Through the Lens of the Youth: Exploring Culturally Relevant Physical Activity with a Northern Aboriginal Community Through Participatory Action Research

by

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A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Science

Centre for Health Promotion Studies

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ABSTRACT

Guided by an overarching participatory action research framework, this research explored physical activity within the sociocultural context of northern Aboriginal communities. I worked in partnership with the Yellowknives Dene First Nation Community Wellness Program in the Northwest Territories, Canada, to develop, implement and evaluate the research. Together, we aimed to: 1) document the community's perspective of and experience with physical activity through the eyes of the youth; 2) investigate how physical activity is embedded in local and traditional culture; 3) raise consciousness about physical activity in the community; and 4) develop a strategic plan for sustaining new and existing physical activity initiatives. Ultimately, this research highlighted the critical role of culture and traditions in the Dene people's physical activity experience and more broadly, their health and wellbeing. Moreover, it demonstrated that a participatory action research project is entirely feasible within the capacity of a Master's thesis, given the appropriate circumstances, partnership, and researcher attitude. This study contributes to the current understanding of physical activity from an Indigenous perspective and provides recommendations for future research, policy, and practice to develop meaningful and effective interventions for chronic disease preventions.

This thesis is an original work by Keren Tang. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board 1, Project Name "Exploring physical activity within the cultural context of Yellowknife Dene First Nations communities," No. Pro00039760. In addition, this research project obtained a Scientific Research License from the Aurora Research Institute for projects taking place in the Northwest Territory, Project Name "Exploration of physical activity within the sociocultural context of Yellowknives Dene First Nations communities," No. 15326.

The research conducted for this thesis is part of a larger social media research initiative, led by Dr. Cindy Jardine at the University of Alberta, with academic collaborators Dr. Candace Nykiforuk (University of Alberta), Dr. Tracy Friedel (University of British Columbia), Dr. Lisa Given (Charles Stuart University, Australia) and Dr. Christine (Cassie) Kenney (Massey University, New Zealand); knowledge user collaborators Angeline Webb (Canadian Cancer Society, Alberta/NWT Division) and Dr. Parminder Thiara (Health Canada, First Nations and Inuit Health, Alberta Region); and community collaborators from the Yellowknives Dene First Nation and K'alemi Dene School in the Northwest Territories and the Queen Elizabeth School in Edmonton, Alberta. The participatory action research project with a focus on culturally relevant physical activity that forms this thesis was developed and implemented by myself, in close partnership with the Yellowknives Dene First Nation Community Wellness Program.

Chapter 3 of this thesis will be submitted for publication to *Action Research* as K. Tang, Yellowknives Dene First Nation Community Wellness Program, and C. Jardine, "From videos to action: A graduate researcher's experience with participatory action research on physical activity with a northern Aboriginal community." I was responsible for facilitating data generation and analysis, done in collaboration with the community partner, as well as the manuscript composition.

Chapter 4 of this thesis will be submitted for publication to the *International Journal of Indigenous Health* as K. Tang, Yellowknives Dene First Nation Community Wellness Program, and C. Jardine, "Our way of life: Implications of Aboriginal culture and tradition in health promotion practices." I was responsible for facilitating data generation and analysis, done in collaboration with the community partner, as well as the manuscript composition.

DEDICATION

To all the communities I have worked with – Newcomb, Ndilo, Dettah, urban Montreal – whose generosity and teachings transformed me.

In memory of my mother, whose enduring love and spirit sustain me beyond the boundaries of the physical world.

ACKNOWLEDGEMENT

Several years ago, as a struggling first-year teacher, I received the most important three-word advice from my now mother-in-law. "Figure. It. Out," she said. And figure it out I did. But I didn't do it alone. Numerous people – supervisors, mentors, colleagues, family, and friends – have supported and helped me to figure things out. And for that, I am forever grateful.

First, mahsi-cho to the youth and community members of the Yellowknives Dene First Nation, as well as the staff of the Wellness Division, without whom this research would not have been possible. I feel humbled and honoured by your steadfast support, feedback, participation, and insight.

To all my thesis examiners – it is in your respective work that I found direction. To my supervisor, Dr. Cindy Jardine, thank you for an incredible learning opportunity. I appreciate your guidance, patience, and flexibility that allowed me to finish my thesis in a timely manner. Thank you to my committee members Dr. Kim Raine and Dr. Tara-Leigh McHugh for your extensive knowledge and experience in health promotion and physical activity that shaped this volume of work. And to my external examiner Dr. Nicolette Teufel-Shone, thank you for your insightful comments and critical questions.

To my peers and mentors at Law and Risk Communication Health (LaRCH) research group, I appreciate your depth of knowledge and the constructive coffee chats. In particular, I want to thank Shelagh Genuis for your continuous encouragement and thought-provoking conversations; and Megan Lukasewich for reviewing my transcripts and early drafts of the chapters.

To my family, those near and far, thank you for the encouragement, motivation, and believing in me.

And finally, Zack, thank you for grounding me.

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LIST OF ABBREVIATIONS

IRM	Indigenous Research Methodology
PAR	Participatory action research
CBPR	Community-based participatory research
NWT	Northwest Territories
YKDFN	Yellowknives Dene First Nation
YK Dene	Yellowknives Dene (People)
CWP	Community Wellness Program
KT	Knowledge translation
CIHR	Canadian Institutes of Health Research
REB	Research ethics board

FOREWORD. SITUATING MYSELF

1.0 Why situate?

The purpose of this section is to tell my story, and give context to why I do what I do, why I am interested in this type of research, and how I ended up in Yellowknife for my graduate studies. Just as there is a "right way" to do research with Aboriginal peoples (Ermine, Sinclair, & Jeffery, 2004), there is a right way to write about such research. Thus, I seek out the words of Indigenous scholars, thinkers, and researchers to guide this communication process.

Location and positionality are key principles in research by and with Indigenous peoples (Absolon, 2011; Absolon & Willett, 2005; Kovach, 2010; Wilson, 2008). Stating where we come from is a pre-requisite in research so that "those who study, write, and participate in knowledge creation are accountable for their own positionality" (Absolon & Willett, 2005, p. 97). This principle of locating ourselves applies to both Aboriginal and non-Aboriginal researchers. In introducing ourselves, we look deeply inward. "Learning about the inner self is the doorway to understanding and gaining knowledge of how to be in mind, body, Spirit and heart in the outer world" (Absolon, 2011, p. 67). This holistic approach prepares the researcher to integrate the self throughout the research process. Location is therefore about understanding myself, how my personal history influences my research motive, and sharing my story (Absolon, 2011). After all, I can only speak with any authority about myself (Absolon & Willet, 2005). Talking about my experience is therefore *not* representing the voices of other non-Indigenous, racialized, immigrant researchers.

Our locations are experience-bound, and specific to individual researchers. Absolon asserted, "Location reveals […] who we are in relation to the world, the earth, our nations, our clans and so much more. Our location reveals a worldview and cultural orientation, which is central to what and how we search" (Absolon, 2011, p. 72). Researchers are people. And in doing research with other people, we apply our unique "human epistemological lenses," rendering our research subjective and biased (Absolon & Willet, 2005, p. 97). Yet, in Aboriginal research, subjectivity and bias are good, as "emotionless, passionless, abstract, intellectual, academic research is a goddamn lie" (Hampton, 1995, p. 52). Rather than perpetuating neutral and objective research, I choose "cultural humility" (Minkler, 2004, p. 690) by writing about

myself. Positioning our lenses is therefore critical to contextualize the research, especially if we see our "position, history, and/or experiences as pivotal to [our] research process" (Absolon & Willet, 2005, p. 97). Locating is the reflexivity emphasized in qualitative research, requiring "that researchers be continually aware of their own biases" (Kovach, 2010, p. 26). For this reason, I locate and state my subjectivity.

There are other reasons why we should locate and position ourselves at the start. First, it is the ethical thing to do (Absolon & Willett, 2005). For peoples that have been "researched to death" (Brant Castellano, 2004), Aboriginal communities have a right to "know who is doing the research and for what purposes" (Absolon & Willet, 2005, p. 107). Secondly, positioning "helps to offset existing unbalanced scholarship about Aboriginal peoples" by eliciting true research motives and intention (Absolon & Willet, 2005, p. 107). Consequently, audiences can "distinguish between authors who have a vested interest in the research and those who do not" (Absolon & Willet, 2005, p. 107). Thirdly, positioning counters the mainstream, Western way of knowing. As a non-Indigenous ally, I prefer to follow the practice of positioning myself from the outset. "Relating pieces of [my] stories and ideas to the research topic" is a way to "resist colonial models of writing" (Absolon & Willet, 2005, p. 98). Lastly, positioning is a pre-requisite in observing a process that includes "cultural protocols, values and behaviors" (Tuhiwai Smith, 1999, p. 15). In other words, "the actual research cannot take place without the trust of the community, and one way to gain trust is locate yourself" (Absolon & Willet, 2005, p. 97). Locating ourselves thus respects Indigenous protocols by presenting our motives and intention to the community.

During research trips to the north, people invariably asked who I was, where I came from, and what I was doing there. I openly and truthfully responded, by situating myself with the community, much as I am doing now in writing. Locating myself was a fundamental mindset that helped me to build connection, trust, and relationship with the community in a short time period. This practice also honours the people I am working with because it respects their ways of entering into a relationship with me. A willingness to locate myself also comes from experiences working with Aboriginal communities, of knowing the importance of talking– rather than boasting – about myself, so that others know my story and my intents.

2.0 The path to my research motive

I was not born of this land. I grew up in post-Cultural Revolutionary China that prospered under Deng Xiaoping's economic reform policies. Eventually, I find myself a wanderer. After living in various places, I finally settled on a career path and pledged allegiance to a new country. Even though I tend to "wander," I did not stumble on my current research by accident. It was through a set of carefully and serendipitously placed stepping-stones that I am now studying Aboriginal health through a participatory approach.

My research journey began in the summer of 2007. I was a fresh and wide-eyed university graduate with a head full of biology facts after four years of undergraduate education. I was heading to New Mexico to teach 7th and 8th grade science on the Navajo Nation. Public school education, living in the Southwest, and working with Native Americans were things I have never experienced. I was excited about the prospect of a new, even exotic, adventure.

The two years I spent on the reservation were a formative and transformative period as I buried my head in the duties of a first-year teacher, a journey mired with trials and tribulations. Nevertheless, in my spare time, I participated regularly in "Just Move It" (JMI), a series of 4-mile community run/walk events held across the Navajo Nation. Over time, I became familiar with a circle of "regulars" who kept up their running through JMI. More importantly, I witnessed an entire nation of people achieving the goals of healthy communities and healthy individuals, who are joined together by physical activity, and who recognize its benefits beyond physical health. Through my community involvement, I came to see the Navajo people as strong, resilient, and united. This experience was so powerful in fact, that it became the main driver for a career interest in health promotion.

With this same narrative, I returned to Canada, continuing to seek opportunities working with Indigenous populations. Yet to this day, I cannot shake off the awful feeling I had when I left the reservation after teaching for two years. At the time, I was torn. I did not want to be perceived as yet another person who taught on the "rez" for her resume. But to stay in my job would have been for all the wrong reasons when my heart was no longer in the right place. That is why, I think, I always sought opportunities to work with Aboriginal peoples, whether it is at an urban Aboriginal youth centre, with an urban Aboriginal health committee, or in my research with northern First Nations communities. Continuing on the path of Aboriginal health and

wellness is a way for me to maintain connection with the knowledge, experience, and relationships developed back on the Navajo reservation.

At the Native Friendship Centre of Montreal, I worked with urban Aboriginal youth. Many faced poverty, homelessness, and unemployment. I learned to work collaboratively with clients who came from all walks of life, and to foster a safe space that was fundamental in promoting self-expression and eventually, self-determination. The youth wanted to sell what they created in weekly stone sculpture workshops and to benefit financially from the artwork. To facilitate this ambition, I led a group of staff and volunteers to coordinate projects based on youth vision and feedback. Together, staff and youth collectively developed an artist cooperative. Everyone contributed. Some created artwork, cleaned out a boutique space, put up display shelves, designed a logo, distributed flyers on the street, and rapped about the co-op on the radio. Other community members contributed with photography, promotional postcards, cleansing ceremony for the space, and opening ceremony for the boutique. I got a taste of what community-based collaboration felt like. And I wanted more.

During this time, I began to understand more deeply the dynamic, challenges, and strengths of Indigenous peoples in Canada. I also wondered more about community cohesion and health. Despite the community engagement I witnessed at JMI events, poverty-related issues still remained on the Navajo reservation. Deaths from drinking and driving were rampant and tore families apart. In Montreal, the centre mainly catered to the homeless who have found one another on the streets. No matter how different and broken, they formed a unique community. I wondered: how could group structures be leveraged to better help and support people?

Loaded with questions about community health, I left a challenging, yet rewarding, fulltime position for part-time classes and work at the South Asian Women's Community Centre. With my co-workers, I engaged girls in public schools and helped them to believe in their unique beauty and strength, make healthy choices, anticipate and learn how to communicate in intimate relationships. We bonded over Bollywood dancing, One Direction, and stories of our first menstrual experiences. I continued to build on my youth and community engagement capacity, preparing for a lifetime career in community-based work. Above all, the experience exposed me to feminist activism and critical theory from a people of colour perspective, which played a major part in the development of my thesis.

Concurrent with some of these work opportunities, I assisted with the Montreal Urban Aboriginal Health Needs Assessment as a research assistant and coordinator for the Aboriginal health committee. This was my first exposure to qualitative and community-based research. Unlike a university-affiliated academic project, this research stemmed from community needs and voice, with a holistic mandate to fulfill a very specific goal of identifying service gaps and establishing an Aboriginal healing centre in Montreal. I helped with gathering and analyzing data with service users and providers through one-on-one interviews and a focus group. I felt part of a larger collective committed to a single goal of improving Aboriginal peoples' health experience in the city. At the official launch of the needs assessment, we shared findings with stakeholders in health and social services, promoted the health committee, and declared the intent of the healing centre. In the end, I directly participated in a process that merged words, ideas, and data from a research question into a concrete outcome.

Along the way, I acquired teachings and built skills that positioned me well for my thesis work in health promotion. A large part of this Master's thesis research was dedicated to community and youth engagement, an area I am all too familiar with. But I was not prepared for the profound personal connection I felt with the research topic, particularly as a non-Indigenous, racialized, immigrant woman doing research with Aboriginal peoples.

And so, I ask myself, "What is my personal reason in my research?" This question gets at the heart of my research motive, the importance of which I have only recently come to grasp. As a non-Indigenous researcher, I think it would be too easy to say that I am motivated to help improve the lives of marginalized peoples, build a more socially just world, contribute to the intellectual pursuit, publish, or simply land a job. In fact, "it is unethical to do research in which you have no stake whatsoever – no interest, no personal connection with, no reason other than your training as a scientist" (Absolon & Willet, 2005, p.104). There is always a reason. Finding that reason is the relational ethics that Castleden and colleagues (2012) discussed from the perspective of non-Indigenous academics. They concluded that research is about the researcher "drinking tea" with communities to establish place, intention, interest, and positionality (Castleden, Morgan, & Lamb, 2012). To not "drink tea" is unethical. The ethics we often prioritize reflect the Tri-Council perspective, more or less the legal and institutional viewpoint (Government of Canada, 2012). Relational ethics is about knowing ourselves. This is what ethics

comes down to. If we are unethical, insincere, or uninterested from the outset, then everything else, the legal, institutional, or administrative ethical rules, is meaningless.

Why do I have a personal interest to make sure that the result does not just sit on the shelf, that it will actually benefit the community, and that something concrete will come out of a Master's project? Certainly, the belief that everything happens for a reason partially explains why: my experience on the Navajo Nation has set me in this course of working with Aboriginal peoples ever since. Additionally, I see this research as an extension of my time spent on the Navajo Nation and at the Native Friendship Centre of Montreal, jobs where I performed a duty and then left feeling incredibly guilty. Yet every opportunity I came across after simply deepened my relationship with Aboriginal health, working with Aboriginal communities, and my research topic. Whatever emotion I carry with me, I recognize that my personal connection with my research extends beyond the research community, beyond this thesis, and truly relates back to previous experiences. That's where I come from; that's my research motive.

I think back to that awful feeling I had when leaving the reservation. This feeling is akin to the feeling I have right now as my research in the north wraps up. Whereas I once worried about maintaining connections with communities (or even if we can at all once we leave a community), I now realize, after much reflection and soul searching, that it is entirely possible.

Research is a ceremony (Wilson, 2008). "Re" in research, or re-search, is an important aspect of many other processes: re-present, re-vise, re-claim, re-name, re-member, re-connect, and re-cover (Absolon, 2011; Absolon & Willett, 2005). The notion of "doing again" resonates with me, as I return to the place where I began and came full circle to understand my research motive and intention. And my own ceremony did not merely manifest as a graduate thesis research. It began long ago, even before I stepped onto the land of enchantment in New Mexico, and will continue long after I finish this thesis research work.

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CHAPTER 1. INTRODUCTION

Health inequity is consistently a key priority area for various government, communities, and organizations around the world. Many Indigenous peoples, in particular, face disproportionate health burdens as a result of underlying historical and social determinants. The surge of literature in the field of Indigenous health highlights the urgency of the issue. A vast amount of information that documents the health problems in Indigenous populations is available. The purpose of this thesis is not to continue describing the health status of Aboriginal peoples in Canada. Rather, it aims to identify and leverage strengths found in one northern community to facilitate greater opportunities in physical activity participation.

The scope of this participatory action research (PAR) project necessitated a foundation informed by various literature areas. In this introductory chapter, I will first situate this research from a strength-based perspective. I then present existing knowledge about health inequity, Indigenous health, and physical activity in an attempt to more accurately depict issues in Aboriginal health. I will also discuss diverging views of body and health, and provide a brief background on the methodology given the qualitative and participatory nature of the research. I will then outline goals and objectives of this thesis project. Finally, I will conclude with an overview of the remaining chapters in this thesis.

I am particular about the terminologies and languages used in this thesis. Because of the highly reflexive and collaborative nature of PAR, I use the first person voice throughout the chapters. More specifically, first person plural "We" indicates the partnership between the community partner and me. The singular "I" refers to myself. In addition, I follow the conventions of terminologies set out originally by the National Aboriginal Health Organization and later the International Journal of Indigenous Health (International Journal of Indigenous Health, n.d.). The term "Indigenous" refers to First Peoples of the land around the world. The word "Aboriginal" specifies Indigenous peoples in Canada who are further distinguished as First Nations, Inuit, and Métis. Rather than using all-inclusive terms, I will use "YK Dene" to indicate the specific identity of the people of the Yellowknives Dene First Nation (YKDFN), with whom I worked closely.

1.1 Strength-based research

Conventionally, information from academic publications, government reports, and the gray literature stems from a deficit-based or problem-centred approach to describe the health status of Aboriginal peoples (Paraschak & Thompson, 2013). Such an approach tends to extrapolate negative generalizations about Indigenous populations using epidemiological statistics on diseases and risk factors (Brough, Bond, & Hunt, 2004; Paraschak & Thompson, 2013). These generalizations, however well intentioned, are merely a part of the picture, rather than the whole truth about Indigenous populations. Unfortunately, this negative depiction is the one that has been generally adopted by society (Brough et al., 2004). Moreover, a deficit-based approach "undercuts Aboriginal self-management over their own health conditions (Paraschak & Thompson, 2013, p. 1046) and relies on outside "experts" to fix the problems (Paraschak & Thompson, 2013; Parlee et al., 2007). In some cases, focusing on the negative has the effect of "robbing [individuals] of their ability to care for themselves and each other" (Parlee et al., 2007, p. 113). Brough and colleagues (2004) also noted that even though community empowerment has always been held as a central tenet in health promotion as outlined in the Ottawa Charter for Health Promotion, the field still tends to begin with health needs assessments that are already problem-oriented. These authors argued that it is simply not enough to identify the problem area and subsequently develop new programs or improve upon existing services so that they are "culturally relevant" (Brough et al., 2004, p. 215). Health promotion and physical activity research requires a fundamental shift in its paradigm with strengths or assets as starting points.

An asset or strength-based approach recognizes that everyone has inherent strength regardless of their life circumstances; that there are always resources available in the environment, whether or not they are used, for support; and that researchers and practitioners should work with communities and individuals, rather than on or to them, to further the strengths (Paraschak & Thompson, 2013). This approach, also known as resilience-based approach (Lewis, Woods, Zuniga, & David, 2010), is about reframing Aboriginal health, looking at "whatever is already going well" (Paraschak & Thompson, 2013, p. 1047) and ways to make it better. In participatory research that seeks to transform, empower, and adjust unequal power dynamics between the researcher and the researched (Brough et al., 2004; Paraschak & Thompson, 2013), addressing strengths first seems to be the natural and obvious approach.

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Tensions remain between the strength-based and deficit-based research approaches in health promotion. In this thesis, I acknowledge the deficits based on epidemiological data to portray "part of the truth about the actual conditions" of Aboriginal health (Brough et al., 2004, p. 216). For this reason, this introductory chapter does contain chronic disease indicators comparing Aboriginal and non-Aboriginal populations in Canada. However, recognizing the benefits of an asset-based approach and based on personal experiences and worldviews, I chose to focus on the positive and the strengths inherent in Aboriginal communities. This focus thus guided the research from formulating a research goal to knowledge translation.

1.2 Health inequity – Aboriginal health status

There are approximately 370 million Indigenous peoples globally (Gracey & King, 2009). Many are subjected to various complex health and social disparities with significant bearing on their wellbeing (Gracey & King, 2009; Reading, 2009). Despite progress in some areas, Indigenous populations in North America, Australia, and New Zealand continue to perform poorly to moderately on the Human Development Index (HDI), which measures a country's health and development, while their non-Aboriginal counterparts enjoy higher HDI rankings (King, Smith, & Gracey, 2009).

In Canada, Aboriginal peoples bear a disproportionate burden of chronic disease (Reading, 2009). The incidence of diabetes is perhaps the most alarming. Aboriginal peoples are 2-5 times more likely to be diagnosed with Type 2 diabetes compared to non-Aboriginal populations (Barton, Anderson, & Thommasen, 2005; Oster et al., 2011; Thompson et al., 2008). Aboriginal women have a 5-fold increase in rate of diabetes compared to their non-Aboriginal counterpart (Reading, 2009). Most alarming is perhaps the rising rate of diabetes among youth and children. Those under 35 years of age witnessed a 46% jump in less than 10 years in type II diabetes, a condition more commonly found among adults (Thompson et al., 2008). Moreover, diabetes is a risk factor for disabilities such as blindness, other chronic diseases, and death (Bloom et al., 2011). Obesity, measured by body mass index, is a risk factor for diabetes and other chronic diseases. In terms of obesity, Aboriginal adults and youth again experience greater prevalence compared to non-Aboriginal populations (Katzmarzyk, 2008). Thus the rising trend in diabetes and related risk factors in Aboriginal communities, a relatively new phenomenon

since the 1950s (Ayach & Korda, 2010; Galloway, 2005; Young, Reading, Elias, & Neil, 2000), represents a critical social and public health concern.

1.2.1 Health status of Northern Aboriginal peoples

A large portion of the Aboriginal populations resides in northern Canada. They are also significantly impacted by health inequity, which continues to grow between Aboriginal and non-Aboriginal groups in the north (Snodgrass, 2013). For example, studies in the north indicated that chronic diseases significantly affect populations such as the Inuvialuit in the Northwest Territories (NWT), where more than 20% of the study participants reported having at least one chronic condition (Erber, Beck, De Roose, & Sharma, 2010). An analysis of the Canadian Community Health Survey 2000-2005 further revealed that while both northern and southern Canadians saw an increase in chronic disease prevalence, northerners faced higher prevalence of risk factors, such as obesity and smoking, which influence the onset of chronic diseases (Deering, Lix, Bruce, & Young, 2009). Such evidence of health disparity signifies a critical time for preventive population-level interventions, including those addressing obesity and diabetes.

1.3 What determines chronic disease status in Aboriginal populations?

While the classic social determinants of health such as education, employment, and social support impact all members of society, Indigenous peoples have been additionally affected by colonialism and related policies that influence their health and wellbeing (Adelson, 2005; Frohlich, Ross, & Richmond, 2006; King et al., 2009). Legislations such as the Indian Act and residential schools left generations of Aboriginal peoples in poorer health compared to the rest of the population (Mikkonen & Raphael, 2010). Removing children from their home environment deeply neglected and disturbed people's sense of identity and culture (Blackstock, 2011). Such practices done over generations gave rise to family discordance, violence, abuse, poor mental health, and drug and alcohol addiction (Adelson, 2005). Furthermore, the Western colonial rule created social hierarchies based on race and distributed low quality land and little resources to Aboriginal peoples on reserves. "Cultural oppression through policies of forced assimilation" (Kirmayer, Simpson, & Cargo, 2003, p. S16) and intentional, unfair resource allocation place the Indigenous peoples at social and political disadvantage, further barring any attempt to achieve

health equity (Adelson, 2005; Loppie Reading & Wien, 2009). These policies have scarring effects; the resulting historical trauma has led to a loss of cultural identity, language, sense of family and community, and land (King et al., 2009). Aboriginal health status today is therefore a culmination of centuries of historical injustice, and institutionalization.

Economic development, environmental pollution and urbanization compound the negative consequences of colonial policies (King et al., 2009). In northern Canada, "resource extractive" economies in minerals and oil are a dramatic example (Snodgrass, 2013, p. 80). The speed and intensity of economic development, coupled with historical trauma, fundamentally changed Indigenous peoples' profound relationship with the land and the way communities survive.

The shift "from traditional to transitional and modern lifestyles" is accompanied by an increase in "lifestyle diseases" including diabetes (Gracey & King, 2009, p. 65). Increasing access to an unhealthy diet high in carbohydrates, calories, and saturated fat that is prevalent in the modern landscape is not offset by "habitual physical activity" inherent in traditional hunting and food gathering activities, nor by consumption of traditional foods (Snodgrass, 2013, p. 77). Such lifestyle factors and changes have perhaps an even greater burden in circumpolar regions. Indigenous peoples in the North have historically developed biological mechanisms such as "body size and proportions" to withstand the harsh living conditions (Snodgrass, 2013, p. 71). However, such mechanisms were balanced with intensive hunting and gathering activities that are increasingly absent in a modern, more urbanized – not to mention expensive, particularly in the north – way of life, a topic that still requires much research (Snodgrass, 2013).

1.3.1 Physical inactivity

Researchers have identified physical inactivity as a risk factor for chronic disease and conditions such as diabetes and obesity (Katzmarzyk, 2008; Kumanyika & Yancey, 2009; Miles, 2007). As a result, physical activity has become a target in health promotion research to curb obesity and related morbidities (Foulds, Warburton, & Bredin, 2013; Katzmarzyk, 2008; McHugh, 2011; Miles, 2007). However, studies have consistently shown that many Aboriginal peoples, adults and youth alike, do not achieve the recommended physical activity levels (Foulds et al., 2013) as provided by the Canadian Physical Activity Guidelines (Tremblay et al., 2011).

The comparison in physical activity level is stark between the national prevalence of physical activity in Canada and that of northern populations in the territories. Generally, Aboriginal northerners are less physically active compared to non-Aboriginal populations. Nunavut had the highest level of physical inactivity compared to the national average. As well, women tended to be more inactive than men, which is true across Canada and in the northern territories (Young & Katzmarzyk, 2007).

1.4 Physical activity initiatives with Aboriginal communities

Physical activity has become a central area of chronic disease prevention efforts. Currently, there are various initiatives, programs, and research efforts in Canada that aim to reduce the level of chronic disease in Aboriginal communities (Johnston Research Inc., 2011). Many of these strategies have the "added benefit of creating community and support systems" to alleviate other issues in the community (Johnston Research Inc., 2011, p. 6).

Support for these physical activity initiatives comes from various levels of government, community, and organizations. Some have explicit health and disease prevention mandates, while others couple the programs with services like mental health. For example, the Aboriginal Diabetes Initiative from Health Canada and the National Aboriginal Diabetes Association were formed in the 1990s to specifically address diabetes in Aboriginal populations (Young et al., 2000). In 2012, Just Move It, a community-based physical activity program that began on the Navajo Nation in 1993 (Jones et al., 2008), was introduced to Canada and became a North American-wide online campaign (Assembly of First Nations, 2012). The campaign encourages initiatives at a community-level to prevent obesity and chronic diseases.

A report of physical activity best practices in Aboriginal communities across Canada identified a range of programs and activities, including "organized competitive sports," "unstructured recreational opportunities, land-based activities," and "simple family walking programs" (Johnston Research Inc., 2011, p. 6). The report identified schools as a critical partner in promoting physical activity at the community level (Johnston Research Inc., 2011). One of the exemplar programs in Canada is the Kahnawake Schools Diabetes Prevention Project, which began as a participatory research project between academics and the community. The outcome of the collaboration was a school-based diabetes prevention strategy, which transformed into

changes in policy, infrastructure, and community engagement (Teufel-Shone, Fitzgerald, Teufel-Shone, & Gamber, 2009).

Success factors for these best practices included: "respect for community preferences" (Johnston Research Inc., 2011, p. 12), integration of culture and tradition, focus on leadership development and building partnerships. The report recommended explicit evaluation strategies, which were lacking in many programs, to ensure long-term sustainability and success. Young and Katzmarzyk (2007) confirmed that in Aboriginal health research, many studies remain "poorly described, few have been evaluated" (p. S158).

Teufel-Shone et al. (2009) further underscored some of these lessons in a systematic review of physical activity interventions in Indigenous communities across North America. They credited sustainable initiatives to strong Indigenous leadership, a non-targeted approach (i.e., inclusive of all age groups), balanced involvement of researchers and community members, explicit evaluation strategies, and consistent funding. Evidently, there is still much work that needs to be done in evaluation research.

1.4.1 Interventions in Northern Canada

Like much of Aboriginal health research, most northern research tends to describe the health status and problems in Canadian circumpolar communities, with less focus on implementing and evaluating action-oriented interventions (K. Young, personal communication, February 13, 2014). The majority of the program and intervention studies that are published veer heavily towards nutrition and food security. Sharma and colleagues (2010) for example, developed the Healthy Food North with an Inuit community, to stress healthy and nutritious food choices, with a minor physical activity component that promoted pedometer use in the workplace. This project remains one of the few action-oriented research in the North.

A recent report on circumpolar regions highlighted best practices in health promotion, specifically nutrition and physical activity, from Nordic countries to Alaska (Young & Chatwood, 2009). The report, titled "Lessons for Canada," demonstrated that Canada still has much to learn in terms of northern strategy and development of health promotion programs and interventions. This thesis aims to contribute to the limited evidence in chronic disease intervention research centering on physical activity by working in collaboration Aboriginal communities in northern Canada.

7

1.5 Diverging perceptions of health and wellbeing

In addition to pointing out the significance of evaluation in intervention research, Young and Katzmarzyk (2007) concluded that most physical activity research focuses strongly on disease and ill-health. This focus reflects the perception of body and health ingrained in mainstream society and perpetuated by Western ideologies.

The dominant discourse in biomedicine dictates the conventional view of health as a personal responsibility. This dogma drives most health interventions and research (Petersen, Davis, Fraser, & Lindsay, 2010). Physical activity is viewed in much the same way: it is an individual's responsibility to reduce her or his risks of obesity and related co-morbidities (Petersen et al., 2010). Repercussions of this mentality include victim blaming (Crawford, 2005) and stigma (Bayer, 2008; Scambler, 2009; Wang, 1992). In the public health domain therefore, physical activity continues to be associated with the individual and her or his physical health status, a view that poses a potential challenge to effective health promotion strategies in Aboriginal communities (Green, 2010; McLennan & Khavarpour, 2004).

This dominant biomedical paradigm that emphasizes individual responsibility and physical health diverges from the traditional Aboriginal healing perspective (Adelson, 2005; Green, 2010; McLennan & Khavarpour, 2004). Traditional healing highlights the balance between physical, emotional, mental and spiritual health as well as "connection to… family and community" (Adelson, 2005, p. S46). Aboriginal concept of personhood is defined by the relationship between the individual and a collective. The individual is part of a network of connections that encompass beyond the immediate family, clan, and kin to "animals, elements of the natural world, spirits and ancestors" (Kirmayer et al., 2003, p. S18). Addressing the collective rather than the individual embraces the Aboriginal worldview of health (Green, 2010). Furthermore, this approach resists the "continued oppression and colonization" (Green, 2010, p. 29) as a result of Western dominance and historical mistreatment of Indigenous peoples that has precipitated in generations of broken families and communities (Loppie Reading & Wien, 2009).

This thesis offers the alternative lens that seeks a cultural understanding of physical activity and situates physical activity as a "collective responsibility" (Kovach, 2010, p. 36). The research challenges the conventional view that health is a personal onus, thus tackling not only a biomedical health issue, but also the underlying historical and social determinants of wellbeing.

1.5.1 Aboriginal view of physical activity and sports

Other disciplines view physical activity more holistically. Physical education literature recognizes that "sport, recreation, and physical activity… are intertwined and integral to personal and community well-being" in an Aboriginal context (Minister of Public Works and Government Services Canada, 2005). In fact, many Aboriginal cultures traditionally regard sport and physical activity as having "medicinal value and healing potential" (Lavallée & Lévesque, 2013, p. 207). Cultural understanding of physical activity has had important influences in sports and recreation development such as incorporating Dene games in the Arctic Winter Games, which consisted predominantly of Western-based sports up until 1990 (Giles, 2013). Such "recovery of tradition itself may be viewed as healing, both at individual and collective levels" (Kirmayer et al., 2003, p. S16). Public health can learn from these experiences of responding to Aboriginal context and needs. Thus, shifting the way physical activity is understood and practiced in health promotion can have significant healing potential, conferring additional benefits to Aboriginal communities.

This research thus stems from the perspective that physical activity, interwoven with sport and recreation, strengthens a community's social and cultural capital, as well as its overall collective wellbeing. Knowledge generated by this research will contribute to the current understanding in public health of how physical activity is perceived by vulnerable and marginalized populations. By understanding more deeply and integrating Indigenous knowledge of health and wellbeing, we shift away from the conventional disease focus, potentially improving health promotion initiatives to address not only physical health but also collective healing objectives.

1.6 Participatory research in health promotion

Increasingly, researchers are recognizing that conventional health education and interventions have limited benefits and have "sometimes actually harmed the people involved" (Israel et al., 2008, p. 48). In fact, mainstream health research continues to be dominated by clinical trials (Sanson-Fisher, Bonevski, Green, & D'Este, 2007), with little input from the participants themselves. To adequately reduce health disparities, health research needs to involve communities in the decision-making process (Israel et al., 2008; Wallerstein & Duran, 2008). Participatory approaches are thus becoming more important, though still underused, as a methodology to engage Aboriginal communities to resolve their concerns (Cargo & Mercer,

2008). Rather than prescribing what the communities should do, researchers work with communities to develop context-specific solutions and build their self-determining capacity (Castleden, Morgan, & Lamb, 2012). This approach shifts power dynamics and ensures greater community control of data and research outcomes (Tuhiwai Smith, 1999). Methodologically, this thesis contributes to the field of participatory research and knowledge translation with northern Aboriginal communities.

1.7 Research goals and objectives

The overarching premise of this research was to understand the physical activity experience within the sociocultural context of the YKDFN. Acquiring a culturally relevant understanding will lead to improved and effective health promotion programs. Specific research objectives were to:

1. Document the community's perspective of and experience with physical activity through the eyes of the youth
2. Investigate how physical activity is embedded in local and traditional culture
3. Raise consciousness about physical activity in the community
4. Develop a strategic plan for sustaining new and existing physical activity initiatives

Together with the community partner, I conducted a qualitative inquiry, guided by the PAR framework, about how communities perceive physical activity as part of their local and cultural identity and wellness, which is viewed as a collective, rather than individual, responsibility. A secondary objective that emerged through the process was to chronicle my experience engaging with PAR as a Master's student and reflect on the lessons learned to support current and future PAR student researchers. This topic was the basis for Chapter 3.

A ground-up approach was necessary to truly understand the community's experience with physical activity, facilitated by youth who acted as agents of change in this research, aligning with the positive youth development theory (Damon, 2004). However, this research not only described lived experiences as reflected by Objective 1, but also generated concrete actions for change through Objective 4. Given the limited availability of action-oriented research with Aboriginal communities, PAR was the appropriate methodology here capturing the community-based and action-oriented aspects of the research. The underlying theory guiding this PAR project is Freire's critical consciousness (Freire, 1974), which stipulates that social change is

born out of collection reflection. This theory justifies the consciousness-raising facet in Objective 3. These theories and methodological framework are further elaborated in Chapter 2.

Celebrating culture was a major research motivation for the community partner. Objectives 2 responds to this element of the research and attempts to re-frame physical activity within a cultural context. Efforts to evaluate physical activity according to Western and clinical standards of prescribed exercise have often been unsuccessful (Findlay & Kohen, 2007). Research has largely cited diverging worldviews on health as a primary factor (Adelson, 2005; Findlay & Kohen, 2007). A better cultural understanding about physical activity, and more broadly of health, can challenge researchers and practitioners to develop more culturally appropriate criteria and interventions that have greater potential to improve Aboriginal health. The relationship between physical activity and culture is the premise for Chapter 4.

1.8 Overview of thesis chapters

This paper-based thesis consists of five chapters, two of which (Chapters 3 and 4) are prepared for publications. Chapter 2 provides a detailed research methodology, illustrating the "how" of the process. I will begin with a philosophical explanation to situate my research paradigms. Then I will outline the various phases of the research, supported by ample details to ensure transferability, all the while recognizing that research relies on the researcher herself as much as on the methods.

Chapter 3 is prepared for the journal *Action Research* with a focus on the research process, highlighting key lessons I learned as a Masters student engaged in PAR. This chapter emphasizes process and methodology. The introductory section highlights the gap in the literature on graduate student experience with participatory research. The methods section is an abridged version of Chapter 2. The results stem from careful analysis of my research experience based on my research journals and interactions with the communities (as captured through conversations, focus groups, and follow up interviews). Finally, I discuss the implications of the participatory process, and suggest ideas for current and future student researchers.

Chapter 4 is prepared for the *International Journal of Indigenous Health*, which assumes the publishing responsibilities of the former National Aboriginal Health Organization. This chapter concentrates on the theme of culture and tradition as a means to promote physical activity and health. I begin the chapter with an overview of diverging notions of health and

wellbeing and the literature on the role of cultural identity in Aboriginal health. The methods section is again a shorter version of Chapter 2, highlighting the key steps in the research that generated participatory videos on traditional physical activity. The results are based on the videos, conversations with the youth, community focus group discussions, follow up interviews, and research journals. I end the chapter considering the implications of the findings and possibilities for future research.

In the final thesis chapter, I summarize the key messages in this research, propose ideas for future research and practice, and reflect on my own personal transformation through the learning process. In addition to the various ethical approvals, consent forms, focus group and interview guides, I have included additional reflection pieces in the appendices (Appendices B & M). These essays provide greater details on overcoming ethical challenges as an outside researcher and capacity building in the research process.

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CHAPTER 2. METHODS AND METHODOLOGY

A participatory paradigm grounds this thesis research, which is further informed by the Indigenous research methodology (IRM). These philosophical underpinnings drive this qualitative inquiry that used tools including participatory action research, visual methods, focus groups, and knowledge translation. As illustrated in Figure 2-1, this chapter begins with a broad overview of my philosophical orientation before diving into the details of the methodology (participatory action research). I then define research rigor used in this thesis, situate the research context, describe data generating methods (participatory video, focus groups, research journals, and impact evaluation) and analytical strategies, and conclude with knowledge translation.

Epistemology & ontology (How we perceive truth and how we think truth can be known)	• Participatory paradigm informed by the Indigenous research methodology
Methodology (How we go about knowing truth)	• Participatory action research
Methods (Strategies used to generate knowledge about truth)	• Participatory video • Focus groups • Research journals • Impact evaluation
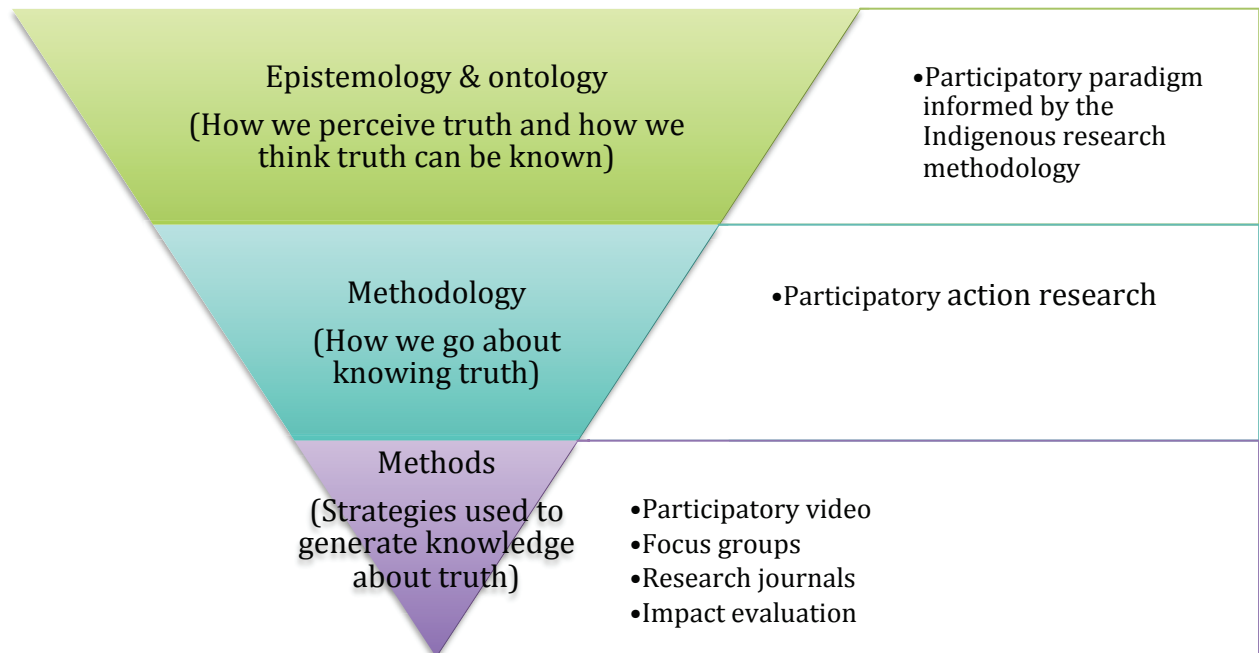
Figure 2-1. Structure of the flow of discussion on methods and methodology. An epistemological and ontological orientation is the philosophical foundation that grounds the methodology of participatory action research, which encompasses the various strategies used to generate data, or knowledge.

2.1 Epistemological and ontological orientation

To orient my epistemological and ontological foundations, I will first provide an overview of the participatory inquiry paradigm and explain why it was used in my project. Then I will discuss IRM, its underlying paradigm, and its relevance to my research.

2.1.1 Participatory paradigm

Paradigms, informed by personal worldviews or outlooks, articulate how we perceive reality and truth (i.e., ontology), how we feel truth can be known (i.e., epistemology), and how we go about knowing truth (i.e., methodology). Paradigms are a crucial starting point in research as they are "the net that holds the researcher's ontology, epistemology, and theoretical position/perspective" (Mayan, 2009, p. 24). Guided by an overarching paradigm, researchers develop their questions and research design. Guba and Lincoln delineated four major research paradigms: positivism, post-positivism, critical theory, and constructivism (Lincoln, Lyndham, & Guba, 2011). These are different ways of understanding our realities. A fifth participatory paradigm, introduced by Heron and Reason (1997), places greater emphasis on experiential knowledge, or "knowing by acquaintance, by meeting, and by felt participation in the presence of what is there" (p. 277). I used a participatory paradigm in my thesis because the research relied on participants' experiences to define physical activity in their specific context.

Like constructivism, participatory paradigm also recognizes that reality and truth are subjective, constructed through our social interactions with one another. This is ontology, how we understand reality, which is a "cocreative dance" between the knower and the greater cosmos (Heron & Reason, 1997, p. 279). Therefore, participatory and constructivist ontologies share the view that multiple and sometimes "conflicting and incompatible" realities can exist at the same time (Heron & Reason, 1997, p. 277). This highly subjective perspective diverges from the positivist understanding of a single, objective truth, a view that is unsuitable in this instance because my thesis focuses on the interpretations and experiences of Aboriginal youth and communities. Thus, to capture diverse experiences of the participants, I challenge the notion that there is only one single truth and employ a participatory paradigm that allows for multiple interpretations of reality.

The epistemology of participatory paradigm is rooted in experiences. Since reality is "grounded in its experiential participation in what is present, in what there is" (Heron & Reason, 1997, p. 277), the experiences and interactions between individuals and the practical world are the basis for research inquiry in a participatory paradigm. Experiential knowing emerges from dialogue and interactions between the researcher and participants. Knowledge is still constructed, but through participation or social interactions.

Methodology is the process through which we come to know. Heron and Reason (1997) proposed a collaborative or cooperative inquiry methodology in which the research relationship frames academics and participants as co-researchers and co-participants. They collaborate, ideally on equal footing, to determine research questions, carry out the inquiry together, co-create knowledge, and build upon existing knowledge.

Heron and Reason (1997) believed that Guba and Lincoln's framework of paradigms lacked distinctions of axiology, or fundamental values in knowing. Positivist research traditions follow an Aristotelian philosophy that research is an intellectual exercise in pursuit of a universal truth. In the participatory paradigm, we search knowledge in order to improve the livelihood of individuals and communities (Heron & Reason, 1997).

The values placed on the betterment of livelihood deeply resonate with my personal beliefs. Coupled with the ontological and epistemological strengths in addressing my research question, these values led me to adopt the participatory paradigm in my thesis. However, because my thesis was based within the specific context of Aboriginal peoples and was done in collaboration with communities, it was necessary to incorporate an orientation that respects Indigenous worldview and knowledge. Thus, this research was also informed by the IRM.

2.1.2 Indigenous research methodology

Because of the relevance of an Indigenous worldview, I will define the Indigenous paradigm, the net that holds Indigenous ontology, epistemology, and methodology. I will then focus on the methodological component of IRM, highlight key principles relevant to my inquiry, and explain my rationale and approach in applying these principles.

The existing taxonomy of research paradigms is extensive (Heron & Reason, 1997; Lincoln et al., 2011). However, it privileges the Western worldview, and therefore addresses a culturally limited set of ways of knowing. Indigenous or traditional knowledge rooted in a "tribal perspective" (Kovach, 2010, p. 34) based on the Indigenous identity and experience, is one way of knowing that cannot be properly compartmentalized into any one of the existing paradigms. To fit within constructivism or participatory paradigms is to conform to the ways of the Western colonizing forces, disregarding values, beliefs, and experiences of traditional knowledge that existed long before the establishment of the academe. The gap calls for new thinking about

epistemology, ontology, and methodology to resist, or decolonize, predominantly Western mainstream ways of knowing.

Epistemology, ontology, axiology, and methodology from an Indigenous experience "blend from one into the next," forming a circle that represents an overarching Indigenous paradigm, guiding the way a researcher thinks and does research (Shawn Wilson, 2008, p. 70). Understanding the circle in its completeness requires a holistic perspective, mixing disparate parts into a whole.

The Indigenous paradigm is informed by a traditional value system common to many Indigenous cultures. This system celebrates the connection between all beings, living and non-living, self, others, and the cosmos. Such an extensive view of relationships with even non-living things diverges from the participatory paradigm that also values relationships. "A relational worldview [… that] assumes relationships between all life forms that exist within the natural world" (Kovach, 2010, p. 34) is thus central in IRM and permeates every aspect of the paradigm.

The Indigenous ontology is similar to constructivist and participatory ontology in that it also perceives multiple realities. However, truth is not an abstract form simply "out there" as the Western ontologies contend. Rather, it is "a process of relationships" developed with the individual (Shawn Wilson, 2008, p. 73). Even knowledge is meaningless until it establishes a relationship with the knower (Shawn Wilson, 2008). Reality, including knowledge, therefore exists because of the relationship it forms with the individual.

Relationship with ideas and knowledge forms the basis of an Indigenous epistemology. Beyond socially constructing knowledge, the Indigenous epistemology also encompasses cultural, linguistic, historic, philosophical, and spiritual underpinnings of that knowledge (Shawn Wilson, 2008). Multi-faceted holistic thinking is therefore necessary to contextualize knowledge.

Whereas positivists reckon research as an intellectual pursuit and participatory paradigm considers research as an activist endeavour for social justice, the Indigenous paradigm values relational accountability, or being responsible to relationships (Shawn Wilson, 2008). This axiological orientation guides the ethical conduct of a researcher in her environment based on the three R's: "Respect, Reciprocity, and Relationality" (Weber-Pillwax, 2001) to ensure the integrity of the research. Respect comes from cultural humility, particularly as "outside" researchers engaging with a community (Minkler, 2004). Reciprocity stems from the

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responsibility individuals have for one another, the earth, and the self (Kovach, 2010). Relationality is the relationships we form and for which we become responsible.

By integrating the values of the three R's, guided by a relationship-based paradigm, IRM is therefore "simply the building of more relations" (Shawn Wilson, 2008, p. 79), allowing the researcher to carry out the inquiry. Forming relationships consequently becomes the way of knowing. The teachings of relationships and relationality directs the conduct of the researcher, who has a responsibility to develop meaningful relationships with communities, even before the start of the research. Community participation relies on the researcher establishing trust and connections through emotionally engaging the community and the research topic. Research with people is, after all, emotionally charged and subjective (Hampton, 1995a; Shawn Wilson, 2008). Such degree of subjectivity and intimacy is contrary to the dominant paradigm that requires researchers to remain objective from a distance. However, a distant, aloof researcher would have a hard time doing research with Indigenous peoples.

Relationships are established not only between researcher and participants. Connections also exist with self, among participants, and between individual and the earth and the cosmos. Such spiritual interconnectedness is yet another critical element of IRM (Hampton, 1995b; Hanohano, 1999; Stan Wilson, 1995). Knowing ourselves and recognizing that all things are connected are the first step towards achieving spirituality. Through interconnections, we come to defend, help, and support one another. This intricate web of relationships with self, others, living and non-living things, and the cosmos forms a larger collective that stands in stark contrast to the "rugged individualism" found in a neoliberal society (Kovach, 2005, p. 30). Thus, tied to relationships is the notion of collectivism, which manifests as "reciprocity and accountability to each other, the community, clans, and nations" (Kovach, 2005, p. 30). Collectivism is community or group-oriented, a tradition important in an Indigenous context (Hampton, 1995b). A collective is not hierarchical; it is a structure where everyone has an equal place, contributing to the overall wellbeing, rather than for the good of one person. Research is therefore not solely about the individual but also the wellbeing of the group.

Building relationships within the group further shifts the way power and knowledge are distributed (Kovach, 2010). Diffusing the conventional, top-down power structure and sharing knowledge equitably with all members of a community are ultimately, ways to decolonize

research and health promotion practices that have been historically imposed upon Indigenous peoples.

2.1.3 Rationale and approach to applying IRM in a participatory inquiry

Absolon (2011) emphasized the importance of IRM for Indigenous researchers: "Being an Indigenous person in a search for knowledge situates me in a place that non-Indigenous people can never occupy. We have inner cultural knowledge and common experiences of colonization and its subsequent impacts on our families, communities and other relations in Creation" (p. 63). Recognizing that I am not Indigenous, I was sensitive to considerations of culturally re-appropriating the Indigenous paradigm: representing something from another culture as mine. For me, the ethically responsible way was to learn about and practice relevant teachings from IRM, while acknowledging and respecting where the knowledge came from. Therefore, in my thesis, IRM is informing my participatory angle to inquiry. Insights from IRM, particularly relationality and collectivism, are valuable to ensure that I carry out research the right way with Indigenous communities.

Relationship building was a significant component of my research activities in the community. Over time, bonds deepened between the community and I, the participants and I, and among the participants. As well, I learned more about myself through a spiritual journey that elucidated my most honest research intention (see Foreword).

Equally relevant to IRM are my research approach and interest in collective wellbeing. I was interested in exploring ways to promote physical activity as a vehicle for collective health. Thus, I worked with the research partner in a collaborative, strength-based, and holistic manner to explore community-level physical activity as a means to an end, rather than the end itself. This approach followed the tenets of IRM that emphasize reciprocity, of sharing roles and responsibilities to balance power between the researcher and the community.

Thus, by prioritizing IRM and voices of Indigenous scholars, I intend to be an effective ally who critically seeks and considers alternative ways of knowing, contributing to the expansion of the IRM niche in mainstream academia.

2.2 Participatory action research: theory and background

> "*If researchers, practitioners, and community members are to address the growing disparities in health status between marginalized communities and those with greater social and economic resources, they need more equitable approaches to research, approaches that involve both action and knowledge generation that are beneficial to and reflective of the communities involved*" (Israel et al., 2008, p. 61).

An overarching participatory action research (PAR) approach embodies this project. PAR is also known by other names such as community-based participatory research (CBPR), action research, and participatory research. The semantics of PAR vary depending on geography and discipline (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2008). The list is exhaustive and "the nuanced differences between them are often difficult to decipher" (Wallerstein & Duran, 2008, p. 26) because "the actual research practice may vary with the local context, history, and ideology of the stakeholders" (Wallerstein & Duran, 2008, p. 29).

These participatory methodologies with a social justice agenda emerged in response to the rising demand for scholarships that directly engage the very community that the research is meant to affect. Various forces, from the sociopolitical uprisings around the world to the development of feminist and postcolonial theories, have shaped this shift in academia (Wallerstein & Duran, 2008). In fact, the participatory worldview is very relevant to public health, which is mandated to improve conditions of communities, societies, and populations. To achieve this goal, health researchers, practitioners, and communities are supporting a more participatory and democratic approach in knowledge generation, recognizing and respecting diverse ways of knowing, and fostering discourses around power, knowledge, and participation (Israel et al., 2008; Wallerstein & Duran, 2008).

In this thesis, I define PAR based on the works of the Kellogg Foundation's Community Health Scholars Program:

> "*a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. [It] begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities*" (Minkler & Wallerstein, 2008, p. 6).

To provide a more in-depth context, I will outline a brief history behind PAR, highlight relevant core concepts, and discuss implications of power.

2.2.1 The origin: Northern vs. Southern traditions

PAR traces its roots back to two streams: the Lewinian Northern and Freirian Southern traditions. While both movements emerged independently to respect human agency and people's ability to make decisions, they diverge in their philosophical underpinnings (Wallerstein & Duran, 2008). The Northern tradition takes an utilitarian approach originating from organizational development that seeks to affect institutional and systems change (Wallerstein & Duran, 2008). The Southern tradition is based on an anti-colonial, anti-capitalist, and anti-oppressive foundation that "challenges the historical colonizing practices of research and political domination of knowledge by the elites" (Wallerstein & Duran, 2008, p. 27). Many scholars view this latter tradition as the gold standard to strive for in research that seeks to alleviate health disparities with marginalized communities. This thesis therefore adopts the "emancipatory participatory research tradition" (Wallerstein & Duran, 2008, p. 29) representative of the Southern school.

Developed during a socio-politically turbulent era, the Southern stream is deeply influenced by Freire's critical pedagogy and the popular education model that encourage a shift in the relationship between the researcher and the researched (Wallerstein & Duran, 2008). Freire (1970) believed, "reflection – true reflection – leads to action" (p. 66). Unlike in conventional research, communities participate actively in a process known as praxis that cycles between reflection and action (Freire, 1970). Reflection raises people's critical consciousness, enabling them to translate their heightened awareness of their lives into actions that would bring about a new and improved social and political reality (Freire, 1974). Instead of imposing on the community, academics and intellectuals assume the role of facilitators to promote collective reflection and social action, with a strong belief that after all, change must come from within (Wallerstein & Duran, 2008).

2.2.2 Core concepts

The gold standard referred to by Minkler and Wallerstein (2008) integrates nine core principles, ideally developed with community partners and practically applied to the extent appropriate within the research context given that much can change during the process (Israel et

al., 2008). These "shared principles result in a negotiation of information and capacities in mutual directions" (Wallerstein & Duran, 2008, p. 27). Common values that underlie PAR and other emancipatory, participatory methodologies include: 1) working with collectives; 2) strength-based orientation; 3) shared and equitable partnerships; 4) co-learning and capacity building; 5) balance between research and action; 6) holistic research approach; 7) iterative and cyclical process; 8) knowledge translation; and 9) long-term relationships (Israel et al., 2008). Ongoing evaluations are necessary to ensure that research remains faithful to these principles. Appendix A discusses these core concepts in more details.

2.2.3 Issues of power: the pink elephants in the room

The shared core principles serve merely as a guideline for ethical research. They are not enough, particularly in the context of working with marginalized communities or communities of colour (Chávez, Duran, Baker, Avila, & Wallerstein, 2008; Minkler & Wallerstein, 2008; Stoecker, 2008). Socially constructed knowledge is based on interactions and dialogues among people, who are inevitably related to one another through differences in gender, race, culture, and class. Participatory researchers must therefore openly and boldly confront the 'pink elephants in the room' by engaging in direct conversations about power and privilege that underlie research relationships as a result of these differences.

Power is a fundamental concept in emancipation-oriented methodologies like PAR (Gaventa & Cornwall, 2006). According to Gaventa and Cornwall (2006), power and knowledge are inextricably linked. In dominant paradigms, knowledge production is a unidirectional process, partitioning individuals involved into strata based on the amount of knowledge they hold. Authorities of knowledge are known as "uppers" and considered to wield greater power. "Lowers" tend to be those lower in social status and power positions (Gaventa & Cornwall, 2006, p. 123). Consequently, power lies not in individuals themselves, but rather in relationships, or relative positions, between individuals.

PAR invariably challenges the power dynamic because it shifts expertise, or knowledge, from researchers to the researched, recognizing that people have their own knowledge based on experiences. As a result, relationships change where uppers become facilitators in a two-way exchange process of co-learning and listening that ultimately empowers – literally giving power

to – those conventionally with less power and voice (Gaventa & Cornwall, 2006). This is a key aspect of PAR.

However, PAR is not the 'be-all end-all' solution to transforming hierarchical power relations. Several issues remain: Is consensus decision-making the best approach in PAR? And how do we know if participants are truly speaking their mind, rather than simply reiterating the opinions of the dominant group? Gaventa and Cornwall (2006) warned that, "consensus can all too easily masquerade as common vision and purpose, blotting out difference and with it the possibility of more pluralist and equitable solutions" (p. 126). Consequently, the powerless can internalize the views of the more powerful (Gaventa & Cornwall, 2006). Thus, even if the researchers are well intentioned to emancipate through inquiry, the process could potentially perpetuate existing power imbalances and oppression. Participatory researchers therefore still need to be mindful of authentic participation in re-defining boundaries of power. Genuine participation, however, is more than tokenism and consultation (Hart et al., 1994). It is "not a given and does not automatically follow from showing up but, rather, must be learned and/or struggled for" (Low, Brushwood Rose, Salvio, & Palacios, 2012, p. 52). Participation is after all, a process (White, 2003). In Appendix B, I reflect deeper upon these various ethical challenges inherent in PAR.

2.3 Research rigor

Rigor in dominant positivist research cannot be transplanted into qualitative research that is driven by a vastly different paradigm. In their seminal work, Lincoln and Guba (1985) re-defined rigor as trustworthiness, which is further distilled as credibility, transferability, dependability, and confirmability of the research. I will define each of these components that guide rather than dictate the rigor of my research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). I will also discuss various strategies I used to ensure that the research accurately portrayed local realities.

Credibility speaks to the internal validity or quality of the research. Credible analysis and interpretation accurately depict participant perspective, experience, and voice (Mayan, 2009). Transferability is akin to generalizability of quantitative results based on statistical significance. Results in context-specific qualitative research can be transferred to other settings by generating a thick, rich description of the research process (Mayan, 2009). Dependability parallels reliability

in quantitative research. Other researchers can replicate reliable or dependable research by following decisions tracked using an audit trail with ample details (Thomas & Magilvy, 2011). Finally, confirmability conveys the researcher's degree of neutrality in the process through reflexive practices. The researcher is "the central figure" in the process of generating and interpreting data (Finlay, 2002, p. 531). As Hampton (1995a) reminds us, objective, distant, and neutral research does not exist because it involves human beings. Therefore, researchers are humans who bring with them their own biases, assumptions, and influences (Finlay, 2002). Reflexivity is when the researcher critically self-examines these factors, is painfully conscious of their role during research, and systematically documents their thoughts and observations in field notes and reflexive journals (Thomas & Magilvy, 2011). Rather than developing strategies to address these criteria individually, I perceive them collectively as rigor and use diverse techniques to ensure good research practice.

2.3.1 Researcher responsiveness

Stoecker (2008) debunked the idea that academics have become irrelevant in community-based work and research. He posited three roles for researchers – initiator, consultant, and collaborator – that interact with other roles including "leader or animator, community organizer, popular educator, and participatory researchers" (Stoecker, 2008, p. 111). These roles are not mutually exclusive nor are they on a first-come, first-serve basis; "one person might occupy multiple roles […], several people might occupy the same role" (Stoecker, 2008, p. 112). He argued that academics no longer become irrelevant if they integrate the various roles while doing participatory research.

Good, rigorous research therefore requires a responsive researcher who embodies multiple roles and is highly reflexive and sensitive to a dynamic research environment (Morse et al., 2002). As the research unfolds, she makes necessary and appropriate adjustments in the research approach, procedures, and protocols to accommodate the changes (Morse et al., 2002). The ability to adapt to changing circumstances reflects an individual's hyper awareness of the environment and the various relationships that result from the research.

Research responsiveness and flexibility were not new concepts to me. I previously worked as a teacher in a middle school classroom and a community organizer in an urban youth centre, both settings where drastic changes frequently arose at a moment's notice. Similarly in

this thesis, I recognized that the research did not manifest itself perfectly in the field. And so, equipped with community organizing and facilitation skills developed from previous experiences, I began my research, anticipating, embracing, and adapting to a dynamic research context, and making decisions often quickly and spontaneously depending on the situation.

2.3.2 Verifying the research

In addition to being a responsive researcher, I employed other verification techniques that checked the rigor of the research. Verifying, or "checking, confirming, making sure, and being certain" (Morse et al., 2002, p. 9), occurred throughout the research process from developing the question to analyzing and interpreting the data. These techniques included prolonged involvement in the research setting, iterative member checking, ongoing debriefs, and detailed journals.

Prolonged engagement is a strategy to strengthen the credibility of the research because the researcher develops profound relationships with her participants and the surrounding (McHugh, 2008). Her constant observation, recorded in journals, allows the researcher to develop a deeper understanding of participant experiences and the research context. This is a form of data that triangulates or corroborates the research results. For the bulk of this research, I spent several weeks during summer 2013 in the field, as well as in short overnight trips prior to and post data generation. My willingness to participate in community activities and learn from others allowed me to be persistently present and embedded.

Morse et al. (2002) argued that member checking needs to be integrated throughout the research process rather than as an after thought. My constant presence in the community during the data generation stage allowed me to initiate ad-hoc conversations with youth and community members. These conversations, often taking place in random locations like my car or a beading circle, served to assess participants' engagement with the research, probe for deeper reflections on the research topic, and verify information. Such informal member checking occurred iteratively throughout the process and required significant researcher responsiveness from me.

Besides verifying data, some of these spontaneous conversations also monitored the rigor of a participatory process. Ongoing debriefs allowed the youth, the research liaison, other community members, and myself to make or adjust procedural decisions collaboratively. Continually revisiting and adjusting the project plan with the community partner helped to

evaluate the strengths and weaknesses, allowing us to improve the research design and ensure that it remains relevant, appropriate, and respectful. Outside the field, I engaged in ongoing conversations with my colleagues, research supervisors and mentors to consider my reflexivity and research conduct, a strategy that addressed confirmability.

I recorded my reflections and exchanges that took place outside a formal research context (e.g., planned focus group sessions) in my research journals, which subsequently became data that provided detailed descriptions of the research process. Moreover, the research journal documented points of decision-making, translating into an audit trail that supported a dependable research. Such rigorous research practice where I was constantly aware of my role and how I responded to relationships with those around me also aligned with "relational accountability," a value inherent in the Indigenous research methodology (Shawn Wilson, 2001, p. 177).

2.4 Research context

In this section, I describe contextual details that paint the community setting and my relationship with the research partner, and the process of establishing trust and relationship with the community.

2.4.1 Community context

Research context is usually defined by "geography, organization, population, or professional service type" (Kitson et al., 2013, p. 4). Study context is "engaged and involved in each stage of the knowledge creation journey" (Kitson et al., 2013, p. 4). Providing context allows for greater transferability of research findings (McLaren, Ghali, Lorenzetti, & Rock, 2007; Poland, Frohlich, & Cargo, 2009). I will therefore define the context in this research by geography, history, and organization of the communities with which I worked.

The YKDFN occupies the historical Chief Drygeese Territory, a gigantic mass of land that extends northward in the NWT. The YK Dene people, who speak the traditional languages of Chipewyan and Wiilideh (Tsetta, Gibson, McDevitt, & Plotner, 2005), originally negotiated the territory in 1900 through Treaty 8. Over the years, various outside agencies including, more recently, the diamond industry, entered the region for economic development (Tsetta et al., 2005). Today, the YKDFN is geographically situated as two communities, Ndilo and Dettah,

around the city limits of Yellowknife, the territorial capital (Figure 2-2). They are approximately 30 km apart from each other, and Ndilo is much closer to the urban centre of Yellowknife compared to Dettah. There are also other YKDFN traditional lands scattered on the Great Slave Lake.

Despite being part of the same First Nation, the two communities have distinct band leadership, although function as a collective band council for governance purposes. One of the service divisions under the overall band governance is the Wellness Division, which oversees all programs and activities that promote the health and wellbeing of band members from Ndilo and Dettah. This division encompasses many distinct programs, one of which is the Community Wellness Program (CWP), the organization with whom I collaborated.
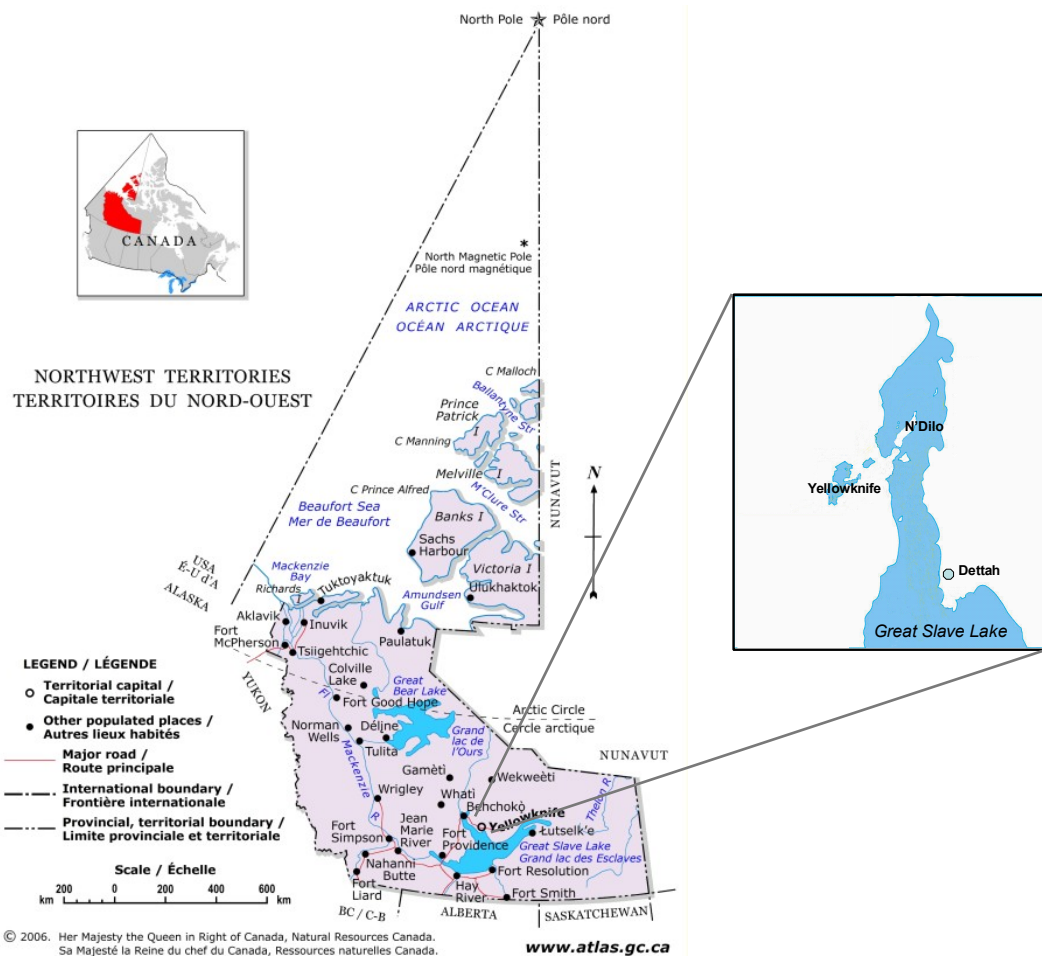
Figure 2-2. Map of Ndilo and Dettah, Northwest Territories (The Atlas of Canada).

2.4.2 Community partner

The CWP is responsible for education/employment, recreation, after school, hand games, sewing, youth leadership, on the land activities and initiatives (Drygeese, 2014). One of its components is the Chekoa Youth Program, a leadership program for youth older than 9 years. The video project was coordinated through the Chekoa Youth Program.

In the past, my supervisor and her research team collaborated with the CWP and the local school on various projects using visual methods such as participatory video (Genuis, Jardine, & Chekoa Program, 2013) and Photovoice (Jardine & James, 2012). These projects promoted the use of multimedia as tools for youth to develop relevant smoking prevention messages. Because of the positive outcomes of these projects, the CWP was interested in further collaboration for its summer youth programming.

In this thesis, I will refer to the CWP as the organizational partner, and the research liaison as the specific individual from the CWP with whom I directly worked. However, because of the scope of CWP's activities, the community's familiarity with the local programs, and to introduce the video project in a less formal way, "Chekoa Youth Program" was used in the consent, assent, and permission to use image forms. Moreover, "Chekoa Youth Program" helped the youth, parents, and community members to avoid the confusion with youth programs organized by other branches of the Wellness Division.

2.4.2.1 Research liaison

The research liaison, Ms. Charlene Sundberg[1], is the manager of the CWP and played an instrumental role in this research. Through connections with community leaders who had previous experience working with my supervisor, I was introduced to Charlene. This is where the conversation started as we began co-developing a research question and a project plan. We maintained contact and communicated through email, text messages, phone calls, and in-person meetings. Thus, it is through an old relationship that a new relationship began.

Connecting with a resource person through the "known sponsor approach" (Patton, 2002, p. 312) is critical in community-research partnerships. Accessing a community has come to bear

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[1] The research liaison has reviewed the writing and given permission to use her name in this thesis. For me, properly acknowledging the research liaison in this thesis is an important means of honouring the research partnership with the community. For a more detailed explanation of the ethics on confidentiality when working with Aboriginal communities, please refer to Ermine, Sinclair, and Jeffery's work (2004).

a negative connotation as researchers used a variety of unethical measures in the past to surreptitiously sneak their way in (Patton, 2002). Community-based researchers have therefore come to recognize the known sponsor channel as one of the best ways to enter a community (McHugh, 2008). Researchers rely on "the legitimacy and credibility of another person to establish their own legitimacy and credibility" (Patton, 2002, p. 313). This liaison is also regarded as the gatekeeper of community information and knowledge (Poland et al., 2009). Because the liaison can facilitate the researcher's transition and integration into the community, the right relationship and chemistry between the partners can either "make or break" the research.

My relationship with Charlene definitely "made" the research. Like many of her coworkers at the Wellness Division, she is an YKDFN member living in the community. Staff members like her have a better understanding of the needs and realities of the community "because we live in the community, we hear people talking about certain issues" (R5). Her extensive family and social connections in both Ndilo and Dettah, and status as a role model, made her a credible voice that brought important community concerns and feedback to the table as the process unfolded.

Charlene's professional background includes recreation, community wellness, early childhood development, and youth engagement – knowledge and skills that were crucial for managing and facilitating CWP activities. Her position at the CWP and in the community was also critical for recruiting both youth and focus group participants and for accessing resources such as the Internet, printing, meeting space, and computers with video-editing software.

She showed unrelenting support and trust, which built my confidence as a novice community-based and PAR researcher. Her enthusiasm for the research was contagious, demonstrating that she truly believed in the value of the project for the community. This was a constant reminder for me that in participatory research, community and stakeholder buy-in is perhaps one of the most important factors.

Our relationship deepened over the summer when we collaborated, organized, and supported youth, other community members, and each other. For example, she introduced the project and my role to the youth and community members throughout the process. We partnered well in this format. Following Charlene's lead facilitated a safe environment for me to work with the youth and community members. In community activities where the larger group told stories,

danced, and drummed around the fire, Charlene shared with me stories that conveyed incredible confidence, resilience, and strength as a woman.

Over many open and honest conversations, she became an important confidante and co-researcher. We engaged in ongoing debriefs about the progress of the project and decisions made along the way, ensuring that research is not only rigorous but also relevant and meaningful to the community.

Nevertheless, just as partnering organizations often have competing interest and priorities as university researchers (Minkler, 2004), the research liaison also had other obligations such as ones to her family. Despite conflicting schedules at times, we managed to overcome the challenges and move forward in the research. Thus, I attribute the success of the project to her trust and encouragement.

2.4.2.2 Initiating a project with the community

The basis of the relationship, trust, and exposure to research established by my supervisor formed the partnership context for this current project about physical activity. My own experience with the physical activity initiative 'Just Move It' from the Navajo Nation (see Foreword) further motivated the research topic. This initiative grew out of local concern for diabetes in 1993. It has since transformed from community runs and walks into a North American wide campaign that connects Indigenous communities from across the continent in an online forum to share best practices in physical activity and health promotion (Jones et al., 2010). This program inspired my interest in physical activity as a graduate trainee.

Subsequently, I entered into the pre-existing research relationship. Prior to formally initiating the current research, I assisted with other health promotion and visual media projects in Ndilo and Dettah. It was in these early trips I began communicating with the research liaison, sharing my experience with physical activity on the Navajo Nation. The research liaison responded enthusiastically that physical activity is inherently a part of the traditional Dene way of life. Together, we developed a video project about physical activity with the youth, and constructed a research vision that was grounded in a northern cultural perspective. In trips leading up to the project, we finalized the research plan, centering on a summer cultural camp on traditional land. Co-planning the cultural camp and the video project with the research liaison

allowed us to introduce the research to parents through a welcome package that included informed consent/assent forms.

2.4.3 Relationship building

Various participatory and Indigenous scholars have criticized the "helicopter researcher" approach (D'Alonzo, 2010; Tuhiwai Smith, 1999; Wallerstein & Duran, 2008; Watson, 2012). Such an individual "flies in to conduct a quick study and abruptly leaves the community" (D'Alonzo, 2010, p. 283). The researcher's fleetingness, and perhaps even nonchalance in some cases, exasperates the distance between communities and academics, and perpetuates mistrust, particularly for Aboriginal communities who are perhaps "the most researched people in the world" (Tuhiwai Smith, 1999, p. 3).

In this research, the distance between the community and the university was significant. To overcome the challenge of distance, I visited the community early on, establishing connections and trust well before solidifying a research question and focus. During my limited time there, I volunteered whenever I could, introducing myself and striking up a conversation with everyone I met, taking the time to play in the gym, bead with elders, and connect with the youth. These activities continued even during the research project and after data generation was over. In addition to short overnight trips to the community, I dedicated the summer months for prolonged stay that further strengthened my credibility.

To avoid the fallacy of the ephemeral researcher, I proactively sought opportunities to participate in community life, familiarize with youth and community members, and establish a consistent presence. Cultural humility and giving back became the two most important avenues for building relationships.

2.4.3.1 Cultural humility

Cultural competence is familiarizing and mastering knowledge and practice of others' culture (Tervalon & Murray-García, 1998). Despite its good intention, there lingers a sense of hierarchy in knowledge and power, isolating the self from the other, a phenomenon well documented by critical and Indigenous scholars. It certainly makes one wonder, can we truly become competent in wearing other people's shoes (Minkler & Wallerstein, 2008)? Similarly, to

be culturally sensitive is to take into consideration the perspective of others based on knowledge of their cultural background, beliefs, and personal experiences (Tervalon & Murray-García, 1998). Cultural humility integrates the discourse on power and racism into cultural competence. Tervalon and Murray-García (1998) defined cultural humility as "a lifelong commitment to self evaluation and critique" (p. 123) that re-examines and shifts the power imbalance between the researcher and the researched. Furthermore, cultural humility suggests a willingness to learn and share cross-cultural experiences and knowledge, while simultaneously understanding and locating our own bias and assumption. Cultural humility is therefore a pre-requisite to building supportive and mutually trusting partnership with marginalized communities or communities of colour (Chávez et al., 2008; Minkler & Wallerstein, 2008; Minkler, 2004).

Openness to learn from others is therefore only one piece of the equation. The other half recognizes the value of location and our own cultural history and heritage. I engaged in open dialogues and conversations about diverse experiences, cultural practices, and belief systems, which facilitated cross-cultural exchanges and furthered the relationship building process.

2.4.3.2 Giving back

During the time that I spent in the community, I tried to contribute as much as I can. At the cultural camp, I volunteered to clean, cook, and supervise the youth in their camp activities. In the community, I helped out at the summer day camp, supervising the children or cooking and interacting with the camp workers, most of whom were also youth between the ages 16-18 years. We shared stories about scary movies, exchanged experiences from our respective cultures, and baked banana bread for everyone. In addition to sharing some day-to-day responsibilities, I also helped community members with letter writing and college application. By volunteering myself in all aspect of community life, I continuously built relationship with the youth, staff, and members of the YKDFN.

2.4.4 Research ethics

I received ethical approval from the University of Alberta Human Research Ethics Board (REB 1) for this research (Appendix C). I also obtained a research license from the Aurora Research Institute to conduct the project in the Northwest Territories (Appendix D). I adhered to

the institutional ethical standards established by the Tri-Council Policy Statement with a chapter dedicated to research with Aboriginal communities in Canada (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, 2010). Moreover, I applied relational ethics that requires profound self-reflexivity and authenticity based on the principles of IRM and PAR (Absolon & Willett, 2005; Shawn Wilson, 2008). I established relationality by "drinking tea" with communities to state my place, intention, interest, and relationships before collecting data (Castleden, Morgan, & Lamb, 2012). Another guiding principle I followed was OCAP™ (Ownership, Control, Access, Possession) that conveyed the importance of community data ownership and shared authorship (First Nations Information Governance Centre, 2014). Following these guidelines enabled the community partner and me to arrive at a common "ethical space" (Ermine, Sinclair, & Jeffery, 2004) where, despite diverse ways of knowing and worldviews, we agreed upon a research vision and objectives.

2.5 Youth participatory video

"Building relationship, establishing trust, and creating positive learning experiences while remaining critical about one's own role and the power dynamics at play are values that are often more crucial to the project than the objective of completing a film" (Dougherty & Sawhney, 2012, p. 440).

The method used in the first phase of data generation was participatory video, which was strongly underpinned by Freire's critical pedagogy and the PAR framework. Visual media was the central focus of the research and played an important function of sparking conversations and critical reflection. In Freirian language, the videos were codes that facilitated "participants to 'see' their reality with new eyes and develop alternative ways of thinking and acting" (Wallerstein & Duran, 2008, p. 38). Thus, using a participatory approach coupled with videography and occasional photography, we engaged youth who documented their experience with and perspective of physical activity in the community.

2.5.1 What is participatory video?

Participatory video is a visual research method, which also includes the likes of Photovoice, photo novella, and digital storytelling that have become increasingly popular in qualitative inquiry as a means to generate data (Low et al., 2012; Mayan, 2009). Social movements in the 1960s (Low et al., 2012), noteworthy developments in academia such as feminist media and Freire's critical pedagogy in the 1970s, and the emergence of PAR during this period fuelled the growing importance of participatory video (High, Singh, Petheram, & Nemes, 2012). It gives participants, especially marginalized people such as Aboriginal youth, a voice that would otherwise remain silent through traditional data collection means (Mayan, 2009). It visually appealed to many of the illiterate poor (Low et al., 2012) and even cultures that value oral tradition and storytelling rather than written communication (Schwab-Cartas, 2012). This method opened the door "for a quality of participation not previously available (Low et al., 2012, p. 50).

A more recent definition situates participatory video as a "a set of techniques to involve a group or community in shaping and creating their own film" (Lunch & Lunch, 2006, p. 10). Using media technologies such as cameras and video recording devices, participants share a particular perspective, experience, story, and concern. In these instances, researchers are facilitators who provide the tools and necessary training to help participants achieve a meaningful goal. The products, either photomontages or videos, generally lead to social actions that would improve the livelihood and health of the participants and their communities (Blazek & Hraňová, 2012; Sitter, 2012; Mayan, 2009). However, the value of participatory video lies not only in the final product but also in the process of video making, which can be just as, if not more, important (Crocker, 2003; High et al., 2012).

The technical component is worth noting here. Participatory video requires a level of comfort in using more sophisticated recording equipment. The hands-on nature of this method offers a valuable opportunity to empower participants and build their capacity by introducing or refining multimedia skills and cultivating creativity and innovation. Particularly in the current digital age, "making a video is easy and accessible" (Lunch & Lunch, 2006, p. 10). The medium of the video has the potential to document an insider perspective more profoundly and lively than other means such as photos and voice recordings. Through their unique lens, filmmaker

participants re-contextualize their lived experiences, shedding new light on ordinary realities, to facilitate collective reflection and possible intervention for change (Yang, 2012).

With PAR principles as its foundation, participatory video has the ability to "destabilize hierarchical power relations" between the researcher and the researched (Kindon, 2003, p. 142). The process "urges [film subjects] to make films about themselves and see themselves through the films" (Yang, 2012, p. 102). Likewise, researchers reflect on the process, power, and relationships during filmmaking (Yang, 2012). Luttrell et al. (2012) coined the term "collaborative seeing" (p. 176) to describe this mutual reflexivity, or critical reflection. With power, knowledge, and action in mind, I embark on my own critical reflection in this research, addressing questions such as, what becomes of my role as a researcher in practice? How much responsibility do I assume in managing the technical aspect of the project? How do the projects manifest genuine participation? What are the limitations and barriers to true participation? Under what conditions does reflexivity arise? How is reflexivity benefiting the participants? And ultimately, how does the participatory video process and output foster positive change in the community?

2.5.2 Participant profile

Our participatory video project engaged youth from Ndilo and Dettah to capture community experience with and perspective of physical activity. Recruitment took place through the *Chekoa* summer youth program in Ndilo and Dettah prior to the commencement of the project. The *Chekoa* youth program is an initiative managed by the research collaborator CWP. Together with the research liaison, we recruited 8 youth from Ndilo and 11 youth from Dettah, all aged 8-18 years. These youth members formed two cohorts of participants. Recruitment strategies included word of mouth (i.e., snowball sampling), poster displays at community centres, as well as targeted recruitment based on the recommendations of local leaders. The size of the participant pool was determined based on youth interest and availability. Despite the small participant pool, we generated a thick description of physical activity in the local sociocultural context through my prolonged engagement in the community and in-depth conversations that unpacked ideas during the video project.

Youth were purposefully chosen as participants in this part of the research. We did not select youth participants to fully represent all youth from both communities, but rather sought to

empower the few who were conveniently available in creating conversation topics for the rest of the community. In accordance with the positive youth development approach, young people were viewed as "resources rather than as problems for society" (Damon, 2004, p. 15). Rather than being treated exclusively as a research target, youth had the knowledge and capacity to act as a proxy for the health of the community. This approach supported giving youth a voice and opportunity for community involvement, in turn benefiting their personal growth and skill development (Damon, 2004). Such an approach is becoming more prominent in fields such as clinical child psychology and education (Damon, 2004). A similar theoretical perspective is taking hold in health promotion research. A previous Photovoice study in Ndilo demonstrated that not only were the results more credible due to youth involvement, health messages delivered "through their children's eyes" were also more powerful for the community (Jardine & James, 2012, p. 7). Likewise in this project, youth acted as agents reminding their communities of the role of physical activity in their local and cultural context. Youth engagement strengthened the credibility of findings and proved far more effective than a researcher from the outside delivering the same message. PAR therefore provided the platform that fostered positive community-youth relationship.

We followed university institution and the CWP's guidelines for the informed consent process and parental permission. All participants provided assent/consent for their participation. Since most of youth participants were under the legal age of 18 years, their parents or guardians also provided written or oral consent. For youth 15 years and under, additional care (i.e., supplemental assent form; reading project summary out loud) was taken to ensure their true voluntary assent. In the event of non-participants whose images were captured in the videos, a separate process followed to acquire their permission to use their image. In the case that the non-participant was a minor, permission was sought from a parent or guardian. Consent, assent, and permission to use image forms are in Appendices E-G.

2.5.3 Participatory video in action

In summer 2013, I spent approximately three weeks in Yellowknife, facilitating the youth participatory video project. Figure 2-3 shows photos of youth filming and editing the videos during the project. The weeks were divided into discrete video-making sessions. In the first week, I worked with a cohort from Ndilo. Eight youth between the ages 8 and 16 years participated in

this group, which also included a youth leader who, upon community leader's suggestion, was hired as a paid research assistant to assist on-site with recruitment, acquiring parental consent, video making and editing. We also introduced the project to the staff and children at a concurrent summer day camp, also organized by the Wellness Division. Participants recruited during this initial week were therefore based on community leaders' suggestions, from the youth assistant's social network, and from the summer day camp.

To accommodate younger children aged 8-11 years from the summer day camp and the older youth aged 11-16 years, I organized a daily schedule that offered two drop-in opportunities: a morning session and an evening "Dinner and Movie" option. The first few days consisted of workshops to familiarize the youth with the filmmaking equipment (recording device, tripod, monopod, adaptors, and speaker system). Icebreaker activities facilitated the youth to form relationships with me. We also brainstormed video content, first developing storyboards and ideas on posters and then recording on camera. Video editing occurred on an on-going basis. The youth assistant edited the majority of the videos and also taught other youth the art of editing using iPhoto.

During this time, I provided leadership training and mentorship, particularly to the youth assistant who held more responsibilities than the other participants. Learning to be on time, responsible, and a role model for the younger children were some of the key lessons that we talked about.

Figure 2-3. Youth participatory video in action. Youth participated in all aspects of the video-making process, from filming, selecting/analyzing, to editing. Youth shown here have all provided consent to use their images through the video project.

2.5.3.1 Cultural camp

In the second week, I volunteered at the cultural camp on Mackenzie Island for youth aged 9-14 years. Mackenzie Island is traditional land located 20 minutes away from Dettah by boat, where "important community meetings took place" (P1). The summer cultural camp is an annual activity organized by the CWP. This year, the organizers invited me to work with a group of youth, who were primarily from Dettah, at this venue to document physical activity from a traditional cultural perspective. In addition to training the youth about basic camera-operating skills, I also helped whenever I could with other activities such as games, cooking, and encouraging the youth to participate in camp life. Not only was I an ally to the youth, I also took on the role of a supervisor, as someone the youth could turn to for advice, direction, and help.

Whereas I facilitated the majority of the workshops in week one, the research liaison and I worked closely and co-facilitated the project at the camp. We gave youth broad instructions to use videography and photography to document evidence of physical activity on the land. These

instructions were coupled with a presentation by a community elder who taught the youth about traditional physical activities and the way people lived on the land a long time ago. This coupling prompted the youth to begin viewing physical activity as a broad concept beyond soccer, volleyball, and running. In addition, I engaged youth in group discussions and facilitated them to interview one another and seek each other's thoughts on the camp and traditional physical activity. Throughout the week, we made the cameras available at all times, giving youth the flexibility to record whenever they had the time and interest. Following each day's recording, I reviewed images with individual youth who took them. Each conversation further analysed the content of the images and confirmed the youth's ownership.

After the camp ended, we returned to the community in the third week to edit and finalize the videos. During the editing process, I engaged the youth in conversations guided by the ORID structure to facilitate their analysis of the meaning and motivation behind each photo or video segment (more in section 2.7 Data analysis). Two additional youth joined us this week in the editing and discussion. These older youth, 16 and 18-year-old respectively, participated at the cultural camp as well but as CWP staff members who took on responsibilities such as facilitation, supervision, and additional help. Once the camp was over, they voluntarily joined the video project outside of their CWP work hours.

Having had discussions about possible online distribution of the videos, the youth decided to retain film credits with their first names. While participant confidentiality is a significant ethical concern, particularly in the cases of youth and social media dissemination, it is also critical to "[acknowledge] the views of participants and the knowledge system as the source of that information" (Ermine et al., 2004, p. 33). Doing so through dialogue and collaboration empowers participants, respects the source of knowledge, and decolonizes conventional academic practices (Ermine et al., 2004). Honouring youth's film credits also recognized their leadership and contribution, eliciting pride from community members-at-large.

2.6 Other data generating strategies

The research liaison and I integrated focus groups and a qualitative evaluation to more comprehensively understand physical activity, the process of participation, and research impact. My own research journals, which documented detailed participant observation, field notes, and reflections, provided context and subsequently became data for analysis.

2.6.1 Focus groups

After video making ended, I compiled and fine-tuned the finished products (e.g., adjusting audio volume, adding subtitles). A few weeks later, I returned to Yellowknife with these finalized videos and shared them, with the input of the youth based on our analysis conversations, with eleven community members and leaders in three focus group discussions. Given PAR's emphasis on human agency (Wallerstein & Duran, 2008), it was particularly important for those youth who produced the videos to present their work, explain their decisions to include or exclude certain clips, and describe their lived experiences. Unfortunately, on the day of the focus groups, the youth, who were already scattered in two different communities, were unavailable due to various reasons, both logistical and personal.

There were six participants in the first focus group, all of whom worked in various aspects of the Wellness Division. The participants ranged from a youth who facilitated recreation activities to an elder who was the community counsellor. I opened the discussion by introducing the project, outlining the goals and expectations of the focus group, and acquired informed consent from the participants (consent form see Appendix H). With the participants' permission, I video-recorded the discussion. Guided by semi-structured questions (see focus group guide in Appendix I), participants provided feedback about the videos and shared their experiences with physical activity. The conversations turned to topics about cultural practices, intrinsic motivation, and possible solutions to overcome challenges faced by the workers in organizing activities for community members of all ages.

Two more mini focus groups followed a few days later and supplemented this larger discussion. Due to unforeseen circumstances, participant availability was a challenge at this time. The reality of community-based research demanded that I make decisions such as adjusting scheduling and recruitment strategy to adapt to spontaneous situations. Instead of organizing another large discussion, I conducted two mini focus groups with 2-3 people. Mini focus groups have the disadvantage of less input and experience compared to a larger group (Krueger & Casey, 2009). However, at this time, it was the most feasible and efficient way to meet with available community members and leaders.

Both sessions lasted 1-1.5 hours. After obtaining informed consent and permission to record, I followed the same format as the first focus group. I showed the videos, asked for

feedback regarding the videos, and facilitated the conversations with follow up questions about participants' experience with and perspective of physical activity in the community.

2.6.2 Evaluative interviews on the impact of knowledge to action

Four and seven months after the focus groups, I returned to the community and followed up with youth, community members and leaders in telephone, one-on-one, or small group interviews about the impact of the research on community initiative and participation in physical activity. These participants all had some degree of contact with the research, either directly as a youth who made the videos, or indirectly as a band council member who attended the community knowledge translation events.

This stage of the research evaluated the impact of the knowledge to action process and outcome. In health promotion, evaluation is critical for determining the "success" of interventions and programs (Nutbeam, 1998). "Success" is often defined by the outcome of interventions or "a change in the health of an individual or group which is attributable to an intervention or series of interventions" (Nutbeam, 1998, p. 29). Impact evaluation, one of the research evaluation strategies, can assess for the true value of an intervention on the individual or community in the long run, the link between the impact and the research activities, and the types of "unintended consequences, whether positive or negative" (Baker, 2000, p. 1). In this research, impact evaluation was also critical for holding both the researcher and the community partners accountable for the health promotion outcomes.

Given my limited time and participant availability, I spoke with nine individuals in two research trips. Probing questions guided the conversations. Respondents shared their perception of the value of the research, how the project affected the participants, whether there were changes in the community, if the changes were due to the research, and whether the project design could have been improved (adapted from Baker, 2000). These conversations were also opportunities for verifying information, or member checking. They lasted on average 20 minutes (informed consent, assent, and interview guide see Appendix J-L). I recorded these exchanges and later transcribed them verbatim for content analysis using a comparison approach to abstract for themes and sub-themes.

2.6.3 Participant observation and reflexive journals

> "*It is in the practice of assembling – the formation of the network – that we produce our realities, including not just the reality of the phenomena under study, but also how we as researchers might emotionally experience our own becomings at those moments of assembling*" (Watson, 2012, p. 195).

Participant observation, fieldnotes, and reflexive journal entries told a story from my vantage as an outside researcher. These forms of data generation also indirectly verified information that participants provided. In other words, it "check[ed] whether what people say they do is the same as what they actually do" (Mulhall, 2003, p. 308). Observation notes can therefore reach where standard data collection techniques cannot (Pope & Mays, 1995). I differentiate the types of writing and explain my rationale for writing them.

In this research, I was an "observing participant" (Watson, 2012) who took "prolonged observation, [was] involved in all the central activities of the organization and whose role [was] known" (Mulhall, 2003, p. 308). Like the research participants, I was also integrated into the process, co-constructing knowledge with them. The direct involvement of an observing participant researcher encourages "first-hand experience and understanding" and strengthens truthfulness of the research itself (Patton, 2002, p. 329). The researcher listens, observes, and learns, "[shedding] the mantle of dominance" and altering power dynamics (Gaventa & Cornwall, 2006, p. 123). My participant observations described activities in the community and at the cultural camp that were not video-recorded. I also documented on-going interactions among the youth, between the youth and I, and between the rest of the community and I. In fact, some of the most memorable conversations occurred organically, outside the formal parameters of the research where I did not have a recorder.

Fieldnotes, while contextual and more objective, can still convey emotions. The notion of "the field" itself is subjective because it is socially constructed based on the researcher's behavior, attitude, and beliefs that stem from personal experiences, worldviews, and training (Mulhall, 2003; Patton, 2002). My fieldnotes documented details such as the setting, atmosphere, and participant dynamics of the focus group discussions and follow-up interviews. Over time, they came to reveal change in my affects as I became increasingly attached to the research and the community.

Observation notes and personal reflections also align with the traditional Indigenous teaching of "learning by watching and doing" (Shawn Wilson, 2008, p. 40). As an outsider with limited knowledge about the people and culture, it was imperative for me to "listen, listen, and listen" (Chávez et al., 2008, p. 102). The process of listening, observing, participating, and learning deepened relationships and my relational accountability, key themes in the Indigenous research methodology (IRM). Through participation, I put myself forward, heightening the level of subjectivity (Absolon & Willett, 2005). The self is critical in IRM, as it is "woven throughout the process" and related to methods (Absolon, 2011, p. 70). Unlike the quiet anthropologist secretively jotting down notes to describe an objective reality, I reflected on conversations and diverse perspectives around me and contemplated my role as a participant, a researcher, and a human being. Through writing my observations, thoughts, experiences, I used the personal reflections as a vehicle for knowledge, discovering and understanding myself more and how I located in relation to the larger cosmos.

Rather than distinguishing participant observation, fieldnotes, and reflections as disparate writings, I consolidated all my notes into a single, detailed research journal for the purpose of analysis. This approach echoed Mulhall's (2003) practice of integrating objective descriptions of the research setting, interpersonal dynamics, chronology of a day's events, dialogues, and personal reflections into a single heading of "Fieldnotes." Journalling thus was a crucial descriptive mechanism that captured the research context and the essence of interpersonal connections, monitored my personal biases and assumptions, and chronicled my self transformation, an essential outcome of research according to IRM (Shawn Wilson, 2008). Locating myself, further building trust, and being accountable to relationships are processes portrayed through my journal entries and therefore informed the way I conducted research.

2.7 Data analysis

Data analysis occurred through two channels. In the field, I analyzed the content of the videos with youth and focus group participants. I termed this process "field analysis." I recorded these field analysis conversations, transcribed them verbatim and conducted content analysis, along with other data sources, back at the university where qualitative data software NVivo 10 was available to facilitate the process. In this section, I provide more details about these two types of analysis, as well as additional analytical measures I took to boost research rigor.

2.7.1 Field analysis

Field analysis was largely guided by focused conversation method ORID that probed the purpose and meaning of the participatory videos through Objective (what do you know?), Reflective (what do you feel?), Interpretive (what does this mean?) and Decisional (what do we do?) perspectives (Stanfield, 2000).

I applied this ORID structure in focused conversations with the youth while analyzing the video and photo footages during the video project, and in the focus group discussions with community members and leaders. The structured method allowed us to examine in-depth the significance of video content, the process of video-making, and participants' lived experiences (Wang, Morrel-Samuels, Hutchison, Bell, & Pestronk, 2004), highlighting that the videos and images alone are not sufficient as data. Rather, it is about people's reflections, interpretations, and stories that go along with the images.

In general, the first phase was an objective examination of the videos. I posed questions that mainly sought participants' feedback on the videos themselves: do these videos portray physical activity, what is done well, what can be improved? Participants then reflected on their own experiences based on the videos in the second phase: how do you connect with the videos? What else do you see in terms of physical activity around you? What do you do to be active? The third phase involved the participants to further consider the content and interpret the significance of the videos. The last phase, perhaps the most important, stimulated participants to brainstorm and focus on the outcome: What are some ways for us to get more people active? Table 2-1 provides sample questions posed to the different groups of participants.

Table 2-1. Sample questions in the field analysis discussions guided by ORID.

ORID structure	Conversations with youth	Focus group discussions
O = objective	Why did you take this picture/video?	Are these portrayals of physical activity accurate? What is done well and what can be improved?
R = reflective	What does this picture mean to you?	How do you connect with the video? What do you do to be active?
I = interpretive	What would you say about this picture to someone outside of your community?	What do these images mean to you? Why is this important?
D = decisional	What can we do?	How can we get more people active?

2.7.2 Content analysis

I examined and further generated meaning from the qualitative data using the conventional content analysis approach outlined by Hsieh and Shannon (2005). Conventional content analysis is the suitable strategy here because I sought to "describe a phenomenon" (Hsieh & Shannon, 2005, p. 1279). Unlike analysis using constructivist grounded theory (Charmaz, 2011), conventional content analysis is "limited in both theory development and description of the lived experience" (Hsieh & Shannon, 2005, p. 1281). However, the analysis still applied an inductive process based on "empirical or 'real world' situations" without previous assumptions (Morse, Niehaus, Wolfe, & Wilkins, 2006, pp. 281–2).

Analysis began with familiarizing myself with the data. There were five sources of data that generated 19 transcripts from the participatory videos (V1-8), conversations with youth (Y1-6), focus groups (P1-11), impact evaluation interviews (R1-9), as well as numerous research journal entries (see Tables 3-1 in Chapter 3 or Table 4-1 in Chapter 4). I organized these data using an alphanumeric coding system for identification. For example, a quotation ending with Y3 in parentheses suggests that the words came from youth participant 3. However, in discussions, interviews, and field notes, participants and non-participants' names have been changed to pseudonyms for ease of reading and participant confidentiality. I transcribed all digital recordings including the videos produced by the youth. During transcription, I noted any hunches about potential themes, which formed the initial coding skeleton for the subsequent systematic coding.

Each text was coded in multiple layers. Based on the initial coding skeleton and bearing the exploratory nature of the research in mind, I scanned the transcripts first for types of activities that participants considered as physical activity or being active. I also scrutinized for words that described the meaning of physical activity, rather than merely the activities themselves. A second reading highlighted factors that motivated or prevented people from participating in physical activity. A third read focused specifically on the research process, interactions between the researcher and the participants (or non-participants), among the participants, and researcher's thoughts and behaviours with the community. At this stage, analysis was based heavily on research journals and non-verbal cues noted in the transcripts. A final read sought events that did not necessarily fall into any of the previous categories, such as

references to cultural identity and specific mentions of the physical, emotional, mental, and spiritual nature of being active. Analysis assessing research impact followed the same procedure, but lagged in the research timeline because the evaluation took place later on.

The initial coding process was done on paper. I then transferred these codes into NVivo 10 that sorted each code into nodes, which were then conglomerated into sub-categories and categories. I visualized the relationships between and among categories and sub-categories by drawing concept maps. Codes were then further collapsed as I compared coding densities (i.e., how frequently a code was referenced in the text), considered the relevance of the codes to the research goals and objectives, and discussed the similarities and differences between codes with other researchers. I systematically tracked my thoughts, hunches, and ideas in memos and annotations. The end product of the analysis was a preliminary codebook. Each category and sub-category was defined and represented with exemplar quotes.

During the data coding and analysis stage, memo writing, co-analysis or post-hoc member checking with the research liaison, and peer review analysis further strengthened research rigor.

2.7.2.1 Shared analysis

I shared this organized initial schema of the analysis with the research liaison during a follow-up research trip. We had a one-on-one conversation about each category and sub-category, characterized by representative quotes. The research liaison agreed with, disagreed with, or elaborated upon the characterization. This conversation was audio recorded to facilitate further analysis and writing. The process resulted in a final version of the coding scheme.

The process we took at this stage, where analysis occurred "back at the university […] with preliminary and final analyses returned to the community for corroboration," is not ideal (Castleden et al., 2012). In working with Aboriginal communities, especially those far away from the university institution, data analysis is perhaps the most difficult research stage to involve communities (Castleden et al., 2012). Participatory researchers often have the time and earnest interest to "drink tea" and develop relationships and trust with communities. However, they frequently find adhering to *every* principle of true participatory research challenging if communities do not have the same interest, time, and capacity to engage with "lengthy, jargon-filled, academic manuscripts" (Castleden et al., 2012, p. 170), or qualitative data coding for that

matters. Minkler (2004) attributed such tension to the "often substantial differences in the timetable and priority ascribed to the research by community and outside research partners" (p. 689).

Recognizing that the community partner has its own priorities and availabilities and given the limited time allocated to a Master's thesis project, we agreed on the current procedure for shared analysis and member checking to ensure the rigor of the research. Castleden et al. (2012) urged academics to be creative and innovative in the co-analysis stage. I believe that given the significant and profound relationship established with the community partner, true co-analysis will be more likely in future projects as the community becomes increasingly research-savvy.

2.7.2.2 Peer review analysis

Once the coding scheme and initial analysis was corroborated with the research liaison, a research colleague helped me in the subsequent peer review analysis. Peer review is one of the strategies for improving research rigor where researchers work with one another to discuss how one worked through the data (Mayan, 2009). The key in attaining rigor in this strategy is having "a critical and supportive colleague [who] asks questions of tentative analyses" (Mayan, 2009, p. 112). Elsewhere, Patton (2002) described this external researcher as "triangulating analysts," or "having two or more persons independently analyze the same qualitative data and compare their findings" (p. 560). The aim is to verify that the primary researcher is on-track with developing broader categories and themes. Moreover, in-depth conversations among researchers verify the language used in the analysis, facilitating the writing phase of the research.

My colleague peer coded 4 out of 16, or 25%, of discussion transcripts (excluding the three participatory video transcripts). The peer review process took place in two phases. In the initial phase, my colleague analysed one focus group transcript and one conversation with youth transcript without a pre-determined codebook. For this set of data, she coded and commented freely based on emerging ideas. We then compared our codes and discussed our rationales for decisions made during the coding process. Because free coding of text varies based on coder's subjectivity, we arrived at different results in the coding scheme with individual interpretations and analysis. Once we reached an agreement in the way we approached and processed the data, my colleague further coded another set of focus group and youth conversation transcripts in phase two, guided by the codebook co-developed by the research liaison and me. We reconvened

and discussed our respective processes, revisited the codebook, and applied more appropriate languages to the various categories and sub-categories. She also proposed new codes to fully capture the content and meaning of the texts. I shared the revised codebook with the research liaison once again for corroboration before finalizing the results.

The level of subjectivity in our iterative process rendered conventional tools such as Kappa scores that are used to determine inter-coder reliability unsuitable to measure rigour in this instance. In fact, Kappa scores (Viera & Garrett, 2005) are thought by some to be merely a positivist tool, developed to fit qualitative data into a quantitative framework (Morse, 1997). An appropriate comparison is the proverbial "fitting a square peg into a round hole." Instead, our approach of peer discussion and reflection for in-depth analysis is a more suitable method that ensured rigorous research. Moreover, the colleague has had experiences working with the same community (although not the same group of youth), and is thus familiar with the community context. Such familiarity facilitated our discussion and data analysis as we both had a relatively similar frame of mind.

2.8 Knowledge to action

The ultimate aim of PAR is social change (Minkler & Wallerstein, 2008). Merely generating knowledge is not enough. Knowledge must be translated into actions that improve communities' livelihood. Integral to this research is therefore knowledge translation (KT), which is "a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve health" (Canadian Institutes of Health Research, 2012, p. 1). KT comes in two flavours: integrated and end-of-project (Canadian Institutes of Health Research, 2012). PAR, the foundation for this research, embodied integrated KT because of the way the community was involved in every step of the way. Engaging communities as "equal partners" ensured that the results would be "more relevant to, and more likely to be useful to, the knowledge users" (Canadian Institutes of Health Research, 2012, p. 2). End-of-project KT are strategies that disseminate the findings beyond the immediate research participants and communities with other stakeholders. In this final methods section, I describe a community KT event that was critical for translating knowledge to action locally, as well as other end-of-project KT activities at a wider scale.

2.8.1 Community family suppers

After incorporating feedback from youth, community members and leaders, I converted the finalized participatory videos into DVDs, an accessible research product that was widely distributed in the community. To celebrate the videos and highlight our research about physical activity, the research liaison and I organized two family suppers in Ndilo and Dettah based on the theme of Healthy Living. We planned and coordinated a presentation about the project, a home-cooked meal, a family quiz about active living, and game prizes that encouraged active family time. At this time, we also recognized and honoured the youth who participated in the project for their leadership and initiative.

The presentation shared the many ideas generated by the youth and focus group participants that would motivate more community members to be active. To involve the wider community in the research project, we provided each attendee, young and old, with three stickers to vote for their favourite physical activity. I later compiled the results of the voting from both communities and interpreted their significance with the research liaison and other community leaders and members in follow-up interviews.

2.8.2 Other end-of-project knowledge translation strategies

Based on the community response at the family suppers, the videos were uploaded onto the social media website YouTube with proper community acknowledgement. The YouTube channel with the videos is available at:
https://www.youtube.com/user/ykdenewellness. This online format increased the accessibility of the videos, facilitating viewing on cell phones and computers, and posting on other social media websites and forums specific to Indigenous communities committed to health promotion efforts (e.g., www.justmoveit.org). Despite their limitations (e.g., unfiltered audience, potentially irrelevant context), these virtual spaces have the potential to reach communities beyond the video-makers' immediate environment. In some cases, Internet platforms create two-way dialogues with other communities, inviting their youth and members to participate, comment, and develop projects in their respective environments. This PAR project was not product-oriented; the goal was not on producing videos that would become immediately or globally viral. Instead, this dissemination strategy centred on the video-viewing audience (i.e., communities) and video-makers (i.e., youth). After all,

participatory videos are context and process-driven, affecting the participants as much as the local communities for whom the videos are made. In other words, the process of sharing the videos on social media websites is as much about building youth confidence and community pride, as it is about spreading the message elsewhere in the world.

In addition to the family suppers and social media spaces, we shared the DVDs and the research project with a local Aboriginal radio station and other stakeholders and decision makers at a territorial level. Another creative KT idea that has yet to be implemented was sharing the videos through television screens installed in taxicabs for passenger viewing.

We are also disseminating knowledge generated from this project to the wider research and practice community through peer-reviewed print and visual media publications, and relevant conferences. CES4Health.info is an example of online publication that caters to the increasing volume of research using visual media methods, delivering results that written texts might not fully portray. Even in these conventional scholarly KT avenues, we continue the spirit of partnership through shared authorship.

Authorship is an important topic in research with Indigenous communities (Ermine et al., 2004; Government of Canada, 2012). Like all other aspects of PAR, researchers need to equally involve communities in representing their own voice in the research and sharing KT responsibilities (Khobzi & Flicker, 2010). The research liaison, other staff at the Wellness Division, and I engaged in a lively discussion about authorship. Because so many people participated in the project, rather than recognizing them as individuals in presentations and journal publications, we agreed in a collective representation of the "Community Wellness Program." In hindsight, we should have given authorship greater consideration in the beginning as we planned the research. Nevertheless, to overcome the challenge of communicating across the distance between the community and the university, we established a protocol and timeline to review manuscripts and abstracts. The community partner and researchers are therefore co-authoring, in some cases co-presenting, conference presentations and peer-reviewed publications.

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CHAPTER 3. FROM VIDEOS TO ACTION: A GRADUATE RESEARCHER'S EXPERIENCE WITH PARTICIPATORY ACTION RESEARCH ON PHYSICAL ACTIVITY WITH A NORTHERN ABORIGINAL COMMUNITY

This chapter is prepared for submission to the journal *Action Research*. I will focus on the process aspect and factors critical to the success of the PAR research. Above all, this paper describes my experience as a graduate PAR researcher in hopes that lessons learned will benefit future PAR researchers and students.

3.1 Student experience with PAR

While there is a plethora of literature on participatory action research (PAR), there are limited publications that document the details of PAR processes that would benefit graduate students who are starting in their career, eager and even idealistic about changing the world (Khobzi & Flicker, 2010; Klocker, 2012). In this paper I[1] seek to provide such details from a PAR project with a northern Aboriginal[2] community in Canada, developed and completed within the context and timeframe of a Master's thesis work, in hopes that they will support emancipatory researchers, future and present, in meaningful research.

PAR has emerged in the last 40 years to resist the dominant Western way of knowing and conducting research. It is particularly relevant to Indigenous peoples for whom research is "probably one of the dirtiest words in the indigenous world's vocabulary" because it is associated with the colonizer's Euro-centric ideals and worldviews, which drive much of the research in academia (Tuhiwai Smith, 1999, p. 1). Faced with communities who have been historically mistrustful of researchers and bogged down with literature that often provide little concrete guidance on translating abstract PAR principles into practice, graduate students enthusiastic about solving some of the world's most complex problems are ill-equipped in the

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[1] This paper is written in the first-person voice where the singular pronoun "I" specifies the experience of the primary researcher. The plural form "We" indicates the partnership between the researcher and the community.
[2] "Indigenous" refers to peoples indigenous to the land around the world; "Aboriginal" in this paper is the umbrella term for Indigenous peoples in Canada, who are further distinguished as First Nations, Inuit, and Métis. Where possible, I use the term "YK Dene" to specify the First Nation with whom I worked. The conventions of terminologies are based on the guidelines developed by the National Aboriginal Health Organization (http://journals.uvic.ca/journalinfo/IJIH%20Defining%20Indigenous%20Peoples%20Within%20Canada.pdf).

field. Most of the time, they rely on common sense and an amicable personality to "get the job done," all the while frantically trying to fit within rigid institutional guidelines.

Challenges that trainees encounter are confirmed among the existing few articles about the student researcher's experience where the focus has been almost exclusively on PhD students and within the context of a doctoral dissertation (Burgess, 2006; Gibbon, 2002; Herr & Anderson, 2005; Khobzi & Flicker, 2010; McHugh & Kowalski, 2010). The general consensus is that PAR is highly rewarding because the student tangibly sees the difference she is making. However, it is not without its obstacles in the field and at an institutional level including the uncertainty of a PAR process and the time constraint imposed by universities (Gibbon, 2002).

Having spent several years working with Indigenous and ethno-cultural communities in North America, I strongly value the emancipatory nature and the social justice agenda of PAR. While I found comfort in reading about these peer researchers' PAR experiences with communities, I still felt disconnected from their reality because I faced different demands and requirements from my Master's thesis program.

Providing details of the process was therefore an important part of this PAR project about physical activity, done in collaboration with the Yellowknives Dene First Nation (YKDFN) in the Northwest Territories (NWT). By discussing process-related results, which emerged from systematic and rigorous documentation and analysis of the researcher's experience, I illustrate that PAR is feasible and completely worthwhile, even at a Master's level, though it does require certain key ingredients.

3.2 Situating the researcher in PAR

Reflection is a critical part of any student researcher's learning process, moving between "self-learning, reflection, and action" in a cyclical manner (Burgess, 2006). In fact, reflection and locating ourselves are not only mandatory for novice researchers (Burgess, 2006), they are also important practices for all researchers to honour the communities with whom we work as we come to understand our research motives and intention (Absolon & Willett, 2005). Sharing ourselves openly further earns trust and credibility with the community.

It is through much reflection that I connected my current research with previous experiences. Working with diverse communities taught me that power and social change come from bottom-up, grassroots movements rather than top-down decision-making hierarchies. In my

own research journey, I have come to embrace PAR, which is simultaneously a way of doing and a way of thinking and seeing our positions in the world (Burgess, 2006). It effectively articulates my personal philosophy and reconciles my various roles, both old and new, as a leader, a student, a facilitator, an activist and an inquirer.

While much has been said in the literature about PAR enabling, or empowering, participants to become co-researchers (Ferreyra, 2006; Flicker, Savan, McGrath, Kolenda, & Mildenberger, 2007; Frisby, Reid, Millar, & Hoeber, 2005; McHugh & Kowalski, 2009), researchers also experience a role reversal. In becoming an "observing participant" (Giles, 2005, p. 35), the researcher embeds within the community and integrates her previous knowledge and experiences to create new knowledge with the research participants.

This degree of subjectivity is rare in most biomedical health research that exalts positivist epistemology and the quest for the single universal truth. An objectivist orientation requires the researcher to bracket her assumptions and previous knowledge, and dissociate the self from the participants. As Hampton (1995) voiced, such an emotionless, objective way of gathering data is "a goddamn lie" because research is after all, done by humans with flesh, blood, and feelings, interacting with other humans (p. 52). In fact, in this research, my previous experiences with Indigenous communities strengthened my credibility and aided my relationship building. Therefore, as a researcher, I could not and should not have distanced myself from the participants and the research process.

3.3 Exploring physical activity

Together with the Community Wellness Program (CWP), the partnering organization from the YKDFN, we developed, implemented, and evaluated a PAR project that explored physical activity within the broader cultural context. Through PAR, we transformed knowledge generated about physical activity into actions that promoted community health and wellbeing.

The underlying PAR framework in this research is deeply informed by the work of Paulo Freire. He introduced the concepts of critical consciousness, or conscientization, and praxis through the popular education model rooted in the idea "of the people" (Kane, 2010). Popular education sought to transform the relationship between teachers and learners to one of shared learning, recognizing that people possessed unique knowledge and experiences. Learning that "starts from where people are at" (Kane, 2010, p. 278) facilitates participants to critically

examine their lives, strengths, and challenges as a collective, and subsequently envision and act on ways to improve their political, social, and economic realities. According to Freire (1970), such cycling between reflection and action was the praxis critical for social change. This research integrates the concept of praxis because it sought to stimulate conversation and community-wide reflection and initiate change.
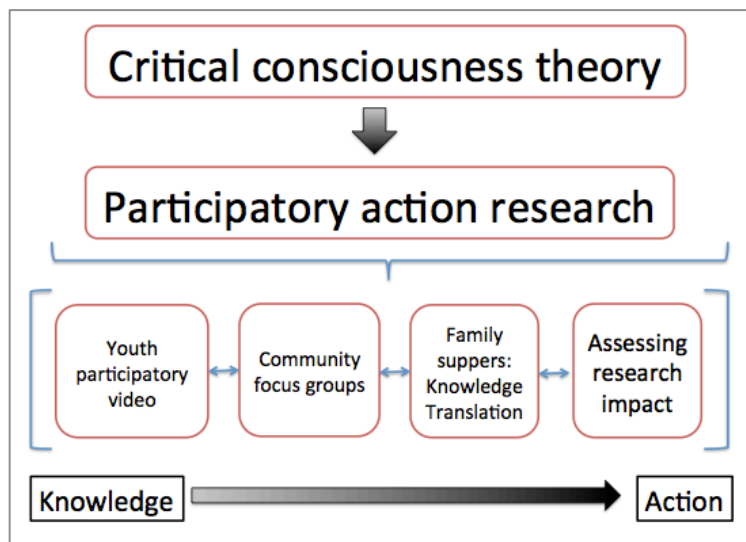
Figure 3-1. Linking theory to practice through PAR.

Figure 3-1 illustrates the relationship between the critical consciousness theory and the PAR framework, which is manifested in four stages in practice to translate knowledge into action. In stage 1, we engaged First Nations youth from Ndilo and Dettah, the two communities comprising YKDFN. The youth developed participatory videos about their experiences with physical activity. These videos became the channels through which community members and leaders reflected in focus group discussions in stage 2. Participants discussed the role of physical activity in their lives, and ways to encourage themselves, their family and community to practice more of it. In stage 3, knowledge generated from the videos and focus groups translated into actions during family suppers as community members collectively made decisions about physical activity programming. The last stage assessed the impact of the research in follow-up interviews. The process was not linear as the figure might suggest. Instead, there was much fluidity between the stages, indicated by the two-way arrows between them, constantly evolving according to community context.

In most PAR projects, it is more likely for the researcher to work with a community representative rather than an organizational entity through the "known sponsor approach"

(McHugh, 2008; Patton, 2002). Therefore, in this research, I directly worked with a research liaison from the CWP who played a pivotal role in the research.

Ethical approval for the research was received from the University of Alberta Human Research Ethics Board (REB 1). A research license was obtained from the Aurora Research Institute to conduct the research in the NWT. The names of youth and community members have been anonymized to respect participant confidentiality. However, given PAR's emphasis on human agency, youth retained the film credits and community information in the final videos to acknowledge the video makers. The line between confidentiality and honouring the sources of information is a constant tension in Indigenous research (Ermine, Sinclair, & Jeffery, 2004). Ultimately, we believe that it is ethical to respect the decisions of the participants and the community.

3.3.1 Initiating the project

Prolonged and intensive involvement in the community was critical in establishing trust, reinforcing credibility, and strengthening research rigor. My relationship with the community began well before the official start of this research project. Prior to formally initiating the research, I assisted with other health promotion and visual media projects with the same community.

In these early visits, I began communicating with the research liaison. In fact, the CWP had already collaborated with my supervisor in the past, and was interested in another collaborative project over the summer. Therefore, I did not single-handedly initiate a research partnership, but instead entered into a previously established relationship, which was an effective way for student researchers to build networks in the community according to Khobi & Flicker (2010).

The research liaison and I continued to envision research goals, and objectives. As an initiator of the research topic (Stoecker, 2008), I introduced the broad interest area of physical activity, which led to an animated conversation about the role of traditional Dene culture in an active lifestyle. Together, we decided to develop a research plan that centered on a summer cultural camp. The project formally began in summer 2013 when I spent three weeks in the community, and continued as shorter trips through to spring 2014.

Between establishing initial relationships to disseminating research outcomes and evaluating research impact, I traveled to the community nearly a dozen times during my graduate study. In these trips, I formed connections, volunteered to give back, and participated regularly in local activities such as beading and recreation. Unlike the conventional "helicopter researcher" (D'Alonzo, 2010, p. 283), I transitioned smoothly into the community despite intermittent travel itinerary. As a result, I familiarized myself quickly with the youth, the school, and community members, learning more in-depth about the community dynamics, history, and culture.

3.3.2 Stage 1: Youth participatory video

Participatory video is a type of visual method that engages participants in making videos about their lived realities through a group-oriented and community-driven process (High, Singh, Petheram, & Nemes, 2012; Lunch & Lunch, 2006). Videos are image-based media that are creative ways to share a perspective, story, concern, or experience, making the findings accessible to a wide variety of audiences, from community members to decision makers. Having more approachable research findings (i.e., videos and images versus two-page briefs) allows policy makers to develop relevant policy and program changes (Lunch & Lunch, 2006). Visual methods in general have experienced a rising popularity in qualitative research because they can access oppressed voices in a way that conventional data collection techniques cannot (Liebenberg, Didkowsky, & Ungar, 2012). At the same time, they offer valuable opportunities for capacity building and skill development, benefits that align with the principle of action in PAR (Chávez et al., 2004; Plush, 2012). The participatory video project with two cohorts of youth from Ndilo and Dettah was the central focus of our research.

Youth played an important role in the research. Consistent with the positive youth development theory, we viewed youth as community resources who held a wealth of knowledge and insights because of their internal position in the community (Damon, 2004; Lerner, 2005). Contrary to the common social perception that youth are problems, collaboratively engaging youth in research can have tremendous effects on community development and wellbeing (Lerner, Brentano, Dowling, & Anderson, 2002). In risk communication and health promotion, youth-initiated and developed messages are often more powerful and effective compared to health education delivered by outside researchers (Jardine & James, 2012). We therefore engaged the youth from the community to become positive agents of change through PAR.

I worked with 19 youth from both communities to develop, record, and edit the videos. Initial recruitment was based on convenience, focusing on those who were available, interested, and recommended by local leaders. Participation increased with a snowball effect through word of mouth. Upon leadership recommendation, we hired a youth research assistant who mobilized participants through her own social network, helped with acquiring parental consent and developing the videos. Because the CWP integrated the video project with the cultural camp, we also recruited youth who were registered with the camp program. The research liaison further promoted the project in the community by talking to youth and their families. We received assent and parental consent for all participants and permission to use images for non-participants who appeared in the finalized videos.

One group of youth from the YKDFN community of Ndilo recorded the day-to-day physical activity experiences in the community before the cultural camp began. Another cohort of youth, primarily from Dettah, another YKDFN community, participated in the summer cultural camp, which was held on traditional land situated on the Great Slave Lake, accessed in the summertime by a 20-minute boat ride. Despite being part of the same First Nation, the two communities, outside the city limits of Yellowknife, the territorial capital, are physically separated by approximately 30 km.

Video-making sessions in the community and at the cultural camp generated a range of data including words, text, and images. Through dialogues, we brainstormed guiding questions such as "What does physical activity mean to you? What do you like to do to be active? What types of activities are active? What types are not?" We developed ideas on posters, or directly filmed impromptu responses. Besides giving basic overviews of research, storyboard, interview, filmmaking, and video editing in the workshops, I provided minimal directions. This approach fosters creativity and gives the participants the freedom to reflect (Yang, 2012). Thus, we did not limit what was and was not relevant in making the videos.

Once we gathered the raw footages, we edited the films using the iMovie software on Mac computers, which were available in both communities. As a result, all of the original video footages were accessible from the communal computers, with duplicates on my laptop for additional editing. We intentionally made the footages available as community resources to ensure that the data belonged to the community, and to create space for future, non-research related, video making possibilities for the youth.

Throughout the process, the youth and I engaged in conversations assessing their images in playback mode. Playback, or watching footages the instant they are filmed or edited, is a "reflective, self-appraisal method […] at the heart of participatory video" (Lunch & Lunch, 2006, p. 47). These conversations served to elaborate on and analyze the content of the videos.

3.3.3 Stage 2: Community focus groups

The youth finished the videos and we shared these preliminary versions with eleven community members and leaders in three focus group discussions. The majority of the participants worked for the community in some capacity, either as a youth leader, counselor, coordinator, or supervisor. Many of these participants were therefore key decision makers in the community.

The videos grounded these focus group discussions, serving as "triggers" that stimulated dialogues and facilitated critical reflection (Wallerstein & Duran, 2008, p. 38). By providing feedback on the videos, the participants segued into broader conversations about physical activity. Our discussions therefore analyzed the content of the videos, raised critical consciousness among the participants about their realities, examined how physical activity is practiced and valued in the local culture, and explored what is needed to improve participation in community initiatives. More importantly, the process facilitated participants to develop concrete steps to promote physical activity that would be inclusive of all members of the community.

3.3.4 Stage 3: Community knowledge translation

After incorporating the participants' feedback and suggestions to enhance the quality of the videos, I converted the digital files into DVDs, which were distributed to community members at two family suppers in Ndilo and Dettah under the theme "Healthy lifestyle." At these dissemination events, we served a balanced meal, organized a family quiz on active living, and celebrated the youth for their leadership in the video project. The research liaison and I presented the research findings and showcased the participatory videos. We informally sought the attendees' impression of the project. Community members agreed that the videos would make an effective tool to promote future cultural camp programs, local Dene culture, and collective physical activity. In addition, we presented the various ideas that the youth and focus group participants suggested in stages 1 and 2 to encourage more people to be active. Community

members voted for their favorite physical activity idea and identified sports tournaments and Dene games as areas of focus. The goal was that the research partner CWP would follow through and implement these ideas in the coming year in some capacity.

3.3.5 Stage 4: Assessing research impact

Three and six months after the family suppers, I returned to the community for a qualitative evaluation of the project and the progress of the physical activity ideas voted to determine whether or not, and how, they were implemented. In semi-structured interviews, I spoke with nine participants ranging from youth and elders to community members and workers, who were involved with the project in some way. Their diverse levels of engagement brought a wide array of perspectives.

In our conversations, we talked about the benefits of the project and room for improvement. Respondents shared their impression of the research project, the progress of the ideas voted for by community members during the family suppers, and any change that took place in the community after the project wrapped up.

3.3.6 Other data generating methods

Because of the importance of reflection in the PAR process, I recorded detailed journal entries that included field notes, participant observations, and reflexive writings throughout my experience, always situating what I observed in relation to my own subjective position. Field notes included contextual details describing the setting and atmosphere of the focus groups and evaluation interviews. Unlike conventional ethnographic practice, participant observation was a critical tool for me to delineate the cultural, social, and community contexts in the research. According to Wilson (2008), participant observation also aligns with the Indigenous research paradigm and methodology that emphasizes learning by observing and listening. Through reflection, I became keenly aware of my thoughts, assumptions, and relationships with others, as well as the wider interpersonal and community dynamics that might have influenced the process.

3.3.7 Analysis

Analysis of data generated through the research was multi-layered. In the field, analysis of the content of the videos was a participatory process. The youth and focus group members took part in "facilitator-led analysis of visual content" (Sawhney, 2012, p. 182). These semi-structured discussions were guided by the focused conversation strategy ORID, common in organizations and corporations for collective brainstorming and team building (Stanfield, 2000). The ORID structure directed the conversations in four phases: Objective (what do you know?), Reflective (what do you feel?), Interpretive (what does this mean?), and Decisional (what do we do?). We recorded, transcribed, and analyzed these conversations along with the impact evaluation interviews to further find meaning.

Using content analysis, I examined these field discussion transcripts and the content of the videos more in-depth back at the university. Analysis of my reflexive journals verified some of the information provided by the participants and delineated details to present a comprehensive picture of the research context and process. The various text data were differentiated via an alphanumeric system shown in Table 3-1. For example, the notation P4 suggests that the quote stemmed from adult participant 4 in one of the focus groups. To facilitate the ease of reading and to protect participants and non-participants' identities, names have been replaced with pseudonyms in all transcripts and research journal entries.

Table 3-1. Data generated from the research and accompanying identification.

Data generating strategies	Source codes

• Videos produced by the youth:
  1. Activities on the land
  2. Summer of Mackenzie Island
  3. Cultural camp short clip
  4. Things to do at cultural camp
  5. Why I like cultural camp
  6. Active vs. not active
  7. Youth in the community
  8. How Yellowknife got its name
	• Videos V1-8

• Conversations with youth	• Participants Y1-6
• Focus group discussions	• Participants P1-11
• Impact evaluation interviews	• Participants R1-9
• Research journals	• N/A

I took a conventional content analysis approach that sought to describe a phenomenon (Hsieh & Shannon, 2005). This approach was appropriate because the research question and

objectives were exploratory and descriptive in nature. Facilitated by qualitative data analysis software NVivo 10, I coded the texts line-by-line, layering multiple themes on top of each transcript, iteratively appraising the codes, and tracking my emerging thoughts with memos and annotations. Relationships among codes surfaced from constantly comparing and contrasting various texts. To visualize these relationships, I created concept maps linking codes, collapsing them into sub-categories and categories.

Later in follow-up trips, I engaged the research liaison in co-analysis by verifying and re-verifying the preliminary themes that were coupled with representative quotes. These follow-ups also facilitated member checking (Mayan, 2009) with youth, community members, and leaders. To further ensure rigor, a research colleague, who is also familiar with the same community, peer reviewed the coding (Mayan, 2009) for 25% of all transcripts. Afterwards, we engaged in in-depth conversations that checked my interpretations and continued to develop the emerging themes.

3.4 Factors shaping the research process

Perhaps equally important as the knowledge about physical activity generated from this research, is the process that translated the knowledge into concrete actions for the community to improve its health and wellbeing. References in the analysis relating to the research process revealed four interrelated sub-categories that were most critical to a short-term PAR project: 1) researcher responsiveness; 2) research approach; 3) trust and relationships; and 4) capacity building. Representative quotes corresponding to each category and sub-category are organized in Table 3-2.

Table 3-2. Summary of categories and exemplary quotes about research process.

Category 1: Researcher responsiveness	
Flexibility	"*I think my attitude today was really helpful. I wasn't so much 'I'm here, let's do this [project]!' Instead, I was more realistic, 'I'm here, I realize there is a tragedy. Things are a bit out of order. Let me help you make lunch.' I wasn't there with an agenda, I was just there to be there.*" (Research journal)
Mindfulness of interpersonal dynamics	"*In fact, she is also the teacher of the other two [participants]. I could see that during the discussion, she was conscious of her role and made sure that she did not overextend her voice*" (Research journal).

Table 3-2. Summary of categories and exemplary quotes about research process (continued).

Category 2: Research approach

Holistic	"*Every time someone says they are bored, there is immediately a new task. There is no time to be idling, sitting around and complaining. There are lots to do, it's a matter about being proactive and finding things on your own*" (Research journal).
Collaborative & participatory	
a. Emotionally engaged	"*[The research liaison's] enthusiasm for this project is contagious. She talked about plans for the summer … and intention to bring me 'out on the land.' If not the canoe trip, then definitely some kind of trip to the bush that will connect physical activity to cultural identity. I'm excited too*" (Research journal).
b. Researcher's perspective	"*A lot of the comments felt like advice for me on how to improve the videos that the [youth] made; they even felt like reprimand… And I caught myself being defensive, and just continued listening to their ideas and thoughts*" (Research journal).
c. Collective feedback	"*I like [the video]… What I think you should put inside there is that, on some nights we have volleyball… There are a lot of adults that come out. Be nice if you had a shot of that inside too*" (P4).
Strength-based	"*That the video was… positive, every word that came out of the kids. As they were talking in the video, everything was positive about the camp. They want more camps, they want longer camps, and… they want more on-the-land activities*" (R5).

Category 3: Trust and relationships

Youth-researcher relationships	"*The night before, the girls were asking me to teach them some Chinese words so they can greet my family. In return, they taught me Dogrib words for 'How are you?' and 'I'm fine'*" (Research journal).
Community-researcher relationship	"*[My family participated in the community feast at the camp.] Everyone was inclusive and welcoming, I was really honoured and grateful. After dinner, the men were going to drum and we were going to dance. Even though the language barrier was a bit difficult, Jeremy and some of the boys still showed my uncle how to properly chop wood. As we got ready to leave the camp, Jeremy said that they made a cane for my 84-year-old grandmother as a gift. We were just so grateful for people's kindness*" (Research journal).
Other relationships	"*What the kids got out of it was friendship… I think awareness for being on the land and walking around, and chopping wood. … We grew up watching it, but actually doing it was a different thing, so I think [the youth] learned and got some kind of skill. So… awareness for communities and for youth, if we keep having this program, then our culture will stay strong. … One day Maya gets older, she has her own kids, she can show the video of what cultural camp was all about*" (R3).

Category 4: Capacity building

Youth leadership (individual level)	"*[The youth] can get more involved with stuff like that, … maybe passing it down to the kids that are younger than them, and not be shy in front of the camera, and if you want to get more involved with sports, just do it. Yeah. […]To get more involved… not to focus on the weekend about fun and partying. It'll be more benefit for the children*" (R6).

Table 3-2. Summary of categories and exemplary quotes about research process (continued).

Community planning (group level)	"When you show this [video] to the community, you could [say], 'From the focus groups, these are the suggestions for things we could do in the community.' Then what you do is, you give ... everybody in the room, three stickers, and you tell them to put their stickers by the ones that they would want to do the most" (P8).
Supporting local leadership (organizational level)	"For the past 5 years [...], we've been meaning to, but then we get sidetracked because we have bigger projects to work on and we kept ignoring the youth sports team. But now that we brought it out at family night, [...] the parents were there, they keep phoning, and the kids [...] are like, 'well, I thought we were going to do this.' And they kept reminding us about that. [...] So we got a couple of parents [...] who are coaching them now, twice a week. [...] So it did kind of make a change for us, [...] now they kept on us and we followed through" (R5).

3.4.1 Researcher responsiveness

Researcher responsiveness was a consistent theme throughout the analysis. As a non-Aboriginal, immigrant Chinese woman, I constantly considered how my multi-faceted identity interacted with community dynamics. Locating myself (Absolon & Willett, 2005) was critical for establishing trust, relationship, and my role as an observing participant with unique experience and knowledge. The intersection between identity, cultural exchange, and relationship building in fact demonstrated my fluid role of a co-researcher as well as a co-participant, both of which I embraced full heartedly. To ensure that the research progressed, I put myself forward, volunteered, and facilitated the video making workshops, focus group discussions, and follow up interviews. There were many logistical challenges, but I allowed ample room for flexibility, providing as little structure as possible so that participants felt safe in their natural environment to express their thoughts. Consequently, I became ultra aware of and sensitive to interpersonal dynamics in the community. Being flexible and aware not only helped to move the project along, but also contributed to the trustworthiness of the research finding.

The category "flexibility" alluded to instances in my journals, observations, and data generating processes where the unexpected arose and was overcome. Being flexible in the research setting meant that the approach from the beginning was relatively unstructured, which accommodated much of the daily variations. For example, most of the filming took place spontaneously. Youth participants freely experimented with the video equipment, film settings, and editing functions, often with the youth research assistant's help and supervision. "*I feel constantly conflicted about giving the kids too many ideas. It has to come from them and I really don't want to impose as an outsider*" (Research journal). The self-directed approach with limited researcher

influence allowed youth to act unhindered in their natural environment, resulting in more realistic portrayal of how youth viewed and experienced physical activity. Focus group members verified the level of truthfulness; "*I like how it's realistic, how it's in the community, that's what most kids do. Gym, in the park, do racing*" (P8). Other activities in the videos, whether they were portraying being active or not, received responses such as "*Well, that's the usual*" and "*Oh my god, that's … so normal*" (P7), or "*Running, and playing, the hand games, yeah, that happen a lot around here*" (P9). While these activities were not necessarily novel or groundbreaking, they were an honest portrayal of what youth did on a daily basis.

The longer I spent in the community, the more I changed my attitude. I no longer painstakingly itemized the details as I did in the beginning (e.g., planning a parent information meeting to acquire consent). Instead, I focused on the large picture. Regardless of community affairs, I tried to maintain a supportive role by being present and responsive, showing that I was willing to shed my white lab coat and empathize, laugh, and cry. As a result, I was constantly aware of interpersonal and community dynamics, another key element in working face-to-face with people in PAR. When I facilitated the focus group discussions, I was particularly mindful of ensuring everyone's voice. Some participants, perhaps because of age, gender, and professional status (i.e., in teacher-student relationships), were more vocal than others. I noticed that few were even conscious of such differences and deliberately gave space to others.

At times, tensions among youth in the community seemed so subtle that it was hardly noticeable. Yet ignoring them would have been detrimental to the progress of video making. One day, two girls were working on the videos and

> "*there appeared to be tension because at one point, I paused and naively asked [Emma] and Gillian, 'Do you guys know each other?' I wanted to encourage them to work together. Instead, both of them looked away and Gillian put her head down [to ignore my question]*" (Research journal).

I did not press on. I acknowledged the tension, reminding myself that frictions in the community, no matter how subtle, can impact research process. However, without the proper support from the research liaison and other community leaders, I was not comfortable to single-handedly resolve the situation right away. Even though it felt like a missed opportunity for mentorship and even conflict resolution, I still re-arranged the workspace so they could edit the videos on two separate computers.

Flexibility was thus a powerful strategy as I went with the ebb and flows of the community. Instead of imposing rigid structures, I took a more unstructured approach and attitude in the research, constantly adapting to a changing environment. In the end, youth spoke and acted more truthfully, as verified by the focus group discussions and my observational notes. Flexibility therefore helped to buffer the question of authenticity and representation common in PAR, especially with youth (Low, Brushwood Rose, Salvio, & Palacios, 2012). Being "responsive and adaptable to changing circumstances, holistic, having processional immediacy, [and] sensitivity" not only facilitated the research process, but also ensured the rigor of a qualitative inquiry (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Indeed, as Morse et al. (2002) reminded us, the researcher is perhaps the most important instrument in the research process.

3.4.2 Research approach

The research was based on a holistic, collaborative, and strength-based approach to explore community-level physical activity.

3.4.2.1 Holistic and all encompassing

The minimal structure and the self-directed nature of this research allowed the youth and community members to explore the research topic of physical activity in a well-rounded manner, generating powerful and profound knowledge. We were not prescriptive in defining physical activity and did not impose outside values and practices. This aligned with the notion of non-interference, which according to Brant Castellano (2004), respected YK Dene people's knowledge, decision-making ability, and self-determination.

For the youth, physical activity is multi-faceted. When asked whether his friends and family are active, Jacob responded, "*Not really, just my dad. [...] He goes out in the bush and works… and comes back… 2, 3 months later. [...] He just works on… hide tanning [...] a moose skin*" (Y2). Conversations with youth and adults thus frequently went beyond sports and exercise to include the role of culture and traditions, and the overall health and wellness of the collective. My observation of the flurry of activities at the cultural camp indicated other, more abstract meanings of being active. "*Even when people were not explicitly doing what is conventionally*

considered as physical activity, they were still active by contributing to the collective" (Research journal).

By recognizing that physical activity is an all-encompassing concept and taking a holistic approach, the process produced other unintended health promoting consequences. After having had several days of meat-heavy meals at the cultural camp, several women and I enjoyed a simple spinach salad when vegetables became available. We then had conversations about having a balanced and nutritious diet. Later, during a large community feast, I contributed with more salad. Preparing the salad in front of others and answering questions encouraged community members to eat healthier. A month later, I visited the elders who were at the cultural camp. They said they were still eating the salad, "*My partner now knows how to make it. She fixed it up, and we ate it*" (Research journal).

On other occasions, topics of substance abuse and alcoholism surfaced in our conversations. During the video-editing process, one youth noticed that in several photographs, the adults were smoking. Consequently, she added the words "No smoking" and "Bad to smoke" to these particular images, which alerted the adults in the focus groups about smoking prevention. While nutrition and addiction were not the focus of the research, these examples illustrated that an untargeted, non-specific, and holistic approach could be a beneficial way to promote health in other ways.

3.4.2.2 Collaboration and participation

By integrating the video project with existing community programs such as the cultural camp and family suppers, the research liaison and I strove to create an inclusive space, incorporating as many voices as possible. Such a participatory and inclusive approach is critical in Aboriginal communities where research has been historically perceived as a negative event (Tuhiwai Smith, 1999). Through collaboration and participation, the research revealed diverse perspectives. Participants, including myself, collectively provided feedback in a safe space and became critically conscious of our attachment to and investment in the research topic, manifested through varying shades of emotions. We were often excited, sometimes hurt and defensive, and even hopeful for future steps.

The emotional aspect of the research transpired primarily from analysis of the conversations, tones, observations, and reflections. Even early on in the planning stage months

before the project, it was evident that people felt close to the research topic. In another instance during a focus group, participants shared challenges with organizing physical activity efforts in the community. Jeremy ruminated on the slow progress of a particular initiative because of his absence over the summer.

> *"One of the things I started, but it didn't continue because … my whole summer pretty much changed… I was hardly at work. I started at the beginning of the summer… a walking group. That was supposed to happen every Wednesday and Friday. It happened a few times and that was it for me… My original goal was… to do this walk twice a week, maybe three times a week. It didn't happen. I want to … start to do a marathon, right from Ndilo gym, walk all the way around, all the way to Dettah gym. … I wanted to… do that, so that we can raise money, to raise money for a baseball field"* (P4).

He expressed excitement over people's initial interest in his activities. But as other priorities began to occupy him, community interest waned despite his broader vision. This anecdote suddenly roused the interest of other participants in the focus group. Danielle responded, "*That's awesome. I would do that*" (P2). Paula added, "*You can still do that. That dream can still come alive. Just because, you just hit a speed bump, that's all you hit, a speed bump, just… we can work on that*" (P3). The discussion here centered on the work that was close to the hearts of many participants, who were perhaps listening to each other's thoughts and struggles for the first time. Whether as an organizer or an interested participant, they all had a particular emotional engagement with the conversation topic.

At times, the discussions "*felt like an energy boost, even for the [participants] there personally, motivating them and reminding them to restart their active regime like daily walking group*" (Research journal). The focus groups were rejuvenating. "*There were a lot of great things that emerged from the conversations; I didn't want it to end*" (Research journal). The laughter prevalent throughout the discussions also conveyed excitement. Georgia described the walking group initiative, "*We're training for it. Or … when we started walking, we were like, we're gonna walk to Dettah! We're … all determined [all laugh]*" (P7)

In another focus group, we spent a significant amount of time talking about hunting, an active process of procuring food via traditional practices. The excitement generated from the discussion on a topic emotionally connected to the participants was contagious. Darrin suggested future video projects to record the experience of a caribou hunt. We then chatted about where the

hunts normally take place and what the experience is like. The conversation became more animated as the participants shared their stories.

> *"I went up there once. We were stranded on a boat and it was pitch black out. We had to go and sleep on the first land that we found. I was so scared I wouldn't get out of the boat. Darrin wrapped me up in tarp and I slept in the boat like that. [laughs] But that's the worst place to sleep! I was all sleeping next to the caribou meat. That would be the first place the bear goes [all laugh]. I was so scared I didn't want to get out of the boat [laughs]"* (P10).

The youth were more covert with their emotional engagement. However, the adults were observant, the research liaison pointed out, "*When we first introduced the cameras to them at the camp, their smiles on their face; they were so happy.*" During the video-making process, few youth expressed outright enthusiasm. It was not until later in informal settings like a car ride, youth talked about their interest in media production and traditional ways of life. For many, the videos were valuable because "*Later, we can watch it and remember what we did for the week. And show people what it's like to live on the land*" (V6). Youth were particularly enthused when watching video segments in playback mode, some even recorded the footages on their cellphones to further preserve the memory.

Just as the participants were emotionally engaged with the research, I was also deeply attached as the researcher. I had a vested interest, not only because the research was my graduate thesis, but also because of my perception that youth are resources for building stronger, healthier communities. Once in a focus group, I openly shared, "*For these kids, I'm so proud of them for making [the videos].*" This elicited positive responses from the others. "*Yeah! And even seeing them [...] there [on the land] videoing and doing all of this was interesting*" (P10).

In some cases, people pointed out that the videos did not capture many activities such as volleyball nights, or every aspect of the cultural camp. "*Remember there were children there. Even the little young baby, and also a child, a youth, a parent, and an elder,*" said Barbara (P1). Some of the adults also misunderstood the ownership of the videos and my role as a research facilitator. Paula critiqued, "*Why when… the [Children's day camp] was over there, no one was filming the [Children's day camp] kids? … Some of the kids were scraping the hide [too]*" (P2). Because I was personally invested and wanted desperately for others to feel the same, I repeatedly clarified, reminded, and even defended the purpose of the project, the decisions made, and my role

as a facilitator rather than a film director. Clarifying and summarizing also helped to re-direct the conversations back on track.

Questions and critiques partly constituted codes for "collective feedback," which made up approximately 75% of the sub-category "collaboration and participation." Ongoing and iterative conversations evolved into a collective feedback cycle where participants continuously provided input to shape the research and finalize the video deliverables. Particularly in the focus groups, the ORID structure elicited suggestions for technical improvements (e.g., poor sound quality) and stimulated discussions about missed opportunities for filming. Informally, youth contributed ongoing feedback throughout the process. In one video-making workshop, Lucas said, "You should make a video of active and not active, like sleeping, sitting around, driving…" (Research journal). On a few occasions, focus group members did not feel one of the videos was strong enough. They believed it was "*way too long*" (P9) and "*the [kids were] just doing the same thing (soccer)*" (P8). In debriefing with the youth assistant who edited the film, she justified her decision for the length of the video because the scenes and the speed matched the music she selected. Moreover, as the facilitator, I specified in the focus groups that I was "not the one making the videos; I let [the youth] deal with their creation."

The community-driven and group-oriented aspect therefore ensured that the outcome and solutions came from local voices. Using research, we linked community needs and reality with policy makers and programmers to provide meaningful and relevant knowledge translation opportunities (Lunch & Lunch, 2006). The approach altered the power relation between the researcher and community, giving the latter greater control and ownership over the process. While all research, including ours, could always be *more* participatory, it was important to balance meaningful research with feasible research.

3.4.2.3 Seeking the positive

It is much easier to involve people in talking about their strengths than limitations. A strength-based approach captures the positive features in the community (i.e., what people do well), rather than deficiencies (i.e., what the communities lack) common in much of Aboriginal health research where attention has been primarily "on epidemiology and ill-health rather than on health" (Wilson, 2008, p. 109). Not only does strength-based approach align with Indigenous research where "focusing on the positive forms a relationship that pulls things together" (Wilson,

2008, p. 109), it also resonates with salutogenesis (Becker, Glascoff, & Felts, 2010). Contrary to pathogenesis that emphasizes factors related to disease and illness, a salutogenic model stresses positive, salutary factors that support people's health and well being (Antonovsky, 1996). Our research integrated within existing community programs fostered positive experiences for the participants. We were able to concentrate on the strengths of the community to understand how people *are* active and encourage more participation in physical activity. Youth filmed themselves playing soccer, basketball, drumming, and on-the-land activities, painting a positive, active lifestyle. The incorporation of culture was also critical in developing positive messages. In fact, the cultural element became a source of pride, reflected by the amount of filming, photography, and coverage of the cultural camp in the videos.

Focusing on the positives, while having the potential to mislead the viewer in believing in an exaggerated reality, can nonetheless boost the confidence of the video makers and their audiences, a health promoting effect in itself. In particular, youth involvement generated a lot of positive buzz. One elder who attended the video screening at the family supper remembered during a follow-up conversation, "*I noticed [that the youth…] weren't too shy about [making the videos] and I was kind of impressed that they were able to do something like that*" (R1). In fact, the 6 most popular words that emerged from the follow-up impact evaluation were: 'community,' 'video,' 'laughs,' 'project,' 'youth,' and 'active.' These high frequency words exude a positive tone to the research, with a focus on the involvement of youth and young people. Community workers noticed youth's confidence at the cultural camp.

> *"[The youth] took pride in their own work. … They made it themselves, and they […] all came to family night to see the final product. […] And [at the camp] they had their own cameras, their own speakers, and they put their headphones on and… they were just videoing anything, just to have the experience. They were having fun over that*" (R5).

In addition to helping the youth see what they were capable of, this project also exposed the youth to multimedia formats, developing their creativity, interpersonal relationships, and concrete technical skills in video making, interviewing, working together, and storyboarding. Duncan observed,

> *"It was good, we had a lot of kids in there and… especially the younger ones, they're involved more, they… seemed like they were interested, and wanted to learn about… talking to each other, asking more questions and… trying to find out more about each*

other in different ways, especially on camera and all that too. [...] They're really interactive with each other" (R8).

Haley, a youth with a significant role in the video editing process, considered how she benefited from the research project. In a phone interview, Haley said that the project "was fun because she was able to be creative. She was able to put her thoughts down into a story. And the editing process kind of helped her to do that, because she doesn't normally do that" (Research journal). The use of technology was actually a highlight of the project. In fact, participants consistently cited technology as a source of distraction that prevented people from participating in community life and initiatives. Upon deeper reflection during the impact evaluation, respondents realized that technology allowed the youth to "do something positive" and helped the community to "get down to the kids' level and see what they're thinking and what they're seeing" (R1).

3.4.3 Trust and relationship

Developing relationships is important in PAR, but perhaps more so when working with cultures that uphold a relational worldview. In an Indigenous context, relationships not only exist between individuals, but also with the land, and with all creations (Absolon, 2011; Kovach, 2010; Wilson, 2008). Even knowledge is not meaningful unless it is connected with the knower (Wilson, 2008). In our research, an elder articulated the relational worldview during a focus group, "*Each individual there [at the cultural camp] has the relationship, with one another, with themselves, with others, with the land, it's a way of life*" (P1). Building relationships thus became an essential pre-requisite to the research, particularly for an outside researcher like me (Minkler, 2004). I recognized that without relationships and trust, there would be no data and the research would lack credibility (Absolon & Willett, 2005; Wilson, 2008). Throughout the process therefore, I was highly reflexive about my interactions with others. Through my research journals, I constantly considered how my words and actions were (or were not) conducive towards establishing relationships with the youth and the wider community, as there were subtle differences in my approach in these two facets.

Overall, the research experience was very positive for the participants, the community partner, and me. Certainly, this PAR project was not an entirely stand-alone experience. It was a single, start-to-finish project part of a larger research endeavor using social media as a health

promotion tool. My supervisor, who is leading the larger research initiative, has already established a long-standing partnership with the community. By introducing me to the partnering organization and the community, she greatly facilitated my transition and my own relationship building, allowing the project to advance much quicker than it would have otherwise. Therefore, the positive experience cultivated a fruitful working relationship that is likely to endure in the future exploring other topics to develop community-specific solutions.

3.4.3.1 Youth-researcher relationship

My role as an adult and researcher was somewhat ambiguous to the youth. I was not exactly an authority figure like a teacher, but I did "*have the keys [to the Youth Program], the money for food, [and] the car to give them rides in*" (Research journal). More than a facilitator who provided video recording equipment and access to workshop spaces, I also saw myself as a role model and at times a mentor.

"*My relationship-building process started [early in the year] when I first came to Ndilo for [a school-based] tobacco social media project where I got to know the students, teachers, and staff at the Office. People didn't start to remember my face until few trips later*" (Research journal). When I returned in the summer, many remembered my presence during the school year. Familiarity formed a foundation for relationship building and working together on the research.

In the first week of the video project, I worked closely with the youth research assistant, Emma. Gradually, Emma and I built trust over Subway meals and car rides, where we often had some of the most meaningful conversations, usually when the audio recorder was turned off. I actively listened to her as she talked about her life as a 16-year-old while reciprocating with my own experiences, constantly bearing in my mind the importance of being a role model. Through Emma, I got to know youth in her social network. I also saw the benefit of letting go a bit. When we arrived at the cultural camp by boat for the first time, I lost my balance disembarking and fell into the water. Later I reflected on how this incident was in fact "*an icebreaker for all of us. It showed that I'm human, I make mistakes, and I fall in the water. [...] In a way, I was glad it happened. I think people are more comfortable with me now. Emma could now come up to me, put her arm around mine, shake her head, and say 'I still can't believe you fell in the water.'*" (Research journal)

The cultural camp itself presented unique opportunities to build relationships with a different cohort of youth from Dettah. We spent all the time together immersed in camp life. I lived in close quarters with the youth. We shared a cabin, told stories late into the night, and taught each other our respective languages. "*Times like these, I feel like I've built relationships in the community. But it really takes time and commitment, 24/7 being there, present … even if the kids are not filming all the time*" (Research journal).

Regardless of the effort I put into building ties, I also acknowledged that "*I can't develop the same kind of relationship with the kids as would [other young adults] who are from the community and have known these kids their whole life. … It's just not going to be the same*" (Research journal). The relationships I did build however were still important connections with different strengths. In fact, accepting my position as an outsider grounded my perspective on establishing relationships, recognizing that being present and available for support were sometimes more important than being everyone's best friend.

3.4.3.2 Community-researcher relationship

I approached relationship building with the wider community with honour and humility. Unlike my relationships with the youth where I also tried to be a role model, as I would with any youth, I was more an observer and learner, grateful that I have been invited and welcomed into the community. Through observing, listening, and learning, I came to understand the complex interpersonal relationships in the community. Knowing where the tensions lie, who were related, or who worked together helped with recruitment and participant engagement in the research process.

I also learned valuable teachings from elders as my relationship and trust with the community deepened. Once at the cultural camp, I accompanied an elder and several youth to check the fishnet on the water,

> "*John told us to find some willow branch and leaves for offering. Once we were in the middle of the lake, he tapped on my shoulder and signaled for us to throw the leaves in the water and say a prayer. […] We made offerings to the water to keep it calm and steady while we collected the fish*" (Research journal).

Despite being an outsider, I openly shared my own stories and Asian background, facilitating a cultural exchange that reinforced my relationships with the youth and the

community, and continued to foster the connections among the participants. For example, I welcomed questions from youth and community members about my home country, and answered to my best ability. When the community invited my family visiting from China to the feast on the last day of the camp, youth and adults alike asked more questions, especially about my 84-year-old Grandmother.

In the end, the level of flexibility and solid relationship building facilitated a vast amount of information and observation to emerge. These intricate details from the research form a rich description of process and context, which is critical because "we understand the world the way we understand an act—not by itself, but in and with its context" (Biglan, 2004, p. 16). A better understanding of the research process and context helps others to translate the work elsewhere, with a different group of people and under different conditions. Research then is more transferable because of the thick description generated from the qualitative and collaborative inquiry.

3.4.3.3 Other relationships

Relationships also manifested through deeper connections among the participants and with the research topic. At the camp, youth from both Ndilo and Dettah connected with one another, sharing a cabin, telling stories, and participating in camp activities. In a follow-up interview about research impact, a mother of a youth participant reflected on how youth and children from both communities continued to show affection for each other after the summer ended. She further summed up the relationships built during the process as "awareness" about traditional way of life and "friendship" among the youth.

Another mother noticed that her daughter, who participated in the video project, now more readily connects physical activity with her experience at the cultural camp.

> "*The kids got to see it, the different movements [at the camp]. And I could see it because my daughter was there. And you know when [my partner] goes to [chop] the wood, she's like, we did that at culture camp, that's exercising. You know, she* knows *it now*" (R5).

In addition, the collective reflection at the focus groups brought participants together in a way that might not have been possible under other circumstances. Barbara contemplated,

"I think cultural camp, when we say camp… that doesn't put the meat to it… It's just a camp; it doesn't mean a lot. [It is more] a way of life… Even going out to the land, instead of calling it a camp, […] say 'a way of life,' a traditional way of life" (P1).

Participants thus became critically aware of the value of a traditional way of life on physical activity as they articulated their thoughts about the videos to me and to each other. As a result, "Our way of life" became the title of the DVDs.

3.4.4 Capacity building

Drawing upon the assets and strengths of the community encouraged capacity building at both micro- and macro-levels. Micro-level capacity building refers to actions that enhance individual's skills, knowledge, and capabilities (McHugh & Kowalski, 2010). Macro-level capacity building usually occurs at a community level, affecting groups of people rather than a single person (Labonte & Laverack, 2001). At an individual level, youth built multimedia skills, boosted their confidence through leadership opportunities, and became role models in physical and cultural activities for their peers and family. At a group level, participants developed strategies to engage more community members in physical activity and decision-making about health promoting initiatives. At an organizational level, the CWP received community feedback that would help the staff to better coordinate and implement wellness programs and activities.

These various opportunities that increased or enhanced capacity acted as vehicles in translating knowledge to action, "altering the initial situation of a group, organization, or community in the direction of a more liberated state" or self-determination (Frisby et al., 2005, p. 380). In this research, action is defined as "a multi-faceted and dynamic process that can range from speaking to validate oneself and one's experiences in the world to 'the process of doing something'" (Reid, Tom, & Frisby, 2006, p. 317). It thus reflects social change (Reid et al., 2006), the ultimate goal of PAR. For a more structured reflection on specific aspects of capacity building as defined by Maclellan-Wright et al. (2007), please see Appendix M.

3.5 Limitations and challenges

Revisiting and analyzing my journal entries, focus group, youth conversation, and impact evaluation transcripts revealed several research limitations: timing, research capacity, and participant engagement.

3.5.1 Timing

During the analysis, instances referring to the inability to do something because of poor timing, lack of time, or schedule conflicts were coded and later categorized as "timing." Focus group participants expressed that the videos showed only a portion of the day-to-day happenings around the community, and missed many opportunities to comprehensively portray the local reality. They discussed other ways of practicing physical activity including drumming, volleyball, tennis, and swimming. Unfortunately, the timing of these activities fell outside the video making workshops, often taking place even later at night. I reflected in my journal, "*If only I had 6 months, then that would be great*" (Research journal). But the reality was, time was limited and we were not able to capture every single activity that happened in the community.

Timing of the project in the summer presented unique challenges for recruitment. With school finished for the year, many families were away on vacation or on the land. Still other youth enrolled in different summer programs. Youth retention in the video-making phase was difficult. Their sporadic availability, coupled with irregular sleep pattern (resulting from the long summer hours of daylight in the north), meant that many were not able to participate consistently. To overcome this challenge, I made myself available from morning until evening, continuously developing the project with those available and interested.

Related to timing was climate, another factor that prevented a comprehensive visual portrayal of physical activity. As several participants pointed out, this project would not be able to capture every activity simply because of the seasonal factor. "*There are other things you do in the winter for example*" (P8). Rather than capturing winter activities through visual media, participants discussed events such as snowshoeing and skidooing in conversations to provide supporting details that would complete the picture of physical activity.

3.5.2 Research capacity

Research capacity was another limitation. As a single researcher in the field, I was not able to transcribe and analyze data iteratively. Data generation and analysis were separated by time and space. Most of the videos were filmed at the cultural camp, which was far away by boat with limited power outlets. Setting up a video-editing and analysis station on my laptop would

have disrupted camp life and disrespected the purpose of connecting with the land. The footages thus had to be uploaded onto the computers in the community days after cultural camp ended for playback and edits.

Once I began facilitating the video editing workshops, I further encountered technical difficulty with providing access to video editing on multiple computers. Transferring footages filmed on the cameras to computers with the iMovie function and converting the clips into an editable format were painfully slow and impractical for all youth to access the editing software at any one time. This technical challenge combined with time constraints only allowed a few youth to edit the film. Such lack of preparation and familiarity with the uploading and editing process likely diminished youth engagement.

Balancing research capacity with the needs of the community was challenging. My defensiveness about the project that arose during the focus groups could have been ameliorated had I approached the program director and discussed the explicit involvement of all children and youth from the beginning, rather than conveniently recruiting youth intermittently throughout the project. Nevertheless, involving all children and youth would require more human resources to effectively facilitate and manage the process, a resource that would have been beyond the scope of this Master's thesis.

The distance between the community and the university also made it difficult. I was not able to be involved with the community for a longer period, which would have guaranteed a greater persistent presence. Contrary to temporary visits, constant involvement would facilitate more ongoing dialogues. Even though the research liaison and I communicated over the distance via email, text messages, and phone calls, none of these communications had the same impact as face-to-face meetings. Moreover, I was not able to adequately train the research liaison or any of the participants in research skills such as analysis, which would have been ideal for iterative transcription and data coding. On one hand, post-hoc verifications such as member checking have their limitations (Morse et al., 2002) and represent the realities of many community-university partnerships (Castleden, Morgan, & Lamb, 2012). On the other hand, we balanced flexibility with feasibility, taking the most effective approach under the circumstances.

3.5.3 "Being active is more fun than videoing:" Participant engagement

This youth's comment underscored the irony of a video project about physical activity. The process of filming is a relatively slow and sedentary activity. Filming prevented the youth from participating in camp life and being active. Having the cameras for the first few days was a new learning experience. Gradually, as they became accustomed to camp life, the cameras seemed more like a burden than a novelty and the video project began to lose its appeal. On our last morning at the camp, we attempted to produce a 5-second group segment. "*Everyone was just so uninterested and bored. All it took was 1.5 minutes*" (Research journal). At the same time, I was relieved because losing interest in the video project also alluded to young people finding interest in other camp activities such as playing, swimming, and interacting with each other.

A lack of interest was not just with the video component itself. On one of the earlier days spent at the camp, there were presentations on different topics that "*went on for a long time, and I think it went on longer than it needed to. The kids were starting to get restless*" (Research journal). Even the day-to-day chores began to wear at times. When James, one of the youth leaders, went to collect spruce branches with a group of youth, "*even I could see his frustration coming through. The kids were starting to not listen anymore. They were tired*" (Research journal).

Youth did not participate much in the second phase of the research for the focus groups. During the video-making phase, I invited the youth to present their videos to the focus groups. Having the youth as co-presenters and co-facilitators was an important aspect of the participatory approach as it recognized their agency and ability to express their own thoughts (Wallerstein & Duran, 2008). While everyone agreed initially, many of them became unavailable on the day of the focus groups. Some were sick or had family emergencies, while others needed transportation to travel from one community to another. In the end, I recognized that even if I had all of their phone numbers and offered endless rides to and from, some factors were simply out of my control and theirs. These mishaps demonstrated that things often do not go as planned, and no matter how much effort the researcher puts into ensuring everything goes smoothly, something will always change last minute. Rather than stalling because the circumstance changed, I adapted the process and communicated youth voice in other ways (e.g. explaining their intention behind their videos based on our conversations). While I realize I may not have adequately conveyed all of their thoughts and I may not have done justice to the youth by representing their voice, given the circumstances, this approach was again, our best option.

3.6 Research implications and conclusion

Master's students are seen as junior-researchers with a different educational and career trajectory. Our degree requires a shorter timeframe, generally 1.5-3 years. For PAR that requires significant dedication to relationship building, time is a critical factor. Consequently, when a Master's student decides to embark on a PAR journey, she has less time compared to other researchers to enter into a research relationship, develop trust with a community, and complete her other academic obligations.

In addition, many Master's students enrolling in a thesis program have not yet contemplated, let alone solidified, a career in research and academia. Some students view a Master's degree as a stepping-stone to other future paths, of which research is one option. With the possibility of entering into the job market post-graduation, the transferable skills acquired through a PAR process will be particularly beneficial in collaborative, people-centered work environments. Thus, I argue that a Master's program should be more than a formative stage of understanding the fundamentals of public health. Experiences matter as well in graduate school. Practical knowledge from participatory and action-oriented research should form an important aspect of students' experiential education. In fact, institutions and faculty members can provide greater support to encourage graduate trainees to embrace PAR, which not only aims to alleviate health inequity, but can also advance "soft" skills that will become transferable in a variety of settings in the future. It would even be worthwhile for universities to provide formal structures that develop students' skills in facilitation, community and stakeholder engagement. Whether it is integrating these skills within existing curricula, or introducing more reflexive courses dedicated to working with marginalized populations, institutions have a responsibility to provide students with more tools than merely developing survey instruments and interview guides before they connect with communities.

Nonetheless, it is intimidating for a student researcher, especially one with limited experience interacting with marginalized groups, to confront the actualities of working in the field. Putting ourselves out there, exposing our vulnerability, and anticipating the unanticipated are often not realities students want to face when there is the looming pressure of finishing a thesis or dissertation. However, this research demonstrated that given healthy circumstances and researcher attitude, a start-to-finish PAR project is possible at a Master's level without

sacrificing rigor, in spite of limited time and budget. Here, I summarize five lessons that facilitated my experience as a student researcher engaged in PAR with Indigenous communities.

First, entering into a pre-existing relationship established by a supervisor greatly benefits the student because of the access to a community of interest, funds and resources, knowledge and support (Khobzi & Flicker, 2010). I had the great fortune of this relationship in my research.

Second, identifying a research interest early on in the graduate program is helpful. Because of previous work experiences, I was able to formulate a research interest area early in the process. This does not necessarily mean concretizing a specific research question, which still needs to be co-developed with or developed by the community partner in line with PAR principles. However, knowing where to begin allowed me to plan ahead to jumpstart the research process.

Third, again based on previous experiences in community settings, I learned to carry a "healthy" attitude when engaging with communities. "Healthy" attitude suggests cultural humility (Minkler, 2004), sincere curiosity, and willingness to listen and learn (Israel et al., 2008). Vulnerability was my best friend as I put myself forward and shared stories and experiences in return. Giving back and participating in community life became even more essential in this short-term project. I believe this attitude constitutes one of the "special skills necessary in working with marginalized communities" (Khobzi & Flicker, 2010, p. 353). Other critical skills such as facilitation (Springett, Wright, & Roche, 2011) can be further practiced in the field.

Fourth, responsiveness, resourcefulness, independence, and a proactive personality are valuable. At the same time, it is also important for the student researcher to maintain a realistic outlook, recognizing that there will always be factors outside of our control because PAR is dynamic and fluid. For me, learning to "give over to the power of process" (Burgess, 2006, p. 432) was a turning point in the research.

Finally, I recognize the undeniable role of serendipity. Researchers and communities may sometimes share different priorities and agendas, which may also change during the process (Khobzi & Flicker, 2010; Minkler, 2004). As the research liaison pointed out, the project turned out how she envisioned it. This was because we were "on the same page." Additionally, the fortuitous timing of the summer cultural camp along with an early interest in physical activity and connection with Indigenous communities, helped to move the project forward.

As Aboriginal communities increasingly gain experience and knowledge about research (Castleden et al., 2012), a PAR approach allows research to be more relevant and meaningful. When done well, a PAR approach has the potential to develop a positive research experience with Aboriginal communities, alleviate the isolation many graduate students face during their thesis work (van der Meulen, 2011), and cultivate a new wave of emancipatory and activist researchers. Not afraid of "getting our hands dirty" comes with tremendous rewards in the end where research not only benefits the community but is also a transformative experience for the researcher. We will continue to seek ways so research can be more participatory and findings more useful for communities. I hope the reflections and thoughts presented here will encourage more junior researchers, not only those pursuing a doctoral degree, think outside the dominant paradigms in public health in mitigating health inequity and working with marginalized populations, especially Indigenous communities.

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CHAPTER 4. OUR WAY OF LIFE: IMPLICATIONS OF ABORIGINAL CULTURE AND TRADITION IN HEALTH PROMOTION PRACTICES

In collaboration with a northern Dene community in the circumpolar north of Canada, we[1] conducted a participatory action research (PAR) project that re-defined physical activity, a priority area in health promotion. Based on local knowledge, findings highlight the fundamental roles of culture and tradition in understanding physical activity, and promoting health and wellbeing. In this paper, we begin by introducing the importance and urgency of a culturally relevant understanding of physical activity and health. We then briefly explain the methods applied in this PAR project, and discuss findings related to the meaning and determinants of physical activity underpinned by a theme of cultural identity. Finally, we conclude with thoughts on the implications of culturally relevant health promotion in an Aboriginal context.

4.1 Introduction: Diverging views of health

Health and socioeconomic disparities disproportionately affect many Indigenous populations around the world (Gracey & King, 2009). Within a Canadian context, Aboriginal Peoples, identified as First Nations, Inuit, and Métis[2], experience higher rates of poverty, abuse, suicide, substance use, and chronic diseases compared to their non-Aboriginal counterparts (Adelson, 2005; Frohlich, Ross, & Richmond, 2006). These burdens are a direct consequence of unjust colonial policies that continue even today, leading to subsequent social, cultural, and economic exclusion (Adelson, 2005; Mikkonen & Raphael, 2010). Aboriginal health status today is therefore a culmination of centuries of historical injustice and institutionalization.

Among the health inequities, a major public health concern is chronic disease burden, a problem that has seen rapid development in recent years such as rising prevalence of diabetes,

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[1] In this chapter prepared for publication in the journal International Journal of Indigenous Research, first person plural "We" indicates the partnership between the community partner and the researcher, and the singular "I" refers to the researcher herself.

[2] "Indigenous" refers to peoples indigenous to the land around the world; "Aboriginal" in this paper is the umbrella term for Indigenous peoples in Canada, who are further distinguished as First Nations, Inuit, and Métis. Where possible, I use the term "YK Dene" to specify the First Nation with whom I worked. The conventions of terminologies are based on the guidelines originally developed by the National Aboriginal Health Organization (http://journals.uvic.ca/journalinfo/IJIH%20Defining%20Indigenous%20Peoples%20Within%20Canada.pdf).

cardiovascular disease, and associated risk factors such as obesity (Young & Katzmarzyk, 2007). Physical inactivity has been well studied as a risk factor for many of these health issues (Lee et al., 2012; Miles, 2007; Young & Katzmarzyk, 2007). Subsequently, many interventions target physical activity to proactively promote health (Findlay & Kohen, 2007).

Yet, one-size-fits-all interventions and practices demonstrate relatively limited effect in shifting disease burdens among Aboriginal populations. In a systematic review of physical activity initiatives in Indigenous communities across North America, only 17% of 64 physical activity programs experienced a significant impact on related health indicators (Teufel-Shone, Fitzgerald, Teufel-Shone, & Gamber, 2009). Findlay and Kohen (2007) argued that without properly understanding how some Aboriginal cultures characterize sports and physical activity, research efforts attempting to measure and evaluate the physical activity level of Aboriginal peoples would be inadequate and ambiguous. Some authors have attributed this inadequacy to divergence between the dominant and Indigenous understandings of physical activity, health, and healing (Adelson, 2005; Findlay & Kohen, 2007).

A western clinical framework dominates the mainstream perception, which dichotomizes health and ill-health (Adelson, 2005). This dichotomy centres on the individual, a dogma driving most health promotion interventions (Petersen, Davis, Fraser, & Lindsay, 2010). The biomedical paradigm has medicalized concepts such as physical activity within the public health domain as a personal responsibility to reduce risks of obesity and related co-morbidities (Petersen et al., 2010).

On the other hand, the Indigenous perspective, largely based on a relational worldview (Kovach, 2010), situates health as relationships with self, others, the community, and greater cosmos (Lavallée, 2007). In this paradigm, individual health is intrinsically related to collective wellbeing and identity (Kirmayer, Simpson, & Cargo, 2003), achieved through the balance of body, heart, mind, and spirit. Health is thus conceptualized more broadly as an interconnection between physical, mental, emotional, and spiritual components, articulated in some Indigenous cultures as the medicine wheel framework (Graham & Leeseberg Stamler, 2010; Lavallée, 2007).

The divergence in ways of knowing and understanding health has prompted scholars to call for new ways of thinking and navigating health disparity (Adelson, 2005; Kirmayer et al., 2003). In fact, the research community has accumulated a "large volume of data on the status and

determinants of health among Aboriginal people in Canada" (Young & Katzmarzyk, 2007, p. S149). But there are few physical activity intervention research efforts to understand the meaning of physical activity through a cultural and traditional lens. One example is Lavallée's (2007) research that applied the medicine wheel model to explore the connection between physical activity and health. Other alternatives include the increasing participatory approaches in health research that reconcile worldviews to develop community-driven, context-specific solutions to inequities (Cargo & Mercer, 2008; Macaulay et al., 2011). In particular, Teufel-Shone et al. (2009), highlighted programs and interventions with strong tribal leadership, collaboration between researchers and communities, and culturally relevant methodologies. They pointed out that these characteristics mark exemplar initiatives with sustaining effect. However, such initiatives remain limited in number.

Our research aims to continue filling this gap by collaborating closely with the community, to study the "role of traditional activities in enhancing health" (Wilson & Rosenberg, 2002, p. 2017), and collectively develop solutions that are relevant and meaningful in the local context.

4.1.1 Research goals and objectives

In this research, we took a participatory approach to promote physical activity and health, considering the benefits of a holistic way of learning about the topic and community-driven solutions. Researchers collaborated with the Yellowknives Dene First Nation (YKDFN) in the Northwest Territories (NWT), Canada, in a PAR project. By prioritizing local voice and knowledge, we explored people's experiences with and perspective of physical activity and more broadly, health and wellbeing. Beyond the meaning of physical activity (i.e., "What is physical activity?"), we also asked, "What determines physical activity" in these communities. Through critical reflections on the meaning and determinants of physical activity, we developed locally relevant actions to encourage more people to be active, thus improving the health of individuals and the collective.

4.2 Methods

We will briefly describe the process that achieved our goal of exploring physical activity within a broad community context. First, the primary researcher will locate herself and her personal affinity to the research topic and approach. Next, we will discuss the PAR framework and the relevant theory, and three phases of data generation, knowledge translation, and impact assessment.

4.2.1 Situating the researcher

My interest in physical activity arose from a previous experience with an initiative on the Navajo Nation that used physical activity as a means to mobilize and engage communities. Later, as a community organizer in Montreal, I witnessed the strength from grassroots movements. Based on my experiences working with communities, I strongly believe that power and strength come from bottom up (i.e., community-centred) rather than topdown (i.e., policymaker-centred). As a result, I found PAR to be a fitting methodology that reconciled my interest in health promotion and passion for community development.

Relationship building is highly valued if not a pre-requisite in PAR. I began building relationships well before the project formally began. I traveled to the North, in circumpolar Canada, as a research assistant for other health promotion projects. During this time, I became a familiar presence by participating in community life, volunteering, and getting to know the youth and community members. I also began conversations with the research partner. Together, we co-developed a research vision and focus, and co-devised a project plan for the summer.

4.2.2 PAR, critical consciousness, and praxis

PAR, also known as action research, participatory research, and community-based participatory research, directly engages the people that the research is meant to affect (Cargo & Mercer, 2008). Research is done with participants, rather than on or to them (Frisby, Reid, Millar, & Hoeber, 2005). The approach is highly reflexive, centering on collaboration, inclusive and safe spaces, and balanced power dynamics (Cargo & Mercer, 2008). Researchers are not the conventional authority of knowledge and information. Rather, they are co-researchers embedded

within the project, sharing power and co-creating knowledge with the participants (Burgess, 2006; Frisby et al., 2005).

The research community has largely credited Lewin for coining the term *action research* (Wallerstein & Duran, 2008) and McTaggart for *participatory action research* (Burgess, 2006). However, the emancipatory and anti-oppressive framework that guides this research comes from Freire's (1970) work on critical consciousness, or "conscientization." Freire (1970) believed that "reflection – true reflection – leads to action" (p. 66). In a reflection-action cycle termed praxis, people critically think about their lived realities and develop meaningful solutions or actions to better their social, economic, and political livelihoods (Wallerstein & Duran, 2008). Critical consciousness is the theory that profoundly informed this research.

4.2.3 Research context

This research defines community by geography. The YKDFN communities of Ndilo and Dettah situate outside the city limits of Yellowknife, the capital of the NWT, and are approximately 30 km apart from each other. Ndilo is a very short distance from the more populated Yellowknife compared to the more isolated community of Dettah, which has easier access to traditional land. Each community has its own leadership, or band council, although these work in concert for governance purposes. In this project, I worked with the Community Wellness Program (CWP). The CWP is under the management of the Wellness Division, which is the branch of the band council that develops, implements, and oversees all wellness-related activities and initiatives. I directly worked with a research liaison in the "known sponsor approach" (McHugh, 2008; Patton, 2002). The research liaison, who was the supervisor for CWP and a community member, was a pivotal figure in the research. We worked collaboratively from identifying the issue at the outset to integrating the project within a cultural camp program, analyzing the data, and coordinating knowledge translation activities.

4.2.4 Phase 1: Data generation

Phase one of data generation involved a youth participatory video project and focus groups with community members and leaders. For three weeks, nineteen youth aged 8-18 years from Ndilo and Dettah created participatory videos portraying physical activity in the community

and on the land. Participatory video is an increasingly popular visual research method, grounded in Freire's critical consciousness theory, that couples video-making with democratic participation (Low, Brushwood Rose, Salvio, & Palacios, 2012). It is a "set of techniques to involve a group or community in shaping and creating their own film" (Lunch & Lunch, 2006, p. 10). The resulting videos are "easy and accessible" (Lunch & Lunch, 2006, p. 10), elucidating voices that may otherwise remain silent through conventional means of data collection (Liebenberg, Didkowsky, & Ungar, 2012).

We chose to work with youth at this stage of the research. Engaging youth as co-researchers echoes the idea that youth are community resources, rather than trouble (Benson, Scales, Hamilton, & Sesma, 2004; Damon, 2004; Lerner, 2005). Moreover, visual projects in the same communities in the past demonstrated that youth-developed health messages were more powerful when effectively communicated to community members (Jardine & James, 2012).

We worked with one cohort of youth in Ndilo in the first week. This period was a pilot run, allowing us to familiarize with the equipment and editing software. Youth built their capacities in digital media and research, exploring the question "What is physical activity" in their surroundings. The video project relocated in the second week to the cultural camp, held on a traditional island 20 minutes away from Dettah by boat. The summer cultural camp is an annual community event organized by the CWP, teaching youth on-the-land practices and skills. Here, I worked with another cohort of youth, who were primarily from Dettah, to film physical activity on the land. In the third week, cultural camp participants returned to the community and we edited the films. Throughout the process, the youth and I stored all of the video footages on community computers, underlining the participants' ownership of the data and providing them options for producing more videos in the future. In addition to facilitating video making, I engaged youth during these three weeks in ongoing conversations about their lived experiences and perspective of physical activity.

We then shared preliminary videos with the wider community in three focus groups. Participants analyzed the content of the videos, linking the images back to their own realities. The videos sparked reflections among community members and leaders, resulting in lively discussions about the research topic, and more.

All conversations from the data generation phase applied an ORID discussion structure that analyzed the videos, probing for their purposes and meaning through Objective (what do you

know?), Reflective (what do you feel?), Interpretive (what does this mean?), and Decisional (what do we do?) stages. In this last Decisional stage of ORID, we brainstormed various actions to encourage greater participation in physical activity in the community.

4.2.5 Phase 2: Knowledge translation

In family suppers held in both communities, we shared the knowledge generated with members at large. We presented research findings, distributed DVDs containing the videos, celebrated the youth participants, enjoyed a nutritious, home cooked meal, and promoted active living through a family quiz. At the end of the night, community members voted for their favorite physical activity ideas generated from the conversations in phase 1, collectively making decisions on and prioritizing initiatives for the community partner to implement in the coming year.

4.2.6 Phase 3: Impact assessment

We informally assessed the impact of the research through ongoing observations and conversations. Three to six months after the family suppers, I returned to the community for a formal assessment of the research by engaging youth, elders, staff, and community members in eight semi-structured interviews. Respondents voiced their impressions of the research and the resulting actions. These interviews were also verification strategies that strengthened the rigor of the research (Morse, Barrett, Mayan, Olson, & Spiers, 2002).

4.2.7 Data analysis

We analyzed the content of the following data sources organized by an alphanumeric system (Table 4-1): transcripts from conversations with youth (youth participants Y1-6), finalized videos (V1-8), focus groups (adult participants P1-11), and impact evaluation interviews (respondents R1-5), as well as the researcher's journal entries (including field notes, participant observations, and dialogues). Most of the discussions were recorded and transcribed. Some in-the-moment conversations when audio-recording device was not readily available were noted in research journals. The alphanumeric system therefore indicates the source of data. For example, P1 suggests that the quote came from adult participant 1 in one of the focus groups.

Meanwhile, names in the transcripts and research journals have been replaced with pseudonyms to protect participants and non-participants' identities.

I coded the content of all data generated at the university where qualitative analysis resources were available. Through the conventional content analysis strategy, I immersed myself in the data, repeatedly appraising the codes to abstract themes and sub-themes without pre-determined categories (Hsieh & Shannon, 2005). Later, I co-analyzed the preliminary results with the research liaison, checking and verifying the emerging themes. A research colleague further peer reviewed the analysis to ensure rigor (Mayan, 2009).

Table 4-1. Data generated from the research and accompanying sources.

Data generating strategies	Source codes
• Conversations with youth	• Participants Y1-6
• Videos produced by the youth: 1. Activities on the land 2. Summer of Mackenzie Island 3. Cultural camp short clip 4. Things to do at cultural camp 5. Why I like cultural camp 6. Active vs. not active 7. Youth in the community 8. How Yellowknife got its name	• Videos V1-8
• Focus group discussions	• Participants P1-11
• Impact evaluation interviews	• Participants R1-9
• Research journals	• N/A

4.3 Findings

All data generated by the participants and observed by the researcher converged into two broad categories, or themes: meaning and determinants of physical activity. A third theme, cultural identity, is the foundation that supports these two elements.

4.3.1 Meaning of physical activity

The meaning of physical activity was broad. Participants articulated the concept of physical activity and described how the definition manifests in day-to-day life through images and personal stories. Data also indicated different viewpoints. This section presents the findings of three key sub-categories: what does physical activity mean (conceptualizing physical activity); what do people do to be active (operationalizing physical activity); and diverse perspectives. Representative quotes exemplifying these categories are summarized in Table 4-2.

Table 4-2. Summary of categories and exemplary quotes about dimensions of physical activity.

What does physical activity mean? (Conceptualizing physical activity)

Movements
- "[At the community carnival,] everyone was just all moving and doing activities all at once" (P6).
- "Because we do a lot of movements, and all that. And… it's like exercising when you do those… chainsaw challenge, or whatever, leg wrestling" (Y3).

Traditions
- "The Dene way of life *is* physical activity; you needed to be fit to be out on the land, and do all this stuff for yourself to survive" (P10).

Keeping busy and participating
- "Back in the days, everyone was active and they had to… They always had something to do. Nothing was boring. Boring didn't exist" (V5).
- "It made me feel good… It's like now I'm more active, in my life. Like I'm more busy, always doing something, like work. Yeah, just keep yourself busy" (P7).

Not "chilling"
- "We just sit around, watching TV" (Y1).
- "Chill – [youth] call it chilling. They sit there… like they could sit there for hours. And then by the time they're done doing whatever they're doing on their iPods, … they are just like sluggish. And … even if you talk to them, you don't even have their full attention" (P7).

What does physical activity look like? (Operationalizing physical activity)

Sports & exercise
- "[…] soccer, hockey, volleyball, running, [and] basketball" (Y4).

Work & household
- "My dad goes to work, everyday, at 6 in the morning. … We do yard work" (Y5).
- "It would be good to put more… the actual work behind the cultural camp [into the videos]. Getting the wood, putting up the tarp, putting up the tipi… tearing down, packing up…" (P4).

Leisure & recreation
- "[…] walking over to [the store] instead of like taking a vehicle makes a difference" (P8).

Culture & tradition
- "Skin the hide, … catch fish… and … check the nets" (V5)
- "Cutting caribou meat," "swimming," and "peeling spruce" (V1)

Not captured on video
- "On some nights we have volleyball and there are a lot of adults that come out. Be nice if you had a shot of that [in the videos]" (P4).

Diverse perspectives

Multi-generational perspectives
- Youth: "You don't want to grow up to be like one those people. … They don't get… any good education, or a job. … It would be hard for them to find a job" (Y3).
- Adults: "What about elders? I didn't see any elders in that. […] You should also capture the older generation. They're also active in the community" (P3).

Wholistic perspective
- Spiritual health: "[…] each one, each individual there's the relationship, with one another, with themselves, with others, with the land. It's a way of life" (P1).
- Physical health: "Because… so you don't get… diabetes or something? Like, you have to be active" (Y5).
- Emotional and mental health:

  "What the kids are used to, playing games, watching TV, and as they get older into their teenage years, they become… they get these 'lazy minds.' You know? Because they're so used to doing, well, I can't imagine sitting in front of a video game for 8-10 hours. You know, what does that do to the brain, what does that do to their development? To, how they're developing?" (P6)

(Wholistic perspective continued on the next page)

Table 4-2. Summary of categories and exemplary quotes about dimensions of physical activity (continued).

P7: We went on a walk two weeks ago, I was like, "I'm scared!" I was kind of scared because last time, that was what happened to me [chest pains, shortness of breath]. But then it was like nothing! I walked up there like nothing, walked down there, and it was great! I was OK. We were just walking like it was normal.

Facilitator: And how did that make you feel?

P7: It made me feel good.

4.3.1.1 Conceptualizing physical activity

Participants conceptualized physical activity as related to movements, traditions, and an active lifestyle. They also described what is *not* physically active.

Fundamentally, participants defined physical activity as "being active" (V5). Some youth immediately responded with "fitness," "exercise," and "go to the gym" (Y3). One focus group participant described the busy-ness and liveliness of a community carnival festival as being active because of the movements.

Movements are inherent in traditional activities as well, a youth commented. Physical activity is therefore also related to Dene games and way of life on the land. Many traditional practices are rooted in survival skills, passed on through generations. For example, the game stick pull where players stand facing away from one another while each pulls on a greased stick, is in fact "what makes [people] stronger in catching the fish" (P10).

Further discussions layered notions of participation and keeping busy onto this foundational understanding. "Being active" is not just being physically active, but also being busy or active in life generally and having an active mind. Moreover, being active suggests working and contributing to a greater collective. The comment "We asked everyone to participate" (P10) suggested involvement in any community activity. At the cultural camp, chores such as chopping wood, building fires, and hauling water, while not formally organized, were nonetheless critical in maintaining the integrity of the camp. Contributing to camp life in any way fosters an inclusive environment, connecting all individuals. One elder reminded us, "Remember there [were] children there, even the little young baby, and also a child, also a youth, a parent, and an elder. So we're connected with all the people there" (P1). Thus, at the camp, to participate, or to stay constantly busy, was being active, whether it was joining others in scraping the moose hide, or chopping up vegetables for supper.

The mentality of keeping busy also translated into people's day-to-day lives in the community. Being active takes on a higher meaning, not just manifested as individual activities around the house, the school, and the playground, but also leading a busy life in general. Participants highlighted the notion of "always doing something" (P7) as integral to the meaning of being active or physical activity.

Besides defining what physical activity and being active was, participants also discussed what physical activity was not. Several youth described their sedentary behavior during summertime when they had no school obligations. Many adult participants talked about physical inactivity in relation to youth behavior. Both youth and adults perceived sedentary behavior, or "chilling" (P7), as negative, unproductive, "sluggish" (P7), and "being lazy" (V6).

4.3.1.2 Operationalizing physical activity

Video and photo footages, narratives, and personal stories corroborated a working definition of "being active" related to movements, traditions, and keeping busy. The project generated the following types of activities considered by the participants as being active: sports and exercise; work and household chores; leisure and recreation; and culture and traditions. Various seasonal and timing factors limited the scope of the video project. As a result, we were not able to film as comprehensively as some participants would have likely. Instead, we supplemented the visual portrayal of physical activity with stories and narratives, for example, about winter activities, volleyball nights, or community drum dances.

4.3.1.3 Diverse perspectives

The activities identified by the participants were diverse, ranging from conventional sports to simply work. The mixture of activities stemmed from perspectives of multiple generations, between the youth and adults. Moreover, a holistic assessment of the data further revealed that physical activity was portrayed through four components of health – spiritual, physical, emotional, and mental.

In terms of multi-generational perspectives, adults immediately perceived physical activity as activities on the land. This was evident in my conversations with the research liaison and other adult participants throughout the process. By contrast, youth immediately associated

physical activity with "conventional" undertakings like soccer and running. Additionally, youth considered the long-term effect of physical inactivity on education and employment.

Youth also diverged from the adults in terms of *who* was physically active. Adults mentioned elders, and actually questioned why there were not more elders included in the videos, which were made from the youth's perspective.

By analyzing the discussions as a whole, comments implied that physical activity conveyed four health benefits: spiritual, physical, emotional, and mental. These interpretations are highly subjective, even after rigorous discussion and co-analysis with the research liaison.

Participants alluded to spiritual health as interrelationships. Comments about the spiritual perspective of the traditional way of life (P1) were prevalent throughout the focus groups. The broader category of cultural identity is related to spiritual health and underpins all discussions.

The physical health benefit of physical activity was seen to lie in its disease-preventing ability and related to body image. Youth participants were quick to indicate physical health even if they were unsure of the exact disease (Y5).

Participants also implied that physical activity builds confidence, which is related to emotional and mental health. After sharing a story about accomplishing a walking challenge, Georgia summarized her positive emotions and confidence while being physically active (P7).

Finally, participants talked about the effect of physical inactivity and sedentary behaviors on the mind. One youth, Emma, expressed concern about being inactive. If people are not active, she says, "they don't get any good… education, or a job" (Y3). Her comment alluded to foresight about the future and long-term impact of physical inactivity and an inactive lifestyle. Similarly, another focus group participant said that youth's sedentary behaviors, particularly those related to screen time or technology use, tended to "rotten their mind" (P7). Other adult participants shared similar responses about the impact of inactive ways on the mind of the youth (P6).

4.3.2 Determinants of physical activity

This research also identified factors that motivated and prevented people from engaging in physical activity in the community. At times, participants spoke directly about influences that encouraged or impeded their participation. Other times, the categories were based on our inferences, allusions, and interpretations of the content of the conversations. Through scanning

and coding transcripts, determining factors emerged and were grouped into three subcategories: motivators, barriers, and those with dual effects. Respective categories are represented by exemplar quotes in Tables 4-3 to 4-5.

4.3.2.1 Motivators

Participants identified factors that exclusively motivated people to participate in physical activity, active lifestyle, and community events: effective promotion; positive reinforcement; self-determination; community support; and community ownership (Table 4-3).

Table 4-3. Summary of categories and exemplary quotes about motivating determinants of physical activity (factors encouraging physical activity).

Effective promotion
- "Talking to people… getting them just to come and try it out. … I started the circuit training in Dettah. I told two of my friends, and Darrin was talking to his friends, and Ella was talking to her friends, and Owen came with his friends. … We had about twenty people, the first two or three [weeks]" (P10).
- "Maybe show a video of what you did last year, this year for next year, […] just an evening, over at the gym, and […] show the videos, give the kids more of an exposure, or parents more of an exposure, of what they're going to be doing" (P3).

Positive reinforcement
- "Stuff like that [story about an elder shoveling the snow from the church steps], got to be recognized" (P1).
- "We can look back at [the videos], and laugh at it. […] Later, we can watch it and remember what we did for the week. […] And show people what it's like to live on the land" (V5).

Self-determination
- "And there's other communities in the Northwest Territories where they run their school systems for the whole year round because they have a way bigger on-the-land component in there. […] it shows that on the land, and tradition and culture go hand-in-hand with healthy living and physical… components. […] And so… if that's part of school where you're learning all your values and where you're learning everything, and you will think like, yeah it's just normal to go out on the land, you know? […] Then [the youth will] want to do [cultural activities] more. They'll want to keep doing that. They'll see that it's more important than iPods, listening to music, and stuff like that" (P8).

Community support
- *Video:* "That's why people were never overweight because they were always moving. And everybody in the family always had a role to play" (V2).

  Y4: "It's true. That's how it is. [At the cultural camp], adults are cooking, working, taking care of the kids. [Kids are] helping out, doing laundry, taking care of kids."
- "We get to see a lot of people, be around them for a long time [at cultural camp], and… we build… teamwork together, strength, and a lot of opportunities" (V5).

Community ownership
- "I feel really proud of all these [videos], but especially because I saw it all in a different way too… I realized back in the day, our traditions, they are really based on physical, like keeping healthy and fit. […] You have to be healthy and you have to be physically fit, you know, in order to do all of those activities. Like people do big long canoe trips, how can you do that if you're not like, you know, in shape? And so that's what that [pointing to the video] reminded me of. Like, makes you proud to do that" (P8).

First, participants considered promotion of programs and activities as an important first step in encouraging participation. In this research, participants identified word-of-mouth and media tools, such as the video project, as two primary means of effective promotion. Tanya's experience demonstrated that word-of-mouth, which accessed her social and family network, ignited people's interest in the circuit training activity (P10). However, this strategy can be labor-intensive. For example, to recruit participants in another activity, Jeremy "called them [and] knocked on [people's] door… to get them here" (P4), showing that outreach could potentially become the responsibility of a few individuals on whom others come to rely. Participants also viewed the physical activity videos as a promotional tool to share news and information about community programs and activities. Paula's comment demonstrated that the videos, when integrated into program planning, could serve to recruit youth participants for future cultural camps (P3).

Second, constant reminders, encouragements, recognition, and prior positive experiences reinforce and motivate people to participate in physical activity, community life, and active living. Barbara reminded us that recognizing those who are active for the sake of being active is critical in celebrating positive behaviors in the community (P1). Elders, for example, are role models who are not always rewarded for their contribution. In addition, the video project reinforced youth's positive experience at the cultural camp. Remembering and sharing positive experiences with others would motivate more people to participate, such as in future cultural camps.

Third, effective change at a community-level stems from local perspectives and initiatives. In the context of Indigenous sovereignty, Aboriginal communities' self-determination, or ability to make decisions as an independent entity, promotes physical activity, as highlighted by Carrie's words (P8). While the sub-category of "self-determination" was limited to few codes and references, this concept of greater capacity for self-determination is significant nonetheless. The research liaison agreed, "Our kids will be more culturally active that way."

Fourth, support at a grassroots level indicates group effort and is important for motivating individuals to practice active living. Participants talked about two types of community support – structural and interpersonal. Consistent, regular, and routine factors including programs and facilities create a supportive structure for community cohesion, active lifestyle, and connectedness among people. Youth suggested that "soccer programs" (Y4) and "Dene games"

(Y3) are ways to motivate people with physical activity, as part of a larger, consistent structure. Playing different roles to contribute to community life is also part of this larger supportive structure. Being around others in positive ways is important, as another youth mentioned in the video. Interpersonal support from peers, youth and adults, strengthens community connection and creates an environment conducive for staying active.

Lastly, community pride, buy-in, and ownership are motivators for physical activity and active lifestyle. Carrie's quote exemplified many community members' pride in the traditions and culture as depicted on-screen by some of the videos (P8). Moreover, the buzz at the family suppers where we disseminated research knowledge and results was another indication of community pride, presumed to encourage greater participation. In addition to ownership from collective pride, the process that directly engaged the community was yet another way of investing people to take greater responsibility of their own and community's health and wellbeing. In this research, we sought the voices of youth, focus group participants, and members-at-large at the family suppers. By giving the wider community a say in prioritizing programs or activities, people are also committing "to say they would participate" (P10).

4.3.2.2 Barriers

Factors that exclusively prevented or hindered people from participating in physical activity and community events, and engaging with an active lifestyle included risky behaviors and transition in way of life (Table 4-4).

Participants discussed lifestyle or personal habits such as alcoholism, smoking, and gambling that were not conducive to an active and healthy lifestyle. Georgia, a regular smoker, described her first experience with the walking group. As she persisted with the group, she noticed that her "muscle tone […] built up" and was able to complete the same walk without any breathing problem with the support of her peers and the community program that organized the walking activity (P7). In another instance during video editing, one youth noticed that several photos in a cultural camp slideshow showed two community members smoking. She stopped to point them out and proceeded to add anti-smoking messages to the photos. This gesture suggested that the youth recognized that smoking negatively affects health and wellbeing and that it was incongruent with the message she was trying to relay in the slideshow.

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Table 4-4. Summary of categories and exemplary quotes about barriers to physical activity (factors discouraging physical activity).

Risky behaviors
- "I couldn't even… like I was just getting shortness of breath, like I couldn't even breathe. And… it was probably from smoking too, by being not active. And by the time I got up [the hill], I was… getting chest pains, […] shortness of breath. I was like [gesturing shortness of breath]… And Lillian [asked], 'are you OK??' I was just like, 'I need water, I need water!'" (P7).
- *P10*: Well, there's the odd ones, kids who don't come out of their houses or… yeah.

  P11: Only know how to play bingo. […]

  P10: That's the other ones. They're stay at home and do nothing, or they're at the Bingo, gambling.

Transition
- "The first video that was seen, it's like already they're… two different [perspectives]. […] Ndilo [youth], I mentioned, they're not out on the land, but they're doing physical […] activities, and you know there's people in the community that do different activities, and… involved in that way" (P1).
- "I'm really saddened that technology has taken us to a lot of places that we've never been before. But in a way, it's kind of sad because the kids are addicted to it. […] They're so addicted to technology and phones and being that connection and that Facebook, it's just… sometimes it really gets out of control" (R1).
- "I noticed that with my niece, with Evelyn. […] She always stays home constantly because she has a phone right? … She just eats and… It's different with Elizabeth. […] Elizabeth doesn't have iPhones, iPods. With her, she's always… out. Her mom always kicks her out of the house [laughs]. And… it's different like, you can just see two different [lives]. This one always stays home and she's always on her iPods, and she's kind of… getting… that extra weight. As with this one, her mom joined her in soccer, so she's always active. She doesn't have an iPhone, and she's always doing something. […] This one's active, this one's not" (P7).

Gambling including Bingo games is another risky behavior that prevented participation in physical activity. Bingo games are a significant part of community life. Staff workers plan community activities by figuring out "what's the best times, the best days where there's lots of people, where people are out, going to Bingo or doing other stuff" (P10). The exchange between Tanya and Darrin demonstrated that for some community members, sedentary games take precedence over other activities that might be more active and involved. These activities affect people's mental wellbeing and connectedness with others and indirectly influence their physical health.

Nostalgia for the past and discussions about transition in way of life were prominent and recurring themes in all focus groups. Adult participants reminisced about how life used to be, and compared the traditional values and ways of life with norms today. They voiced that influences from technology, mainstream society, changing attitudes and life circumstances accelerated the transition.

The influence of the mainstream society was strongly felt in the community. Many adult participants echoed that when they were younger, "there was not a time when we were actually inside. Nowadays, it's different. It's way different" (P2). They recognized the difference between

their youth and young people today. Proximity to urban centres and access to mainstream resources influenced people's interest in the traditional way of life. An elder noted the transition, "When I was their age, there was a lot time in the bush, more out on the land than being in town. But [the youth now], it's less out there [on the land] and more in town, in the community" (P1). She implied that as a result, less people are participating in traditional life on the land.

The collection of videos portrayed the transition as well. On one hand, several videos, developed mostly by youth from Dettah, featured traditional activities at the cultural camp. On the other hand, videos made by youth from Ndilo, which is closer to Yellowknife, largely featured familiar places like the gym, the road, and the playground. The difference in the youth's realities was clear to the focus group participants, as demonstrated by Barbara's comment (P1). Many youth from Ndilo who made the videos did not participate in the cultural camp due to circumstantial factors including access to resources. Thus, their only access for filming was the day-to-day activities in the community.

When asked what changed the pattern of life, many responded definitively with "technology," as remarked by an elder (R1) during a follow-up interview. Focus group participants noticed that rampant use of technology often interfered with the community programs and family life. Georgia shared her observation of her two nieces, pointing out that one is more active and busy because of a *lack* of gadgets in her life and family support. (P7)

Some suggested that returning to the land could help alleviate the "tech addiction" many youth face. Carrie suggested,

> "*When [the youth] haven't had [their gadgets] for a couple of days, they're like completely different people. […] When you're out on the land for a while, you're focused and then… you realize what's important, […] in this world, living on the land, how would we be able to survive, right? So you think more like that, and you just naturally become more like that*" (P8).

Her comment indicated that on-the land programs such as cultural camps not only could teach traditional values and ways, but also help people re-focus themselves, participate more in community rather than online life.

<u>4.3.2.3 Dual effectors</u>

Some factors served as both motivators and barriers: intrinsic motivation, timing, resources, community leadership, place, and family influences (Table 4-5).

Table 4-5. Summary of categories and exemplary quotes about dual effectors that both encourage and discourage physical activity.

Intrinsic motivation
- "Like everybody who was on that walking group on that first day, I called them. I knocked on their door… to get them here. […] It's just that there's not… like people they want to do it, they want a healthy lifestyle, but they don't want, they need someone to push them. They can't, like they don't want do it on their own." (P4).
- "[My partner] likes to be out on the land, and he always go into the bush. […] As soon as someone say, do you want to go here or out on the land. He gets stuff ready right away or… We have a wood stove in our house. Our wood stove's been running all winter, instead of heat. And he's outside every other day, with his brothers, cutting wood. And […] he prefers wood stove than oil. Not money wise, but it feels more homey […], like how it is in a house. […] So that's what motivates him to do the wood every other day. To keep the wood piled up" (P10).

Timing
- "We try to work around that schedule. We think of when's the best time for people, and… it's very hard to get people to participate" (P10).
- "That's why those lunch hour ones are good because … we're all [working] around here anyways, and if *everybody*'s going, and you're … the only one left here, you're like, 'Oh, I should've went.' So then it helps you to go the next day or something" (P8).

Resources
- School: "I think too though, realistically, […] there's only so much the Wellness Office can do, evenings and weekends right? It needs to come from the school I think. […] Watching that video, it really is true that our traditional ways, like you have to be fit and healthy [on the land]. […] But all those traditional ways… I don't think they're translated as well in the school systems because we follow the school systems that are already set out by us, by the public school systems, you know, district 1 authority (YK1). Whereas Down South, some models, they create their own and we should be doing that. Because all the kids are in school most of the time, right? That's where it should be, […] implemented as part of [the school]. It could work a lot better" (P8).
- Access: "A lot of people down here in Ndilo, they don't have boats down here. People in Dettah, they do have boats, so they go out more, out in the land more. Like the kids down here [in Ndilo], they don't get that opportunity; so they don't even know about that cultural camp" (P4).

Community leadership
Youth as resources
- "To me the most interesting part was like, the kids were like, 'My name is blah blah, and I like this.' You know, like some of them said lots. It was interesting that they did, it was cool that they all said that they had fun out there, cuz, it reminds us that you know, it really is more fun out there for them" (P8).
- "And I think we need to do more [video projects] and I feel like the young people, they have a different perspective, when you look at things right? You look at um… events, or else, you look at things that are happening in the community, they look at it differently than we do as adults" (R1).
Role models
- "Even […] elderly people in our communities. Yesterday, we going from Dettah, I saw an elder, walking from his house, right to where, [turning to Danielle] where Kate lives. From his house, beside the gym, he walked all the way around, with [those] walkers. […] This elderly man, I said Wow, he's getting some fresh air, he's doing exercise, you know? It's awesome to see that. And I know another elderly man, in Dettah, he goes for walks with his daughter or son because he can see that the kids, were good on the walk. It was very good to see that. […] That movement, instead of being inside the house, […] he goes out in the community, going for walk" (P1).
- "I think, just us being role models, being there and pushing them, that would help. […] I don't know any other way to change [people's attitudes and behaviors]. And we need to get more [role models]. […] I see it as me and Darrin being the role models for Dettah, and Jeremy and Martha in Ndilo. Like there's only… two of us, whereas we're trying to get other families, […] and we have to […] push them" (P10).

Table 4-5. Summary of categories and exemplary quotes about dual effectors that both encourage and discourage physical activity (continued).

Place
- "I like how it's realistic, like how it's in the community, that's what most kids do. Gym, in the park, do racing" (P8).
- "When I was their [the youth] age, there was a lot time in the bush, more out on the land than being in town" (P1); "There was not a time when we were actually inside" (P2); "Everything was on the land. We were always out" (P11).

Family influences
- "I think a lot has to do with home life, their [the youth] home life. [...] You know, how is their home life like? What activities are within the home? [...] You know, I have a grandson, and [...] he's had an X-box for the last two years, he's probably played it six times, even if that. Because there's so many things we do in the home, eh?" (P6).
- "My sister is, the other one. [She plays] soccer, hockey, volleyball, running, basketball... I think that's it" (Y4).
- "It *has* to come from the home. You need to be taught respect from the home. You need to start... it needs to be taught from the home how to be physically active, how to keep a healthy lifestyle. Everything starts at the home. It's not only us [the staff] who need to be teaching this stuff" (P10).

4.3.2.3.1 Intrinsic motivation

People act "on their own" volition (P4). Having intrinsic motivation facilitates individuals to be active, and lacking intrinsic motivation has the opposite effect. For several youth, being active is driven by self-motivation such as body image. For example, Y4 is motivated to be active to avoid a negative outcome: "Because I don't want to be *fat*. [...] I want to stay healthy." Another youth thought about the future and also wanted to avoid a possible negative consequence. "You don't want to grow up to be like one of those people [who] don't get... any good education, or a job" (Y3). She based this response on her observation of and experience with peers who were less active. Youth's responses regarding whether or not they are active consistently evoked a sense of boredom. Physical inactivity and sedentary behaviors are not only signs of a "lazy mind" (P6) and lack of motivation, but are also related to the characteristics of being bored or having nothing to do.

At times, self-motivation is not enough and needs to be supported by other people and community resources. Georgia talked about her friend calling and reminding her to keep up with the walking activity (P7). "Friendly competitions" (P8) are other ways to draw out people's inherent interest in doing something simply for fun. Jeremy further indicated that peer support and being in the presence of others provide the push necessary to cultivate that motivation (P4). However, his comment also suggested that like effective outreach and promotion efforts mentioned earlier, the responsibility of supporting motivation might fall on the shoulders of few

individuals. Tanya also discussed maintaining connections with the traditional way of life as a motivation to stay active.

4.3.2.3.2 Timing

Timing is a dual effector. On one hand, conflicting schedules, which are always a challenge in programming, tend to prevent people from being active and participating in community life. On the other hand, consistent and frequent programs are essential to encourage participation. Timing is a critical issue in the work of program organizers such as Tanya. The research liaison pointed out that events in neighbouring communities including Behchoko and Lutse'k'e, and even school events, which conform to schedules based on the city of Yellowknife that caters to a larger, more diverse student population, also determine local events. Because organizers need to manage multiple conflicting schedules, large-scale events such as carnivals and traditional game tournaments are usually one-off activities. On a day-to-day basis, "consistency of programming" (P6) and frequent physical activity patterns that "happen a lot around here" (P9) are key to retaining regular participants. Carrie gave the example of the daily lunch hour walking group (P8). The research liaison concluded, "So it's timing, for our programs to be run well, for people to come and participate," indicating that organizers must juggle timing and consistency to ensure community participation.

4.3.2.3.3 Resources

In addition to the CWP that organizes wellness activities, schools are another important community resource. However, being part of a larger Yellowknife-based school district has both advantages and disadvantages. Many youth mentioned their involvement in school-based sports teams and training. One youth said that she is "most active in school" (Y4). Even after-school activities like biking and gym recreations revolve around the school schedule. Evidently, school plays an important role in encouraging people, especially youth, to be active. At the same time, many focus group participants expressed that programs offered through the schools are not enough, and recommended that schools should more tightly integrate culture and tradition in the curriculum. Traditional way of life should be a fundamental mentality, Carrie suggested, rather than an added bonus (P8). However, this mentality is difficult to acquire when schools must

follow certain rules and regulations set out by a broader jurisdiction that also oversees activities in urban schools with a different student demographic that faces distinct reality and needs. As already mentioned, designing culturally relevant curricula and policies require greater decision-making capacity from the community.

Access to and availability of resources affect people's motivation and ability to be active. Participants acknowledge that resources are limited in the community. Georgia noted, "They need more places for physical activity in the community" (P7). Yet, Carrie responded, "The kids use what we have in the community. […] We have a *small* gym, [laughs] but they still use it how they can" (P8).

Community context also determines access to resources. Even though Ndilo and Dettah are part of the same First Nation, their context, needs, realities, and thus barriers differ significantly. Jeremy commented, "The way the government looks at it, it's because 'baseball field, they have one already, Yellowknives Dene,' which is in Dettah, but not in Ndilo. […] They said they gave money for it already. And they look at it, they look at Ndilo and Dettah as one community" (P4). His comment suggested that government bodies tend to treat the two distinct entities as one for administrative purposes, resulting in inequitable resource allocation, limiting people's access to certain facilities. Ndilo is also much closer to Yellowknife compared to Dettah, which is more isolated yet has easier access to traditional land. Tanya said, "We're so close to Yellowknife. [The youth] are all [going to] movies, bowling, they're all going to Yellowknife where they have different facilities. […] They spend most of their time there than in the community" (P10). Jeremy's description of boat access (P4) illustrated that differential access to the land could determine how people practice traditional way of life. Being close to the city can therefore be both beneficial and inhibiting. Resources simultaneously afford people a higher standard of living and better quality of life, and shift values and norms from traditional to mainstream ways.

4.3.2.3.4 Community leadership

Participants talked about human resources as two sides of the same coin. Key resource people or role models are necessary to encourage others to be active. However, these individuals are few in the community. When they are not available, people are less likely to be active.

Moreover, this research focused on youth leadership, a topic frequently discussed by the participants as a positive factor that encouraged overall participation in the community.

Youth initiatives arose in various ways. Their responses during the video project demonstrated depth and insight. One video where youth shared their thoughts about cultural camp, and culture in general, captured the most attention during the focus groups because "it showed that the kids have their own knowledge" (P6). In a clip where we checked nets on the water and caught fish with an elder, a youth identified the fish species based on her previous learning (V2). In another video, youth highlighted the benefit of the video project to "remember what we did for the week. And show people what it's like to live on the land" (V5). Youth also reflected on their cultural camp experiences, borrowing words from a counselor's presentation earlier in the week, demonstrating their ability to retain and transmit knowledge. Jolene pointed out in a follow-up interview that messages from youth are powerful because they convey a different perspective to stimulate community-wide reflection (R1).

Other than youth serving as role models, participants mentioned other adults and elders who set examples to be active and lead healthy lives. For example, Barbara praised elders in the community who stayed active and contributed to collective wellbeing (P1). Some participants reflected on their own roles in the community. They found that over time, people come to rely on these few resource persons for motivation and support. Participants' experiences implied a very real possibility that such individuals might burn out with the pressure of responsibility. For Jeremy, even recruiting more workers might not change the situation, "Same thing, if I'm not there, it doesn't happen" (P4).

4.3.2.3.5 Place

Participants discussed key locations where physical activity and inactivity take place. Certain locations are culturally meaningful, some encouraged people to be active, while others like home were linked with sedentary behaviors. Many youth immediately associated physical activity with the gym, school, and playground, popular places shown in the videos that were significant "because this is where we are physically active" (Y3). Focus group participants corroborated the youth's words. Many of these places are also very accessible. The gym, for example, "opens until 11PM" (Y5), available for youth to be active and gather as a group. Others talked about "the community hall" (Y5) as a meaningful space for gatherings, round dances, and

drumming. These events, while not explicitly related to exercise or sports, are nonetheless critical to the cultural integrity and collective cohesion of the community.

The outdoors was a common theme among youth and adult participants. Jeremy suggested that the videos filmed in Ndilo could benefit from "something more outdoorsy" (P4). Participants talked about specific places like the "area down near [the end of the island] where we go swimming" (P4), or more generally about being outside, "walk around, […] walk way uptown" (Y3). One participant shared a story about a family member, who is active because "She's always […] out. Her mom always kicks her out of the house" and sometimes "join[s] her in soccer […]; she's always doing something" (P7). Several participants admired the elder who, "instead of being inside the house, […] he goes out in the community, going for walk" (P1). Being outside is important for developing the sense of community. The research liaison explained, "Everybody just keeps to themselves now where they're not visiting each other or going out on the land."

Participants associated the outdoors with the land, a place that encouraged people to be active. Many people looked back in time and reflected on the amount of time they spent outdoors on the land. The cultural camp was located on a traditional island, which as an elder said in one video, is "a place [that] is very, very important to the Dene people, our people" (V1). Even harsh climate does not interfere with heading out to the land. The youth remembered their winter cultural camp experiences, "We go out in the land […] by skidoo; we stay over night" (Y5).

4.3.2.3.6 Family influences

Numerous references about family influences or "home life" (P6) came up during our discussions. Family members can exert positive or negative influences on people's physical activity or health behaviors. "Close family, friends" (P7) can also act as role models. These individuals contribute to a support network in the community to motivate physical activity and active lifestyle. For staff members, positive family influence helps them in their day-to-day programming and encourages participation.

In addition, structure or schedule within the home could be conducive and inhibiting to physical activity. Kourtney's comment suggested that a home life busy with family activities and chores occupies the youth such that they do not spend too much screen time on video games, computers, or television. Kourtney further elaborated that occupying oneself with chores is a

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structured means to maintain traditions at home "because back in the day… we couldn't just sit around. […] We had to haul water, chop wood, and [find] other ways."

4.3.3 Dene way of life

Underpinning the research is a strong cultural identity, a theme that permeated throughout all aspects of the research from the videos to conversations with the youth, focus groups, observations, and informal interactions with community members. During co-analysis, the research liaison said,

> *"The words on the other page, it caught my mind, the 'Dene way of life.' […] It's… just our way of life. […] We couldn't take the bus or… we had to walk to the next community kind of thing, with dog team or whatever, you needed to be fit. If you were sick, you wouldn't be able to travel. And just that "Dene way of life" […] connects to everything we're talking about."*

The theme of cultural identity, specifically Dene way of life, is therefore critical to the discussion of what is physical activity, and what factors encourage or prevent people from engaging in physical activity.

In this section, we will discuss key themes related to cultural identity that stemmed from the analysis: 1) respecting our elders; 2) transferring legacy; 3) inclusiveness; 4) land; and 5) traditional practices. Characteristic quotes are outlined in the accompanying Table 4-6.

Table 4-6. Summary of categories and exemplary quotes about the Dene way of life - themes underpinning the research.

Respecting our elders
- "If it weren't for them, for the elders, we wouldn't be here. That's why here, we respect our elders" (P4).
- "Even that day when your family went there [to the camp]. […] Because it was their first time there, […] I felt… I had to do something for them. That's the reason why I made that cane for your [grandmother]. So that's why, I… like I had to do something for her because it's her first time here, this is our culture, I wanted to give her something to, to remember us by" (P4).

Transferring legacy
- "I think [the cultural camp] is important […] because it's kind of our tradition to teach young ones about our culture, I guess. Keep it alive" (P9).

Table 4-6. Summary of categories and exemplary quotes about the Dene way of life - themes underpinning the research (continued).

- *Facilitator (F)*: What was happening here (regarding a photo of people setting up the moose hide)?

  Youth (Y7): They are putting up the moose hide.

  F: Why is this important?

  Y7: They will prepare it and then we can use the hide to make clothing.

  F: Have you done this before?

  Y7: Yes, with my great-grandmother.

  F: Why is it important to learn about moose hide at the cultural camp?

  Y7: Because the kids now don't really know how to do this anymore." […]

Inclusiveness

- "Remember there were children there, even the little young baby, and also a child, also a youth, a parent, and an elder. So we're connected with all the people there, like we're all there, the children, the girl, the elder, so that you have all the ages in there" (P1).
- *Y4*: And… there's some of those younger kids, that's why. Like, younger than 9, and you have to be 10 and up to be able to go to that camp, otherwise you can't.

  Facilitator: So you think younger kids should go?

  Y5: Yeah.

  Y4: Because they are fun. […] And they are funny.

Land

- "It make you feel good about yourself, you just feel alive, you know. […] When I went there [to the cultural camp on the land…] just for one day […], I just liked it, just being away. […] It's just peaceful out there, just nice. You don't get to do that… everyday. […] You take a break from your busy life to go there" (P7).
- "We didn't catch trout today but we did see some baby seagulls. There was a seagull nest near the fish net and seagulls constantly gawked at us as we pulled on the net. Before we left, Darryl tossed one of our jackfish onto the island. Elder John said that the baby seagulls needed it more than we did. It's a way of thanking the other animals" (Research journal).

Traditional practices

Cultural camp

- "I think cultural camp, when we say camp… that doesn't put the meat to it. […] It's just a camp; it doesn't mean a lot. […] Because when it's a way of life, […] in order for him to do what he has done, there's a purpose why he's doing that. It's a way of life in a week, and everyone, each individual [person] that's spent a week over there. It's a way of life. […] It's more powerful to say a 'way of life.' It has meaning to it. Even when… you show it to the people in the community… right there, they'll make the connection with the video. Because they would understand yeah, that is a way of life. They experienced that, that lifestyle" (P1).

Traditional games

- "We have a big binder full of Dene games. It's half Dene games, Arctic games. […] We usually race stick pull where you grease up the stick, and it's about strength, it's slippery. There's two people stand beside each other and… this person pull this one and this person pull this one. […] And back in the day, it's how they used to catch fish. […] Fish slides right under them. […] That's what makes them stronger in catching the fish. And then they have that snow snake. It's part of Arctic Winter Games where they have this big long stick, and then you run and you throw it in the snow. And that's how they used to catch caribou. […] When the caribou are lying down, it'll cut their stomach while they're sleeping. […] So they'll go hunting at nighttime when they're laying down. […] That's how they would get the caribou. And all the different games have different meanings to it" (P10).

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4.3.3.1 Respecting our elders

Elders play a major role in the community. As mentioned previously, elders are role models for a healthy and active lifestyle and bearers of knowledge. Several focus group participants voiced that the youth-produced videos did not adequately portray elder involvement because "they're also active in the community" (P3). Jeremy explained that when my own family visited the cultural camp, the community treated my 84-year-old grandmother as one of its own elders because of the ingrained respect (P4).

4.3.3.2 Transferring legacy

Participants mentioned or implied consistently that teaching the next generation is critical in preserving Dene culture and history. One of the important benefits of the cultural camp is transferring the legacies of culture and tradition, as voiced by Lillian (P9). As a result, the video project that recorded life at the cultural camp not merely promoted the summer program itself, but "also promot[ed] the culture" (P3). Adults and elders modeled ways of traditional living at cultural camps, providing valuable experiential learning to the youth in practices such as hide tanning and catching fish. In turn, youth retained and applied information and traditional knowledge about the land and animals. For example, Sarah shared how she differentiated fish species. "I learned this at a cultural camp few years ago. They took us down to the water where we were catching the nets and pulling out the fish. […] They showed us the fish" (Y4). Another youth explained the significance behind the photos she took of men setting up a spruce scaffold to stretch the moose hide, also indicating that cultural camps are ways to pass on traditional knowledge.

Youth also learned from their families who go out to the land. Jacob shared his experience going to the bush with his father for "hide tanning a moose skin" (Y2), which was a lot of work; "it took a week or more" (Y2). He looked on, "watched and learned" (Y2) as his father used up a lot of energy tanning the hide. Learning by observation is an important way of receiving the lessons from the older generation.

4.3.3.3 Inclusiveness

Getting more people involved was a common reference throughout the research. Participants discussed inclusiveness as part of group activities (e.g., community feasts, storytelling) and community identity. Focus group participants suggested that a more accurate portrayal of physical activity in the community would include events with more people, such as the weekly "hand games and drum dances. […] If you get few of the guys together and have kids drum and that, invite other programs […] that are going on, to include in the drum dance" (P1). The demographic make-up of the cultural camp was also a depiction of inclusiveness, as the elder reminded us. The interconnectedness among individuals described by the elder (P1) related back to the meaning of physical activity based on participation and contribution to community wellbeing.

Participants, especially youth, shared insights on how to be more inclusive. In a conversation, they highlighted that promotion of future cultural camps need to include everyone more in the camps by inviting families and even younger children.

4.3.3.4 Land

While participants discussed the meaning of various places in their physical activity practices, land emerged as a particularly important place for the YK Dene people because it is related to their spiritual health and cultural identity. However, the topic deserves special mention here because of its significance. Many stories and experiences during the research linked back to the inherent value of land and traditions. For example, one youth explained the meaning behind her photos of food obtained from the land and the water, caught through traditional means of hunting and fishing. Images of skinning and cutting a caribou leg demonstrated that "This is the food we need to eat. It's traditional food" (Y4). Similarly, catching fish by checking the net on the lake is important "because [the fish] is food we eat" (Y4). Nowadays, people hunt in places that are not directly connected to the community[1], far "past the tree line" (P11), "half way to… Nunavut" (P10), where there are "no trees at all" (P11). "You jump in the plane and you're there in a week or two" (P11). People camp out on "the barren land" (P10), "cold" (P11) and "wet"

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[1] Local hunting practices are dictated by government legislations and policies. Due to drastic decrease in caribou populations in recent years, the Government of the Northwest Territories imposed a temporary ban on caribou hunting. Decline in caribou population is due to a variety of factors including predators, anthropogenic activities such as mining, and natural events such as forest fires (Environment and Natural Resources, 2011).

(P10), where grizzlies roam. While hunting is a challenging activity, participants nevertheless exude joy, evident in the tone of the conversation, in participating in an activity connected to their cultural and traditional identity.

The land also develops a peace of mind, mentally, emotionally, and spiritually, as experienced by Georgia. She realized the importance of land while being out there "in the bush" (P7). Her comment also implied that while people want to reconnect with the land, busy life and work schedules often do not grant the opportunity and access. Various ceremonies and traditions at the cultural camp heightened the sense of spirituality and connection with the land. We fed the fire on our first day on the land, visited a small cemetery on the island, and prayed to the spirits. These acts of respect signified the connection with the land and the spirits. We also prayed, with tobacco or willow leaves that we sprinkled on the water, to bless us for a safe journey across the lake on the boat. The story with sharing the fish with seagulls further exemplified people's respect for land, water, and other creatures.

4.3.3.5 Traditional practices

Land is intimately related to cultural camps and on-the-land programs. The structured life of the cultural camp allowed the youth to experience the traditional way of living through experiential learning. At the camp, there is a strong sense of community and collective wellbeing. In fact, the ground rules at the camp "asked everybody to participate" (P10). In another instance, a young videographer ended her movie by filming and naming everyone sitting around the fire (V5). The presence of individuals together is a significant feature of the camp.

Focus group participants situated cultural camps in relation to the YK Dene people's identity and way of life. When we screened one video during the focus groups, participants unanimously requested to add drumming as background music. They immediately associated cultural camp with traditions, and identified the incongruence between the images and the music. The connection with culture and tradition showed that cultural camps are more than just a camp. They are also a means to propagate traditional knowledge and connect people with the land and culture. Participants suggested changing the name of such programs from "cultural camp" to "a way of life" to signify "this is who we are."

In addition, hand games, traditional game tournaments, and drumming were prevalent throughout the discussions. Participants considered traditional games as physical activity, also

rooted in a traditional way of life. During the summer months, hand games are the priority for many men and boys in the community, who travel extensively in the North, competing against other communities. Participants also discussed other Dene and arctic games rooted in survival skills. Tanya explained the significance behind several traditional games (P10). These survival games are inherently active and similarly represent a way of life on the land. Youth also expressed much enthusiasm for traditional games and suggested Dene game tournaments as a resource to support more youth to be active.

4.4 Interpretation & discussion

Paraschak and Thompson (2013) reviewed national surveys and government reports about Aboriginal physical activity cultural practices and identified four strengths. They include a focus on holistic balance; strong family and community relationships; ability to integrate the strengths of both a traditional cultural perspective and a Western mainstream perspective; and commitment to determine and make decisions about community-specific solutions to health and wellness (Paraschak & Thompson, 2013). The strength-based perspective in these documents suggests that there is indeed a paradigm shift in approach to understanding physical activity. The "Strong in the City" health promotion research done by Brough et al. and their collaborators (2004) about urban Indigenous communities in Australia reinforced the strong family and community connections strength. Themes generated from this research about the meaning and determinants of physical activity with a strong undertone of cultural identity resonate with these strengths in physical activity cultural practices and health promotion initiatives.

In this research, we explored physical activity and its multifaceted dimensions. By understanding how people conceptualized and operationalized physical activity, and through various lenses and perspectives, we redefined this concept within an Aboriginal health promotion context. The terminology of physical activity was fluid. We came to use it synonymously with active living, traditional way of life, and healthy lifestyle. Moreover, we identified factors that motivated and prevented community members from engaging in physical activity. Finally, culture and traditions were the foundational themes grounding all findings.

4.4.1 Redefining physical activity

The meaning of physical activity developed by the participants in this research was holistic, with dimensions extending beyond sports, recreation, and exercise. This is consistent with McHugh's (2011) research where Aboriginal youth felt that physical activity does "not just have to be sports" (p. 14). This research also highlighted the importance of traditional activities in the definition of physical activity. Others shared this view, concluding, "traditionally relevant [physical activity] opportunities may enhance perceptions of a supportive environment and possibly impact [physical activity] involvement" (Kirby, Lévesque, & Wabano, 2007, p. 6). Moreover, physical activity is not restricted to specific events, but an active lifestyle, participation, and contribution to community livelihood.

As other authors noted, physical activity is multi-layered, complex, and dynamic (Findlay & Kohen, 2007; Thompson, Gifford, & Thorpe, 2000). Lavallée (2007) explored the complex nature of physical activity using the medicine wheel framework. The framework situated participants' experience with physical activity through physical, emotional, mental, and spiritual health perspectives. Other authors advocated for similar "interventions that nurture wholistic health rather than taking a pure problem-based approach to prevention" (Cargo, Peterson, Lévesque, & Macaulay, 2007, p. 102). "Wholistic" in this sense suggested wholeness, which is conceptualized as a balance of the four elements – physical, emotional, mental, and spiritual – rather than the mere absence of disease (Cargo et al., 2007). In this research, the YK Dene people did not explicitly articulate the medicine wheel model. However, they recognized the teachings of the four health perspectives, which are manifested, for example, in the CWP's organizational mandate.

In addition to the four health perspectives, this research also discerned viewpoints from different generations. While conversations with youth and adults shared certain themes, they also differed on *who* is physically active and *what* is physical activity. The divergence here alluded to a possible intergenerational gap. While many adults spoke outright about elders as role models for physical activity, the youth perhaps did not directly make the association. Furthermore, in defining physical activity, youth appeared to compartmentalize activities that were physically active and those that were strictly cultural. This suggested that their understanding of physical activity was perhaps contextual, constantly changing with the environment. This finding resonates with the idea that "sports, recreation, physical activity, and active living are culturally

and historically confined" (Giles, 2005, p. 49). Ultimately, the link between being physically active and culturally active became a key lesson learned, reminding the community that cultural promotion *is* health promotion.

Knowing that the meaning of physical activity is broad, program organizers could develop initiatives that are not strictly sports and recreation related to promote physical activity health. Diversifying roles with existing and new activities promotes the participation-oriented aspect of physical activity. Enlisting volunteers in tasks such as coaching is one way to increase the roles, broadening the involvement to include even spectators.

4.4.2 Encouraging physical activity

Understanding factors influencing people's decision to be active can facilitate participation in physical activity. Decision-makers can develop and encourage structural and interpersonal support to foster more of the motivators and curb the barriers.

Conversations about the determinants of physical activity revealed important community strengths. For example, access to resources determined people's engagement in physical activity. Taking advantage of available resources demonstrated resourcefulness and resilience. Family and peers are important resources supporting people's physical activity participation (Green, 2010; Schinke et al., 2010). Elders and role models also contribute to this web of community support. Recognizing elders' contributions can encourage community members to be active and stay connected with traditional values, especially those related to promoting the wellbeing of the bigger group. The experiences of several participants showed that while having role models in the community is important, their absence is equally important: without them, it is difficult to encourage participation.

Youth leadership was an important sub-theme that also revealed community strength. Young people make up a significant percentage of the Aboriginal population in Canada (Adelson, 2005; Findlay & Kohen, 2007). Findlay and Kohen (2007) pointed out, "behaviors established in childhood and adolescence can have a lasting impact on life-long health" (p. 186). Similarly, Schinke et al. (2010) suggested youth leadership development early on to promote sports participation in current and future generations. It is therefore critical to recognize the potential in youth who can mobilize the whole community as agents of change. Opportunities in

training and mentorship are ways to cultivate community capacities in physical activity and health promotion, and lessening the burden on overworked resource people.

Equally prominent was the lived realities of youth today and "back in the days." Many adult participants looked back at their childhood and described a traditional way of life on the land that differed drastically from that of the youth now. Technology has certainly played a major part in recent years as it became more economical and easily accessible. The ease of access led to the adults perceiving the youth as addicted to technology, especially social media, cellphones, and video games. The two contrasting experiences signified a transition in way of life consistent with the literature on the determinants of Aboriginal health (Gracey & King, 2009; Snodgrass, 2013).

Looking into the past is important for preserving culture and tradition through the oral history. However, this needs to be balanced with contemporary youth's realities. As Hampton (1995) explained, looking back is "neither a rejection of the artifacts of other cultures nor an attempt to 'turn back the clock'" (p. 29). Culture and tradition are important to Aboriginal people's health and wellbeing, but they are not "the preservation of a frozen museum specimen" (Hampton, 1995, p. 29). In fact, they are continuous and fluid with history and context (Green, 2010). Even technology and other mainstream influences have their advantages in the current day context. Many participants believed that this video project, for example, was one positive means of applying technology and facilitating youth leadership and initiative. The community was able to hear youth voice through visual media and develop ways to improve participation in physical activity and healthy lifestyle. In fact, the research sparked much interest in future multimedia project. Several participants proposed video ideas about language, community hunts, and how to improve the community.

The integration of different perspectives also manifested by the community vote at the family suppers where we disseminated research findings and outcomes. Community members voted for physical activity initiatives that ranged from sports tournaments, heavily influenced by mainstream society, to Dene games and community hunts that are rooted in traditional practices. The results of collective decision-making thus demonstrated the crossing-over of two worlds. As reflected in another research, "this interest in both traditional and non-traditional forms of physical activity can be viewed as representative of the people who are experiencing influence from two very different ways of living" (Kirby et al., 2007, p. 14). Finding a middle ground that

captures the good of both worlds is in fact what elder Albert Marshall referred to as "Two-eyed seeing" (Lavallée & Lévesque, 2013; Paraschak & Thompson, 2013). The concept, stemming from a strength-based perspective (Brough, Bond, & Hunt, 2004; Paraschak & Thompson, 2013), encourages the integration of strengths found in both traditional Aboriginal and Western scientific knowledge. More than cultural relevancy, the two-eyed seeing approach can be incorporated into physical activity, sports, and recreation program development, implementation, and evaluation in a practical sense (Lavallée & Lévesque, 2013). It is not an "either-or" conversation but a reconciliation of diverse ways of knowing and doing.

In using technology to document traditional knowledge and practices as a means to transmit the legacy of the Dene way of life, this research is one example of the coming together of two worlds. The sports tournament idea elected by the majority of the YKDFN community is another illustration of two-eyed seeing. While the sports themselves can be any of the mainstream types, be it soccer, basketball, or volleyball, the coming together of people inherent in the term "tournament" reflects the traditional value of collectivism that the participants frequently described with pride in their definition of physical activity.

More broadly, this collective gathering resonates with a sense of belonging, one of the four principles in the "Gathering of Native Americans," an annual event aimed at building strengths and solidarity among Native American communities in the United States (United Indian Health Services, n.d.). The other three principles are equally relevant to this research: mastery (or empowerment), interdependence, and generosity (United Indian Health Services, n.d.). Evidently, similar values of strength are shared across Indigenous cultures regardless of geographical boundaries, and applied in ways to support healthy communities.

4.4.3 Role of culture and land in health promotion

Several themes related to cultural identity emerged during analysis that underpinned the research. These themes directly implicated the Dene Laws, which are perhaps most relevant in framing the understanding of physical activity and health in the YKDFN community. The Dene Laws are a set of teachings that help to guide people's lives with strong values placed on family, community, and traditional culture (Blondin, n.d.). The Dene Laws are regarded widely in the greater Dene Nation in the NWT (Aurora College, n.d.). "Be respectful of elders and everything around" and "Pass on the teachings" are two laws explicitly discussed by the participants.

Several other laws stipulated collective wellbeing: "Share what you have," "Help each other," and "Love each other as much as possible" (Blondin, n.d.). These teachings convey interconnectedness among community members and a sense of inclusiveness, which was another important theme from the analysis. Therefore, Dene laws ground the research findings.

Dene Laws reflect Indigenous knowledge relevant for the YK Dene people. As Kovach (2010) suggested, "[Indigenous] knowledges are bound to place" (p. 37). The significance of place and territory, land in particular, consistently surfaced during discussions of traditional way of life and cultural camps. Even Dene games were "heavily influenced by the connection between travel and life on the land" (Giles, 2005, p. 2). Hampton (1995) wrote, "The earth is our home. Our bodies come from and return to the earth. […] We do not own this place – we belong to the land. It is an intensely personal relationship" (p. 38-9). He further asserted, "a uniquely Indian place promotes involvement rather than isolation or segregation" (Hampton, 1995, p. 40). Place therefore connotes home, community, and the collective. For health promotion, place is a critical factor in encouraging active lifestyle, traditional way of living, and physical activity.

The "Dene way of life" rooted in place as an indicator for the Dene people's health and wellbeing, particularly their deep connectedness with the land, has been explored in the past (Parlee, Berkes, & Teetl'it Gwich'in Renewable Resources Council, 2005; Parlee, O'Neil, & Lutsel K'e Dene First Nation, 2007; Wilson, 2003). Dene people's perception of land reflects a holistic worldview of the connection between their health and the health of the environment. Parlee and collaborators' (2005) research of the Teetl'it Gwich'in women's berry-picking activity examined precisely this connection. Some of the themes generated in the conversations with the women about their berry-picking experience echo themes that emerged from our research. The Teetl'it Gwich'in women voiced that berry picking has emotional, mental, physical, and spiritual benefits; develops and reinforces social connections; and provides "cultural continuity" through land and resource use (Parlee et al., 2005, p. 133). Underlying this activity is an implication of self-governance, of communities making decisions about how the land and its resources are used. Similarly, traditional physical activity "out on the land" (Parlee et al., 2005, p. 133) portrayed in our research conveyed a reliance on the resources provided from nature, showing that being active and contributing to the collective strengthened social ties and conferred physical as well as emotional, mental, and spiritual benefits. Further, the research also implied self-determination, suggesting that if communities had greater decision-making capacity,

there would be a stronger focus on on-the-land activities to benefit community members, especially the youth.

Like some of the previous research, the ideas and themes generated from our video project are not definitive representations of the YK Dene people's physical activity experience. Rather, they are "tools or windows through which Aboriginal and non-Aboriginal people might begin to learn and communicate with one another (Parlee et al., 2005, p. 134). Ultimately, as Parlee et al. (2005) concluded, "'land' and the resources on that land are central to individual and social well-being" (p. 136). The land itself is a resource that needs to be healthy in order for the people to be healthy.

Despite the important lessons learned about the role of culture and tradition, and by association land, for YK Dene people's health and wellness, other concerns lurk outside the immediate research context. Unlike the Teetl'it Gwich'in people, the YK Dene people do not yet have their land claims fully negotiated (Indian and Northern Affairs Canada, 2007). Land claims treaties are critical because they give communities "joint jurisdiction over their land resources" (Parlee et al., 2005, p. 128). However, rapid and intensive economic development continues in the North, often against the wishes of local communities, and consumes land and threatens the livelihood of circumpolar peoples (Berger, 1977). Until the YK Dene people fully negotiate their land claims and until the communities have greater self-determining capacity to make decisions about what is important for their wellbeing including responsible use of traditional territories, it is likely a disconnect will remain between people's health and that of their natural surroundings.

Linking the impact of contemporary political processes such as land claims negotiation and the health of the communities that undergo the negotiation is beyond the scope of this thesis. But we can draw upon lessons from previous research about the impact of the natural resource industry (e.g., Diamond mines) on the health of people (Gibson & Klinck, 2005), and quantitative evaluation of land claims agreements on the social welfare of the communities (Indian and Northern Affairs Canada, 2009). It will be worthwhile for future research to explore in-depth (and/or potentially supplement existing quantitative measures with qualitative narratives) how people are experiencing the impact of land claims treaty in terms of health and wellbeing. Such research could even adopt the "socio-ecological health" approach, contributing to the field of "ecohealth" (Parlee et al., 2005), to comprehensively assess human health impact in relation to environmental health.

4.4.4 Research limitations

We encountered various challenges during the process. For example, we had technical difficulties with video production and iterative data analysis in the field. The human resource capacity in the field limited participant retention and engagement. Above all, we wondered about the authenticity of the video footages portraying these elements. As much as we strived to, we were not successful in comprehensively illustrating physical activity in people's day-to-day lives. The sheer scope of filming excluded much footage from being incorporated into the final, publishable forms. Furthermore, the timing of the project in the summer allowed us to only capture a segment of people's lived experiences with physical activity.

Authentically portraying people's lived realities is a fundamental concern in participatory video. The narratives and stories that accompany the images are social constructs themselves and not necessarily "seamless self-representation" (Low et al., 2012, p. 57). In this research, youth had free reign to film. However, they were still bound by the context of the cultural camp, the project, and interactions with adults like the research liaison and the researcher. Even during the editing process, adults strongly encouraged youth to highlight the positive aspects of their cultural camp experiences. By focusing only on the positives, did we not undermine the authenticity of youth's lived experiences? On one hand, outside audiences would likely perceive from the videos that traditional ways of living is thriving in this community, even though many participants lamented the way they were experiencing the transition away from traditions. On the other hand, we could interpret the positive highlights as underscoring the importance of culture and traditions, and the community's desire to see its youth more engaged with traditional ways.

4.5 Concluding remark

Through collaboration, we generated different meanings of physical activity, ultimately redefining a health science terminology, to encompass meanings beyond "moderate to vigorous exercise regimes." Based on the videos and the dialogues, we concluded that physical activity *is* cultural camp, as well as gym and recreation activities. But as Wheeler (2009) pointed out, participatory video is in fact "important in terms of the research process and the social action surrounding it, rather than in terms of the research findings it generated" (Wheeler, 2009, p. 10).

The outcome of participatory video is not merely new knowledge generated, but actions that translate the knowledge into useful practice in the real world. Thus, information emerging from the research was valuable because it mobilized the voice of the rest of the community, as members collectively made decisions about physical activity initiatives. The process facilitated the community to reflect on the past and future, identifying ways to encourage people to be physically, and culturally, active not only through sports and exercise, but also through a deeper connection with the land.

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CHAPTER 5 CONCLUSION, RECOMMENDATIONS, & REFLECTIONS

In this final concluding chapter, I will 1) review how this research contributes to the literature; 2) revisit the research goals and objectives and explain how we achieved them; 3) provide recommendations for practice and research; and 4) reflect on my own transformation through the process as a researcher, a student, an ally, and a person.

5.1 Contribution to research

Much of existing literature in Aboriginal health focuses on describing health problems. Health is still mostly framed within a Western biomedical, disease-oriented context. This perspective is prominent among extant health research. This thesis contributes to the gap in intervention and action-oriented research with northern Aboriginal communities, driven by a holistic, wellness-oriented approach. Moreover, this research adds to the literature on participatory research at a grassroots level, developing changes with the community from identifying an issue to making decisions in programs and policies.

Intervention research is action-oriented. According to Hawe and Potvin (2009), "intervention research is about contributing directly to the implementation of actions to improve the population's health" (p. I10). However, there are only few intervention research initiatives done with Aboriginal communities in a Canadian context; most of these efforts focus heavily on disease or obesity prevention (Young & Katzmarzyk, 2007). Moreover, local health promotion programs and projects that are currently taking place in the north still require comprehensive and rigorous evaluation to monitor their effectiveness (Young & Katzmarzyk, 2007). Despite the plethora of epidemiological research quantifying disease prevalence, incidence, and levels of physical activity and inactivity, there remain limited numbers of qualitative research to explore in-depth Aboriginal peoples' experience of physical activity (McHugh, 2011). Some of the qualitative examples include McHugh (2011), Lavallée (2007), and Kirby, Lévesque, and Wabano (2007). Ultimately, these studies reveal that a more appropriate way to promote health and physical activity with Aboriginal communities is through a culturally relevant and holistic lens, consistent with the traditional Aboriginal paradigm common in many cultures (Cargo, Peterson, Lévesque, & Macaulay, 2007). Methodologically, participatory research serves to

bridge such research that reveals valuable insights from communities with real-world practice and social change (Cargo & Mercer, 2008). However, participatory research that integrates community voice remains in the shadow of the more prominent clinical trials that dominate health research (Sanson-Fisher, Bonevski, Green, & D'Este, 2007).

This thesis research therefore contributes to these gaps by integrating in-depth qualitative exploration with actionable strategies, evaluation, and a holistic approach to promote physical activity through equal partnership with Aboriginal communities.

5.2 Revisiting research goal and objectives

I collaborated with the YKDFN Community Wellness Program in the NWT in this research. Through PAR, we set out to promote health and understand the physical activity experience within the context of northern Aboriginal communities. We believed that acquiring a culturally and locally relevant understanding would lead to improved and effective health promotion programs not just within the YKDFN communities, but also other contexts. Again, here are the research objectives we set out to achieve:

1. Document the community's perspective of and experience with physical activity through the eyes of the youth
2. Investigate how physical activity is embedded in local and traditional culture
3. Raise consciousness about physical activity in the community
4. Develop a strategic plan for sustaining new and existing physical activity initiatives

5.2.1 Achieving objectives and some more

After an extended period of relationship building with the community and several intensive weeks of data generation, we did achieve the research objectives in the end and learned much more than we initially anticipated.

The focal point of the research was the participatory video project with the youth from the community. This focus directly addresses objective 1. The process documented youth perspective and experience with physical activity, a health terminology that was interpreted more broadly as being active. Focus groups with community members and leaders contributed to an even wider perspective, beyond youth voice. Other than describing the types of activities that

were active, we also defined being active in the sense of having a busy life, participating and contributing to the community. We examined the role of elders, role models, family and community support, and reflected on factors that motivated and deterred people's engagement with physical activity. All conversations, with adults and youth, formulated a comprehensive understanding of physical activity, which was discussed in depth in Chapter 4. My personal experience working with the community for an extended time added my own perspective as an observing participant, and verified much of the knowledge generated.

To address objective 2, we learned that physical activity is indeed an intrinsic part of the local and traditional culture. Recognizing that culture is fluid and dynamic (Giles, 2005), we distinguished between a day-to-day culture in the community and traditional culture that manifested primarily on the land. Both of these elements were integral to people's cultural identity.

For objective 3, through ongoing conversations, videography, and community gatherings, the process facilitated critical reflection at a community level, the depth of which was evident in the transcript and my observations. The process encouraged the participants to consider physical activity beyond simply answering "what" but "why." Even though the resulting conversations did not reveal any new, groundbreaking information, they nonetheless became a starting point for improving community participation.

Finally for objective 4, while we did not explicitly develop a step-by-step strategic plan with the research partner, the wider community did participate in the decision-making process through the focus groups and the family suppers to prioritize physical activity initiatives. The community voted for sports tournaments, community hunts, and traditional Dene games. In follow-up sessions with the research partner and community members, it was clear that the CWP was integrating priority areas in program development in some capacity, on an ongoing basis. Youth participants and community members who have had experiences with the research constantly reminded the CWP of the initiatives voted for by the wider community and held the organization accountable.

Beyond objectives 1-4, the process also elucidated various factors critical to the success of a PAR project in the short term, which I discussed in Chapter 3. As a Master's student, I faced a time and budget constraint, and began with a lack of familiarity with the northern community. Constant presence and prolonged engagement allowed me to build trust. However, this would

not have been possible without the foundation established by my supervisor's collaborative relationship with the community. Ultimately, it was collaboration, open communication, an earnest desire to learn about each other, and a lot of flexibility that enabled the process to stay on track and on schedule.

5.3 Recommendations for practice, research, and policy

The findings of this research are practical and action-oriented. In this section, I will outline suggestions for program development at community level, provide recommendation for future research, and discuss implications in policymaking.

5.3.1 Recommendations for the community partner

In a very gratifying outcome, the recommendations arising from this research for future action by the community partner are already being implemented. The YKDFN CWP has indicated their intention to follow up with the actions voted on during the family suppers and has begun to integrate the results and messages from this project into local programming. In a recent conversation, the research liaison shared how the lessons from the video project are informing cultural camp in the year following this research. The elder is continuing with the traditional physical activity teachings at the camp, the staff members are promoting more explicitly the message of "physical activity *is* cultural activity," and the youth's morning routines is more active, involving group stretch and canoeing.

The six actions prioritized by the community – walking marathon, Biggest Loser weight loss challenge, community hunt, longer and more inclusive cultural camps, sports tournaments, and traditional games – are being incorporated by the CWP in its program planning in ways that are feasible and meaningful for the organization. In some of the follow-up conversations, staff members mentioned that they have been involving parents with coaching, and the youth in forming girls and boys sports teams in both communities to prepare for larger tournaments. Staff members have been organizing practice sessions for traditional games, but the issues continue to lie with participant retention. In terms of weight loss challenges and walking marathons, community workers are working with individuals on a one-on-one basis, providing personal motivation in paired walking exercises. Even though these six priority areas are a mixture of

traditional activities and mainstream sports, they all reflect one key finding from the research: collective wellbeing and community participation. This element is consistent with the community's understanding that physical activity is a collective action, even for the Biggest Loser weight loss challenge, which seems to be individual-focused, but is in fact framed in a community weight loss context. These activities therefore not only promote physical activity, but also encourage social connection, community development, and collective wellbeing.

Additional recommendations for the community partners deal with means of supporting and validating the actions already being undertaken. Implementing the actions may benefit from support from external resources like sports and traditional games organizations (e.g., Sport North, Aboriginal Sport Circle). Community leadership is also critical to program sustainability and success (Teufel-Shone, Fitzgerald, Teufel-Shone, & Gamber, 2009). Indeed, community leadership was a major theme identified from community conversations in this research. Increased capacity in human resources would greatly support the CWP as it moves forward in its community mobilization and organizing efforts. Training, professional development, and even mentorship opportunities are possible avenues to build leadership skills for the youth, existing staff, and interested community members in recruitment, community mobilization, and effective program delivery. Moreover, diversifying roles and responsibilities at community events, much as how CWP is involving parents in coaching, can utilize volunteers, thus increasing the human resource capacities, and mobilize more family units and community members. Sustained efforts in such group-based initiatives are likely to foster a culture of community involvement, motivating people to participate in other health and wellness activities. Finally, ongoing, structured and rigorous evaluation is needed to track the longer-term progress of the current community actions, as well as to assess the process and impact of capacity building.

5.3.2 Future research

This thesis has generated several ideas for prospective initiatives and future research, which emphasize action-oriented interventions, knowledge translation, and greater understanding of Aboriginal health and wellbeing. Below, I discuss three specific areas of research recommendations.

1. Population health intervention research: Community members prioritized sports tournaments and traditional games during family suppers. The logical next step is to help

the community further develop, implement, and evaluate these activities through intervention research using a participatory and mixed methods approach. Such larger-scaled, long-term 3-5 year research qualifies as population health intervention research, which shifts "the distribution of health risk by addressing the underlying social, economic and environmental conditions" (Hawe & Potvin, 2009, p. I8). The program would not only be limited to the health sector but would also implicate other areas such as education and employment (Hawe & Potvin, 2009). Supported by a multi-sectoral partnership among non-governmental organizations, government agencies, and the YKDFN community, the intervention would aim to positively influence physical activity patterns, promote participation, and prevent chronic diseases in the long run for the community. In addition to diversifying local programs with activities decided upon by the community and guided by local and traditional knowledge, this program would offer employment opportunities, training and leadership development for staff, youth, and community members, building individual and community capacity.

2. Knowledge translation: Knowledge translation needs to continue, sharing lessons learned from this research with other Indigenous communities, fostering partnership and collaboration. Partnerships are also not exclusive between communities and researchers. Inter-community collaborations, facilitated by research institutions, can have tremendous impact on building research and leadership capacities for the communities themselves. Other Dene communities outside of the YKDFN have also had multimedia research experiences such as "The Woman Who Came Back" animation project in the community of Behchoko (Punter, 2013). Knowledge exchange forums among Aboriginal communities in the NWT can encourage community members and youth to lead discussions, promote sharing of experiences and lived realities, build research capacity, and foster a participatory and positive culture of inquiry that aims to improve the livelihood of the people. These forums can further generate new ideas for future projects, focusing on youth as health promotion leaders, using technology to tell stories, bridging intergenerational dialogues, and cultivating solidarity among communities for emancipatory research and social justice.

3. Connection to land: Emerging from this research is the importance of cultural identity and connection to the land, especially among the youth. In traditional culture, Indigenous

groups have a strong bond with the land. But in their transition to a mainstream way of life, this bond has been weakened, even lost. This research illustrates a way to reconnect youth to their traditional culture while promoting community health and wellness. One avenue for future research is to focus heavily on the relationship between Indigenous ownership of land and their health and wellness. The federal government has conducted a broad quantitative assessment of the impact of Comprehensive Land Claims Agreements on the health and social wellbeing of the communities that experience the process (Indian and Northern Affairs Canada, 2009). But it would be instructive to investigate further questions such as "How do land ownership and land titles matter in the health and wellbeing of Indigenous people? What is the health impact of treaty negotiation process and land claim agreements as perceived by community members?" By elucidating Indigenous experiences and perspectives, such research can greatly benefit the communication process between communities and government agencies engaged in the negotiation in moving towards a common ground and reconciliation.

5.3.3 Policy recommendation

Government agencies can benefit from lessons in this research experience. Policymakers need to apply the bottom-up approach that we took, through participation and collaboration rather than consultation. Instead of imposing programs and policies with limited community input, policymakers can apply the PAR framework and encourage community engagement as they develop effective policies and programs about issues that are meaningful to the communities.

In fact, policymakers are recognizing the importance of hearing community voices in shaping decisions around funding, policy, and programmatic strategies. One provincial government agency has already expressed interest in the process undertaken in this research as an example of community engagement that it hopes other Aboriginal communities can adapt to generate stories, ideas, and actions. In this research, the particular issue was culture and traditional physical activity, identified by the community partner. Elsewhere, issues can be as diverse as responsible land use and resource development that can also improve the understanding and relationship between communities and external stakeholders such as the government and private companies.

Indeed, a key value of this research is the community engagement processes from the ground up, working with communities to identify an issue that is meaningful for them, and building activities and programs based on this issue. Communities were not involved in mere consultation. Instead, the community and I developed means to encourage as much participation as possible. In the end, it was the community who took control of the process and came up with solutions collectively. Ultimately, this research highlights the importance of greater self-determination and decision-making capacity for communities where outcomes would inform policy development at higher levels. After all, community-driven and community-identified solutions, ideas, and research with strong local support are more effective because they are likely to see positive progress in the long term.

Of course, it is unrealistic to expect *every* policy decision at municipal, territorial, and federal levels, to rely on rigorous, structured community engagement strategies like ours that spanned several months. But government agencies can play a more supportive role by dedicating resources, both in funding dollars and connections linking communities with facilitators, organizations, or other communities that have gone through similar processes. Support can also mean recognizing the self-governing capacity and strength of Aboriginal communities at the negotiation table so that they can have a say in how they envision their communities' future.

5.4 Final reflection

Absolon (2011) wrote, "The methodology is just as much about the person doing the searching as it is about the search. […] Situating ourselves in our search is distinctive. Our research is personal" (p. 74). I began this writing process by situating myself and explaining my research motivation and intention. I end here with a personal reflection about the research process. Transformation is inherent in Indigenous research as ceremony. In thinking about my experience with PAR, qualitative research, and Indigenous research methodology or IRM, I consider the ways that the process has changed me, as a researcher, a learner, and a person.

Wilson (2008) explored the idea that research is a ceremony, one in which we constantly build relationships with one another, with ideas, with the land, and with inanimate objects. Rituals and ceremonies are about strengthening relationships and cultivating "a state of mind that will allow for the extraordinary to take place" (Wilson, 2008, p. 69). He suggested that research

achieves the same consciousness-raising purpose as ceremonies, as we spiritually attain new levels of understanding of our surroundings.

"Setting the stage properly" lays the foundation for any ceremony (Wilson, 2008, p. 69). In my research ceremony, I prepared by spending most of my time "drinking tea" (Castleden, Morgan, & Lamb, 2012), beading with elders and community members, and playing in the gym with the youth. Building those early relations was important for me to engage with the actual research ceremony itself. Research is a process of learning after all. Over time, the process raised my critical consciousness, and that of the community, about relationships, the research topic, and ourselves.

5.4.1 The more I see, the less I know

In his album, Franti (2008) sang, "the more I see, the less I know." This lyric summarizes my overall experience with research. I began my graduate education with a preconceived notion of what research is and what my graduate experience would be like. First, after research assistantships in the hard sciences, I found bench research a very isolating experience. I generalized all research based on a single experience. Second, prior to formally starting my research, I expected that my experience with the community up North would be no different from my organizing and facilitating experiences as a teacher on the Navajo Nation and as a community worker in Montreal. Third, I believed that my two-year thesis would be similar to my other short-term, discrete job stints. Finally, as I searched for the "perfect" paradigm to fit my research, I stumbled upon the concept of "Indigenous paradigm," which I perceived as an instrument of a researcher's toolbox, ready to use at the researcher's disposal.

I was wrong in all of these aspects.

In regards to my perception of research, after two years of graduate education, I learned that research is so much more than laboratory science. Qualitative research and PAR offered a path for me to continue in community-based work, and the possibility to work in people-centred environment. My research journey also taught me that while community-based, participatory research with northern Aboriginal communities did resemble community organizing in many ways, it also entailed greater depth and intricacy than I had ever imagined. Certainly, to facilitate a video project did not require a research degree. Rather, it is the critical reflection and mindfulness about the relationships established, my own attitude and behaviors that made the

project more meaningful. I now know that research is not a simple scientific method that distills straightforward results based on a question and a series of procedures. Research is more involved than that. It is complicated, "messy, and growing, and flexible, and soft, and warm, and often fuzzy" (Hampton, 1995, p. 49). In the end, everyone gained more than when we first started.

I also considered my conduct as a researcher in the community, and why I felt comfortable at times and uncomfortable other times. Many people were curious about my research and often asked if I taught the community "proper ways to be healthy." Even though I was a researcher in physical activity, never once did I tell people how much exercise they should do, how they should do them, and what is good or bad for their health. Direct interference was not what the research topic was about. In fact, it disregards people's ability to make decisions for themselves and violates the principles of IRM that I discussed in Chapter 2 (Brant Castellano, 2004; Wilson, 2008). Non-interference is seen as "passive and irresponsible" by mainstream health professionals and researchers (Brant Castellano, 2004, p. 100). However, it is "consistent with [Indigenous] teaching based on non-intrusive modeling rather than direct instruction that attempts to shape the behavior of the learner" (Brant Castellano, 2004, p. 100). At the time, I did not realize that there is a terminology for what I was doing.

Just as relationship building and its appreciation are a process, my understanding of IRM was also a process that has evolved significantly. Constant reading and re-reading, writing, and thinking have exposed me to new terminologies, ideas, and questions that will keep me wondering for years to come. Moreover, through discussing the literature with my classmates, and relating the writing and sharing our stories with one another, I recognized the need for cultural humility, openness, and compassion in accessing and understanding IRM. This methodology is not simply a researcher's tool as I initially imagined, but a journey where I began at one point and ended in a new place of revelation and enlightenment.

The more I read, the longer I spent in the communities, the less I realized that I knew. After immersing myself in cultural camp activities and learning about traditional ways of life that I have never experienced before, I found that I knew less at the end of the summer than I initially thought I did, particularly people's view on physical activity, recreation, games, and the connection to their cultural identity. That is a good feeling! I should be learning new things I did not know before; otherwise, I would not be doing research. The research process changed me to embrace the role as a lifelong learner.

5.4.2 Research climax

I sifted through hundreds of photos from the research and paused at a picture of a round dance (Figure 5-1). The circle in the photo was formed by relationships: mothers, fathers, cousins, aunties, brothers, sisters, husbands, parents, and friends. I was part of that circle through relationship building. Suddenly, I understood the notion of "research is ceremony." My own research ceremony was akin to the round dances I participated in at the cultural camp. These gatherings epitomized the spiritual nature of relationships. At the beginning, I did not have any relationship with anyone in the community. The only true relationship I held was with my research motive or intention (see Foreword). Gradually, as I joined the dance, the circle grew larger and I formed more relationships. New connections flourished between the community and myself and the university in the research partnership. Existing ones, among the youth or between youth and elders, intensified. We developed stronger bonds with the research topic, seeing physical activity and health through culture and tradition. I also have a better understanding of myself, my connections with others and the community. Ultimately, the relationships transformed all of us. Their depth gave me a whole new appreciation for humanity's kindness and generosity, and the interconnectedness of all beings. I end the research deeply humbled and honored, with a greater sense of purpose. Yes, research was indeed a ceremony.

Figure 5-1. An image from the video of a round dance at the cultural camp that epitomizes my research climax when I understood the true meaning of "Research is ceremony."

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Wilson (2008) suggested that the climax of the ceremony is "when it all comes together and all those connections are made" (p. 88). Thinking back to the round dance that day, I realized that the cultural camp was the climax of my ceremony when relationships and ideas fell into place.

> *"The purpose of any ceremony is to build stronger relationships or bridge the distance between our cosmos and us. The research that we do as Indigenous people is a ceremony that allows us a raised level of consciousness and insight into our world"* (Wilson, 2008, p. 137).

This ceremony also connected with my initial research intention. I am now critically conscious that the research was not an isolated unit of my life, but is intricately tied to my past, present, and future experiences, none of which were, are, and will be stand-alone instances. My "Aha" moment sprung at the end of the research when I finally visualized the web of relationships that connected all of my experiences, not just from one project. These events continuously develop my skills and build upon my story, which ultimately contributed positively to the research. I recognize now that all along, I have been involved in a very personal matter that linked the Dene community in the North back to my students in New Mexico and the youth in Montreal. I think I am now starting to understand the sacredness, continuity, and flow of research. Just as my ceremony reaches back in time, it will also continue into the future.

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APPENDIX A. CORE CONCEPTS OF PARTICIPATORY ACTION RESEARCH.

Below I provide a more detailed discussion of each of PAR's nine core concepts as briefly mentioned in Chapter 2 Methods and Methodology. These principles have been negotiated with the community partner in some capacity, and all are therefore relevant to my thesis. They have played a critical role in guiding me in conducting ethical research.

1. Collective vs. individual

Research for social change is community-driven. Researchers develop partnerships with collectives rather than individuals. In this relationship, questions such as "What defines a community?" inevitably arise (Israel et al., 2008). In many cases, the definition of community transcends geographical boundaries and can vary according to the local context. Notion of representation is important as well; is it possible for individuals or organizations to adequately represent the community? As Israel and colleagues (2008) point out, "even those who are from and still reside within the community, are sometimes somewhat different from community members at large, primarily in education level and income" (p. 54). Thus, in working with a research partner, researchers must consider the appropriateness and representation of the individual or group.

2. Strength-based orientation

A major goal in community-based participatory methodologies is capacity building by identifying community strengths and needs, tapping into resources, developing skills, and discovering new and existing assets. Labonte and Laverack (2001) defined capacity building in a community health context as the "increase in community groups' abilities to define, assess, analyze and act on health (or any other) concerns of importance to their members" (p. 114). Capacity building is thus an interaction between individual and community characteristics and resources in the broader environment.

3. Equitable partnership

Research-community partnerships encourage the involvement of relevant stakeholders in all aspects of the research process. Partnerships are fluid and "not everyone will be involved in

the same way in all activities" (Israel et al., 2008, p. 56). Such working relationships raise concerns about authentic, as opposed to token, participation, size and scope of the partnership, the ability of partnerships to include and exclude, and the decision-making process and structure (Israel et al., 2008). Ultimately, the key lies in research envisioned, owned, and controlled by the community (i.e., research question stems out of community concern). Consequently, communities gain greater self-determination, defined by Nyswander (1956) as "starting where the people are" (cited in Israel et al., 2008, p.57). This would require sharing roles and responsibilities and shifting power dynamics between researchers and community partners.

4. Co-learning and equal contribution

Co-researching is a critical feature of PAR as community stakeholders inform the researcher and guide the various stages of the project, including identifying a research question and developing a study design (Mayan, 2009). This methodological approach draws out "the experiential knowledge of participants as distinct and important" (Frisby, Reid, Millar, & Hoeber, 2005, p. 368) and underscores that "individuals and communities are … experts of their own experience, with complementary knowledge and skills to contribute to the research process" (Mayan, 2009, p. 43). Moreover, the organic nature of PAR facilitates co-learning and "helps demystify the research process" (Frisby et al., 2005, p. 368) for both the researcher, especially a novice like myself, and the community.

Partnerships are therefore opportunities for all parties, including researchers, to contribute and gain new learning and skills. Co-learning recognizes that communities have just as much knowledge and skills to offer as university researchers. Academics use research tools and knowledge translation to facilitate the process of critical consciousness, while communities reciprocate with profound local knowledge. During the exchange, both parties build skills, knowledge, and capacity.

5. Knowledge and praxis

Freire (1974) defined praxis as the process of reflecting upon one's reality and acting on ways to improve one's livelihood. Praxis is critical in PAR, which raises people's consciousness and prompts them to "take effective action toward improving conditions in their lives in order to promote social change" (Frisby et al., 2005, p. 370). The action element in PAR can manifest in

a variety of ways (McHugh & Kowalski, 2010), from institutional and programmatic changes at a policy level to personal changes affecting participants at an individual level. Thus, knowledge generation is not the only goal of PAR. Rather, it is about the balance between research (knowledge generation) and outcomes that lead to social change (Israel et al., 2008; Minkler & Wallerstein, 2008).

6. Holistic research approach

Community based, participatory health research adopts the definition of health according to the World Health Organization from perspectives of physical, mental, and social wellbeing (Huber et al., 2011). This approach also aligns with the ecological model of health at individual, interpersonal, organization, community, and societal levels (Richard, Gauvin, & Raine, 2011). Such a holistic framework examines and aims to improve health from a social and environmental determinants perspective, rather than pinpointing specific illness or disease.

7. Iterative research process

PAR researchers and community partners engage in dialogues that are cyclical and iterative, constantly visiting and re-visiting key points throughout the research process to ensure equitable and authentic involvement of both parties (Frisby et al., 2005; Israel et al., 2008). Such ongoing conversations lead to improvement in research design, implementation, evaluation, capacity building, and knowledge translation (Israel et al., 2008).

8. Knowledge translation

Once research generates knowledge and develops actions for social change, what is next? What will knowledge translation and dissemination look like and who is responsible for what? While roles and responsibilities should be established early in the process, it is beneficial for the partners to periodically re-examine goals and priorities. After all, "many of the issues may not seem relevant or compelling until a partnership has had to face them directly" (Israel et al., 2008, p. 57). Knowledge should be shared with all stakeholders. This step, like other parts of the process, also requires equitable partnership. Issues of authorship are particularly important in academic arenas such as conferences and peer-reviewed publications. How do these forums include or exclude the voice of the community? Research partners need to think beyond these

standard KT venues and make the knowledge understandable and accessible for all stakeholders (Israel et al., 2008).

9. Relationship building

Unlike a laboratory experiment, PAR requires long-term commitment to relationship building, often extending beyond the research timeline outlined in funding proposals. In Indigenous communities, where members are often skeptical and suspicious of outside researchers who have long objectified Indigenous peoples as research subjects (Tuhiwai Smith, 1999), establishing trust and relationships bears greater importance. In fact, they are pre-requisites for successful and sustainable partnerships and projects.

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APPENDIX B. REFLECTION ON OVERCOMING CHALLENGES AS AN OUTSIDE RESEARCHER

Minker (2004), in a critical discussion on the role of the researcher as an "outsider" in community-based participatory research (CBPR), outlined five ethical challenges. She pointed out that "outside researchers" should be mindful of: truly involving the community in determining a research agenda; "insider-outsider tensions;" the role of racism; the realities of participation; and action-oriented knowledge dissemination (Minkler, 2004, p. 684). Applying her framework, I reflect on and discuss how this Participatory Action Research (PAR) project about physical activity addressed tensions inherent in community-research partnerships.

The nature of community-determined research agenda

Some argue that *true* participatory research is when communities, rather than researchers, pose research questions and control much of the process. However, Minkler (2004) supported the view that outsiders from academia can still play an important role in initiating research projects, given that they are flexible and have the facilitation and interpersonal skills needed to convey research ownership to the community.

In our community-based PAR project, the research topic of physical activity originated from my Master's thesis proposal. However, it was not entirely one-sided. In fact, the project solidified after months of constant, ongoing dialogue with the community partner prior to establishing a research focus. My supervisor has already established a long-term working relationship with the partnering organization Community Wellness Program (CWP) for several years. Their partnership manifested in previous community-based projects that generated a Photobook illustrating the use of tobacco (Jardine & James, 2012) and social media messages developed by youth to prevent smoking (Genuis, Jardine, & Chekoa Program, 2013). The community partner witnessed the benefit of the partnership, particularly in that the project provided multimedia tools and leadership opportunities for youth. After one of the visual research projects on smoking prevention ended, the community partner encouraged my supervisor to continue such short-term, summer projects that involved youth. With this initial interest in visual methods and health promotion research, I began discussing potential research topics with the research liaison from the CWP. Previous experience with initiatives in other

Indigenous communities inspired me to suggest physical activity as a research area. The research liaison pointed out that in fact diabetes is not a prominent problem in the community. "After all", she said, "physical activity is part of the local Dene culture." This conversation transformed into an exploratory research focus centering on the community's experience with and perspective of physical activity. Thus, the original topic of physical activity may not have been a priority for the community, but physical activity as defined through a cultural lens, particularly as manifested in on-the-land programs, was an area of interest. We later developed the research plan together, integrating the project into existing programming, namely the summer cultural camp.

Thus, the research topic was not entirely initiated by the researcher or the community alone, nor did it emerge from a vacuum. It was a product of an ongoing collaborative relationship. The openness and flexibility of PAR promoted community ownership and determination of the research agenda. Moreover, the research focus was not a divisive or controversial one. Highlighting cultural strength built community pride, contributing to the success of the project.

Power dynamic within the insider-outsider relationship

Minkler (2004) discussed tensions in research relationships often compounded by funding structures. She noted that universities are generally the major funders for research projects, giving academics more sway in the partnership because of cash flow. The financial support structure in our research was rooted in the collaborative relationship we developed with the community partner. By integrating the research into local programming, researchers shared funding and resources with the community partner. While the community partner provided the space and human resources for recruitment, the university supplied the hardware such as video equipment and audio recording devices to carry out the research and the travel funding for the researcher. This shared model avoided, or at least alleviated, some of the power struggles inherent in how funding is distributed.

Nonetheless, as a university affiliate, I was still perceived as a person with resources and capacity to make things happen. For example, as a graduate student, I was not the authority who determines payment agreements and schedules with the youth research assistant. However, because the community saw me as the link with the institution, I bore the role of an authority regardless of my desire and intention. As I reflected on the unsolicited power associated with my

university status, I found support in other community workers as we engaged in open communication about power and status.

In addition to the shared funding and resource structure, building trust and meaningful relationships also eased the power dynamics between the insider and outsider. As the researcher, I spent a significant amount of time building connections in the community. Months prior to the official start of the project, I was traveling to the community in short trips. Despite their limited time period, these trips offered me the opportunity to familiarize myself with the interpersonal network in the community. Castleden and colleagues (2012) suggested that having "no knowledge of interpersonal community or organizational dynamics" (p. 169) can pose particular challenge as researchers move forward in the process. Except for sleeping, I practically spent every hour in the community, volunteering or participating in quotidian activities such as beading and gym recreations. Even during the research period, most of my time was dedicated to relationship building. For example, I helped with supervising children and mentoring the youth worker during the summer day camp where we cleaned, cooked, and facilitated together. When the community partner was too busy with organizing the monthly family supper, I helped out by developing a family quiz promoting literacy and traditional languages. A consistent presence over a long time, even if hampered by periods of absence, deepened my understanding of local knowledge and strengthened the bond I built with the youth and families. Ultimately, I realized that letting down the researcher's wall is the first step towards gaining the trust of others.

Approach research relationship with cultural humility

Much has been published on the experiences of privileged, white academics working with racialized or Indigenous communities. Race and colonial history are often central determinants of the interpersonal dynamics in these situations. Here, I reflect on my role as a non-Indigenous, racialized researcher working with Aboriginal communities, a perspective less explored in the literature.

Yellowknife's tourism sector has experienced a surge in the Asian market with Japanese and more recently, Chinese and Korean tourist. However, visitors often remain at a distance from the communities, except perhaps during tours with local Aboriginal guides. During my extended stay in the community, youth and community members expressed interest and curiosity about my racial background. I welcomed their questions about the language and culture of my Asian

heritage with transparency and openness. Just as I was learning about the community's cultural protocols and traditional practices, the community was also learning about my cultural background. In a way, these two-way conversations and dialogues bridged different experiences and deepened mutual trust and relationships.

Letting down my guard is one aspect of the "cultural humility" that Minkler (2004) mentioned. To be culturally humble, based on experience in the field, is to strive for a balance between being aware of my own assumptions and a desire to learn new things. As a former teacher and community organizer for Indigenous youth, I recognized that cultural safety, a related concept to cultural humility (Cargo & Mercer, 2008; Health Council of Canada, 2012), is critical for building relationships and active listening. Cultural humility is thus the foundation for a safe space, as it becomes a way of thinking and approaching individuals with openness, honesty, and willingness to ask and be asked questions. This approach encouraged participation, conversations, and dialogues, and became the basis of forming trust with participants and non-participants alike. After all, much of the meaningful conversations occurred outside a direct and explicit research environment (e.g. video project, focus groups), indicating that youth and community members felt comfortable and safe to share stories with me. Nevertheless, I am constantly reminded of the question "Am I creating space or taking space?" (Kovach, 2005, p. 26) recognizing completely that my attitude and ability to create a safe environment dictated my interactions with others, ultimately affecting people's participation.

Who is the community?

A central question in PAR lies in the definition of community – who is the community? What determines an individual or a group of individuals to represent a bigger group of people? In our research, Ndilo and Dettah were two physically separated communities, both under the same First Nation. However, the two communities differed significantly in context. For example, one community was much closer to traditional land and had easier access to boats, whereas the other was closer to the larger territorial capital city of Yellowknife. At an organizational level, we collaborated with the CWP, which oversees various programs for all age groups in both communities. Moreover, many CWP staff members live in the community and are related to community members, allowing them to respond immediately to community needs. One community worker said during a follow-up interview, "Because we live in the community, we

hear people talking about certain issues, at public meetings. We try to follow through with what we think is best for the community, for physical activity" (R5). The organizational mandate and unique characteristic of the staff members demonstrated that CWP was an ideal research collaborator who adequately represented the needs and voices of the communities in a health promotion project. Moreover, the research liaison and I created multiple opportunities for wider participation in the research, better representing community perspective and experience.

Despite a solid partnership, sometimes "conflicting personal and family issues and priorities" shifted the level of the CWP's participation (Minkler, 2004, p. 692). This "fluid" participation manifested in all stages of the research (Minkler, 2004, p. 692). For example, in developing the research focus, I worked closely with the research liaison. However, during the summer months, the staff, like the youth in the community, also had fluctuating schedules that left much uncertainty in their participation in the project. Instead, I took on more responsibility in facilitating the video workshops, given that I had the equipment and knowledge to carry out the technical aspect of the project. At the cultural camp when the research liaison became fully available, we facilitated the video-making process together. Ultimately, the smooth operation of the project relied on the trust and support of the community partner, even if their participation was minimal at some stages of the research.

Action-oriented knowledge translation

The Canadian Institutes of Health Research (CIHR) defines knowledge translation (KT) as broadly, "a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system" (Canadian Institutes of Health Research, 2012, p. 1). As part of this dynamic process, CIHR recognizes that "interactions between researchers and knowledge users … may vary in intensity, complexity and level of engagement [depending] on the nature of the research and the findings as well as the needs of the particular knowledge user" (Canadian Institutes of Health Research, 2012, p. 1). Underpinning the KT is the understanding that the ultimate audience is the knowledge users. In other words, as community-based participatory researchers, our primary responsibility is to the community. Even under circumstances where the community does not want to release undesirable findings because of concern of stigmatization, researchers still have an obligation to

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respect the requests of the community (Minkler, 2004). After all, KT and PAR are processes that rely on bi-directional communication and decision-making.

In our research, we collaborated to organize community-level KT activities to reach members at large. The CWP explicitly integrated the sharing of findings and outcomes with local programming, as we did for other aspects of the research. The primary research outcome was a DVD developed in the youth participatory video project. Media formats such as DVD or social media websites are an accessible way to disseminate research knowledge to community members.

Other types of end-of-project KT activities include the standard conference presentations and journal publications. Minkler (2004) urged researchers to establish formal agreements and protocols about communication and publication early in the research process, as a lack of consideration can negatively affect "building and maintaining a good working relationship between professionals and community participants" (p. 693). In our context, written and formal understandings could potentially undermine the trust already established between two parties (Castleden et al., 2012). Rather than relying on formal agreements, we developed a more informal protocol on presentation abstract and publication submission through an oral understanding and email communication. Other CBPR researchers shared a similar sentiment regarding informal agreements determined on "case-by-case basis" (Castleden et al., 2012, p. 171). Such a strategy may not be entirely reliable, but we recognize that communities and researchers may have different priorities. Publications are not always the priority of the community partner, who may simply not have the time to review "lengthy, jargon-filled, academic manuscripts" (Castleden et al., 2012, p. 170). The more important factor in our partnership in determining publication protocols is transparency, and open and ongoing communication with the community.

As Aboriginal communities become more versed in research ethics and knowledge translation (Castleden et al., 2012), they recognize the benefit of returning research findings to the community. In a follow up evaluation about the impact of our research, one elder pointed out the importance of community knowledge translation,

> *"Bring back the information and tell the people and possibly give us some, not ideas, but some feedback on what we should do, how we should do it. That I think, researchers have not done enough, that's why I'm really hesitant to participate in any kind of researcher's*

survey lately. But I trust you, I think, I've seen you a few times, come back to the community and brought back what you have found and what, you know, your research. I appreciate that" (R1).

This elder expressed a concern common in most Aboriginal communities. After all, as Indigenous scholar Tuhiwai Smith (1999) warned us, "'research,' is probably one of the dirtiest words in the indigenous world's vocabulary" (p. 1), for the very reason that research is conventionally a one-way knowledge exploitation rather than a two-way knowledge creation.

As the elder also alluded to, research findings should help to improve existing practices and policies. Policy change is therefore critical if we want the research to "affect the lives of large numbers of people" (Minkler, 2004, p. 693). In this research, the findings did in fact have an impact in shaping and directing future programming for the CWP as identified in follow up evaluation interviews with the community workers. One of the key lessons from the research highlights the strong cultural connection this First Nations community has with the land. The implication of this understanding suggests that culture and tradition should take priority in health promotion. Prioritizing culture and tradition will promote health in other areas including physical activity and nutrition with long-term disease preventing capacity. While such a notion may not be new (Green, 2010; Harris, Fain, Hoaglund, & Youth Research Team, 2008), it certainly does confirm the role of culture and tradition in public health, potentially implicating future policy, practice, and research in Aboriginal health.

KT is one important action resulting from the research. However, the "action component […] may take a wide variety of forms" (Minkler, 2004, p. 693). The research process also built self-confidence and leadership capacity for the youth participants. Community members in the impact evaluation generally agreed that the research project had the greatest impact on the youth. One respondent said, "I think [the project] really builds their confidence in trying to do something and get it done. And… you know, it's the stuff that is important to them I think" (R1). Merely participating in a community-university project facilitated by a researcher can also have an impact on the youth. One community leader said, "I think it gives the children and youth an incentive to go to university, because you're involved and if they see what entails in your study" (R2). The project not only exposed the youth to research, but also "opened up … young people's eyes and interest in other areas" (R1) such as multimedia. Basic training of youth in video

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editing and film making skills and community ownership of visual data can pave the way for future media and research projects.

Not only did community ownership of the project benefit the youth, it also benefited the community partner who can channel the findings into reports and funding applications. One respondent said, "I don't think we got any funding regarding that video making kind of thing. If we look into it, like for another project, or a continuous project, […] maybe one every year, […] I'm thinking that it could benefit the community in different ways, with the funding part" (R5). Her comment underscored the long-term vision and research benefits for the community partner.

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APPENDIX C1. ETHICS APPROVAL FROM THE UNIVERSITY OF ALBERTA RESEARCH ETHICS BOARD 1.

Notification of Approval

Date: July 31, 2013

Study ID: Pro00039760

Principal Investigator: Keren Tang

Study Supervisor: Cynthia Jardine

Study Title: Exploring physical activity within the cultural context of Yellowknife Dene First Nations communities

Approval Expiry Date: July 30, 2014

Approved Consent Form:	Approval Date	Approved Document
	31/07/2013	Permission to use image.docx
	31/07/2013	Youth video info sheet and consent assent form.docx
	31/07/2013	Focus group info sheet and consent form.docx
	31/07/2013	Younger children assent form

Thank you for submitting the above study to the Research Ethics Board 1. Your application has been reviewed and approved on behalf of the committee.

A renewal report must be submitted next year prior to the expiry of this approval if your study still requires ethics approval. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Approval by the Research Ethics Board does not encompass authorization to access the staff, students, facilities or resources of local institutions for the purposes of the research.

Sincerely,

Dr. William Dunn

Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

APPENDIX C2. ETHICS APPROVAL FROM THE UNIVERSITY OF ALBERTA RESEARCH ETHICS BOARD 1 (AMENDMENT).

Notification of Approval - Amendment

Date:	November 25, 2013
Amendment ID:	Pro00039760_AME3
Principal Investigator:	Keren Tang
Study ID:	MS2_Pro00039760
Study Title:	Exploring physical activity within the cultural context of Yellowknife Dene First Nations communities
Supervisor:	Cynthia Jardine
Sponsor/Funding Agency:	University of Waterloo 1774

	Approval Date	Approved Document
Approved Consent Form:	7/31/2013	Focus group info sheet and consent form.docx
	7/31/2013	Youth video info sheet and consent assent form.docx
	7/31/2013	Younger children assent form
	7/31/2013	Permission to use image.docx

Approval Expiry Date:	July 30, 2014

Thank you for submitting an amendment request to the Research Ethics Board 1. This amendment has been reviewed and approved on behalf of the committee. The following has been approved:

- Addition of an impact evaluation component via focus groups.
- Add $50 honorarium for impact evaluation participants.
- Impact Evaluation Poster (10/30/2013)
- Impact Evaluation Discussion Guide (10/30/2013)
- Impact Evaluation Information Sheet and Consent Form (11/25/2013)

Sincerely,

William Dunn, Ph.D.
Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

APPENDIX D1. NORTHWEST TERRITORIES SCIENTIFIC RESEARCH LICENSE APPROVAL FROM THE AURORA RESEARCH INSTITUTE (YEAR 1).

Aurora Research Institute - Aurora College
PO Box 1450 Inuvik NT X0E 0T0
Phone: 867-777-3298 **Fax:** 867-777-4264 **E-mail:** licence@nwtresearch.com

August 15, 2013

Notification of Multi-Year Research

I would like to inform you that Scientific Research Licence No. 15326 has been issued to:

Dr. Cindy Jardine
University of Alberta
Centre for Health Promotion Studies
3-295 Edmonton Clinic Health Academy
11405 - 87 Ave
Edmonton, AB
T6G 1C9   Canada
Phone: (780) 492-2626
Fax: (780) 492-0364
Email: cindy.jardine@ualberta.ca

to conduct the following study:
Exploration of physical activity within the sociocultural context of Yellowknives Dene First Nations communities (Application No. 2423)

This is year 1 of a 2 year project.

Please contact the researcher if you would like more information.

SUMMARY OF RESEARCH
This licence has been issued for the scientific research application No.2423.

The goal of this research is to qualitatively explore physical activity within the sociocultural context of the Yellowknives Dene people and communities. Specific objectives are:
1) to document the community's experiences with and perspective of regular physical activity through the eyes of their youth; and 2) to raise awareness about physical activity in the community, and develop strategies to sustain and improve regular physical activity initiatives.

This research is being done in collaboration with the Yellowknives Dene First Nations (YKDFN) Community Wellness Program. Together with these partners, the research team have reached a common understanding that the overall goal is to increase the awareness of physical activity and develop strategies to sustain physical activity initiatives at a community level.

The two research objectives will be accomplished in two parts. Objective 1 corresponds to part 1 of the research: the youth participatory video project. Objective 2 correspond to part 2 of the research: community talking circles ('focus groups'). These two components are driven by an overarching participatory action research approach where researchers and the community co-develop the research process and co-create knowledge. Participants help to shape and guide the direction and potential outcome of the research. Part 1 of the research will specifically apply the method of participatory video with a focused ethnographic lens, guided by the research focus on the role of physical activity in the strengthening and development of Aboriginal youths' cultural identity. Part 2 of the research involves talking circles which comprises the essential knowledge translation aspect of participatory action research where concrete actions will be put in motion to achieve positive change in the community.

Part 1) Youth participatory video project. First Nations youth from the YKDFN communities of Ndilo and Dettah will be involved in a video and social media project using a participatory research approach. Visual media methods have become increasingly popular in the field of health and social sciences research because they adopt a participatory lens. Methods such as Photovoice, photo novella, participatory video, and digital storytelling give the power to the participant to share a

Page 1 of 3

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particular perspective, experience, story, and concern using media tools such as camera and video recording device. The products, either photomontages or videos, generally lead to certain social actions that would improve the livelihood and health of the participants and their communities. Visual media methods thus break down power dynamics between researchers and participants, by treating the latter as co-researchers and co-creators of knowledge. Such methods give participants, particularly marginalized groups such as Aboriginal youth, a voice that would otherwise remain silent through traditional research methods.

Through their unique voice and perspective, the youth will document the community's experience with regular physical activity in a northern context. Video-making sessions will be held on-location at the Chekoa summer youth programs in Ndilo and Dettah, each with approximately 5 to 10 youth participants. A specific event such as a canoe trip, cultural day, or camping trip will be central in the exploration of the connection between physical activity and cultural identity. These sessions will be co-facilitated by the researcher and local community workers. Facilitators will treat youths as co-researchers. Youths will develop their own interview questions and envision how these questions will be addressed through visual media. Involving youths as co-researchers has proven to be a valid and credible method that balances power relationships and confers ownership to the participants in the research process. Skill training including leadership, teamwork, research, interview, and media will be embedded in the video-making process. Part 1 of the research project will not only raise awareness among the youths about physical activity in their local cultural context but also build capacity for them to take initiative in the community. Moreover, because the "process […] can bear more significance for all actors of the video than the video-as-a-product," the project will therefore impact the youth participants as much as their intended audiences (their peers and communities).

Recruitment: Participants will be youths between the ages of 10-25 from Ndilo and Dettah. Research collaborators from the Community Wellness Program, who manages the Chekoa youth program, will facilitate the recruitment process. The video project will be embedded in the youth program's regular summer activities. Facilitators will introduce the video project and the broader research goals and objectives to the youth participants dropping into the program either in a group setting or on an individual basis. Since consistent participation in the general summer program is not always guaranteed, recruitment will occur on an on-going basis to identify interested participants. Posters for the video project will also be displayed at the community centres in both Ndilo and Dettah to attract potential participants. Contact will be facilitated through research collaborators.

Consent: Signed consent (forwarded with a project description) will be obtained from the guardians of youth under the age of 18. However, because oral tradition may be strong in the communities, an oral consent is also a valid form of consent. As such, in the case when a guardian expresses concern about a written signed consent, facilitators will present the option of oral consent by explaining the project verbally, noting date, time, and place, and confirming the consent with the facilitator's signature. Youths will also provide assent by completing the signed consent form after their guardians. If the youth prefers, facilitators will obtain oral assent in the same manner as the oral consent procedure. If the youth reaches the legal age of independent consent during the research project, then an option will be provided to sign an additional consent form to indicate continued participation. Options to withdraw, end, or modify participation in the research will be made explicit to the participants and their guardians initially in the consent form and introduction, and re-iterated later should circumstances require. Participants (and their guardians) may request to view the progress of the research at distinct stages to decide continued commitment or early termination.

Data analysis: The video segments will be analyzed using unstructured interview strategy with participants either on a one-on-one basis or in a group setting. Analysis will be based on approaches such as ORID ("objective, reflective, interpretive, decisional"), which guides participants to explain the purpose and meaning behind the media data. Portions of the video may also be transcribed and analyzed for common themes using a constant comparison and development approach to further generate meaning.

Part 2) Community talking circles ('focus groups'). Two to four talking circles will be conducted independently in Ndilo and Dettah with approximately 5-8 community members each to review the results of the youth participatory video project. These talking circles will take approximately 1 1/2 to 2 hours. Participants will also assess lessons learned from other nation-wide physical activity campaigns and programs to gain insights about how other Aboriginal communities motivate people to engage with physical activity. These sessions will facilitate community-level critical thinking about active living and the implementation of culturally and geographically appropriate physical activity solutions. The range of participants' experience and knowledge, facilitated by an experienced animator, will allow them to interact with one another, contributing to a meaningful discussion that will ultimately lead to consciousness-raising, a health-promoting activity in itself. "Because people form their attitudes and beliefs relative to others," the interaction among the participants is therefore critical for data gathering and community envisioning. Ultimately, the sessions will aim to identify physical and human resources available in the community and externally to ensure sustainability of inclusive physical activity initiatives. The outcomes will include a working group and a community developed strategic plan outlining a vision for active living and sustainable next steps. The talking circles will conclude with a debrief session to assess the participants' experience

with the discussion process. These sessions will be digitally and/or video-recorded (with consent) for transcription purpose and to allow researchers to make field observations about the interactions among participants.

Recruitment: Individuals from diverse backgrounds will participate in the talking circles. Research collaborators from the Community Wellness Program will facilitate the recruitment process. Purposeful sampling will identify community members and leaders with a vested interest in physical activity and related programs. Conversations with interested participants may also result in snowball recruitment. Posters for the talking circles will also be displayed at the community centres in both Ndilo and Dettah to attract potential participants. Contact will be facilitated through research collaborators.

Consent: Participants will sign a consent form at the time of the talking circles after facilitators have formally introduced the research goals and objectives. In the event of oral consent, facilitators will follow the oral consent procedure described in part 1. Options to withdraw, end, or modify participation in the research will be made explicit to the participants in the introduction, and re-iterated later should circumstances require.

Analysis: The transcribed texts will be analyzed for common themes using a constant comparison and development approach. The summary of the results will contribute to a part of the strategic plan that community members will create.

Any data arising from the research or subsequent to the project will be synthesized and presented to the communities first before wider knowledge dissemination. All community members and leaders will be invited to a feast to view the youth-produced videos and results of the talking circle discussions. It is anticipated that further research results will be shared through the local channels such as community newsletters and bulletins.

The fieldwork for this study will be conducted from August 15, 2013 to December 31, 2013.

Sincerely,

 * original signed *

_____
Jonathon Michel,
Manager, Scientific Services

DISTRIBUTION
Akaitcho Territory Government
Northwest Territory Métis Nation
Wek'èezhìi Renewable Resources Board
Yellowknives Dene First Nation - Lands & Environment

APPENDIX D2. NORTHWEST TERRITORIES SCIENTIFIC RESEARCH LICENSE APPROVAL FROM THE AURORA RESEARCH INSTITUTE (YEAR 2).

<div style="border:1px solid black;padding:1em;">

<div align="right">
Licence No. 15385
File No. 12 410 882
January 03, 2014
</div>

2014
Northwest Territories Scientific Research Licence

Issued by:	**Aurora Research Institute – Aurora College** Inuvik, Northwest Territories
Issued to:	Dr. Cindy Jardine University of Alberta Centre for Health Promotion Studies 3-295 Edmonton Clinic Health Academy 11405 - 87 Ave Edmonton, AB T6G 1C9 Canada Phone: (780) 492-2626 Fax: (780) 492-0364 Email: cindy.jardine@ualberta.ca
Affiliation:	University of Alberta
Funding:	University of Alberta Canadian Institutes of Health Research
Team Members:	Keren Tang
Title:	**Exploration of physical activity within the sociocultural context of Yellowknives Dene First Nations communities**
Objectives:	To qualitatively explore physical activity within the sociocultural context of the Yellowknives Dene people and communities.
Dates of data collection:	January 1, 2014 to December 31, 2014.
Location:	Ndilo and Dettah, NWT

Licence No.15385 expires on December 31, 2014
Issued in the Town of Inuvik on January 03, 2014

 * original signed *
_____
Doug Robertson,
Director, Aurora Research Institute

</div>

January 03, 2014

Notification of Multi-Year Research Renewal

I would like to inform you that Scientific Research Licence No. 15385 has been renewed by:

Dr. Cindy Jardine
University of Alberta
Centre for Health Promotion Studies
3-295 Edmonton Clinic Health Academy
11405 - 87 Ave
Edmonton, AB
T6G 1C9   Canada
Phone: (780) 492-2626
Fax: (780) 492-0364
Email: cindy.jardine@ualberta.ca

to conduct the following study:
Exploration of physical activity within the sociocultural context of Yellowknives Dene First Nations communities

This is year 2 of a 2 year project.

Please contact the researcher if you would like more information.

SUMMARY OF RESEARCH
This licence has been issued for the scientific research application No.2575.

The goal of this research is to qualitatively explore physical activity within the sociocultural context of the Yellowknives Dene people and communities. Specific objectives are:
1) to document the community's experiences with and perspective of regular physical activity through the eyes of their youth; and 2) to raise awareness about physical activity in the community, and develop strategies to sustain and improve regular physical activity initiatives.

This research is being done in collaboration with the Yellowknives Dene First Nations (YKDFN) Community Wellness Program. Together with these partners, the research team have reached a common understanding that the overall goal is to increase the awareness of physical activity and develop strategies to sustain physical activity initiatives at a community level.

The two research objectives will be accomplished in two parts. Objective 1 corresponds to part 1 of the research: the youth participatory video project. Objective 2 correspond to part 2 of the research: community talking circles ('focus groups'). These two components are driven by an overarching participatory action research approach where researchers and the community co-develop the research process and co-create knowledge. Participants help to shape and guide the direction and potential outcome of the research. Part 1 of the research will specifically apply the method of participatory video with a focused ethnographic lens, guided by the research focus on the role of physical activity in the strengthening and development of Aboriginal youths' cultural identity. Part 2 of the research involves talking circles which comprises the essential knowledge translation aspect of participatory action research where concrete actions will be put in motion to achieve positive change in the community.

Part 1) Youth participatory video project. First Nations youth from the YKDFN communities of Ndilo and Dettah will be involved in a video and social media project using a participatory research approach. Visual media methods have become increasingly popular in the field of health and social sciences research because they adopt a participatory lens. Methods such as Photovoice, photo novella, participatory video, and digital storytelling give the power to the participant to share a particular perspective, experience, story, and concern using media tools such as camera and video recording device. The

products, either photomontages or videos, generally lead to certain social actions that would improve the livelihood and health of the participants and their communities. Visual media methods thus break down power dynamics between researchers and participants, by treating the latter as co-researchers and co-creators of knowledge. Such methods give participants, particularly marginalized groups such as Aboriginal youth, a voice that would otherwise remain silent through traditional research methods.

Through their unique voice and perspective, the youth will document the community's experience with regular physical activity in a northern context. Video-making sessions will be held on-location at the Chekoa summer youth programs in Ndilo and Dettah, each with approximately 5 to 10 youth participants. A specific event such as a canoe trip, cultural day, or camping trip will be central in the exploration of the connection between physical activity and cultural identity. These sessions will be co-facilitated by the researcher and local community workers. Facilitators will treat youths as co-researchers.

Youths will develop their own interview questions and envision how these questions will be addressed through visual media. Involving youths as co-researchers has proven to be a valid and credible method that balances power relationships and confers ownership to the participants in the research process. Skill training including leadership, teamwork, research, interview, and media will be embedded in the video-making process. Part 1 of the research project will not only raise awareness among the youths about physical activity in their local cultural context but also build capacity for them to take initiative in the community. Moreover, because the "process can bear more significance for all actors of the video than the video-as-a-product," the project will therefore impact the youth participants as much as their intended audiences (their peers and communities).

Recruitment: Participants will be youths between the ages of 10-25 from Ndilo and Dettah. Research collaborators from the Community Wellness Program, who manages the Chekoa youth program, will facilitate the recruitment process. The video project will be embedded in the youth program's regular summer activities. Facilitators will introduce the video project and the broader research goals and objectives to the youth participants dropping into the program either in a group setting or on an individual basis. Since consistent participation in the general summer program is not always guaranteed, recruitment will occur on an on-going basis to identify interested participants. Posters for the video project will also be displayed at the community centres in both Ndilo and Dettah to attract potential participants. Contact will be facilitated through research collaborators.

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As such, in the case when a guardian expresses concern about a written signed consent, facilitators will present the option of oral consent by explaining the project verbally, noting date, time, and place, and confirming the consent with the facilitator's signature. Youths will also provide assent by completing the signed consent form after their guardians. If the youth prefers, facilitators will obtain oral assent in the same manner as the oral consent procedure. If the youth reaches the legal age of independent consent during the research project, then an option will be provided to sign an additional consent form to indicate continued participation. Options to withdraw, end, or modify participation in the research will be made explicit to the participants and their guardians initially in the consent form and introduction, and re-iterated later should circumstances require. Participants (and their guardians) may request to view the progress of the research at distinct stages to decide continued commitment or early termination.

Data analysis: The video segments will be analyzed using unstructured interview strategy with participants either on a one-on-one basis or in a group setting. Analysis will be based on approaches such as ORID ("objective, reflective, interpretive, decisional"}, which guides participants to explain the purpose and meaning behind the media data. Portions of the video may also be transcribed and analyzed for common themes using a constant comparison and development approach to further generate meaning.

Part 2) Community talking circles ('focus groups'). Two to four talking circles will be conducted independently in Ndilo and Dettah with approximately 5-8 community members each to review the results of the youth participatory video project.

These talking circles will take approximately 1 1/2 to 2 hours. Participants will also assess lessons learned from other nation-wide physical activity campaigns and programs to gain insights about how other Aboriginal communities motivate people to engage with physical activity. These sessions will facilitate community-level critical thinking about active living and the implementation of culturally and geographically appropriate physical activity solutions. The range of participants' experience and knowledge, facilitated by an experienced animator, will allow them to interact with one another, contributing to a meaningful discussion that will ultimately lead to consciousness-raising, a health-promoting activity in itself. "Because people form their attitudes and beliefs relative to others," the interaction among the participants is therefore critical for data gathering and community envisioning. Ultimately, the sessions will aim to identify physical and

human resources available in the community and externally to ensure sustainability of inclusive physical activity initiatives.

The outcomes will include a working group and a community developed strategic plan outlining a vision for active living and sustainable next steps. The talking circles will conclude with a debrief session to assess the participants' experience with the discussion process. These sessions will be digitally and/or video-recorded (with consent) for transcription purpose and to allow researchers to make field observations about the interactions among participants.

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Any data arising from the research or subsequent to the project will be synthesized and presented to the communities first before wider knowledge dissemination. All community members and leaders will be invited to a feast to view the youth produced videos and results of the talking circle discussions. It is anticipated that further research results will be shared through the local channels such as community newsletters and bulletins.

The fieldwork for this study will be conducted from January 1, 2014 to December 31, 2014.

Sincerely,

_____
Jonathon Michel,
Manager, Scientific Services

DISTRIBUTION
Akaitcho Territory Government
Northwest Territory Métis Nation
Wek'èezhìi Renewable Resources Board
Yellowknives Dene First Nation - Lands & Environment

APPENDIX E. YOUTH PARTICIPATORY VIDEO: INFORMATION SHEET, PARENTAL CONSENT, AND YOUTH ASSENT.

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

3-300 Edmonton Clinic Health Academy	www.publichealth.ualberta.ca	Tel: 780.492.8211
11405 – 87 Ave.	health.promotion@ualberta.ca	Fax: 780.492.0364
Edmonton, AB T6G 1C9		

Exploring physical activity within the cultural context of
Yellowknives Dene First Nation (YKDFN) communities

Dear Parent/Guardian,

Your child has been invited to participate in a video project at the Chekoa Youth Program this summer. This project is a partnership between the Chekoa Program and the University of Alberta, and is part of a graduate thesis work. The goal of this project is to work with the youth and raise awareness about the different ways physical activity is practiced in the community.

Physical inactivity is a factor that contributes to many health issues. More and more, programs that promote physical activity are recognizing the importance of culture. Better understanding of how culture is part of peoples' everyday life and traditions can help shape programs to promote physical, mental, and emotional health. This project will explore the role of culture in physical activity, as seen through the eyes of the youth.

How will we involved your child?
Your child will participate as producers, creators, and co-researchers in a video and social media project documenting the ways physical activity is practiced in Ndilo and Dettah. The majority of the filming will be done during the cultural camp organized by the Chekoa Program. Once we're finished with the videos, we will share them with the community during a movie night. Then we will upload them to YouTube. Participation in this project is voluntary. Your child can choose to stop their participation at any time during video making. The contribution they make up to that point will not be used. But your child will not be able to withdraw from the project once the videos are shown to the community.

What will my child learn?
- Teamwork and leadership skills through hands-on learning
- Understanding of how to do a research project, including interviewing skills
- Media skills in video-making

How will we respect people's privacy?
We will do our best to make sure any personal information is kept confidential. Only the staff from the Chekoa Program and researchers from this project will see any information with names attached. This information will be locked up when we are not using it. We will store the information in a locked filing cabinet in a locked office that can only be accessed by the researchers. The information will be stored for seven years. The videos will be encrypted so no one can change them after they are uploaded to YoutTube.

When we talk about the results, we will use a false name so your child's identity will be protected. However, other students will know that that your child was part of this project and gave us information. Your child may also choose to discuss what they said with other students and community members.

We will also do our best to protect the privacy of the people who are in the videos. Your child will be instructed to ask permission before taking anyone's picture or video. We will then ask the person for written permission to use their picture in the video before it is shown in public.

3-300 Edmonton Clinic Health Academy
11405 – 87 Ave.
Edmonton, AB T6G 1C9

www.publichealth.ualberta.ca
health.promotion@ualberta.ca

Tel: 780.492.8211
Fax: 780.492.0364

We think the students may be proud of the videos they produce and wish to have their names included with the videos when they are uploaded to YouTube and presented in other places. However, your child will also have the choice to not have their name attached to their video.

What are the risks and benefits to my child?

There is a small chance that your child might feel bad or uncomfortable about working in groups. We will do our best to support each child in this project. The benefits to your child are being able to learn about physical activity in their local environment, about making videos, and about asking questions. We think that your child may also benefit from feeling proud of the video they produce and the contribution they make to the community.

What will we do with this information?

The videos produced by the students will be shown to people in several ways:
- They will be uploaded to YouTube.
- They will be show cased at a 'movie premier' for the community.
- They may also be uploaded to other online forums such as Just Move It (a website for Aboriginal communities to share physical activity ideas and resources).

We will also talk about how well this process worked in various presentations and papers we prepare after the research is completed.

What we need from you…

We need your permission for your child to be involved in this project, and to show people the videos they produce. If you agree, please check the "yes" box on the attached form. If you do not agree, please check the "no" box.

Contacts

Keren Tang from the University of Alberta and Charlene Sundberg from the Chekoa Youth Program (part of the Community Wellness Program) are organizing this project. Keren's supervisor is Dr. Cindy Jardine, also at the university.

If you have any question or concern about this project, please do not hesitate to contact any one of us:
- **Keren Tang** (Graduate Student, University of Alberta, 780-492-0392, ktang@ualberta.ca)
- **Charlene Sundberg** (Community Wellness Programmer, Community Wellness Program, 867-920-2925, csundberg@ykdene.com)
- **Dr. Cindy Jardine** (Associate Professor, University of Alberta, 780-492-2626, cindy.jardine@ualberta.ca)

The plan for this study has been reviewed to make sure it follows ethical guidelines and approved by the Research Ethics Board 1 (REB) at the University of Alberta. If you have any questions or concerns regarding your rights as a participant, or how this study is being conducted, you may contact the University of Alberta's Research Ethics Office at 780-492-2615. This office has no affiliation with the study investigators.

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

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11405 – 87 Ave.   health.promotion@ualberta.ca   Fax: 780.492.0364
Edmonton, AB T6G 1C9

Consent Form for Youth Participation in the Research Project:

Exploring physical activity within the cultural context of
Yellowknives Dene First Nation (YKDFN) communities

Please read the following carefully:

- I have read or had explained to me the information provided on the research project.
- I understand that my child will be making videos about physical activity.
- I understand that my child will not be specifically identified in any presentations or reports talking about the information they provided in the interviews.
- I understand that the data will be safely stored for seven years
- I understand the possible risks and benefits of my child participating in this research
- I understand that my child will decide if or if not they wish to be identified in association with their videos.
- I understand that the videos produced will available to people through YouTube and through other ways.
- I understand that information about this process may be used in community and other presentations and in reports.

I agree with these statements and agree that my child can participate in the project

❑   **Yes**

❑   **No**

_____   _____
Print Name   Signature

Child's Name: _____

Date: _____

If you agree that your child can participate in this project, but would rather not sign the form, please tell the person who read this information to you and they will sign to witness your agreement.

_____ (name) has said that their child can participate in this research project.

_____   _____
Witness Name   Witness Signature

Child assent to participate: _____   _____
Child Name   Child Signature

APPENDIX F. YOUTH PARTICIPATORY VIDEO: YOUNGER CHILDREN ASSENT FORM (FOR PARTICIPANTS UNDER THE AGE OF 15).

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

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11405 – 87 Ave.	health.promotion@ualberta.ca	Fax: 780.492.0364
Edmonton, AB T6G 1C9		

Exploring physical activity within the cultural context of
Yellowknives Dene First Nation (YKDFN) communities

Principle investigators: **Keren Tang & Dr. Cindy Jardine**

We want to tell you about a research study we are doing. A research study is a way to learn more about something. We would like to find out more about how people are active in your community. You are being asked to join the study because we would like to hear about your thoughts on how people are active.

If you agree to join this study, you will be asked to make videos about how people are active. We will be making videos during the Cultural Camp for one week. Afterwards, we will edit and finish the movies. We will share these movies with others during a community feast and on Youtube so they learn more about physical activity.

It is possible that you might feel shy or bad about working in groups. But we will do our best to help you and make you feel comfortable to have fun.

This study will help us learn more about how people are active in our communities, making videos and asking questions. By the end of the project, you may also feel very proud of the movies you will have made.

You do not have to join this study. It is up to you. You can say okay now and change your mind later. All you have to do is tell us you want to stop. No one will be mad at you if you don't want to be in the study or if you join the study and change your mind later and stop.

Before you say **yes or no** to being in this study, we will answer any questions you have. If you join the study, you can ask questions at any time. Just tell the researcher that you have a question.

If you have any questions about this study please feel free to contact
- **Keren Tang** (Graduate Student, University of Alberta, 780-902-8852, ktang@ualberta.ca)
- **Charlene Sundberg** (Community Wellness Programmer, Community Wellness Program, 867-920-2925, csundberg@ykdene.com)
- **Dr. Cindy Jardine** (Associate Professor, University of Alberta, 780-492-2626, cindy.jardine@ualberta.ca)

☐   **Yes, I will be in this research study.**   ☐   **No, I don't want to do this.**

_____   _____   _____
Child's name   Signature of the child   Date

_____   _____   _____
Person obtaining Assent   Signature   Date

APPENDIX G. YOUTH PARTICIPATORY VIDEO: SAMPLE PERMISSION TO USE IMAGE FORM FOR NON-PARTICIPANTS.

Permission to Use Image of People
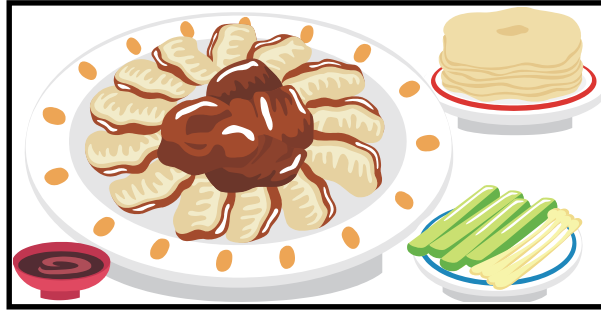
(insert picture here)

You have my permission to use video segment represented by the picture shown above in a video project organized at the Chekoa Youth Program. This project contains images of how physical activity is practiced in my community. I understand that the video will be distributed to people in my community and to other people interested in the project. I also understand the video may be uploaded on public Internet sites such as YouTube or Facebook.

_____ _____

Name (print) **Signature**

_____

Date

APPENDIX H. COMMUNITY FOCUS GROUPS: CONSENT FORM.

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

3-300 Edmonton Clinic Health Academy   www.publichealth.ualberta.ca   Tel: 780.492.8211
11405 – 87 Ave.   health.promotion@ualberta.ca   Fax: 780.492.0364
Edmonton, AB T6G 1C9

Exploring Physical Activity within the Cultural Context of
Yellowknives Dene First Nation (YKDFN) Communities

What is this project about?

You are being asked to participate in this focus group as part of a research project on physical activity. This project is looking at physical activity in your community, and how this fits within local and community culture. It is a partnership between the Chekoa Program and the University of Alberta, and is part of a graduate thesis work.

The purpose of this focus group is to talk about the different ways physical activity is practiced in your community. You will also be looking at videos on physical activity produced by the youth from Ndilo and Dettah in the summer of 2013. After presenting the videos, we would like to talk with you about physical activity in northern communities, current physical activity programs in this community, and your opinions about community-wide physical activity.

What will you be asked to do?

We will ask for your feedback and opinions about their videos and your knowledge about physical activity. So that the researchers correctly understand your comments, we would like to video-record this session. No one other than the researchers and the person who will record your words on paper will see these videos. You will be able to see how your information will be used prior to the results being shared with anyone outside the project.

Participation in this focus group is voluntary. You can say as much or as little as you would like. You can decide not to continue participating at any time, and you do not need to give a reason. There will be no penalty for withdrawal. Up to 30 days after this focus group, you can ask us not to use a part or all of what you said. You can also add information if you would like by contacting Keren.

How will we respect your privacy?

The information gathered from today's discussion will remain confidential. We will not reveal your identity or that of the other people who may be mentioned in this discussion. Instead, we will assign a false name or general description (such as 'male age 35-39) to identify your comments. However, people may try to identify the source of comments based on their knowledge of the people involved in this project. We ask that you <u>not</u> discuss this discussion with anyone outside the focus group out of respect for everyone's privacy.

What are the risks and benefits?

Because this is a group discussion, at times it is possible that you will feel uncomfortable in talking. We will do our best to support you in the group. If you feel uncomfortable or tired to answer any question, you don't have to answer it. The benefits of this research project include promoting physical activity in the community. We will also give you a gift of $50 for sharing your information and time with us.

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

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Who will have access to this information?

The videos of these focus groups will be accessed only by the people involved with the project (contact information below), and a transcriber, who will sign a confidential agreement. The original videos and anything with your name on it will be safely stored in a locked cabinet in a locked office and as encrypted files for seven years.

What will we do with this information?

Results from today's discussion will be presented back to both Ndilo and Dettah at a community meeting. The results will also be compiled into a final report to be shared with the community. We will also talk about the research process and outcomes in various papers and presentations.

What do we need from you?

Please complete the consent form attached with this letter. If you agree to participate in this discussion, please check the "yes" box on the form. If you do not agree, please check the "no" box.

Contacts

Keren Tang from the University of Alberta and Charlene Sundberg from the Chekoa Youth Program (part of the Community Wellness Program) are running this project. Keren's supervisor is Dr. Cindy Jardine, also at the university.

If you have any question or concern about this project, please do not hesitate to contact any one of us:
- **Keren Tang** (Graduate Student, University of Alberta, 780-492-0392, ktang@ualberta.ca)
- **Charlene Sundberg** (Community Wellness Programmer, Community Wellness Program, 867-920-2925, csundberg@ykdene.com)
- **Dr. Cindy Jardine** (Associate Professor, University of Alberta, 780-492-2626, cindy.jardine@ualberta.ca)

The plan for this study has been reviewed to make sure it follows ethical guidelines and approved by the Research Ethics Board 1 (REB) at the University of Alberta. If you have any concerns about this project that you feel you cannot talk about with the people listed above, you may contact the Chair of the REB 1 at (780) 492-7550.

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Consent to Participate in the Research Project: *Exploring physical activity within the cultural context of Yellowknives Dene First Nation (YKDFN) communities*

Please read the following carefully:

- I have read or had explained to me the information provided on participating in a focus group as part of this research project.
- I understand that I do not need to answer a question if I do not wish to do so, and may withdraw from the group discussion at any time without penalty. I may withdraw, change or add to any information up to 30 days after the focus group.
- I understand that today's discussion will be video recorded and an independent transcriber will later convert the conversation into text.
- I understand that the data will be securely stored for seven years.
- I understand the risks and potential benefits of participating in this research.
- I understand that I will be able to see how my information will be used prior to the results being shared with anyone outside the project.
- I understand that I will not be specifically identified in any presentations or reports talking about the information I provided in today's discussion, although people may try to identify the source of comments based on their knowledge of the people involved in this project.
- I understand that information from these discussions may be used in reports, papers and presentations.

I agree with these statements and am willing to participate in a focus group

❑   Yes
❑   No

_____   _____
            Print Name   Signature

Date: _____

_____

If you agree that to participate in this project, but would rather not sign the form, please tell the person who read this information to you and they will sign to witness your agreement.

_____ (name) has said that he/she will participate in this research project.

_____   _____
            Witness Name   Witness Signature

Date: _____

APPENDIX I. COMMUNITY FOCUS GROUPS: FOCUS GROUP GUIDE.

Exploring physical activity within the cultural context of Yellowknife Dene First Nations communities

The purpose of this focus group/talking circle is to hear your thoughts on the progress and implications of this research project. Most importantly, we are interested to know your thoughts and/or vision about potential applications of community-level physical activity program in this community.

I.   Youth participatory video
    a. Film(s) produced by the youths in the community documenting their experiences with and perspective of physical activity
        i.   What is your first impression of the video? What stood out to you in particular?
        ii. Do you agree or disagree with some of comments? What are they?
II. Identifying gaps
    a. Based on your impressions of the youth videos:
        i.   What are your thoughts about physical activity in general?
        ii.   How do you think physical activity is related to your health?
        iii. Do you think it is important for your children to do physical activity? Why or why not?
        iv.   What are some of the ways you do physical activity?
        v.   What would be your personal motivation to do physical activity regularly?
        vi.   Do you feel you have a lot of opportunity to do physical activity regularly? Why or why not?
        vii. What are some of the challenges of physical activity in this community?
        viii. What do you think about having more physical activity programs in the community? Is this a good or bad idea? Why or why not?
        ix.   What are some ways everyone, regardless of her or his age and ability, can participate in physical activity?
III. Implications of the research
    a. Next steps:
        i.   What might be some of the challenges implementing a community-level program for physical activity?
        ii.   How might you overcome some of these challenges?
        iii. What are the resources necessary to implement a program that motivates people moving (both indoors or outdoors)?
        iv.   Who do you think might be the best person/organization to be responsible for a community-wide physical activity program?
        v.   What do you think is necessary to keep the program going?
        vi.   Would you be interested in forming a working group to monitor the progress of physical activity involvement in the community, holding it accountable?

APPENDIX J. IMPACT EVALUATION: CONSENT FORM.

Exploring Physical Activity within the Cultural Context of
Yellowknives Dene First Nation (YKDFN) Communities

What is this project about?

You are being asked to participate in this evaluation as part of an ongoing research project on physical activity. This project is looking at physical activity in your community and culture. It is a partnership between the Community Wellness Program and the University of Alberta, and is part of a graduate thesis work.

The purpose of these conversations is to determine whether the video project about physical activity that took place over the summer had an impact in the community. Impact, or change, can be good, bad, or both. There can be impact on the participants and in the community. I'm interested in hearing what you thought about the project and the changes that took place after.

What will you be asked to do?

We will ask for your feedback and opinions about the project and the physical activity idea voted by community members during the family suppers. So that the researchers correctly understand your comments, we would like to audio-record this session. No one other than the researchers and the person who will write your words on paper will hear these conversations. You will be able to see how your information will be used prior to the results being shared with anyone outside the project. The conversation will take no more than 1 hour of your time.

Participation in this conversation is voluntary. You can say as much or as little as you would like. You can decide not to continue participating at any time, and you do not need to give a reason. There will be no penalty for withdrawal. Up to 30 days after this discussion, you can ask us not to use a part or all of what you said. You can also add information if you would like by contacting Keren.

How will we respect your privacy?

The information gathered from today's discussion will remain confidential. We will not reveal your identity or that of the other people who may be mentioned in this discussion. Instead, we will assign a false name or general description (such as 'male age 35-39) to identify your comments. We ask that you not discuss this discussion with anyone outside the conversation out of respect for people's privacy.

What are the risks and benefits?

At times it may be possible that you will feel uncomfortable in talking. We will do our best to support you in the conversation. If you feel uncomfortable or tired to answer any question, you don't have to answer it. The benefits of this research project include promoting physical activity in the community. We will also give you a gift of $50 for sharing your information and time with us.

Who will have access to this information?

The audio-recordings will be accessed only by the people involved with the project (contact information below), and a transcriber who will sign a confidential agreement. The original audio and anything with your name on it will be safely stored in a locked cabinet in a locked office and as encrypted files for seven years.

What will we do with this information?

The results will be compiled into a final report to be shared with the community through the Wellness Program. We will also talk about the research process and outcomes in various papers and presentations.

What do we need from you?

Please complete the consent form attached with this letter. If you agree to participate in this discussion, please check the "yes" box on the form. If you do not agree, please check the "no" box.

Contacts

If you have any question or concern about this project, please do not hesitate to contact any one of us:
- **Keren Tang** (Graduate Student, University of Alberta, 780-492-0392, ktang@ualberta.ca)
- **Charlene Sundberg** (Community Wellness Programmer, Community Wellness Program, 867-920-2925, csundberg@ykdene.com)
- **Dr. Cindy Jardine** (Associate Professor, University of Alberta, 780-492-2626, cindy.jardine@ualberta.ca)

The plan for this study has been reviewed to make sure it follows ethical guidelines and approved by the Research Ethics Board 1 (REB) at the University of Alberta. If you have any questions or concerns regarding your rights as a participant, or how this study is being conducted, you may contact the Chair of the University of Alberta's Research Ethics Office at 780-492-2615. This office has no affiliation with the study investigators.

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Consent to Participate in the Research Project: *Exploring physical activity within the cultural context of Yellowknives Dene First Nation (YKDFN) communities*

Please read the following carefully:
- I have read or had explained to me the information provided on participating in an interview/group discussion as part of this research project.
- I understand that I do not need to answer a question if I do not wish to do so, and may withdraw from the discussion at any time without penalty. I may withdraw, change or add to any information up to 30 days after the session.
- I understand that today's discussion will be audio recorded and an independent transcriber will later convert the conversation into text.
- I understand that the data will be securely stored for seven years.
- I understand the risks and potential benefits of participating in this research.
- I understand that I will be able to see how my information will be used prior to the results being shared with anyone outside the project.
- I understand that I will not be specifically identified in any presentations or reports talking about the information I provided in today's discussion, although people may try to identify the source of comments based on their knowledge of the people involved in this project.
- I understand that information from these discussions may be used in reports, papers and presentations.

I agree with these statements and am willing to participate in this evaluation discussion.

      ❑   Yes
      ❑   No

_____   _____
       Print Name   Signature

Date: _____

_____

If you agree that to participate in this project, but would rather not sign the form, please tell the person who read this information to you and they will sign to witness your agreement.

_____ (name) has said that he/she will participate in this research project.

_____   _____
       Witness Name   Witness Signature

Date: _____

APPENDIX K. IMPACT EVALUATION: YOUNGER CHILDREN ASSENT FORM (FOR PARTICIPANTS UNDER THE AGE OF 15).

UNIVERSITY OF ALBERTA

School of Public Health
Centre for Health Promotion Studies

Exploring physical activity within the cultural context of Yellowknives Dene First Nation (YKDFN) communities

Principle investigators: **Keren Tang** & **Dr. Cindy Jardine**

We want to ask you about the video project we were doing. This is part of a research project. Research is a way to learn more about something. We would like to find out more about what people think about the project we did last summer and about physical activity since the project. You are being asked to join this conversation because we would like to hear about your thoughts on how people are active.

This past summer, we made videos in the community and at the Cultural Camp. Afterwards, we edited and made movies about how people were active. We shared these movies with others during a community feast and on Youtube so people learn more about physical activity. People also voted for their favorite physical activity ideas, which were sports tournament and traditional game nights.

Now it's been a few months since the project, and we are wondering if there has been any change in how people are active. We would therefore like to ask you about what you think. It is possible that you might feel shy or bad. But we will do our best to help you and make you feel comfortable to speak your thoughts.

You do not have to participate in this conversation. It is up to you. You can say okay now and change your mind later. All you have to do is tell us you want to stop. No one will be mad at you if you don't want to be in the study or if you join the study and change your mind later and stop.

Before you say **yes or no** to being in this study, we will answer any questions you have. If you join the study, you can ask questions at any time. Just tell the researcher that you have a question.

If you have any questions about this study please feel free to contact
- **Keren Tang** (Graduate Student, University of Alberta, 780-902-8852, ktang@ualberta.ca)
- **Charlene Sundberg** (Community Wellness Programmer, Community Wellness Program, 867-920-2925, csundberg@ykdene.com)
- **Dr. Cindy Jardine** (Associate Professor, University of Alberta, 780-492-2626, cindy.jardine@ualberta.ca)

☐   **Yes, I will be in this research study.**   ☐   **No, I don't want to do this.**

_____   _____   _____
Child's name   Signature of the child   Date

_____   _____   _____
Person obtaining Assent   Signature   Date

APPENDIX L. IMPACT EVALUATION: INTERVIEW GUIDE.

Exploring physical activity within the cultural context of Yellowknife Dene First Nations communities

The purpose of these conversations is to determine whether the video project about physical activity that took place over the summer had an impact in the community. Impact, or change, can be good, bad, or both, and can take place among the participants and in the community. I'm interested in hearing what you thought about the project and the changes that took place later.

Video project impact:

1. What is your overall impression of the video project? What did you like about it?
   a. If the interviewee had direct involvement in the project: Do you think the project met your expectations?
   b. For all interviewees: Do you think this project met the expectations of the youth participants and community members?
2. In what ways do you think the project has benefited the youth? The community? The Wellness Program?
3. What were some of the most important things you learned from having the youth participate in the project?
   a. If the interviewee participated in subsequent focus group discussions: What were some of the things you learned from focus group discussions?
   b. For all interviewees: What were some of the most important things you learned from watching the results of the project (e.g. videos, presentations)?
4. How do you think the results of the project could benefit the community?
5. Do you think anything has or will change in terms of physical activity for the youths who participated or the community members who watched the films?
6. Is there anything you would change about the process of the project to make it better?

Community-level physical activity initiative
At the family suppers where we shared the videos made by the youth, community members voted for their favorite physical activity idea (sports team tournament) that would get everyone up and moving. The Wellness Program was going to follow through with this idea in 2014. The following questions are specifically about the progress of this idea.

1. Since the family supper, have you seen any announcement related to the idea around the community? Can you describe these announcements?
2. Have you seen any progress made with this idea? What kind of progress has been made in the community?
3. What are some of the benefits you think will come from this community activity?
4. What might be some of the challenges of organizing this activity? How do you think the Community Wellness Program can overcome these challenges?

APPENDIX M. REFLECTION ON CAPACITY BUILDING DURING THE RESEARCH.

Capacity building is a key feature of participatory action research (PAR). It is often helpful for researchers to reflect on the various ways the research project has improved and enhanced the capacity of research participants and community partners. In a reflective essay, Raine et al. (2010) applied the capacity-building framework, a tool developed by Maclellan-Wright et al. (2007) to highlight how their project helped to build capacity within the community. The comprehensive tool has nine components: participation; leadership; community structures; external support/funding bodies; asking why; obtaining resources; skills, knowledge and learning; linking with others; and sense of community (for detailed definition for each component, see Raine et al, 2010, p. 682). Guided by the same nine criteria, I also reflect on how this current PAR project about physical activity contributed to the learning of participants, the researcher, and the wider community. Unlike the original instrument, I combine both external and internal resources as a single category of "resource mobilization," resulting in a total of eight, rather than nine, criteria. In some participatory research projects, resource networks can be quite extensive to include government and non-profit entities. The distinction between outside and inside support in this research is less relevant as we relied exclusively on two organizational stakeholders: the university and the community.

1. Participation

Participation at all levels means "the active involvement of people in improving their own and their community's health and well-being" (Raine et al., 2010, p. 682). For this research, youth, community members, leaders, and elders from the Yellowknives Dene First Nation (YKDFN) became involved with the project in various aspects. Some directly made and edited the videos, some co-developed the research plan, some observed the process, and some participated in focus groups and the follow-up evaluation. Everyone was involved in a project that aimed to raise awareness and improve physical activity and active living on the land.

The ability to involve people to participate relied on a foundation of trust, relationships, and community ownership of the research. As a research assistant, I became involved in existing visual research projects with the YKDFN communities (Genuis, Jardine, & Chekoa Program, 2013; Jardine & James, 2012) prior to initiating the current one about physical activity. I began visiting the community early on. Gradually, I familiarized myself with the school environment,

some of the students, and community organizations such as the Community Wellness Program (CWP), which later became the organizational partner on the physical activity video project. I also began engaging with the research liaison who worked for the CWP about potential summer collaborations. I introduced my interest in exploring physical activity, which sparked an animated conversation about the role of physical activity in the traditional Dene way of life. This conversation eventually led to the idea of integrating a video project with the summer cultural camp program. Thus, through ongoing presence and conversation, I built relationships with the workers at the CWP, the school, and the youth.

During the summer time when the project officially began, the staff at CWP were extremely helpful and welcoming, recommending key youth members who were interested in participating and helping with the recruitment process. In fact, one of the recommended youth became a research assistant on the project, and was key in recruiting other youth through home visits and her personal social network. Her role in recruitment and skill in video making and editing further demonstrated the benefits of working with youth as resources.

Integrating the video project into existing programs significantly contributed to community buy-in of the research. Consequently, staff at the CWP became invested in the project, and played an important role in developing community interest, encouraging, and facilitating youth participation once the project began.

The length of the project also helped retain participant interest and participation. Though it spanned several months, the overall research took place in stages, and each stage was relatively short. For example, the youth video project dedicated one week to each of the two locations – in the community and at the cultural camp – that comprised of unique participants. Youth were thus invested throughout the week and only began to show waning interest at the very end of each week, just as the project was wrapping up.

After spending much time in the community and at the cultural camp during the video project, the community became familiar with my presence. My ongoing involvement and relationship building further engaged other staff and community members in focus group discussions. The family suppers, where we disseminated research outcomes, also saw a significant turnout because of the youth who were involved in the project. The family suppers became an opportunity to identify and later recruit participants for the follow-up evaluation interviews.

2. Leadership

The capacity building instrument described leadership as "developing and nurturing both formal and informal local leaders during a project" (Raine et al., 2010, p. 682). Our research reinforced the capacity of local leaders including the community partner CWP. More importantly, the research developed skills for informal leaders like the youth.

The community partner and I decided on roles and responsibilities throughout the research process in frequent face-to-face meetings. While we worked together during the process, we agreed that I would play a bigger part during the youth participatory video project, particularly with the technical media and youth engagement aspect. The community partner took the initiative to integrate the project into existing wellness programs and was responsible for following through with the physical activity ideas generated from the research process. We constantly discussed ways to improve the research, fill the gaps in programming with the physical activity ideas suggested by the community, and funding possibilities for future projects to improve community wellness.

Youth participants demonstrated a significant leadership role. During the research process, I engaged the youth in taking initiative in making the videos. We organized video making and editing workshops that built teamwork, and allowed the youth to experiment with the recording devices and a variety of media techniques. Moreover, time spent with the youth encouraged mentorship. During community suppers where we showcased the final videos, we also recognized the youth who participated in the project for their initiative, leadership, and participation. Youth received certificates of achievement and a university souvenir as a reward, setting examples for other young people to participate and be proactive in the community.

One specific youth participated in the project as a paid research assistant. Many high school students work for various organizations in the community during the summer. Such initiatives engage youth in giving back to the community in a meaningful way. Recognizing that youth is resource and a wealth of knowledge and skills, we hired Emma as a research assistant with the same intention that aligned with other community youth initiatives. As a result, I spent a lot more time with this youth than with others. Emma already had some media skills. I then worked with her and trained her in building work habits and teaching media skills to other youth participants. She also played an instrumental role in recruiting youth participants. Training often

took place during non-workshop hours and thus resulted in much one-on-one mentorship opportunities.

3. Community structures

The capacity building tool identifies community structures as "linking with pre-existing community structures, improving community structures, and creating new community structures that help community members" (Maclellan-Wright et al., 2007, p. 303). Various aspects of this research project contributed to community structure: youth participatory videos, focus group discussions, and community knowledge translation.

We integrated the video project within existing programs, which facilitated community and participant buy-in, recruitment, and a natural implementation process. During summer time, the school offered youth programs for its students. However, not all students lived in the community, and not all youth in the community participated in the school-based program. Meanwhile, CWP offers a summer camp program for youth younger than age 11. During the week when the video project took place in the community, we offered workshops in the community youth centre, which did not offer any activity of its own over the summer. Consequently, the video project filled a gap in the community that served older youth who did not participate in either the school-based program or children's summer camp nor worked as youth workers.

During the cultural camp, which was the highlight of CWP's summer youth program, the video project became an additional activity at the camp along with moose hide tanning, hiking, canoeing, swimming, and archery. The project added to the diversity of activities already offered at the cultural camp, enriching the youth's learning experience.

The subsequent focus group discussions provided feedback on the videos developed by the youth. The discussions then evolved as participants reflected on current programs and structures in the community. The conversations eventually elicited ways to improve existing practices and programs.

Later, the research project contributed to the content for family suppers, which were key knowledge translation events with the broader community. To be consistent with previous family suppers, the community partner and I organized two evenings centred on the theme of physical activity and active living. We shared the results of the research project with the wider community

audience, screened the youth videos, recognized youth leadership in the project, served a home-cooked meal with lots of vegetables, and raised awareness about active living through a family quiz that drew upon content from the videos.

4. Resource mobilization

The capacity building tool emphasizes external supports as "providing project-related information, […] technical expertise, being accessible when the project needs support, [and] open and ongoing communications" (Maclellan-Wright et al., 2007, p. 303). Both entities in the research – community and the university – supported the project. Resources were shared between the university and the community partner. Funding as part of a larger social media research supported my stipend, living expenses, video and audio equipment, and knowledge translation materials such as DVDs. By integrating the video project into the existing program, the community partner provided in-kind support in space, office supplies, and funding for the cultural camp. The integrated project thus received support from multiple sources, highlighting the benefits of a collaborative relationship between research and community. Equal financial investment also promoted community buy-in and accountability for both parties.

5. Asking why?

Asking why with the participants is the essential process "addressing root causes of the issue(s) targeted by the project" (Maclellan-Wright et al., 2007, p. 303). While the video project was largely image-based, the process of video making and editing involved ongoing conversations with youth focused on the "whys," or the reasons behind their responses. The focus group discussions also centred on asking why, especially as the conversations broadened to include community engagement, intrinsic motivation, and challenges and successes of organizing community-level physical activity initiatives.

Seeking fundamental reasons behind participants' responses encouraged in-depth probing and understanding of how physical activity is practiced in the community. A more complete understanding subsequently led to a meaningful exploration of solutions to overcome some of the challenges that participants mentioned. Nevertheless, the process of 'asking why' initiated community-wide reflection and is a starting point for future advocacy, programming, and research opportunities.

6. Skills, knowledge and learning

An interdisciplinary committee of supervisors who specialized in risk communication, health promotion, advocacy, physical activity and recreation, Indigenous health, and qualitative research methodology supported me as the primary researcher on this project. Moreover, this research drew upon and reinforced my knowledge from previous work experiences with Indigenous populations and community engagement. These diverse backgrounds from the university synergized with the local knowledge and expertise of the community.

In such a collaborative environment, I learned about participatory methodologies and constantly improved upon my research skills in the field. Knowledge generated in this research contributes to the current understanding of the Indigenous perception of health and physical activity as well as its implications in culturally relevant health promotion practices.

The community partner learned about research and the collaborative process, as well as from feedback from the community regarding program development. In community-research partnerships, community and academics often face different, at times conflicting, priorities (Anderson et al., 2012). In this research, the community partner may be occupied with other non-research related priorities and therefore do not have the adequate time and opportunity to evaluate its programs with the community. By including the greater community voice in the project, the research increased the accountability of the community partner.

In addition to being a training opportunity for the graduate researcher, the research also offered learning opportunities with youth in the community as described under item 2, Leadership. They learned about digital media tools, and acquired more in depth teachings about cultural activity and physical activity.

7. Linking with others

We disseminated knowledge broadly through local activities in the YKDFN communities and NWT departments, as well as at national venues like meetings and conferences. Moreover, we connected with the 'Just Move It' online community (through www.justmoveit.org). 'Just Move It' was a major factor that influenced my interest in Aboriginal health when I participated in its initiatives while working on the Navajo Nation. The local program transformed into a North American-wide, online campaign connecting Indigenous communities in Internet forums to share ideas and best practices about healthy communities and healthy people. Subsequent to

our discussion, the CWP registered and joined the Just Move It community, sharing stories about our physical activity research with over 500 Indigenous communities and programs in North America.

Becoming a member of the broader Just Move It network allows the community partner to access external resources at national and international levels. However, helping CWP to develop and concretize these relationships is beyond the scope of this Master's project. I hope future research opportunities and collaborations will help to build quality linkages with other groups that share the goal of improving the health and wellbeing of Indigenous peoples.

8. Sense of community

The DVDs developed by the youth elicited much pride in the community, visible particularly during the family suppers where we showcased the movies and recognized the youth for their leadership role in the project. The project highlighted youth involvement and reminded the community that youth are resources that positively affect the wellbeing of the community. These observations are consistent with the Positive Youth Development theory (Benson, Scales, Hamilton, & Sesma, 2004; Damon, 2004). One elder who participated in one of the family suppers commented during a follow-up evaluation, "I think [the project] really builds [the youth's] confidence in trying to do something and get it done" (R1). Focusing on youth overcame internal conflicts and brought the community closer.

Furthermore, YKDFN has a unique context where there are two physically separated communities within the same First Nation. The research project involved youth and members from both communities. The DVDs contained videos developed in both locations, by different youth participants. The make-up of the participants in the research therefore inadvertently strengthened the bond between the two communities.

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