

Running Head: ABORIGINAL PEOPLES, WATER AND HEALTH & WELL-BEING

“Our connection to water is our connection to our Mother Earth and . . . to all of creation”:

An exploratory study of how Aboriginal peoples perceive water as  
contributing to their overall health and well-being

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*“People think of Mother Nature as metaphor. Aboriginal peoples mean it literally. And I, as a scientist have come to understand, they are absolutely right in the most profound scientific way”*

-David Suzuki

**Abstract**

When water is looked at in the context of health, it is generally in terms of access to safe drinking water (Health Canada, 2002). When considering the health of Aboriginal peoples however, it is necessary to look at water in a broader context because water plays a vital role in many traditional activities and for many it is also seen as part of the spiritual world (Bartlett, 1988; Droitsch, 2009). Currently, there is very limited research that has explored the relationship between water and the health of Aboriginal peoples, however there are many studies which emphasize the impacts of environmental change on the health of Inuit and First Nations. These studies have found that environmental change such as global warming, contamination and pollution can negatively affect physical, mental, emotional and spiritual health. The purpose of this study was to explore how Aboriginal peoples' perspectives on water contributes to overall health and well-being. Data was collected through four semi-structured telephone interviews with people who were over 18 years of age and self-identified as Aboriginal. The overall themes that emerged from the data include: water as being important for a connection to Mother Earth, identity, health and healing and reconnecting to culture. This study explored how water contributes to the health of Aboriginal peoples in a broader sense than just physical health. The findings suggest that water needs to be protected in order to protect and promote the health of Aboriginal peoples and Mother Earth.

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## **Chapter 1: Introduction**

In Aboriginal cultures, water is often described as the lifeblood of Mother Earth. There are many Aboriginal ceremonies, beliefs and values that reflect the importance of water for all of creation (Environment Canada, 2010a). Aboriginal cultures are profoundly linked to water as it plays a role in spirituality, healing, and sustenance activities (Waldram, Herring, & Young, 1997). Health is conceptualized by Aboriginal peoples as incorporating balance with others, the environment and Mother Earth (Lavallee, 2009). In the field of health promotion, there is a similar push for a holistic approach that views human health in relation to the health of ecosystems. Physical environments are recognized by the Public Health Agency of Canada as one of the social determinants of health (Public Health Agency of Canada, 2010). The Ottawa Charter for Health Promotion (1996) takes a socio-ecological approach to health, recognizing the complex links between people's health and their environments. Human development has resulted in the declining health of ecosystems, including bodies of water. The ill-health of ecosystems can also have both direct and indirect human health effects that exacerbate health inequities (Corvalen et al., 2005; Marmot, 2007). Given that ecosystems are being negatively affected by human development and that Aboriginal perspectives of health suggest that the health of people is dependant upon the health of water, it is important to further explore the relationship between water and the health of Aboriginal peoples.

There are many gaps in current health and environmental research that has been conducted in Aboriginal communities. Health research often only focuses on physical health to the exclusion of aspects of health such as mental, emotional and spiritual health. By taking a holistic approach to the research and incorporating Aboriginal ways of knowing, it opens up ways of looking at health that transcend the physical. This research project explored the relationship between health and water, and sought to incorporate Aboriginal ways of knowing. The purpose of this research project was to understand Aboriginal perspectives on water by asking the question: how does water contribute to

overall health and well-being? This question was addressed by conducting in-depth, semi-structured telephone interviews with four English speaking, self-identifying Aboriginal peoples over the age of 18.

### **My Role as a Researcher**

Over the course of this research project, I have struggled with the fact that I am a person of European descent doing health research with Aboriginal peoples. In a multicultural health promotion class that I took in the third year of my Bachelor of Science in Health Promotion degree, my eyes were opened to the oppressive policies that European and Euro-western colonizers imposed upon Aboriginal peoples. I also learned about the history of research that has been done on Aboriginal peoples which has been used as evidence to further marginalize the population and deny them basic rights. Currently there is a movement to turn this around and incorporate Aboriginal ways of knowing into research and do research on topics that are identified by communities, not researchers. One of the reasons that I had an internal struggle about whether it was right for me to conduct research that explored Aboriginal health was because of the limitations of an honours project. The thesis is started in September and finished in April, not giving me nearly enough time to engage with a community and develop a research project that addressed needs expressed to me directly. Also because I am of European descent and had little exposure to Aboriginal cultures in my life before university, I was afraid that I would be rejected by potential participants as being unqualified to address the topic. To overcome this self-doubt, I took it upon myself to learn more about Aboriginal cultures by reading books and articles, learning from my supervisor and attending cultural events. This past summer I attended the Odawa Festival of Aboriginal Culture 2010 in Ottawa. I also attended an Aboriginal Health seminar at the Mi'kmaq Native Friendship Centre in Halifax that was put on by Capital Health for their annual Diversity Week. The reassurance from my supervisor that the research that I was conducting was meaningful and culturally appropriate was also important in encouraging me to continue this endeavour. It was



heartening to hear from my participants that they supported the research that I was doing, because it affirmed that I was doing relevant research and was allowed to do so despite my non-Aboriginal ancestry. I think it is important to share this personal journey because it demonstrates that I didn't take the role of being a researcher lightly. I acknowledge that I will never fully understand the experiences that Aboriginal peoples have gone through and that my non-Aboriginal worldview has influenced this research.

I have grown as a person throughout this learning journey; learning how to view the world from a perspective other than my own. The more I worked on this project, the more I realized how much I have yet to learn and I look forward to doing so in the years to come.

## Chapter 2: Literature Review

This chapter will review some literature and policies that are relevant to the research question. It will start with a basic overview of Aboriginal peoples and Aboriginal identities; the importance of culture and water for health and well-being of Aboriginal peoples, followed by Aboriginal and non-Aboriginal perspectives of water; water issues in Aboriginal communities; and finally relevant Canadian and international policies regarding water rights and Indigenous peoples rights will be discussed.

### Aboriginal Peoples in Canada

The word 'Aboriginal' is an inclusive term that encompasses the three indigenous groups in Canada: First Nations, Métis and Inuit. According to the 2006 census, there are now over one million people in Canada who identify as Aboriginal. It is the fastest growing population in Canada, growing 45% between 1996 and 2006 (Statistics Canada, 2009).

### Aboriginal Identities

There is not one single Aboriginal identity; indigenous nations in North America are as diverse as countries around the world, however they do share a common history of colonization and cultural oppression (Waldram, Herring, & Young, 1997). The suppression of cultural expression, such as making the practice of some ceremonies illegal and stopping native languages from being spoken, has had negative effects on Aboriginal identities. Colonialist policies that affect Aboriginal identity still exist to this day (Reno, 2009). The *Indian Act* officially recognizes First Nation identities by using blood quantum, even though blood and biology are not a traditional way of determining who can identify with a group (Lawrence, 1999 in Reno, 2009). For First Nations, who are governed under the *Indian Act*, the designation of non-status can affect one's ability to connect with their culture because in many cases they are restricted from living on

reserve and participating in their nation's government (Palmer, 2009). Overall, Aboriginal identity is a very complex issue that is intricately tied with colonialist policy.

### **Culture and Health**

Colonialist policies of cultural oppression and environmental dispossession, which forced Aboriginal peoples away from their traditional lands and took away their culture, have resulted in the marginalization of Aboriginal peoples and subsequent higher rates of health problems (Waldrum, Herring, & Young, 1997). Residential schooling and the prohibition of cultural activities no longer take place in Canada, however the cultural oppression of Aboriginal peoples continues to this day (Kirmayer, Simpson, & Cargo, 2003). Cultural expression is important for health and well-being. The Public Health Agency of Canada (2010) lists culture as one of the twelve social determinants of health. If one is not able to express culture and identity, then he/she may be at-risk for developing health problems (Public Health Agency of Canada, 2010). The Aboriginal population in Canada are a good example of this since assimilation and loss of identity have led to higher rates of many physical and mental illnesses. These health inequities can be seen in the higher rates of diabetes, injury and suicide experienced by Aboriginal individuals as compared to rates in the Canadian population as a whole. Since Aboriginal perceptions of health and illness are distinctly different from those that the mainstream Canadian healthcare system is based upon, treatment that incorporates Aboriginal ways of knowing is generally more successful (Green, 2010). Reconnection to one's culture can also improve health, and, as McCormick (2000) explains, reconnection to culture changes one's values and adds meaning to one's life. Green (2010) and Kirmayer, Simpson and Cargo (2003) both found that cultural expression and the recovery of traditions is a way for Aboriginal peoples to heal. Therefore, it is important to recognize the role that culture and cultural expression plays in the

maintenance and recovery of health.

### **Water and Health**

When water is discussed in the health literature it is generally in terms of access to safe drinking water. Health Canada claims that “Canadian drinking water supplies are generally of excellent quality” (Health Canada, 2009, n.p.), however, for many Aboriginal communities, this is not the case. In 2005, over 100 reserves in Canada were under boil water advisories (National Aboriginal Health Organization (NAHO, 2005). Unsafe drinking water can lead to illnesses caused by water-borne pathogens such as E.coli, and poisoning due to the ingestion of chemicals like pesticides (Boyd, 2006). A study done by the National Aboriginal Health Organization (NAHO, 2005) found that 32.2% of First Nations adults consider their household water unsafe to drink. Due to this mistrust, 70.8% resorted to alternative sources for drinking water (NAHO, 2005). This places an additional financial burden on households because bottled water can be up to 10,000 times more expensive than tap water. Contrary to popular belief, resorting to bottled water is not a healthier option. It is much less regulated than public water and has been shown to contain high levels of arsenic and mercury (Clarke, 2007). For this reason, it is important that public sources of water in Aboriginal communities are kept free of contaminants so that health inequities are not further exacerbated.

Improving access to safe drinking water on First Nations reserves is an important health issue, however, the connection between water and health is much more complex than just access to safe drinking water. In Aboriginal cultures, health is seen as encompassing four components: physical, emotional, mental and spiritual. In addition to the four components of health, it also involves finding balance with others, and the environment which is often referred to as Mother Earth (Lavallee, 2009). Many activities that are part of Aboriginal culture such as fishing,

hunting, gathering, and spiritual practices are all reliant on water (Bartlett, 1988; Droitsch, 2009; Morris et al., 2007). In areas that have been affected by pollution, the continuation of traditional cultural practices increases exposure to toxic substances. Discouraging these practices is not an effective prevention measure however because the abandonment of cultural activities also results in adverse health effects (Arquette et al., 2002). In order to protect and promote the health of Aboriginal peoples and their cultures, the entirety of Mother Earth, which includes bodies of water, needs to be kept healthy (Whiteford & Whiteford, 2005).

There is a paucity of research that has looked at the importance of water for the health of Aboriginal peoples, however there have been a few recent studies that have looked at the relationship between the health of First Nations peoples and the environment. Wilson (2003) conducted 17 in-depth interviews with the Anishinabek peoples of northern Ontario. She found that people felt healthier when they had more interaction with nature because they were able to express their culture. Richmond et al. (2005) conducted a study with the 'Namgis First Nation in British Columbia which also explored the relationship between the natural environment and health. It was found that the growth of the aquaculture industry in British Columbia is negatively affecting health because it is limiting access to resources which are needed for social and cultural activities.

### **Aboriginal Perspectives of Water**

Aboriginal identities are intrinsically connected to the natural and spiritual worlds, therefore to have human health, one also needs environmental health (Waldram, Herring, & Young, 1997). In many Aboriginal cultures, water is viewed as “[a] sacred gift that connects all life” (Indigenous Peoples Kyoto Water Declaration, 2003, para 2). Water is deeply respected because of the belief that everything in the natural world is connected (The Interior Alliance of

B.C. & The Council of Canadians, 2001). For many, water is seen as part of the spiritual world (Waldram, Herring, & Young, 1997) and also plays a vital role in cultural activities such as fishing, trapping, hunting ceremonies, and healing (Bartlett, 1988; Droitsch, 2009). It is something that transcends the physical world as water can connect individuals through time and space and to Mother Earth.

### **Non-Aboriginal Perspectives of Water**

In many non-Aboriginal perspectives, water is not conceptualized in ways other than the physical. Its value is defined in economic terms and its life sustaining properties are largely disregarded. Historically, nature has been perceived as something to conquer and to use for monetary gains. In contrast with many Aboriginal views, the non-Aboriginal perspective does not believe that water is a living thing or has a spirit. Instead non-Aboriginal peoples personal connection to water is only understood in the physical sense such as for hydration and recreation (Groenfeldt, n.d.). The non-Aboriginal perspective of water has been dominant in decision making regarding the natural world which has resulted in harmful changes to Mother Earth, including water, which can affect the health of Aboriginal peoples (Groenfeldt, n.d.).

### **Water Issues in Aboriginal Communities**

There are many Aboriginal communities across Canada that are experiencing negative health consequences from harmful changes or pollution of water. Three distinct pathways to this change emerge from pollution by industry, hydroelectric development and the effects of climate change. Each of these three pathways are discussed below using examples from Aboriginal communities across Canada that are being affected by these changes.

**Industry.** Water pollution from industry is affecting indigenous peoples' health and cultural expression in many places in North America. The land and waters within the Mohawk

territory of Akwasasne in northern New York have been polluted by industrial activity upstream. As a result of the pollution, individuals have avoided important cultural activities in order to protect their health; however, they have found that abandoning cultural practices also has adverse health effects (Arquette et al., 2002). Two northern Ontario First Nations communities, Grassy Narrows and White Dog, have also been subject to industrial water pollution. In the 1960's, a paper mill located upstream dumped the equivalent of 9000kg of mercury into the river over an eight year period (CBC News, 2010). This resulted in the mercury poisoning of over one hundred individuals and the loss of traditional activities such as fishing and harvesting (Morris et al, 2007; CBC News, 2010). In Nova Scotia, Boat Harbour, which borders the Pictou Landing First Nation reserve has been used as the final dumping site for wastewater from a pulp and paper mill at Abercrombie Point. Many promises to clean up the harbour have been broken and residents can no longer use the harbour in traditional ways because of the intensity of the pollution (Parrott et al., 2009).

The oil sands industry in northern Alberta is causing widespread environmental devastation, including water pollution. Kelly et al. (2010) found that contrary to claims made by industry and government, oil sands development does substantially increase the amounts of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and zinc to the Athabasca river and its tributaries downstream from development. Fort Chipewyan, a community located downstream from the oil sands, is home to many people from Cree, Dene and Métis Nations (CBC News, 2009). Residents in the community are experiencing high rates of illness such as rare cancers which have been attributed to water pollution from the oil sands (Timoney, 2007). The rapid development of the oil sands industry has led to concerns from Aboriginal peoples about its effects on health, water and air quality and its

impacts on wildlife (Droitsch & Simieritsch, 2010). As a result of these concerns, Aboriginal groups in Alberta and the Northwest Territories have called for a moratorium on oil sands development. In September 2010, the Assembly of First Nations Chief Shawn A-in-chut Atleo spoke about concerns of oil sands development, stating “First Nations across the country are concerned about the impacts of oil sands development on First Nations peoples, the environment, our traditional foods, our culture and spiritual practices and our rights in our traditional territories” (Droitsch & Simieritsch, 2010, p. 1). Several lawsuits have been filed by Aboriginal communities in order to protect the lands, waters and wildlife from further harm (Droitsch & Simieritsch, 2010).

***Hydroelectric Development.*** Hydroelectric development has occurred all over Canada as a way of securing electricity for cities and towns. It is generally considered a better alternative to burning fossil fuels since hydroelectricity is said to be a clean and renewable energy (Waldram, 1988). This assumption does not take into consideration that lands that are flooded to create hydroelectric stations produce large amounts of greenhouse gases from the decomposition of vegetation (Barlow & Clarke, 2002). Environmental devastation also occurs during the construction of a hydroelectric dam. Dams can change entire eco-systems by stopping fish from reaching spawning grounds, causing mass flooding, and increasing the amount of contaminants in the water (Waldram, 1988). Historically, the destruction of eco-systems through hydroelectric development has affected Aboriginal peoples disproportionately due to their reliance on the land and water for sustenance (Waldram, 1988). David McLaren, a member of the Chippewas of Nawash Unceded First Nation illustrates this point well by observing that “When the dams release water changing the natural flow of the water the fish, literally, get lost and the beaver also get confused which affects the wild rice, and so on” (Our waters, our responsibility: Indigenous



water rights, 2004, p. 8).

During the 1970's, HydroQuebec drafted 'La Grande Projet' which outlined a plan to create a series of hydroelectric dams around the James Bay area that would change the flow of 19 waterways. Inuit and Cree communities in the area protested the development as it would flood 11500km<sup>2</sup> of land that was used for traditional sustenance activities but the project still got built (Ma, Hipel, & De, 2005; Whiteford & Whiteford, 2005). Further hydroelectric projects in the area included local Inuit and Cree communities in the decision making process where they also mounted a strong opposition. Hydroelectric development has also occurred in Manitoba. During the 1970's Manitoba Hydro made plans to harness the power of the Nelson River. There was poor communication between the provincial government, Indian and Northern Affairs and Aboriginal communities which resulted in the destruction of many culturally important lands (Matsui, 2009; Waldram, 1988). A few communities were also relocated so that the land could be flooded. This relocation robbed these communities of the lands and waters that they connected to spiritually, which caused economical and social problems. Even communities that were not relocated have been affected by hydroelectric development in Manitoba (Matsui, 2009). The Tataskweyak Cree Nation has "suffered social and environmental devastation. Water became high in the winter and low in the summer. This has forever affected [their] ability to draw life from the Nelson River" (Our waters, our responsibility: Indigenous water rights, 2004, p. 19). In Manitoba, and in Quebec, the construction of dams has negatively affected the physical and spiritual health of Aboriginal peoples. High levels of mercury in James Bay Cree has been directly attributed to hydroelectric development (Barlow & Clarke, 2002) and changing the flow and level of water has hindered sustenance activities and flooded places that have spiritual significance.

*Climate Change.* Climate change is a long-term, significant alteration in weather patterns that disrupts ecosystems in a variety of ways including changing water (Haines et al., 2006). Aboriginal cultures, especially those in northern Canada, are being threatened by the changes to water, ice, and snow that are currently being experienced. Warmer temperatures have affected the composition, duration, quality and quantity of ice and snow in the region which are important for travel and sustenance activities. Sea levels are also changing, becoming higher in the Inuvialuit Settlement Region and lower in some communities in Nunavut. Sources of fresh water are also scarcer in many regions of the Arctic. Natural sources of fresh water such as brooks and creeks are drying up and rivers, lakes, and ponds have also been observed to be shallower in recent years. According to many Inuit, the taste of fresh water has also changed due to the effects of sedimentation, algal growth and increased salinity. This is causing problems, especially for the elderly population because they prefer fresh water to treated water (Nickels, Furgal, Buell, & Moquin, 2005). Overall, water in the Arctic environment has already started to change as a result of climate change. The close relationship between Aboriginal peoples and the environment means that they are more vulnerable these changes (Furgal & Seguin, 2006).

Aboriginal peoples, especially Inuit, are experiencing direct and indirect health problems as a result of climate change. Inuit have experienced a physical, mental and cultural loss when seasons are missed or shortened (due to warmer weather) and less time is spent out on the land. Cultural practices that are dependant upon water in the form of snow and ice are also being lost due to climate change. Changes in snow composition have limited the practice of building igloos. The loss of sea ice has resulted in less hunting and fishing because the animals are not as healthy, harder to find and ice is thinner, thus the cultural knowledge that goes along with being out on the land risks being lost. Since physical, emotional, mental and spiritual health are all improved by

participating in traditional activities such as hunting, climate change is not only having a negative effect on the environment but also the health of the Aboriginal peoples (Nickels et al., 2005).

### **National and International Policies**

*National Policies.* There are many national policies in place that pertain to water, health and indigenous peoples. The *Canada Health Act's* primary objective is "to protect, promote and restore the physical and mental well-being of residents . . ." (Health Canada, 2010, p. 1). Since culture is a social determinant of health and Aboriginal culture is intricately connected to Mother Earth, in order to meet the primary objective of the *Canada Health Act*, the environment also needs to be protected. Under the *Canadian Environmental Protection Act (CEPA)*, Canada has a responsibility to protect the environment. The *CEPA* is described as "[a]n Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development" (Environment Canada, 2010b). According to the Brundtland Report, sustainable development "meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations Commission on Sustainable Development, 2007). The *Fisheries Act* is an Act which pertains to the protection of the environment in relation to water. Section 36 of the *Fisheries Act* describes that nobody is allowed to directly or indirectly deposit deleterious substances in water frequented by fish (Department of Justice, 2010). Given the examples cited previously regarding the pollution of water by industry, section 36 of the *Fisheries Act* is clearly not being upheld. With regards to Aboriginal health, this is a problem because fish is a traditional food in many Aboriginal nations. Under the Constitution of Canada, the federal government has the responsibility to protect the full range of First Nations water uses such as for fishing, hunting, gathering, trapping, navigation and ceremonies (Droitsch, 2010).

***International Declarations.*** The *United Nations Declaration on the Rights of Indigenous Peoples* is a document that pertains to Aboriginal peoples in Canada. It contains 46 articles that detail the minimum standard of rights to which Indigenous Peoples are entitled. Harmful changes to water such as from industrial activity, hydroelectric dams and climate change violates the rights of the Aboriginal peoples in Canada as outlined by the declaration. Article 8 states that “Indigenous peoples and individuals have the right not to be subjected to . . . destruction of their culture” (United Nations Human Rights Council, 2007, n.p.). Since Aboriginal cultures are so intertwined with the natural world, environmental destruction also destroys culture. When water becomes so polluted or changed that fishing, ceremonies and other traditional activities that use water can no longer be partook, cultural expression is limited. Article 11 explains that “Indigenous peoples have the right to practice and revitalize their traditions and customs” (United Nations Human Rights Council, 2007, n.p.). Many Aboriginal traditions and customs use elements of nature. When traditional Aboriginal waters are polluted, the ability to practice and revitalization of traditions and customs is hindered. Even if industry stops polluting, toxins can persist in an environment for a long time. Article 24 states “Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals, and minerals” (United Nations Human Rights Council, 2007, n.p.). Healing is very important in Aboriginal cultures and many of the tools used to do it, like water, plants, animals and minerals are taken from Mother Earth. When these are contaminated or become extinct, Aboriginal peoples are robbed of the sources they use to heal themselves (Kirmayer et al., 2003).

In the summer of 2010 the United Nations General Assembly passed the motion for the right to clean water and sanitation. A few months later, the United Nations Human Rights Council

also passed the right to clean water and sanitation, making the right legally binding (The Council of Canadians, 2010). This has a great impact on Aboriginal peoples because it will help protect water from pollution and abuse from industry. Another declaration, not yet adopted by the United Nations, is also relevant to the protection of water and Mother Earth. The *Universal Declaration on the Rights of Mother Earth* is a document that was proclaimed by the People's World Conference on Climate Change and the Rights of Mother Earth. It "recognizes that Earth is an indivisible, living community of interrelated and interdependent beings with inherent rights, and defines fundamental human responsibilities in relation to other beings and to the community as a whole" (Cullinan, 2010, n.p.). This is similar to Aboriginal worldviews where identities are connected to natural world. The intent of the *Universal Declaration on the Rights of Mother Earth* is to have it adopted by the United Nations as a companion document to the *Universal Declaration of Human Rights* (Barlow, 2010). If it does get adopted by the United Nations, it will bolster the case of indigenous peoples even further by demonstrating the right of Mother Earth to exist and be healthy.

## **Conclusion**

Water is an important aspect of the health and well-being of Aboriginal peoples because it plays a role in cultural expression and spiritually. Non-Aboriginal perspectives of water only incorporate water's physical properties which have led to the general disregard of how it affects health in ways other than drinking water. There are many Aboriginal communities that have experienced, or are experiencing, ill-health as a result of harmful changes to water from industrial pollution, hydroelectric development and climate change. The Federal Government has many responsibilities to protect health and water and to ensure the rights of Aboriginal peoples through enforcing and upholding national policies and international declarations. Gaining a better

understanding of Aboriginal perspectives on water and how they contribute to overall health and well-being is key to protecting and promoting health.

### **Chapter 3: Methodology**

#### **Research Approach**

This research will use a decolonizing approach because historically, research was done *on* Aboriginal peoples instead of *with* them. It was done solely to satisfy the curiosity of the researcher, not what the community identified as a need (Smith, 1999). As a result, research did a lot of harm to Aboriginal peoples and communities because it was used as 'evidence' to justify colonizing practices and policies. A decolonized methodology strives to include the community in all stages of the research process and to do good and not harm. This research project is very small, therefore not all of the elements of a decolonized methodology were able to be included. A research project that employs all of the elements of a decolonized methodology is initiated by an identified need for the research in a community. The need for the research that I conducted was not expressed to me directly but rather through the literature. Also with limited time and resources, it is impossible to engage with a community, to the extent that I would like. Nevertheless I think that this research will be beneficial because it will provide a perspective on the relationship between water and health that is currently lacking in the health literature. I believe that it is important to include a decolonized approach to the methodology in this honours project because I want to ensure that I create a project that will be useful for communities. I am of British ancestry and I acknowledge that my people were the perpetrators of colonization that did so much harm to Aboriginal peoples. I do not want this to persist, instead I want to demonstrate that even though I am White, I can do research that does not perpetuate colonization.

#### **My Background**

In a decolonized methodology, the researcher acknowledges their background and way of knowing, therefore I will explain how I came to the point of conducting research regarding

Aboriginal perspectives on water and how it influences health and well-being. My learning journey on water issues began at the 2008 Sierra Youth Coalition Sustainable Campuses National Conference in Sherbrooke, Quebec. At the conference, I attended a session on the environmental harms of the bottled water industry. I was incredibly empowered by the session and felt that I had a responsibility to bring the knowledge I had gained back to Dalhousie to try and make the campus bottled water free. I joined up with SustainDal, the largest student run sustainability group at Dalhousie University and formed the SustainDal Water Committee. Our mission is to eliminate the sale of bottled water at Dalhousie University while also raising awareness of water issues and improving access to tap water on campus. The SustainDal Water Committee's first project was to do an assessment of the water fountains on campus. Once we had the results of the assessment we met with different stakeholders on campus in order to see how we could work together to improve them. Though we have not yet succeeded in a bottled water ban, we have brought water issues to the forefront at the university. We initiated the formation of a water sub-committee of the President's Advisory Council on Sustainability, held three tap water/bottled water taste tests, been interviewed on CBC Radio and co-hosted a talk by Maude Barlow. There have been several articles in the Dalhousie media about our work which have started even more conversations on the topic of water issues. Through my work as the leader of the SustainDal Water Committee, I have taken it upon myself to learn about water issues in Canada and around the world. This knowledge has fuelled my passion for water issues and has made me want to apply it to my degree in health promotion.

I originally got interested in water issues facing Aboriginal communities by doing a project on it for a multicultural health promotion class. I wrote a paper that explored how water pollution, hydroelectric development and climate change affect the health and cultural expression



of Aboriginal peoples. What I argued was that, for Aboriginal peoples, access to unchanged natural bodies of water is important for health in a broader sense than just drinking water, they are needed to sustain culture which contributes to physical, mental, emotional and spiritual health. In the paper I also compared and contrasted the *North American Free Trade Agreement* and the *United Nations Declaration on the Rights of Indigenous Peoples*. This paper really opened my eyes to the complexity of water issues. After I had finished writing this paper, I wanted to explore the topic in more depth so I decided to pursue an honours in health promotion on the topic.

In October 2010, I attended The Canadian Water Innovation Lab (CWIL), an unconference for young water leaders in Canada. At the Lab, I took part in experiential learning activities, field tours, interactive dialogue sessions, and met with guest mentors: water resource practitioners, policy makers, activists, educators, and Aboriginal and community leaders who all had an interest in water. Waterlution, the non-profit corporation that hosted the CWIL is a “water learning organization that brings together young leaders – interested or working on water-related topics – for peer-to-peer and inter-generational learning programs” (Waterlution, 2009, p. 1). One of the sessions at CWIL was a session on the topic of Aboriginal Communities and Water. Thirty five participants, Aboriginal and non-Aboriginal, came to together to learn from each other and discuss water issues as they pertain to Aboriginal communities. What struck me the most was that it wasn't water problems that were focused on, it was the importance of water for sustaining culture, just as I had learned through my course paper. I have incorporated my interests in water and Aboriginal culture into this honours project and I hope to do them justice by building on these past learning experiences.

### **Study Design**

The research project sought to understand Aboriginal perspectives on water by asking the question: how does water contribute to overall health and well-being? Four self-identifying Aboriginal peoples took part in this study. Since the purpose of this project was to explore an issue about which relatively little is known, qualitative research methods were used because they are a good way to explore issues in-depth. Semi-structured interviews were used as the method of data collection.

### **Recruitment**

All recruitment for this study was done via email. The recruitment email included a small description of the study and my contact information (Appendix A). The email also employed snowball sampling by having a sentence encouraging recipients to forward the email to anybody who they thought may be interested in participating. Attached to the email was the recruitment poster for the study in .jpeg format (Appendix B). I first contacted someone that my supervisor knew who had expressed interest in taking part in the study. After a week I had not heard back from this person, so I sent an email to the mailing list from the CWIL Aboriginal communities and water group. From this initial email to the mailing list I secured two participants and I also received a number of supportive emails from people who did not meet the inclusion criteria. I sent two follow up emails to the CWIL mailing list one week apart, reminding people that there was still room in the study if they were interested in participating. The first reminder email did not produce any new participants but the third one secured a third participant. After my first interview I asked the participant if he knew of anybody else who would be interested in participating. He said that he did know of someone so I re-sent him information about the study and the recruitment poster which he then forwarded on to his friend. Without my knowledge, this

person posted my recruitment poster on Facebook which is how the fourth participant found out about the study. This participant contacted me over the phone unlike the others whom I corresponded with via email.

### **Data Collection**

Data was collected through telephone interviews with four participants which fit within my goal of having between 3-5 participants. With permission from each of the participants, the interviews were recorded using the recording application on my cellular telephone. In addition to this, I also took notes during the interview. The interviews were between 20-40 minutes in length and were loosely guided by the use of an open-ended interview guide (Appendix C). The audio-recordings of the interviews were transferred to a password protected laptop immediately after the interview. All of the data was stored on a password protected laptop. Names were removed to ensure confidentiality.

### **Participants**

Four self-identifying Aboriginal peoples over the age of 18 took part in telephone interviews in early February 2011. All four participants were from different provinces and territories in Canada; Alberta, Manitoba, Ontario and the Yukon. I had an equal distribution of male and female, urban and rural dwellers and Métis and First Nations peoples. No Inuit took part in this study. All of the participants had both a personal and a professional interest in water.

### **Data Analysis**

After each interview, the audio file was transferred onto my password protected computer and transcribed verbatim. Originally the data analysis was going to be done using a qualitative coding software program, however I found that when I broke the transcripts down into code a lot of meaning was lost because many of the stories told to me seemed to hold a lot of meaning that

could not be captured through extensive coding. Instead of using a computer program, I did my data analysis on paper. After listening to all of the interviews multiple times, I listed all of the prominent words and topics that occurred in the interviews such as Mother Earth, celebration and fishing. From this list of words and topics, I grouped 'like' concepts together to create common themes that emerged from the interviews.

### **Ethical Considerations**

This study was approved by the Dalhousie University School of Health and Human Performance ethics committee. Once someone had contacted me with interest in participating in the study, I sent them the informed consent form (Appendix D). For three participants I sent it to them via email and the other I sent via fax. The informed consent form described the nature of the study and the nature of the participant's role in it. There was a statement that participation was voluntary and could be terminated at any time without penalty. All of the potential risks, discomforts and benefits were also outlined in the form. There was a guarantee that all of the responses will remain confidential. Additional consent was sought if participants agreed to have quotes used in the research report. Participants were given the option of having their real name or a pseudonym attributed to the quotes. Contact information of the researcher and the researcher's supervisor was provided in case the participant had any questions. Participants were also informed of their right to obtain a copy of the written thesis upon the completion of the study. Oral informed consent was sought from the participant before they partook in the interview.

### **Strengths and Limitations**

There are limitations to this research approach. Only people who had access to a telephone were able to participate in the study and only literate people with internet access were likely to be recruited. This research project had no funding, therefore contact through telephone

and email was the most cost-effective way to complete the study. There were some limitations to not doing the interviews in person. It is sometimes harder to build a trust relationship between the interviewer and interviewee when there is no contact in person. I was fortunate enough to have met three of my participants at the CWIL so there may have been more trust than if they were complete strangers. Because the interviews were done over the phone, I could not see the participant's body language so I was not able to respond to non-verbal cues which are an important aspect of communication. Although these may be limitations of this study there are strengths to the methods that I have chosen as well. By recruiting from the CWIL mailing list I targeted some of Canada's leaders in water issues. This proved to be a great resource since all of my participants were very eager to talk about water and had an interest in water on several different levels. The semi-structured interview also was a great method to use to collect data because it allowed the conversation to flow naturally and gave the participants a great deal of control over what they shared.

### **Knowledge Translation**

This thesis will be shared with many different people and groups. A hard copy of the thesis will be submitted to the Dalhousie University School of Health and Human Performance to complete the honours option in the Bachelor of Science in Health Promotion. This copy will be kept at the School of Health and Human Performance office and made available to students and faculty. The study will further be disseminated by doing two presentations on the research; one at the Crossroads Interdisciplinary Student Research Conference and the other at the School of Health and Human Performance graduate seminar on April 11<sup>th</sup>, 2011. In the future I also hope to write a article for publication based on this research. In keeping with the decolonizing methodology, I will also share the findings outside of the university community. A copy of the

written thesis will be sent to all of the participants who requested it. I also plan on sending an electronic copy to Waterlution.

### Chapter 4: Findings

*Water more generally is . . . something that everybody can connect to and there is that visceral feeling of connection with water and I don't think many people in Canada don't connect with water on some level. The connection with the Métis is that economic historical connection, there is also the water environment. Just the sense that you gotta protect the water because it is one of the few things that we put into us directly without, historically without altering. (Kris)*

The purpose of this project was to explore Aboriginal perspectives of how water contributes to overall health and well-being. The central theme that emerged from the interviews was that water is important for Aboriginal cultures and that culture contributes to overall health and well-being. Four sub-themes emerged from this including 1) connection to Mother Earth, and it 2) contributes to Aboriginal identities, 3) health and healing, and 4) reconnection to culture.

#### Connection to Mother Earth

Water was talked about by participants as connecting people to Mother Earth. This connection was talked about in terms of the importance of maintaining healthy water and concerns about harmful changes to water. All of the participants expressed feeling connected to water on a personal and/or spiritual level. This connection with water was also talked about in the context of the interconnectedness of water with all of the natural world. Healthy waters are important for healthy people and healthy environments. Participants stressed the importance of water for their connection to Mother Earth. In the quote below, Frank, a First Nations man from a small village in central Yukon, highlights the importance of water in the Yukon. He draws attention to its necessity for the life of plants, animal and humans and the importance of protecting water.

*My connection with water, well its a very spiritual thing in the Yukon. The water is the most important because it waters the trees, it waters the animals, it waters the human beings and everything that is on land base and that is why it needs to be kept clean. (Frank)*

The following quote by Natalie, a Métis woman from southern Alberta, demonstrates how water acts as a connection not only to the natural world but it also connects people across time and space and to other elements of the world beyond the physical.

*Historically waterways were a very important method of transportation but more I guess along the modern line, water is the way I see water and many of my peers is that its that one component that there is no chance of life without and it is part of a huge part of what is inside of us and it connects us to everything around us. The water is cycled through animals and plants and all over the world, water has moved since the world began and it connects us through time and across spaces and to other animals and plants so its one of the connections that we have that binds us all. (Natalie)*

Vicki is an Anishinabe woman who lives on a reserve in Ontario. Her quote below illustrates how water is the connection to the physical but also the spiritual world as well.

*Our connection to water is our connection to our Mother Earth and is our connection to the sun, is our connection to the our Neebageesis which the moon and our connection to all of creation. (Vicki)*

**Concerns.** Concerns about different threats to the environment, and water in particular were also brought up in all of the interviews. Most of the concerns that arose were about issues of declining water quality. Participants talked about concerns that they had about water and how it related to both the health of the natural world and human health. Frank brought up a number of issues affecting the environment in the Yukon including cyanide contamination from mining, global warming and land erosion; highlighting how it affects the fish.

*Well we have got a lot of mining happening so with the mining is a lot of environmental issues and also they are bringing it cyanide slowly and we don't like that and with global warming there is a lot of erosion happening in the terrain you can see there is a lot of sand and trees being swept in the rivers stuff like that and also it effects the salmon, the silt fills in the rocks and stuff that the salmon need for spawning. (Frank)*

In the Yukon, Frank has observed that the number of salmon is diminishing because of global



warming and the construction of hydroelectric dams. Fish, and salmon in particular are important to health because they are one of the main sources of food. Below Frank explains how hydroelectric dams have a negative effect on fish numbers in the Yukon.

*[They] didn't build a fish ladder for the fish to get over [the dam] so slowly they are cutting the food source off in the Mayo River and they will still come up the Stewart River but the fish are much smaller, not as big as they used to be. (Frank)*

Another thing that Frank observed is that global warming is affecting the ability for people to partake in sustenance activities because the river is not frozen as long as it used to be.

*With global warming you really have to watch what's happening with our water because its meant for consumption, its also meant for travel and its becoming a problem to get upriver to hunt, fish and trap, not so much trapping but with global warming it is getting to be a problem because the river stays open so steady flow and this year we are having a lot of trouble with water in the town contaminating the drinking water and stuff and that's because of silt and stuff in the river . . . it creates a lot of problems for us. (Frank)*

Participants also brought up the topic of compromised water quality and its effects on human health. Frank described how in the Yukon the taste of water has changed and one can no longer drink directly from many lakes and streams. He relates this diminished water quality by stating

*When we drink the contaminated water its going to affect us in the long term and we may get sickness from that water. (Frank)*

Vicki notes that the water quality of Georgian Bay is being compromised during large storms because waste water treatment plants can not handle the increased influx of water so it is handled by dumping of raw sewage straight into the bay.

*That (dumping raw sewage into the bay) does have an impact on our water . . . because we see high bacteria levels and our beaches end up being closed so that is a big concern, . . . [in a]citizens sort of point of view that you know our beaches are closed a few days after a storm where we know that those water treatment systems are overflowing and it makes it very unhealthy not only for us but also the other beaches that are on the mainland*

*that rely on the health of the beaches and the water for their economic activity. (Vicki)*

When asked about concerns around water Kris, a Métis man from an urban centre in Manitoba, brought up the situation of Lake Winnipeg, stating that “[t]here is a lot of danger and a lot of concern that Lake Winnipeg is going through eutrophication and nutrient loading”.

Eutrophication is caused by an accumulation of nutrients in a body of water that causes excessive algae growth, the decay of which depletes the water of oxygen. The impacts of this on health were brought up in relation to economic well-being of people who rely on Lake Winnipeg.

*If you start removing that ability to earn off of a commercial fishery or even to offset some of the cost by fishing for subsistence you start to see that decline in economical status and that will have a direct effect on health. (Kris)*

Kris brought up the point that changes to the environment are not always seen as a negative occurrence. Progress and development are needed to create economic opportunities and to improve quality of life. The Lake Winnipeg East Side Road Project plans to build a road to connect 22 previously isolated communities. When asked if the road construction would impact the environment, Kris replied:

*I think that will definitely impact it but it is also a trade off there is an number of First Nation and Métis communities that didn't have all season road access and so when you start to look at that in terms of economic well-being but also access to services if someone had you know if they had to have their appendix removed to get them out was a lot more of hassle in the spring or the fall than it will be once the road is built. (Kris)*

This section has explored the personal and spiritual connection that water holds to participants, as well as how it contributes to connection with Mother Earth. Health concerns relating to water and were also explored.

### Contribution to Aboriginal Identities

Many participants talked about how water plays a role in Aboriginal identity and culture. Kris brings up the ramifications of the Métis being marginalized through government policies and how it affected people's feelings about identifying with the culture. Although this quote does not pertain to water, in talking with Kris, he prefaced his understandings of water by explaining the history behind his own Aboriginal identity.

*The culture of the Métis has waxed and waned and waxed again in the last few years so essentially the Métis culture had a really high water mark around the 1850s 60s 70s like when the Riel rebellion was happening or the Red River Rebellion which kinda brought Manitoba into Confederation but shortly thereafter with the Manitoba Act and then some of the change and amendments to the Manitoba Act they were sort of marginalized . . . that marginalized group of people ended up in poverty and as Métis some of them didn't look Native so they managed to sneak by without attracting too much attention to themselves. Its sort of an assimilation thing by poverty, they had to survive. In the 20's, 30's, 40's, 50's even up into the 60's people were really ashamed of being Métis, even today they are ashamed of claiming they have any Aboriginal ancestry. We have a culture that was lost, or that was very much underground. (Kris)*

Vicki talked about how reconnecting to that identity that was hidden or lost can be a very positive thing that can even help people with their healing.

*Once you can identify with who you really are then you are more empowered. Finding your spirit name and finding your clan is the biggest thing that you can do for yourself as Anishinabe and the biggest thing that you can do for your healing because that adds to who you are. (Vicki)*

Water can play a part in finding one's identity and reconnecting with culture because it plays a role in many traditional activities.

*In terms of our celebrations sometimes we'll still have canoe races. There is a lot of celebration in my culture and some of the activities that we'll have like I said canoe racing and fun things you know, sometimes [when] we look at it even from an Aboriginal perspective, water is not always serious, there is a lot of fun that happens and I would say the most important things that occur for me in terms of culture and celebration would be those events but also*

*harvesting and fishing and those types of activities are so very very important to keep culture alive to keep those traditional activities. (Natalie)*

One thing that Kris pointed out in a story of the effects of hydroelectric dams and fishing is that traditional activities aren't necessarily explicitly engaged in by people for the purpose of identifying with their Aboriginal ancestry, yet traditional activities are important to hold on to that identity.

*I remember going out one day and we went fishing and we caught a few pickerel or whatever and we had dinner that night which was good and the next day and his boat was in the mud but I remember clearly seeing that he moored his boat in the water and he kinda got off and tied it up and it was fine and when we went out the next day and saw the mud and I was like 'what the hell is going on here' and he said 'well the dam in Saskatchewan probably raised gates a little bit' so the water wasn't flowing anymore and now the water levels dropped by like five feet so he couldn't actually get his boat into the water any more so that day was toast we couldn't fish so that's an immediate impact to the cultural practice. When I was with those guys it wasn't like they were fishing because they were Cree, but I think if you were to take that away it would take part of their Cree-ness away, you know like their ability to practice that traditional life. (Kris)*

In the Anishinabe culture, Vicki explains that there are gendered connections to water.

*Our women the have always been the carriers of the water. Traditionally they are the ones who go to the rivers and the streams and they gather the water for the community and for the people, for the elders, for the children. They also pray for the water in ceremonies so when you actually come to an to an Anishinabe ceremony whatever ceremony it may be it may be a naming ceremony, it may be a sweat lodge, it may be a feast of some sort but it's always the women who take care of the water and the men take care of the fire. (Vicki)*

Vicki discussed how Anishinabe women still have a special connection to water but the role has evolved over time to incorporate the protection of water because of the threats to it.

*My personal main goal is to remind our own women that we have that connection to the water and that we have to start looking after the water because of the amount of threat to it. Before colonialism, before the settlers had come, our role wasn't so much water protection but that is what it has evolved to be and its what a lot of First Nations women are doing across*

*Ontario, Manitoba, Michigan, Wisconsin and Minnesota where our Nations traditionally are. . . . That really is what is moving right now and its not only (Dump) Site 41, its Grassy Narrows, its Aamjiwnaang First Nation and Curb Lake First Nation its all of these different Anishinabe First Nations that are getting up and awakening to what is happening in their own communities and standing up for the water rights of our First Nations. First Nations people never ever once gave up water rights in any of the treaties historically in Canada, we have never given up water rights, water has always been an essential part of every First Nation community. (Vicki)*

Site 41, as referenced by Vicki in the quote above, was an issue where there was a proposed dump to be built over a pristine aquifer. Activism by both Anishinabe and non-Native people, succeeded in stopping the construction of the dump and protecting the aquifer. The growing 'water awakening' of Anishinabe women that resulted from Anishinabe activism around Site 41 has had positive effects by empowering the women and breaking down racial prejudices in the surrounding non-Native communities.

*The non-Native people were not successful until the First Nations women came and it was really more the work of the spirit I guess that made that movement successful because that is what we brought. We brought the sacred fire, we brought the lodge, we brought the ceremonies, we brought the prayers and in doing that we were able to bring together a whole new community of people who would not normally have the chance to be together. We are talking Native people in a predominately White racist society that were able to put down those prejudices and those judgements against one another to work together and became unified as one and work together to protect the water and the environment and also democracy as well in the County of Simcoe and Tiny Township so it was really a great awakening process. (Vicki)*

## **Health and Healing**

In the literature that explores water and health, it is almost always in the context of access to safe drinking water. This stems from the non-Aboriginal one-dimensional view of water that conceptualizes it only in a physical sense. When water and health are seen through an Aboriginal lens, the importance of water to health extends much further, as the following quotes demonstrate. Participants talked about a number of ways that water plays a role in health and

healing. Frank brought up the use of salmon as an alternative to cholesterol medication.

*If the salmon stop coming up on the river then we gonna have to go to our lakes where we get grayling, we get whitefish, we get trout and we are going to have to count on that fish source because fish is very important for your diet, it definitely fulfils what you need in your body level but cholesterol and its a very healthy food and the oils in the salmon are what treat people traditionally but you know you can go to the hospital and get medication an example is Lipitor which is for cholesterol but you can also eat eat salmon which would do the same thing. (Frank)*

He also compared the health benefits of food gathered from the land versus food from the grocery store.

*Well it is natural food from when they are born until they get shot or whatever you know they are eating natural . . . they are not pumped up with steroids cause today they do that with chickens and beef and everything else they pump 'em right up and then put them up on the market from sale. The animals on our land don't do that, they are natural, they drink the clean water, they eat the clean plants which is generated from the water and all that good stuff. (Frank)*

Natalie also pointed out the importance of connection to one's culture for mental and social health.

*I mean culturally having that connection to yourself and what's around you is extremely important for that mental social health side of things. (Natalie)*

Kris and Natalie also both recounted instances where they drew on a body of water for strength and guidance. Kris relayed the story of when he proposed to his wife. For him it was important to do it next to a body of water, referring to it as “reaching out to the stabilizing force to help me ask her”. The importance of being next to a body of water for certain moments in life was also expressed by Natalie.

*The Oldman River is really that body of water for me where I learnt so much but even just going down through one of the parks that line the river valley . . . when I would have a question or something that I really felt was important for me to think about I would go to the mouth of where the St Mary's River and the Oldman River meet and sit and ponder and I usually*

*walk away with some clarity and those are really meaningful experiences at a personal level. (Natalie)*

In all of these quotes, it can be seen that water can contribute both directly and indirectly to physical, mental, emotional and spiritual health.

### **Reconnection to Culture**

Reconnecting with water and culture was another one of the themes that come up in several of the interviews. This reconnection was related back to the disconnection that happened as a result of colonist policies that enforced things such as residential schools.

*Young people are so busy watching TV and playing their iPods and playing their games and stuff, eating cheese you know, its not happening the traditional way and the language also is lost quite a bit, there is a lot of background on that actually, the mission school, kids being taken away and parents being stressed out about it, the introduction of alcohol and the introduction of drugs, all of that stuff ruined the traditional ways so now it is up to us middle aged people to carry it on and try and teach it. (Frank)*

In the Yukon, middle aged people are trying to teach the younger generation the traditional way, however “There is a lot of resistance because of technology, kids aren't interested in traditional knowledge” (Frank). This contrasts with the growing numbers of youth that both Natalie and Vicki are seeing who are reconnecting to their culture.

*With residential schools, with missionaries coming into our communities and telling us that basically we had to be assimilated, we had be Christian, we had to be either Catholic or Protestant, a lot of the things that happened, a lot of the things that manifested out of that was that we lost our language, we lost our culture, we lost our identity and we essentially became oppressed and now we are seeing a strengthening or reemergence of culture, of language but it had to get almost to that very very, that breaking point where it was do or die and I would say that was probably in the early 80's down here where it was it was conflict between Protestants, Catholics, and Traditionalists and we almost lost we almost everything. So now we have had to relearn all of the ceremonies, all of this culture over again and how to do these thing. (Vicki)*

Here Natalie talks about Aboriginal youth reconnecting to their cultures and how water fits into that.

*I guess for my culture as well as many Aboriginal cultures, there is a bit of a generational severing that occurred and a lot of, especially for urban Aboriginal populations, a lot of that connection to the past and what the past might have held for a connection with water its there and it could be accessed but I think but a lot of that is lost and not being passed down which is really sad. I think its really amazing and inspiring to see so many young Aboriginal people reconnecting with what is around them and their culture . . . it is really inspiring to see people reconnecting with water and the land around them and I think that what I find really interesting is to see how people are not separating things, that it is all an interrelated discussion that when we are talking about water, we are talking about the animals and we are talking about the plants and we are talking about the land and its part of the same discussion that's happening and I think the most important piece of that discussion for me is that it is a discussion of respecting the water and respecting everything that uses the water and that relies on it and I mean like I said that extends to the land and to the plants and to other people and its exciting to see that reemergence of awareness and desire to understand in that way. But like I said, a lot of what could have been passed down between generations there were several points in the past couple of generations where that information stopped flowing. (Natalie)*

When asked what sparked this youth reconnection to culture, Natalie replied:

*In a lot of stories, a lot of elders will say that after that period it will be the children who would reconnect and bring back ceremonies that were lost or that people weren't using anymore, weren't following. I don't know what is causing this but it seems consistent that there is this very strong group that really have a desire to reconnect and you know it could be that people are just seeing things going wrong and want something better, and it could be that there is just that inner feeling that we need to, we need to reconnect with to what's meaningful and that water is a big part of that. (Natalie)*

Natalie and Vicki also both emphasized how this youth reconnection to culture begins on a personal level and then it “builds into a desire to interact with people who are reconnecting themselves” -Natalie.

*I think there is that personal piece and that piece that connects you to who you are and to your culture but I think that celebrating and getting together and making those larger connections as a group is really important too. (Natalie)*



Reconnecting with culture can also be a very important aspect of healing from things like addiction and it can contribute to personal growth.

*We are seeing a reemergence of culture because its almost like people had to crash really hard and we see a lot of people who are drug addicts, who are suffering from alcoholism or any sort of physical abuse or anger issues. How they are finding healing is through finding their cultural identity and we see that throughout the Anishinabe Nation in its entirety right now. Their connection to their language and their culture is how they're finding their healing and they are coming to the sweat lodges and they are coming to the lodges and that is why now on [our] First Nation as well as any other nation of Anishinabe that its more acceptable now and almost to a point where being traditional is the stronger side as opposed to being Catholic or Protestant now in our community. Its really really growing and its coming back in a big way. Its really beautiful and exciting to watch and feel when you see your brothers and your sisters and your cousins and your aunts and your uncles all become stronger and empowered because they are finding who they are and that's who we are as Anishinabe and that who we have always been and our connection to water is our connection to our Mother Earth and is our connection to the sun, is our connection to the our Neebageesis which the moon and our connection to all of creation. (Vicki)*

### **Summary of Findings**

Water was talked about in many different contexts throughout the four interviews. These quotes demonstrate that water is very important for both health and connection to culture. It contributes to identity, the connection to Mother Earth and health and healing. Since water is important to culture than it is also an important aspect of reconnecting to culture after many colonialist practices limited cultural expression. From these four perspectives it can be seen that water contributes to overall health and well-being on many different levels. It is understood in a very holistic sense; human health and the health of Mother Earth were rarely separated. Concerns about declining water quality from things like industrial pollution and global warming were expressed by all participants. In the following chapter, these findings will be expanded upon by relating them back to relevant literature, national policies and international declarations related to

water, and its relationship to the health and well-being of Aboriginal peoples.

## Chapter 5: Discussion

This chapter will discuss the findings from the interviews in relation to findings from other studies and explore how the findings relate to the greater body of health literature. The overarching theme is that water contributes to culture and culture contributes to overall health and well-being. Related sub-themes include: water as a connection to Mother Earth, water as a connection to identity and cultural reconnection, and water for health and healing.

### Water's Importance to Culture

All of the participants expressed that they had personal and/or spiritual connections to water. It was found that water is important for identity because it plays a role in many traditional activities and in the case of the Anishinabe, there is a gendered connection to water. All of the participants viewed water in a multidimensional way; discussing its life sustaining properties for all of creation and its importance in traditional activities, spirituality and health. This dynamic perspective on water is consistent with Aboriginal worldviews that are very holistic and interconnected with Mother Earth (Green, 2010). Non-Aboriginal worldviews typically foster the conceptualization of water only in a physical sense (Groenfeldt, n.d.). This was represented by the participants largely through many of their concerns about diminishing water quality. These harms to Mother Earth were largely coming from outside sources that were driven by a one dimensional view of water that does not take into consideration water's role in things like spirituality. This led to participants having to deal with the repercussions of this one dimensional thinking. A clear example of this is Yukon Energy failing to build fish ladders for the salmon which has reduced the number of salmon, a traditional food source, in the river.

There are polices in place that should be adhered to in order to protect water so that it can continue to be used for cultural purposes. The *United Nations Declaration on the Rights of*

*Indigenous Peoples* guarantees a set of rights for all indigenous peoples the world over, including Aboriginal peoples in Canada. Article 11 states that they have the right “to practice and revitalize cultural traditions and customs”. Since some participants talked about how cultural reconnection is happening in many indigenous nations across Canada, it is important to protect water so that this reconnection is not hindered by impairing traditional practices. Article 24(1) states that “Indigenous peoples have the right to their own traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals”. As Frank talked about, failing to install fish ladders is affecting the size, health and amount of salmon, a traditional medicine, in his community. This points to the notion that the full impacts on the health of Mother Nature and humans were not considered in the decision not to install fish ladders next to hydroelectric dams. Nationally, the *Constitution of Canada* also recognizes the responsibility of the Federal Government to protect the full range of First Nations water uses such as for fishing, hunting, gathering, trapping, navigation and ceremonies (Droitsch, 2010). From issues that all four participants brought up, it is clear that the importance of water to Aboriginal cultures is not being fully taken into account. The Federal Government needs to live up to the duties under the *United Nations Declaration on the Rights of Indigenous Peoples* and the *Constitution of Canada* and start taking action to protect water so it can continue to be used for cultural practices.

In 2010, the right to clean water and sanitation, a legally binding right, was declared by the United Nations. This has a great impact on Aboriginal peoples because it will help protect water from pollution and abuse from industry. It also links water's importance to nature and the sustainability of life, a view that the participants also shared. The right to clean water also places more duty on the Federal Government to deal with the lack of clean drinking water in many First

Nations reserves.

### **Culture's Importance to Health**

Culture is one of the twelve social determinants of health (Public Health Agency of Canada, 2010). The subject of the importance of water for identity and reconnecting to culture came up during several of the interviews. Reconnecting to one's culture and identity can be a very positive thing for one's health and healing. Reconnection to culture as a method of healing for Aboriginal peoples is consistent with many different studies. Wardman and Quantz (2005) found that stronger connections to Aboriginal identity were a protective factor against alcohol abuse. Hundleby et. al (2007) found that Aboriginal women ceased engaging in anti-social and criminal behaviour and formed new identities when they started reconnecting with their culture and engaging in traditional activities, some of which likely included water. Green (2010) takes this one step further by suggesting that culture in itself is a form of treatment. She explains how in Aboriginal cultures, engaging in traditional activities such as ceremonies and rituals, which can include water, are important for individual and community healing. This research project had similar findings regarding reconnection to culture as healing such as Vicki's example of how people in her community are finding their healing from things like abuse and alcoholism by reconnecting with culture. The concept of health and culture being interrelated is also recognized by the Public Health Agency of Canada (2010). Therefore health promotion efforts should recognize the importance of water to reconnecting to culture and identity because of its health benefits.

There are several national and international policies in place that are meant to protect and promote the health of Aboriginal peoples. Article 24(2) in the *United Nations Declaration on the Rights of Indigenous Peoples* states that “indigenous individuals have an equal right to the

enjoyment of the highest attainable standard of physical and mental health”. From all of the findings discussed above, it should be clear that water contributes to the physical and mental (as well as emotional and spiritual) health of Aboriginal peoples both directly and indirectly. Due to water's importance to overall health and well-being, it is important to ensure its health as well. In Canada, there is a national policy, the Canadian Environmental Protection Act which pertains to both human health and environmental health. The Act's objective is to protect the environment and human health. The *Universal Declaration on the Rights of Mother Earth*, which will soon be proposed at the UN, is a document that also concerns the environment. It outlines what Mother Earth is, Mother Earth's inherent rights and human obligations towards Mother Earth. It recognizes Mother Earth's right to integral health, the right to water as a source of life and to be free from contamination, pollution and toxic or radioactive waste. This document could be used to bolster the rights of indigenous peoples and protect and promote their health since human health is interrelated with cultural health and environmental health.

The policy documents discussed above do seem to require action on behalf of the Government of Canada to protect water for the health of Aboriginal peoples and Mother Earth. However, Canada initially was one of only four countries who voted against the *Declaration on the Rights of Indigenous Peoples*, only deciding to support it three years after it was passed by the UN General Assembly. Canada was also one of the few countries who abstained from voting on the *Declaration on the Right to Water and Sanitation*. This is concerning because Canada's prior voting tendencies suggest that they will not vote in favour of the *Declaration on the Rights of Mother Earth*. It also suggests that they may not be quick to act to protect and promote the health of Aboriginal peoples. The findings from this study demonstrate the importance of water to the health and well-being of Aboriginal peoples. Hopefully this study will help to change the tide and

have water in the context of health looked at beyond access to safe drinking water.

### **Strengths and Limitations**

One of the limitations of this study is that my position as a non-Aboriginal person doing Aboriginal health research may have shaped questions that led participants to respond in a certain way. Another limitation is that one of the three Aboriginal sub-groups, Inuit, was not represented. The small sample size could also be viewed as a limitation because data collection did not reach saturation. I believe the sample size to actually be a strength because the study was exploratory in nature and it allowed for in-depth interviews. It should be noted that the findings are not representative of all Aboriginal perspectives on water. They are also not meant to be generalized to the entire Aboriginal population in Canada however, as can be seen from the four participant interviews, there are some shared perspectives and experiences.

### **Directions for Future Research**

This study demonstrated the importance of incorporating Aboriginal perspectives on water into further Aboriginal health research. Future research should do more interviews with Aboriginal peoples across Canada to gain a more in-depth understanding of how water contributes to overall health and well-being. In Aboriginal communities that are experiencing water issues, representing their views on how it affects culture and health may be a powerful advocacy tool. I found the connection between water and Aboriginal identities fascinating and a topic that would be very interesting to explore further.

### **Conclusions**

The bulk of health research about water has been done in the context of access to safe drinking water. This is a result of the dominant non-Aboriginal perspectives that shape the research which conceptualize water only in a physical sense. This research went beyond these barriers by looking at health through an Aboriginal lens to explore how water contributes to overall health and well-being. It was found that water is important for Aboriginal cultures and that culture contributes to overall health and well-being. Four sub-themes emerged from this including that water is seen as a connection to Mother Earth, and it contributes to Aboriginal identities, health and healing and reconnection to culture. The importance of water means that Mother Earth needs to be kept healthy in order to protect and promote the health of Aboriginal peoples. This should be done by recognizing the importance of water to Aboriginal cultures and acting on national and international policies put in place to protect indigenous rights, human health and the health of Mother Earth.



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**Appendix A:****Recruitment Email to the Canadian Water Innovation Lab Mailing List**

Hello,

My name is Gillian and I participated in the Aboriginal Communities and Water Session with all of you in October at Waterlution. That session had such a profound effect on me that I have sought to learn more about the topic by incorporating it into an honours project that I am doing as a health promotion student at Dalhousie University. My project will explore the relationship between health and water by seeking to understand Aboriginal perspectives on water. My research plans to ask: how does water contribute to overall health and well-being? I will be conducting telephone interviews with 3-5 self-identifying Aboriginal peoples over the age of 18. The project has been approved by the Dalhousie School of Health and Human Performance Ethics Committee.

I was wondering if you or anybody you know would be interested in participating in a telephone interview for my project. It will take approximately an hour to complete. Attached is a recruitment poster for the project. If you have any questions or are interested in participating, please contact me by email at [g.pritchard@dal.ca](mailto:g.pritchard@dal.ca) or by phone at 613-985-3359.

Thank you,

Gillian Pritchard



**Appendix B: Recruitment Poster**

**Aboriginal Perspectives  
on Water:  
How does Water Contribute to  
Overall Health and  
Well-being?**

**Are you interested in participating in a  
telephone interview on the topic of  
water and health?**

**The telephone interview will be held  
in late January or early February**

**It will take approximately  
an hour to complete**

**You are eligible to participate if you  
are over 18 and self-identify as Aboriginal**

**If you are interested  
in participating,  
please contact  
Gillian Pritchard  
g.pritchard@dal.ca  
1-613-985-3359**



### **Appendix C: Interview Guide**

#### **Personal**

Tell me about a body of water to which you feel connected

- Vacation, played in as a child, cultural significance, etc

Tell me a story that illustrates the importance of water to you

What is the importance of water in your culture?

- Daily living, transportation, ceremonies, recreation, spiritual . . .
- How does water play a role in the cultural activities that you engage in (if any)?

#### **Environmental**

Can you recall a time when unsafe/polluted/diverted water interfered with the ability to engage in cultural activities?

1. How did this affect you/your community?

#### **Community**

Tell me about some water related concerns past or present in your community

- How did these concerns affect the relationship with water/ water related cultural activities?
- How do you see these concerns as affecting people's health?
- If no concerns, does the community actively work to make sure water continues to meet daily and cultural needs?

#### **Generational**

Have traditional cultural uses of water changed? If so why do you think so?

Have ways of knowing water changed over generations? If so why do you think so?

**THANK YOU!**

**Appendix D: Consent Form**



**Consent to Take Part in Research**

**Study Title:** Aboriginal perspectives on water:  
How does water contribute to overall health and well-being?

**Student Researcher:** Gillian Pritchard  
School of Health and Human Performance  
Dalhousie University  
6230 South Street  
Halifax, Nova Scotia  
B3H 3J5

Email: [g.pritchard@dal.ca](mailto:g.pritchard@dal.ca)  
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School of Health and Human Performance  
Dalhousie University  
6230 South Street  
Halifax, Nova Scotia  
B3H 3J5

Email: [dhmartin@dal.ca](mailto:dhmartin@dal.ca)  
Phone: (902) 494-7717

**Introduction**

Thank you for your interest in taking part in this study. I am doing this research project to fulfil the honours option in my undergraduate degree in Health Promotion at Dalhousie University. Before you complete the interview, I will provide you with information about the study, some risks and benefits, detail your confidentiality, and answer any questions or concerns you may have. Your participation in this study is completely voluntary and you are free to leave it at any time. If you have any questions at any point please do not hesitate to ask.

**Purpose of Study**

The purpose of this study is to learn how Aboriginal perspectives of water contribute to overall health and well-being.

**Description of the study procedures:**

All participants in the study will be asked to participate in one telephone interview. The telephone interview will all be conducted by Gillian Pritchard. In the interview you will be asked about your relationship with water and how it contributes to your overall health and well-being.

With your permission, the interview will be recorded using a digital recorder. If you do not wish to have the interview recorded, I will take written notes.

If you agree to participate in the study, you will need to provide consent for your participation by giving oral consent which will be recorded using a digital recorder. Once the study is completed, you will have the opportunity to receive a final copy of the report.

**Who can take part in the study?**

Any English speaking, self-identifying Aboriginal (First Nation, Metis or Inuit) person over the age of 18 can participate in this study.

**Who will be conducting the research?**

I, Gillian Pritchard will be conducting the research as part of my honours project in Health Promotion at Dalhousie University.

**Length of time:** Interviews will take approximately one hour to complete.

**Possible risks and discomforts:**

There are no direct risks from taking part in the study; however some of the things talked about in the interview may be emotional for you. For example, we may talk about the loss of traditional culture or personal health issues. If you become upset at any point during the interview, we can take a break from the process, or stop the interview completely. You do not have to answer any questions that make you feel upset or uncomfortable, and you may leave at any point and for any reason throughout the interview. If you decide during the interview that you do not want to take part in the study, all your responses will be deleted and not used in the study.

**Possible benefits:**

There will be no direct benefits of taking part in this study.

**Compensation**

Participants will not receive financial compensation for taking part in this study.

**Anonymity/Recognition**

It cannot be guaranteed that you will remain anonymous, since someone may notice that you have taken part in the study, but all the information will remain confidential. Since all of the information you provide during the interview is owned by you and/or your community, you will have the opportunity to be recognized as a contributor to the research. You have the option to have your name appear in the “acknowledgements” section in the publication and future presentations. All identifying information will be removed from the body of the publication and presentation completely. If you would like your name to appear in the “acknowledgements” section, a Research Agreement will be read to you, and your agreement or disagreement will be recorded by giving oral consent. You will have two weeks following the interview in which to change your mind about having your name acknowledged.

**Confidentiality**

All the information you provide during the interview will be treated as confidential. The information you give during the interview will not be discussed with anyone else, and the notes and audio-recordings will be kept in a locked cabinet and on a password protected laptop computer. The only people who will have access to the information are myself and my supervisor, Debbie Martin. I will be the one responsible for keeping the data secure. Although all information talked about during the interview is kept confidential, I must report any suspected cases of child abuse or neglect, or the abuse or neglect of an adult in need of protection to the nearest social worker, or the RCMP.

**Problems, concerns or questions:**

If you have any questions about this study, or your role as a participant in the study, please contact Gillian Pritchard by telephone at 613-985-3359 or by email at [g.pritchard@dal.ca](mailto:g.pritchard@dal.ca)

You may also contact Debbie Martin, my supervisor by telephone at 902-494-7717 or by email at [dhmartin@dal.ca](mailto:dhmartin@dal.ca)

If you wish to speak to someone not involved in the study who can advise you on your rights as a participant in a research study, you can contact Dr. Fred McGinn, Interim Director, Dalhousie School of Health and Human Performance, for assistance by phone (902) 494-1187, or email: [fred.mcginn@dal.ca](mailto:fred.mcginn@dal.ca).

Thank you for your time.

**YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM**

**Aboriginal perspectives on water: How does water contribute to overall health and well-being?**

- |  |         |        |
|--|---------|--------|
| 2. I have read the consent form/had it read to me                          | Yes [ ] | No [ ] |
| 3. I have had the opportunity to ask questions/discuss the study           | Yes [ ] | No [ ] |
| 4. I have received sufficient answers to all of my questions               | Yes [ ] | No [ ] |
| 5. I have received enough information about the study                      | Yes [ ] | No [ ] |
| 6. I understand that I am able to withdraw from the study                  | Yes [ ] | No [ ] |
| a. At any point during the interview                                       |         |        |
| b. For any reason  |         |        |
| 7. I agree to have my responses audio recorded                             | Yes [ ] | No [ ] |
| a. If no, the interviewer will take written notes                          |         |        |
| 8. I consent to having my parts of my responses quoted in the final report | Yes [ ] | No [ ] |
| 9. I understand that it is my choice to take part in this study            | Yes [ ] | No [ ] |
| 10. I agree to take part in this study                                     | Yes [ ] | No [ ] |

For the interviewer,

I have explained this study to the best of my ability to the participant. I believe I have answered all questions to the best of my ability that the participant had. I believe the participant fully understands what is involved in being in the study, any potential risks they might endure, and that the participant has freely chosen to participate in the study.

**Research Contributor’s Agreement for Interviews**

*The following agreement is read to the participant by the interviewer. The participant's their consent will recorded using the digital recorder.*

I, \_\_\_\_\_, acknowledge that I have taken part in the research project titled: Aboriginal perspectives on water: How does water contribute to overall health and well-being? As a participant, I agree to:

- Have my name acknowledged in the publication and future presentations. Your name will be acknowledged in the “acknowledgements” section of the final report.

Yes [  ] No [  ]

- I would like to receive a copy of the completed report.

Yes [  ] No [  ]

If yes, please provide your contact information (address of e-mail address) to which you prefer the report to be sent to you.

\_\_\_\_\_.

\_\_\_\_\_.

\_\_\_\_\_.