

Physical Activity for Aboriginal Older Adults: A Scoping Study and a Case Study

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THESIS

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Abstract

In Canada, out of the total Aboriginal populations, the older Aboriginal adult populations continue to increase and suffer disproportionately poor health compared to non-Aboriginal seniors. Despite these facts, there is a dearth of research concerning Aboriginal older adults, especially regarding their engagement with physical activity. My thesis is written in the publishable paper format and is comprised of two papers. Using a scoping study methodology in paper one, I demonstrate that intersecting factors such as colonialism, social inequities, and physical activity practices that are rooted in Western ideals and do not address Indigenous older adults' needs, all contribute to Indigenous older adults' lack of participation in physical activity. Using a case study approach in paper two, I demonstrate how Elders In Motion, a program offered by the Northwest Territories Recreation and Parks Association (NWTRPA), shows a shift in physical activity programs becoming more respectful of older Aboriginal adults' cultures and communities; however, while the staff at the NWTRPA has made a strong effort to adapt a southern-based program for northern communities in the NWT, there are several program features that reaffirm colonial practices and support Westernized ideas of physical activity. Taken together, the papers in this thesis make apparent that physical activity programs and research concerning physical activity for older Aboriginal adults continue to be embedded in colonial practices. As a result, there is a demonstrated need for program development and research in this area to work towards reducing health disparities and challenging colonial practices.

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Chapter One: Introduction

The 2006 Canadian Census found that the Canadian Aboriginal¹ populations² aged 65 and over have increased 43.0% since 2001 (Statistics Canada, 2010). Despite this dramatic increase in older Aboriginal peoples, there is a dearth of research concerning these cohorts (Jervis, 2010; Wilson, Rosenberg, & Abonyi, 2011), especially regarding its members' engagement with physical activity (Young & Katzmarzyk, 2007). Physical inactivity is a major risk factor for many chronic diseases that are prevalent in Aboriginal populations (Waldram, Herring, & Young, 2006). Pervasive lifestyle changes have resulted in decreases in the physical activities in which elderly Aboriginal peoples participate; as a result, they are living more sedentary lifestyles (Waldram et al., 2006). For older adults (65+ years of age), physical activity interventions have been shown to improve physical, social, and mental health (Taylor et al., 2004). Aboriginal populations face many specific challenges with regard to overall health and access to health services as a result of colonialism and current health policies (Wilson et al., 2011). Given these populations' unique determinants of health (Waldram et al., 2006) and history with colonialism, it is especially important to have physical activity programs that are culturally³ relevant, that demonstrate respect for Aboriginal peoples' history and the impacts of colonization, and that do not perpetuate colonialism (Giles & Darroch, in press). Physical activity is often ignored as a site of colonization of Aboriginal peoples, so it is important to understand how physical activity programs can reaffirm colonialism.

My research expands on the current body of literature pertaining to older Aboriginal peoples' participation in physical activity by examining research studies related to Indigenous older adults' engagement with physical activity and the "Elders in Motion" (EIM) program, which is run by the Northwest Territories Recreation and Parks Association (NWTRPA) to understand if and how physical activity is a site of colonization for older Aboriginal adults. EIM

administers training programs that allow communities to establish recreation programs for Aboriginal Elders³ within their communities or in home settings. For my research, I used case study and scoping study methodologies to, first, identify what is known about older Indigenous adults' engagement in physical activity and the existing gaps in the literature. Second, I sought to understand if and how EIM is adapted for residents of NWT communities, and to understand the challenges that program leaders and communities have faced with regard to implementing and maintaining the program and how they have dealt with these challenges.

Literature Review

To understand where my research fits into the current body of knowledge, my literature review will focus on the current state of Aboriginal health. Additionally, given that a section of my thesis refers to research findings regarding Indigenous older adults in the global context, due to the lack of research conducted in Canada on Aboriginal older adults and physical activity upon which I could draw, I will discuss Indigenous older adults' health, while focusing more specifically on older Aboriginal peoples' health in Canada. I will also examine physical activity for older adults and for Aboriginal peoples and how physical activity has been a site of colonization for Aboriginal peoples. Following this, I will explore the significance of colonialism's impact on older Aboriginal peoples' health and I will define cultural relevancy and discuss the importance of culturally relevant health promotion programs.

Current State of Aboriginal Health

In contrast to the non-Aboriginal populations, Aboriginal populations face many health inequalities. Indeed, in comparison to the non-Aboriginal populations in Canada, heart disease is 1.5 times higher in Aboriginal populations, type 2 diabetes is 3-5 times higher among First Nations peoples and the rates are increasing among the Inuit populations, tuberculosis rates are

8-10 times greater in Aboriginal populations, and Aboriginal peoples have a shorter life expectancy (Health Canada, 2012) by 8.1 years for males and 5.5 years for females (Health Canada, 2007). Other health issues faced by Aboriginal peoples in comparison to non-Aboriginal peoples are higher rates of some forms of cancer, injuries, pneumonia, depression, addiction, and suicide (Mitchell & Maracle, 2005). In addition to the physical and mental health disparities that Aboriginal populations face, there are also many social and economic inequities that exist between these populations and the non-Aboriginal populations, such as high levels of unemployment, low educational attainment, inadequate housing, and high levels of poverty (Mitchell & Maracle, 2005). Many of the physical and mental health problems that are prevalent amongst Aboriginal peoples are represented as being issues of personal responsibility and/or as community problems by indicating that individuals choose to behave in certain ways that result in poor health (see, for example, Public Health Agency of Canada [PHAC], 2011). While personal choices do make some contributions to poor health, by focusing on individual lifestyle choices, government agencies and other organizations shift the blame to the individual and ignore the policies and programs that do not address the broader social determinants of health, such as colonialism, that exercise huge influences on Aboriginal peoples' health (Graham, 2004). The broader social determinants of health, such as colonialism, colonial legislation, Westernized education and health systems, and assimilation tactics, have been identified as the root of the problem for the widespread health disparities between Aboriginal peoples and non-Aboriginal peoples (Czyzewski, 2011; Frohlich et al., 2006). Similar to the general Aboriginal populations, the health status of older Aboriginal peoples is also much lower in comparison to non-Aboriginal seniors (Health Canada, 2002).

State of Older Aboriginal Peoples' Health

Indigenous older adults worldwide suffer much poorer health in comparison to their non-Indigenous counterparts (Australian Indigenous HealthInfoNet, 2013; Belza, et al., 2004; Health Canada, 2002; Moulton et al., 2005). In the United States, ethnic minority older adults, including Indigenous older adults, experience a much higher prevalence of chronic diseases, such as diabetes, hypertension, and stroke, in comparison to white older adults and have much lower physical activity participation rates (Belza et al., 2004). In Australia, the proportion of older Indigenous peoples is much lower than the proportion of non-Indigenous older adults, which is reflective of the chronic diseases that lead to high rates of mortality and lower life expectancy of Indigenous peoples (Australian Indigenous HealthInfoNet, 2013). In New Zealand, the population of Māori older adults is, similar to Indigenous older adults in Canada, expected to increase much faster than the non-Māori older adult population; however, Māori older adults also suffer from chronic diseases at much higher rates in comparison to non-Māori older adults (Timutimu, Talamaivao, Humona, Searle, & Yeh, 2011).

Similarly, older Aboriginal peoples in Canada suffer from disproportionate rates of chronic disease and mental illness in comparison to non-Aboriginal older peoples (Beatty & Berdahl, 2011; Rosenberg et al., 2009; Wilson, Rosenberg, Abonyi, & Lovelace, 2011). Older Aboriginal adults are one of the most neglected groups in Canadian society due to their increasing physical and mental health issues and “increasingly poor socio-economic supports [which] have forced them into even more challenging and dependent situations” (Beatty & Berdahl, 2011, p. 1).

There has been limited research concerning older Aboriginal peoples' health; however, some studies have begun to explore topics related to the meaning of successful aging, caregiving, culturally appropriate care, health status, and health care use (Wilson et al., 2010).

Despite the growing literature on Aboriginal older adults and health, there is still limited research regarding these populations' engagement with physical activity.

Physical Activity for Older Aboriginal Peoples

Many authors have discussed the importance of physical activity throughout the aging process (Centers for Disease Control and Prevention, 2014; King, Rejeski, & Buchner, 1998; PHAC, 2012; Taylor et al., 2004). Physical activity has many benefits for older adults, including improving cardiovascular health, improving bone health, reducing the risk of falls, improving cognitive function, and treating depression (Taylor et al., 2004). Many physical activity programs for older adults are offered through interventions, programs, classes, and activities (King et al., 1998) and, as a result, physical activity has typically been viewed within the Western biomedical model of health as an individual behaviour to counteract sedentary behaviour that leads to chronic diseases and other health conditions (Thompson, Chenhall, & Brimblecombe, 2013).

For older Aboriginal peoples, this way of viewing physical activity and the idea of “active aging” can be somewhat problematic. Often physical activity is only accessible to older adults who are already physically active prior to older age or those who have the resources and financial means to begin being physically active (Ranzijn, 2010), such as being able to afford fitness classes or transportation to a program. Many Aboriginal older adults live in poverty, which stems from the impacts of colonialism (Beatty & Berdahl, 2011); as a result, physical activity programs are often not attainable for them. Further, the physical activities that are available may not be culturally relevant. Mainstream physical activities are typically designed to appease non-Aboriginal older adults and do not take into consideration the needs of Aboriginal seniors (Belza et al., 2004; Hanashiro, 2012). This does not mean that Aboriginal older adults

cannot be active through their own traditional practices, such as berry picking, hunting, fishing, etc.; however, most surveys, questionnaires, and research to measure physical activity do not include these practices as physical activity (Young & Katzmarzyk, 2007) and programs often do not offer a space for these practices to occur. Certainly, colonialism has led to a Westernized biomedical model of physical activity that is not inclusive of many Aboriginal older adults' approach to health and physical activity (Ranzijn, 2010) as it devalues their knowledge of their own traditional practices and their holistic approach to health.

While some people may argue that physical activity promotion is a colonial practice, I would argue that it might be colonial and Eurocentric to understand physical activity as improving one's *own* health. An Aboriginal person participating in physical activity is doing so as an Aboriginal person for his/her own reasons, not necessarily reasons that promote Eurocentric ideals. Physical activity participation is not necessarily colonial because Aboriginal peoples can participate in a way that does not reinforce Eurocentric physical activity discourses by combining and connecting contemporary society with their own worldviews, history, community, and identity. Historically, however, programs have often not approached physical activity in this way as Aboriginal health and health promotion for Aboriginal peoples have been strongly influenced by colonialism.

Colonialism's Impact on Health

Colonialism is defined as “i) the control or governing influence of a nation over a dependent country, territory, or people; ii) the system or policy by which a nation maintains or advocates such control or influence” (Czyzewski, 2011, p. 1). Many authors have argued convincingly that colonialism is the root cause of many of the health disparities evident today between Aboriginal populations and non-Aboriginal populations (Czyzewski, 2011; Frohlich,

Ross, & Richmond, 2006; Mitchell & Maracle, 2005). Colonization has created a social hierarchy that places Aboriginal peoples below non-Aboriginal peoples and, as a result, Aboriginal peoples are subjected to marginalization and their health needs are often not met (Czyzewski, 2011). It has created a situation where Aboriginal peoples have very little control over their community affairs and thus over their health care, education, languages, and governance, which have largely been placed in the hands of the federal government (Czyzewski, 2011).

Older Aboriginal populations face unique challenges to health as a result of colonialism. Many current older Aboriginal populations are comprised of residential school survivors (an outcome of colonization), which, in itself, serves as a unique determinant of health for these populations in that it has resulted in trauma for the survivors and their families, the loss of traditional healing practices, and the underutilization of traditional healers by these populations (Wilson et al., 2011). In comparison to younger Aboriginal populations, older Aboriginal populations have faced many different life experiences as a result of colonization, such as loss of traditional health practices, assimilationist government policies, and the aforementioned residential schools (Wilson et al., 2011). As a result, the social determinants of health for older Aboriginal populations are very much rooted in history and politics. Health promotion programs should address these factors to improve the health of older Aboriginal populations.

Culturally Relevant Health Promotion and Physical Activity Programs

To increase participation and positive results in health promotion programs, it is important that programs are culturally relevant for older Aboriginal peoples. Culturally relevancy refers to the inclusion of the “implementation of local teachings into education and promotion of healthy living by Elders and tribal leaders” (McKee, Clarke, Kmetc, & Reading,

2009, p. 59). For physical activity, this also includes the inclusion of traditional physical practices, collaboration with communities, building on communities' strengths, and addressing their needs and goals. It is also important to address Aboriginal populations' needs through the inclusion of Aboriginal peoples in program development. Barnett and Kendall (2011) argued that for health promotion programs to be effective in Aboriginal communities, program developers should engage with community members through each stage of program development and implementation. Program developers need to also recognize the relevance of community input and participation in program development and recognize the importance of using knowledge of the community processes (Barnett & Kendall, 2011), which relates to cultural relevancy. Kirby, Lévesque, and Wabano (2007) stated that before implementing a physical activity program in an Aboriginal community, it is important to discuss with community members their "perceptions of their access to and involvement in physical activity opportunities in their community" (p. 9). For example, there are many economic disparities that exist in Aboriginal communities (Kirby et al., 2007), so it is important to discuss with community members how program costs can be addressed and to understand what resources are available to ensure that programs are accessible to everyone.

Culturally relevant programs should also respect and encourage Aboriginal knowledge. Learning from Elders and listening to stories is a significant part of Aboriginal cultures (Stiegelbauer, 1996), so by facilitating discussions with the Elders around physical activity for the community, interest in and ownership over the program can be fostered and programs can be made to be more culturally relevant. For programs to be culturally relevant it is also important to consider that Aboriginal communities are each unique and diverse and have their own goals,

challenges, and needs, which need to be addressed separately in each community (Sutherland, Skinner, Hannin, Montgomery, & Tsuji, 2007).

If health promotion, and more specifically physical activity, programs are not developed in a culturally relevant way, they can further discriminate against Aboriginal peoples and exacerbate their detachment from the current health system (Barnett & Kendall, 2011). The current Westernized biomedical model of health disregards the knowledge that Aboriginal peoples often view health in a holistic manner (Mitchell & Maracle, 2005). When Aboriginal knowledge about health and wellness are not incorporated into healthcare and health promotion programs, Aboriginal peoples are often reluctant to participate and seek advice from healthcare workers and health promotion program coordinators (Oliver & Mossialos, 2004). Cultural relevancy allows non-Aboriginal people to understand the importance of taking into account Aboriginal knowledge in program development, especially Elders' traditional knowledge, teachings, and values (Brascoupe & Waters, 2009). Cultural relevancy is crucial in order to have respect and trust between a non-Aboriginal program developer and the participants. A strong health promotion program should take into consideration the participants' cultures, including their values, beliefs, and traditions towards health, as well as the political and social issues involved in program development, such as colonialism.

Improving the health of older Aboriginal adults is crucial, as there is a gap in the health status between these populations and the older non-Aboriginal populations. In order to address this gap, and thus the broader issue of health equity, it is essential to develop culturally relevant health promotion programs for older Aboriginal peoples. Current research pertaining to older Aboriginal peoples remains limited (Jervis, 2010; Wilson et al., 2011); as a result, my research makes an important contribution to understanding the ways in which physical activity programs

can be made to be culturally relevant and representative of Aboriginal older adults' physical practices, and thus potentially more effective for Aboriginal Elders.

Elders in Motion

The NWTRPA first began its involvement with EIM in 2006 through the production of the first EIM resources, which was led by Johanna Russell, from the Yellowknife Health and Social Services Authority (YHSS), and Alfred Moses, from the Beaufort Delta Health and Social Services Authority (NWTRPA, 2009). There is little record of the involvement of the NWTRPA in the beginning stages of EIM, other than the mention of the partnership between the NWTRPA and the YHSS in the NWTRPA's Elders in Motion 2009 Final Report (NWTRPA, 2009).

Johanna Russell and Alfred Moses were the main coordinators behind EIM at this time. The main objectives of the early stages of EIM were to "provide fitness lay-persons with an easy-to-follow program for Elders" and to "provide Elders with a safe way to be active" (NWTRPA, 2009, p. 1).

This part of the program involved developing and distributing a Leader's Booklet, a Participant Handout, and three Thera-Bands (NWTRPA, 2009). The booklet contained information about the benefits of exercise for older adults, the barriers to physical activity and associated solutions, warm-up exercises and stretches, strength exercises, cool down stretches, and useful resources, such as *Canada's Food Guide* (Health Canada, 2011) and *Canada's Physical Activity Guide to Healthy Active Living for Older Adults* (Health Canada, 2013) (NWTRPA, 2009). The booklet and handout were piloted with Aurora College's Recreation Leaders Program and third year Nursing Program students (Fort Smith campus) and with the Lutsel K'e Community Health Representative. Focus groups were held with these groups and feedback was compiled and used to create the final drafts of the Leader's Booklet and Participant

Handout (NWTRPA, 2009). Once the final draft of the booklet and handout were completed, they were printed and distributed along with three Thera-Bands each to Recreation Coordinators, Community Health Centres' Nurse in Charge and Community Health Representatives, students in the Aurora College's Recreation Leaders and Nursing programs, The Centre for Northern Families (Yellowknife), Senior Centres, Diavik Mine and BHP Billiton Diamonds, North Slave Correctional Centre, NWTRPA's membership, and Regional Health Promotion Officers (NWTRPA, 2009). After the distribution of these documents, no formal evaluation was conducted to evaluate the benefits or use of the resources.

Partnership with Canadian Centre for Activity and Aging

In early 2009, the NWTRPA, in partnership with the Dene Nation, developed EIM through funding provided by the Dene Nation, which was received through Health Canada's Aboriginal Health Transition Fund, to create a fitness program for Elders in the NWT (Canadian Centre for Activity and Aging [CCAA], n.d.). The three main objectives of EIM are

to improve access to physical activity opportunities for Elders living in the Northwest Territories, to develop a train the leaders manual and accompanying video for the Elders in Motion Fitness Program, and to deliver training of the Elders in Motion Fitness Program to various health and recreational leaders, and students in the NWT. (CCAA, n.d., p. 6)

In the fall of 2009, the NWTRPA partnered with the CCAA to further develop EIM. EIM now uses CCAA's evidence-based Home Support Exercise Program, which is now called the Active Living Exercise Program (ALEP), an exercise program of 10 easy and effective exercises (CCAA, n.d.). The NWTRPA and the CCAA adapted the ALEP for the smaller, rural, and remote communities in the NWT. Training is provided by the NWTRPA and CCAA to

community health and recreation staff to implement the program in their own communities (NWTRPA, n.d.).

How does EIM Operate?

The EIM program can be used in a recreation or home-based setting to encourage Elders to increase their physical activity; however, the program is generally run in a group setting in the recreation, community, or health centres and is often run alongside other programs for Elders. EIM is a very flexible program for program leaders to implement in their communities, as it is up to the program leaders to decide when is best to run the program. Generally, EIM is offered at the same time each week and occurs when the space, time, and money is available to run the program. EIM is not often offered in the summer months due to many of the Elders being out on the land and away from community centres.

To run EIM, community members rely on the NWTRPA for training, partial funding, and support with program development. The NWTRPA provides training, which was developed in partnership with the CCAA, to community health and recreation staff to implement the program in their own communities (NWTRPA, n.d.). Starting in 2013, as a part of EIM, the NWTRPA provided four \$2000-2500 grants that communities can apply for to help carry out the program. EIM is supported financially by the Government of the NWT's (GNWT) Departments of Health and Social Services and Municipal and Community Affairs (NWTRPA, n.d.). Training of the program leaders for EIM includes the ALEP and various other activities such as Balls and Balance and workshops on how to coordinate Elders programming in their communities. A new and not yet fully developed part of the program is that the Active Communities Coordinator will visit the communities to discuss opportunities for Elders' physical activity and to explore the ways that recreation leaders, community health representatives, home support workers, and

others in the community can help encourage Elders to be more active and to understand more about what the Elders are interested in doing. In early 2013, the communities that were accepted into the EIM program and received grants were Lutsel K'e, Enterprise, K'atlodeeche First Nation (Hay River Reserve), and Ulukhaktok.

EIM Training Gathering

The NWTRPA also organizes a Training Gathering for EIM program leaders and participants, which has been held twice in the past four years. The Training Gathering is a chance for those involved with EIM, such as program leaders and Elders, from across the NWT to get together and participate in the various training workshops, such as ALEP and Balls and Balance, and to share their stories about the program. There is also an awards ceremony and dinner that recognizes Elders who have been nominated by their communities to receive an Active Elders Award. Elders are nominated based on their involvement in the community and their participation in an active lifestyle (NWTRPA, n.d.). After the involvement of the CCA in EIM in 2009, an external consultant completed a formal evaluation in 2010. It mainly focused on the preliminary stages of EIM and did not explore the cultural relevancy of the program. The long-term challenges of the program and the cultural relevancy of the NWTRPA's adaptation of EIM have not been explored.

Epistemology

I used a constructionist epistemology throughout my research process; a constructionist believes that individuals construct their own meaning of phenomena as they engage with their environments and surroundings (Crotty, 1998). Constructionists "strive to understand the behaviour of individuals by examining the influence of their environment on their actions" (Gagnon, 2010, p. 13). A constructionist approach allowed me to recognize how the impacts of

colonialism have shaped the construction of meanings of health promotion programs and research, specifically those relating to physical activity and recreation, for Aboriginal peoples. By using this approach, I was able to understand how the organizers and program leaders of EIM construct the meanings of success in terms of successful, culturally relevant programming for Aboriginal Elders.

Theoretical Framework

My research was informed by a postcolonial theoretical framework. Here, I present a review of this theoretical framework in order to understand the ideas of this approach and how it informed my research. I will also provide a background on how this theoretical framework was relevant for both my scoping study and my study of the NWTRPA's EIM, a program developed for Aboriginal older adults.

Postcolonial theorists explore the effects of colonization through analyzing discourses and critiquing how people write and speak about the world. They pay particular attention to how colonization has partially determined present social and material conditions (McEwan, 2009). Postcolonial theorists seek to understand the “complex processes of cultural construction and the power relations entangled in such processes” (Rail, 2007, p. 189). It is a theory that addresses issues such as gender, race, ethnicity, and identity and the relationships between power and knowledge (McEwan, 2009). Postcolonial theory aims to acknowledge and listen to those who were formerly and/or currently colonized and to expose the discourses portraying these groups of people.

An important concept of postcolonial theory is the actual term “postcolonial.” There have been many discussions around this term's meaning and whether or not the “post” relates to a temporal or critical aftermath (Ashcroft, Griffiths, & Tiffin, 1989; McEwan, 2009; Young,

2001). It is problematic to assume that the “post” refers to the completion of one period of history and that there has been an emergence of another (Childs & Williams, 1997). To only understand the “post” as being a period after colonialism assumes that there was one period of colonialism and ignores the fact that there have been many different periods of colonialism within many different empires (Childs & Williams, 1997). This assumption also ignores the critical aftermath from colonialism and colonialism’s impact on current discourses, cultures, policies, etc. (McEwan, 2009). Further, it is also problematic to assume that “post” refers to a period after colonialism because it can be argued that some populations are still under the control of colonial governments and are still subject to colonial policies (McEwan, 2009), such as the Aboriginal populations in Canada. As a researcher using postcolonial theory, I understand the “post” in postcolonial as referring to the condition where cultures, discourses, and critiques are still strongly influenced by colonialism; thus, I do not employ this term as just a temporal reference.

McEwan (2009) identified postcolonial theorists’ four core strategies: destabilizing the dominant Ethnocentric discourses; challenging how these discourses are created; critiquing “the spatial metaphors and temporality employed in western discourses” (p. 26); and recovering the voice of and giving power to the marginalized, the oppressed, and the dominated. My research fits within McEwan’s first strategy, as I focus on understanding physical activity for Aboriginal older adults within the Western norms of physical activity and how these programs can destabilize these norms and be more culturally relevant. Culturally relevant development and implementation of programs and policies can help to prevent further discrimination and colonization of Aboriginal peoples (Barnett & Kendall, 2011).

From the beginning of imperialistic policies and colonization to the present day, Aboriginal peoples have been oppressed and marginalized; indeed, though they have displayed remarkable resilience, Aboriginal peoples still suffer the effects of colonization today. Based on the assumption and view of western superiority (Battiste, 1998), Eurocentric colonial policies regarding healthcare, education, language, spirituality, traditions, etc. have been and continue to be used to control Aboriginal peoples. While there has been a paradigm shift in recent years that recognizes and respects Aboriginal rights, there are still key aspects of Aboriginal cultures that are missing from government policies, such as Aboriginal languages and knowledge (Alfred, 2009). One of the main problems with the underrepresentation of Aboriginal knowledge and involvement in government policies is that it places Aboriginal peoples as inferior to non-Aboriginal peoples and is disrespectful of Aboriginal peoples, their history, and their knowledge (Battiste, 1998). Western, Eurocentric knowledge still remains the dominant form of knowledge, even in the wake of critiques surrounding Eurocentric power and discourses (Battiste, 1998). Indeed, Western knowledge is still seen as more legitimate than Aboriginal knowledge because of the denial of Aboriginal peoples' claims to humanity and history, which has led some Aboriginal peoples to accept and perpetuate the colonial discourses that further their marginalization and oppression (Smith, 1999). Understanding and deconstructing the impacts of colonialism and imperialism are central to Indigenous cultural politics (Smith, 1999).

Another significant part of postcolonial theory is the self-determination of Aboriginal peoples, which Smith (1999) described as not just a political goal of research, but also a goal of social justice. Self-determination is an Indigenous right under international law, but is a complex and controversial concept because the exact meaning and how it is to be applied is contested between governments and Aboriginal peoples (Napoleon, 2005). It can loosely be understood as

the right of Aboriginal peoples to have freedom and control over their own lives. Napoleon (2005) described it as both a collective principle and an individual principle, through politics and government, and agency and autonomy. Henriksen (2001) argued, however, that although self-government and autonomy may be seen as the main components of self-determination, not all Aboriginal peoples may view these as the only parts of this concept. In this paper, I will employ the concept of self-determination to refer to “the right of the people to freely pursue its economic, social and cultural development (Henriksen, 2001, p. 10) and “to be in control of their lives and their own destiny” (Henriksen, 2001, p. 14).

It is through this use of postcolonial theory that I pursued my research. As a non-Aboriginal person, this approach guided me by helping me to be cognizant about my position as a non-Aboriginal researcher, to respect Aboriginal peoples’ culture and history of colonialism, to collaborate with the NWTRPA to ensure the research reflected its objectives, and to listen and learn from their knowledge and the program leaders’ knowledge. Also, when working towards a goal, such as culturally relevant physical activity programs for Aboriginal peoples, Smith (1999) noted the importance of alliances between Aboriginal and non-Aboriginal groups. As a student at a Canadian university, I am in a position where I can be an ally to Aboriginal peoples by listening and providing support and resources while working towards cultural relevancy. In working towards this goal, I believe that non-Aboriginal researchers should understand that we need to transform conventional Western methodologies to avoid perpetuating colonial practices. A postcolonial approach informed both papers that comprise my thesis. In the first, a scoping study, I employ a postcolonial perspective in evaluating and understanding the gaps that the scoping study revealed in the existing literature on Aboriginal older adults and physical activity. In my second paper, a postcolonial approach helped me to determine the challenges with EIM

and if it is culturally relevant, while understanding that Aboriginal populations in the NWT are very diverse and may experience the EIM program differently.

Methodology for Paper One

In doing research with Aboriginal communities, some may think that an Indigenous methodology would be the most appropriate methodology to use; however, as I am a non-Aboriginal person with limited knowledge of Aboriginal worldviews, I believe that I am not in a position to use these methodologies and thus decided to use more conventional Western methodologies, such as a scoping study and case study. Even though I did not use an Indigenous methodology for my research, Indigenous methodologies still informed my research. They informed my work by helping me to understand and emphasize the contexts that inform Aboriginal peoples' "lives, positions and futures" (Steinhauer, 2002, p. 72). They also guided my work by making me consider my relationship with the research and with the research participants to ensure that I was fulfilling my role in the relationship (Steinhauer, 2002).

Given the dearth of research concerning Indigenous older adults, I decided that a scoping study would be an effective methodology for determining what research does currently exist regarding these populations. For the purposes of my research, I used Arksey and O'Malley's (2005) approach to a scoping study. In this section, I first provide an overview of a scoping study, including the steps involved in this type of review. Next, I describe how I used a scoping study and why it was beneficial for my research. Finally, I discuss the strengths and weaknesses associated with scoping studies.

Overview of a Scoping Study

Research reviews are becoming increasingly popular in health-related research (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010); however, there is a wide range of

terminology that is used to describe reviews that all have similar characteristics. As a relatively new researcher, this can make it difficult to choose the most appropriate form of review to employ. Arksey and O'Malley (2005) recognized this lack of clarity and sought to define and outline a methodological framework for a scoping study, which is just one of the many types of reviews available. They defined a scoping study as a review that

aims to map rapidly the key concepts underpinning a research area and the main sources and types of evidence available, and can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before. (p. 21)

Arksey and O'Malley (2005) discussed that a scoping study differs from a systematic review in many ways. Systematic reviews typically have a well-defined question, search for specific study design, assess quality of studies, develop exclusion criteria at the beginning, synthesize evidence to generalize findings, and determine the weight of evidence in favour of certain studies (Arksey & O'Malley, 2005). In contrast, Scoping review typically address broader topics, identify all relevant literature regardless of study design, do not assess quality of the studies, develop exclusion criteria post hoc once the research is familiar with the literature in the area, have some thematic construction but do not synthesize the findings to determine the weight of one study over another (Arksey & O'Malley, 2005).

Scoping studies can be undertaken for four common reasons: "to examine the extent, range and nature of research activity, to determine the value of undertaking a full systematic review, to summarize and disseminate research findings, [and] to identify research gaps in the existing literature" (Arksey & O'Malley, 2005, p. 21). The review that I conducted was mainly concerned with the fourth reason since I was interested in understanding what research currently

is available regarding Indigenous older adults and physical activity and identifying the gaps in this research. Arksey and O'Malley (2005) described a five-stage approach for conducting a scoping study, which included identifying the research question, identifying relevant studies, selecting studies, charting the data, and collating, summarizing and reporting the results. A scoping review provided me with the most adequate and comprehensive approach for addressing my first research objective.

Strengths and Weaknesses

Like any methodological framework, there are both strengths and weaknesses to a scoping study. A strength of a scoping study is that it “can provide a rigorous and transparent method for mapping areas of research” (Arksey & O'Malley, 2005, p. 30). Scoping studies can also be conducted in a relatively short amount of time in comparison to a full systematic review; however, scoping studies still require a great deal of time and analytical work and should not be looked at as an easy option to avoid a systematic review. Another benefit of a scoping study is that it includes studies with a variety of research designs and methodologies, which is a strength over a systematic review, where the focus is generally only on randomized control trials (Arksey & O'Malley, 2005). Scoping studies are also very effective in showing the volume, nature, and characteristics of studies in a certain field of research, which helps to show the research gaps (Arksey & O'Malley, 2005). They are also beneficial for presenting results in an accessible and condensed way, which makes it easier for knowledge users, such as practitioners and policy makers, to use the study findings (Arksey & O'Malley, 2005). While there are many strengths to a scoping study, there are also some weaknesses of which researchers need to be aware.

One of the weaknesses of a scoping study is that it does not involve an evaluation of the quality of studies. This can result in an overwhelming number of studies to be included in the

review and cause tension between the concepts of breadth and depth when conducting the searches. In order to address this in my study, I ensured that I developed specific exclusion criteria for my review. Scoping studies also do not focus on examining the number of studies that are in favour of particular interventions; they focus on all studies equally (Akrsey & O'Malley, 2005). Given the shortcomings of a scoping study, I still chose to perform this type of review for my thesis because I wanted to be able to review all studies, not just randomized control trials and interventions, relating to Aboriginal older adults and physical activity, regardless of the quality or effectiveness the studies. I did not include a methods and analysis section for paper one because a scoping study methodology dictates these actions within the steps I outlined above.

Methodology for Paper Two

In order to determine how EIM was developed for older adults in the NWT and to understand the challenges that program leaders and communities have faced with EIM, I used a case study methodology for my research. Case studies are one of the many ways that a social science researcher can conduct his/her research. It is a very useful methodology for answering “how” or “why” questions for a contemporary event or set of events (Yin, 1994). Since many researchers in sociocultural studies seek to understand complex social phenomena, a case study can be a very valuable methodology to use, as it does not disrupt the meaningful characteristics of the real-life event being studied and provides an in-depth investigation into the case (Yin, 1994). In this methodology section, I will first explain what a case and case study are and provide an overview of the different debates about this methodology. I will then describe the different types of case studies that a researcher can employ. Next, I will explain and justify the particular type of case study I used for my research. Finally, I will describe the strengths and weaknesses of using a case study methodology.

Overview of Case Study

Before commencing a case study, it is important to define the case. Bloor and Wood (2006) described a case as a bounded system, such as a community, an institution, an individual, a program, an activity, or an event. For my second paper, the case was the EIM program run by the NWTRPA. Stake (1995) explained that researchers are interested in certain cases for both their uniqueness and commonality.

Yin (1994) described a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 13). The purpose of a case study is for the researcher to understand a social situation, event, program, activity, etc. in a single or multiple social setting(s) (Bloor & Wood, 2006). The reasons for conducting a case study may be to describe the social phenomenon or to generate or test a certain theory through the case (Bloor & Wood, 2006). For a novice researcher, it can be difficult to understand and design case studies because of the debates in the field surrounding the definition of a case study.

In reading the work of Stake (1995) and Yin (1994), who are two well-known authors in case study research, one can see a debate regarding the definition of and types of case studies that researchers can employ; this is one of the more common debates in the field. For Stake (1995), a crucial focus of a case study is the specific case that is being studied. For Yin (1994), the main focus of a case study is the method and techniques used for the data collection. Stake (1995) believed that the results from a case study could not be generalized to other cases, whereas Yin (1994) argued that the results of a case study could be generalized to other cases. Stake (2005) and Yin (1994) also have different categories of case studies.

Types of Case Studies

As previously mentioned, there are many different types of case studies. For Stake (2005) there are intrinsic, instrumental, and collective case studies. For Yin (1994) there are descriptive, explanatory, and exploratory case studies.

An intrinsic case study is a case study that looks at a certain case because the researcher is interested specifically in that case for his/her own intrinsic reasons (Stake, 2005). The main goal of an intrinsic case study is not to generalize about a phenomenon or to build upon theory; it is for the researcher to gain a better understanding of that specific case. An instrumental case study, on the other hand, is employed when the researcher uses a certain case to increase his/her understanding of something else (Stake, 2005). The case plays a supporting role in helping the researcher to understand a phenomenon and is not the main interest of the researcher. Intrinsic and instrumental are kinds of singular case studies. The third type of case study for Stake (2005) is the collective, or multiple, case study. A collective case study is used when a researcher wants to gain a better understanding of a certain phenomenon, population, or condition and uses multiple cases to study and understand it (Stake, 2005). It is similar to an instrumental case study, except more than one case is used. While Stake (2005) identified these aforementioned three main types of case studies, Yin (1994) identified three different types of case studies.

For Yin (1994), descriptive, explanatory, and exploratory case studies can all be either single or multiple case studies. First, a descriptive case study describes a population, event, or a program that has not previously been a common topic of study and illustrates key phenomena about the case(s) (Yin, 1994). Second, an explanatory case study looks at the causal links in a single case or multiple cases. A researcher uses this type of case study to provide explanations about the phenomenon related to the case and to show how these explanations can be applied to other situations (Yin, 1994). Finally, an exploratory case study focuses on “what” questions

about a case that develop theory for further inquiry into other similar cases (Yin, 1994).

Regardless of the debates regarding case studies, it is still common for researchers to use a case study methodology.

Using a Case Study for My Research

For my research, I employed an exploratory case study methodology, as outlined by Yin (1994). Gagnon (2010) explained that exploratory case study research typically deals with cases that are often disregarded, but are obviously important and need to be studied. As such, an exploratory case can be used in preliminary social research to further study a specific case or similar cases (Gagnon, 2010). For my research, the case was EIM. Due to the strengths of using a case study, which I will outline below, I believe that an exploratory case study was the most appropriate methodology for my research with EIM.

Strengths and Weaknesses

As I will demonstrate through a discussion of its strengths, an exploratory case study methodology was appropriate for my research. First, it aligns with my constructionist epistemology. Using a case study allowed me to understand the complex social systems that individuals and groups of individuals are part of and to understand how and why these social systems exist (Gagnon, 2010). Second, case studies generally involve multiple methods for data collection, which provide the researcher with a variety of rich data for an in depth look into the case (Bloor & Wood, 2006; Tellis, 1997). Common methods to gather data for a case study are participant observation, interviews, focus groups, audio or video recording, and archival research (Yin, 1994).

Third, as mentioned above, exploratory case studies are often used with new cases that have not been previously researched, so using this approach helped me to examine an area where

there had been very little research: physical activity for Aboriginal older adults. Fourth, given the time constraints of completing a two-year Master's thesis, a case study was more appropriate to use than ethnography because it still allowed me to gain rich, in depth data without having to be in the field for long periods of time. While there are many benefits to using a case study methodology, there are also weaknesses that researchers have identified; however, many of these weaknesses can be refuted.

One of the weaknesses cited with respect to case studies is that the results cannot be generalized (Tellis, 1997; Yin, 1994). Researchers such as Yin (1994) have refuted this by suggesting that case studies “are generalizable to theoretical propositions and not to populations or universes” (p. 10). A researcher conducts a case study to help to understand a larger phenomenon, not to generalize statistical results from a sample to a population. Another critique mentioned in the literature regarding case studies is the bias that can be present in the explanation of results and conclusions by the researcher (Yin, 1994). Yin (1994) has refuted this by indicating that people may confuse case study research with case study teaching, which allows the case study to be intentionally changed to further prove a point; case study research is in fact very rigorous and fair.

As demonstrated throughout this section, I believe that an exploratory case study methodology was the most appropriate one to use for my research. Based on the strengths of an exploratory case study methodology, I was able to explore EIM and determine if the program is culturally relevant.

Methods and Analysis for Paper Two

As the aforementioned section states, a case study methodology typically involves multiple methods. For my research, I believe that using multiple methods provided me with the

most detailed and thorough data. Before I discuss the different methods and analyses that I used, it is important to address sampling and how I identified participants for my research. Following this, I describe the different methods and analyses that I used for paper two.

Sampling

Marshall (1996) identified three different approaches for sampling: convenience, judgement, and theoretical. For my research, I used judgement sampling, which is the most common sampling technique (Marshall, 1996), for EIM program coordinators and NWTRPA staff members. It involves actively selecting participants based on certain criteria that the researcher establishes, which makes it a more intellectual strategy (Marshall, 1996). My specific criteria were that these participants had to be either past or current program coordinators for EIM or staff members of the NWTRPA. Since this research was fully supported by the NWTRPA staff members, with their help and guidance, I was able to invite seven program leaders from various communities across the NWT to participate in my research. Two NWTRPA staff members also participated.

Paper Two Methods

The purpose of the second paper was to address the second research objective: to understand if and how EIM is adapted for residents of NWT communities, and to understand the challenges that program leaders and communities have faced with regard to implementing and maintaining the program and how they have dealt with these challenges. In order to undertake this second objective, I conducted semi-structured interviews and archival research. The data collected from these methods were analyzed using thematic analysis. I travelled to Yellowknife, NWT, for two months (May and June, 2013) for the data collection and to volunteer with the NWTRPA in order to become familiar with the organization.

Semi-structured interviews. Interviews are a very common method that researchers use for qualitative research. In fact, interviews have become such a common part of our culture that scholars have said that we live in an “interview society” (Fontana & Frey, 2005; Kvale & Brinkmann, 2009). Generally, interviews fall into three main categories: structured, semi-structured, and unstructured. For my research, I used semi-structured interviews. Semi-structured interviews use an interview guide (Kvale & Brinkmann, 2009) that can range from being fairly structured with specific questions, to just being a list of topics that the researcher wishes to cover (Ayres, 2008). In a semi-structured interview the researcher typically asks open-ended questions to elicit responses from the participants. A benefit of using this type of interview is that probes can be used to gain further information or to demonstrate the researcher’s use of active listening (Ayres, 2008), which can create a more trusting relationship between the interviewer and the interviewee. Semi-structured interviews can be very useful to learn about participants’ experiences, opinions, interpretations, etc.

The semi-structured interviews were conducted using an interview guide that was created with input from my key stakeholder: The NWTRPA. I conducted nine semi-structured interviews with EIM program coordinators from throughout the NWT and NWTRPA staff members. Seven of these interviews were over the telephone due to the great distance between communities in the NWT and the other two were held at the NWTRPA office in Yellowknife. The duration of the interviews was approximately thirty to sixty minutes and all, but one, of the sessions was digitally recorded with permission from the participants, as one participant requested not to be recorded. Using a semi-structured interview approach gave me ample amounts of useful data and helped me to learn more about EIM, how it has developed, and the program leaders’ experiences with running EIM.

Archival research. For my second paper, I also conducted archival research. Patton (2002) noted that archival research can produce detailed, useful data about organization or programs, which is why I used this for my research on EIM. There is an abundance of sources that can be used for archival research, including annual reports, emails, evaluations, brochures, presentations, manuals, photos, etc. There are two types of resources in archival research: primary and secondary. Primary resources are first hand accounts of historical events, such as diaries, business records, newspaper articles, etc. (Caseñas & Kalsebeek, 2006). Secondary resources are usually descriptions or analyses of the primary resources, such as encyclopedias, dictionaries, bibliographies, etc. (Caseñas & Kalsebeek, 2006).

There are several factors that must be considered prior to employing archival research. Archival research is usually conducted later on in the data gathering process because it is important to have a strong focus for your research before using this method (Caseñas & Kalsebeek, 2006). Another thing to consider when using this method is that archives typically only represent the voice of those individuals or groups who were highly regarded and considered important. It is unlikely that archives will incorporate groups that have been marginalized or oppressed. Archives can also be difficult to access and often have to be requested in advance, which increases the time for data collection (Caseñas & Kalsebeek, 2006). They can also take extended periods of time to analyze as there can be many documents to go through in order to find sufficient information (Caseñas & Kalsebeek, 2006). I used archival research to look at EIM's annual reports, program evaluations, and program descriptions to help to understand the program's development, implementation, and evaluation strategies.

Paper Two Analysis

Thematic analysis. The data from the semi-structured interviews and focus groups were

analyzed using thematic analysis. Thematic analysis is used to uncover and report recurring patterns in data (Braun & Clarke, 2006). Braun and Clarke (2006) described a six-step approach to thematic analysis. First, the analyst should familiarize him/herself with the data by (re)reading the data and taking note of initial ideas. Second, initial codes need to be generated and attached to the text in order to systematically identify and organize all the data. Third, the codes should be collated into potential themes. Next, themes need to be reviewed and researchers should ensure that the themes fit in both their original context as well as the generated theme. Fifth, themes have to be given clear and concise names and definitions that reflect the message that the analysis is attempting to deliver. Finally, in the sixth step, the final product should be produced by selecting the most appropriate, compelling extracts that relate to the research questions and literature reviewed. This sixth and final step also represents the researcher's final chance to analyze the data (Braun & Clarke, 2006). Through thematic analysis, I was able to determine if EIM was culturally relevant for Aboriginal older adults and to understand the challenges that program leaders have faced with implementing and maintaining EIM.

Thesis Format

This thesis is written using the publishable paper format. Paper one will address my first research objective: To identify what is known about older Indigenous adults' engagement in physical activity and the existing gaps in the literature. Paper two will address my second research objective: To understand if and how EIM is adapted for residents of NWT communities, and to understand the challenges that program leaders and communities have faced with regard to implementing and maintaining the program and how they have dealt with these challenges. Through these two papers I hope that my research will make a strong contribution to understanding the gaps in current literature regarding Aboriginal older adults and physical

activity and the ways in which physical activity programs can be made to be culturally relevant for Aboriginal Elders and their communities. Finally, I hope that my findings can be used to improve older Aboriginal adults' health and further efforts towards culturally relevant programs.

Footnotes

¹ The term Aboriginal is used to refer to First Nations, Métis, and Inuit peoples in Canada and the term Indigenous is used to refer to Indigenous peoples in the rest of the world and to be consistent with the literature being cited.

² I use “populations” (plural) to recognize the diverse Aboriginal nations that make up Canadian Aboriginal populations.

³ Throughout this paper, I understand culture to be “the often unconscious standards by which societies-structured groups of people- operate. These standards are socially learned rather than acquired through biological inheritance” (Haviland, Prins, Walrath, & McBride, 2005, p. 14).

⁴ The NWTRPA uses the term “Elders” to refer to Aboriginal older adults and will be used interchangeably with Aboriginal older adults throughout.

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Chapter Two: Indigenous Older Adults and Physical Activity: A Scoping Study

Abstract

Despite that the older Indigenous populations in Canada experience disproportionately poor health and are growing quickly, research regarding older Indigenous adults' health and wellness, including their physical activity behaviours, remains limited. In this paper, we provide a scoping review (Arksey & O'Malley, 2005) of the existing literature on older Indigenous peoples' physical activity patterns, identify knowledge gaps in this area of research, and discuss the implications of this review for health promotion practitioners and researchers. A search of nine databases and two journals yielded fourteen articles for review. The key terms for this review focused around three main ideas: Indigenous peoples, older adults, and physical activity. Through charting the data and analyzing the studies using a thematic approach, it became apparent that most of the studies focused around the idea that Indigenous older adults had low physical activity participation rates. The themes from this review corroborate that intersecting factors such as colonialism, social inequities, and physical activity measures, tests, programs, and centres that are developed for non-Indigenous older adults that are typically not addressing Indigenous older adults' needs, all contribute to Indigenous older adults lack of participation in physical activity.

In Canada, out of the total Indigenous populations¹, the older Indigenous adult populations have increased from 4.8% in 2006 (Statistics Canada, 2010) to 5.9% in 2011 (Statistics Canada, 2013). Alarming, Rosenberg, Wilson, Abonyi, Wiebe, and Beach (2009) demonstrated that older Indigenous peoples in Canada are in much poorer health in comparison to their non-Indigenous counterparts. They found that older Indigenous peoples are more likely to report poor/fair health as well as suffer from more chronic conditions when compared to older non-Indigenous peoples. For Aboriginal older adults in Canada, the prevalence of chronic diseases, such as diabetes, cancer, heart disease, stomach problems, asthma, chronic bronchitis, and emphysema is much higher in comparison to non-Aboriginal older adults. To deal with these conditions, Aboriginal older adults face many barriers in accessing adequate healthcare due to the lack of Aboriginal languages spoken by many healthcare providers and cultural² differences related to aging, medical treatment and death that exist between Aboriginal older adults and non-Aboriginal healthcare providers (Rosenberg, Wilson, Abonyi, Wiebe, & Beach, 2009). Aboriginal peoples have a shorter life expectancy by 8.1 years for males and 5.5 years for females in comparison to non-Aboriginal peoples (Health Canada, 2007). Given the fact that these populations experience disproportionately poor health and are growing quickly, older Indigenous adults' health and wellness, including their physical activity behaviours, should be a key research priority. Nevertheless, researchers and policymakers have paid little attention to the health and physical activity needs of older Indigenous peoples, though they have focused heavily on these needs for older non-Indigenous populations (Beatty & Berdahl, 2011; Rosenberg et al., 2009). Indeed, the older Indigenous adult populations are one of the most neglected societal groups in Canada (Beatty & Berdahl, 2011).

To make a contribution towards addressing the neglect of older Indigenous peoples' health, in this paper I provide a scoping review of the existing literature on older Indigenous peoples' physical activity patterns, identify knowledge gaps in this area of research, and discuss the implications of this review for health promotion practitioners and researchers. Prior to doing so, however, I first offer an overview of disparities between Indigenous and non-Indigenous older adults' health in Canada, with a focus on the roles the social determinants of health, particularly colonialism (Reading & Wein, 2009), play in these disparities. Such information is crucial for situating the existing body of knowledge on Indigenous older adults' health within its current socio-cultural-historical context. Given that there has been very little work done in Canada with Indigenous older adults and physical activity, I had to look internationally to review research in this area.

Health Disparities and the Social Determinants of Health

The existing body of literature makes it clear that many health disparities exist between Indigenous peoples and non-Indigenous peoples in Canada, with Indigenous peoples suffering from much poorer health in comparison to non-Indigenous peoples (Frohlich, Ross, & Richmond, 2006; Waldram, Herring, & Young, 2006). These disparities are also seen between older Indigenous peoples and their non-Indigenous counterparts, with older Indigenous peoples suffering from chronic diseases, such as heart problems, hypertension, diabetes, and arthritis, at double or triple the rates as non-Indigenous seniors (Health Canada, 2002). Many authors have argued, however, that these health disparities are directly related to the social inequities that exist between these populations (Czyzewski, 2011; Frohlich et al., 2006; Reading & Wein, 2009), which can also be described as the social determinants of health. Graham (2004) described the concept of the social determinants of health as “referring both to the social factors promoting and

undermining the health of individuals and populations and to the social processes underlying the unequal distribution of these factors between groups occupying unequal positions in society” (p. 102). The social determinants of health impact individuals, communities, and cultures in different ways and on different levels: proximal, intermediate, and distal. The proximal determinants of health are those that have a direct impact on health, while the intermediate determinants of health are “thought of as the origin of those proximal determinants” (Reading & Wein, 2009, p. 15). Moreover, the distal determinants of health have the most significant impact on health because they “represent political, economic, and social contexts that construct both intermediate and proximal determinants” (Reading & Wein, 2009, p. 20). Some authors have argued that due to the health inequalities between Indigenous peoples and non-Indigenous peoples and Indigenous peoples’ history with colonialism, Indigenous peoples have a unique set of social determinants of health, which includes colonialism, a distal determinant of health (Czyzewski, 2011; Reading & Wein, 2009; Waldram et al., 2006).

While colonialism has had direct impacts on the health of Indigenous people, such as through the introduction of contagious diseases like smallpox and tuberculosis (Waldram et al., 2006), it also has and continues to have an indirect influence on the health of Indigenous peoples (Czyzewski, 2011). Colonialism has significant impacts on the health of Aboriginal peoples today. It creates social, political, and economic inequalities that affect the proximal and intermediate determinants that lead to poor health, such as inadequate education, poor access to culturally safe health care, poor access to healthy and affordable food, poor housing conditions, and high rates of unemployment (Reading & Wein, 2009). Colonialism has also created social, political, and economic disparities that result in Indigenous peoples’ knowledge being viewed as inferior to that of non-Indigenous peoples’.

Historical trauma from colonization and current colonial practices and policies has had and continues to have significant influences on Indigenous peoples' self-determination. Like colonialism, self-determination influences all other determinants of health for Indigenous peoples (Reading & Wein, 2009). Reading and Wein (2009) argued that "in order to ensure the most favourable intermediate determinants of health, Indigenous peoples must participate equally in political decision-making, as well as possess control over their lands, economies, education systems, and social and health services" (p. 23). Without such control and ownership over social, political, and economic factors, these populations will likely continue to experience poor health.

Since physical activity has been shown to have positive influences on physical, mental, and social well-being for older adults (Hamer, Lavoie, & Bacon, 2014), it represents an important area of study for addressing Indigenous older adults' health. Through this scoping study, I identify what is known about older Indigenous adults' engagement in physical activity, the existing gaps in the literature, and for future research directions. To our knowledge, no such review exists regarding older Indigenous adults and physical activity.

Methodological Framework

This review of Indigenous seniors and physical activity is a scoping study, which is a type of qualitative literature review. To conduct this review, I used Arksey and O'Malley's (2005) methodological framework for a scoping study. Scoping studies are often used to address broader topics and are less likely than systematic reviews to address very specific research questions (Arksey & O'Malley, 2005). A key feature of this type of review is identifying all relevant literature, regardless of the study design (Arksey & O'Malley, 2005).

Arksey and O'Malley (2005) discussed four main reasons for conducting a scoping study: “to examine the extent, range and nature of research activity, to determine the value of undertaking a full systematic review, to summarize and disseminate research findings, [and] to identify research gaps in the existing literature” (p. 21). This paper is mainly concerned with the fourth reason, to identify research gaps in the existing literature, since the area of research examining older Indigenous adults and physical is very limited and requires further attention. A scoping study was chosen as the most appropriate methodology for this review, not only for its effective use in areas that have not been thoroughly reviewed, but also because it is becoming an increasingly popular methodology for reviewing health research (Levac, Colquhoun, & O'Brien, 2010) and has been widely used in previous health-related reviews (see Abraham, Sommerhalder, & Abel, 2010; Crooks, Kingsbury, Snyder, & Johnston, 2010; Toohey & Rock, 2011; Wise, Angus, Harris, & Parker, 2012)

Arksey and O'Malley (2005) described a five-stage approach for conducting a scoping study. The first stage, identifying the research question, is important for helping to plan how the search strategies are built. They suggest keeping a wide approach to the question in order to create a breadth of literature, since parameters can be set once there is a general idea of the scope of the field (Arksey & O'Malley, 2005). The second stage, identifying relevant studies, is concerned with adopting a strategy to identify studies, published or unpublished, that are related to the research question and often results in a large number of studies (Arksey & O'Malley, 2005). This stage is when researchers decide on some of the parameters, such as language and date range of the studies as well as what type of sources will be covered, such as electronic databases, reference lists, relevant organizations, and key journals. The next stage, study selection, involves eliminating studies based on the development of inclusion and exclusion

criteria and is where irrelevant studies are taken out (Arksey & O'Malley, 2005). These criteria are often developed after conducting the search because it gives the researcher time to become familiar with the literature in order to determine its relevance (Arksey & O'Malley, 2006).

The fourth stage, charting the data, allows the researcher to analyze the data and chart key issues and themes from the relevant studies, which helps to contextualize the findings in each research study (Arksey & O'Malley, 2005). Levac et al. (2010) suggested that for this stage, the researcher should decide what specific information to take from the studies based on its relevance to the research question. The final stage, collating, summarizing, and reporting the results, involves presenting an overview of all material reviewed and allows the researcher to show the dominant areas of research and to find out the main gaps (Arksey & O'Malley, 2005). This stage can be completed through a more thematic approach, by organizing and presenting the results in a thematic manner; however, the authors also suggested providing a descriptive numerical summary that includes the number of studies included, the types of studies, the years of publication, and other characteristics of the studies (Arksey & O'Malley, 2005). A scoping study can be a large and tedious project to take on; however, keeping track of how each stage of the process is conducted can make the review much more manageable and effective in exploring the existing research and identifying future research directions.

Analysis

To complete the first step of Arksey and O'Malley's (2005) five-stage approach for conducting a scoping study, I determined that my research question would be, "what is known about older Indigenous adults' engagement in physical activity?" Once I decided what the research question would be, I began the second stage by developing the key terms to use for the search strategy. The key terms for this review focused around three main ideas: Indigenous

peoples, older adults, and physical activity. The related search terms that I used for Indigenous peoples were Indigenous, Aboriginal, Native, First Nation, Métis, Inuit, and Indian. The related search terms that I used for older adults were senior and elder. Finally, the related search terms that I used for physical activity were recreation, leisure, and sport. For the searches, I used Boolean operators to maximize the number of possible variations of key terms. I limited the search to the key terms in the article titles and abstracts and to only articles published in English. I conducted the search in nine electronic databases: SPORTDiscus, Physical Education Index, PubMed, Sociological Abstracts, Medline, CINAHL, Scopus, PsychInfo, and ProQuest Dissertations and Theses. I chose these databases based on their relevance to the fields of study relating to physical activity and Indigenous populations. I also hand-searched two pertinent journals in the field: *Journal of Cross-Cultural Gerontology* and *Journal of Physical Activity and Aging* since such an approach has been suggested as being a key part of the process in identifying relevant studies (Arksey & O'Malley, 2005). The search from the databases yielded 340 articles and theses; the search in the journals resulted in four articles. After deleting duplicates of the articles, I ended up with 190 total articles and theses. These papers were collected and organized by citation and abstract using EndNote® referencing software.

For the next stage, study selection, I developed exclusion criteria for eliminating studies that were not relevant to the review. The exclusion criteria were developed post hoc, which is central to scoping studies, because of the unlikelihood that the researchers are able to identify exclusion criteria at the beginning of the search (Arksey & O'Malley, 2005). The exclusion criteria that I developed included 1) articles that did not have physical activity, recreation, leisure, or sport as the primary focus (e.g., articles that focused on diabetes management with physical activity as one small factor of the research); 2) articles that did not have a distinct focus

on Indigenous older adults (e.g., articles that did not have specific results for Indigenous older adults); and 3) articles that combined results for both middle-aged and older adults and thus did not have specific results for older adults. After applying the exclusion criteria to the relevant articles and reading through the article abstracts, there were 32 articles to review.

Once I identified all relevant articles, I conducted the fourth stage of the scoping study: charting the data. For this stage, I created a table that included the title, authors, research objectives, participants, methods, and main findings for each article. Since I had a broad research question of identifying what was known about Indigenous older adults' engagement with physical activity, I decided that charting this information from the articles would be the most useful in terms of understanding what was known and for identifying common elements among the articles. Each of the remaining articles was read thoroughly. After reading through the full articles, eighteen articles were excluded based on the exclusion criteria, which left a final total of fourteen articles for review. For the final stage of the data collection and analysis, I summarized the data using a thematic approach to understand what is known about Indigenous older adults and physical activity.

Results

Fourteen articles were included in the final review process to understand what is known in the academic literature about Indigenous older adults and physical activity. In this results section, I will first provide an overview of the characteristics of the articles that I reviewed, followed by a review of the themes that came out of my analysis of the studies. While fourteen articles may seem like a rather small number of articles to review on such broad topic, this small number is not surprising given that numerous authors have discussed the lack of research regarding Indigenous older adults and physical activity (Beatty & Berdahl, 2011; Rosenberg et

al., 2009). The articles ranged in publication date from 1999-2012. The studies ranged in numbers of participants from 17 to 396 Indigenous older adults. Some studies also included older adult participants from other ethnicities, including White, African American, Chinese, Latino, Vietnamese, etc., while others focused solely on Indigenous older adults. Ten of the articles were based on American studies, while the remaining three studies were based on studies conducted in each of Canada, New Zealand, and Australia.

The articles consisted mainly of three types of studies: interventions to increase physical activity, studies designed to conceptualize physical activity in relation to health and leisure, and exploratory studies of the barriers and facilitators to physical activity. Four of the articles were based on data from two separate studies, two from each study, while the remaining articles were all based on separate studies. The articles included quantitative and qualitative studies, with five quantitative, six qualitative, and three mixed methods studies. The methods of data collection ranged from pre- and post-experiment tests and demographic questionnaires to participant observation and focus groups. While the studies varied in methods, participants, and research objectives, common themes appeared throughout the articles.

Through charting the data and analyzing the studies using a thematic approach, it became apparent that most of the studies focused around the idea that Indigenous older adults had low physical activity participation rates. Within this main theme, four other broad themes became evident: psychological, environmental, cultural, and health are the most common barriers to older Indigenous adults' participation in physical activity; social support through community and family are important for older Indigenous adults' participation in physical activity; Indigenous older adults' lack of knowledge about physical activity and low education levels serve as barriers

to participation in physical activity; and self-monitoring of physical activity is effective in increasing physical activity levels.

Barriers to Participating in Physical Activity

Four of the studies in this review explored the barriers that Indigenous older adults faced regarding their participation in physical activity. The first theme, psychological, environmental, cultural, and health are the most common barriers to participating in physical activity, related mainly to these studies. Lack of motivation to engage in physical activity (Henderson & Ainsworth, 2001; Sawchuk et al., 2011a), low self-esteem (Belza et al., 2004; Henderson & Ainsworth, 2001), fear of falling, and self-consciousness (Mathews et al., 2010) were all identified as psychological barriers to physical activity for Indigenous older adults.

Environmental barriers to physical activity included not being close to interesting places for walking (Sawchuk et al., 2011a), lack of transportation to facilities for exercise programs (Belza et al., 2010; Mathews et al., 2010; Son & Hutchinson, 2009), inconvenient facility hours and costs (Belza et al., 2010; Mathews et al., 2010), neighbourhood safety and fear of crime (Belza et al., 2004), and environments that are not supportive of culturally relevant physical activity (Belza et al., 2010; Hanashiro, 2012).

Lack of cultural relevancy in active aging policies (Ranzijn, 2010), lack of cultural relevancy in research studies that explore physical activity behaviours (Wright-St. Clair et al., 2012), disconnectedness and isolation from other Indigenous older adults in fitness centres (Belza et al., 2004), and lack of traditional activities in programs and fitness classes for older adults (McLintock, 1999) were identified as cultural barriers to physical activity in the studies included in this review. Finally, health barriers to physical activity included constraints to being active as a result of chronic conditions, such as diabetes, arthritis, and coronary heart disease

(Belza et al., 2004; Henderson & Ainsworth, 2001; Mathews et al., 2010; McLintock, 1999; Son & Hutchinson, 2009). While there were many barriers to physical activity for the Indigenous older adults that were identified in these studies, an important factor for increasing the likelihood of physical activity participation was the support of family and community.

Importance of Social Support

The second theme, social support through community and family are important for Indigenous older adults' participation in physical activity, was apparent in many articles, especially those that included comparisons between Indigenous older adults and older adults from non-Indigenous backgrounds. For example, in a study that compared Maori and non-Maori older adults, leisure activities that focused around family were more important than individualistic recreation activities for Maori older adults (Wright-St. Clair, 2012). Indigenous older adults in two studies noted that having a community connection and engagement with other Indigenous older adults were important factors for their physical activity participation (Belza et al., 2004; Mathews et al., 2010). Another study also discussed how physical activity for Indigenous older adults is a means for them to be healthier and able to provide support and care to family and community members; it is a way to facilitate social support for others (Hanashiro, 2012). While social support may positively influence physical activity for these populations, many Indigenous older adults do not feel that they have the knowledge to perform proper physical activity.

Lack of Physical Activity Knowledge and Low Education Levels

The third theme, lack of knowledge about physical activity and low education levels, was also associated with low physical activity participation for older Indigenous adults. Many of the older adults in the studies concerning barriers to physical activity expressed that they did not

have the knowledge to safely perform physical activities, so they just did not participate at all; this was evident mainly in studies that compared Indigenous older adults to non-Indigenous older adults (Mathews et al., 2010; Wilcox et al., 2009). While most participants in the studies were able to identify the benefits of physical activity for cognitive, physical, psychological health, many of them were unsure of what types of activities would provide these benefits and the specific recommendations for physical activity (Mathews et al., 2010; Wilcox et al., 2009). Lack of knowledge about physical activity pertained to frequency, duration, intensity, safety, and location of programs (Mathews et al., 2010; Wilcox et al., 2009). Along with knowledge about physical activity, knowledge about health, and educational attainment had positive relationships with physical activity levels (Sawchuk et al., 2008a). In three of the research studies (see Kochevar, Smith, & Bernard, 2001; Sawchuk et al., 2008b, Sawchuk et al., 2011b), when appropriate physical activities were prescribed and Indigenous older adults had the knowledge to perform them, the older adults participated in the physical activities for the duration of the studies.

Positive Influence of Self-Monitoring Physical Activity Levels

The final theme, self-monitoring of physical activity is effective in influencing physical activity levels, was apparent in the intervention strategies that focused on the lack of physical activity participation by Indigenous older adults. The keeping of an activity log and tracking physical activity were better for increasing physical activity in all studies that used self-report measures (Kochevar et al., 2001), when compared to goal-setting or specific activity counts (e.g., pedometer step-count measurements) (Sawchuk et al., 2008b; Sawchuk et al., 2011b). While all of the studies in this review did cover large areas of research and the authors performed a laudable task of addressing gaps in research about Indigenous older adults and physical activity,

there are still many questions and areas of research that have yet to be investigated and are important for advancing this area of study.

Discussion

Indigenous older adults continue to experience much poorer health in comparison to non-Indigenous older adults' health (Australian Indigenous HealthInfoNet, 2013; Health Canada, 2002; Moulton et al., 2005). While this inequity speaks to ongoing challenges with addressing Indigenous peoples' social determinants of health and knowledge translation of existing research finding, this inequity also illustrates the need to further target research efforts at the gaps that still remain in relation to Indigenous seniors and physical activity. Thus, in this section, I start by identifying how this scoping study enables us to summarize what is known about Indigenous older adults' physical activity. I also discuss the knowledge gaps that still exist in research today concerning these populations and their members' engagement with physical activity as well as the implications of this review for researchers and practitioners alike.

What is Known About Indigenous Older Adults and Physical Activity?

Overall, it is difficult to make generalizations about Indigenous older adults' physical activity because of the differences between various communities and groups; however, in this review there were common themes that were shared across the fourteen different articles. Given that there has been very little work done in Canada with Indigenous older adults and physical activity, I had to look internationally to review research in this area. The themes from this review corroborate that intersecting factors such as colonialism, social inequities, and physical activity measures, tests, programs, and centres that are developed for non-Indigenous older adults that are typically not addressing Indigenous older adults' needs, all contribute to Indigenous older adults lack of participation in physical activity. Practitioners and researchers need to be aware of these

complex factors before commencing research, programs, tests, etc. and prior to attempting to “fix” the problem of low physical activity rates.

Current Knowledge Gaps and Implications for Practitioners and Researchers

While there were a relatively wide variety of topics discussed within the fourteen articles, there are still many knowledge gaps that remain. With the exception of one article (see Ranzijn, 2010) included in this review, there were no articles that focused on critiquing physical activity programs or on providing a postcolonial analysis of physical activity for Indigenous older adults. The current body of literature contains very little information about the meaning of physical activity for Indigenous older adults and their experiences in physical activity programs. One study (see Henderson & Ainsworth, 2001) was conducted with older Indigenous women to understand their perspectives on physical activity and others have been done to understand the barriers and enablers to physical activity, but, in general, little research has been carried out to understand what it means to be physically active and physical activities' relation(s) to health and culture for Indigenous older adults. It is thus possible that a great deal of knowledge about and levels of participation in physical activity is not captured in the existing body of research. For example, the main theme across the majority of the studies was that Indigenous older adults have low physical activity participation rates and little knowledge of physical activity. Importantly, while many studies concluded that Indigenous older adults are not knowledgeable of physical activities, this lack of knowledge specifically concerned Western physical activity and failed to account for the participants' knowledge of Indigenous physical practices, which marginalizes Indigenous peoples' knowledge and physical activity practices.

There are also knowledge gaps in relation Indigenous peoples in many countries. When looking at the studies included in this review, the majority were conducted in the United States.

It would also be beneficial to conduct more research with Indigenous older adults in other countries, such as Canada, Australia, and New Zealand, to name a few. This is important because while Indigenous populations around the world share in many of the same effects of colonization (United Nations, 2009), they all have different experiences with colonialism and physical activity and have distinct challenges, strengths, resources, languages, education, governance, etc. that contribute to overall health. Additionally, since most of the studies in this review were conducted in urban settings, it may be useful to have a stronger focus on rural and remote Indigenous communities to understand their community members' engagement with physical activity because of the different factors associated with physical activity participation in an urban community versus a rural community (Wilcox, Castro, King, Housemann, & Brownson, 2000). Furthermore, instead of treating all Indigenous groups as homogeneous, it would be productive to also focus on individual communities and to conduct comparisons between and within different Indigenous groups to investigate issues pertaining to gender, class, sexuality, ability, etc., in order to move away from colonial idea that all Indigenous peoples are the same (Smith, 1999).

While there has been a substantial amount of work and effort put into conducting research with Indigenous older adults, there is still much to be learned about understanding meanings of, engagement and interests in physical activity for Indigenous older adults.

Conclusion

The studies in this review show that there are many issues for practitioners and researchers to consider before planning research or a physical activity program with Indigenous older adults. As researchers, we need to understand why it has been acceptable for these populations to receive such little interest for so many years when it is quickly increasing (WHO,

2012) and there continues to be health disparities between Indigenous and non-Indigenous older adult populations. Even though the Indigenous populations are much younger in comparison to the non-Indigenous populations, older Indigenous adults will continue to be one of the most neglected groups in society if researchers and practitioners continue to ignore the effects of colonialism on the health of these populations (Beatty & Berdahl, 2011). This review also shows that current health promotion practices related to physical activity do not take into account Indigenous older adults' traditional practices around physical activity, health, and their unique determinants of health (Czyzewski, 2011; Reading & Wein, 2009; Waldram et al., 2006).

To help move away from colonial ideals when developing a program or a research project, consulting with and asking questions of Indigenous older adults concerning what they are interested in and how they want to do it is an important part of enabling the older adults to have ownership over the program and foster their self-determination. This would also help to identify their needs and strengths, so that programs can be designed and evaluated in ways that are meaningful to the intended user group. In turn, this could help to increase motivation to be physically active and community self-determination for these populations (Kirby et al., 2007), which were identified in some of the articles as a few of the psychological barriers to participating in physical activity.

If physical activity for Indigenous older adults is just being understood as something that needs to be "fixed" through Westernized norms of physical activity, it can reinforce colonial ideas that Western knowledge of and approaches to performing physical activity are the most effective and acceptable way to participate in physical activity and thus ignores the importance of Indigenous knowledge of physical practices. By further critiquing colonial practices, recognizing and embracing Indigenous older adults' knowledge of physical practices, and

understanding their meanings of and engagement in physical activity, researchers and practitioners alike have the opportunity and means to create change with and for Indigenous peoples and to support Indigenous peoples' self-determination, which could lead to reducing the health disparities and social inequities that exist between the increasing Indigenous older adult populations and non-Indigenous older adult populations.

Footnotes

¹ I use “populations” (plural) to recognize the diverse Indigenous nations that make up Indigenous populations around the world.

² Throughout this paper, I understand culture to be “the often unconscious standards by which societies-structured groups of people- operate. These standards are socially learned rather than acquired through biological inheritance” (Haviland, Prins, Walrath, & McBride, 2005, p. 14).

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Appendix

Title, Author, and Research Objectives for Each Study, Divided into Specific Types of Studies

Table 1

Title, author, and research objectives for each study, divided into specific types of studies.

<u>Type of study</u>	<u>Title (year)</u>	<u>Author</u>	<u>Research objectives</u>
Intervention to increase physical activity	A randomized trial to increase physical activity among native elders (2008)	Craig N. Sawchuk, Steve Charles, Yang Wen, Jack Goldberg, Ralph Forquera, Peter Roy-Byrne, and Dedra Buchwald	To compare two methods for increasing physical activity and walking among American Indian elders: daily physical activity monitoring and daily physical activity monitoring with pedometer
	Does pedometer goal setting improve physical activity among Native Elder? Results from a randomized pilot study (2010)	Craig N. Sawchuk, Joan E. Russo, Steve Charles, Jack Goldberg, Ralph Forquera, Peter Roy-Byrne, and Dedra Buchwald	Pilot study to examine if step-count goal setting resulted in increases in physical activity and walking compared to only monitoring step counts with pedometers among American Indian/Alaskan Native elders.
	Effects of a community-based intervention to increase activity in American Indian elders (2001)	Andrew J. Kochevar, Kurt L. Smith, and Marie A. Bernard	To evaluate the efficacy of a community-based exercise course applied to a group of American Indians, who desired to increase their physical activity.
Conceptualize physical activity in relation to health and leisure	Active ageing: another way to oppress marginalized and disadvantaged Elders? Aboriginal Elders as a case study (2011)	Rob Ranzijn	Explore whether the term "active ageing" may further marginalize certain older populations and to explore expanded conceptualizations of ageing
	Conceptualizing leisure self-care in an exploratory study of American Indian Elders' health beliefs and behaviours (2009)	Julie S. Son and Susan L. Hutchinson	To explore the possible role of the leisure element in American Indian elders' views of health and use of self-care and to identify the elders' perceived leisure constraints
	Doing what's important: Valued	Valerie A. Wright-St. Clair, Mere	To explore the feasibility of asking older New Zealanders to

	activities for older New Zealand Maori and non-Maori (2011)	Kepa, Stefanie Hoenle, Karen Hayman, Sally Keeling, Martin Connolly, Joanna Broad, Lorna Dyall, and Ngaire Kerse	name their three most important activities and to test the WHO's International Classification of Functioning, Disability and Health's (ICF) utility in coding open responses concerning important activities
	Perceptions and beliefs about the role of physical activity and nutrition on brain health in older adults (2012)	Sara Wilcox, Joseph R. Sharkey, Anna E. Mathews, James N. Laditka, Sarah B. Laditka, Rebecca G. Logsdon, Nadine Sahyoun, Joseph F. Robare, and Rui Liu	To examine the perceptions of the link between physical activity and nutrition to the maintenance of cognitive health in an ethnically and geographically diverse sample of older adults.
	Physical activity and human development among older Native American women (2008)	Karla A. Henderson and Barbara E. Ainsworth	To explore the involvement in and meanings of physical activity among a selected group of Native American women over their life span and life course.
	The perception of physical activity and social support for physical activity among Native Hawaiians 55 years and older (2004)	Verna L. Hanashiro	To examine the perception of physical activity and social support for physical activity among Native Hawaiians 55 years of age and older.
Exploratory study of barriers and facilitators to physical activity	Barriers and facilitators to walking and physical activity among American Indian Elders (2010)	Craig N. Sawchuk, Joan E. Russo, Andy Bogart, Steve Charles, Jack Goldberg, Ralph Forquera, Peter Roy-Byrne, and Dedra Buchwald	Examine self-reported barriers and facilitators to walking and physical activity among American Indian Elders; assess relationship between health-related quality of life and barriers to physical activity
	Education is associated with physical activity among American Indian elders	Craig N. Sawchuk, Andy Bogart, Steve Charles, Jack Goldberg, Ralph Forquera,	To determine whether educational attainment is associated with physical activity among American Indian elders between 50-74 years of age who

(2009)	Peter Roy-Byrne, and Dedra Buchwald	participated in a randomized physical activity trial.
Older adult perspectives on physical activity and exercise: Voices from multiple cultures	Basia Belza, Julie Walwick, Sharyne Shiu-Thornton, Sheryl Schwartz, Mary Taylor, and James LoGergo	To identify barriers and facilitators to engaging in physical activity and to broaden our understanding of culturally appropriate physical activity and exercise programs.
(2001) Older adults' perceived physical activity enablers and barriers: A multicultural perspective (1999)	Anna E. Mathews, Sarah B. Laditka, James N. Laditka, Sara Wilcox, Sara J. Corwin, Rui Liu, Daniela B. Friedman, Rebecca Hunter, Winston Tseng, and Rebecca G. Logsdon	To examine perceived physical activity enablers and barriers among a diverse group of older adults and to explore racial/ethnic differences in these enablers and barriers.
Functional independence and active living: An action research study with First Nations elders (2012)	Mary Joan McLintock	To investigate and initiate a community-based process for improving the physical activity levels of the elderly members of six rural First Nations communities in Alberta and to improve their overall health. 1) What steps are First Nations rural communities able to take in order to get their elderly members more physically active? 2) Who in the community will have the most influence in getting the elderly to be more physically active? 3) What obstacles prevent the elderly in First Nations communities from being more physically active? 4) How can these obstacles be overcome?

Chapter Three: Culturally relevant physical activity through Elders in Motion?: Physical activity promotion for older Aboriginal adults in the Northwest Territories, Canada

Abstract

The 2006 Canadian Census found that the Aboriginal populations in Canada aged 65 and over have increased 43.0% since 2001. Despite this dramatic increase in older Aboriginal peoples, there is a dearth of research concerning this cohort, especially regarding their engagement with physical activity. Using a postcolonial lens, this research sought to understand if and how the Northwest Territories (NWT) Recreation and Parks Association's (NWTRPA) Elders in Motion (EIM) program is adapted for NWT residents and their communities; the challenges that program leaders and communities have faced in implementing the program; and how program leaders have dealt with these challenges. The findings from the nine semi-structured interviews show that EIM demonstrates an attempt to offer culturally relevant programming for older Aboriginal adults in the NWT and thus challenges some colonial practices that can be (re)inscribed through physical practices by developing EIM program material with a northern theme, incorporating plain language into all EIM documents, and visiting each community that is interested in running EIM. There are, however, aspects of the program that reaffirm colonialism: a lack of culturally relevant activities for the participants, little consideration of the diversity of Aboriginal peoples and cultures throughout the NWT, and reinforcing the idea that a physical activity program for mainly white older adults in southern Ontario will be sufficient for older Aboriginal adults in the NWT. In light of these findings, recommendations are offered for the NWTRPA on how the program can further challenge colonial practices and how the program can be more culturally relevant for its Aboriginal participants.

The 2006 Canadian Census found that the Aboriginal¹ populations² in Canada aged 65 and over have increased 43.0% since 2001 (Statistics Canada, 2010). Despite this dramatic increase in older Aboriginal peoples, there is a dearth of research concerning these cohorts (Jervis, 2010; Wilson, Rosenberg, & Abonyi, 2011), especially regarding its members' engagement with physical activity (Young & Katzmarzyk, 2007). This paper is concerned with meeting the needs of older Aboriginal adults in particular because their physical and mental health is so much worse than their non-Aboriginal counterparts in the NWT, which suggests that these populations' health needs require concerted attention (Beatty & Berdahl, 2011; Health Canada, 2002). Since there is a mix of Aboriginal and non-Aboriginal in the communities throughout the NWT, programs have to cater to both of these populations' needs; however, since the participants of EIM are mainly Aboriginal, this research focuses primarily on physical activity programs for Aboriginal peoples.

In their book, *Aboriginal health in Canada*, Waldram, Herring, Young (2006) discussed how pervasive lifestyle changes due to colonization have resulted in decreases in the physical activities in which elderly Aboriginal peoples participate; as a result, they are living more sedentary lifestyles. For older adults (65+ years of age), physical activity programs have been shown to improve physical, social, and mental health (Taylor et al., 2004); however, given the older Aboriginal populations' unique determinants of health (Waldram et al., 2006) and history with colonialism, it is especially important to have physical activity programs that are developed or adapted in ways that demonstrate respect and are culturally³ relevant for Aboriginal peoples' histories and the impacts of colonization (Giles & Darroch, under review). Physical activity is often ignored as a site of colonization of Aboriginal peoples, so it is important to understand how physical activity programs can reaffirm colonialism. For the research described herein, I

examined the Northwest Territories (NWT) Recreation and Parks Association's (NWTRPA) Elders in Motion (EIM) program. The research objectives for this project were twofold: 1) to understand if and how EIM is adapted for residents of NWT communities, and 2) to understand the challenges that program leaders and communities have faced with regard to implementing and maintaining the program and how they have dealt with these challenges. I used postcolonial theory to guide this research. Employing a case study methodology, I used semi-structured interviews and archival research as data collection tools. Thematic analysis of the data identified that EIM demonstrates an attempt to offer culturally relevant programming for older Aboriginal adults in the NWT and thus challenges some colonial practices that can be (re)inscribed through physical practices. Through EIM, the NWTRPA staff challenge colonialism by developing EIM program material with a northern theme, incorporating plain language into all EIM documents, and visiting each community that is interested in running EIM. There are, however, aspects of the program that reaffirm colonialism: a lack of culturally relevant activities for the participants and little consideration of the diversity of Aboriginal peoples and cultures throughout the NWT.

Situating the Research

The NWT is a very diverse area of Canada. It is 1 143 793 square kilometres and has a population of about 41 462 people (Statistics Canada, 2014c), over half of which identifies as Aboriginal (Statistics Canada, 2014b). In the smaller communities of the NWT, the residents are mainly Aboriginal, but also include non-Aboriginal peoples (Government of the NWT [GNWT], n.d.). There are 33 communities in the NWT, the capital and largest of which is Yellowknife (GNWT, n.d.). The median age of the population in the NWT is 32.3 years, with 5.7% of the population over the age of 65 years (Statistics Canada, 2014c). Of those who are 65 years and over living in a private dwelling, more than 25% live alone, which is similar to the overall

Canadian population (Statistics Canada, 2014c). The NWT is the only province or territory in Canada where there are 11 official languages; nine of these are Aboriginal languages and the other two are English and French (GNWT, 2013a). Poverty is an issue in the NWT as the gap is increasing between low and high income groups. The GNWT (2013b) released a report, which stated that vulnerable individuals, such as Elders³, are more affected by poverty and that “Aboriginal residents also face higher rates of poverty than non-Aboriginal residents” (p. 8). The GNWT (2013b) noted that “unemployment and income assistance rates are higher in the smaller communities, as is the cost of living” (p. 8). Consequently, the NWT is comprised of very diverse groups of people with varying resources, languages, and locations.

Elders in Motion: History and Structure

In early 2009, the NWTRPA, in partnership with the Dene Nation, developed EIM through funding provided by the Dene Nation, which was received through Health Canada’s Aboriginal Health Transition Fund, to create a fitness program for Elders in the NWT (Canadian Centre for Activity and Aging [CCAA], n.d.). The three main objectives of EIM are

to improve access to physical activity opportunities for Elders living in the Northwest Territories, to develop a [training] manual [for program leaders] and accompanying video for the Elders in Motion Fitness Program, and to deliver training of the Elders in Motion Fitness Program to various health and recreational leaders, and students in the NWT. (CCAA, n.d., p. 6)

In the fall of 2009, the NWTRPA partnered with the CCAA to further develop EIM. EIM now uses CCAA’s evidence-based Home Support Exercise Program, which is now called the Active Living Exercise program (ALEP). This program consists of 10 easy and effective exercises (CCAA, n.d.) and was developed mainly for older adults in southern Canada. The NWTRPA and

the CCAA adapted the ALEP for the smaller, rural and remote communities in the NWT by incorporating more plain language into EIM documents and using northern people, themes, and music in the documents and audio/visual material. In addition to the ALEP, EIM also includes a Balls and Balance activity, which uses small, lightweight exercise balls and stretching motions to improve Elders' balance and stability.

The EIM program can be used in a recreation or home-based setting to encourage Elders to increase their physical activity; however, the program is generally run in a group setting in the recreation, community, or health centres and is often run alongside other programs for Elders. EIM is a very flexible program for program leaders to implement in their communities, as it is up to the program leaders to decide when is best to run the program. Generally, EIM is offered at the same time each week and occurs when the space, time, and money is available to run the program. EIM is not often offered in the summer months due to many of the Elders being out on the land and away from community centres.

To run EIM, community members rely on the NWTRPA for training, partial funding, and support with program development. The NWTRPA provides training, which was developed in partnership with the CCAA to community health and recreation staff to implement the program in their own communities (NWTRPA, n.d.). Starting in 2013, as a part of EIM, the NWTRPA provided four \$2000-2500 grants that communities can apply for to help carry out the program. EIM is supported financially by the Government of the NWT's (GNWT) Departments of Health and Social Services and Municipal and Community Affairs (NWTRPA, n.d.). Training of the program leaders for EIM includes the ALEP and various other activities such as Balls and Balance and workshops on how to coordinate Elders programming in their community. A new and not yet fully developed part of the program is that the Active Communities Coordinator

visits the communities to discuss opportunities for Elders' physical activity and to explore the ways that recreation leaders, community health representatives, home support workers, and others in the community can help encourage Elders to be more active and to understand more about what the Elders are interested in doing. In early 2013, the communities that were accepted into the EIM program and received grants were Lutsel K'e, Enterprise, K'atlodeeche First Nation (Hay River Reserve), and Ulukhaktok.

The NWTRPA also organizes a Training Gathering for EIM program leaders and participants, which has been held twice in the past four years. The Training Gathering is a chance for those involved with EIM, such as program leaders and Elders, from across the NWT to get together and participate in the various training workshops, such as ALEP and Balls and Balance and to share their stories about the program. There is also an awards ceremony and dinner that recognizes Elders who have been nominated by their communities to receive an Active Elders Award. Elders are nominated based on their involvement in the community and their participation in an active lifestyle (NWTRPA, n.d.). While there was a formal evaluation of EIM completed in 2010, it mainly focused on the preliminary stages of EIM and did not explore the cultural relevancy of the program. The long-term challenges and successes of the program and the cultural relevancy of the NWTRPA's adaptation of EIM have not been explored.

Literature Review

In order to situate this research in the current body of literature, here I will provide an overview of the current state of older Aboriginal peoples' health. I will also examine physical activity for older adults and, more specifically, the status of physical activity for older Aboriginal peoples. Following this, I will explore cultural relevancy in relation to physical activity programs for Aboriginal peoples.

State of Older Aboriginal Peoples' Health

Just as the non-Aboriginal older adult populations (65 years and older) in Canada are increasing, so too are the older Aboriginal populations (Health Canada, 2002; Statistics Canada, 2010). In fact, the number of older Aboriginal peoples doubled between 1996 and 2006 (Statistics Canada, 2008); however, while these populations are increasing, older Aboriginal peoples suffer from chronic diseases, such as heart problems, hypertension, diabetes, and arthritis, at double or triple the rates as non-Aboriginal seniors (Health Canada, 2002). Other than physical health, there are many aspects of Aboriginal wellness that the Westernized biomedical model does not consider. For older Aboriginal peoples, successful aging does not just mean being in good physical health; it also means “being active in the community, passing down knowledge and wisdom” (Jervis, 2010, p. 301). A significant problem in the NWT for Aboriginal older adults is isolation and lack of socialization with other members of the community (Beatty & Berdahl, 2011). In order to have successful programs to maintain or improve older Aboriginal adults' health, it is important for such programs to consider cultural dimensions of definitions of health and successful aging as well as respect and recognize their implications on health. As a result, physical activity programs, which are common elements of health promotion programs for older adults, should also take these issues into consideration.

Physical Activity for Older Adults

It is commonly accepted that physical activity has many important physiological and psychological health benefits, especially for older adults. Endurance exercise has been shown to promote great improvements in cardiovascular health for older adults and research has demonstrated the importance of strength training in reducing the incidence of falls (Health Canada, 2011; Taylor et al., 2004). In addition to improving physiological factors, physical

activity has also been shown to have significant impacts on improving emotional, cognitive, social, and perceived physical function in older adults (Taylor et al., 2004). Regardless of the known benefits that physical activity has on health, many older adults are relatively inactive (Ashe, Miller, Eng, & Noreau, 2009). Taylor et al. (2004) argued that it is often difficult to develop an effective and successful physical activity intervention program for older adults because of low retention rates. It can be especially difficult for the older Aboriginal populations due to the impacts of colonization and Western models of physical activity (Beatty & Berdahl, 2011).

Status of Physical Activity for Aboriginal Adults

For Aboriginal peoples, the activities required for daily living, such as living off of the land, used to involve high levels of physical exertion (Waldram et al., 2006). A decline in physical exertion for daily living tasks has resulted from a much more technologically-reliant society, where furnaces have replaced the need to chop wood for a fire, skidoos have replaced the requirement of walking, and stores have replaced the demand for hunting, which has led to more sedentary lifestyles for Aboriginal peoples (Waldram et al., 2006). The transformation from a traditionally active lifestyle to a more sedentary lifestyle for Aboriginal peoples has had significant implications for these populations.

There have not been many studies conducted to determine actual amounts of physical activity performed by Aboriginal peoples; however, the Aboriginal Peoples Survey (APS), conducted in 1991, showed that 54% of Aboriginal adults in Canada participated in leisure-time physical activity (Statistics Canada, 1993). Also, the Regional Longitudinal Health Survey (RHS), which was conducted from 2002-2003, found that 21% of Aboriginal adults participated in moderate activity levels for at least 30 minutes per day for 4 days a week (Young &

Katzmarzyk, 2007). Significantly, the aforementioned surveys rarely included questions regarding older Aboriginal adults' physical activity participation and physical activity was absent from other health surveys that were conducted with Aboriginal peoples, such as in the second APS in 2001, the First Nations and Inuit Regional Health Survey (RHS) in 1997 (Young & Katzmarzyk, 2007), and the third APS in 2012 (see Statistics Canada, 2012). It is important to note, however, that physical activity statistics, like the ones provided in the survey results listed above, have limitations. The questions regarding physical activity on the APS and RHS were most likely only related to Western norms of physical activity and were probably not relevant to Aboriginal peoples who did not participate in these types of activities (Waldram et al., 2006). For studies looking at physical activity patterns of Aboriginal peoples, it may be more useful to look at overall activity by including physical activity done in the home, outside the home, out on the land, and in everyday tasks, as opposed to solely looking at Westernized physical activity pursuits; this would be more respectful of Aboriginal cultures and traditions and may be more representative of the actual activity that is done (Waldram et al., 2006).

There have been many physical activity initiatives that have been implemented in Aboriginal communities, often by non-Aboriginal health professionals. Unfortunately, many non-Aboriginal health professionals have not demonstrated cultural relevancy and these programs have not been successful in increasing amounts of physical activity (Kirby, Lévesque, & Wabano, 2007). These programs are often not sustainable, as government funding is typically sporadic and inconsistent and does not necessarily address the needs of each specific community. The programs' staff members are often ever-changing and attempt to run Westernized programs that further perpetuate colonial practices by producing Western knowledge of physical activities as superior and do not consider the community members' approaches to health and wellness

(Kirby et al., 2007). Many of these physical activity initiatives have been aimed at youth, while very little have been developed for older Aboriginal adults (see Lang, Macdonald, Carnevale, Lévesque, & Decoursay, 2010; Pigford et al., 2013; Rose & Giles, 2007; Rovito & Giles, 2013; Valentine, Dewar, & Wardman, 2003).

Culturally Relevant Physical Activity Programs for Aboriginal Communities

An emphasis on holistic approaches to wellness is important in programs that are developed for, by, and/or with Aboriginal communities, especially those for older Aboriginal adults (Jervis, 2010). A holistic approach considers the interconnectedness that the individual has with the world around him/her. Since the land has such a significant meaning in Aboriginal cultures, Kirby et al. (2007) discussed how it may be beneficial to incorporate the outdoors as much as possible when developing physical activity programs. It is important to note that while it is important to include traditional activities in physical activity programs for/with Aboriginal peoples, community members also may also request that Western physical activities (e.g., yoga, aerobics) be included in physical activity programs (Kirby et al., 2007); For physical activity programs to succeed in Aboriginal communities and to encourage individuals to be more active, practitioners and researchers need to demonstrate cultural relevancy in their programs, adopt a holistic approach, and address community members' needs in order to not perpetuate the effects of colonialism, such as the assumption that non-Aboriginal peoples know what is best for Aboriginal peoples and that Western knowledge is the only legitimate knowledge (Jervis, 2010; Kirby et al., 2007). While there have been many studies that have addressed the adaptation of programs and the challenges and success factors of health initiatives and youth programs in Aboriginal communities (see Lang, Macdonald, Carnevale, Lévesque, & Decoursay, 2010;

Pigford et al., 2013; Valentine, Dewar, & Wardman, 2003), which are important to consider, there is little known about what these factors are for programs that are focused on Elders.

To create or adapt physical activity programs for Elders, input from community members is a meaningful part of the development and implementation process (Sutherland, Skinner, Hanning, Montgomery, & Tsuji, 2007), which can encourage more culturally relevant activities as well as programs that are sustainable in the long-term (Kirby et al., 2007). With the health disparities that exist between Aboriginal and non-Aboriginal older adult populations and the aging Aboriginal populations, it is important that researchers address the complex factors that are involved with developing or adapting physical activity program for the older Aboriginal adult populations.

Theoretical Framework

This research was informed by postcolonial theory. McEwan (2009) identified postcolonial theorists' four core strategies: destabilizing dominant Ethnocentric discourses; challenging how these discourses are created; critiquing "the spatial metaphors and temporality employed in western discourses" (p. 26); and recovering the voice of and giving power to the marginalized, the oppressed, and the dominated. Though I am non-Aboriginal, I identify myself as an ally with Aboriginal communities, particularly those in the NWT, where I volunteered last summer.

Postcolonial theorists efforts are focused on "regaining political, cultural, economic and social self-determination...[and] requires the dismantling of colonialism as the dominant model on which society operates" (Mundel & Chapman, 2010, p. 167). Based on the assumption of Western superiority (Battiste, 1998), Eurocentric colonial policies regarding healthcare, education, language, spirituality, traditions, etc. have been and continue to be used in attempts to

control Aboriginal peoples, including their physical practices (Forsyth, 2007). While there has been a paradigm shift in recent years that has resulted in increased recognition and respect of Aboriginal peoples' rights in some areas (such as education and healthcare), there are still key areas in which the need for Aboriginal peoples' right to exercise self-determination is overlooked. Western knowledge remains the dominant form of knowledge, even in the wake of critiques surrounding the damaging impacts of Western, Eurocentric power and discourses within physical activity (Forsyth, 2007; Giles, Castleden, & Baker, 2010; Paraschak, 1998). Pursuits of physical activity and recreation for Aboriginal peoples are embedded in colonial practices (Forsyth, 2007), such as having exercise classes, standardized programs, competitions, and coaches that aim to discipline Aboriginal bodies so as to meet the Westernized ideal of an athletic, healthy body. Physical activities for Aboriginal peoples are often promoted as fostering freedom, expression, and ownership over the body, but colonial powers still practice control over their bodies, which hinders Aboriginal peoples' efforts towards self-determination (Forsyth, 2007). With these colonial practices at play in physical activity, self-determination cannot be achieved (Forsyth, 2007; Paraschak, 1998). While physical activity may seem like a trivial part of self-determination, I argue that physical activity is an area in which Aboriginal peoples' self-determination requires greater attention.

Smith (1999) described self-determination as not just a political goal of research, but also a goal of social justice. Self-determination is a right under international law, but is a complex and controversial concept because the exact meaning and how it is to be applied is contested between governments and Aboriginal peoples (Napoleon, 2005). It can loosely be understood as the right of Aboriginal peoples to have freedom and control over their own lives. Napoleon (2005) described it as both a collective principle and an individual principle, through politics and

government, and agency and autonomy. Henriksen (2001) argued, however, that although self-government and autonomy may be seen as the main components of self-determination, not all Aboriginal peoples may view these as the only parts of this concept. In this paper, I will use self-determination to mean “the right of the people to freely pursue its economic, social and cultural development...founded on the principle of equality and non-discrimination...to be in control of their lives and their own destiny” (Henriksen, 2001, pp. 10-14). It is through this use of the concept of self-determination and the theoretical framework of postcolonialism that I pursued my research on the adaptation, strengths, and challenges of a physical activity program for Aboriginal older adults.

Methodology and Methods

Case studies are a common methodology for answering “what,” “how,” or “why” questions about a current event, program, social phenomenon, or activity (Yin, 1994).

Exploratory case studies are often used in qualitative research to study topics that have had little previous research done on them or not well understood (Gagnon, 2010). These case studies are done in hopes of developing further inquiry into similar cases (Yin, 1994). I chose to conduct an exploratory case study of the NWTRPA’s EIM program because there has been very little research conducted on physical activity programs for Aboriginal older adults; consequently, an exploratory case study was the most appropriate methodology to employ.

A common component of a case study is the use of multiple methods for collecting data (Bloor & Wood, 2006; Tellis, 1997). The methods I used for my data collection were semi-structured interviews (Ayres, 2008) and archival research (Patton, 2002). Prior to conducting the research, I attended the EIM Training Gathering in February 2013 to learn about the program and to meet program leaders and participants from across the NWT who were involved with EIM.

The opportunity to build relationships with EIM program facilitators and to gain knowledge about the program assisted me in the subsequent data collection. While still in Yellowknife, I developed the research objectives and interview guides with the NWTRPA's staff members' assistance. The staff members also identified program leaders to interview. The interview guide for the program leaders included questions such as, "What motivates Elders in your community to participate in programs, come out to events and programs?", "Do you feel that the program is respectful of your community's cultural history and traditional activities? How?", and "What have been some of the challenges in starting and maintaining EIM?" The interview guide for the staff from the NWTRPPA included questions such as, "How has EIM been adapted for northern communities?", "What are some of the challenges that the NWTRPA, as an organization, faces with EIM?", and "Do you feel like the program is sustainable once a community member has received training? Why/why not?"

For May and June of 2013, I was fortunate to base myself out of the NWTRPA's office in Yellowknife, where I served as a volunteer while I also collected most of the data. I conducted 9 semi-structured interviews. Seven were with program leaders from various communities across the NWT. Five of these program leaders had taken training and run an EIM program in the past and two had run EIM in their community in the past year or had taken some of the training provided by the NWTRPA. The participants included two Community Health Representatives, one Home Support Worker, and four Recreation/Health Promotion Coordinators, four of whom are Aboriginal and three of whom are non-Aboriginal. I interviewed six women and one man who were from a total of five different communities across the NWT, which range in population from approximately 80 people to over 700 people (NWT Bureau of Statistics, 2012). Due to the vast distances across the NWT, these interviews were conducted over the phone. The other two

interviews were conducted with the Executive Director and the Active Communities Coordinator at the NWTRPA. These interviews were done in person at the NWTRPA office in Yellowknife. I transcribed the interviews verbatim and the participants were provided with a copy of the transcripts. They were provided with two weeks in which to return the transcripts to me with any feedback that they had; however, none of the participants provided any feedback. Participants' names appear with permission and due to increasing recognition of the need for Aboriginal peoples to be recognized for their expert contributions to research.

I also conducted archival research by analyzing documents related to the NWTRPA and EIM. Patton (2002) noted that archival research can produce detailed, useful data about organization or programs. I analyzed annual reports from 2009-2013, a previous evaluation of EIM that had been completed by a consultant in 2010, booklets about Balls and Balance and ALEP, and manuals for training program leaders. These types of documents can be difficult to access; however, I was fortunate that the NWTRPA provided me with all of these documents.

Analysis

I used thematic analysis to analyze the transcripts from the semi-structured interviews and the documents from the archival research. Thematic analysis is used to uncover and report recurring patterns in data (Braun & Clarke, 2006). I followed Braun and Clarke's (2006) six-step approach to thematic analysis. In the first phase, I immersed myself in the data to become familiar with the details that were in them; I did this by repeated active reading and searching for patterns, themes, etc. (Braun & Clarke, 2006). As I transcribed the interviews myself, this was an effective way to immerse myself in the data, as I had to go through the interviews in detail multiple times. The second phase involved creating the initial set of codes to use from the data by coding for as many emerging patterns as possible (Braun & Clarke, 2006). I used selective

coding (Boeije, 2010), as I was sensitized to certain codes based on my theoretical framework and literature review. I identified the initial codes by going through the interview transcripts separately multiple times and highlighting areas that related to my project goals. Some initial codes that I identified were “isolation,” “Elders’ feedback,” “motivating Elders,” “lonely,” “more training,” and “out on the land.”

Next, the third phase involved looking at the broader themes in the data rather than codes, which involved looking at the relationships between codes and sorting the codes into potential themes (Braun & Clarke, 2006). Once I found the initial codes, I started to make connections between codes to group them into potential themes, such as “active lifestyle,” “prevent isolation”, and many others. The fourth phase involved reviewing the potential themes and determining what themes needed to be modified, removed, added, etc. (Braun & Clarke, 2006). My theoretical framework, postcolonialism, and the topics covered in the literature review or those which were identified as being missing from the existing literature helped me to narrow down these themes. After going through all of the potential themes, I removed some themes that did not apply to the research objectives and modified some that were similar. In the fifth phase, I focused on defining and naming the themes (Braun & Clarke, 2006). I identified three distinct themes with multiple subthemes under each. The main themes were 1) the NWTRPA adapted only the material of EIM; 2) program leaders recognize the benefits of EIM, but have difficulty with running the program; and 3) Elders, their knowledge, and their culture need to be respected and embraced. Finally, the sixth phase involved the final analysis and production of the results section, which allowed me to tell the story of my data and “make an argument in relation to [my] research questions” (Braun & Clarke, 2006, p. 93).

Results

Based on my analysis, I identified three main themes that related to my research objectives of evaluating the challenges communities have faced in implementing EIM and determining if and how EIM is adapted for NWT communities. The three themes were 1) the NWTRPA adapted only the material of EIM, not the content, for the communities; 2) program leaders recognize the benefits of EIM, but have difficulty with running the program; and 3) Elders, their knowledge, and their culture need to be respected and embraced by program leaders, the NWTRPA staff, and key stakeholders. Each of these themes had associated subthemes, which I discuss below.

NWTRPA Adapted Only EIM Material

Since the development of the first EIM program in 2006, there have been many changes to the program. Most significantly, the program developed a partnership with the CCAA in 2009 (NWTRPA, 2010). Since the CCAA is based out of southern Ontario, with programs designed for older adults in southern Canada, a substantial amount of the material provided by the CCAA was not particularly relevant for a northern audience, such as the unfamiliar faces in the booklets, the lack of northern music and known people in the videos, and the lack of plain language in the training manuals. The NWTRPA worked with communities in the NWT and the CCAA to adapt the material for northern communities (NWTRPA, 2010).

Adapted program material makes it more relatable.

One of the main reasons that the NWTRPA wanted to adapt EIM material for northern communities was that it makes it easier for Elders to relate to the program. Sheena Tremblay, the Active Communities Coordinator from the NWTRPA, noted that “it’s important to use local people in all of our posters, brochures; it makes it more meaningful for people in the communities” and that doing this made it “more realistic for people in the communities”

(personal communication, June 17, 2013). Geoff Ray, the NWTRPA's Executive Director agreed, stating that "I think all of us identify with people of our own demographic, so the hope is there that [the material] tells the story from northern Elders to northern Elders" (personal communication, June 20, 2013). The training materials incorporated more plain language than in the original CCAA documents, the design and pictures had northern themes, and they included northern settings, northern voices, and northern people in the brochures, videos, and training manuals.

Program content needs to be adapted for northern communities.

While it is a significant achievement for the NWTRPA to adapt the EIM program material for northern communities, there are still parts of the program that have not yet been adapted. Some program leaders suggested that the program content, such as the 10 exercises and other program elements, should also be adapted for northern communities. A program leader from one of the NWT communities suggested that culture be associated with the activities; the main focus from the NWTRPA could be completing the activity, but a secondary element of culture could be added (personal communication, September 12, 2013). As Roslyn, a program leader from Fort Liard suggested, exercises could be given names like "scrape the moose hide" or "pulling the fish out of the lake," which she felt would "make [the exercises] more culturally relevant" (personal communication, June 19, 2013). Sandra, a program leader from Enterprise, stated that adapting the program content for northern communities would help to "just to get [the Elders] out...we could get more things that they are [traditionally] used to doing" (personal communication, July 12, 2013).

Along with adapting the 10 exercises of the HESP and the Balls and Balance program, many program leaders expressed that it would be beneficial to include more traditional activities

in EIM. Along with making the program more interesting, some mentioned how this might also be a beneficial way for the Elders and youth to participate in a program together. One of the program leaders discussed how including traditional activities would increase interest in the program by adding another element to it (personal communication, September 12, 2013). As Sandra mentioned, it would be useful for the program leaders to have training that included “more ideas to get them out or to learn more of their traditional activit[ies]” (personal communication, July 12, 2013). One program leader stated that the program “could be adapted if there was program dollars for EIM to get them out [on the land] and doing stuff like that” (anonymous, personal communication, July 12, 2013)

Program Leaders Recognize Benefits, but have Difficulty Running EIM

While program leaders recognized that EIM has many benefits for older adults, such as preventing isolation, encouraging socialization, and encouraging active lifestyles, there were also many challenges that the program leaders faced in establishing and maintaining EIM programs, such as motivating the Elders to attend the program and having the resources and support to run EIM.

Program helps prevent isolation and encourages socialization.

One program leader discussed how depression is a big problem in the North and EIM helps to get people socializing and could help to prevent depression (personal communication, September 12, 2013) Programs like EIM help to prevent isolation and “it gives [Elders] a time to socialize with their own peers” (J. Banksland, personal communication, June 24, 2013). Encouraging socialization was one of the most commonly cited benefits of the program. Sandra stated that some of the most positive aspects of the program for its participants are “their happiness and health and getting out to be with people...just for the socialization and all that too

because some people just sit by themselves all day long and they get into that funky groove or whatever” (personal communication, July 12, 2013). Roslyn stated that “something like [EIM] would get them out of their houses, especially in the winter when they are really isolated...it would bring them together, you know give them some social time” (personal communication, June 19, 2013).

Elders are not motivated to attend program.

While it is apparent that the Elders do enjoy attending the program and socializing with their peers, many program leaders noted how it was a challenge to motivate the Elders to attend the program. As one program leader mentioned, it is difficult to have Elders participate in the program because “they kind of didn’t want to go at the beginning” (anonymous, personal communication, July 12, 2013). Roslyn noted, “the culture makes people a little bit reluctant to join in to something that is like a standardized series of exercises” (personal communication, June 19, 2013). Another program leader mentioned that sometimes the Elders are not motivated to attend because in her community, “it seems more of a community where the people just don’t get along...once they’re at home they just like to stay at home” (S. McMaster, personal communication, July 12, 2013).). When asked why some of the Elders did not participate in the program, Diane replied that it was likely because some of the Elders still lead traditional lives and the program was not based around traditional activities (personal communication, September 11, 2013). Including traditional Aboriginal activities may help to motivate more Elders to attend EIM. Many program leaders mentioned that one way to motivate Elders to attend the program was by providing prizes and food. Sandra mentioned that in Enterprise, that “when we do have meals or potlucks [the Elders] come out more for that...they do come out because we do usually

have nice prizes then” (personal communication, July 12, 2013). This shows that culture, food, and prizes could potentially be emphasized to a greater extent in EIM.

Sustainable and trained staff members for the program are hard to find.

Along with motivating Elders to attend the program, it can be difficult for communities to have adequate staffing for the program due to lack of funding and lack of time to take on more responsibilities. As Sheena noted, the NWTRPA has found this as a challenge for many communities. She noted that often with the programs, “everything was ready to go, but then the program coordinator, the person who was going to run the program, left town or couldn’t commit to it anymore” (personal communication, June 17, 2013). Roslyn discussed how

it’s hard to add another responsibility into our day...actually getting the Elders into the room and doing the exercises is one tenth of it and there’s nine tenths other things that have to go on around that and that’s where we don’t have the people to do those things. (personal communication, June 19, 2013)

Some program leaders described how they would have staff for the program, but then due to funding cuts, the staff would have to be let go and the program would be left without a coordinator. As one program leader mentioned,

I know it’s kind of always up in the air with the funding and stuff like that. They say it’s a term position from now until March 31st and they say we’ll have to see if we get our funding again. (anonymous, personal communication, July 12, 2013)

While there are many benefits to EIM, lack of motivation for the Elders to attend the program and inadequate staffing for Elders programs make it challenging for communities to have sustainable and successful programs.

Elders, Their Knowledge, and Their Culture Need to be Respected and Embraced

Having a program that is respectful of Elders and their cultures is of great importance to the NWTRPA. When asked if she thought that EIM was respectful of the culture and history of the different communities, Sheena replied, “I think so, I hope so. If there is anything that’s not, I would like to change it so that it is” (personal communication, June 17, 2013). Participants identified several factors that could contribute to the program leaders, NWTRPA staff, and key stakeholders having a greater understanding and respect of Aboriginal Elders, their knowledge, and their culture in the development, delivery, and evaluation of EIM.

Need to get input directly from Elders.

Gathering input directly from Elders about their experiences and opinions of the program was important for the program, not just from the NWTRPA’s perspective, but also in the program leaders’ view. One of the program leaders mentioned how one of the most important things when starting a new program is to have the Elders, at the very first meeting, generate what they want to do, with the help of the program leaders; it needs to be the Elders creating the program and having ownership over it (anonymous, personal communication, September 12, 2013).

Input from the Elders is important for the development and implementation of EIM in the communities. Talking to Elders and hearing their comments and concerns is one of next steps that the NWTRPA wants to take with EIM. When asked if talking to Elders would be something that the NWTRPA wants to do in the future, Sheena replied, “it would be a good idea to know or at least at some point to try and find out. Just to see...if they like the program or what they want and that kind of thing...I think a big part is building relationships” (personal communication, June 17, 2013). Geoff recognized that there is a lot of room within the program to gain input from Aboriginal Elders, not just specifically about EIM, but also just to learn from them and hear

their stories. He mentioned that “we’re losing a lot of cultural elements and...the story that’s been told over and over again is we’re not hearing stories from our Elders and so I think this program has a part to play in that” (personal communication, June 20, 2013).

Elders’ wellness is not always a priority.

With the aging Canadian populations, older adults’ health and wellness is becoming a top priority for many organizations (Health Canada, 2012). This does not seem to be the case in some communities in the NWT. During their interviews, participants mentioned that the government cut funding for Elders’ programs and that most funding appears to go towards programs for youth or that Elders’ programs were not a priority for some recreation leaders. As Geoff mentioned,

[for] some communities, it may not be a priority of either the program delivery person or probably more likely at the organization that they work with...[they] may not identify Elders’ fitness as a key area of focus...One of the biggest barriers that we run across is that not all of the program leaders do have that full support to deliver an Elders’ fitness program. (personal communication, June 20, 2013)

Even when Elders’ wellness is a priority for recreation leaders, sometimes running the program is not possible if it is not a priority for the funding agency. When I asked Diane, a program leader from Aklavik, why an Elder Coordinator was not hired this year since there had been one hired in other years, she said that funding was the main reason (personal communication, September 11, 2013). Another program leader mentioned that “some of the important stuff [like programs for Elders] that they don’t think is important always get cut...we used to get money for an Elders Committee to see what the Elders want to do, but that got cut out of our budget” (anonymous, personal communication, July 12, 2013). Even with the Aboriginal

older adult populations increasing in the NWT, Elders' health and wellness does not seem to be a top priority, which makes it difficult for communities to maintain EIM.

Discussion

Below, I describe how the NWTRPA's EIM program shows a shift in physical activity programs becoming more respectful of older Aboriginal adults' cultures and communities by adapting a southern Canadian program for a northern Canadian audience. While the program does move closer to being culturally relevant for these populations and challenges colonial practices, I also discuss how there are two aspects of the program that reaffirm colonialism: a lack of culturally relevant activities for the participants and little consideration of the diversity of Aboriginal peoples and cultures throughout the NWT. Finally, I discuss some recommendations for the NWTRPA on how the program can move more towards challenging colonial practices and Eurocentric physical activity programs for older adults and how the program can be more culturally relevant for Aboriginal older adults. A more culturally relevant program would allow stronger contributions to be made toward respectful and inclusive physical activity programs.

Shift towards More Respect of Cultures and Communities

The NWTRPA's staff members make a strong effort to be respectful of culture and communities across the NWT. The NWTRPA's staff members demonstrated that they understand that a program developed for older adults in southern Canada may not be appropriate for older adults in the NWT by making some changes to the CCAA's ALEP program. These changes included creating more of a northern theme for the training manuals, videos, and pamphlets, and incorporating more plain language into all of the documents. Research has demonstrated the importance of plain language in resources in order to ensure relevance and understanding for the reader (NWT Literacy Council, n.d.). In the NWT, 54% of Aboriginal

adults and 13% of non-Aboriginal adults do not have a grade twelve education (NWT Literacy Council, n.d.) and the 2011 National Household Survey found that in the NWT 14.5% of Aboriginal peoples reported an Aboriginal language as their first language (Statistics Canada, 2014). As a result, plain language is essential in making EIM resources accessible. Providing them in all official languages would, however, make in-roads in further enhancing accessibility..

A not yet fully developed part of the EIM program is that the Active Communities Coordinator visits each community to discuss opportunities for Elders' physical activity and to explore the ways that recreation leaders, community health representatives, home support workers, and others in the community can work together to help to encourage and support Elders to be more active through EIM. Listening to the community members and understanding what they want from a program and what resources they have for implementing physical activity programs is an essential aspect of adapting programs for Aboriginal communities (Kirby et al., 2007). By including community members in discussions about programs in their communities and listening to their stories, ideas, and concerns, the NWTRPA staff is helping to foster self-determination in these communities and challenging colonial, southern-based programming. Despite the ways in which this program challenges colonialism, there are some factors that reaffirm colonial practices and prevent the program from being culturally relevant for the participants.

Factors that Reaffirm Colonial Processes

There are some practices that EIM engage in that can reaffirm the colonial process. These include providing a standardized Western-based program, such as the ALEP and Balls and Balance; not providing culturally relevant activities; not including and engaging Elders and

program leaders in discussion about program content; and not recognizing and addressing the diversity of Aboriginal peoples and their communities.

Lack of culturally relevant activities.

The main components of EIM are the CCAA's ALEP and the Balls and Balance program. While both of these aspects of the program demonstrate a laudable effort to improve the physical activity levels of older Aboriginal adults, having a standardized program that is based on Western models of physical activity reaffirms colonialism and reinforces the discourse that a Western approach is the most effective and best way to improve health.

EIM also provides little opportunity for participants to engage in activities that reconnect them with their traditional lifestyles on the land, which the program leaders identified as something in which the participants were interested. With one of the goals of EIM being to provide culturally relevant physical activity, it is important for participants to take part in activities that are based around traditional lifestyles, such as berry-picking, walking, hunting and gathering, and fishing.. Studies have found that for Indigenous peoples living in remote areas, being physically active is about being on out the land and performing culturally relevant activities (Thompson, Chenhall, & Brimblecombe, 2013). A program like EIM could be a means for older Aboriginal adults to reconnect with the land, with each other, and with traditional practices through culturally relevant physical activities (Mundel & Chapman, 2010).

It is important to note, however, that not all Aboriginal peoples are only interested in traditional activities; thus, these types of activities are not the only activities that should be included in EIM. There are also a lot of opportunities to include non-traditional activities, such as some of the existing parts of EIM. Deciding which activities are included in the program should be a process that includes dialogue with the participants to determine their needs and

desires. By engaging the older adults in discussions around the program, activities that do not have their roots in Aboriginal cultures, such as the ALEP or Balls and Balance, can be transformed into activities that are representative of Aboriginal peoples' cultural practices (Baker & Giles, 2008) by having the Elders and program leaders control what activities they want to do, where they want to do them, and how they want to do them. For example, if the Elders in a community enjoy doing the Balls and Balance exercise, but want to call them a different name or perform them in a location other than the community centre, then they can choose that and make it their own practice. Through engagement with participants, the activities – both those linked to Aboriginal culture and those that are not - in the program would become something that the participants have ownership over, which can contribute to self-determination.

Little consideration of the diversity of peoples and communities across the NWT.

Those who offer programs within the NWT should take into consideration that it is comprised of very diverse groups of people. There are 33 different communities across the NWT (GNWT, n.d.), which have varying cultures, languages, resources, funding, geographical locations, climates, and demographics. Not every community can run a program in the same way and certain activities that are successful in one community may not work in another due to differences in resources, funding, interests, etc. For example, in some communities, EIM program leaders have access to a vehicle to transport the Elders to and from the program, whereas in other communities, this is not the case and the Elders have to get to the facility on their own. While this example may seem trivial for a program in southern Canada, in the North, it can drastically change how many people have access to the program, particularly in communities where there is no public transit.

By not taking into consideration the diversity of the NWT populations and their resources, there is a risk that the NWTRPA's programming could homogenize the different groups across the NWT, which risks reaffirming the colonial mentality that all Aboriginal peoples are the same. While it may not be realistic currently to address the diversity of every individual participant in a program, it is important for program leaders and developers to at least be conscious of the various factors that influence a person's health and ability to participate in a physical activity program. Through understanding the diversity of all of the participants in a program, it will allow the program to be more representative and respectful of each of the participants and their cultures and histories.

Recommendations for a Culturally Relevant EIM Program

Below, I describe some recommendations for moving towards a more culturally relevant EIM program, which would foster stronger contributions to be made to self-determination for EIM participants and their communities. Recommendations include incorporating dialogue with the program leaders, fostering relationships among the various communities, creating program resources for key stakeholders to help sustain EIM, and engaging in discussions with the Elders in participating communities.

First, it would be beneficial for the NWTRPA to communicate with program leaders in each community to find out what specific training they would like and to find out how the programs can be further adapted for each community; this could include the adapted CCAA programs or other activities, such as berry picking, yoga, walking, and other activities suggested by participants. Also, the results from the interviews indicated that most of the program leaders wanted more training; however, it seemed to depend on the community as to what they wanted the training to include. By understanding the diverse needs of each community, its members, and

the program leader, the program would likely be more sustainable by building upon their strengths and recognizing and addressing their weaknesses. Providing more training to the program leaders and listening to their input may also help to encourage self-determination and increase their confidence in delivering the program. The training could also include advice on how to motivate, engage, and support Elders to participate in the development and delivery of the program.

Second, the results indicate that the NWTRPA might want to encourage more communication between program leaders. It would be beneficial for the NWTRPA to facilitate interaction between the program leaders in different communities as this would help build relationships among the communities. While the Training Gathering does this to a certain extent, many program leaders and the NWTRPA staff discussed how these relationships did not always continue throughout the year. The program leaders would then be able to share their stories and ask questions about the program in other communities. By facilitating this knowledge exchange, it would allow the communities to be less dependent on the NWTRPA for running EIM and would help to facilitate self-determination in the communities. Practically, I recommend that the Active Communities Coordinator should facilitate these discussions through conference calls, a monthly newsletter, or gatherings. A newsletter may also be an opportunity to recognize active Elders or excellent program leaders and would keep the program leaders connected and excited about the program all year long.

Another way to engage and connect program leaders and participants could be through the development of an online customizable toolkit. The toolkit could be developed by NWTRPA staff, program leaders, and participants and then offered online to other program leaders and community members. It could be used as a guide for program leaders to develop a program, such

as EIM, but they would have the choice to use certain activities and the flexibility to customize the program based on their community resources and needs. This would allow program leaders and participants a quick and easy way to share their stories and suggestions with others.

Facilitating communication about EIM between communities may also help to keep Elders' health and wellness as one of the top priorities in the communities by keeping it as a main topic of discussion all year long.

Third, the NWTRPA should create a resource to provide to key stakeholders to encourage them to support the program. While the NWTRPA has a great deal of communication with the program leaders, the results from the interviews indicate that there has not been much communication with the local health authorities, the GNWT, private funders, and other key stakeholders. It would be beneficial for the NWTRPA to create a resource for these organizations that explains the objective of EIM, how the program is run, and how organizations can help to support the program. Included in this could be information on the diversity of each of the communities to demonstrate that the funding is needed, since a program from the South cannot just be transferred to the North without modification. This would likely help to increase the support for the programs in the communities, may help to find further funding for the program, and may keep Elders' health and wellness at the forefront of priorities in communities and governing bodies.

Finally, I recommend that the NWTRPA supports further research to understand EIM from the Elders' perspective, which is a key factor for improving the program's cultural relevance. The NWTRPA staff members discussed how they would like to hear from the actual Elders for feedback on how they feel about the program. It would be beneficial to include this in a future evaluation of the program to understand how it could be modified to meet the needs of

the Elders. Understanding what activities are of interest to the Elders, whether more traditional or non-traditional, would hopefully motivate more of them to participate. Gaining input from the Elders and listening to their stories and ideas is central to cultural relevancy and creating their ownership over the program, which is a key factor in self-determination (Henriksen, 2001), so it should be strongly considered. Along with helping the NWTRPA to learn from the Elders about the program, this would also help to create a physical activity program for older Aboriginal adults that is based in culturally relevant practices, which could encourage key stakeholders and funding agencies to see that Elders' health and wellness is an important issue to address.

Conclusion

The NWTRPA has made a strong effort to adapt a southern-based program for northern communities in the NWT. Making changes to program material to give it a more northern theme and engaging in initial discussions with program leaders and EIM participants is an important step in having a culturally relevant program. There are, however, many program features that reaffirm colonial practices and support Westernized ideas of physical activity. Physical activity is not often looked at as a site of colonization and since self-determination and respect for and acceptance of Aboriginal peoples' histories, worldviews, and knowledge are important for social justice (Smith, 1999), efforts for culturally relevant programs for Aboriginal peoples need to extend into every part of society. Given the health disparities between Aboriginal and non-Aboriginal older adults, physical activity programs ought to be the focus of continued research and action if we are to address issues of social justice throughout all of society.

Footnotes

¹ The term Aboriginal refers to First Nations, Inuit, and Métis peoples living in Canada, while the term Indigenous is used to make reference to Indigenous peoples in the rest of the world and to be consistent with what is used in the literature.

² I use “populations” (plural) to recognize the diverse Aboriginal nations that make up Canadian Aboriginal populations.

³ Throughout this paper, I understand culture to be “the often unconscious standards by which societies-structured groups of people- operate. These standards are socially learned rather than acquired through biological inheritance” (Haviland, Prins, Walrath, & McBride, 2005, p. 14).

⁴ The term Elders is used in this paper to discuss older adults living in the NWT. I use this definition based on its use by the NWTRPA, while understanding that an Elder in Aboriginal cultures has a different and significant meaning.

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Chapter Four: Conclusions

Throughout the process of completing my Master's of Arts, I have learned that there are many factors to consider when planning and conducting research, especially when this research concerns Aboriginal populations, and especially given that I am not an Aboriginal researcher. I have learned the importance of being reflexive and understanding my role in the research. As a non-Aboriginal person, this has meant understanding and being aware of my background as a white, Western, relatively privileged, heterosexual female student researcher from a Canadian university. I have also learned that it is important to not just make specific, hands-on recommendations for programs, but also to consider the broader implications of the research that I reviewed and the research that I conducted to understand the "so what?" of my research. The research I conducted made me realize not only the multitude of complex factors stemming from colonialism that relate to older Aboriginal peoples' poor health, and more specifically their engagement with physical activity, but also how I can be an ally in helping to reduce these disparities and in helping to work towards developing culturally relevant physical activity programs with Aboriginal older adults, which in turn will help to enable self-determination and destabilize colonial practices for these populations. In this conclusion, I provide a brief overview of the two articles that comprise this thesis and I put the findings into conversation with each other in order to provide a broader context for their contributions to the literature. Additionally, I provide some recommendations for future research regarding these populations' engagement with physical activity and practical recommendations for physical activity program development and implementation.

Existing Research

In recent years, physical activity for Aboriginal peoples has been an increasingly popular research topic; however, most of this research has tended to focus on youth programs and health

initiatives (see Lang, Macdonald, Carnevale, Lévesque, & Decoursay, 2010; Pigford et al., 2013; Rose & Giles, 2007; Rovito & Giles, 2013; Valentine, Dewar, & Wardman, 2003). There is very limited research to date that has examined Aboriginal older adults' involvement in physical activity, the cultural relevancy of physical activity programs for these populations, and how these programs can be used as an avenue for self-determination and destabilizing colonial practices.

Research has suggested that Aboriginal older adults have low physical activity participation rates (Belza et al., 2004; Henderson & Ainsworth, 2001; Kochevar, Smith, & Bernard, 2001; Sawchuk et al., 2008; Sawchuk et al., 2011; Son & Hutchinson, 2009) and limited knowledge of physical activity (Mathews et al., 2010; Wilcox et al., 2009); however, this body of research has focused on Westernized norms of physical activity and has not accounted for older Aboriginal peoples' traditional physical practices (Ranzijn, 2010). Research has also demonstrated that many health disparities exist for older Aboriginal peoples and that they suffer from a much higher prevalence of chronic conditions, such as diabetes, hypertension, coronary heart disease, and arthritis, in comparison to non-Aboriginal older adults (Health Canada, 2002). These disparities and lack of research show the need for more research on how more culturally relevant physical activity programs can be designed for/by/with Aboriginal older adults in order to reduce these health disparities.

My Effort to Address Existing Gaps

Using a scoping study methodology, in paper one I provided a review of older Indigenous peoples' physical activity patterns and I also identified knowledge gaps in this area of research and discussed the implications of this review for health promotion practitioners and researchers. Through this paper, I demonstrated that intersecting factors such as colonialism, social inequities, and dominant understandings of physical activity coalesce in a way that results in the

marginalization of Indigenous older adults' physical activity knowledge and needs in both physical activity programs and research. .

Paper two builds on paper one. In it, I examined a physical activity program for older adults in the Northwest Territories (NWT), Elders in Motion (EIM), to better understand how one program attempted to address older Aboriginal adults' physical activity needs. Using a case study approach, in paper two I showed how the NWT Recreation and Parks Association's (NWTRPA) EIM program demonstrates a shift in physical activity programs becoming more respectful of older Aboriginal adults' cultures and communities by adapting a southern Canadian program for a northern Canadian audience. Nevertheless, I found that while the staff at the NWTRPA has made a strong effort to adapt a southern-based program for northern communities in the NWT, there are several program features that reaffirm colonial practices and support Westernized ideals of physical activity, such as a lack of culturally relevant activities for the participants and little consideration of the diversity of Aboriginal peoples and cultures throughout the NWT. In paper two, I also made recommendations on how the program can move towards challenging colonial practices and how the program can be more culturally relevant for Aboriginal older adults, which would lead to stronger efforts toward self-determination.

Taken together, the papers in this thesis make it apparent that physical activity programs and research concerning physical activity for older Aboriginal adults continue to be largely embedded in colonial practices. By providing a review of the existing literature, paper one demonstrated that cultural relevancy is lacking in physical activity research and programs for Aboriginal older adults, while paper two showed this through a specific example – the NWTRPA's EIM program. Both papers also demonstrated that Aboriginal older adults continue

to be homogenized within Western society. Indeed, the diversity of Aboriginal populations is rarely taken into account in research and program development (Reading & Wein, 2009).

Research that is conducted with Aboriginal older adults regarding their physical activity continues to ignore these populations' engagement in traditional physical practices and focuses on Westernized physical activities. This disregards their knowledge of physical practices, even though authors have discussed the negative impacts of Western norms within physical activity for Aboriginal peoples (Forsyth, 2007; Giles, Castleden, & Baker, 2010; Paraschak, 1998). This extends into other facets of Western society, which trivializes and ignores Aboriginal peoples' unique determinants of health and their knowledge of education, healthcare, governance, environment, etc. (First Nations Education Council, 2009; Monture-Angus, 2005; Smye & Browne, 2002). The achievement of social justice and health equity for all groups in Canada will require the examination of all sites of where colonization occurs, including physical activity, and a focus on how they can be culturally relevant and turned into sites that challenge colonial practices.

Future Research Recommendations

One of the limitations of my research was that due to resource and time constraints, I was not able to conduct research with Aboriginal older adults themselves. This was due to the programs not being run in the summer and many of the program participants being away from the community for the summer months, which was when I was planning on doing my data collection in order to complete my Master's thesis within the given time limits. This is part of the reason why I chose to explore the cultural relevancy of a physical activity program - EIM - and not the cultural safety of it. Since I did not interview the actual program participants, I felt that cultural safety of a physical activity program for Aboriginal older adults would not be an

appropriate framework to explore, given that the main concept of cultural safety is to understand the power dynamics between the researcher(s) and the participant(s) and the program developer(s) and program participant(s) (Brascoupé & Waters, 2009); I would need to have the participants' perspectives in order to do this. As a result, one of the main areas for future research should be the examination of culturally safe physical activity programs for Aboriginal older adults, which would ideally have involvement of Aboriginal older adults in all parts of the research process

I also suggest that future research should focus on understanding what it means to be physically active for Aboriginal older adults and to understand how they view physical activity in relation to health. This could help to understand how physical activity can play a part in reducing health disparities between Aboriginal older adults and non-Aboriginal older adults and it could also make a contribution to the development of research, funding, programs, or policies that embrace and are reflective of older Aboriginal peoples' understandings of physical activity.

I also think it would be wise to explore similarities and differences in physical activity practices between and within different groups of older Aboriginal adults to understand the array of experiences that they have with physical activity, especially as they relate to gender, class, sexuality, ability, etc. Such research could help to move away from colonial idea that all Aboriginal older adults are the same and share the same experiences with physical activity. Given that there is such limited research that has been conducted with Aboriginal older adults and physical activity and that there is still much work to do in understanding how programs can be more culturally relevant for these populations, there are many different areas to examine and these are just a very few of the potential areas that could be addressed.

Practical Recommendations

As I discussed in paper two, there are a few recommendations for the NWTRPA, and health promotion program practitioners in general, that, based on the results and feedback from the research participants, I believe would facilitate further steps towards developing and delivering a physical activity program for Aboriginal older adults that is culturally relevant and thus challenges colonial practices and fosters self-determination. For the NWTRPA, there are a few things that I suggest that the staff should continue to do with EIM. Currently, a not yet fully developed part of the program is that the Active Communities Coordinator will visit the communities that are interested in offering EIM to discuss ways to facilitate the program specifically in each community. I recommend that the NWTRPA continue to develop this part of the program and make it a significant part of the development and sustainability of EIM. Such visits could be an important part of identifying the needs, strengths, and resources in each community, which would help the NWTRPA to better support program sustainability in each community. I also recommend that in order to improve the sustainability of EIM, which was identified by the program leaders to be a challenge, the NWTRPA continue to provide training and support to community members to lead EIM programs and continue to fund EIM in a variety of communities. I think it would be beneficial, however, to give the communities more ownership over the program and have the Active Communities Coordinator explore other funding opportunities for EIM with the program leaders to prevent the communities from becoming too dependent on funding from the NWTRPA alone and to help the programs become more sustainable over the long term.

I also recommend that stronger relationships should be fostered between program leaders and practitioners in communities that offer EIM through conference calls, monthly newsletters, gatherings, or an online module. The module could be developed by NWTRPA staff, program

leaders, and participants and then offered online to other program leaders and community members. It could be used as a guide for program leaders to develop a program, such as EIM, and share their stories and ideas with other program leaders. For the NWTRPA, this could be beneficial because the Active Communities Coordinator is not able to frequently visit all of the communities that participate in EIM. If relationships were established between program leaders, this would allow them to share ideas, successes, and challenges. Finally, I recommend that organizations that are involved with developing physical activity programs should, along with the program leaders and participants, help to create program resources that can be given to potential key stakeholders in the program, such as governments, private funders, health organizations, etc., in order to help find further funding for Elders' health and wellness programs. This would help to demonstrate the need for funding and to explain how these agencies can help to support the communities and the programs since funding for programs in communities for Aboriginal older adults is often very limited and sporadic.

Final Thoughts

This thesis demonstrates the need for more research with Aboriginal older adults concerning their physical activity practices, particularly concerning the ways in which both research and programs can become more culturally relevant and address their unique social determinants of health. It is my hope that this research can be beneficial for practitioners and researchers in showing how physical activity programs for older Aboriginal peoples can be made to be more culturally relevant. I also hope that it can be valuable in demonstrating to policymakers and funders the importance of investing in physical activity for Aboriginal older adults and to help further understand Aboriginal older adults specific social determinants of health. If we are to continue to focus on achieving social justice and health equity for all groups

in Canada, we need to consider all sites of colonization, including physical activity, and focus on how they can become more culturally relevant and turned into sites that empower older Aboriginal peoples and destabilize colonial practices.

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Contributions

Lauren Brooks-Cleator developed, designed, and undertook this thesis, its theorization, analysis, and writing. Dr. Audrey Giles supported all aspects of the dissertation's development, theorization and analysis, and provided assistance and input into writing and reviewing the final product. Both papers will be published with Brooks-Cleator as first author and Giles as second.

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Ethics Approval Notice
Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Audrey	Giles	Health Sciences / Human Kinetics	Supervisor
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(Ia: Approval, Ib: Approval for initial stage only)**Special Conditions / Comments:**The Aurora Research Institute approval submitted to the Ethics Office on June 17th, 2013.