hobbies. For example, Chdng1b responded, “My hobbies like watching TV, reading, writing, drawing and stuff like that.” Chdng2b said, “My favourite sport is football. The things that I like to do most is playing video games and reading books.” Chdng3b also stated, “...and mostly what I like to do is just reading books at home as well as just playing on my iPad and just messing around on it.”

It was observed for most children that leisure-time physical activity participation was considered secondarily to screen time. Pntng2 stated, “There are some playtimes that don’t get them engaged actively like most times they stay with the electronic devices playing games.” The parents generally described that spending more time indoors reduced their active engagements. They also described that screen time takes bulk of their free time. Pntng6 stated, “So the TV takes most of their time. When they are tired of watching the TV, they will be doing hide and seek, chasing themselves around the house.”

When the parents compared pre-migration experience with Canadian experience, easy accessibility and globalization were described as the major reasons for children’s transition to a more screen dependent lifestyle. Pntng3 stated, “The
world now is so much into computer, iPad, systems, that children kind of enjoy that life.” This was confirmed by a few children as well. Chdng4 stated, “Well I watch TV a lot more because the shows are already there on Netflix, right? So, all you just have to do is just press it and you can watch as long as you want.”

### 4.3.5 Cultural adaptations

The families showed some cultural adaptations which are majorly focused on language and moral behaviour adaptations. They believed that cultural adjustment is a learning process for them. Most families in their first-year post-migration did not state that they have reached the stage of full integration where they feel comfortable with the balance of both their heritage practices and the new cultural practices. Some of the families who had been in Saskatchewan for more than five years, stated that their children were integrating well.

In terms of the communication, some parents believed that their children are adapting quickly to the manner of language inflections. Pntng9 stated, “For the children, they adapt quickly, and it is very easy for them to integrate because of their nature. An adult will be struggling to adapt to a different environment.” Pntng6 also described the acculturative experience for his children and how they have been able to adjust to the manner of language inflections.

When they came newly in the first two weeks, then their spoken English was different, so sometimes when you try exhaustively to communicate with people, it will make you to draw back. But now, even their accent is changing so their communication is better understood now.

The parents described that their children developed a sense of belonging as they adapt particularly in schools. A few parents also mentioned that their children’s language adaptation brings a positive change to the entire family. This was
influenced by the questions that children brought home from schools, the knowledge impacted at home, and parents’ willingness to learn from their children. Here are some parents describing how their children’s language adaptation in school impacted the family. One parent said:

And I told you already that the way they speak...if my son speaks for you now, you see that change in tongue. Even when we speak in English, we speak in our own accent and not the accent they are used to hearing in school. So those kinds of things will change, and language is an example. (Pntng5)

Another parent stated:

For instance, the language. Their accent is changing. Then also some of the experiences they are having in school are changing from that of Nigeria. Now when they get home, they ask for a lot of things that we the parents don’t even know...And the positive changes they bring impacts us at home as well. Like when we speak sometimes, they correct our pronunciations, so we also learn (laughs softly; Pntng6).

Another cultural adaptation that the families described was moral values adaptation. Unlike the language adaptations, most families stated that they would like their children to retain their heritage moral values.

Because my principle in my house is that, for me to have believed something, it is because it has passed through test. So, if I’m holding onto something as a cultural belief, I’m not holding onto it because Nigerians said so or my tribe says so, but because I’ve seen it, it’s been proven over time from my parents to me, and I’ve seen that it’s worth the while. So, I try not to allow environment to change it. (Pntng3)
But in terms of moral, I have to reiterate that there’s a zero tolerance on morals because that’s what shapes a kid’s life and all that. These are things that shaped us, and we are benefitting from, so definitely we will pass onto the children as well. (Pntng5)

In particular, the cultural values that the families described were honour and respect. The parents claimed that as their children get integrated, they would still insist they keep these cultural values. Pntng6 stated, “Really, I would love that they retain our culture like greetings and respect for elders, we teach them that.” Here is another parent sharing her perspective on respect around parent-child engagement.

Our culture encourages children to play. There’s a saying in our place that ‘even if you are playing with an adult, you still have to know decorum...’

Because our culture demands that, though he’s playing with you and making you have fun, you must give that honour and due respect. You won’t do like you do to your mates like hit his back; so, in our place, that is not accepted.

(Pntng3)

Some other parents discussed their perspectives on respect in terms of expecting their children to keep peers who understand their heritage values. For example. Pntgh3 stated, “But right now I will make sure that their friends should be someone whose attitude and way of life falls in line with our tradition and culture.” Pntng4 also shared a similar perspective below.

Well, in my culture, we don’t call elderly people by name and they have brought home friends that will say, hi my name is Rachel, and I’ll say okay my name is Lola. And they say, hi Lola, how are you? Is not allowed in my culture to call my friend’s mum by her name...If this happen to my child because he has been mingling with other people that call their parents by
name. Even if they are the best of friends, I will not allow them to play together.

From the previous quote above, the story depicts a woman who described cultural value in terms of having respect for elderly people. She stated that it is culturally disrespectful for someone to call an older person by name. She further described how this cultural value may impact her children’s physical activity with peers in terms of disapproving playing time with children from another cultural practice where that is allowed. This was showed as a barrier to physical activity due to sociocultural differences. After probing, the parent explained that if her daughter’s friend agrees with adjusting to her culture, then she would approve of them playing together.

Because there was one of her friends that I told that it’s not right to call an elderly person by name. And she said, oh what do I call you? I said you can call me Chdng4’s mum. And she said, oh that’s good. Anytime she comes, Chdng4’s mum, Chdng4’s dad. And that was cool. Anytime she wants to enter my house, even if I’m sleeping and she presses the bell, I would open the door for her. Yeah. (Pntng4)

It is noteworthy to mention that many of the families talked about respect generally but not in the context as described in the story from the excerpt above. In general, the parents were interested in their children keeping their cultural values as it pertains to moral behaviour. Most parents described that the important thing for their children is to be respectful in their manner of communication to people whether in West Africa or Canada, even if their children have friends with different cultural practices.

4.4 Facilitators of Physical Activity for the West African Children

4.4.1 Enabling environment. From the analysis, it was observed that there are several factors that influence physical activity engagements for the children. The
first influencing factor that emerged was the environment. Some families believed that despite the environmental challenges, there were some built environmental features used occasionally to enable their children’s physical activity participation. The commonly described features were parks, walkways, and trails around the neighbourhood. They described that these features encourage their children to exercise in the summer, serve as a source of fun for them, increase family time together, and bring people in the community together. One 14-year-old boy said, “Once in a while, they gather all the good people and we have a big match, and it’s pretty fun. Where the snow is all covered in the park, that’s where we use.” (Chdgh4). The parents also supported, as Pntng5 stated, “We’ve taken them to park about four or five times since we got here. So, we have been to parks just to exercise their bodies. So, it’s good that parks are not limiting, and it is rather an advantage.”

The few interviewed families living in lesser populated areas such as the suburban and rural area, also described that their environment provide enough space and features for their children to engage in outdoor activities. One parent who lived in a small city stated, “The other thing is where I live, the city made it easier for kids to ride their bikes because there are walkways and bicycle pathways.” (Pntng7). The built environment in towns was also linked with neighbourhood safety, active transportation, and inter-town sport events for children, as well as overall improved active living opportunities for their families.

Well, since they are a lot of small towns around our area, we usually have track and field with the other towns, and we compete with the [different] grades. So, they split us up into boys and girls. And then they split us up into grades... Yes, the town is just perfect. If anybody doesn’t want to be active, it might not be because of space... But since we live in a town, we can go
anywhere, and we don’t get lost and we usually walk to school or ride our bikes. (Chdgh2)

**4.4.2 Parental role-modelling.** This subtheme was mentioned by most of the interviewed families. Parents described that their engagement serves the purpose of behavioural modelling for the children. One parent stated, “The other thing is we parents ourselves. When we engage ourselves in physical activities, they are motivated to join us in whatever we are doing.” (Pntng1). The type of activities that parents model for their children range from leisure activities like dance and sports, to fitness activities like calisthenics and stretches, to domestic activities like household chores. Here is an 11-year-old girl describing role-modelling by stating, “At home usually, we would turn on music and we’ll just dance. Well sometimes dad does the daddy dance, and we all laugh and copy him... We usually try to keep up with our dad when he’s stretching or exercising.” (Chdgh2). Another participant gave a perspective on sports from a parental perspective. “I’m a sportsperson myself. I play football actively even up till today. I will always encourage my children to do sports they want to do.” (Pntng5).

For the children, there were some direct and indirect implications derived from parental role-modelling. For direct implications, the children derived fun, encouragement, and motivation from seeing their parents do these activities. Indirectly, they were increasing their daily active time and developing an active lifestyle whereby they can engage in these activities even without parental engagement or motivation. Chdgh4 while describing how he converted parental motivation to personal motivation stated, “Like they do talk about how they used to do sports too. And it just challenges you to go higher than they did.” Pntng8 also said, “Now, it has become norm for them because even when I’m not around, they do
Another parent provided a perspective on domestic activities.

One of the things is that we are an active family. Everyone in the family is involved in household chores like cleaning or mopping. When we parents are doing something, they are also doing something. They assist me if I’m shovelling snow, and we do it together, which gets them to be active also.

(Pntng?)

4.4.3 Peer influence. Another facilitator described by both children and parents was the influence of peers. They described peer influence positively in terms of getting together in school or the neighbourhood. Chdng3a stated, “When our friends come out. Usually, we just play like a made-up game or another game that we’ve played before. We’d ride our bike and just have fun around here.” Chdgh2 also stated, “There are friends that live close to me and I’d walk to school with them.” They also described the negative impact of not having friends around for activities. In some cases, the influencing effect of peers was described by children in response to final interview question stated as ‘what would you like to see change to improve ways for you to be active or play sports?’ In response, few children mentioned that getting a few friends with similar interest would encourage them to be more physically active.

I would like to see at least like two more people who are like me and interested to find someone to encourage them. So, if one is not available, then the other one might be available. But then I just want to find at least two people who can encourage me to do the exact same thing.

4.4.4 School influence. The participants explained that school was also an important facilitator of physical activity for their children. Both parents and children
described the importance of gym sessions for the children. Few parents explained that they appreciate the system of having a mandatory school policy whereby children are compelled to be outdoors as part of the curriculum or during recess. Pntng1 sharing a comparative view with pre-migration stated, “Yea, having time scheduled for physical activities. And that is one thing I appreciate so much in their academic system here.” Pntng7 said, “They are encouraged to stay active in their school. That’s why gym time is part of their school curriculum and it’s regular.” Chdgh1 also stated, “We are allowed to go out at recess in school and it is compulsory to go out.”

The participants described that their children have more physical activity opportunities at school compared to home. Some children particularly described school environment as the only opportunity for them to be active. Chdiv1a said, “Well, pretty much at school, you always have gym, recess, and a bunch of activities you can do at school like soccer, volleyball, basketball, tennis; which I think is helping.” Chdng4 also said, “But then whenever I’m on my own, I don’t really do it. It’s just school that encourages me to do it.”

Peer influence was also linked with school influence in terms of children having easy access to their friends at school. Some parents explained that their children looked forward to school days particularly due to the unrestricted access to their friends. Pntng1 stated, “I believe that they like to go to school because of that...You know, they want to go to school because they know that school will give them more access than they have back at home.”

One 14-year-old boy was able to distinctively describe the benefits he derived from school activities. In particular, the benefits derived from physical education were different from recess sessions. Physical education was linked with sportsmanship skills while recess was linked with fitness and sports skills. He said,
“The Phys Ed just helps you with teamwork and cooperating, and things like that. But when it is recess you get to practice what you want and need to work on to help you with whatever you are doing.” (Chdgh4). He explained that physical education was structured, with teacher’s supervision, and did not allow him to practice his preferred skills. This 14-year-old boy participated in competitive sports and had previously discussed financial constraints with enrolment in after-school programs. This made him rely on school opportunities for development of necessary skills.

4.5 Engaging Together as a Family

Enjoying a physically engaging family time was a theme for all the interviewed families. Many parents explained that they try to create time to engage in physical activity with their children. They engaged together in recreational activities which include walking, cycling, dancing, sports, going to the park, and home calisthenics. Active family time was described as an occasional occurrence and fulfilling time for the families. Several beneficial outcomes for the children and the parents emerged from this theme.

4.5.1 Derived outcomes. For the family, it was observed that engaging together in physical activity helped improve family cohesion. Pntng2 stated, “We go to the park, play basketball and do some sports together and that brings bonding in the family.” Besides the parents, one child also confirmed that having an active family time has helped with reconciliation with their parents. Here is what Chdgh3a said, “It helps us to be united again. If you are having any problem with dad and mum, it will help to bring all of you together.”

For the children in particular, family cohesion was said to help them develop a sense of belonging in the family. Pntng6 discussed sense of belonging along with other beneficial outcomes of active family time for his children, as follows:
There are some times we just play whereby they come to me and I carry them and throw them around the garden. I know when I do that, I am giving them a sense of belonging, I make them happy, and also registering a lot of memories in their heads.

It was clear from the findings that engaging together as a family produced a fun environment for the children. One particular approach the parents used to create a fun environment was through the design of competitive games. For example, Pntng3 said, “The last time they had a badminton racket here and they wanted to play, and I’m like okay, you versus mummy. Something like that. And it gives us that atmosphere or environment for us to speak freely.” An important outcome that emerged from the family time was freedom of communication for the children. A number of the families shared that their family time helped their children’s communication skills because the children were allowed to speak freely during this time. Pntng6 stated, “When they are playing, they are free, happy, and they can talk better.” Also, the children supported the outcome of freedom of communication. Here is what Chdgh3b said: “Maybe you did something wrong to mum or dad and then you see it’s like mum is angry and when there is that dance show, you can feel free to talk to her.”

In addition to fun time, family cohesion, and speaking freely as outcomes for the children, few of the children also described that engaging together as a family enabled them to learn skills required for sports participation. “Yes, sometimes when he’s not busy, he comes to the driveway and shows us some skills like for basketball.” (Chdng1a).

For the parents, some of them explained that engaging together as a family enabled them to discover new things about their children. The children were able to freely share troubling situations with their parents. Drawing from the quote from
Chdgh3b, this 11-year-old girl described that she is able to talk about wrongdoings with her parents particularly during a dance show that the family watched and imitated together. Some other parents also confirmed the discovery of new things through their family engagement.

We are able to talk and laugh together. We are able to discover some things that naturally, we will not discover. Like there was a time we were playing basketball and my son came up to say oh, he’s having some pains at a certain part of his leg. And I was like oh, when did that start? And he was like when he was playing in the school. (Pntng2)

Another parent described the discovery of new things in relation to emotional situations for the children.

But there are things or emotions they may show while we are involving in physical activities due to their excitement. For example, the story I said earlier that some neighbourhood children were refusing to play with her, it came up one day when we went out to the field. As we were running, she started saying it. Immediately, she almost broke into tears when she started to talk about the story of the girls not letting her in to play, something like that you know. (Pntgh2)

From these quotes above, it can be observed that the nature of things discovered varied. It was also observed that these discoveries were usually related to troubling situations for the children. The story of Pntgh2 emanated from the challenges earlier described (under section 4.3.4.2. social environmental challenges) concerning children’s experience of social rejection by other children in the neighbourhood. This parent’s explanation showed that the discovery was necessary because the experience had a negative impact on the child’s emotional health.
There are other beneficial outcomes that emerged for the parents through their engagement together as a family. These outcomes were centred on teaching and supervising. Some parents explained that they use the family time as an opportunity to teach their children necessary skills.

But when we are doing soccer, I teach them the techniques and all that. Also, when they are getting ready for their track and field events, I will go out once in a while with them to let them try their running, sprinting, breathing, and do a few stretching. (Pntgh2)

The parents either taught them through physical demonstration or counselling. For example, Pntng5 stated, “Every time they tried, they couldn’t do it so I was encouraging them by telling them they need to be focused and also think about the end result when doing it, and that they might have to try it more than once to get it.”

In terms of supervision, some parents engaged together with their children to minimize their children’s risk of injuries. During recreational cycling, they engaged with their children to direct them on the right places for safe cycling. For example, Pntgh3 said, “When it’s summertime, they would want to ride the bike. At that time, I will be riding with them because you don’t have to let them ride to places that will cause any harm to them.” The family time was also used to improve their children’s self-confidence in specific activities. For example, Pntgh3 further described how he strategically used dancing to suppress his children’s shyness. This is the parent whose children talked about watching and emulating dance shows together. “My children are very shy to dance especially the boys. So, I’m just trying to demonstrate to them that they should not be shy and to try to dance because they may need to dance in school.”

The last outcome that was derived for the parents was the use of active family
time to teach moral behaviour and sportsmanship to their children. Respect during play was a moral behaviour emphasized by some parents. Pntng1 said in terms of respect that, “...also opportunity to teach them some little bit of courtesy...This is how you behave to people, you don’t shout on the field, you don’t yell at people, and things like that.” Respect during play was emphasized by encouraging the children not to lose their sense of respect due to their excitement. Few of the participants also showed that the children tended to easily accept the life principles that are taught during this time. Pntng6 said, “At that time, they take the teachings we give them.”

4.6 Engaging in Risky Play

4.6.1 Inherent interest. The findings showed that most of the children were interested in risky play. The parents engaged in risky play while growing up and their children also showed an inherent interest to engage in physical activity under challenging circumstances. Chdng6 stated, “I like the monkey bars. It’s hard to do but I still like to do it because it’s fun. It’s funnier than those ones that are not challenging.” There were some personal factors that enabled children to engage in risky play, and these include personal motivation and the fun. For example, one of the children stated, “I always like to do stuff. I always feel like after doing it, I can actually tell what it felt like whether it was scary or fun.” (Chd1v1a). Another child described his personal motivation to take risk by saying, “Nike is a shoe brand that motivates me a lot, and the logo for Nike is risk everything, and that also motivates me more.” (Chdng8).

Some of the children engaged in adventurous risky play. They took risks even with knowledge of the consequences beforehand. Chdng4 said, “And then someone warned me that…you are going to fall over at least once. That even if you are good at it, you are still going to fall at least once if not more than that.” In some cases, they
continued challenging activities despite getting injured. For personal motivation, they concentrated their thoughts on the positive outcomes to help ignore the risks.

In grade 5, I was doing basketball, and then one of my friends threw a ball and broke my pinky finger. Then the next day, we also had Phys Ed again and the doctor said I shouldn’t use ball or anything. Although I didn’t play the sports, I did the basketball warmup and my hand hurt a little, but I just looked away. I learned that when you take risks, anything is possible. (Chdng8)

4.6.2 Outcomes. There were some outcomes that emerged from the children’s engagement in risky play. The outcome mentioned by most of the children was learning from experiences that were risky. They mentioned that it made them learn new things, new skills, and acquire knowledge that can help prevent failure in subsequent activity attempts. Chdng4 stated, “But then I actually start to get it. Now I can flip with one leg, two legs and do whatever I want on the monkey bar.” Chdng7 said, “When I do risky things, I don’t usually get hurt and I learn from them.” Chdng8 also said, “So yeah, that’s the good part about taking risks. Because when you take risks, you learn your lessons and get better at it next time.” Another child linked taking risks with creative learning and smartness. Here is what Chdgh4 said, “What you learn is to be stronger, to learn how to manoeuvre around people, to be smarter using your head...” The parents also buttressed the outcome of risky play for their children by describing that parents who want their children to learn would allow some degree of risky play. Pntng6 stated, “You know they also learn from some of those challenging play. But if you restrict them completely, you are also preventing them from learning.” The parents also described outcomes related to developing confidence and independence. Pntng1 said, “It builds their confidence when you do things that are risky.”
4.6.3 Managing risk. The findings revealed that the children were able to properly manage the risks involved in their activities with the help of their parents. This involved the parents keeping a safety check on their children during these activities. Safety was reinforced by the parents through counselling and supervision of activities. Pntng5 said:

Yea, yea, yes. Like I’m telling you, she wants to go high even to the extreme and do some stunts such as swinging twice my height. So, we don’t need that. Just swing high, enjoy yourself and come back. That’s what I’m saying. My acceptance is strictly based on safety.

Pntng7 stated, “What I tell them is in whatever they do, safety first. They’ve had some accidents riding their bicycles like breaking their hands. So, I tell them whatever they do, be conscious of safety, use helmets, etc.” Pntng3 also stated, “In all things, physical activity comes with the big part which is safety. The only thing that I mostly emphasize on is safety.”

From the quotes above, it can be noted that the parents did not prevent the children from playing but they ensured that the children kept safety in their mind-set whenever they engaged in activities that were physically challenging. One of the parents stated that his acceptance is strictly based on safety, but he still mentioned that the child can swing high and enjoy herself. In the other situation where the children had suffered broken bones from cycling, the parent did not prevent them from cycling but taught his children to use protective equipment during the activities. One of the children even described that her parents took pictures of them on the monkey bars during one of their family time in the park.

4.7 Parental Conditioning Associated with Domestic and Other Activities

Findings showed that all the parents used conditioning as a parenting strategy
to encourage children’s engagement in domestic activities such as daily kitchen duties, house cleaning, gardening, and snow clearing. The parents used two types of approach which are positive reinforcement and negative reinforcement.

4.7.1 Positive reinforcement. The parents used a reward system for this approach. Some parents rewarded completion of domestic activities with more active outdoor times. Pntng4 stated, “I told you that you are going to go out like two times, then I’ll add one more time for you to go. So, they will be so glad to join me in the kitchen to help.” Another parent stated, “Most of the time, they are done with the house chores within 20 – 30 mins, and then they can go and play.” (Pntng6). The children also described this type of reward system. For example, Chdng6 stated, “…or my mum will say I should go and sweep my room. And when I do it, I get the chance to play.”

Besides domestic activities, parental conditioning was applied in other situations that involved rewarding with active outdoor play. This mostly involved reinforcing non-physical activity related behavior using active outdoor time as a reward.

It is always one of those things that we can use to keep them level headed...When you want them to behave well, do you want to go play out there? Okay, if you want to play, you have to do this, do that, take care of this, take care of that, be well behaved. (Pntng1)

In other situations, positive reinforcement was used to encourage the children’s academic commitments. For example, Pntng6 stated, “When I come back from work, I usually ask them if they have any assignment. Most of the time, they don’t have any. But if they gave them, then they must do it first before playing.” The children also provided input in the use of this approach. Chdgh3 stated, “They allow you to go
and play soccer outside, but you must study before you go out.”

Below is a continued story of the 14-year-old boy who was actively involved in sports and also part of a basketball and football team in school. His mother described that they were trying all their best to ensure he continued in these sports because of his talents and good prospects. They also shared that the financial commitment to sustain his participation was enormous, but they would try to keep him engaged at the competitive level required for him to grow. But his sports engagement was dependent on his academic standing in school. The mother believed that his son was deeply committed to sports and would therefore not jeopardize opportunity to play sports by having a poor academic standing.

He knows because we have an agreement. If he’s falling behind in his schoolwork, that takes him out of the sports. The teacher sent us a message two weeks ago that he’s really trying. Yea, because if he doesn’t, he is out. Then he would hate for me to see him not play but we are not going to trade that. So, he knows and whatever he will do to make sure his schoolwork and assignments are submitted on time, he has to. (Pntgh4)

4.7.2 Negative reinforcements. The other approach parents used to encourage domestic activities was through the application of negative reinforcements. This type of reinforcement involved disciplining the children when they refused to perform their assigned responsibilities. The children’s hobbies and other liked wants were used as the elements of discipline. These hobbies were either reduced or deprived when specific home responsibilities were left undone. In particular, screen time was a major hobby that was deprived as a form of discipline. Parents explained how screen time control was used as a negative reinforcement to perform necessary household activities. One parent stated, “We have some laid-down rules that you can
only watch TV weekdays when I’m around or probably in the sitting room. Apart from that, I don’t allow them, and they must have completed their domestic work.” (Pntng8). Another parent stated, “We tell them that if we don’t see you doing it, then you can’t use your computer.” (Pntgh5). The children also gave responses that supported this type of reinforcement. For example, Chdgh1 stated, “If I didn’t do what I was supposed to do...That means I can’t go on any tech like go on my tablets or watch TV. I can’t do anything that involves technology.”

4.7.3 Conditioning outcomes. There were some outcomes that emerged from this theme. The derived outcomes were separate for parents and children. The parents were interested in teaching the children a sense of responsibility by instilling life principles. For example, Pntng5 said, “The first thing should be that you have done the necessary chores before asking permission to play. It is like part of training them up.” Pntng8 also said, “So we want them to know their responsibility and apply self-discipline so that when they grow, they have control over their own lives.”

For the children, they began internalizing the principles by taking responsibility themselves. Going back to the story of the 14-year-old boy who was engaging in competitive sports, the parent described that his son himself agreed to the terms of maintaining good academic standing for continuation in sports. She described that the teacher gave feedback that the boy was performing better in school. This showed a form of internalization by the child. Some other participants also described internalization of the instilled principles. Chdng5 stated, “It’s a duty! It is a home principle. You have to take care of responsibilities before leisure.” Chdgh3a also said, “You feel like next time you are going to do the right thing for you to get outside and play soccer.” Another child explained how she completed her domestic responsibilities in advance to avoid any hindrances to her sports engagement.
Usually on Saturdays is our chore days so sometimes I’d rather do them on Fridays so that I would have time for a basketball game on Saturday morning...Before I go to a tournament, I have to finish my chores so I do them on Friday. (Chdgh5)

An 11-year-old daughter stretched this understanding by further explaining that it will be unreasonable for her to see the need for domestic responsibilities to be done, and refuse doing it. Below is an analogy she used to describe the process of internalization of the instilled principles activities.

Because I know if I don’t do it, no one will do it for me, so it is my own job and if I stay there for someone to tell me, I think that I’m a fool. Because if you are sitting in rubbish, and you think rubbish is good for you to sit in, it’s not good. So, you have to sweep it and you won’t sit there for someone to come and tell you before you go and sweep the place. (Chdgh3b)

Another parent described how the process of internalization has led to the development of leadership skills. This parent allowed his children to take a leadership role in creating domestic responsibilities for everyone at home. From this parent’s response, the children were developing leadership and management skills through the process of internalization. This was also linked with a sense of belonging for the children.

At a point in time, you don’t even need to give her that condition anymore because she knows. Besides, the good thing is, for the chores, they pick their chores, they wrote the timetable. It was a free democratic process. Write the chores that we need to do in this house and delegate. So, they delegated for me myself. I tell them that I’m doing my own chores, so what happened to yours? After all, you are the one that wrote these chores out. So,
it gives them that sense of belonging, sense of responsibility, and that leadership that they are leading the family in putting things aright. (Pntng5)

4.8 Member Checking of Themes

The member checking of findings was conducted by requesting the verification of themes from all the families. Six families provided their feedbacks on the four-page summary of findings sent to them (see Appendix K). Follow-up was done with the other families, but they were not able to provide feedback possibly due to other priorities of life. All the families that responded confirmed that the findings were representative of the discussion during the interviews. Feedbacks were received from both the parents and children. Here are some of the parents’ excerpts from the member checking of findings. Pntng1 stated:

Yes, the themes represent some of the perspectives we shared with the interviewer during our cause of discussion and I believe it presents the challenges encountered migrating to a new environment where cultural differences and social norms play a major factor in determining choice of what children and family can get involved in concerning children’s physical activity participation.

Pntng8 said:

These themes show what we are doing. For example, theme 6, we set a standing rule that no chores, no watching of TV or playing with electronic devices. So, if they don’t do their chores properly, they don’t go outing and no access to electronics. There is one thing to do your chores, there is another thing to do it correctly. If I am not satisfied with their chores, I will not allow them to go for their outings.

Another parent stated, “Yes, we are able to relate well with the theme based on our
One of the participants also described that engaging in the interview as well as going through the summary of findings has been an encouragement for his family to start integrating more physical activity opportunities into their daily lives. He described how their recent family time at the park provided an opportunity for family cohesion, while confirming some of the acculturative challenges such as competing priorities for parents.

Yes, it does make a lot of sense and meaning. Because it gives me an in-depth understanding of physical activity and benefits and transitioning experience from Africa to here. Also shows the factors that influence physical activity for my children in this new environment, for example, engaging in physical activity as a family which provides benefits like bonding. We all went to a park recently and it was like a union for the whole family. But most parents are too busy in Canada but with this discussion, we had now saw the need of bonding in physical activity. We are also planning to go on a 5-km bike ride since everybody has bike now. So, mum will be in front and I will be in the back and we are planning it for this summer. (Pntng8)

Besides the parents’ verification of findings, some of the children also provided their own perspectives on how the findings were representative of the interview discussions. One of the children said:

Yes, the themes are talking about physical play which I participate in, in the school and in the environment where I live with my parents. Playing in the school as part of school or class is quite different from where I come from. The activities are interesting, and I always enjoy it. The descriptions make sense with what I’m experiencing as the result of immigrating to Canada.
Another child also confirmed the themes as a representation of their discussion by stating:

Yes, it relates to our discussion because in theme 6, the positive reinforcement applies to me because when I do my chores, I get praises and privileges. The discipline also applies to me because if I’m lazy, and I get my electronics taken away from me and I don’t get privileges anymore. This has helped me though because now I know to always do my chores.

4.9 Summary

Using a purposive sampling for recruitment, the participants were parents of at least one child of adolescent age and any of their adolescent children aged 10 to 17 years willing to be interviewed. The participants comprised of families who migrated to Canada within the last ten years. They showed good experiential knowledge of physical activity and benefits as well as some generational differences in their perceptions. There were some acculturative experiences for the families which showed their cultural transition in relation to active living opportunities. The families enjoyed engaging together in physical activity as a family and had some positive outcomes from their engagement; however, this was not a consistent practice for them. A more consistent practice was parental conditioning on children to instil principles that are associated with domestic activities and some other forms of physical activity. They showed several facilitators for their children’s physical activity including parental role-modelling, peers, and school influence. The children also showed they were inherently interested in engaging in risky play and some adventurous activities including winter activities. However, their parents allowed or restricted engagement in these activities based on safety limits. Overall, the families’
capacity to promote physical activity for their children was hindered by many challenges including Saskatchewan weather, safety concerns, financial hindrance, bullying, social rejection, and finding an acculturative balance. In addition, there were several determinants of physical activity for the West African children, and several outcomes emerged from them. This can be found in a contextualized model described in figure 3.
Figure 3 – The acculturative model of West African immigrant families for children’s active living
5.0 Chapter Five: Discussion

5.1 Contextualizing the Model

The research questions of this study sought to understand the perspectives of the West African immigrant families in Saskatchewan and assess the impact of the sociocultural environment on active living among their adolescent children aged 10 to 17 years. The acculturative model of West African immigrant families for children’s active living (Figure 3) portray an idealized representation of several determinants shaping the physical activity engagement and opportunities of the sampled West African immigrant children in Saskatchewan. Developed from the themes, subthemes, and their features, the model depicts a complex interrelationship of factors which contribute to the lifestyle changes that West African immigrant children undergo after immigration. The model captures the actions and experiences of the children and their families and expands the reach of the meanings drawn from the outcomes. Each separate section of the model is depicting a composite condensation of factors capable of connecting within its entity. Each collection of factors also has the potential of interconnecting with other sections to positively or negatively impact active opportunities and the associated consequences.

The previous chapter was focused on the description of the participants’ perspectives from their own point of view. Therefore, in grounding the model, the themes and their underlying features were synthesized through interpretive inferences that transcended descriptive representation to an intensive representation. The transitional factors provide a unique aspect to the model through its representation of the families’ perceptions on balancing their pre-migration practices with the post-migration ones. They also inform the manner in which changes in cultural perspectives may shape the healthy active lifestyles of the West African immigrant
children. The internal factors were grounded through meanings drawn from the participants’ understanding of children’s active living in combination with related outcomes that arose from other themes. The external factors were developed from the combination of sociocultural factors and parental factors. The parental factors sprung out from the combination of parental knowledge, family active engagements, parental conditionings, and parental cultural perceptions. The sociocultural factors were established through the lens of the range of interpersonal, environmental, and cultural factors that have an enabling or hindering effect on the children’s active engagements in different societal settings. Overall, the collective factors have a role to play in the children’s psychological orientation towards different intensities of physical activity integrated into their daily routines during their acculturation process.

5.2 Transitional Factors

The construct of this part of the model arose from the manner in which parents and children sought to achieve a balance between their pre- and post-migration experiences. During the process of rereading the data, I discovered that parents’ discussion always circled back to the comparison between the two experiences. This provided an acculturative perspective that portrayed the manner of lifestyle and cultural adjustment made in relation to active living.

Table 3. Features of transitional factors

<table>
<thead>
<tr>
<th>Nature of Activity Transition</th>
<th>Unstructured physical activity versus structured physical activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Mobility Transition</td>
<td>Less restricted independent time versus more restricted independent time</td>
</tr>
<tr>
<td>Neighbourhood Living Transition</td>
<td>Communal living versus private living</td>
</tr>
<tr>
<td>Cultural Adaptations</td>
<td>Finding a balance in language adjustment</td>
</tr>
<tr>
<td></td>
<td>Finding a balance in moral behaviour choices</td>
</tr>
</tbody>
</table>
5.2.1 Nature of activity transition. Many participants self-reported during the interviews that their physical activity levels had reduced since they immigrated to Canada. This has been supported by studies in Europe and US, which showed that immigrants tend to engage in unhealthy behaviours including physical inactivity, that may pose an increased risk for chronic diseases (Gadd, Sundquist, Johansson, & Wandell, 2005; Tshiswaka et al., 2018). This is also supported by the established literature on negative acculturation effect, which described that health status of immigrants may tend to decrease the longer they reside in the new host country.

Before immigration, the West African children commonly engaged in unstructured forms of physical activity. However, in Canada, the nature of activity opportunities for the children has mostly turned to structured physical activity, while the parents seem to be finding it difficult to get enough active opportunities.

Physical activity as described by the parents was an essential part of their daily living back at home in West Africa. In other words, many of their daily activities such as working, commuting, playing, and getting basic needs were physically active in nature. This context was shown in a systematic review that showed a sample of African immigrants who did not believe in intentional leisure walking for health improvement because walking and other forms of physical activity was part of their normal lives in Africa (Ngongalah et al., 2018).

An important part of unstructured activity pertaining to their pre-migration experiences was non-leisure-based activity. There is evidence to believe that non-leisure physical activity is an important part of active living which is associated with reduced risk of premature mortality especially in older adults (Lin et al., 2011). Many of the parents and children in this current study engaged in utilitarian physical activity during pre-migration, meaning the engagement in physical activity
specifically for a purpose other than leisure, and in accordance with one’s cultural practices (Hekler, Castro, Buman, & King, 2012). The type of utilitarian activity for the families in this study included work-related activities, domestic chores, and active transportation. For example, getting to desired destinations as described by the parents usually warranted a form of utilitarian walking, whether as part of the travelling distance to a transit stop, or for the full travelling distance.

In some instances, parents described utilitarian physical activity in relation to primitive practices done for the provision of basic needs of life such as food, water, and shelter. For example, the act of hoeing, digging, and land cultivating for non-mechanized farming, as well as drawing water from well for domestic uses. This is similar to the common land-based activities of Indigenous Canadians such as trapping, gathering and hunting, which can also be traced back to the origin of physical activity as part of human evolution (Paffenbarger et al., 2001). The importance of work-related physical activity was emphasized by a longitudinal study in the US, which relates reduced energy expenditure from work to increased obesity prevalence in the country (Church et al., 2011). Overall, it can be interpreted that the pre-migration experiences for the families included a lot of utilitarian physical activity essentially due to a lifestyle that is dependent on different forms of movement intensities for daily sustainability.

Seeing their children’s way of life in Canada, many parents could not help but state that they wished their children were as active as they were, while growing up as a child. Unlike the non-leisure-based participation for the parents, the children’s active opportunities during pre-migration included leisure-based unstructured as well as utilitarian physical activity. In this context, active play represents the major type of leisure-based unstructured activity that gets the children vigorously active. The
families did not show that their children engaged in a consistent structured physical activity during pre-migration whether at school or at home. However, there was a consistent reflection on the way children created their own games and fun active opportunities. This was mostly associated with leisure time and provided favourable outcomes such as creativity and self-reliance for the children. In support, Ross and Francis (2016) also reported that their studied children showed resourcefulness despite having inadequate resources.

In comparison to life for the children in Canada, their major source of vigorous physical activity was through school structured programs such as physical education and recess sessions. Children found the physical education curriculum interesting, possibly because of the difference in experience. In addition, it is uncommon for physical education back at home to involve a consistent physically engaging program throughout the academic year. Therefore, the few children who engaged in organized sports in Canada particularly described how fun and engaging it was for them. Recess session was also described as an opportunity to be physically active; however, a few of the children do not usually spend recess on physical activity pursuits. This was mostly observed for recess done indoors. For example, some children explained that their indoor recess times are spent playing different games that are sedentary in nature, and some spend the time chatting with friends. In other cases, few children described recess rules and teacher’s supervision to be restrictive in nature when it tends to prevent the ability to vigorously participate as needed. Overall, structured school programs provide important physical activity opportunities for children post-migration. In terms of residential engagement, the children sometimes got unstructured active outdoor play, but it was mostly dependent on a favourable weather.
Overall, the children transitioned from unstructured active play and utilitarian activities during pre-migration, to structured school engagements and less active play during post-migration. Meanwhile, the parents have transitioned to a low utilitarian and leisure-time active engagement. These West African immigrant children seem to be mainly engaging in regular aerobic and endurance exercises through sports and school programs; while parents may be mostly engaging in muscular and flexibility exercises through home calisthenics and occasional aerobics in free time.

5.2.2 Neighbourhood living transition. Most participants had an acculturative experience involving the transition from communal living to private living. The children favourably related communal living during pre-migration to socialization, social connections, and community trust, all of which were social practices that empowered them to be active. On the other hand, some of them described the difficulty they were having in terms of meeting people and socializing in Canada. Parents further emphasized that communal living for them was a living style that encouraged knowing one another within the community thereby building relationship and trust. Comparatively, parents said they barely know people living close to them in their residential areas in Canada. While it may be perceived that people living in apartment settings are close to each other for good networking, some of the sampled West African families highlighted that they barely know those living in the next apartment to them. For example, Pntgh3 stated, “Here we all live in apartments and we hardly see each other.” I was curious to determine whether these parents have tried to initiate relationship with their neighbours; however, upon probing the parents, they explained that these types of effort were typically unproductive for them. For example, Pntgh1 stated, “I have tried to talk to some neighbours, but their responses are not good.”
Importantly, these experiences appeared culturally shocking for the families, as they perceived a lack of trust in neighbourhood safety for their children. Back in West Africa, parents could freely allow their children outdoors without closely supervising them. This was considered a usual practice in West Africa which was possible because of the trust they had in other families living in the neighbourhood. This allowed children from the neighbourhood to come together and regularly engage in recreational activities. Therefore, the children were not left without supervision per se, but were being watched collectively by any of the parents in the neighbourhood. A common reflection, as stated by one parent was “everybody is everybody’s neighbour, and every kid is every parent’s kid.” (Pntgh1). In this communal living context, the biological parent addressed the immediate needs of the children, while the emotional developmental process of the children was greatly influenced by the community parents.

As a transitioning experience, parents explained they do not yet have the same level of trust in their Canadian neighbourhood. Supported by a study in US, immigrant children stated that their parents do not allow them to go out alone due to safety concerns and distance to parks (Ross & Francis, 2016). In this current study, similar reasons were mentioned, in addition to having no relationships with people living around them. In other cases, weather influence was highlighted as the reasons why people tend to live privately in Canada. One of the parents however revealed that the longer he stayed in the Canada, the more his trust in the society evolved.

In conclusion, the families experienced a transition from communal living to private living and this transition seem to be affecting their neighbourhood social connectedness, parental trust in the neighbourhood, and children’s ability to freely and independently play outdoors in their Canadian neighbourhoods. This has a direct
implication for physical activity opportunities, thereby reducing the children’s chances of getting physically active through recreational activities in their home environment.

5.2.3 Children’s independent mobility transition. The acculturative experience based on this part of the model involves the transition in independent outdoor playing time. During pre-migration, children had a regular unrestricted independent time, which has now restrictively reduced in Canada. These restrictions typically come from the parents due to several reasons which will be further discussed. First, it is important to establish that the children themselves described that they get less free play time post-migration. This may be a result of them getting older, as physical activity tends to decline with age. Nevertheless, the parents clarified by explaining that although their children seem to get a lot of free time here, it is their independent active playing time that has significantly reduced.

Comparatively, these children had fewer physical activity options but more active time during pre-migration, whereas, they are having more physical activity options but less time to participate during post-migration. The emerged reasons for this type of transition include weather influence, societal settings, perceived safety concerns, and parental availability. Given that most participants migrated to Canada through the economic stream of the Canadian immigration system, it is believed that these families had a middle to high SES back in Africa. This may have afforded them homes with large fenced compounds, as well as safe neighbourhoods for their children to engage in independent outdoor activities in Africa. However, they cannot continue the same practice in Canada due to the stated perceived reasons. First, besides the weather influence, parents believed they might be deemed irresponsible if their children were left to play on their own. For example, one parent stated from his
response that “this is the structure here in Canada,” while another stated that “this is what the society requires of me.” Secondly, these West African parents were concerned that their children may not be safe playing alone in the neighbourhood especially because of poor neighbourhood social connections. This factor not only affects playing time, it also affects children’s freedom to actively commute to school. From this study, it is noteworthy to mention that some children were interested in active transportation here in Canada; however, their parents were uncomfortable allowing them particularly due to perceived safety concerns. Lastly, parents believed they always needed to be present with their children during outdoor playing to ensure safety. Therefore, inasmuch as the parents were not available, the children were automatically unable to go outdoors. Thus, this section of the model showed that children’s independent outdoor playing time has reduced post-migration when compared to pre-migration experiences.

5.2.4 Cultural adaptations. Due to acculturation, the children from this study were undergoing a cultural transition involving communication adaptations and control of moral values. This cultural transition was shown as a learning process considering that most families were willing to accept some new practices while in other cases keep their heritage practices. Generally, families with a longer acculturation time mostly showed better integration for their children.

In terms of accepting new practices, the participants conceptualized language inflections as a cultural practice the parents wanted their children to adopt. The children’s ability to adopt the manner of communication in Canada has an important role to play in their physical activity engagements. A US longitudinal study has shown that language proficiency may improve vigorous physical activity participation for immigrant children particularly with group sports engagement.
(Kimbro & Kaul, 2016). It is perceived by the parents that adoption of a Canadian communication style would improve the children’s integration, thereby giving them more opportunities to get physically active in the social environment.

It would appear that the children seemed to naturally have a better language integration compared to their parents; however, the process of integration seemed challenging for some. For example, a few parents reported their children had challenges with being heard in school during their first few months after immigration. The children were not faced with challenges associated with hearing instructions but rather with being heard. Nevertheless, several parents explained that their children were adjusting well in terms of language. This is similar to the findings from a study which showed that children tend to adapt to host culture quicker than their parents (Renzaho et al., 2017). Interestingly, parents learned from the new communication practices that their children adopted. Given that the children picked language inflections faster than the parents, their parents learned particularly from questions raised by the children during the learning process. The children may also develop a sense of belonging and leadership capacity which may improve their social integration to engage in physical activity in various cultural settings.

Parents learning from their children therefore creates a shift in power dynamic, as the children feel in control of the cultural integration. Similarly, Renzaho et al. (2017) described that power dynamics tend to shift for immigrant children post-migration because they usually realize the power control they did not have prior to immigrating. Although Renzaho et al. (2017) reported that this may result in an intergenerational conflict within the family, this current study did not observe any conflict due to power control between the parents and children. Nevertheless, this current study found that the parents and children were constantly trying to find the
balance between the host cultural practice to adopt and the heritage practice to retain.

The parents emphasized moral values as a heritage practice, they want their children to retain. The moral values described include sense of respect, honour, and self-discipline which were described across range of contexts including playing sports, parent-child engagement, greeting elders, and domestic activities. Parents believed these are cultural practices which they have practiced and have kept them in good moral standing until present. Therefore, they expected their children to keep these moral values despite living in the new environment. It is important to clarify that heritage practices are unique to different immigrant families of different cultures. For example, calling older people by their names was described as a sense of disrespect in some cultures. Therefore, a younger person is culturally required to either call an older person with a prefix which symbolizes respect such as bro, sis, sir, and ma. One of the parents described her position of taking offense from her children’s friends calling her by name despite them unknowing her heritage cultural practices. This pose an important determining factor for engaging in physical activity with peers. Meanwhile, most parents described that the important thing for their children is to be respectful in their manner of communication to people whether in Africa or Canada, even if their children have friends with different cultural practices. Therefore, the level of importance given to the keeping of heritage moral values was strongly emphasized by the immigrant families. This also represents an important part of their acculturative experiences that can impact their children’s peer retainment and social integration which can in turn impact their physical activity engagements.

In conclusion, the transitional part of the model portrays the process of acculturation for the West African immigrant families relatively to physical activity opportunities for their children. The acculturative experiences were described with a
transitional perspective involving pre-migration and post-migration experiences.

There seemed to be important transitions around the nature of activity opportunities, children’s independent mobility to play outdoors, and neighbourhood living supportive of active living, all of which had a negative impact on the children’s physical activity post-migration. In addition, there seemed to be transitions around the adoption and retainment of cultural practices that particularly impact the children’s ability to make friends as well as socially integrate into the Canadian society.

5.3 Internal Factors

The early years post-migration are very crucial for the families, especially the children. Table 4 represents some internal factors that can shape their integrative experiences with active living orientation that are appropriate for their stage. Based on the model, these internal factors which could be inherent or acquired during integration are important factors in determining the physical activity participation of the West African immigrant children. These factors include knowledge, acquisition of skills, development of confidence, and motivation. These factors are further discussed below.

*Table 4 – Features of internal factors*

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Motivation</th>
<th>Confidence</th>
<th>Skills</th>
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<tbody>
<tr>
<td>Experiential knowledge of physical activity and benefits</td>
<td>Intrinsic motivation through inherent drive</td>
<td>Acquired through parental counselling and encouragement</td>
<td>Learning skills through parental engagement</td>
</tr>
<tr>
<td>Generational differences in understanding and perceived benefits</td>
<td>Intrinsic motivation triggered by anticipated fun and reward system</td>
<td></td>
<td>Learning skills for new sport experiences</td>
</tr>
<tr>
<td></td>
<td>Intrinsic motivation acquired through external motivators such as parents, peers, and school</td>
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</tr>
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</table>
5.3.1 Knowledge of physical activity and benefits. Research has shown that African immigrants have a good understanding of physical activity (Ngongalah et al., 2018; Tshiswaka, Ibe-Lamberts, Whembolua, Fapohunda, & Tull, 2018). In this study, it was also concluded that the participants had a good knowledge of physical activity and its benefits. For example, both parents and children understood that physical activity essentially involves any type of movement acquired through different daily activities. From the findings, it was noted that the understanding of the participants was shaped by their experiential knowledge. The findings did not show that the participants had a good theoretical knowledge of physical activity, as only one parent, a medical doctor, stated using the recommended physical activity guidelines for his children. This study found that generational differences exist in the perceptions of physical activity between the parents and children, and this has the potential to shape opportunities for the children. These generational differences were shown not only in the understanding of physical activity but also in the perceived benefits for the parents and children. For example, children perceive gym class to be a helpful means of getting active while most parents rarely considered going to a gym as a means that would be helpful to them. The parents supported their children’s engagement in activities at school, but they do not have any personal interest in going to a gym to get physically active. This became more apparent in the analysis when a few of the parents discussed that they do not have a gym membership while others showed no interest in going to the gym at all. This is similar to another recent study that showed that the sampled African immigrants were not interested in going to the gym (Tshiswaka et al., 2018). In addition to these differences, this study revealed that just as children benefitted from being active, their parents also benefitted through their children’s engagements. The construct of these benefits emerged from the
collective thoughts of the participants.

Evidence suggests that physical activity contributes to several dimensions of health benefits for children (Brown et al., 2013; Corbin et al., 2013; Mei et al., 2016). In a similar manner, the participants conceptualized their understanding of the perceived benefits to their children through a diverse range of benefits which include physical, social, mental, emotional, and cognitive health outcomes. Although these health outcomes are established in the literature, the participants confirmed them through their experiential knowledge. For example, some children described social health by stating that physical activity helped with meeting new people. Emotional outcomes were showed in how they described their feelings during and after physical activity. In terms of mental outcomes, participants explained how they tended not to worry about things during the act of exercising. Akin to the findings in this study, physical activity has been shown to improve mood, reduce anxiety, and alleviate depression among children (Brown et al., 2013; Martinsen, 2008). In addition, evidence has shown that physical activity has some cognitive benefits for children, with reference to short term benefits including numeracy, writing, and academic performance (Maher et al., 2016; Reed et al., 2010). A few children in this study, through their experiential knowledge, explained that they have had improved academic skills after physical activity participation.

Other benefits that were constructed for children from the analysis include better sleeping and eating habits. Interestingly, a few parents embedded a strategic and temporal dynamic by stating that they usually encourage their children to get more active play when they purposefully want them to sleep earlier. Golem et al. (2019) also found that one of the strategies parents use to overcome sleep barriers is to either enrol children in sports or encourage more active play.
Parents also benefitted from their children’s active lifestyle. Ashton-James et al. (2013) found that parents derive enjoyment and life fulfilment from their investment in children’s activity. In a similar manner, this study showed that parental benefits were centred on emotional health. More specifically, the parents experienced a feeling of delight seeing their children active and they tended to worry less about their children’s health. In conclusion, the knowledge of the children and their families has the potential of shaping the children’s lifestyle after immigration. More importantly, their understanding of the range of benefits from physical activity helps demonstrate knowledge as an internal influence for the children and their families.

5.3.2 Motivation. Children can be motivated through different means but there were two types of motivation the children revealed in this study, and these comprised of intrinsic motivation and extrinsic motivation. Studies on African immigrant adults have suggested lack of motivation as a barrier to being active (Persson, Mahmud, Hansson, & Strandberg, 2014). Due to the age group of children sampled in this study, it was observed that most of the children had self-motivation. This type of motivation was observed through the nature of children’s interest in risky play. As described in the findings, the children showed inherent interest in risky play, which resultanty reflected in their ability to motivate themselves under challenging circumstances. The parents themselves engaged in challenging activities through their own childhood development in Africa. Therefore, it can be implied that the children’s inherent interest in risky play draws a connection from their cultural background. In addition, their personal motivation was reflected through some of their audacious experiences concerning risky play, considering that some children continued taking risks despite getting injured. This study showed that most of their injury experiences were not dire to the extent of keeping them from subsequent
adventurous opportunities. Akin to the findings in this study, a systematic review reported that children have the tendency to get injured during leisure-time physical activity but most of the injuries are minor and the proportion of medically treated ones are low (Nauta, Martin-Diener, Martin, Mechelen, & Verhagen, 2015).

Meanwhile, the children also showed that they were sometimes in need of extrinsic motivation which was provided either by their family members, their friends, or the school system. This type of motivation also has a link with the type of reward system the children are exposed to at home and school and has the potential to influence their self-motivation. This part will be further discussed in the section addressing the outcomes of the external factors influencing physical activity for the immigrant children.

5.3.3 Other internal factors. The other internal factors shown by the children in this study include sports skill development and self-confidence. Noonan et al. (2016) reported that children are more motivated to perform activities they enjoy. In this current study, we found that most internal factors that enabled physical activity went in tandem with the children’s expectation of deriving fun from the experience.

From a life course perspective, skill development and perceived competence at a younger age as well as through adolescence may enable children to stay physically active for lifelong health (Hearst, Patnode, Sirard, Farbakhsh, & Lytle, 2012). It was found in this present study that children acquired these internal factors through various means which mostly resulted from the outcomes of their engagements such as risky play, family engagements, and school instructional engagements. For example, parents showed skills to their children during family active engagements. Also, whenever the children engaged in risky play, they learnt from the experience and got better at subsequent attempts. Evidence has shown that
engaging in risky play enables children to develop personal abilities such as self-reliance and confidence (Little & Wyver, 2008; Sandseter & Kennair, 2011). This current study contributed empirically to this finding by showing that the children acquired sport skills and confidence through a learning process. The development of confidence and motivation can be further linked to their mental and emotional capacity through resilience build up, which has been associated with children’s ability to overcome anxiety, alleviate frustration, and maintain positive feelings (Sandseter & Kennair, 2011).

More closely connected to the development of the internal factors is the impact of family engagement. This was informed by the role of parental engagement in the development of physical literacy for these immigrant children. Physical literacy has been defined as “the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life.” (IPLA, 2017) Given that many of the children showed the development of these internal factors through parental support, the role of family active time may have a close connection with physical literacy for the children. Furthermore, independent play also provided outcomes that inform the development of internal factors important for physical literacy. For example, as it was highlighted in the findings, one of the children (Chdgh4) described how physical education provided sportsmanship skills for him, while sports skills were mainly developed during the recess practice opportunities. As a competitive young athlete, when recess was unstructured, without strict supervision, and allowed independent exploration, it proved an important time for him to work on personal development of sports skills.

**5.4 External Factors**

This section explains the different ways by which the children’s physical
activity is impacted by external influences including their social support and the environment. The interplay between external and internal factors are also described in this section. The external factors are further subdivided into two broad categories which are parental factors and sociocultural factors.

5.4.1 Parental factors. There are some parental practices associated with active opportunities for their children. The two major practices that emerged from this study are parental active engagement with children and parental conditioning on domestic and other activities. The relationship of these factors with the different intensity of children’s physical activity are further discussed.

Table 5. Features of parental factors

| Parental engagement | Parent-child engagement | Moderate to vigorous activity participation
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Outcomes</td>
<td>Created fun environment, emotional closeness, sense of belonging, opportunity to speak freely, discovery of troubling situations, learning skills, developing competence and confidence</td>
<td></td>
</tr>
<tr>
<td>Parental conditioning</td>
<td>Positive reinforcement using reward system</td>
<td>Rewarding the completion of light intensity domestic activities with more outdoor time</td>
</tr>
<tr>
<td></td>
<td>Rewarding good morals and academic commitment with more outdoor time</td>
<td></td>
</tr>
<tr>
<td>Negative reinforcement by discipline system</td>
<td>Reducing or depriving screen time hobby</td>
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<tr>
<td>Outcomes</td>
<td>Internalizing principles, taking responsibilities, self-discipline, and developing leadership skills</td>
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5.4.1.1 Parent-child engagement. This concept was constructed to capture the importance of engaging in physical activity together as a family as well as the different outcomes for the parents and children. Parent-child engagement provided MVPA opportunities for the children in this study. Evidence has suggested that parental support and encouragement tend to improve children’s physical activity and self-efficacy across all age groups (Gustafson & Rhodes, 2006; Xu, Wen, & Rissel,
Meanwhile, studies have reported inconsistent relationship between parental physical activity and child physical activity (Gustafson & Rhodes, 2006; Trost & Loprinzi, 2011; Yao & Rhodes, 2015). This current study provides an understanding that transcends parental encouragement to direct physical activity engagement with their children as a family.

Although the participants did not state that they engage in a consistent parent-child engagement, they all showed the importance of these times for them through the outcomes derived from their experiences. This study found that both the parents and children benefitted in the form of family cohesion, thus creating emotional closeness within the family. Similarly, other studies have shown family cohesion as a beneficial outcome of parent-child active engagement (Morgan et al., 2015; Trost & Loprinzi, 2011). Morgan et al. (2015) reported in a dad and daughter intervention study that family engagement had a positive impact on the physical and emotional health of the sampled girls. The findings of this study also indicated that family cohesion helped the children acquire a sense of belonging in the family.

Not surprisingly, parent-child engagement led to a created fun environment for the children. However, some other important outcomes emerged from the excitement and these include freedom of communication. Research on family-based physical activity intervention have shown that family engagement increased parent-child communication (Thompson et al., 2010). In similar vein, this current study revealed that the children were able to freely communicate and express themselves during their family playtime. Consequently, the freedom of communication coupled with a created fun environment, enabled the parents to discover new things about their children. In fact, these were discoveries of emotional situations that may not have been discovered earlier under normal circumstances, without engaging in
physical activity together.

For the parents, they took the opportunity of family engagement to teach and supervise their children. The parents used these times to teach skills, sportsmanship, and life principles, particularly respect during play. Similarly, Lumpkin (2008) discussed in the context of adolescent sports that it is the responsibility of the parents, teachers, and coaches to teach character and moral virtues in sports. Lumpkin also reinforced that character building is not always an automatic outcome in adolescent sports unless efforts are directed towards it. In this current study, the parents understood that there’s the possibility of children talking disrespectfully while being overwhelmed by the created fun environment. Therefore, they ensured their children kept their sense of respect and self-discipline during play. This further emphasized the importance of respect as a cultural and heritage practice that the families ensured their children retained. On one hand, the parents taught and supervised the children through physical engagement and counselling. On the other hand, the children learnt important cultural principles, acquired sport skills, and developed self-confidence to engage in physical activity. The participants hereby demonstrate the children’s development of internal factors through the external influence of parental engagement.

5.4.1.2 Parental conditioning. This was another parenting practice observed from all the families in this study. Parental conditioning was mainly discussed in the context of domestic activities but there were discussions that extended to conditioning to reinforce moral behaviours. Based on the movement continuum, domestic activities are classified as light intensity physical activities (Chaput et al., 2014a). All the families in this current study showed that their children engaged in domestic activities as a cultural practice constructed through the establishment of
home principles. In the process of instilling these principles, the parents utilized two types of reinforcement namely positive reinforcement and negative reinforcement.

Central to the positive reinforcement was the use of a reward system applied in compliance to specific activities assigned. The different types of rewards described by the participants included monetary reward, praises, and more outdoor time. Interestingly, as parents rewarded completion of chores with more outdoor playing time, they tended to promote light physical activity using MVPA as reward. This was mostly observed among male children interested in active outdoor play. The only female child that experienced this type of reinforcement was enrolled in competitive sports. On one hand, domestic activities were being reinforced; on the other hand, non-physical activity related behaviours were also being reinforced. In these two situations, physical activity through outdoor playing time was used as a reinforcer. Therefore, active outdoor play was promoted indirectly whenever children adhered to the reinforced domestic activities as well as moral behaviours such as academic commitment. The story of the 14-year-old athlete whose parent conditioned using academic standings showed that the parent’s expectations involved grooming a well-rounded individual who has another career option in case any unforeseen circumstances that may hinder sport participation occur in future. Akin to the findings in this study, Lumpkin (2008) revealed that it is important for young athletes to avoid exclusion from other aspects of life. In terms of the negative reinforcement, the major factor used for discipline was screen time. As was earlier described, several children claimed recreational screen time as one of their hobbies. Therefore, this was leveraged by the parents as an element of discipline to establish a home principle around domestic activities. This type of parenting has been reported as authoritarian parenting among African immigrants in a multi-ethnic Australian study which
showed that parents focused on discipline to set family rules for the sampled youth (Renzaho, Dhingra, & Georgeou, 2017).

Parents believed that these principles were set to help their children’s healthy development. More specifically, it was explained as a way of helping their psychological development, giving them a sense of autonomy, and preparing them for life encounters as they grow up. Studies have shown that children may refuse to accept parental disciplines due to intergenerational acculturation gap (Renzaho et al., 2017). Interestingly, the finding of this current study was contrary in this context, as the children showed internalization of the principles set by the parents. As the parents described that their children seemed to eventually have the awareness to perform these domestic activities, the children also agreed to the principle regarding completion of chores before leisure. Hence, internalization can be viewed as an internal factor developed from parental conditioning principles. Moreover, the process of internalization led to the discovery of the potential to develop leadership skills. This was dependent on the uniqueness of expectations set by each family, given that leadership through internalization was only observed in one family where the parents trained their children to develop chore rosters for the entire family. From a life course perspective, children’s internalization around domestic activity may provide a lifelong active living benefit rather than a short-term benefit, as these values may be held by the children over the course of life. Given that researchers have shown low-intensity activities like household chores in association with reduced risk of adult obesity (Banks, Lim, Seubsman, Bain, & Sleigh, 2011), principles on domestic activity at childhood could have implications for lifelong health.

5.4.2 Sociocultural factors. The sociocultural factors determining physical activity participation for the children are divided into two subcategories which
include the facilitators of physical activity for the West African children, and the barriers facing the children and their families. These factors also portray the characteristics that the children show towards active opportunities within the society. The different features of each subcategory enabled the grounding of the relationship with active living.

*Table 6. Features of sociocultural factors*

<table>
<thead>
<tr>
<th><strong>Barriers</strong></th>
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<tr>
<td>Physical environment</td>
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<tr>
<td>Weather and lack of neighbourhood space</td>
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<tr>
<td>Social environmental challenges</td>
</tr>
<tr>
<td>Feeling unsafe going outdoors, experiencing rejection, experiencing bullying, experiencing discrimination, perceived sociocultural norms, and parental concerns about legal implications of letting children play outside</td>
</tr>
<tr>
<td>Financial constraints</td>
</tr>
<tr>
<td>Cost of programs, lack of resources, and lack of subsidized programs</td>
</tr>
<tr>
<td>Competing priorities for parents</td>
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<tr>
<td>Lack of time due to parent’s busy schedule, career transition, academics, and employment conditions</td>
</tr>
<tr>
<td>Other barriers</td>
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<tr>
<td>Increased screen time, lack of awareness of services and resources available, low confidence in ability to interact with others, and lack of motivation</td>
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<table>
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<tr>
<th><strong>Outcomes</strong></th>
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<tr>
<td>Acceptance of social norms, mental toughness, resilience, and strive for excellence</td>
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<tr>
<th><strong>Facilitators</strong></th>
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<tr>
<td>Enabling environment</td>
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<tr>
<td>Access to parks, trails, walkways, and other facilities</td>
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<tr>
<td>Parental role-modelling</td>
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<tr>
<td>External influence complementing intrinsic motivation</td>
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<tr>
<td>Peer-group motivation</td>
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<tr>
<td>Active travelling</td>
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<td>School influence</td>
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<tr>
<td>Easy access to friends during recess, and excitement for new physical education experience</td>
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<tr>
<th><strong>Outcomes</strong></th>
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<tr>
<td>Having fun, improving self-confidence and intrinsic motivation, and expecting health benefits</td>
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5.4.2.1 *Barriers.* These were mostly physical activity barriers that were non-existent prior to immigration, experienced during the acculturation process, and impacting the here and now as it pertains to the children’s lifestyles. The challenges
which are further discussed include physical environmental challenges, social environmental challenges, financial constraints, competing priorities for parents, and increased screen time for children.

5.4.2.1.1 Physical environment. Weather was a major environmental challenge that families had to deal with. Weather was constantly linked to reduced outdoor playing time. Although some children were willing to spend some time outdoors during the colder weather, the parents restricted them due to health concerns. The children had this interest because they were not used to playing in winter, and they perceived snow activities to be fun. Similar to the findings in this study, a qualitative study on Brazilian immigrants reported pre-schoolers showing interest in snow activities (Lindsay, Arruda, De Andrade, Machado, & Greaney, 2019). The study further emphasized that parents prevented outdoor time for these pre-schoolers due to safety and weather-related concerns. Therefore, there is the possibility of enhancing the children’s interest in snow-related activities, despite weather being an environmental barrier. In addition, parental understanding of safe ways to be active in cold weathers and provision of resources like snow boots and coats, could help alleviate the parents’ safety and health concerns.

Besides weather, the home environment was another challenging factor. There is enough evidence linking built environment with physical activity opportunities. With the built environment covering a wide spectrum of places where people spend their everyday lives, the home environment still represents an important part that impacts active opportunities for immigrants. Ross and Francis (2016) reported through a qualitative study that lack of space to be active was a challenge for immigrant children. Akin to this, lack of space emerged from this current study as a challenge for the West African immigrant children as well. Most families lived in
either apartments or town homes; meanwhile, their community organization in West Africa provided a large space in between homes for neighbourhood activities. Therefore, living in a clustered designed neighbourhood was not what these families were used to, and many highlighted this as a challenge they must consistently deal with until they can afford to move to a spatially preferred neighbourhood.

5.4.2.1.2 Social environment. The impact of the built environment on health behavioural choices has been evidently supported however the social environmental aspect seems understudied, particularly among immigrants. The findings from this study provide an empirical evidence around several social environmental barriers including parental concerns on safety as well as perceived sociocultural norms. The coping strategies applied in dealing with these challenges were also found in this study.

The first challenging factor stated by most parents was perceived neighbourhood safety. Studies have shown that safety concerns have an impact on parental decisions and children’s restrictions particularly among immigrants (D’Haese et al., 2015; Lindsay et al., 2019). In this current study, it was found that neighbourhood safety affected parental attitudes and perceptions toward children’s independent outdoor playing time. More specifically, car traffic in and out of the residential area, and lack of trust in people living in the area were the reasons for concerns. The lack of trust can also be linked to their transitioning into a private living, which the families perceive as the common living style in Canada. Their concerns with trust may be influenced by their lack of social connectedness in the neighbourhood. Essentially, the few parents who did not have major concerns with neighbourhood safety had stayed more than five years in Canada and had undergone an evolving trust in their neighbourhoods.
Bullying was another factor that affected children’s active opportunities. Bullying affected children both at school as well as the neighbourhood. At school, interest in recess activities and physical education was affected while in the neighbourhood, self-confidence to independently get outdoors was affected. This showed a psychological impact particularly in the form of anxiety and fear which could potentially affect the children’s self-esteem and life satisfaction. A US study provided a similar result among sixth graders who felt reluctant to participate in physical education due to bullying, and they were also afraid of reporting to the teacher in authority (O’Connor & Graber, 2014). Children who participated in this study, felt reluctant telling their parents who might otherwise be perceived as a closer support system compared to teachers, thus, showing the burden of bullying on the children. Hence, the children’s self-confidence as an internal factor, is affected by the external influence of bullying.

Bullying not only affects children of visible minority, it also affects children of other ethnicities. Evidence from a meta-analysis has shown that ethnicity is not yet an independent factor accounting for group differences in bullying (Vitoroulis & Vailancourt, 2018). This current study also did not find the children’s experience of bullying to be a result of their immigration status or ethnicity. Meanwhile, the parents believed bullying is a normal experience, and this may have affected children’s willingness to talk to their parents about it. Considering bullying is a social challenge which mainly gets resolved through an intervention, there’s a possibility the children dealt with bullying for an extended period. O’Connor and Graber (2014) also found in their study that parents educated their children around bullying being a normal experience that they needed to show personal toughness in dealing with.

Comparatively, it was revealed in this current study that the children, during pre-
migration in West Africa, dealt with bullying themselves and consequently developed mental toughness in the process. O’Connor and Graber (2014) also showed that some parents would discipline their children for not defending themselves against the bully. This may partly explain the reason the children from this current study were reluctant to tell their parents. For example, one of the parents mentioned that her child would not tell her because of concerns that she will be disgraced by her. Other parents whose children experienced bullying counselled their children that bullying is inevitable, and they should learn to deal with it in case of any subsequent occurrences. This may contribute to the understanding of how authoritarian parenting style may be related to the West African families.

The meanings drawn from the bullying experiences should be carefully interpreted, as the ability to defend against bullying through self-confidence was related to pre-migration. During post-migration, most of the children that experienced bullying, only overcame this challenge either when their parents intervened through counselling, or friends through confrontational measures, or teachers through separation measures during physical education and recess.

Looking at another societal challenge, some families reported experiencing social rejection particularly in the neighbourhood setting. Few children who sought to play with other children in their neighbourhood experienced rejection. In similar manner, some parents also reported how their children in the act of seeking play time with neighbourhood peers, were either denied participation or left alone to continue playing as the other children went indoors. This may pose a major psychological and motivational challenge for the children to be active. However, most of the children who had this experience did not show a responsive attitude that connoted a resultant low self-esteem, which may be credited to the children’s self-toughness or perceived
understanding of the experience. For example, the 14-year-old boy took a consolation in the notion that he was more skilful than them and would therefore not be concerned if not allowed to join the play. This explains an interplay between external and internal factors. The children, perhaps unintentionally, have to react to the experience of rejection by showing mental toughness and resilience.

Another societal challenge discovered from few families was overgeneralization based on perceived race. Overgeneralization in this context was particularly related to people attributing competence in sports or skill-related fitness to their perceived race. For example, one 14-year-old girl described what she normally hears at school as, “you are only good at sports because you are black.” (Chdng4). Interestingly, overgeneralization, just as bullying, was also accepted as a sociocultural norm by the participants who experienced it. Parents believed it is a common societal experience that cannot be prevented from happening. As a coping strategy, parents counselled their children to overcome the challenge by striving for excellence in whatever event they engage in including sports participation. This was the most effective coping strategy discussed by the families. This can be interpreted as children needing to remodify themselves by attempting to either resist or overcome what the society portrayed them to be. This resulted in the internalization of this belief by the children who explained that they needed to work hard to improve skills as well as strive for excellence in order to avoid the negative effect of overgeneralization on their attitudes toward sports.

The impact of sociolegal policies on parents’ perceptions was another social environmental barrier that emerged from this study. Parental concerns for child welfare policies affected the level of children’s independent mobility allowed by parents. For example, few parents were concerned about having a social service case,
if their children encountered injuries or went missing due to independent outdoor mobility. In some cases, the parents believed they may be stigmatized by the society as irresponsible if their children were left to play outdoors independently. On reflection, parental concerns on the legal system as well as the penalties associated with child neglect was showed as a major hindrance to children’s active outdoor play. Parents therefore thought of themselves as being careless if they left their children outdoors unsupervised. However, this was a different experience to their normal lifestyle in West Africa where they had a communal living and their children could independently play on their own in the neighbourhood. Therefore, the parents had to adjust to this perceived sociocultural norm of needing to stay with their children outdoors, especially due to concerns with the legal system and policies. In this context, parental concerns were majorly directed toward keeping both the children and them safe. Meanwhile, this was due to nervousness about legal implications of letting their children play outdoors and consequently resulted in a reduced outdoor physical activity for their children at home.

Overall, there are several social norms that affected the children’s opportunities to be active. These include children’s experience of bullying, social rejection, and overgeneralization based on perceived race, as well as parental concerns for neighbourhood safety and social service policies. These perceived sociocultural norms have a close link with children’s independent mobility outdoors. The families accepted the social environmental challenges as societal issues that cannot be prevented but can be controlled through personal motivation, toughness, and strive for excellence.

5.4.2.1.3 Competing priorities for parents. For the children to have a consistent physical activity participation either through sports or active outdoor play,
there is the need for parental support, engagement, or supervision. This posed a challenge for them due to other important activities competing for parental time commitment. Studies have shown competing parental priorities as a barrier to sports enrolment among immigrant children (Lindsay et al., 2019; Ross & Francis, 2016). Many immigrant parents who participated in this study showed a lack of time to support or engage with their children’s physical activity due to their busy schedule. The lack of time for these immigrant families is particularly due to resettlement challenges associated with career transition, education, and employment conditions. Most interviewed parents were not able to practise in their professional field of interest after migrating to Canada (Table 1). Most immigrants tended to work in Canada below their already attained academic level. This forced some immigrant parents to undergo a career transition during their first few years after immigration, which may require further education and academic commitments. Consequently, children’s physical activity became a lower priority in comparison to other commitments for the West African families. For example, few parents reported that they had to combine academics with extended working hours, and these affected their family schedule which in turn affected their children’s physical activity engagements.

5.4.2.1.4 Financial constraints. Due to the economic challenges that recent immigrants face during their early years post-migration, many families were unable to provide sustainable financial support for their children’s interest in sports programs. In this study, parents showed that lack of subsidized programs and high cost of programs were challenges to children’s physical activity. This means that many of the immigrant children were not enrolled in after-school programs and mostly spend their after-school time indoors on sedentary pursuits. While the possibility of funding for immigrant children may exist in Saskatchewan, none of
these families showed awareness of programs that are directed toward equality of access to sports and physical activity for children.

5.4.2.1.5 Screen time as a hobby. Studies have shown that screen-based sedentary behaviour has a negative impact on the physical, social, and mental health of children (Chaput et al., 2014b; Hamer et al., 2009; Tremblay et al., 2011). This study found that children considered screen-based play primarily before active play. Contrary to their pre-migration experiences, most of the immigrant children now have easy access to screen devices. A number of the boys described playing videogames as their hobbies while several girls described watching TV shows, listening to music, and playing on their screens as hobbies. Therefore, screen time was shown to compete for the children’s leisure time. Before immigration, most children spend their leisure time outdoors. This may have been conditionally due to lack of electricity or perhaps the availability of outdoor activities with friends in a communal living setting. However, due to acculturation after immigration, screen-based activities were considered first before physically engaging activities whenever the children had some free play time. With many of the recent immigrants spending a lot of their after-school period indoors, screen-based sedentary behaviour posed a significant physical activity challenge, as it seemed to encourage more indoor time for the children.

5.4.2.2 Facilitators. Several factors emerged from this study as facilitators of children’s physical activity. These factors include the enabling environment, parental role-modelling, school influence, and peer influence. The observed interrelations within these factors are also described in the discussions below.

5.4.2.2.1 Enabling environment. The built environment comprises of land use, urban design, and other infrastructures that combine with human activity within the
physical environment where we live, work, and play (Handy et al., 2002). Physical activity indicators such as active play and active commuting, as well as interventions directed toward improving active living, are significantly impacted by the environmental features in the society. Attributes of active transportation such as walking, cycling, and use of public transit depend largely on the way the physical environment is set up. The findings from this study revealed that some parents favourably utilized some environmental features that worked for their families. The built environment was favourably linked mostly with parks for families in the highly populated cities. Few families who lived in the less populated areas such as towns also favourably linked built environment with active transportation, more space, and independent outdoor mobility for their children. This showed the importance of enabling environment on children’s overall daily activity. Although most interviewed families lived in the cities, a high number of them described how environmental features such as parks and walkways at close proximity has encouraged them to be physically active.

Despite establishing lack of space in the neighbourhood as a challenge, the few families that lived in a town or a less populated city considered their environment to be adequately spaced for different activities. This is partly due to the natural environment including the green spaces around their neighbourhood. Similarly, Janssen and Rosu (2015) reported that residential areas designed with natural green spaces show a favourable relationship with physical activity outcomes such as active play and active transportation among children. This current study found active transportation as an important mediator in the interrelation between the environment and school, through access to safe routes to school.

5.4.2.2.2 Parental role-modelling. The parents believed that when they were
active, their children modelled their behaviours. This involved an intentional
dynamic, through which parents deliberately perform specific activities with the
understanding of its impact on their children. This finding is similar to the data
reported in a multi-ethnic study in England which showed how some of the sampled
parents considered it a necessity to be active with their children (Trigwell et al.,
2015). From the children’s perspective, they derived fun and motivation with the
confidence to perform the activities independently. The type of motivation derived by
the children is intrinsic considering that they developed the drive to be involved
through their parents’ activities. They tended to internalize this motivation overtime
as they acquired personal drive to conduct those specific activities on their own.
Therefore, parental engagement and encouragement complements their intrinsic
motivation.

Given that the internalization of certain behaviours could backfire if not
carefully handled, this study did not find any negative modelling with physical
activity. Children’s internalization mainly led to independently performing the
activities in their parents’ absence. In some cases, parental role-modelling was taken
by the children as an opportunity for competition whereby the children acquire a
competitive drive to show they are better than their parents. In this case, the
children’s interest in winning may be seen as an external reward that motivates the
children, hence, a form of extrinsic motivation involving parental engagement.
Clearly, parental modelling alone does not ensure consistent daily opportunities for
children without parental support for other activities such as sports and outdoor
playing. Nevertheless, the types of activities generally described in this study
regarding role-modelling were not necessarily conventional in nature but ranged
across different forms of home activities including dancing and chores.
5.4.2.2.3 **Peer influence.** Not surprisingly, peer group motivation was widely described by the children. This study found that their explorative and creative abilities were partly dependent on having their friends with them. As a non-family influential factor, peer groups have been shown as an important predictor of children’s physical activity (Kirby, Levin, & Inchley, 2011). With competing parental priorities highlighted as one of the challenges in this current study, peer influence proved to be an important facilitator for the children. Peer group was shown in this study as an enabler for active transportation to and from school. For example, one 10-year-old girl described having friends living close-by as an enabler for walking to school. Her parent had safety concerns with her actively commuting on her own, despite the school being located within a 5-minute walking distance. Inferentially, peer group active travelling showed the potential of alleviating parental safety concerns thereby providing more opportunities for increased total daily activity for the children.

5.4.2.2.4 **School influence.** Given that the children showed the need of external motivation at times, the school act as a direct facilitator for them through supportive curriculum and policies. The school was shown as an important mediator in the interrelation between environment and peer influence. In other words, the children were motivated at school due to an enabling environment that provided easy access to their friends. Physical education and recess were considered the most important opportunities for the children at school. Bengoechea et al. (2010) showed that children enjoy school environment partly due to the physical education curriculum. The children in this present study, who have been accustomed to different physical education learning from their heritage countries, now seemed to embrace the new physical education curriculum. Odunaiya et al. (2010) suggested in
a Nigerian study that there is need for better integration of physical education into the curriculum at the secondary school level. Given that most schools from the participants’ heritage countries do not have regular physical education, the schools in Canada provided structured physical activity that proved interesting and exciting for the children.

Overall, the findings showed that the school environment was the predominant setting through which the children got consistent physical activity since their after-school period was mostly spent indoors. Meanwhile, studies have shown that curricular physical activity alone is not enough for children to achieve the necessary health benefits, hence, the need for other means of active opportunities throughout the day (Davison et al., 2007; Faulkner et al., 2009). Therefore, the sampled West African children in this study have shown the need for more active opportunities for optimal health.

In conclusion, the Acculturative Model proposes that internal, external, and transitional factors are the major factors impacting the immigrant children’s active living. The transitional factors provide a unique perspective that demonstrates the need for balance between pre-migration experiences and post-migration opportunities. Some internal factors such as confidence and resilience emerged as outcomes of the external influences, while other factors such as knowledge of benefits may provide internal drive for the children. In addition, external factors such as parental engagement and conditioning, support system, and sociocultural barriers are important determinants of the children’s active living. Inferentially, reducing the negative influence of some external factors such as discrimination, coupled with transitional settings that promote unstructured activity and neighbourhood trust, could prove supportive toward increased active living for the children. However, the extent
to which each determining factor on the model is effective for increased active opportunities, is beyond the scope of this study. As the children may develop mental toughness from an unfavourable external influence, their confidence and motivation to be active could also be negatively affected.

5.5 The Acculturative Model and Other Theories on Physical Activity

5.5.1 Self-determination theory. This is a theory that involves the impact of psychosocial factors in an intrapersonal level. Self-determination theory describes the role of intrinsic and extrinsic factors in human motivation around cognitive and social development (Buchan et al., 2012; Deci & Ryan, 2000). This theory addresses the manner in which an individual develops motivation for a health-related behaviour and keeps the behaviour over time (Buchan et al., 2012). The theory proposes that individuals are naturally active, inquisitive, and self-motivated to succeed (Buchan et al., 2012). This is similar to what was found in this current study. Many participants showed their understanding of the benefits of physical activity which in turn impacts their perceptions of physical activity. For example, children believed physical activity produces fitness benefits such as building muscles and were more likely to have acquired self-motivation to engage in physical activity for these benefits. Importantly, the children were also inherently interested in taking risks during physical activity. For example, Chdv1a asserted that she enjoyed engaging in risky play because she liked the curiosity of finding out whether the activity was fun or scary. Chdng8 also believed that taking risks during physical activity unearths different possibilities.

The theory also accounts for differences in the interaction of individual’s self-motivated nature within the social context that either support or forestall that nature (Deci & Ryan, 2000). In other words, it proposes that the use of external factors such as rewards or praises for encouragement, may produce an outcome that is naturally
influenced by an individual’s self-motivation. This was supported by this study firstly because the children were sometimes in need of some form of external motivation to engage in physical activity. Secondly, this study showed that parents used a reward system of more outdoor playtime, praises, or money to encourage their children to perform light domestic activity at home.

Central to self-determination theory is the understanding that inherent psychological needs for competence, autonomy, and relatedness are required for motivation (Deci & Ryan, 2000). In this context, any social environment that negatively affects these psychological needs would forestall optimal levels of motivation needed. This study also had a similar point of view. Although children showed autonomy and motivation as outcomes from parent-child engagement, their level of confidence to engage in active outdoor play was dependent on the availability of their social support system. This study emphasized the impact of parents and peers as external motivating factors for the children. For example, Chdng4 specifically suggested that having a friend with similar interest would motivate her to be regularly active. She further advocated that having an electronic reward system whereby tracking of daily activities was financially compensated was an approach that could prove motivational for her. Despite the impact of the parents as an external factor, the children displayed internalization of principles designed by parents to motivate them around physical activity. Therefore, this study postulates that the extrinsic motivation provided by the parental rewards has the potential to trigger an intrinsic motivation that is sustainable for the children over time. Furthermore, when the coping strategies for the identified sociocultural barriers become weakened, their motivation and sense of internalization could also be affected. Clearly, the parents in this study created principles that could be fully
integrated into the children’s lives for future purposes. Due to the duration of this study, internalization was shown by the children, while ingraining of the principles was not determined. Hence, the purpose of the study is addressed in terms of the perspectives related to setting of principles by parents and internalization of the principles by the children. A longitudinal approach to this study context would therefore create a better understanding of the degree to which internalization of these principles is sustainable.

5.5.2 Transtheoretical model of change. The transtheoretical model also addresses interventions at the intrapersonal level. The model describes that before an individual can engage in a successful behavioural change process, certain stages of change represented in a cyclical process must be passed (Buchan et al., 2012). These stages include precontemplation, contemplation, preparation, action, and maintenance. The Acculturative Model derived from this study does not necessarily support this model; although shared similarity through the interrelationship of the factors. This connotes that factors interact in a multidirectional manner to either improve or reduce their chances of physical activity engagements during their acculturation process. The transtheoretical model is characterized by different psychosocial factors influencing behaviour change at different stages. Meanwhile, Buchan et al. (2012) explain that interventions focused only on individuals may be underestimating the complexity of physical activity behaviour. Therefore, the Acculturative Model transcends the individual focus to provide an expanded perspective that captures the impact of social, cultural, and environmental factors on the immigrant children’s lifestyle, thereby addressing the purpose of the study.

5.5.3 Social cognitive theory. This is another theory that advocates the use of psychosocial principles for interventions concerning health behavioural change.
Social cognitive theory asserts that personal factors and environmental factors interact reciprocally to influence behaviour (Joseph, Daniel, Thind, Benitez, & Pekmezi, 2016). It posits that any change in an individual’s perceived behaviour capacity or the environment produces a change in the behaviour. This was supported by this current study, given that the nature of activity engagement for the children changed after migrating to a new environment. In addition, this study found that the children’s ability to develop internal factors for psychosocial adaptability was dependent on their environmental factors such as the social support system. Commonly identified constructs of social cognitive theory include behavioural capability, modelling, anticipated outcome, self-discipline, and reinforcements (Joseph et al., 2016). These also were supported by the findings of this study particularly through the relationship shown across different factors. For example, parental use of positive and negative reinforcements with domestic activities was constructed in relation to expected outcomes around children’s self-acceptance of responsibilities. Parental modelling was also an important concept in the study which also yielded children’s innate capacity to personally engage in the activities in context. This study also postulates that the children’s exposure to unstructured physical activity in a pre-migration environment may have a relationship with their innate interest in risky play and the associated personal outcomes.

5.5.4 Socio-ecological model. Many theoretical models on behaviour change focus on psychosocial factors such as self-efficacy and self-control; however, only a few take the approach that considers an ecological perspective (Buchan, Ollis, Thomas, & Baker, 2012). One such model that has been commonly used by behavioural science researchers is the socio-ecological model. The socio-ecological model is a framework that is used to explain behaviour change under multiple
determining factors which include intrapersonal, interpersonal, organizational, community, and policy factors (Buchan et al., 2012).

Given that acculturation is strongly determined by adaptations across different environmental spectrum, the Acculturative Model shares similarity with the socio-ecological model in numerous ways. The complex interrelation of factors was supported by the Acculturative Model. The socio-ecological model showed that the intrapersonal factors can be subdivided into psychological factors and demographic factors. This current study also supported this notion by highlighting series of internal factors with psychological implications for the children such as experiential knowledge, self-confidence, and motivation. In relation to the demographic factors, this study found that financial capacity, which is an important part of socioeconomic status, has an important role to play in deciding whether families enrol their children in organized sports. Similar to the socio-ecological model, the Acculturative Model featured several sociocultural factors shaping active living for the children including interpersonal networks such as parents and peers, organizational factors such as schools, and community factors such as built environment, weather, and perceived discrimination and sociocultural norms. While the socio-ecological model has policy factors as a separate category, the participants in this study also described factors related to child welfare policies and school curriculum policies. This was also featured under the sociocultural aspect of the Acculturative Model. As Buchan et al. (2012) affirmed that the multiple factors of ecological models should be considered for health promotion interventions, this study expanded the policy reach of the Acculturative Model through recommendations that are discussed in the implications.

5.5.5 Exercise self-schema theory. Self-schema connotes that an individual’s self-rated experiences lends a foundational understanding for future judgements.
(Sheeran & Orbell, 2000). In other words, one’s history of physical activity participation has a role to play in the perceived ability concerning future activities in context. This was supported by the findings from this study. For example, parents who were active during their childhood narrated past active experiences to their children with the belief that they could teach their children necessary sports skills in context. This study also showed that experiential knowledge was central to the participants’ understanding of physical activity. Many participants showed an understanding of physical activity due to their previous experiences of physical activity engagements. The concept of self-schema (i.e., the impact of self-rated experiences), was also extended by this current study. This current study posits that the self-rated experiences of parents could create inspiration and motivation for their children. For example, Chdgh4 discussed how his parent’s anecdotes of an active childhood always challenged him to have a better achievement than his parents, thereby developing his competence in sports.

5.6 Strengths and Limitations of the Study

This study demonstrates the importance of considering children’s point of view when conducting a research that involves children. This study also provides depth of knowledge regarding the lifestyle of immigrants living in urban areas of Saskatchewan. The uniqueness and strength of this study further lies in the construction of a model showing several determining factors of active living for the African immigrant children transitioning to a new lifestyle in Saskatchewan with their families.

However, the large amount of data, which may have provided richness, resulted in a strenuous and time-consuming coding process, leaving a caveat of some part of the data being uncaptured in the findings. The focus of this study was on the
children’s physical activity engagements and not that of the parents. Although the parents’ perspectives were captured, their physical activity engagement was not the focus of this research. Therefore, this study may not depict an idealized representation of active living for the West African parents, but mainly their perceptions on their children’s physical activity. I was not able to cover all the West African countries during the recruitment process, and it is possible that their perspectives could have added more richness to the derived findings. The families interviewed did not span across the different regions in Saskatchewan. Most families interviewed lived in the urban and highly populated areas of Saskatchewan, and there was a little representation of the perspectives of families in rural areas. The age group of children that participated was 10 to 14 years, which was younger than the intended criteria of including children up to 17 years. Majority of the parents that participated were fathers, and this may have impacted the findings of the study. All the families were traditional nuclear families, resulting in a selection bias possibly because of the snowballing recruitment technique. Hence, the perspectives of other family categories such as single parent households and single child households were not captured. The presence of the parents in the room during the interviews could also have resulted in a social desirability bias, as the children could have limited the information they provided. Several interviewed families lived in Saskatchewan for less than a year, and it is possible that their responses was reflective of a challenging resettlement phase. I did not include families who were predominant French-speakers, which meant that cultural perspectives such as language transition for this group may have been uncovered. None of the families that agreed to participate had a refugee status. Finally, the parents shared that their expectations for this research is to produce a positive change on the challenges faced with immigrant families; therefore,
their interview responses may have been directed towards an anticipated change.
6.0 Chapter Six: Recommendations and Conclusion

6.1 Recommendations for Health Promotion

The findings of this study have implications for different sectors working to ensure smooth transition for immigrant families, and to promote healthy childhood development for immigrant children in Saskatchewan. The findings can be used by health promotion organizations to better understand some determining factors of West African immigrant children’s lifestyle. These organizations could therefore develop programs with an understanding of important cultural-based values of movement for West African families with implications for other visible minorities within the province. For example, the West African families showed the importance of unstructured play to their active living engagements as opposed to conventional competitive options of physical activity. In addition, the families were accustomed to a communal living approach for healthy childhood development, which seems challenged in their new post-migration environment. Therefore, the cultural-based values of movement for these families can be used to improve understanding for the development of physical activity interventions both provincially and nationally.

It is important for programs developed by these organizations to be accessible and inclusive to all population groups, as this will foster engagement in physical activity. Through the findings from this research, organizations may need to create programs with the recognition of some reinforced societal barriers that not only impact West African immigrant children, but also affect other marginalized groups such as Indigenous people, people with disabilities, older adults, among others. The children from this study had societal challenges like bullying, rejection, trust, and overgeneralization based on perceived race. Therefore, practical initiatives for children’s active living should include an educational process that reinforces
socialization, ethnocultural diversity, and inclusion as important factors that ensure proper integration into the Canadian society.

The Saskatchewan weather was a major challenge for the families. Therefore, recreational organizations can partner with resettlement organizations to provide affordable recreation passes to newcomers, and continued support for some length of time to improve inclusivity through physical activity participation.

The children from this study seemed to have interest in activities that immigrant parents might otherwise consider unsafe like snow-related activities. Therefore, parents can be reoriented through various social media platforms on the importance of embracing all-weather physical activity opportunities. Meanwhile, snow-related activities may attract some costs related to clothing accessories and equipment. Newcomers may tend to avoid such costs during their resettlement phase; therefore, program initiatives are needed to provide accessories to newcomers to improve engagement in physical activity across all seasons.

Families from this study had knowledge of the importance of physical activity and understood the significance of parent-child engagement. Although there are currently not many family interventions on active living for immigrants in Saskatchewan, some non-governmental organizations may take the approach of educating parents and other important support networks, as these emerged as important facilitators for the children. Therefore, these organizations may need to educate new and existing African immigrant parents to emphasize the awareness of physical activity benefits that transcend physical health in order to encourage family engagement.

Program delivery agencies should create a wider awareness of low-cost sports programs available to all children within the province. Most families from this study
believed their children were not eligible for any available subsidized sport programs. In fact, some families do not have knowledge of accessible public spaces for them to be active. While initiatives such as Jumpstart and KidSport are committed to ensuring equality of opportunities for children, none of the families had awareness of these initiatives. More awareness of subsidized programs should be done among immigrants particularly through platforms like social media, faith-based settings, community associations, and resettlement organizations.

6.2 Recommendations for Urban Planning and Infrastructural Developers

This study also has some important implications for the urban planning sector. Urban planners could consider the growing influx of immigrants as a rationale to create a mixed-use development that addresses the transitional factors of active living that emerged from this study. Immigrant families are more likely to lean towards settlement in areas where the neighbourhood design involves medium- to low-density housing that allows for spaces for children to play within the neighbourhood. This may create an economic benefit considering that many immigrants as well as other visible minorities may tend to acquire homes with potential for long term investments in areas where neighbourhood safety can be ascertained. Lifestyle activities such as walking and biking which were showed as preferred choices in this study, could be promoted through the development and awareness of trail networks within Saskatchewan communities.

The uniqueness of unstructured physical activity that emerged for these families should be considered in planning stages for the development of play spaces. Urban planners can collaborate with transportation and infrastructural sectors to include cultural values that shape movement within their planning conversations. This study provides an inclusive understanding of African immigrants, considerably
one of the fastest growing immigrant populations within Saskatchewan. Efforts could be made by non-governmental organizations, municipal governments, and financial sponsors to create physical environments supportive of diverse active opportunities. For example, the creation of safe and accessible environment for active transportation to and from school could be one initiative.

It would be productive to initiate intracommunity sports programs that create environments conducive for better relationships and social networking; hence, encouraging development of trust within the community members. Many of the participants were accustomed to sports such as soccer and track and field events, therefore, more sport events that are family-specific can be organized around these sports choices. In addition, the current existing programs such as ones organized by the Regina Soccer Association can be subsidized for affordability and better participation rates.

6.3 Recommendations for Policy Makers

There are also implications for policy and decision makers around the health and wellness of immigrant children and other marginalized groups. These include decision makers in schools, health authorities, and urban planning. There is the need for health authorities to ensure that policy planning around health within Saskatchewan involves active living initiatives that consider accessibility, affordability, inclusivity, seasonality, and safety. Decision makers should also consider family circumstances in the stages of transition, as multi-level interventions are needed for successful impact. Policy makers can use the knowledge created concerning West African lifestyles to inform decisions. For example, urban planners could encourage communal living and schools could create unstructured physical activity opportunities and allow physical activity to be more self-directed by children.
These types of initiatives may encourage healthy active lifestyles for immigrant children and their families and help overcome some challenges of independent mobility identified by this study.

The findings of this study have shown that the West African immigrant children have interest in physical activity engagements within challenging situations. This could involve independent outdoor play, outdoor engagement during winter seasons, adventurous activities on the playground, walking to school with friends, and playing with minimal supervision in schools or at home. Therefore, decision makers in schools could develop policies that encourage natural inquisitiveness for children. These include enforcing policies such as daily outdoor play within schools whereby children are encouraged to get outdoors across all seasons to enjoy nature and acquire increased daily physical activity levels. Increased opportunities for children to be active provides a potential consequence for reduced economic burden on the health care system particularly regarding chronic diseases that are now affecting children in highly industrialized countries.

Some parents in this study had concerns for legal policies governing child neglect and abuse, therefore, immigrant families may need to be informed on the degree of acceptance regarding these policies. Under the Government of Saskatchewan, Child Abuse and Neglect Protocol, neglect includes “failing to provide a child with safety and supervision.” Although research has positively recommended unsupervised outdoor play for children, immigrant parents from this study are less likely to apply this evidence-based practice for their children due to legal concerns.

Based on the historical United Nations Convention on the Rights of the Child, children require a space for free play, as it was embedded in Article 31. Given that
some families from this study had the perceived notion that they would be stigmatized, and their children may be removed from their protection due to risks associated with independent play, immigrant families may need a better understanding of the acceptable grounds within the governance policies. Child welfare policy makers may need to reform policies governing risks through an inclusion of a cost-benefit risk assessment process to alleviate legal concerns for the parents. This may have some positive implications for parental empowerment to comfortably allow unsupervised outdoor play for their children in a discretionary manner.

There is also an implication for school policies and decision making particularly around recess. As it was discussed in the findings, that few children explained that their expectations for recess were not fulfilled because of recess restrictions and supervision. Therefore, recess policies could address the importance of incorporating regular unstructured free activities into recess as well as the balance between safety and playability. Recess leaders could be trained and guided on supervisory practices that do not restrict challenging activities and help control sociocultural barriers like bullying, which typically occurs during recess. In addition, teachers should also be guided on the integration of physically active classroom initiatives.

6.4 Research Implications

This study produces a unique contribution to the literature on immigrants’ health and well-being. In doing so, it addresses how the physical activity of immigrant children is impacted when they migrate to a HIC and provides an improved understanding of the lifestyle perceptions of West African children and their families. The findings of this study add in-depth knowledge to the evidence available on physical activity among children in Canada. More importantly, and
perhaps not intentionally, the findings provide significant insights into transitions and cultural shifts and barriers for West Africans in Saskatchewan. It can be implied that physical activity which seemed to take a secondary position in their lives, could be significantly improved when various barriers such as bullying, discrimination, financial costs, and perceived safety are successfully addressed.

This study contributes to the evidence regarding parental influence on children’s physical activity. The study approach creates a unique opportunity for children who had never been interviewed to be a part of the constructive meaning developed in this research. This study contributes an intergenerational perspective to better understand the perceptions of physical activity and benefits among children and their parents. It also provides intergenerational perspectives on physical activity interest including their perceptions on physical environmental factors such as weather. The cultural practices including parenting styles among West Africans were better understood as well as the transitioning parental roles were illuminated. In addition, the importance of light physical activity such as household chores, which was found among the children in this study, should not be overlooked as a contributor to overall daily accumulation of energy expenditure. Though most parents showed an authoritarian style of parenting, which was demonstrated through their use of positive and negative reinforcements for domestic chores, further research may help establish whether this is the dominant type of parenting among African parents. This study through its immigration focus adds to the emerging research on physical activity transition and global health. The findings exposed the importance of transitional factors such as nature of neighbourhood design on immigrant children’s health. The findings showed that the families lived in communal settings pre-migration; therefore, further studies could explore the type of living conditions associated with
active living among other immigrant populations before and after migration.

The model developed ensured transferability through richness in description; therefore, contextual application of the factors to West African immigrant families and other visible minorities could be cautiously made. Consequently, the model produces a conceptual understanding on the experiences of the West African immigrant families as it pertains to their children’s physical activity engagements following a recent immigration into a HIC. The model provides direction and insights for future research in this field of study. The model has implications for future quantitative research in this field of study, particularly to investigate the predictive capacity of different relationships of factors determining physical activity for African children. For example, it may be hypothesized that transitional factors such as parental satisfaction with living conditions or financial capacity is a better predictor of physical activity for the immigrant children when compared with internal factors such as self-confidence. Further investigation may also use a quantitative approach to determine the hierarchical level of relationships among factors determining children’s physical activity during acculturation. The findings from this study could also be compared to established immigrants within Canada in terms of immigrants that have resided for more than 10 years. In similar vein, the study can be compared to Canadian-born participants, thereby, showing the difference in parenting styles as well as perceptions on risky play.

There are also implications for further qualitative research. The findings provide room for delving deeper into some discovered sociocultural barriers of physical activity among the immigrant children. For example, barriers such as overgeneralization based on perceived race, bullying, and social rejection may require further exploration through phenomenological approach to better capture
other dimensions like the emotional consequences of these experiences. The perspectives of schoolteachers may also be investigated to determine the extent of their influence as another important social support in the lives of the African children post-migration. There is also need for more in-depth understanding of cultural-based values of movements among other diverse ethnic groups within Canada.

6.5 Conclusion

The purpose of this study was to explore the perspectives of West African immigrant families living in Saskatchewan on active living for their children between 10 to 17 years. Global evidence has shown a trend relating to reduced physical activity levels and increased sedentary levels among younger age groups, posing a major population health concern. Many HICs have shown an elevated rate of inactivity levels while LMICs are beginning to experience an increase in this trend. Attention should therefore not be taken away from an increasing level of immigrants moving from a region of low-resource context such as West Africa to a high resource context such as Canada. Canada being a highly industrialized country is experiencing one of the highest growths of immigrants in the recent decade across the globe. Meanwhile, studies have shown that recent immigrants tend to experience a negative acculturation effect. This phenomenon can be attributed to several factors including adaptation to the new sociocultural environment and changes in active lifestyle. Given the paucity of data among African immigrants, studying active living perspectives for West African children in Saskatchewan offers a framework for understanding the acculturative experiences of specific ethnic minority groups in Canada.

The current study used a grounded theory approach with a constructivist world view to capture the actions and experiences of the West African families.
pertaining to children’s active living. Using a purposive sampling, 15 families were recruited. A total of 31 semi-structured interviews were conducted, as parents and children were interviewed separately from each family. This study found that the participants had an experiential knowledge of physical activity and its benefits. Further, this study found that their knowledge was based on their practical experiences of being active.

The participants reported several acculturative perspectives related to the children’s active living through their reflections on transitional factors pertaining to pre- and post-migration experiences. They reported nature of activity transition as moving from unstructured activity engagements to structured activity engagements. Neighbourhood living transition was reported in terms of communal living during pre-migration to private living post-migration, and this has significantly reduced their children’s engagement within the neighbourhood. The participants also asserted that their children’s independent play time has reduced since immigration. The parents reported cultural transition for their children in a manner which involve adopting language inflections while retaining heritage moral values on sense of respect and discipline.

Besides the Saskatchewan weather, which was commonly reflected by all the families, there were several sociocultural barriers identified by the families. These involved parental concerns with perceived neighbourhood safety and some children’s experiences of bullying at school and the neighbourhood. There were also some children who experienced rejection by neighbourhood residents particularly in attempts to initiate a socially conducive environment for outdoor play. These barriers were reported in relation to independent outdoor play for their children. Some parents were also concerned with the legal implications of allowing their children to play
independently in an outdoor setting. Parents described competing priorities as a challenge hindering their time commitment to regularly support and engage in physical activity with their children. These barriers altogether seemed to be keeping the children indoors after-school and significantly affecting their physical activity engagements. It can therefore be implied, that physical activity took a secondary position for the families and addressing these barriers would improve their engagement in physical activity.

Despite the challenges reported, there were some facilitators of physical activity for the children. Having an enabling environment such as parks and walkways in proximity was reported. Parental role-modelling was also an important factor that encouraged physical activity. The participants reported school and peer influence as important facilitators especially due to the relationship that was shown between them, in terms of the children having easy access to their friends at school and therefore looking forward to school days. The desire to have fun and the expected health and fitness benefits were also important positive internal influencers for the children.

A good number of the children showed an interest in risky play and these provided outcomes such as creativity, self-confidence, and skill development for the children. Risk management with physical activity was ensured through parental counselling on safety limits as well as parental supervision. Parent-child engagement also provided important outcomes for the children including family cohesion, development of sportsmanship and sport skills, and development of self-confidence.

Finally, the participants reported parental conditioning on domestic activities through a way of instilling home principles. Domestic activity is considered a light-intensity activity on the movement continuum, and it has the potential to contribute to
overall daily physical activity levels. Positive reinforcement was used by the parents through a reward system. The rewards used include outdoor playing time, money, or praises. Furthermore, the use of negative reinforcement was also described through a discipline system whereby identified children’s hobbies particularly screen time was controlled. The children also showed internalization of the principles by taking responsibilities without being compelled. This type of parenting has been considered authoritarian by other studies (Hubbs-Tait et al., 2008; Jago et al., 2011; Renzaho et al., 2017). Further studies may help confirm this type of parenting among African immigrants.

There are implications for different sectors associated with population health including health promotion and policy makers. It is important to involve immigrant families and their communities in the designing of policies and program initiatives for physical activity. In addition, the acculturative model which was developed through interpretations may require further research to determine the hierarchy of factors that determine physical activity participation for West African children during acculturation. This study therefore contributes a holistic view to the different factors shaping active living opportunities for West African children, thereby contributing empirical evidence towards immigrant health.
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APPENDICES
APPENDIX A: PARTICIPANT CONSENT FORM

Project Title


Researcher

Oluwasegun Hassan, PhD candidate [Oluwasegun.Hassan@uregina.ca; 306-526-4928]

Supervisor

Dr. Shanthi Johnson, PhD [Shanthi.Johnson@ualberta.ca; 780-492-9981]

What is the Purpose of this Study?

We are inviting you to participate in a research project to investigate children’s physical activity participation from the view of West African immigrant families living in Saskatchewan. In particular, we are interested in learning about your experiences and thoughts on the various physical activity and playing options you children have had over time and any changes you have noticed since you arrived in Canada.

What Makes me Eligible to Participate in this Study?

You may participate in this project if your family is originally from West Africa, immigrated to Canada in the last ten years, have a permanent residency or citizenship status, and have one or more children within 10 to 17 years of age, who is/are able to move freely with or without assistance. You would need to be able to communicate in either English or French. If you prefer French communication, a translator or interpreter will be used. You may also refer us to any family that you think may fit these criteria for participation.

What are the Procedures Involved in this Study?

If you are interested in participating, we will conduct individual interviews. You and your child will be invited to take part in an interview separately. The interview will occur in a place and time of your choosing. The questions are open-ended and flexible. Each interview is expected to last between 30 to 45 minutes. These interviews will be audio recorded and written out for the purpose of the study. Notes will be taken during and after the interview to assist in understanding what we have talked about. We will send you a written out version of the interview and you will
have one week to verify, add, or alter any part of our discussion. You would also assist in transferring the transcript of the interview with your child to him/her for verification. If we do not hear back from you within one week of the researcher sending the transcripts, we will take it that you do not have any changes to be made. In the case that we are not able to meet face-to-face for an interview, a Skype recording will be done. There is a possibility that we may contact you for a follow-up interview if further clarifications are needed. There is also a possibility of inviting you and your child to be part of a focus group just to verify the findings of the study. Please feel free to ask any questions regarding the procedures and goals of this study.

What are the Risks of Participating in this Study?

There are no anticipated risks to your participation in this study. It may be possible that you do not wish to answer some of the questions asked in the interview. If this happens, you can choose not to answer certain questions, or you can choose to discontinue the interview. There will be no penalty for discontinuing the study at any point.

What are the Benefits of Participating in this Study?

For your participation, your family will be compensated with a pedometer which is an instrument used for counting daily steps. Through the interview questions, the possibility does exist that you may become more aware of the factors influencing your children’s physical activity engagements. In addition, you will be contributing to the valuable knowledge on healthy active living among immigrants. A one-page summary of the findings will be made available at your request upon completion of the study.

Will my Participation be Kept Confidential?

Any information collected from you and your child during this study will be kept confidential, and your privacy will be protected at all times. Your identity information including email address or Skype ID will be kept private. Information collected throughout this research project may be used in thesis reports, conference presentations, and academic publications; however, your names will not be disclosed. Direct quotations from you may be utilized in these publications but pseudonyms will be used to refer to you. If a video recording was made through Skype, no photos or videos of you will be published. If we have an Internet interaction via email or Skype, identity information such as email address will be kept confidential. Communication tools such as Skype attempt to ensure data security through encryption technologies. While beneficial, there are still possibilities of risk associated with using such a medium.

How will the Data be Stored?

The tape recorders used for data collection will be kept in a locked safe. The data will be stored on the researcher’s password protected computer. Your signed informed
consent will be stored in a locked file cabinet. Only the researcher and supervisor listed in this study will have access to the data. After the completion of this project, the data will be stored for five years and will be permanently deleted after that.

**What is My Right to Withdraw?**

Your participation in this study is entirely voluntary. You have the right to withdraw from the research project study at any time for any reason. There will not be any negative consequence to you, if you choose to discontinue your participation in this study. The compensation given to your family for participation will remain with you. You also have the right to withdraw your data from our discussion however the insights developed from the data cannot be revoked. Your right to withdraw data from this study will apply until the end of the one-week duration when you might have been advised to check or make alterations to our discussion. After this time, it is possible that some results have been analyzed, written up, or presented and it may not be possible to withdraw your data.

**Questions or Concerns**

If you have any questions or concerns about this project, please contact the researcher(s) using the information at the top of page 1. This project has been approved on ethical grounds by the U of R Research Ethics Board on June 27, 2018. Any questions regarding your rights as a participant may be addressed to the committee at (306) 585-4775 or research.ethics@uregina.ca.

Your signature below indicates that you have read and understand the description provided.

I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

Parent’s/Guardian’s Name (please print): __________________________

Parent’s/Guardian’s signature and Date: __________________________

Researcher’s signature and Date: _________________________________
APPENDIX B: PARTICIPANT ASSENT FORM

University of Regina

Faculty of Kinesiology and Health Studies
Centre for Kinesiology, Health and Sport, Room 173
3737 Wascana Pkwy, Regina, Saskatchewan S4S 0A2

Project Title

Researcher
Oluwasegun Hassan, PhD candidate [Oluwasegun.Hassan@uregina.ca; 306-526-4928]

Supervisor
Dr. Shanthi Johnson, PhD [Shanthi.Johnson@ualberta.ca; 780-492-9981]

We are inviting you to participate in a research project to investigate children’s physical activity participation from the view of families from West Africa living in Saskatchewan. You are not under any pressure to participate in this research study.

If you decide to participate in this research, you will be asked to describe your thoughts on the various physical activity, sports, and playing choices you have had over time and any changes that you have noticed since you arrived in Canada.

It will take about 30 minutes for us to talk and our conversation will be audio recorded on a digital tape. This recording will allow me to listen carefully to what we will be talking about. The recording will then be written out and passed to you for checking. Before the interview, you will have the chance to ask any question you might have regarding this research project. Also, please feel free to ask any question during our conversation.

For your participation in this research, your family will be given a pedometer as a reward. A pedometer is an instrument used for counting daily steps. There are no risks or discomfort to you if you participate in this research but we may ask for another interview in future, if needed.

You are allowed to withdraw at any time, for any reason, if you do not feel comfortable with participating anymore. This will not result in any type of penalty.

The information you provide during our conversation and your personal information will be kept private and not shared with other children. When we have to send our written conversation to you for checking, we will advise your parents to ensure you are the one that checks it. When this research is done, a report will be written and it will not include your name or state that you were part of the research.
If you have any questions or concerns about this project, please contact the researcher(s) using the information at the top of page 1. This project has been approved on ethical grounds by the U of R Research Ethics Board on [date]. The email address for the Research Ethics Board is research.ethics@uregina.ca and phone number is (306) 585-4775.

Your signature below means that you have read and understand what is described in this form.

I have had the opportunity to ask questions and my questions have been answered. I accept to participate in this research project. A copy of this assent form has been given to me for my records.

Child’s Name (please print): __________________________

Child’s signature and Date: __________________________

Researcher’s signature and Date: __________________________
APPENDIX C: GUIDING INTERVIEW QUESTIONS

Parent

1. Tell me about yourself
   Probe:
   - What does being physically active mean to you?
   - Tell me about your experience with physical activity as a child

2. Tell me how you think your child benefit from being active?
   Probe:
   - What are the health benefits for your child?
   - How do you benefit from your child being active?
   - How would you describe your child’s feelings from being active?
   - How do you feel when your child gets active?

3. Describe how your child was active in your country of origin.
   Probe:
   - Since you arrived in this country, how would you describe any changes to being active?
   - When did you notice these changes?
   - Why do you think these changes occurred?

4. How would you describe a typical play time for your child?
   Probe:
   - What general guidelines do you set regarding your child’s play time or other activity engagements?
   - Why do you set these guidelines?

5. What personal or cultural beliefs do you have regarding children’s physical activity?
   Probe:
   - How would you describe any changes to these beliefs since you arrived in Canada?

6. What motivates your child to be physically active?
   Probe:
   - What prevents your child from being active?
   - How does the neighbourhood affect your child’s activity engagements?
   - How do people in your community affect your child’s activity engagements?
• How do people in school affect your child’s activity engagements?

Children

1. Tell me about yourself
   Probe:
   • What does physical activity mean to you?
   • How do you benefit from physical activity or sports activity?
   • How do you feel after performing any physical activity or sports activity?

2. How do you spend you leisure or free play time in your country of origin?
   Probe:
   • Since you arrived in this country, how would you describe any changes to your leisure or free play time?
   • What are the reasons for these changes?

3. Describe what your normal play time at school looks like. How do you play indoors and how do you play outdoors?
   Probe:
   • Describe what your normal play time at home looks like both indoors and outdoors.
   • How do you feel after these play times?

4. What sort of things mum/dad does that influences how you spend your free play time?

5. What are the things that encourage you to engage in physical activity or sports activity for recreational purposes?
   Probe:
   • How do they encourage you to engage in these activities?

6. Describe the things that prevent or stop you from doing physical activity or sports activity?

7. How does your neighbourhood influence your free play time?

8. What would you like to see change to improve ways for you to engage in physical activity or sports or recreation?
APPENDIX D: BACKGROUND INFORMATION

1. What is your gender? ____________

2. How old is your child? ____________

3. What is your country of origin? ____________

4. How long have you been in Canada? ____________

5. Are you able to communicate in English? ____________

6. Which of following best describes your marital status?
   a. Married or common-law
   b. Divorced
   c. Widowed
   d. Separated
   e. Single

7. Which of the category best describes your total yearly income?
   a. ≤$20, 000
   b. $20, 001 to $40, 000
   c. $40, 001 to $60, 000
   d. $60, 001 to $80, 000
   e. $80, 001 to $100, 000
   f. >$100, 000

8. What is your highest level of education? ____________

9. Does your child have any condition that may prevent him/her from doing physical activity? ____________

10. What is your residential area in Saskatchewan? ____________
APPENDIX E: RECRUITMENT POSTER

Faculty of Kinesiology and Health Studies
University of Regina

PARTICIPANTS NEEDED FOR RESEARCH IN

ACTIVE LIVING PERSPECTIVES OF WEST AFRICAN IMMIGRANT FAMILIES IN SK

We are looking for volunteers to take part in a study of Exploring children’s healthy active living from the perspective of West African immigrant families in Saskatchewan through a grounded theory approach.

As a participant in this study, your family would be asked to:

*Take part in a face-to-face discussion.*

Participation would involve a session with you and your child, each of which is approximately 45 minutes.

In appreciation for your time, your family will receive:
*A pedometer for tracking daily steps.*

For more information about this study, or to volunteer for this study, please contact:

Oluwasegun Hassan
Faculty of Kinesiology and Health Studies at
306-526-4928 or
Email: Oluwasegun.Hassan@uregina.ca

This study has been reviewed and received approval through the Research Ethics Board, University of Regina.
APPENDIX F: TRANSCRIPT RELEASE FORM

I, ________________________________, have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter, and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Oluwasegun Hassan. I hereby authorize the release of this transcript to Oluwasegun Hassan to be used in the manner described in the Consent Form. I have received a copy of this Data/Transcript Release Form for my own records.

_________________________________________________________
Signature of Participant                                      Date

_________________________________________________________
Signature of Researcher                                     Date
APPENDIX G

Research Ethics Board
Certificate of Approval

PRINCIPAL INVESTIGATOR
Oluwaseun Hassan
SUPERVISOR
Dr. Shanthi Johnson

DEPARTMENT
Faculty of Kinesiology and Health Studies

REB#
2018-090

TITLE
The perspectives of West African immigrant families in Saskatchewan on active living among adolescents: A grounded theory study.

APPROVED ON
June 27, 2018

RENEWAL DATE
June 27, 2019

APPROVAL OF
Application for Behavioural Research Ethics Review
Background Information Survey
Recruitment Poster
Transcript Release Form
Participant Consent Form
Guiding Interview Questions
Participant Assent Form

Full Board Meeting
Delegated Review

The University of Regina Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol, or related documents.

Any significant changes to your proposed method, procedures or related documents should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date; each year the study remains open, and upon study completion. Please refer to the following website for the renewal and closure forms:
https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html

Raven Sinclair, BA, CISW, BISW, MSW, PhD
REB Chair

Please send all correspondence to:
Research Office
University of Regina
Research and Innovation Centre 159
Regina, SK S4S 0A2
Telephone: (306) 585-4775 Fax: (306) 585-4853
research.ethics@uregina.ca
APPENDIX H

Research Ethics Board
Certificate of Amendment Approval

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR:</th>
<th>DEPARTMENT:</th>
<th>REB#:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oluwasegun Hassan</td>
<td>Faculty of Kinesiology and Health Studies</td>
<td>2018-090</td>
</tr>
</tbody>
</table>

SUPERVISOR: Dr. Shanthi Johnson

TITLE: The perspectives of West African immigrant families in Saskatchewan on active living among adolescents: A grounded theory study

**AMENDMENT APPROVAL OF:**
- Inclusion of participants that communicate in French
- Use of a translator for interviews conducted in French
- A confidentiality agreement to be signed by the translator

<table>
<thead>
<tr>
<th>NEXT RENEWAL DATE</th>
<th>AMENDMENT APPROVAL DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 27, 2019</td>
<td>November 2, 2018</td>
</tr>
</tbody>
</table>

Full Board Meeting [ ]  Delegated Review [x]

**AMENDMENT CERTIFICATION**
The University of Regina Research Ethics Board has reviewed the changes to the above-named research project as outlined in your memo dated November 2, 2018, and they are approved.

**ONGOING REVIEW REQUIREMENTS**
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for the renewal and closure forms:

[https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html](https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html)

[Signature]

Ana Steininger
Research Ethics Board

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Please send all correspondence to:
Research Office
University of Regina
Research and Innovation Centre 109
Regina, SK S4S 0A2
Telephone: (306) 585-4775
Fax: (306) 585-4893
research.ethics@uregina.ca

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APPENDIX I

Research Ethics Board
Certificate of Renewal Approval

PRINCIPAL INVESTIGATOR:  Oluwatagun Hassan
DEPARTMENT:  Faculty of Kinesiology and Health Studies
REB#:  2018-090

SUPERVISOR:  Dr. Shanti Johnson


ORIGINAL DATE OF APPROVAL:  June 27, 2018
NEW EXPIRY DATE WITH THIS RENEWAL:  June 27, 2020
TODAY’S DATE:  June 12, 2019

RENEWAL CERTIFICATION
The University of Regina Research Ethics Board has renewed the above-named research project for an additional 12 months.

Any significant changes to your proposed method, procedures or related documents should be reported to the Research Ethics Board Chair for consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for the renewal and closure forms:

https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethics-forms.html

Ara Steininger
Research Ethics Board

Please send all correspondence to:
Research Office
University of Regina
Research and Innovation Centre 109
Regina, SK S4S 0A2
Telephone: (306) 585-4775  Fax: (306) 585-4853
research.ethics@uregina.ca
## APPENDIX J

### West African Countries and Population of Immigrants in Canada and Saskatchewan

<table>
<thead>
<tr>
<th>Country</th>
<th>Canada</th>
<th>Saskatchewan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>3,305</td>
<td>0</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2,555</td>
<td>0</td>
</tr>
<tr>
<td>Cape Verde</td>
<td>175</td>
<td>0</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>12,850</td>
<td>70</td>
</tr>
<tr>
<td>Gambia</td>
<td>755</td>
<td>15</td>
</tr>
<tr>
<td>Ghana</td>
<td>24,660</td>
<td>535</td>
</tr>
<tr>
<td>Guinea</td>
<td>5,720</td>
<td>40</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>120</td>
<td>0</td>
</tr>
<tr>
<td>Liberia</td>
<td>2,670</td>
<td>65</td>
</tr>
<tr>
<td>Mali</td>
<td>2,830</td>
<td>10</td>
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<tr>
<td>Mauritania</td>
<td>1,050</td>
<td>0</td>
</tr>
<tr>
<td>Niger</td>
<td>1,235</td>
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<tr>
<td>Nigeria</td>
<td>52,380</td>
<td>2,440</td>
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<tr>
<td>Saint Helena</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Senegal</td>
<td>8,860</td>
<td>20</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>3,185</td>
<td>55</td>
</tr>
<tr>
<td>Togo</td>
<td>3,790</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>126,160</strong></td>
<td><strong>3,280</strong></td>
</tr>
</tbody>
</table>

Canada Census Program 2016
APPENDIX K: MEMBER CHECKING OF THEMES

Title: Exploring the perspectives of West African immigrant families on children’s physical activity in Saskatchewan.

During the data collection process, 15 families were interviewed. There were separate interviews with parent and children (10 to 17 years). From the analysis, six themes emerged showing the perspectives of West African families concerning children’s physical activity participation.

Please find below a summary of the themes including a brief description of the features of each theme:

**Theme 1: Good Knowledge of Physical Activity and Benefits**

*Sub-theme 1: Experiential knowledge*

- The findings showed less of theoretical knowledge but more of knowledge acquired through personal experiences of being physically active

*Sub-theme 2: Intergenerational perceptions*

- Parents were quick to relate physical activity to general well-being and reduced risk of diseases. Most parents rarely showed interest in gym activities. Children described benefits that were related to fitness, muscle building, body image, and mental development. Children also strongly showed interest in gym activities.

*Sub-theme 3: Perceived benefits for children*

- These include physical health benefits, mental health benefits, emotional benefits, cognitive benefits, sociocultural benefits, sleeping benefits, and nutritional benefits

*Sub theme 4: Perceived benefits for parents*

- These include sense of joy and happiness, and less worrying about children’s health when they are physically active.

**Theme 2: Transitioning Experience Associated with Physical Activity**

*Sub-theme 1: Nature of activity transitions (structured versus unstructured physical activity)*

- Before immigration, most of the West African families engaged in unstructured physical activity like outdoor playing, riding bicycles and playing soccer. However in Canada, most families have to transition to structured physical activity.
Sub-theme 2: Independent mobility transitions for children (unrestricted independent time versus restricted time)

- Before immigration, West African children had a lot of unrestricted independent outdoor playing time. However in Canada, they have a lot of restricted independent playing time.

Sub-theme 3: Neighbourhood living transitions (Communal living during pre-immigration versus private living during post-immigration)

Sub-theme 4: Dealing with challenges of active living

- Physical environmental challenges
  - Weather, lack of space, neighbourhood safety, etc.
- Social environmental challenges
  - Social rejection, bullying, societal norms, concerns for social services and child welfare policies, etc.
- Financial constraints
  - Cost of programs, lack of subsidized programs, etc.
- Competing priorities for parents
- Increased screen time for children

Sub-theme 5: Cultural adaptations

- Finding a balance in language/communication transition
- Finding a balance in moral behavioural choices.

Theme 3: Influencing Factors of Physical Activity for the West African Children

Sub-theme 1: Built environment (parks, trails, walkways, etc.)

Sub-theme 2: Parental role-modelling (parental engagement in physical activity)

Sub-theme 3: Peers (Peer group motivation)

Sub-theme 4: School (Easy access to friends, physical education, recess activities, etc.)

Theme 4: Engaging Together as a Family

Sub-theme: Derived outcomes from family active times

- For the family
Bonding, created fun, and exciting environment

For the parents

- Teaching skills and sportsmanship, supervising to ensure safety, discovering new things about their children

For the children

- Acquiring a sense of belonging, getting better opportunities to speak freely, learning skills, developing competence and confidence

**Theme 5: Engaging in Risky Play**

**Sub-theme 1: Children engage in risky play naturally**

**Sub-theme 2: Risky play outcomes for the children**

- Independent learning, acquiring knowledge and skills for subsequent attempts, developing personal motivation and confidence, becoming creative, and getting smarter.

**Sub-theme 3: Managing risky play**

- The parents ensure that safety is reinforced through supervision and counselling.

**Theme 6: Parental Conditioning Associated with Domestic Chores and Other Physical Activity**

**Sub-theme 1: Positive reinforcements**

- Rewarding the completion of domestic chores
  - Money, praise, more outdoor time or playing time

- Rewarding good behaviour and academic commitment with more active playing time

**Sub-theme 2: Negative reinforcements**

- Applying discipline when domestic chores are left undone.

- Disciplines include depriving or reducing liked wants of children
  - Screen time, playing time, hobbies

**Sub-theme 3: Conditioning outcomes**

For parents the outcomes include:
• Establishing home and life principles, teaching a sense of responsibility, ensuring healthy childhood development, teaching a sense of autonomy, preparing children for life encounters.

For children the outcomes include:

• Internalizing the principles, taking responsibilities, developing leadership skills

FEEDBACK

By looking at the themes above, please provide your feedback on the following questions in a brief paragraph:

1. When you look at the themes, do they make sense to you?

2. Do any of these themes represent an appropriate description of the perspectives you shared during our discussion?