"Ogitchidaa", An Indigenous Perspective on Research Sovereignty in Canada: Anishinaabe, Nēhinan (Cree), Saulteaux and Red River Métis voices from Manitoba and Saskatchewan

By

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Abstract

There are many barriers Indigenous people and communities experience when trying to conduct research and access data that is about them. As Indigenous people work towards sovereignty in their governance and economics, having sovereignty in data and research is increasingly important as research and data are important for decision-making, funding, and policy development. Identifying what barriers exist, why they exist, and how Indigenous people can be supported to overcome them is how to achieve Indigenous Research Sovereignty. Individual Semi-structured interviews and a group discussion with Indigenous academics, students, community members, and those involved with Indigenous organizations was the qualitative (Western) method used to better understand the needs Indigenous communities have around data and research. Through Two-Eyed Seeing, Western Methods were informed by Indigenous methods of storytelling, testimonials, personal reflections, narratives, envisioning, and sharing circles to reflect the Indigenous focus of this research and ensure knowledge shared is presented appropriately. The barriers to Indigenous Research Sovereignty identified are hesitation and mistrust that stem from past experiences with research and ongoing impacts of colonialism; power dynamics and vulnerability; differing worldviews and research approaches; misunderstanding and miscommunication; pan-indigenizing and lack of representation; institutional barriers and systemic oppression; the reality that Indigenous needs around health and wellbeing are not being met; and, how there are not enough opportunities or resources for Indigenous people to conduct research. Supports to Indigenous Research Sovereignty are following Data Sovereignty and research principles; awareness, education, and training; inclusion, indigenization, and decolonization of institutions; celebrating cultural diversity; inclusion of culture and protocol in research; the use of Indigenous and community-led research; the recognition of Indigenous resurgence and promotion of Indigenous sovereignty; and the development of partnerships between allies, institutions, and communities. Truth and reconciliation are support for Indigenous Research Sovereignty because it is about supporting Indigenous people and addressing the barriers they face, by understanding the truths behind them. Indigenous people must be the ones leading the way for research and sovereignty, and they must be the ones who determine how they want to be included in colonial spaces.

Acknowledgments

I would like to begin by acknowledging that all this research was conducted on the beautiful lands of Treaty 1 and Treaty 6. Treaty 1 is the traditional territory of the Anishinaabeg, Cree, Oji-Cree, Dakota, and Dene Peoples, and the homeland of the Métis Nation. Treaty 6 is also the homeland of the Métis Nation as well as the traditional lands of the Cree, Dakota, Nakota, and Saulteaux Nations. Treaty 1 has been my home my entire life and I also have family that came from Treaty 6. I have immense respect and appreciation for the people who were here first and the ways that they have cared for the land respectfully and sustainably. Understanding the lands that I live on and off, and their history is how I connect with the environment, and it is how I locate my place in the world as a woman, a mother, a partner, a daughter, a sister, and a professional.

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Dedication

I dedicate this work to my daughter, Ivy. I hope that this work inspires and encourages you to be true to who you are and to follow your own path, whatever that path may be. Life is sometimes hard and there are many barriers and challenges that you will have to face. I want you to know that there are many people out there who will always love and support you, no matter what you choose to do or who you choose to be.

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1 Introduction

1.1 Background

Indigenous Peoples are isolated from data and its uses (Walter, Lovett, et al.; Schnarch; Carroll et al.). This alienation causes harm, exploitation, oppression, and misrepresentation making the development of policies and implementing community-based programming politically challenging (Walter, Lovett, et al.; Schnarch). Standardized data collection fails to reflect the diversity among Indigenous Nations, nor does it highlight the realities faced by these communities (McBride et al.; Carroll et al.; Walter, Lovett, et al.; Walter and Suina). Research that focuses on the "5 Ds of data" (difference, disparity, disadvantage, dysfunction, and deprivation) perpetuates negative stereotypes of communities while undermining their strengths and resilience; and because of this disconnect, data remains of little use for local and regional Indigenous decision-making (Pholi et al.; Walter and Suina). The context in which data is collected (who collected it when they collected it, why they collected it, and how it was collected) controls social narratives, influences policy development, and decision-making (Johnson-Jennings et al.). Those who control the narrative—and therefore hold the power—are generally not Indigenous and often leave out important context giving rise to the legacy of harms that have been perpetuated by governments and other outside interests when it comes to research and the widespread misunderstandings that have placed marginalized groups (including Indigenous communities) at risk (Walter and Andersen, "Conclusion: Indigenous Peoples and Statistics"; Schnarch; Carroll et al.; Walter, Lovett, et al.; W. A. Wilson). These power imbalances created by those who control the data (and the associated narrative) and the legacy of Western research paradigms have been harmful to communities (Walter and Andersen, "The Paradigm of Indigenous Methodologies"; Walter and Suina; Walter, Kukuai, et al.).

The long-lasting impacts of colonialism have created systemic inequalities that continue to impact Indigenous Peoples (Marmot; Reading and Wein). The COVID-19 pandemic exacerbated inequalities and made it apparent that Indigenous communities are disproportionately affected due to a lack of access to resources and information crucial to pandemic responses (Power et al.; Richardson and Crawford; Lavoie et al.). The disparity and inequity are of course real for COVID-19, but unlike previous pandemics, social media and proactive leadership have enabled communities to respond in much more effective ways than in past pandemics, arguably mitigating this inequity in the process (Walters et al.).

Forced dependency and a lack of access to data and resources are barriers communities worldwide are overcoming to assert control over their communities in a movement described as 'Indigenous Data Sovereignty' (Walter, Kukuai, et al.; Walter and Suina; Kukutai and Taylor; Carroll et al.). Indigenous data sovereignty is a form of resistance and self-determination; it is defined as "*the rights of Indigenous*

Peoples to determine the means of collection, access, analysis, interpretation, management, dissemination and re-use of data about the Indigenous Peoples from whom it has been derived, or to whom it relates" (Walter et al., p. 146). Data that is created from sovereignty movements not only reflects the world views, values, knowledge, and traditions of Indigenous people but also represents an important part of Indigenous sovereignty and promotes collective well-being (Foxworth and Ellenwood; Kukutai and Taylor; Walter, Lovett, et al.; Hudson et al.). Movements around Indigenous data sovereignty have only begun to have impacts since 2015 which largely focus on research (Hudson et al.). Indigenous data sovereignty arguably represents one element, albeit a critical one of the larger concept of Indigenous research sovereignty (Hudson et al.). Indigenous research sovereignty focuses on Indigenous ways of knowing, Indigenous methodologies, protocols and traditions, and responses to Indigenous people's needs and desires moving forward; while also addressing colonial legacies and past experiences with research and researchers (Williams et al.; Díaz Ríos et al.). Indigenous self-determination in research is an expression of Indigenous research sovereignty (Hudson et al.). This expression is also reflected in the right Indigenous people have to data through Indigenous Data Sovereignty and Indigenous Data Governance (Hudson et al.; Kukutai and Taylor; Foxworth and Ellenwood; Lovett et al.). Indigenous Data Governance refers to stewardship, as well as any processes that are needed for Indigenous people to take control of their data; it is an important part of Indigenous Data Sovereignty (Carroll et al.; Schnarch). Data also includes knowledge as Indigenous knowledge has been used by researchers as data; therefore, when talking about data governance it includes by extension knowledge governance as well (Latulippe and Klenk). Indigenous researchers, in the interest of using their knowledge both as data and as a basis to develop research projects reflective of their lifeways often push against quantitative methods, which are still the basis of most conventional Western research and data collection (Walter and Andersen, "The Paradigm of Indigenous Methodologies"; Walter and Suina; Walter, Kukuai, et al.; Hudson). Yet, these quantitative methodologies are often necessary for programming, funding, and grant applications and are still generally viewed as more "acceptable" forms of knowledge and data (Walter and Andersen, "Conclusion: Indigenous Peoples and Statistics"). Although the Canadian government has made attempts to include Indigenous people in research development, research institutions, and universities have still not yet meaningfully incorporated Indigenous data sovereignty into their programs and the decolonizing of academic spaces has still not been achieved (Díaz Ríos et al.).

To understand decolonization, it is important to look at the impacts of colonization and to acknowledge and know that Indigenous people had self-determination before colonization; as well as their lands, their struggles, and their contributions as intellectuals and activists in society (Arsenault et al.; Tuck and Yang). Self-governance and self-determination more broadly represent the underlying paving stones for achieving social justice, as communities should have their own political structures, resources,

and ability to make decisions at the local and regional levels (Bowie). Indigenous self-determination includes governance; it is the rights Indigenous people have to choose their priorities, practices, and forms of government (Bowie). Indigenous self-governance refers to the formation and administration of a body that governs Indigenous people, policies, resources, land, and programs; the existence of which is evolving and must be agreed upon by federal and provincial governments (Henderson).

Land claims are the main way Indigenous communities have currently achieved self-government but, these claims only include Inuit and First Nations people who are part of a Community and exclude those who are not part of a community, and Métis people as well (Henderson). According to colonial law, land claims are about communities achieving self-government by changing the structures of their governance; some communities are doing this by using heredity chiefs, longer terms rather than 2 years, owning education systems, establishing courts, and working on their childcare laws and so on (Henderson; Bowie).

Aside from treaties, Métis people were offered scrip to settle land claims which entitled them to a homestead (Sawchuk). It is argued persuasively that land claims (and scrip) and treaties still enable governments to control community priorities and activities, despite being grounded in reconciliation; and that claims of self-declaration are ironic because it necessitates you declare yourself as "otherness" defined by the government (Rodon; Sawchuk). Larry Chartrand, a citizen of the Métis Nation (Michif), professor emeritus in the Faculty of Law at the University of Ottawa, and a former director of the Indigenous Law Centre at the University of Saskatchewa, argues that Métis people shouldn't be obtaining justice or asserting their rights in the colonial framework of Canada because of the necessity to follow steps and provide proof dictated by the Canadian government and laid out in Section 35 of the Constitution (Chartrand). Métis and Indigenous self-governance are better off establishing themselves through the international doctrine of human rights than through Canadian (colonial and oppressive) legislative systems (Chartrand). Decolonization is also important as it involves the recognition of Indigenous lands, knowledge, voices, and sovereignty (Datta).

Indigenous scholars and communities engaging in research, is a form of decolonizing academia and research, as it pushes against colonial agendas by moving towards goals of social justice, and engaging research that has Indigenous interests at heart (Smith, 2021). Indigenous research agendas are very much in the interest of social justice and are critical when it comes to addressing inequalities through the development of Indigenous methodologies, among other responses (Walter and Andersen, "Conclusion: Indigenous Peoples and Statistics"; Smith, "Twenty-Five Indigenous Projects"). Indigenous scholars are increasingly interested in the importance of Indigenous data governance and Indigenous data sovereignty as it relates to health, policy, self-governance, self-determination, reclamation, social justice, and

sovereignty (Lovett et al.; Smith, "Twenty-Five Indigenous Projects"). Even with the development of ethics regulations and protocols by individual Indigenous communities (Murveit et al.); and an increase in research projects that are participatory, community-based, and Indigenous-led, the decolonization of research spaces has still not yet been achieved according to researchers (Díaz Ríos et al.; Gaudry and Lorenz).

In Lightfoot's 2016 article, "Revealing, reporting, and reflecting: Indigenous Studies Research as praxis in reconciliation projects", the author works with the past present, and future to go towards desire-based research (Tuck, 2009). Lightfoot's 3 R's also represent the past present, and future, and are crucial for improving damaged relationships between Indigenous peoples and colonial governments and are also tools that can be used to enact social change (Andersen and O'Brien; Lightfoot). As put by Audre Lorde, "*For the master's tools will never dismantle the master's house. They may allow us to temporarily beat him at his own game, but they will never enable us to bring about genuine change*" (Lorde, p. 27), a statement which speaks to the reality of on-going negotiations between Indigenous communities and colonial governments. It is essential to reflect on this and look at what other countries are doing to achieve similar goals and how they look toward each other for ideas; by doing this, alliances are often formed, which lay the foundations of powerful movements of Indigenous Sovereignty, acknowledgment, and self-governance (Kukutai and Taylor; Lightfoot).

Indigenous sovereignty is not something easily defined (Shrinkhal). In Canada, Indigenous sovereignty refers to the rights of Indigenous peoples to their lands, cultural identity, spirituality, languages, social and political systems, and legal structures; it includes traditional knowledge and belonging to a nation, tribe, and community which is separate and regardless of any governing nation-states; it refers to worldviews and the relationships people hold with the land; and, it acknowledges the past but more importantly looks to the future so that Indigenous people can thrive (Shrinkhal; Indigenous Environmental Network; Karim; Johnson-Jennings et al.). As stated by Hudson et al. (2023), "Indigenous Peoples' right to sovereignty forms the foundation for advocacy and actions toward greater Indigenous self-determination and control across a range of domains that impact Indigenous Peoples' communities and cultures," (p. 1). Movements around Indigenous sovereignty and resistance have existed for centuries (Smith, "Getting the Story Right, Telling the Story Well Indigenous Activism, Indigenous Research"). The necessity of these movements continues to grow and there are many ways they are occurring; alliances among Indigenous groups; increased numbers of Indigenous scholars; growing Native and Indigenous studies departments at universities; as well as other social movements such as Missing and Murdered Indigenous Woman, Girls and 2-Spirts People (MMIWG2S), Every Child Matters, Jordan's Principle, Idle No More, Ground Work For Change, Indigenous Work Group for Indigenous Affairs

(IWGIA) and the 'Land Back' movement are some of many important initiatives that aim to bring awareness to the inequalities experienced by Indigenous people and to bring about social and environmental justice (Kolopenuk; Moreton-Robinson; Smith, "Twenty-Five Indigenous Projects").

In addition to Indigenous movements around sovereignty, social justice, and data and research, there are a number of Calls to Action that relate to Indigenous data and research in the Truth and Reconciliation Report for Canada, these include: numbers 39 (the development of a national plan to collect and publish data about sovereignty, the victimization of Indigenous people, as well as data about family violence victimization and homicide), 55 (annual reports from all government levels on data that the National Council for Reconciliation request so they can determine the progression towards reconciliation), 56 (a call to the prime minister from the National Council for reconciliation to issue an annual report on the "State of Aboriginal Peoples" which outline their plans for advancing reconciliation), 65 (A call from the Social Sciences and Humanities Research Council, Indigenous peoples, post secondary institutions, educators as well as the National Center for Truth and Reconciliation to establish a national research program to increase the understanding of reconciliation with multi-year funding) and 78 (A call for the commitment from the government of Canada to making $10 million in funding contributions over a seven year period towards the national Center of Truth ad Reconciliation, and additional amounts for communities to assist in research projects around the histories of their residential school experiences and how they have been involved in truth, healing and reconciliation) are particularly relent to data and research sovereignty yet none have been reconciled to date ("Truth and Reconciliation Commission of Canada: Calls to Action"; Jewell et al.).

The United Declaration on the Rights of Indigenous Peoples (UNDRIP) is another document that highlights the rights of Indigenous peoples to self-determination and self-governance over their people, resources, and lands (Kukutai and Taylor; Walter and Suina; Hudson; United Nations General Assembly; Davis). These rights to self-governance also include all data that are relevant to Indigenous people (Walter and Suina; Lovett et al.; Davis). In addition to self-governance and self-determination, social justice is concerned with equality and addressing the structural racism that our society is built on; a structure that perpetuates power imbalances (Hudson et al.). UNDRIP speaks to the rights Indigenous Peoples have to control their data (Article 231) as well as research ethics and Indigenous Cultural Intellectual Property Rights (ICIP) (Carroll et al.). Within UNDRIP Articles 3, 4, 5, 15(i), 18, 19, 20(i), 23, 31, 32, 33, 38, and 42 all relate to the right Indigenous people have to data that is about the people, lands, resources, and ways of life (Hudson; Davis). Although some self-governance agreements have been made Indigenous people still live and must operate under the nation-state's governance, and function within the structures and policies that exist; meaning, proposals made for funding must include Western

research approaches and proposal guidelines are strict and don't include Indigenous approaches to policy, programming, and development (Harding et al.; Díaz Ríos et al.).

1.2 Rationale

There is a significant amount of scholarly literature that discusses the meaning and importance of Indigenous data sovereignty and governance but there is a lack of dialogue about Indigenous research sovereignty. Consulting the literature yields very little information about Indigenous research sovereignty. There are only two articles that even use the term "Indigenous Research Sovereignty", both published in the spring of 2023, long after the inception and execution of this research project. Although little information exists about Indigenous research sovereignty there is a bountiful amount of information on topics that relate to it such as Indigenous methods and methodologies, Indigenous-led research, Indigenous data sovereignty and governance, and Indigenous sovereignty and resurgence. What is also missing is a dialogue that connects these concepts and ideas and an examination of how they relate to Indigenous research sovereignty.

A critical content analysis and synthesis conducted by Diaz Rios et al in 2020 looked at how institutions and organizations can conflict with commitments by governments to involve Indigenous Peoples more holistically—and not just symbolically—in research through decolonization. However, Dias Rios et al (2020) ultimately found little progress had been made, "*While the acknowledgment of Indigenous knowledge and participatory research in ethics regulations, the establishment by Indigenous communities of their regulations, the development of a critical mass of Indigenous scholars, and the establishment of add-on programs and Indigenous academic units may signal some progress, these strategies have not achieved the decolonization of research in ways that equally value Indigenous knowledge, languages, worldviews, philosophies, and aspirations*" (p. 411). Numerous Indigenous scholars are working towards decolonizing academic spaces and indigenizing research methods and methodologies, but there aren't as many discussions about the role of communities who are also striving to achieve this (Warrior; Moreton-Robinson; Innes, "Introduction: Native Studies and Native Cultural Preservation, Revitalization, and Persistence"; Andersen and Walter; Smith, "Twenty-Five Indigenous Projects"; Andersen and O'Brien); this relates to a lack of resources, technology, support, and the long-lasting impacts of colonization that prevent communities from conducting research (Winter and Boudreau).

One of the focuses of this research is progress, as put by Lightfoot, "*reconciliation must be promoted within the whole society, not only within Aboriginal communities"* (Lightfoot, p. 301). We are all treaty people; reconciliation is a two-way street that involves effort from both Indigenous and non-Indigenous peoples because it cannot be done in isolation. Self-governance and self-determination are

particularly relevant now, as these are major topics of the Truth and Reconciliation Commission of Canada, (TRC) 'Calls to Action', the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), as well as the Principals of OCAP (Data Sovereignty principles that stand for Ownership, Control, Access, and Possession) and Data Governance Principles: CARE (Collective Benefit, Authority to Control, Responsibility, and Ethics).

Inherent to understanding the needs of Indigenous communities is responding to said needs and collaborating to come up with practical solutions (Murveit et al.). To do this, it is important to question the reality of the data collected "on" Indigenous People and question who this data is really for (Walter, Kukuai, et al.). Indigenous-led research is beginning to emerge at higher rates around environment, health and wellness, government, politics, etc. in response to the need to come up with solutions; however, there is still the question of how Indigenous-led are these projects. Who is initiating them? Who benefits from them? If they have been successful how was this achieved? Are there guidelines? If there are what are they and if there are not should there be? And more generally, how do Indigenous-led research and Indigenous research sovereignty relate to Indigenous Sovereignty? There are still many questions about Indigenous research that need answers and therefore this research aims to start a dialogue about what barriers exist for Indigenous people and communities who want to conduct research, why those barriers are there and most importantly what the alternatives are and supports that enable Indigenous people to take control over research about them, their lands, and their futures.

There is a gap in the literature specifically around Indigenous research sovereignty. Understanding the barriers to research and the support needed for Canadian Indigenous people and communities to conduct research for themselves is an important part of the Truth and Reconciliation Commission of Canada, (TRC) 'Calls to Action', the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). This research involves conducting a series of interviews to understand the experiences Indigenous people have had with accessing and collecting data and how this relates to Indigenous research sovereignty, data sovereignty and data governance. The need for this understanding is apparent in the lack of information available on Indigenous research sovereignty and the absence of any definition for it.

1.3 Goal and Objectives

The overall goal of this research is to explore the barriers and supports to Indigenous Research Sovereignty in Canada and how they have evolved. The objectives for achieving this goal are as follows:

1) Document experiences Indigenous people and communities have had around conducting research.

2) Gain an understanding of what barriers exist for Indigenous people and communities conducting research.
3) Determine whether and how Indigenous research sovereignty is currently being addressed.
4) Identify how Indigenous research can be supported and ideas for mobilizing it.

1.4 Research Design

The research area for this project is Canada and more specifically the prairie region. The Interview participants chosen for this research are Anishinaabe, Nēhinan (Cree), Saulteaux and Red River Métis people from Manitoba and Saskatchewan. The people being interviewed were identified based on three cohorts: Indigenous Scholars and students who conduct research related to sovereignty; Community Researchers who have been involved in research projects in their communities; and Indigenous People who work in Indigenous organizations and institutions. Using interviews was the most appropriate method for this research as using interviews is a way of exposing truths (Czyzewski). Truth goes hand in hand with reconciliation, which is a movement that the Canadian Government, and other governments, as well as organizations around the world, are using to address social inequalities towards Indigenous peoples.

Indigenous methods and methodologies are being used to inform the Western research approaches used in this research. The Western methods used will be done in a way that reflects the Indigenous methods of storytelling, testimonials, personal reflections, envisioning and sharing circles (Smith, "Twenty-Five Indigenous Projects"). The reason Indigenous methodologies are not being used as the main methods for this research is because Indigenous methodologies are intended to be used by Indigenous people and are grounded in the understanding of relational accountability (S. Wilson); non-Indigenous researchers may choose to use them, but only to guide their research methods and methodologies. Using Indigenous Knowledge to inform this research is crucial because sharing truths is an important part of the decolonization of spaces like universities and research institutions by reinforcing Indigenous sovereignty through knowledge sharing and production (Díaz Ríos et al., 2020; Gaudry & Lorenz, 2018; Johnson-Jennings et al., 2019; Smith, 2021). Decolonization is how Indigenous people are challenging Western research methodologies to include Indigenous epistemologies and methodologies and a way of valuing Indigenous worldviews in research (Díaz Ríos et al.; Kovach).

The main Western method used in this research is Individual Semi-structured interviews that are held with a focus group discussion. Semi-structured interviews can be used to discover knowledge and truth, in the same way, storytelling and personal reflections do by interacting with people from different life experiences and are best used when the people being interviewed have firsthand knowledge (Kakilla; DiCicco-Bloom and Crabtree; Smith, "Twenty-Five Indigenous Projects"). The interview questions that

will be used will act more as a conversation guide, with prompts and main topics, rather than a list of formal questions. Individual interviews give individual voices a chance to be in the spotlight. Focus group discussions are an opportunity for like-minded people to come together to have joint reflections and compare their own experiences as they relate to the interview topics, as well as contribute to the analysis of other interviews, and discover emerging themes. (Mann; DiCicco-Bloom and Crabtree). The analysis was done using an Inductive thematic analysis to ensure the ideas and stories shared remained intact, allowing the topics discussed in the interview to form the basis of the results and conclusions of the research (Mann).

1.5 Significance of Research

This research stems from my experience working with the "Our Data Indigenous" App project based at the University of Manitoba, a project aimed at making research and data collection more accessible for Indigenous people in communities. Working on this project helped me understand the principles of Indigenous Data Sovereignty but data is only one part of research, so it led me to question… what about Indigenous *Research* Sovereignty?

This research will attempt to understand Indigenous research sovereignty, barriers that exist, how barriers are being overcome, and what supports are needed to mobilize Indigenous-led and community-based research projects in the interests of self-governance, self-determination, and Indigenous sovereignty. As stated by Tuck (2009), "*Regardless of the size of the role, relationships among the academy and tribes and communities should be mutually beneficial, with an emphasis on the real, positive outcomes for communities in both the short and long term"* (p. 224). This research, as well as the larger research project it is a part of, are developed to support Indigenous sovereignty by providing tools and resources for communities to conduct research, on their terms and collect data that is useful for their respective communities.

Indigenous methods and methodologies are often outcome-based; therefore, building relationships and reciprocity are both methods and outcomes used in this research as they are an essential part of work with Indigenous people (Smith, "Twenty-Five Indigenous Projects"; Smith, "Twenty Further Indigenous Projects"; Barnhardt and Kirkness; Tessaro et al.). Reciprocity is the principle of giving back and it is an extremely important part of Indigenous research (Lavallée; Barnhardt and Kirkness) This research will attempt to build relationships between Indigenous communities and universities. This is a relationship that is tenuous at best, as (most) communities have had negative experiences with researchers from academic institutions, and universities have a long-standing legacy of perpetuating misrepresentation and appropriation (Kolopenuk). Sharing and telling stories gives Indigenous people a chance to voice their experiences with institutions like universities and governments, the reality of these

relationships, how they have changed over time, and how they might be improved in the future (Maynes and Pierce). Discussing next steps and actions is an Indigenous method inherent in the interview process and it is important for maintaining long-term relationships (Smith, "Twenty-Five Indigenous Projects"). As mentioned by several Indigenous scholars, building relationships through collaboration is a crucial part of working with Indigenous communities (Ritchie et al.; Smith, "Twenty Further Indigenous Projects"; Moreton-Robinson). Holding a focus group discussion to share interview results and facilitate collaborative data analysis, also provides the opportunity to come up with supports and actions that can help inform research sovereignty projects in the future.

Research can be a useful tool for learning why things are the way they are, and finding solutions to the problems we face. Finding ways for researchers and the government to work better with Indigenous people is important for Truth and Reconciliation. Part of reconciliation should be building better relationships between Indigenous communities and universities. The themes and conversations that arise from this research, and any possible action items will contribute to indigenizing and decolonizing academic spaces and show the relevance of doing work that is based on other ways of knowing and understanding. There are more and more researchers interested in working with Indigenous communities. If more people understand the ideas of Indigenous Research Sovereignty, the work being done will be more effective and more beneficial to all involved. This research is an opportunity for people who want to conduct research that is led by and done for Indigenous people to learn how to do it in good ways by hearing the voices of the people themselves. Therefore, this research aims to tell a narrative of Indigenous research sovereignty in Canada based on the personal experiences of Indigenous people who have been involved in research.

1.6 Position Statement

According to Smith, Windchief and Ryan, and other Indigenous research, since I am a 'white' settler in Canada and a non-Indigenous researcher collaborating with Indigenous people, I must locate myself within the world, as well as this research, and be clear as to what my intentions are for this research (Smith, "Twenty Further Indigenous Projects"; Windchief and Ryan). I am a white settler in Canada. I was born on and continue to live on Treaty 1 lands in Winnipeg, Manitoba, the traditional territory of the Anishinaabe, Cree, Ojibway-Cree, Dakota, and Dene Peoples, and homeland of the Métis Nation.

My family comes from many places. On my father's side, they came from a little valley in Greece and settled in Winnipeg in 1958 to flee the post-war conflicts. My Yaya (Grandmother) worked as a seamstress to help her husband, and several other family members come to Canada to start a better life with more opportunities. My mother's is more complex; some are from Europe (Scotland and England);

some from Iceland; and others from a German-speaking region in Russia. They settled as farmers in Saskatchewan, on Treaty lands 4 and 6, sometime in the late 19th century along with many others being coaxed by the newly formed Canadian government with the promise of land to farm. With a mixed heritage such as this, my life has been full of different experiences and the acceptance of many different customs and traditions.

I grew up with an immense appreciation of nature—spending much time in it hiking, camping, and on occasion, excavating. This appreciation eventually led to me receiving an Environmental Studies degree in the spring of 2020 from the University of Manitoba, with a minor in Biology (Botany). In addition to plants, and nature I have always had a deep love for music, history, and art. After completing a bachelor's degree at the height of the pandemic I felt uncertain about many things (as others did too, I am sure) so I decided to stay in academia and pursue a master's degree.

My journey through my master's has led me on a winding path that has brought me to where I am now. I did not expect to be looking at Indigenous research sovereignty, I have questioned many times my place as a non-Indigenous person doing this research but, my path has brought me here and the work I have been doing the last few years; working with various communities in Manitoba and Saskatchewan to develop and conduct research projects; training community members how to use various data collection technologies; and assisting in writing up reports from the results of their work has placed me in this position to ask questions and gather stories from the people I met to co-create a narrative about Indigenous research sovereignty.

There is an article by Eve Tuck (2009) that discusses how research with Indigenous peoples tends to be damage-focused (as opposed to desire-focused) and how damage can be reinforced through the binaries that exist between researchers and those who are being researched. The way I intend to grapple with researcher/ researched binaries is to highlight people's voices by giving them a space to share the stories they want to share. I hope then to share the narratives that arise from this research so others may benefit and use it. I have come to understand that when working with Indigenous communities it is important that the work is reciprocal and has clear benefits for both the researcher and the communities (Conrad; Smith, "Twenty-Five Indigenous Projects"). Reciprocity can look different than you may expect; it is not merely a transaction but is sometimes something more meaningful, like a bond or a friendship (Conrad; Smith, "Twenty-Five Indigenous Projects"). The experiences I have gained so far have shown me how to deal with the researcher and researched binaries that exist, and I hope they continue to help me deal with them as I continue to grow as a researcher and as a professional.

Interconnectedness and relationships are important aspects of Indigenous research because they are part of Indigenous worldviews and culture (Lavallée). Research cannot be unbiased; researchers are connected to participants and our minds are connected to our emotions; therefore, one must locate

themselves within research and acknowledge that personal growth is part of the research and the end product (Lavallée). As someone non-Indigenous, I don't want to—nor should I—be an observer, Indigenous people and communities have been observed long enough. So, I then must be part of this research; I have to include myself, and my thoughts as part of the reflective process. In doing this I am growing and learning about myself and my place. This personal growth is reflective of Indigenous approaches to research.

2 Literature Review

2.1 Colonial Legacies and the History of Being Researched

Indigenous communities have been prevented from reaching their potential; this relates to land rights, systemic racism, self-determination, and cultural revitalization (Browne et al.; Marmot; Reading and Wein). Settler colonialism has created a toxic environment for many Indigenous people and communities, in which poverty, historical trauma, compromised health, and racism have prevailed (Foxworth and Ellenwood; Johnson-Jennings et al.; Nelson and Wilson; Walter and Andersen, "Deficit Indigenes"). Research has been a colonial tool of oppression and Indigenous Peoples have continually been the subject of research instead of producers of their knowledge (Kolopenuk; Díaz Ríos et al.). The research that was been done by governments and non-Indigenous people in the past – and some would still argue, today, has been harmful; it has perpetuated stereotypes and has not been done in a way that is useful to communities (Foxworth and Ellenwood).

Statements shared by many Indigenous people are of being "researched to death", or "the most researched people in the world" (Smith, "Introduction"; McBride et al.). The research that has been done on Indigenous peoples has been unethical in the way people were treated, the way data was collected, and how it has been used (Sherwood and Anthony). Research has often been used against communities to further government agendas with little benefit to communities, causing (often indirect) harm (Foxworth and Ellenwood). Medical research on Indigenous people is a particular area where harm was done (Sherwood and Anthony). Most research data is not useful or representative of the community and is often not accessible (McBride et al.). Research in the past has often caused more harm than good as there is a tendency in Western academia to place Indigenous peoples in the context of being disadvantaged and needing to be saved or "rehabilitated"; this notion has resulted in racism, marginalization, and continued oppression of Indigenous communities and other equity-seeking groups in society (Foxworth and Ellenwood; Smith, "Introduction"; Antoine; Kovach). The ones who have been benefitting from Indigenous research are the primary research investigators who have been carried on the backs of the Indigenous communities they have used; in this sense, communities have been supporting researchers

rather than researchers supporting communities in an unethical power dynamic (Moore et al.). Murveit et al. (2023) explain that "*Power dynamics among academic researchers and communities' matter; the distribution of benefits between academic researchers, their non-academic Indigenous research partners, and communities should be scrutinized*" (p. 8). Researchers need to recognize the relationships between Indigenous people and (Western) academia, and how it had contributed to colonization (Antoine). Ethical approaches to research are of utmost importance because of the legacies of harm and the negativity that surrounds research (Murveit et al.).

Indigenous people have not been involved in the production of knowledge and research (except as misrepresented subjects); and Indigenous knowledge and voices have been left out and undervalued in the academic world (Antoine; Smith, "Introduction"; Walter and Andersen, "Deficit Indigenes"). Indigenous people have been mistreatment and misrepresented in research and their knowledge is also at risk of being misused and appropriated by those who don't understand Indigenous cultures and the way their knowledge is meant to be shared (Díaz Ríos et al.; Sherwood and Anthony). Researchers have used Indigenous knowledge and data for their own personal and financial gain and have treated sacred knowledge as data used for outside decision-making; an act that does not respect Indigenous knowledge or sovereignty (Sherwood and Anthony; Latulippe and Klenk). As stated by Sherwood & Anthony (2020), "*Communities must be research partners who can demand reciprocation for their participation and sharing of their knowledge, time and experiences*" (p. 19). Indigenous scholars and communities are interested in partnerships, overcoming stereotypes, and reframing the way research is being done by decolonizing academic spaces, reclaiming their knowledge, and promoting Indigenous research and sovereignty (Smith, "Introduction"; Walter and Suina; Walter and Andersen, "Deficit Indigenes").

2.2 Decolonizing Research and Indigenizing the Academy

The academy is a space of colonialism; it gatekeeps the way knowledge is taught, produced, and learned; and it is where power resides (Kovach). Indigenous communities don't often find academic work useful or meaningful because of colonial legacies that have perpetuated socioeconomic inequalities, and a general mistrust of the educational system (Windchief and Ryan). Decolonizing research is about changing the way research is done with Indigenous communities (Antoine). Decolonizing research and academic spaces is important because of the harms and unethical research that has been done in the past; it is a way of honouring Indigenous ways of knowing, being, and doing; and promotes the use of Indigenous research to place Indigenous voices and their knowledge the center of the research process (Kovach; Smith, "Choosing the Margins: The Role of Research in Indigenous Struggles for Social Justice"). Decolonizing includes resurgence and focuses on strengthening and rebuilding Indigenous culture, knowledge, economies, and politics, and reconnecting to the land through language and ceremony

(Gaudry and Lorenz). Universities are (potentially) important places of resurgence because they can financially support important work that is being done by communities and organizations who are looking to preserve Indigenous languages, and cultures and help protect their lands (Gaudry and Lorenz). Indigenizing the academy is different from decolonizing because it isn't about changing the way things are done, it is about making space for Indigenous perspectives and knowledge in academic institutions (Gaudry and Lorenz). In an article written by Lavallée (2009), they identify indigenization as, "*The process known as indigenization, many universities are making a conscious effort to bring Indigenous people, as well as their philosophies and cultures, into strategic plans, governance roles, academics, research, and recruitment*" (p. 7). Goals to indigenize and decolonize academia are long-term ones but in the meantime, they aim to redistribute intellectual privileges, decentralize administrative power, and work towards building relationships that are collaborative with Indigenous communities and supported by allies (Gaudry and Lorenz; Lavallée; Murveit et al.). It is important to note that even if a space is "Indigenized", it does not mean it is decolonized; there may be an Indigenous presence, but there is still a prioritization of Western, colonial approaches to knowledge production, and education (Gaudry and Lorenz).

Some hold concerns about "redwashing" when it comes to universities, as it relates to land acknowledgments and Indigenous hires. "Red washing" is a tactic that corporations—and to an extent, universities—are using to paint themselves as "benevolent" by providing sponsorships for Indigenous education and culture, and hiring Indigenous educators, but their intentions behind these actions are often questionable (Thomas-Müller). Several articles emerged in late 2021 criticizing land acknowledgments claiming that they are performative; make people complacent; perpetuate false ideas about dispossession; and don't do anything to help reconciliation (Deer; Lambert et al.). Indigenous people have weighed in saying that they must be personal, and people need to understand what they are saying if acknowledgments are to be meaningful (Deer). Land acknowledgments are important, but there should also be an acknowledgement of how Indigenous communities contribute to research projects with their knowledge and skills; this type of acknowledgment is not seen as often, especially in published articles (Hudson et al.; Lock et al.). Indigenous scholars such as Linda Tahiwai Smith (2021) and Margaret Kovach (2009) declare that to rebuild trust between Indigenous people, communities, and nations in Canada, the structure of Western academia must be dismantled. One way this is being done is by decolonizing academic spaces. What has been argued is that to decolonize, a completed upheaval to reorient the way knowledge is produced, as well as balancing the power relations which exist between Settler Canadians and Indigenous people is needed; this means academic institutions would need to fundamentally become something new (Gaudry and Lorenz; Latulippe and Klenk).

A lot of change must occur within academic institutions, but it doesn't overshadow important initiatives occurring in Canadian institutions. The University of Manitoba, like universities across Canada, are attempting to be more inclusive of Indigenous people by offering courses and engagement sessions through places like the Community Engaged Learning Office and developing programs such as Wawatay, an Indigenous Science Program, and ENGAP the Engineering Access Program directed for Indigenous students. Community-based and land-based research and learning are ways that academia is being decolonized as it places the community as the center of knowledge production, as well as the interpretation, and dissemination of research (Gaudry and Lorenz). This process has been described by Gaudry and Lorenz (2018) as "Decolonial Indigenization" which means, *"constructing research programs that rebuild capacity for Indigenous intellectual institutions to determine their own intellectual priorities and establishing local institutions to govern research projects in order to move beyond research collaboration with outsiders to community-led research projects,*" (p. 225). Decolonial Indigenization also requires that universities become autonomous partners which support Indigenous people and communities to decide the way programs are given so they may govern education and research in their own way. Learning on the land and land-based education practices place Indigenous Knowledge and its holders in a place of authority, recognizing them as experts, an acknowledgment that shows that those who are in academia aren't the only ones who hold knowledge (Gaudry and Lorenz).

"Indigenizing the academy" is part of the TRC 94 Calls to Action, Call number 16 which calls on academic institutions to create programs in Indigenous languages ("Truth and Reconciliation Commission of Canada: Calls to Action"). Some feel that decolonization may never completely be achieved because Universities have a European origin and are thus ultimately based on European values and education principles (Gaudry and Lorenz; Taiaiake). Spaces can be carved out and universities can work with people in those spaces to include Indigenous knowledge in education in a way that is meaningful, respectful, and reciprocal (Taiaiake; Gaudry and Lorenz; Kovach; MacDonald). Universities have begun to acknowledge the need for inclusion of Indigenous languages, histories, knowledge, and cultures in the academy (i.e., indigenizing) even before the Truth and Reconciliation Commission (TRC) identified it as a place of playing an important role in truth and reconciliation (Lavallée). Reconciling academic spaces creates space for both Indigenous and Western/ Canadian views to evolve and reimagine what constitutes knowledge; how Indigenous knowledge and European knowledge can be used and reconciled; and what relationships between institutions and communities should look like (Gaudry and Lorenz). The main focuses have been on Indigenous engagement and inclusion but that is just one part; indigenous curriculum, research, and pedagogies need to be included in the education system to decolonize and reconcile academia (Gaudry and Lorenz; Lavallée). Indigenization should be led by Indigenous people with the support of Allies, so it can be a learning experience for everyone (Lavallée). Dr. Cary Miller of

the University of Manitoba speaks to the importance of educating people in academia about Indigenous people in her 2019 talk titled, “Looking Beyond Cultural Competency: The Need for Literacy in Indigeneity to Achieve a Reconciled Campus Community” (Miller). Allies need to do some of the heavy lifting as well; as indicated by Justice and former Senator Murray Sinclair, reconciliation is a “Canadian problem” (CBC Radio). Decolonizing and indigenizing the academy plays a role in recovering Indigenous knowledge; this is important because the history of traditional knowledge being generated for use by governments (W. A. Wilson; Nadasdy).

An important part of decolonizing academia is addressing the ownership of knowledge and with whom that knowledge is shared; communities must be able to share and approach institutions on their terms (Gaudry and Lorenz). Indigenous people are interested in making space for their knowledge in research because research that is done by outsiders to Indigenous communities often holds the priorities of the outsiders (Innes, “‘Wait a Second, Who Are You Anyways?’”). Indigenous communities and researchers are interested in taking control over the narratives that tell their stories that have been collected and built upon through generations; it is these narratives and stories that are central to Indigenous Knowledge (Johnson-Jennings et al.; Windchief and Ryan; Smith, “Getting the Story Right, Telling the Story Well Indigenous Activism, Indigenous Research”). For Indigenous people to frame their narratives they need to be the curators and the custodians of how their research is done and how their knowledge is used (Evans et al.; Windchief and Ryan). If academic institutions are going to be decolonized, researchers and universities need to put Indigenous knowledge and experiences at the center of research (Gaudry and Lorenz).

2.3 Recovering Indigenous Knowledge

Indigenous knowledge has sustained its communities and lands from time immemorial, but it is being lost (Murveit et al.). Recovering Indigenous knowledge is empowering, and it is one of the ways Indigenous peoples and communities are overcoming the impacts of colonialism and reclaiming their cultures, traditions, and languages (W. A. Wilson; Gaudry and Lorenz).

The recovery of Indigenous knowledge by Indigenous people is an anticolonial political strategy because of how it relates to lands and territories that have been taken from Indigenous people; it is important because it ensures that knowledge can continue to be passed on to future generations (W. A. Wilson). In Wilson’s article “Indigenous Knowledge Recovery is Indigenous Empowerment” (2004), she explains how the colonial mindset would have people believe that Western knowledge is superior, and that Indigenous knowledge is of the past and should be left behind; these ideas were set by people who are unwilling to change progress. In truth, settlers would like this knowledge to be left in the past because if it was accepted as valid, the exploitation and destruction of lands would have to stop (W. A. Wilson).

Non-Indigenous researchers have laid claim to being experts in Indigenous knowledge through the extractive research that has been done (Murveit et al.). Latulippe & Klenk (2020) warn that the co-production of knowledge with Indigenous and non-Indigenous researchers is still often a process that is "extractive and transactional" leading to the question of whether Indigenous people should be producing the knowledge on their own. "*The scholarship on knowledge co-production too often upholds this view of knowledge, perpetuating the notion that research is an activity that can be separated from the contexts in which knowledge is acquired and holds meaning and value; that is, from knowledge holders, practices, and the politics that reproduce differential relations of power between groups*" (Latulippe & Klenk, p. 7). Allies can play a role in knowledge recovery, but it must come from communities themselves before recovered knowledge can be shared to avoid any further appropriation and misuse (W. A. Wilson; Nadasdy).

Indigenous knowledge can't be separated from the people or their lands (Latulippe and Klenk). Indigenous peoples need to be at the center of their knowledge recovery and for this to happen, self-determination, self-governance, and reclamation of lands are important as land is central to Indigenous identities (W. A. Wilson; Latulippe and Klenk). Recovering knowledge can improve Indigenous health and well-being and heal past scars and generational wounds; the knowledge recovered may contain instructions for living life that reflect the past and inform the future (W. A. Wilson). The knowledges Indigenous people have can play a crucial role in future knowledge production; different ways of thinking are what is needed to overcome global obstacles to social and environmental issues (W. A. Wilson; Latulippe and Klenk). Indigenous knowledge recovery must also involve knowledge protection; outside researchers should be stopped from extracting knowledge, and instead, Indigenous communities should be the ones producing knowledge and Indigenous research (W. A. Wilson; Latulippe and Klenk).

2.4 Indigenous Research

Indigenous people have conducted research throughout history; asking questions is part of life and understanding that which surrounds us but the word research and what it means now is not how Indigenous people would have seen it (Smith, "Introduction"; Moreton-Robinson). Research is a word linked to colonialism and European Imperialism (Moreton-Robinson; Smith, "Introduction"). Indigenous knowledge passes through and is built on by generations; knowledge is improved and thus ways of doing and understanding evolve with the proof and disproof of different ideas; much like Western research (Moreton-Robinson; Arsenault et al.; Kovach). Indigenous research is the principles, beliefs, and values that are parallel to Indigenous ways of learning knowing and being (S. Wilson). Indigenous research should allow for Indigenous knowledge to form the theoretical and conceptual approaches to research and research methods, while also following the proper cultural protocols (Lavallée). Indigenous research

doesn't just include Indigenous knowledge, it uses other knowledge and other approaches to research including qualitative and even quantitative research approaches to statistics, mapping (and counter-mapping), health, environment, ethnobotany, biogenetics, technology, technoscience, etc. (Kolopenuk; Walter and Andersen, "Indigenous Quantitative Methodological Practice: Canada"; Paneque-Gálvez et al.; Weiler et al.; Joseph et al.; Valiani).

One of the challenges that Indigenous research faces is that it must undo the dominant hierarchical view of humans as being outside of nature and the environment, instead of being part of it (Moreton-Robinson). Western research is inherently disconnected, as it is viewed that being objective produces high-quality results meaning that there can be no connection between one's self and the research (Moreton-Robinson; Lavallée). Feminist research epistemologies and ontologies push that connections are important and research can never be truly objective, especially for social research, Indigenous research shares some of these views (Moreton-Robinson; Lavallée). Classification and categorizing is a Western approach; having one way of doing things and indicating it as the "best" is a colonial and Western way of viewing things (Moreton-Robinson). In Indigenous research, having standards and rules is important while leaving flexibility and room to grow and improve (Moreton-Robinson).

Indigenous research aims to be collaborative and participatory, demonstrating the importance of being connected and the earth; this requires Indigenous approaches to understanding and knowledge, and how we form relations with our surroundings (Moreton-Robinson; Arsenault et al.). Defining research and methodologies and doing "good work" in communities is also important but, to create space for Indigenous research to evolve and grow, there must be the creation of standards and rules by Indigenous people; to do this it is necessary to reflect on the way things have been (and continue to be) done (Moreton-Robinson). Indigenous researchers and academics use existing knowledge and disciplinary experiences—including Western scientific experiences—to develop different approaches to research and methods that are better suited to Indigenous research (Moreton-Robinson; Arsenault et al.). Indigenous methodologies used in research are often relational as they are developed based on Indigenous knowledges, cultures, and ways of knowing (Walter and Suina).

Indigenous people view the world as relational; meaning the things that occur are related to one another. The idea of "living in relation", or relationality, is a philosophy about the inter-connectedness of all living and non-living things and relates to how we as individuals and communities view the world and our place in it (Moreton-Robinson; Smith, "Twenty Further Indigenous Projects"). "*Indigenous scholarship, land-based practice, and grassroots organizing demonstrate that Indigenous knowledge is not mere 'data' that can be slotted into exogenous Western scientific models*" (Latulippe & Klenk, p. 7). Using relationality ensures context is maintained; this is especially important in Indigenous statistics and

quantitative research approaches where Indigenous populations are often over- and misrepresented (Walter and Suina).

Using an Indigenous research framework involves handling research in a way that is best and most appropriate for the community and people you are working with; this means incorporating Indigenous values and beliefs within a research project; including the design, methods and analysis, and the dissemination of the data (Lavallée). Research that follows cultural ethics, protocols, and cultural knowledge is a way of expressing Indigenous sovereignty and is an act of decolonization (Moreton-Robinson; Kovach; Lavallée). Research policies and guidelines that benefit Indigenous communities incorporate Indigenous knowledge systems within them and play an important role in Indigenous research (Carroll et al.).

2.5 Research Policies and Ethics Guidelines

Data is how decisions are often made in terms of policies and the allocation of resources (Hudson et al.; Johnson-Jennings et al.). Effective policies understand what the social determinants of health and wellness are, and include factors such as cultural identity, language, connections to the lands, and environmental dispossession (Crowshoe et al.; Richmond and Ross; Smylie et al.; Walter, Kukuai, et al.). Research is entangled with politics because the data that comes from research influences political decisions; therefore, the people who are impacted by political decisions should be involved in the research that influences them (Schnarch). Research policies and Ethics guidelines are meant to promote the idea that Indigenous people are active participants in the research that is about them and their lands, and not merely subjects of research (Moore et al.).

There are barriers to the effective development of policies and ethics guidelines that relate to a statement shared by Sherwood & Anthony (2020): that they are, "*entrenched in colonial relations and structures*" (p. 19). Harding et al. (2012) explain that the barriers around ethics are because of cultural differences, organizational constraints, violations, and unrealistic expectations that put strains on university and community relationships.

Ethics boards are meant to ensure research is being done appropriately; this should also include the acknowledgment of power imbalances between researchers and those being researched (Schnarch). The Canadian "Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans" has a substantial section that provides suggestions for research "Best practices" with "Aboriginal" people (Evans et al.; Schnarch; Lavallée; Díaz Ríos et al.). These guiding practices are intended to ensure respect for people, justice, and concerns for welfare, and additionally are meant to ensure there is reciprocity in research (Moore et al.; Secretariat on Responsible Conduct of Research (Canada). Yet, researchers and

Indigenous people don't feel that the previous Tri-Councils Policy Statement (TCPS) was adequate and that it glossed over what ethical considerations are necessary (Moore et al.). Despite best intentions made by government and universities to address the concerns around research that involves Indigenous people, ethics guidelines being used are limited because of the underlying assumptions that Indigenous people are vulnerable; they ignore the strength of communities and their capacity to control research and ensure research with them is done ethically (Sherwood and Anthony).

The recent 2022 update to the TCPS includes suggestions that are in line with Indigenous methodologies. The update indicates that there is a shift in thinking from ethics committees on how research should be done with Indigenous people; but it is a small victory as there is a lack of Indigenous representation on policy development councils and ethics boards (Evans et al.; Schnarch). In 2017, an article written by Moore et al. made suggestions for improvements to Chapter 9 of the TCPS. These suggestions included: more funding opportunities; more financial resources; more time allotted to account for Indigenous approaches to research; training for review board members and anyone who is involved in the research processes when Indigenous people are involved; creating a sub-committee that can help inform review and ethics boards on proposals; clarity and less vagueness in Chapter 9 on what Indigenous research is and how it can be done; changes to financial policies; and funding that is specifically intended for building capacities such as training, and participation in the research (Moore et al.). Reviewing the 2022 amendment to the TCPS shows that some suggestions have been included: the addition of local ethics review boards (within Canadian Institutions) when available; promoting the building of capacity and mutual research benefits; there are also examples provided within the document on how guidelines have been implemented (Secretariat on Responsible Conduct of Research (Canada)). Other suggestions included in the 2022 TCPS are training for those involved in research such as financial advisors, researchers, and ethics review boards. Very little was said about improving financial availability and increasing opportunities, only that, "lack of engagement by communities may be due to inadequate financial or human resources" (P. 172); finally, little was said about time, except to acknowledge that doing research (in a good way) with communities require time investments and these considerations should be made in proposals (Secretariat on Responsible Conduct of Research (Canada)). These are all steps in the right direction but are still merely suggestions, meaning there is no accountability for researchers to follow them except only that they might 'strongly consider' them.

Community ethics guidelines differ from institutional ethics; this puts researchers in a sometimes-awkward position as they are contractually bound to follow the institutional ones and morally obligated to take it upon themselves to follow the community ones; meaning communities are left to ensure that researchers following guidelines and protocols (Murveit et al.). Lomawaima (2020) suggests four rules to

follow when doing research with Indigenous communities: if researchers want to know community-specific ethics, ask; researchers should not do more talking than listening; if guidelines have been established then follow them; and researchers must give back to the communities they are working with. These principles relate to the US-developed Belmont Principles on Transdisciplinary Research which discuss respect, justice, and beneficence to prevent harm to research subjects (Wilmer et al.). Wilmer and research partners expanded on the Belmont Principles by adding four principles with regards to research partnerships between academic institutions and Indigenous communities: acknowledging the importance of "Appropriate representation"; the importance of self-determination as Indigenous communities are sovereign and have rights to determine how research is done; the importance of benefits, i.e., reciprocity; and lastly, "deference" which maintains that people be willing and open to different ways of knowing (Wilmer et al.). Indigenous communities are now more aware of the benefits and risks of being involved in research and are making their own ethics guidelines (in addition to existing protocols) that ensure research is done in a way that is meaningful, beneficial, and inclusive of the community at all stages of a project (Lavallée; Murveit et al.; Moore et al.). Protocols often involve permissions from the tribal council, rights to data, protections and collective rights, and benefits (Murveit et al.).Researchers must seek to understand protocols and implement them respectfully and responsibly (Murveit et al.). Different communities have different protocols; researchers must educate themselves and learn about the community they are working with; researchers also must understand that they have a responsibility to use knowledge respectfully without placing any strain on the community that is choosing to share their knowledge (Murveit et al.). Community ethics guidelines and protocols are especially important when collaborating with communities that have been harmed by researchers in the past (Murveit et al.).

Guidelines that highlight "good work" with communities include all of the typical ethical requirements that should be used in an Indigenous context by explaining why the research is being done; who benefits from it; continual reporting back to the community; involving the community with opportunities to participate and consultation; cultivating technical skills in research development to dissemination; building relationships; using local and traditional knowledge in the research when appropriate; using Indigenous research methodologies and data sovereignty principals; respecting and following community protocols, as well as traditional and collective rights of Indigenous people; basing research out of the interests of the community; ensuring research benefits the community; and returning all reports and summaries to the community (Schnarch; Arsenault et al.; Walter and Suina). There is not yet a standard so guidelines can be addressed by researchers in different ways as they are a guide to be followed which can be interpreted in different ways (Lavallée). Lavallée (2009) explains that the more research that is done with Indigenous peoples, the more information will arise about working in good

ways with Indigenous people, and Indigenous ways of knowing will be increasingly incorporated within research institutions (Lavallée).

Institutional level Research Ethics Boards are not properly equipped to address the individual and unique needs of First Nations, Inuit, and Metis communities around research, let alone the greater issues Indigenous people have had with research as a whole; this includes Indigenous participation in data and knowledge governance (Carroll et al.; Schnarch; Latulippe and Klenk). "Indigenous Data Sovereignty and Policy", an article written in 2020 by Walter, et al. looks at Indigenous resilience and the importance of Indigenous data sovereignty and Indigenous data governance as communities move forward through a (oppressive) colonial landscape while also being undermined by Canadian policy. Hudson et al. (2023) assert that "*the shift toward identifying Indigenous data rights and interests could provide the basis for legal recognition, either through Indigenous Peoples own resolutions and codes or national/federal law*" (p.2). Communities are more than willing to lead the way in community research to reform current policies about their health and environment to promote self-determination (Richmond and Ross; Sherwood and Anthony). OCAP and other data sovereignty principles continue to be used to advocate for and respect the inherent right to self-determination and jurisdiction over knowledge production (Auger et al.). Governments need to work with communities individually, as each community has its own unique needs and priorities (Kukutai and Taylor; Lovett et al.). Guidelines have been developed to inform researchers and governments on how to work with Indigenous people. Indigenous data sovereignty and Indigenous data governance are important aspects of effective community planning, decision-making, and reclamation as they relate to Indigenous rights and self-determination over health, governance, resources, land, culture, and language (Pratt et al.; Auger et al.; Carroll et al.; Schnarch; Walter and Suina).

2.6 Indigenous Data Sovereignty and Data Governance

Data itself is a resource of growing importance but there is a lack of data that has been created by and for Indigenous People (Johnson-Jennings et al.; Foxworth and Ellenwood; Arsenault et al.; Walter and Suina). As noted by the Alberta First Nations Information Governance Centre, "*the content and purposes of data have historically been determined outside of First Nations communities, and the misuse of data has led to situations of misappropriation and broken trust*" (McBride et al., p. 2). Indigenous data sovereignty aims to move Indigenous peoples from being study subjects to the creators of research and Indigenous data (Walter, Lovett, et al.). Indigenous data refers to all data that are generated about Indigenous people and their lands – by Indigenous peoples themselves as well as non-Indigenous governments and institutions (Carroll et al.). Carrol et al. (2020) provide a definition of Indigenous data: "*information and knowledge about the environment, lands, skies, resources, and non-humans with which they have relations; (2) information about Indigenous persons such as administrative, census, health,*

social, commercial, and corporate and, (3) information and knowledge about Indigenous Peoples as collectives, including traditional and cultural information, oral histories, ancestral and clan knowledge, cultural sites, and stories, belongings," (p. 4). Current Indigenous data does not reflect Indigenous realities and there have not been meaningful opportunities for Indigenous people to engage in research so they may collect data themselves (Walter, Lovett, et al.). Discussions around Indigenous data sovereignty and Indigenous data governance have begun to emerge in recent years as they relate to the collective rights Indigenous people have to data that is about them, their territories and lands, natural resources, cultures and traditions, and lifeways (Walter and Suina; Hudson). Claiming Indigenous data rights is an act of decolonization through self-determination and self-governance (Walter and Suina; Kukutai and Taylor).

Large amounts of Indigenous data have been collected by governing agencies and research institutions creating large amounts of digital data, but it rarely shows how Indigenous people are overcoming their situations (Walter, Lovett, et al.). Most Indigenous data that does exist portrays deficits of Indigenous people and paints them in a negative light; just because there is more data, doesn't mean it is accurate or informative (Walter and Andersen, "Deficit Indigenes"; Lovett et al.). Much of the Indigenous data that is collected by surveys, like the Census, oversimplifies complex systems, creating data that is not representative or relevant to Indigenous people (Walter, Lovett, et al.). Indigenous data can provide important information for Indigenous peoples for decision making which can help facilitate cultural revitalization, economic growth, and self-determination of their futures (Walter, Lovett, et al.). Although data is technically available, it is often held by non-Indigenous governments and institutions, and it isn't easily accessed because it is often dispersed and disconnected; Indigenous people must work their way through red tape and government regulations to access data and information that is about them (Johnson-Jennings et al.; Carroll et al.). Not only is data inaccessible, but those who control the data, control the narrative, leaving power imbalances between colonial and Indigenous societies especially around "open" and "big" data, stressing the need for principles around Indigenous data sovereignty and governance (Johnson-Jennings et al.; Kolopenuk; Walter and Andersen, "Deficit Indigenes"; Lovett et al.).

Historically data belonged to the researcher but now this is shifting to movements around data being open; this conflicts with Indigenous worldviews because they are more people-centred and emphasize the importance of collective ownership and control of Indigenous data (Carroll et al.). Data principles have become increasingly important as the world becomes more digitized and technological innovation creates "big" and "open" data; this is evident with the development of formal data governance principles, and the creation of data standards, policies, and access protocols (Hudson et al.). The intention

of having open data is so other researchers and institutions can build upon existing data (Carroll et al.; Walter, Lovett, et al.). In theory, open data can be a good thing and spark innovations and sharing but the reality is that Indigenous people have unique needs around open data and data in general, and those needs are not being considered in research projects (Walter, Lovett, et al.). The openness of "big data" can be used in a way that may be harmful to marginalized groups as it is yet another form of dispossession and discrimination putting marginalized groups more at risk as it doesn't address power dynamics between researchers and individuals, institutions and communities; and, it doesn't reflect Indigenous values, culture, and knowledge (Foxworth and Ellenwood; Marley; Kukutai and Taylor; Walter, Lovett, et al.; Lomawaima). Once data becomes openly available it can be used for harm it doesn't have community interests at heart; claiming ownership is one way to abate these possibilities (Schnarch, 2004). Data sovereignty and governance principles are intended to be used by Indigenous and non-Indigenous researchers, government, institutions, and anyone working with data that is related to Indigenous people to ensure Indigenous data isn't being misused, misinterpreted, or appropriated (Schnarch; Walter and Suina; Walter, Kukuai, et al.).

When Indigenous people are left out of data governance and research decisions it takes away the power of decision-making and puts it in the hands of others; inevitably giving the power of narrative to non-Indigenous people and institutions (Walter, Lovett, et al.). From this, data sovereignty has arisen as an important part of Indigenous Sovereignty as a whole (Kukutai and Taylor; Johnson-Jennings et al.). Indigenous data sovereignty also gives Indigenous people the opportunity to use data that already exists to reshape existing narratives about them (Kukutai and Taylor; Johnson-Jennings et al.). Indigenous data sovereignty is a way of re-telling the stories that have been told by non-Indigenous people and re-framing them from an Indigenous point of view (Johnson-Jennings et al.). Data that is culturally relevant and generated locally will allow for innovation, aspirations, and decision-making that will benefit and sustain Indigenous communities (Johnson-Jennings et al.; Walter, Kukuai, et al.). The Assembly of First Nations ultimately ratified the motion that data sovereignty be "*the cornerstone of nation-building*" in 2016 and asserted that the federal government underwrites the creation of regional First Nations Information Governance Centers across Canada and a national First Nations data governance strategy (Kukutai and Taylor). Each of the ten regional Information Governance Centers works with First Nations communities under their purview to achieve data sovereignty in ways that reflect their worldview and priorities (Kukutai and Taylor). The emergence of the First Nations Information Governance Centre and the regional Information Governance Centers are already playing a critical role in training and building community capacity and serving the data needs of communities (Kukutai and Taylor). Indigenous data sovereignty principles push for Indigenous people to play meaningful roles in research; as partners and co-researchers, instead of participants (Kukutai and Taylor).

The First Nations Information Governance Center developed First Nations' Principles of OCAP (Ownership, Control, Access, and Possession) to address Indigenous Data Sovereignty as a Canadian response to the legacies of colonialism that has resulted in deep-seated mistrust, and the need for positive changes to research practices through Indigenous self-determination and governance (Schnarch; First Nations Center; Hudson et al.). OCAP was initially developed because Indigenous people didn't have access to their health data, despite large databases housed by the government (Walter, Lovett, et al.). Although the principles were initially developed from a health and First Nations context, they are still applicable to other Indigenous groups including Inuit and Métis, and to research that spans fields outside of health (Schnarch; First Nations Center). The principles of OCAP relate to collective ownership of group information, First Nations control over information and research, First Nations management of access to data that is about them, and the physical possession of data by First Nations (Schnarch). By using the guiding principles, it encourages questions around the gatekeeping of research and who decides what makes research "proper" or not (Schnarch). The benefits of OCAP include improved research in terms of quality and relevance, rebuilding trust, decreased research bias, community empowerment, and the development of capacity (Schnarch; First Nations Center).

The Research Data Alliance (RDA) International Indigenous Data Sovereignty Interest Group was formed after the publication "Indigenous Data Sovereignty: Toward an Agenda" was released by Kukutai and Taylor in 2016 (Hudson et al.). The group's interests are in data-driven research and Indigenous-led so that Indigenous communities can benefit from research data and are meant to promote the idea of data sharing and use to the global community (Hudson et al.). After a workshop hosted by the RDA in 2018, the Global Indigenous Data Alliance (GIDA) asserted CARE principles for Indigenous Data Governance (GIDA; Carroll et al.; Hudson et al.). CARE stands for Collective benefit, Authority to control, Responsibility and Ethics (GIDA; Carroll et al.). CARE principles were developed by the International Indigenous Data Sovereignty Interest Group with consultation from Indigenous Peoples, allied scholars, activists, government, and non-profit organizations to support Indigenous and community-led data governance standards and increase the participation of Indigenous Peoples in activities around data governance (Carroll et al.; Hudson et al.). CARE principles advise on how to conduct responsible data practices and management with Indigenous data by addressing and acknowledging historical (and colonial) power imbalances to create Indigenous practices and policies grounded in Indigenous worldviews (Walter, Lovett, et al.). Another set of principles for data governance is the FAIR (Findable, Accessible, Interoperable, Reusable) Principles that guide scientific data management and stewardship developed by the RDA FAIR Data Maturity Model Working Group (Carroll et al.). This working group aims to operationalize both CARE and FAIR for the future of Indigenous data (Hudson et al.). FAIR principles are more about good management and stewardship of data and aren't specific to Indigenous

Data Governance, unlike OCAP and CARE which are Indigenous Principles (Hudson et al.; Carroll et al.). CARE principles encourage those using data to be mindful and recognize the rights Indigenous people have to data that is useable and accessible (Hudson et al.; Carroll et al.). Both CARE and FAIR (if applied in an Indigenous context), like OCAP, relate to the self-governance and self-determination of Indigenous people to advance innovations (Carroll et al.). Indigenous Data Sovereignty principals address issues that arise with "Big data" and "open data" and attend to Indigenous needs around data collection and sovereignty, especially in the research environment (Robinson et al.; Hudson et al.). Despite principles providing a framework that supports ethical decision-making around research, law and policy, and infrastructure there is no legal obligation or enforcement that holds researchers and institutions accountable to follow data and governance principles (Hudson et al.). However, in Canada, it is now mandatory for institutions and researchers to have Data Management Plans and strategies when they apply for funding from the Canadian Tri-Council (Government of Canada).

In an article written by Hudson et al. (2023), they explore in detail Data *for* Governance and Governance *of* Data. Data *for* Governance is about the right of self-determination (how collective identity relates to the ability to control and organize data); the right to reclaim (the reclamation, preservation and retaining of data in a way that is reflective of Indigenous cultures, relationships and identities); the right to possess (control and jurisdiction over data); the right to use data for individual or collective purposes; the right to consent to potential harms and assess risks involved with data collection and use; and lastly, the right to refuse the way data will be used (Hudson et al.). Governance *of* Data relates to the right to govern (i.e. make decisions on how data is accessed by developing and implementing protocols); the right to define how ways of knowing are represented in data; the right to privacy (how identities, individual and collective are protected and caretaken); the right to know how data can be tracked, stored, used and reused and who can access data; the right to associate and know how data will be attributed in future use; and also the right to benefit from data and its uses that contains intellectual property (Hudson et al.). The rights that relate to consent, privacy and benefits of data governance relate to collectivity and the role it plays in Indigenous worldviews; the rights about defining, associating, and reclaiming represent the desires Indigenous people must change the way they interact with settler-colonial frameworks that impact them (Hudson et al.).

Hudson et al. (2023) argue that not all data governance rights will be met in every context but at least one or more could be. Researchers need to understand data sovereignty principles as they will enable them to grow and evolve to reflect changing social, political, and environmental climates; and they must also make space for Indigenous rights to data governance and sovereignty (Harding et al.; Kukutai and Taylor). Moving forward data sharing and re-use will grow and as this happens there will be a need for

more comprehensive data and research management strategies and policies; this is already occurring with the Tri-Agency Research Data Management Policy, 2021 and the MBIE Open Research Policy, 2022 (Hudson et al.). Hudson et al (2023) indicate that there should be tools that can implement Indigenous data sovereignty and governance principles and create space for Indigenous people to engage with the principles, determine how they should be addressed and what actions can be taken so that the principles can be used not just by institutions and researchers but organizations as well. Discussions around Indigenous data principles must include Indigenous contributions and address things like acknowledgments, attributions, authorships, access, and authorities (Hudson et al.). Several scholarly journals have not yet made it mandatory for Indigenous authors to be included in articles that have Indigenous content in them; doing this is important because authorship keeps people connected to the material that has been published so that people can keep track of where and how their material is being used (Lock et al.; Hudson et al.; Anderson and Christen).

Indigenous data sovereignty and governance principles are about claiming ownership and ensuring there is benefit from the research being done, but it is argued that Indigenous communities should be the ones who decide how this will happen (Harding et al.). Looking not only at control but also collective benefit of data, ethics around data collection, and how data will be used in the long term reorients Indigenous people from being the subjects of research to being the ones who benefit from the research; asserting self-determination and overcoming unequal distributions of power (Carroll et al.; Hudson et al.). Technologies that facilitate Indigenous data sovereignty and governance are important because of increased isolation from government resources, especially in instances such as Global pandemics, like COVID-19 (Greenfield).

2.7 Internet and Communication Technologies

Access to technologies and isolation from data resources continue to undermine Indigenous policy and initiatives and have created a "digital divide" (Walter and Andersen, "Conclusion: Indigenous Peoples and Statistics"; Winter and Boudreau). The digital divide describes the gap between those who have access to information and communication technologies (the internet) and those who do not; Indigenous communities are on the wrong side of the digital divide (Greenfield). Internet access was described by the UN as a basic Human right in 2011; this right relates to freedom of expression and opinion and promotes the equitable progression of our global society (Hobart and Woodhouse) Some say that internet access is becoming as essential as water and electricity (Hobart and Woodhouse). *"Community access to computer and Internet technology remains a crucial resource for connecting people to the information and skills they need in an increasingly digital world"* (Kelley, p.1).

Many Indigenous communities have limited internet access due to their geographic location and economic barriers. Over two-thirds of homes on First Nations reserves do not have high-speed internet (Buell). A 2017 study indicated only 24% do (Greenfield; Mueller). More geographically isolated areas, especially in Northern regions have less reliable access (Hudson).

The COVID-19 pandemic has exacerbated the impacts of the digital gap by showing how important connectivity is in our increasingly technical world as we have turned to a virtual approach to work, education, health care, etc. *"lack of connectivity exacerbates socio-economic inequities, including business opportunities, employment, education, and physical and mental health"*(Hudson, p.3). The internet is how essential services are now being accessed by people around the world; this includes accessing information resources which are important for economic and social development (Hudson; Xu and Reed). Internet connectivity facilitates research development, data collection, and knowledge and information sharing (Xu and Reed; Hudson). Leadership in communities can also use internet connectivity to distribute surveys that can inform decision-making and be used to find and apply for grants and funding (Xu and Reed; Hudson). Internet access also may increase research output and facilitate economic growth; Improving economic growth increases social well-being and in turn, increases community capacity to conduct research that is relevant to the community (Hudson). Indigenous people around the globe are using the internet to preserve culture and history. Apps and media outlets are also being used to preserve Oral stories and revitalize language, but they often require the internet (Hudson).

Indigenous leaders are asking for federal policy changes that connect communities to online services (Hobart and Woodhouse). Doctors, counselling, education, shopping, media, and delivery services are now available virtually. The Federal Universal Broadband Fund was created to address the gaps in connectivity in Canada, but it is still left up to the community to initiate setting up Broadband; and it may be difficult if communities are facing other pressing issues, like meeting basic needs (Buell). Some communities are overcoming barriers to internet access by setting up Starlink satellites to become connected, albeit at a great financial cost that few communities can afford (Powless).

Partnerships and collaborations with universities and non-profit organizations that are ethical and mutually beneficial are necessary for finding solutions that work with each community's unique needs (Buell; Murveit et al.); examples of this include First Mile and the Our Data Indigenous app. First Mile is a non-profit organization where researchers collaborate with Indigenous communities to develop and conduct research projects that will make positive changes for the community (McMaster, 2021). The Our Data Indigenous App project is another project which aims to put research tools in the hands of communities through training and collaboration (ourdataindigenous.ca). There are many benefits to being connected such as information sharing between communities; access to the Internet facilitates the

generation and diffusion of knowledge (Xu and Reed). And, learning from one another and connecting is an important part of truth and reconciliation (Mueller).

Recently, there has been an increase in tools and technologies that contribute to the want for more control over research. An evaluation that focuses on data collection and Indigenous sovereignty is important because it looks at the positive initiatives that are being taken to further the Indigenous Data Sovereignty Movement (Tuck). Sharing narratives and truth-telling is one approach to decolonizing the way research is done and doing it in a way that benefits communities (Datta; Robinson et al.; Smith, "Twenty Further Indigenous Projects"). Projects that are led by Indigenous people will create narratives that represent their values, knowledge, worldviews, and cultural practices (Johnson-Jennings et al.; Hudson et al.).

2.8 Indigenous-Led Research

Using Indigenous-led approaches to research is increasing in popularity within research and academic institutions (Moore et al.). Yet, the idea of Indigenous people leading their own research is not new; Indigenous people, according to Smith (2021) have been conducting their research for generations; but Western science and the academy have denied its validity (Moore et al.). Including Indigenous people in research has been occurring through participatory and community-based approaches to research (Ritchie et al.; Cochran et al.). Participatory and community-based research approaches can be useful because they can address policy gaps by including Indigenous communities in the research process, but the degree of their (meaningful) involvement can vary greatly (Schnarch; Lavallée; Cochran et al.). Participatory Action Research is another approach that aims to work with Indigenous communities by working with them to achieve something for the community through action, but there is a danger that it perpetuates the idea that groups (often marginalized) who are being engaged are not capable of producing their own research and must rely on outside researchers if it is to be considered as valid (Evans et al.).

Community-based data collection is important because of the barriers frequently encountered when planning and developing programming due to the lack of community data that is available to local leadership and health authorities (Walter and Suina). Community-based research is ideal in theory, but in practice, the involvement that Indigenous communities have in research is up to the discretion of —often non-Indigenous— researchers (Lavallée; Ritchie et al.). Participatory research can highlight the strengths of a community through inclusion while also emphasizing the strengths of a community through collaboration (Murveit et al.). Ideally, collaborations in participatory research can allow for Indigenous ways of knowing, being and doing to shape the design of the research, in a sense letting the community lead the research (Peters et al.). However, collaborations between the community and the researchers in community-based and participatory research can be difficult, especially if the community is remote

creating a “proximity paradox” (Ritchie et al.). The proximity Paradox explains that there is an increase in the amount of community-based research principles being used, especially with remote communities, yet the more remote the community, the more difficult the principles are to follow; this also extends to social, not just geographic proximity (Ritchie et al.). Following community-based and participatory research approaches is easier when the partnerships between the researcher and the community are closer in proximity because communities and researchers can meet face to face, making it easier for relationships to be built and sustained over time (Ritchie et al.). Understanding community protocols is important for building and maintaining long-term relationships and is part of the collaboration that (should) occur within community-based and participatory research projects (Lavallée). Researcher experience and knowledge of community protocols may vary and without the acknowledgment of protocols and efforts made towards long-term relationships with a community, a project that appears to be community-based may not be (Lavallée; Ritchie et al.). Ritchie et al. (2013) explain that for effective collaborations, funding models should be more supportive in facilitating face-to-face interactions. Indigenous-led research is an approach that researchers are looking towards as an alternative to community-based and participatory research (Peters et al.).

Reviews show very little evidence that “Participatory” and “Community-based” research is being done by and for Indigenous communities as it still mostly excludes the community, especially when it comes to data collection (Lavallée). Researchers are beginning to replace community-based and participatory research with Indigenous-led research, recognizing that participation and homogenized research methods are not enough (Peters et al.; Ritchie et al.). Indigenous-led research is important but there is still a concern that this term may be used too loosely. New research approaches are necessary if effective research is going to be done by, with and for Indigenous communities; researchers supporting self-determination through the implementation of community and project-specific research methods is necessary, as well as the recognition of Indigenous, and more specifically, Indigenous sovereignty in research (Ritchie et al.).

2.9 Indigenous Research Sovereignty

Data is only one aspect of research. Unlike Indigenous Data Sovereignty, Indigenous Research Sovereignty is a topic that is only just beginning to emerge in the literature, with only two articles about it that came out in the spring of this year by Hudson et al. (2023) and Murveit et al. (2023). The emergence of conversations around Indigenous research sovereignty has followed up movements toward Food Sovereignty, Network Sovereignty, Energy Sovereignty, Data sovereignty and, Knowledge Sovereignty (Latulippe and Klenk; Hudson et al.). Research sovereignty relates to all applications of sovereignty movements that are worth researching and exploring further so they can be mobilized (Hudson et al.). The

apparent inequities in research activities, funding, policy, and resource allocation have revealed a narrative that promotes a growing need for Indigenous Research Sovereignty (Hudson et al.). Even though data is only one component of research, Hudson et al. explain that "Establishing Indigenous Peoples' Rights in Data provides a concrete step toward operationalizing Indigenous Data Sovereignty and Indigenous Research Sovereignty by articulating a range of specific rights that can be recognized to support Indigenous Peoples' aspirations for control of data and self-determined research activities". (p. 6).

Exploring Indigenous Research sovereignty is an important part of decolonizing research and contributes to the development of Indigenous and nation-specific methods and methodologies (Ritchie et al.; Datta). Latulippe & Klenk (2020) argue that we should move away from attempting to incorporate Indigenous knowledge into Western research and instead make room for Indigenous people to lead research for themselves. Linda Tuhiwai Smith (2021) explains that Indigenous research should be done by and for Indigenous people. Indigenous Research Sovereignty must include a much larger involvement of Indigenous People in the control of research activities, agendas, and infrastructures around Indigenous research, including data management (Hudson et al.). Identifying what Indigenous Research Sovereignty means and what it will look like would contribute to a society that is more inclusive, diverse, and equitable (Hudson et al.).

An article based in the USA emerged in 2023 titled "Stories as data: Indigenous research sovereignty and the "Intentional Fire" podcast" by Murveit et al. shared what they learned and their process for supporting Indigenous research sovereignty with regards to fire management practices in the United States through the collaborative development of an ethical research guide for using Indigenous knowledge and providing an example of how they navigated a collaboration between universities and Indigenous communities. Murveit et al. (2023) explain that "*Even though practitioners of Western science are increasingly interested in embracing and integrating Indigenous knowledge, there is still a lot to learn about these collaborations, and a need for more guidance on collaborative methods that implement Indigenous research sovereignty*" (p. 3). Indigenous people are interested in research that is based in the community; a reality not yet achieved with most research agendas being implemented by non-Indigenous scholars (Murveit et al.; Moore et al.). Indigenous research sovereignty is important because it upholds Indigenous knowledge and understanding; it is the research that is "enacted and implemented" by Indigenous people (Murveit et al.).

Both Indigenous research sovereignty and Indigenous data sovereignty are important parts of Indigenous Sovereignty as a whole and more specifically the rights Indigenous peoples have to self-determination over their lives, lands, and research activities (Hudson et al.). Ensuring that data systems and research practices are consistent with Indigenous rights and Indigenous sovereignty is important

moving forward; this is especially true as research becomes more openly accessible (Hudson et al.; Walter, Lovett, et al.; Cartney et al.). Murveit et al. (2023) explain that collaboration is not a necessary part of Indigenous research sovereignty but can be beneficial in upholding it. In a concluding statement made by Latulippe & Klenk (2020), "*Not every thing is for non-Indigenous people from acknowledge sovereignty perspective, but non-Indigenous researchers and institutions have a role in creating a meaningfully supportive environment; for instance, by working to acknowledge and redress past harms, up root on going institutional racism and colonialism, enact treaty and guest responsibilities to Indigenous lands and peoples, give effect to the UNDRIP, and, in Canada, deliver on TRC recommendations*" (p. 10). However, Allies and non-indigenous researchers need to be supportive of Indigenous research agendas (Murveit et al.).

3 Methodology

Research with Indigenous people must be done in a way that respects and acknowledges traditional knowledge and values (Warrior; Johnson-Jennings et al.). The type of methodology used in this research is Qualitative (Western), informed by Indigenous Methodologies through Two-Eyed Seeing. Both Indigenous and Western Methodologies were given priority when framing, collecting, analyzing, and communicating the data; this allows for research to be viewed through different lenses while utilizing the strengths of each approach (Bartlett et al.). By using a mixed-method approach like Two-Eyed Seeing, I acknowledge that there are power dynamics at play that often favour Western methods over Indigenous ones. While this may be true it is something that was taken into consideration during the collection, analysis, and dissemination of this research. I also acknowledge that Two-Eyed seeing approaches were originally developed and applied to Western scientific research in Eastern Canada by Mi'kmaw Elders Murdena and Albert Marshall, and not in Western Canada where this research was conducted (Bartlett et al.; Peltier; McKivett et al.). Two-Eyed Seeing is about viewing research in a way which utilizes the strengths of both Western and Indigenous approaches to research. Therefore, I am using the term 'Two-Eyed Seeing' for my methodology because I developed my methods in a way that draws from the Western knowledge and experiences I have as a non-Indigenous researcher, and the Indigenous approaches to research I have learned through this research project.

Indigenous methodologies differ from Western methodologies because they don't solely aim to collect information but are an expression of individuals doing the research; they are different from Western methodologies; they are unique and have their standing without needing to be validated and analogized to Western methods and methodologies (Kovach; S. Wilson; Walter and Suina). Indigenous methods and methodologies should be used to inform work for and in Indigenous communities because

they give voices to marginalized peoples and communities (Kovach; Evans et al.; Maynes and Pierce; Walter and Suina). Indigenous Methodologies acknowledge the colonial landscape and resist its narrative; they acknowledge Indigenous traditions, ways of knowing, and ways of viewing the world; and they assert that research is for the people (not on the people); it challenges power dynamics; and is an important part of Indigenous self-determination (Evans et al.; Walter and Suina; Smith, "Introduction"; Antoine). Ensuring there is space for different methodologies and ways of knowing and doing is important because this research is Indigenous (Peltier).

This research involved interviews with Indigenous academics, students, community members, and those who are part of Indigenous Organizations. Interviews were used because they provide a greater understanding of the needs of Canadian Indigenous communities around data and research. Qualitative methods are the main Western type used in Indigenous research, next to mixed methods due to the colonial history of quantitative and positivist approaches to research and the harms and stereotypes it has perpetuated (Walter and Andersen, "Conclusion: Indigenous Peoples and Statistics"; Smith, "Introduction"; Walter and Suina). For this Indigenous-focused research, the value of qualitative methodologies holds precedence over quantitative methodologies because they better capture traditional and contemporary Indigenous knowledge, while also preserving the rights to that knowledge which is created by and for Indigenous people (Warrior; Johnson-Jennings et al.). As stated by Smith (2021), Indigenous knowledge is important because it embodies what is remaining of Indigenous cultures; this is why Indigenous research methodologies will be used in this research to inform the way the qualitative methods are utilized, and how the knowledge that comes from this research will be shared.

3.1 Study Area

Manitoba and Saskatchewan are the study areas for this research. The people interviewed represented Anishinaabe (Ojibwa), Nēhinan (Cree), Saulteaux and Red River Métis communities. Three of the people interviewed in this research were Metis and six were First Nations; 1 Saulteaux, 1 Nēhinan / Saulteaux, 2 Anishinaabe, 2 Nēhinan. Most people interviewed live in or around Winnipeg, except for one who lives in Eastern Saskatchewan.

3.2 Interview Participants

The interview participants were chosen according to the people I had personal relationships with through the work I have been involved with in the last three years. In the interviews one of the questions asked was if there was anyone else, they would recommend I Interview and include in this research; from those recommendations, I was connected to people outside my network. A total of seven individual interviews were completed for this project and one group discussion with three of the original participants and two additional people. Building relationships is an important part of doing research with Indigenous

people, this is the reason the people who were chosen to participate in this research are the people that I already had relationships with. There were a couple of people interviewed who I reached out to and had no previous relationship with.

The people interviewed each have different backgrounds and experiences which provides different perspectives to the research. Some of them are Indigenous Scholars, researchers, and students who conduct research related to sovereignty; Community Researchers and people who were or are working in communities and have been involved in research projects in their communities; and Indigenous People who work within Indigenous Organizations and institutions. Having a perspective from Indigenous scholars, researchers, and students is useful for this research because they can provide a perspective from within research institutions as they have insights on the barriers they and other Indigenous people experience with education and research in academia. Researchers and scholars can also speak to how they and others have overcome these barriers, as well as speak to the need to have a greater representation of Indigenous voices and knowledge in academic and other institutions. Student voices are important also because they represent the next generation of Indigenous scholars, researchers, and professionals. Speaking to people from communities who are involved in research is also important because their voices are the ones not often heard. Scholars and those who are within the research institutions have been the dominant narrative around research and data sovereignty thus far so highlighting community voices that may give unique perspectives is also important for this research. Including Indigenous voices from organizations is also important as they are involved in research and will have experiences and perspectives on Indigenous research sovereignty, the barriers that exist, and ways that they are being overcome.

Each person who was interviewed indicated that they wanted to be identified by name; a list of participants, their name, their interview group, affiliation, and the type of interview they were involved in is highlighted in Table 1.

Table 1. A list of interview participants, their cohort, affiliation, and intended interview type.

Interview Group	**Participant**	**Affiliation**	**Interview Type**
Indigenous Scholar and Student	Moneca	Ph. D Researcher.	Individual
Indigenous Scholars and Student & Community Researcher and Workers	Taylor	Student at the University of Manitoba, Land educator and Water Guardian.	Individual
Indigenous Scholars and Students/ Community researchers	Fiona	Métis master's student at the University of Manitoba.	Individual & Group

Indigenous Scholars and Students	Tammy	Ph. D Student at the University of Manitoba, instructor at the University of Winnipeg, and MMIWG2S advocate.	Individual
Community Researcher and Worker	Errol	Community-based Business Owner.	Individual
Indigenous Organization/ Institution Worker	Shavon	An employee for an Indigenous health organization.	Individual & Group
Indigenous Organization/ Institution Worker & Indigenous Scholar and Student	Nikki	Métis Ph. D Student at the University of Manitoba and an employee at the Community Engaged Learning Center.	Individual & Group
Indigenous Scholar and Student & Indigenous Organization/ Institution Worker	Ashley	Land Based Educator and Project Coordinator for Kis Kin Ha Ma Ki Win based out of the University of Manitoba.	Group
Indigenous Organization/ Institution Worker	Daniel	Métis Director at Lake Winnipeg Indigenous Collective.	Group

3.3 Interview Questions

Interviews represent one of the important steps to reconciliation involving testimonials from Indigenous peoples that present the truth of the matters (Czyzewski; Smith, "Twenty-Five Indigenous Projects"). Interviews were used to understand the ways communities are overcoming colonial barriers they face as it relates to research sovereignty. Interview questions were based on a past-present-future framework. Questions on the past looked at legacies, past practices, and the background context of research programs in communities. Questions on the present showed what has changed over time, how responses and solutions have changed, what is taking place now, and the reality of research sovereignty in its current state. Questions on the future brought an element of hope; what the best practices and supports for Indigenous research are; what has been learned; and ideas for action moving forward. The questions and discussion prompts are listed in Table 2.

Table 2. A list of the questions asked during interviews, as well as prompts that could be used during the interview discussions.

Question Type	**Question**	**Discussion Prompts**
Introductory	What comes to mind when you think of research?	What are your thoughts on Indigenous-led research?
		What are your thoughts on Indigenous-led research? How can it be done in a good way?
		Do you think sovereignty relates to Indigenous-led research or plays a role in Indigenous Sovereignty as a whole?

Past and Present	What are the differences between research that has been done in the past, and research that is occurring now?	What were the challenges or barriers?
		How have they been overcome?
	What types of protocols do you feel are important when working with an Indigenous community?	Do you think it is important for researchers to maintain long-lasting relationships with the community they are researching in?
	What do you know about OCAP?	Is there adequate access to data that has been generated from research?
		Do you think it adequately addresses the issues around Indigenous Research and data sovereignty?
		What piece do you think is missing from OCAP?
		Should Indigenous peoples be developing their data?
Future	What kinds of resources/ support or training do communities need to conduct their research?	What are the benefits of communities conducting their research?
		What are the challenges?
	Are technology and access to technology important to conducting research?	What types of technologies are important?
	What do you think are important guidelines for Indigenous Sovereign research?	How would you define Indigenous research sovereignty?
	Do you have any advice for other Indigenous Researchers or Allies?	
Concluding	Is there anything else you want to share or add?	
	Do you have any suggestions for other people I can reach out to who would be interested in being part of this research?	

Questions that ask about experience, current realities, and future hopes reflect the 3 R's that are important for reconciliation—revealing, reporting, and reflecting (Lightfoot). Others have also explored the importance of Rs in research and expanded on their meaning in Indigenous pedagogy (Tessaro et al.). Four Rs were used by Kirkness and Barnhardt (1991) to develop best practices for supporting Indigenous students. The four Rs were respect, relevance, reciprocity, and responsibility (Barnhardt and Kirkness). A fifth R, "relationships" was added and explained by Tessaro, et al. in 2018. In 2022, an article titled "The Six Rs of Indigenous Research" in the Tribal College Journal of American Indian Higher Education added a sixth R, "representation" (Tsosie et al.). Each iteration of R highlights how Indigenous research has progressed and how there is still room for improvement.

3.4 Introduction to Methods

To achieve the overall goal of this research, a Two-eyed seeing approach was used, combining qualitative and Indigenous research methods. Two-Eyed Seeing in research is about utilizing multiple approaches and research pedagogies and combining different ways of knowing and doing to conduct research and create knowledge (Bartlett et al.). Incorporating Indigenous methods is important because, like this research, Indigenous methods question the way research is being done (Evans et al.; Bartlett et al.). The development of Indigenous methods partially stems from one's own identity as an Indigenous person, therefore it wouldn't be appropriate for a non-Indigenous person to use only Indigenous methods. Instead, Indigenous methods and ways of knowledge production informed the Western (qualitative) methods being used (Kovach; S. Wilson). Using a Two-Eyed Seeing approach is crucial because it ensures that Indigenous knowledge is being shared and presented appropriately; and it reinforces Indigenous sovereignty by valuing Indigenous ways of knowledge production, knowledge sharing, and worldviews (Bartlett et al.; Peltier; McKivett et al.). The graphic depicted in Figure 1 shows how this research used Two-Eyed Seeing and how Indigenous methods were at the heart of this research. Interviews were the Western method used in this research. The interviews were semi-structured leaving questions open-ended to facilitate discussion and to allow Indigenous methods of storytelling, testimonials, personal reflections, and narratives, and envisioning to also have a place.

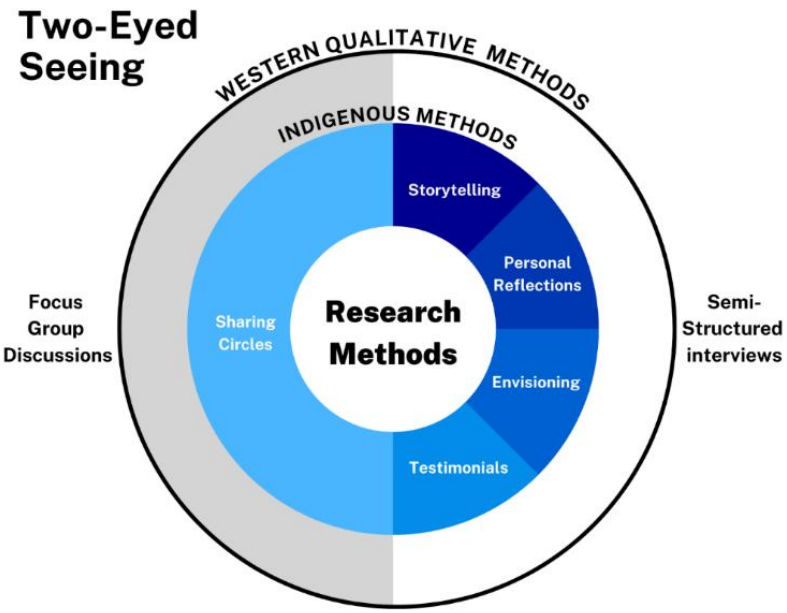

Fig. 1. Donut chart showing how Indigenous methods were used to inform Western methods in this research.

3.5 Western Methods

3.5.1 Semi-structured interviews

Interviews are a way of creating a space where truths can be shared, and a dialogue can occur. Semi-structured interviews were the qualitative method used because they are closer to conversations and less formal than formal structured interviews (Mann). Open-ended interview questions were used because they leave room for interviewees to share and elaborate on things that are important and relevant to them. Semi-structured interviews can also be used to discover knowledge and truth, in the same way Indigenous methods of storytelling and personal reflections do by interacting with people from different life experiences (Kakilla; DiCicco-Bloom and Crabtree; Smith, "Twenty-Five Indigenous Projects"). The semi-structured questions that were used acted more as a conversation guide, with discussion prompts (see Table 2). Interviews focused on experiences, especially concerning governments, industry and universities, the factors that underlie these experiences, and any ways of mitigating or addressing barriers to conducting research. The discussions that arose from the interviews made up the first four objectives of this research.

All interviews were conducted virtually using video conferencing, in part reflecting the realities of the COVID-19 pandemic and enabling participants from different parts of the country to be engaged in this research.

3.5.2 Individual interviews

Individual interviews were one of the qualitative methods used in this study. Individual interviews give individual voices a chance to be in the spotlight. It is important to acknowledge that relationships exist (or don't) between the person sharing and the person the stories are being shared with because these relationships can affect the way stories are shared, understood, and analyzed (Abu-lughod; Maynes and Pierce). Keeping this in mind is important because it serves as a reminder that researchers play a role in their research and its outcomes.

3.5.3 Focus Group Discussions

Focus groups are an opportunity for like-minded people to come together to have joint reflections and compare their own experiences as they relate to the interview topics (Mann; DiCicco-Bloom and Crabtree). The focus group discussion was done to explore ways of responding to barriers to research and sovereignty and come up with possible solutions, and actions people can take to address them utilizing a more collaborative approach to data analysis. After the individual interviews were conducted and an initial analysis completed, a newsletter-style document was sent out to all of the people interviewed for them to review and reflect on the outcomes and themes before being invited to a group discussion where participants could ask questions and provide feedback The news article contained visuals depicting what

themes arose from the interviews; showcasing what this thesis is about, the ways research was approached and why the research was approached in this way (see Appendix 3 for a copy of the newsletter).

3.6 Indigenous Methods

The Indigenous methods used to inform this research were storytelling, personal reflections, testimonials, envisioning, and sharing circles (Smith, "Twenty-Five Indigenous Projects"). All these methods are inherent in the interview process and therefore are reflected in the methodologies.

3.6.1 Storytelling

Storytelling is an Indigenous method that uses the stories of individuals to create a collective narrative (Smith, "Twenty-Five Indigenous Projects"). Storytelling is a way to share experiences while also resisting the Western paradigms of academia by giving the storyteller, rather than the researcher control of the narrative (Windchief and Ryan). Storytelling is an important part of Indigenous culture as it is the way knowledge is passed through generations, *"The story and the storyteller both serve to connect the past with the future, one generation with the other, the land with the people and the people with the story"* (Smith, p. 166). Stories have a beginning, middle and end, just as this research aims to reflect the past, present, and future, it makes storytelling an important method to inform this research. Another characteristic of storytelling is the reciprocity that occurs between the listener and the storyteller as it can give a medium in which the stories shared can be passed for others to learn from those experiences (Smith, "Twenty-Five Indigenous Projects"; Windchief and Ryan). During analysis, the stories shared in the interviews were not broken up, instead, they were kept whole because coding and qualitatively analyzing them would be problematic and inappropriate (Lavallée). Within the results section, some of the quotes were longer stories, but after much thought, they were summarized and/or shortened, and the full story was put in an appendix so as not to disrupt the flow of the results section.

3.6.2 Personal Reflections

Personal reflections are a narrative where people reflect on and explore their own experiences (Somers; Maynes and Pierce). Personal reflections are a type of Indigenous method that can provide perspectives from the past and can be used to understand different social and cultural norms and contexts (Somers; Maynes and Pierce). Personal reflections highlight how different people interact with society and the way they may be impacted by the structures of society, their place in it and how they have been shaped by those experiences (Maynes and Pierce). Personal reflections inform the *past* and *present* aspects of this research and are inherent in the interview process.

3.6.3 Testimonials

Testimonials are an Indigenous method being used to inform this research because part of this research reflects the *past*. Talking about past experiences can sometimes bring up uncomfortable or

painful experiences that people may have had. This is why creating a safe space to share, and the option of remaining anonymous is important for the interview process (Smith, "Twenty-Five Indigenous Projects"). Testimonials also inform *present* aspects of this research as they are the testaments to the lived experiences people have had.

3.6.4 Envisioning

Envisioning is an Indigenous method Linda Tuhiwai Smith highlights in Chapter 8 of her book, "*Decolonizing Methodologies: Research and Indigenous Peoples*" (2021). Smith (2021) states that envisioning is, "*The power of Indigenous peoples to change their own lives and set new directions, despite their impoverished and oppressed conditions, speaks to the politics of survivance*" (p. 147). Envisioning informed the *future* aspect of this research. Participants were asked to reflect on what actions can be taken to achieve Indigenous Research Sovereignty. Envisioning gives people the opportunity to imagine a future where things are different (Smith, "Twenty-Five Indigenous Projects").

3.6.5 Sharing Circles

Sharing circles are the Indigenous method used to inform the focus group discussion. Sharing circles create a safe space where all voices are equal and all are welcome to contribute to the topics of discussion (Lavallée; Kovach, "Conversational Method in Indigenous Research"). Sharing circles informed the way the focus group was held by using the ideas of openness and equality to create a safe space for sharing, understanding, and discussing (Lavallée). Indigenous worldviews are relational, and knowledge is thought of as something that is co-created and shared (Díaz Ríos et al.). Therefore, discussing the conclusions of this research and the themes that arose in the results provided an opportunity for the co-creation of the knowledge and outcomes of this research.

3.7 Consent and Ethics

The reference number for ethics from the University of Manitoba is Protocol # J2020:040 (HS23817)**.** This ethics number refers to the larger research project in which this research is grounded. The research project titled, Kitatipithitamak Mithwayawin is a collaborative research project based out of the University of Manitoba shaped by 11 Indigenous organizations who shared their need for innovative and culturally appropriate countermeasures to COVID-19 and other pandemics to better serve Indigenous communities now and into the future (https://covid19indigenous.ca/). The advisory council on this project identified a need for a way to collect data and research in their communities in a way that was safe and effective during the pandemic. The larger research project has moved beyond the pandemic by working with communities who have shared experience with research and data collection coming from outside of the community which led to the development of this master's project.

Transparency and consent are both important as they relate to another Indigenous method called "rights to knowledge" (Warrior). Rights to knowledge is an important aspect of OCAP and is also outlined in UNDRIP, and by First Nations Information Governance Centers (FNIGC). Therefore, any information that arises out of this research will be for the communities and people I work with.

For this project, it was important to achieve consent and ethics that surpassed the ethics procedure outlined by the University of Manitoba and by Canadian Tri-Council guidelines. Consent for involvement in this research occurred at the individual level. This type of consent was achieved by meeting with the people I worked with and being transparent about who I am, what my research is about and what my research is intended for (TallBear; Marley; Innes, "'Wait a Second, Who Are You Anyways?'"; Walter and Andersen, "Conceptualizing Quantitative Methodologies"). Before conducting any interviews all the participants were told how the information from the interviews was going to be used. Verbal consent was obtained during interviews, by taking participants through a list of points outlining what the research is about, its purpose, how information that arises from the interview will be used and protected and their choice to be anonymized, along with their other rights to refuse to answer questions or withdraw at any point. The verbal consent was audio-recorded at the beginning of each interview. Information about consent was also given to each person, along with a transcript after their interview (see Appendix 1 for a copy of the consent information sent to participants). All interview participants were offered an honorarium for their participation. Compensation for sharing stories and experiences is an important part of building relationships, as well as reciprocity.

3.8 Data Analysis

After the interviews were conducted, transcripts were made using Otter.ai, a transcribing software. Otter.ai assistant, which joins virtual meetings and makes an audio recording of the meeting, and a transcript as the meeting was happening, was also used during the interviews since they were all held virtually. After transcripts were made, they were imported into Dedoose, a qualitative data analyzing software where the contents of the transcripts were analyzed for reoccurring themes that arose out of the individual interviews. The interviews were analyzed using an inductive thematic analysis which approaches analysis without predetermined ideas and allows things to arise more naturally (Mann). This approach was used to find patterns and common emerging themes in the data (Mann). Blocks of text from the interviews were highlighted and annotated with "codes" that contained a brief explanation of what was described in the highlighted excerpts (Lavallée). An example of this coding method can be seen in Appendix 2. From the codes, categories and subcategories were created to group similar codes together (Lavallée). Not every annotated code was included. After grouping the codes into categories, connections were looked for and explored between the categories to identify overarching themes (Lavallée). Any

stories told in the interviews were not coded in separate pieces but left intact, as storytelling and stories are an important part of Indigenous cultures (Lavallée).

The initial intention was to number each interview to protect the identities of those being interviewed and if someone indicated they would like to be anonymous, the interview numbers, names of the interviewees, and the associated interview transcript would be kept in documents on a flash drive, only accessible to myself. However, everyone indicated that they were comfortable with their name not being anonymized. Anytime a quote was used from the interview, the person the quote was from was informed about what quotes were being used, and the context it was being used in. This was done by providing a table to each participant with their quote, a brief explanation of the section the quote was being used in and the context in which the story or quote was used. Another column was left blank to allow them to change or edit their quote or make suggestions about the context it is being used (see Table 3 for an example). This provided transparency from me as the researcher and ensured each interview participant knew how the things they shared were used in this research.

Table 3. Process for informing Interview participants how their quotes were used in the research.

Context/ Section	**Quote**	**Feedback**
This column explained the context quotes/ stories that were used and what section of the results they were used in.	This column contained the quote itself.	This column was left blank for people to edit their quotes or make suggestions about the context.

Inherent in this research is reciprocity. Reciprocity is also considered an Indigenous method and so it is being used to inform how the results were shared with the people interviewed for this research project (Evans et al.; Galletta; Windchief and Ryan; Peltier; Conrad). Reciprocity is an Indigenous value, and it is an important part of research that is done with Indigenous people (Windchief and Ryan). Reciprocity is reflected in this research as the knowledge that comes from this project will be shared with the people who contributed to it.

Once the overarching themes were identified, they were shared with the participants in a Newsletter via email for review. The Newsletter was made to share the results and themes that emerged from the interviews with the interview participants by using graphics to depict the results and visually summarize what was found (See Appendix 3 for an example of the Newsletter shared). The purpose of the Newsletter was to help facilitate the group discussion before going further in the research and writing up the results and conclusions. This is a practice called “member checking” within qualitative research that

ensures the validity of themes while also providing another opportunity for participants to comment and provide feedback on the results while also adding another layer of Indigenous voices to the research (Lavallée).

After the Newsletter was distributed, the participants were invited to a group discussion. During the group discussion, the participants were given the opportunity to comment and provide feedback on the graphics that were shared in the Newsletter and to reflect as a group on what the next steps are to enable change around Indigenous research and research with Indigenous people. Giving the interview participants my findings and engaging participants in reflections is another form of reciprocity between the participants and the researcher (Galletta). The intention behind the focus group was to have an iterative process for sharing the outcomes with the people who participated in the individual interviews are engaged in research and have lived experiences. The focus group was also an opportunity to fill in any gaps. There is a lot of value in bringing people together to reflect on experiences, think about the future, and establish policies and procedures around doing work with Indigenous people. Feedback from the focus group was taken into consideration for the results and conclusion.

4 Results

For the sake of this research the terms "Indigenous community" and "community" are used interchangeably, and any claims about "Indigenous" refer specifically to First Nations and Metis people as there is no Inuit representation in this research. The specific groups represented in the following section are Anishinaabe (Ojibwa), Nēhinan (Cree), Saulteaux and Red River Métis communities. Therefore, when the term "Indigenous" is used, it refers to the experiences of the people interviewed from these specific cultural groups.

4.1 Introduction

"Research is a word, right? But that word has meaning, and it has its own life, and because it has its own life, it has a past, a present and a future. If the past doesn't inform the present and we keep doing research the same way, and we don't change the way it is … then the future is not going to look too bright" (Moneca)

4.1.1 Past Experiences with Researchers and Research Institutions

Colonialism has resulted in the systematic oppression of Indigenous people. Most Indigenous people in Canada have been disconnected from their communities and culture. First Nations people were

put on reserves and forced into residential schools, stripping them of their language, culture, and ability to thrive in their diverse cultures. Métis people were oppressed, and experienced prejudice from all groups; their communities were dismantled, forcing them to hide their identities for fear of persecution and punishment. These circumstances have left Indigenous communities vulnerable to researchers taking advantage of them.

Indigenous communities have had negative experiences with researchers and research institutions. “Research is everywhere in First Nations, it's exhausting because as a First Nation, you get sick of being the test subject” (Shavon). Despite the research being very present in First Nations communities, they are still thought of as research subjects, not as research partners. There has been no reciprocity and no relationship-building. Past non-Indigenous researchers did not understand Indigenous worldviews, or the important customs and protocols communities have. Researchers underestimated the importance of land, the connections between people and the land, and the ceremony that comes with those connections. “Without having the respectful ceremonial part of it (research) beforehand, it can be a bit jarring and also a bit reminiscence of the residential era of people just coming in and taking what they want” (Fiona). Indigenous research has been extractive. Researchers in the past did not properly use the knowledge they were given by the community. Researchers were able to do whatever research they wanted and the way they wanted to do it with very little oversight and without considering if the research was potentially harmful, or if it had any real benefit for the community.

Past research had very little benefits for Indigenous communities; it has mainly benefitted researchers and research institutions. Researchers in the past didn’t take into consideration how their research could benefit the community, how they could give back to the community or what kind of research communities wanted to do. Before the development of OCAP and other data sovereignty principles, there was no mechanism in place protecting communities and their knowledge and ensuring researchers worked with communities in good ways. Without any data sovereignty principles, there was nothing advocating for communities to have control over the data that is about them and their lands. There was no idea of communities having ownership over their data or research, leaving them vulnerable to being taken advantage of.

Research in the past only looked at negatives or what has been described as the “5 Ds of data”; difference, disparity, disadvantage, dysfunction, and deprivation (Walter and Suina). Past research never highlighted the good things happening in communities. Instead, research created stereotypes, often making Indigenous people look bad. “They're making Indigenous people look bad based on statistics. That is the stigma that comes with researching Indigenous people” (Errol). Indigenous people would rather not be involved in research at all than have it impact them negatively.

> "Research isn't something that people want to happen in their communities because …there is no giving back. The way communities operate is, for example, you're coming to a community to do ceremony, you're giving yourself to the community to get knowledge. But when a *researcher* comes there, they're not. They're just coming to the community and they're taking and then they're not doing anything with that knowledge. So, research for communities is about people coming there and taking and never giving back" (Moneca)

The experiences of the past have caused communities to have a deep mistrust towards universities and researchers. These legacies have continued to leave communities hesitant about working with researchers and research institutions because of their lack of understanding of them, their culture, and important cultural protocols.

4.1.2 Current Experiences with Researchers and Research Institutions

Research is very present in First Nations communities. "In the outside world, Indigenous people are not seen as something important. We are important because we make good research" (Moneca). Despite some changes in the positive direction, research in First Nations communities is still very extractive; researchers are not working in good ways and are still treating people as test subjects. "Historically, and when I say historically, I mean, like six years ago, research conducted with Indigenous folks was very extractive. We would go into communities and say, 'This is what we want to know and you're essentially just our research subjects'" (Nicki). There is still a lot that is going wrong, and researchers aren't being respectful of the communities they are working with. In the following quote, Taylor shared a story that highlights a negative experience her community had with a researcher.

> "I helped out with a research project… It was a total nightmare. (The researcher) came in with funding … (the researcher) was talking about the students behind their backs to me and when I brought all this up (the researcher) was very rude and then all of a sudden just took off with all the funding money because (the researcher) got mad at us because we wanted to have the students more involved in the research … things just started to unravel and unfold in a very unprofessional manner. That's not the first time that this has happened" (Taylor)

This quote indicates that the researcher had not developed a relationship with the community. Communities are still consistently saying that things are going wrong with research projects. Researchers are not listening to the community's needs, and they are not giving anything back. As soon as the funding is gone, the project dissipates, the researchers leave, and nothing ever gets accomplished. "This has been done throughout all First Nation communities where people outside people come in to do research on our lands and waters, yet we seem to not have that piece of the data presented to us afterwards" (Taylor).

Researchers are not following through with their promises, and they are not sharing the results of the research with the community or giving them ownership over the data that is about them.

The problem is not just with researchers, it is with institutions as well because they are behind the ball. Fiona shared an experience she recently had while gathering with a group of graduate students. The students had all met to get to know each other and share their research focus. One student simply indicated they were doing "Indigenous research" as if making such a broad statement was a normal thing to say.

> "He just said, 'Oh, something Indigenous related. Not quite sure…something involving Indigenous people'…What does that mean? How can you be entering a master's program, which has a very strong connotation that there is a certain level you must get to and just to say, 'you're gonna do something with Indigenous people', and not specify anything beyond that? The room just went, 'Oh, cool'… that spoke volumes to me. Even the instructor there wasn't really pushing them to explain what they meant. It was surprising to me because I feel like I do a lot of research on all the good stuff that has been coming out in terms of Indigenous research and the way we're moving forward, then just to be shocked and realize 'Oh, no, things are still not moving where they need to move'" (Fiona)

Researchers are interested in working with communities, but they don't know how to approach it. Non-Indigenous researchers see themselves as saviours and as the ones who can make communities 'better'. "There is a saviour complex when it comes to researchers, and now Indigenous communities are becoming very wary of researchers because they are doing research about them, not with them" (Ashley). Researchers see Indigenous people as charity cases instead of seeing them as being capable of determining how they can make their communities better.

People in the community are continuing to be excluded from the research process and researchers are still too focused on personal gain and publishing papers. Even researchers who have good intentions are not setting communities up for success. Moneca shared a story about a research project that fell apart after the researcher left because they didn't include the community in the planning. "I worked in a community garden project where people just built the community garden. There was nothing, people didn't grow in the community gardens because nobody really knew what to do. And so, for me, the researcher was just about ticking off numbers about okay, this community has a great community garden, but they didn't teach anybody anything" (Moneca). Communities should be involved in projects that are about them and their communities if researchers want the projects to succeed and have meaningful impacts.

Unlike First Nations communities, Métis research is only just beginning to emerge, and currently, there is very little research available.

"To me, research is beginning to change … it is just at the cusp of wanting to become something different and I think possibly in the future research can be done differently and it can actually work differently. It is just getting people to recognize that research is a powerful tool, and it does have the capacity to make change" (Moneca). Communities should be the ones deciding what research they participate in and what research is done in their community. "I think that we understand now that Indigenous research needs to be different. We understand that Indigenous communities should have self-determination to be able to choose what kinds of research they participate in, what that research will look like, and how that research is conducted" (Nicki). There is more recognition and respect given to Indigenous people and their knowledge. "We all are being acknowledged finally, even though it took so, so long, and it took some aggressiveness … Indigenous science is finally starting to be seen the way that it should be…I find that we're finally getting recognized for our value and our reciprocal relationships with Mother Earth and with the land and with the water with the animals" (Taylor). There is a shift happening from the way research was done with Indigenous people in the past but there is still a lot of room for improvement. People are interested in this shift but there isn't access to information that defines what Indigenous research sovereignty is and what role it has in Indigenous sovereignty. To understand Indigenous Research Sovereignty, it is important to understand Indigenous Research.

4.2 What is Indigenous Research?

"(research) …is not just a word. It has a life force. It needs to change, and it has to grow like anything else in this world. If it doesn't, it's no good to people" (Moneca)

Research has a different meaning to Indigenous people. Each person interviewed was asked what came to mind when they think of research. From their responses it was clear what the differences and similarities are between Indigenous and Western views of research (see Fig. 4.). Indigenous views are more holistic and include people, relationships and finding solutions to improve livelihoods; these are all integral parts of Indigenous research. Western views of research are more focused on data collection, the researchers' views and elevating the status of the researcher and the institution. Western research also values objectivity; viewing things from an outsider's point of view instead of immersing oneself within the research subjects, especially when it comes to social research. This view is in direct opposition to

Indigenous views of research which stress that a researcher is part of their research and can and should not be removed from the research they are conducting.

> "To me, research is about re-searching. It's about re-looking re-viewing looking at things differently and that's how I resolved the idea of research in my head and how I feel comfortable with it. It's because it's about me re-looking at things and re-viewing things and searching for me in that work. To me, that's what research is. it's about finding me as an individual, as someone in that work that's important" (Moneca)

Although there are more differences than similarities between Indigenous and Western views of research, it is always about finding answers, understanding why things are the way they are, and moving forward.

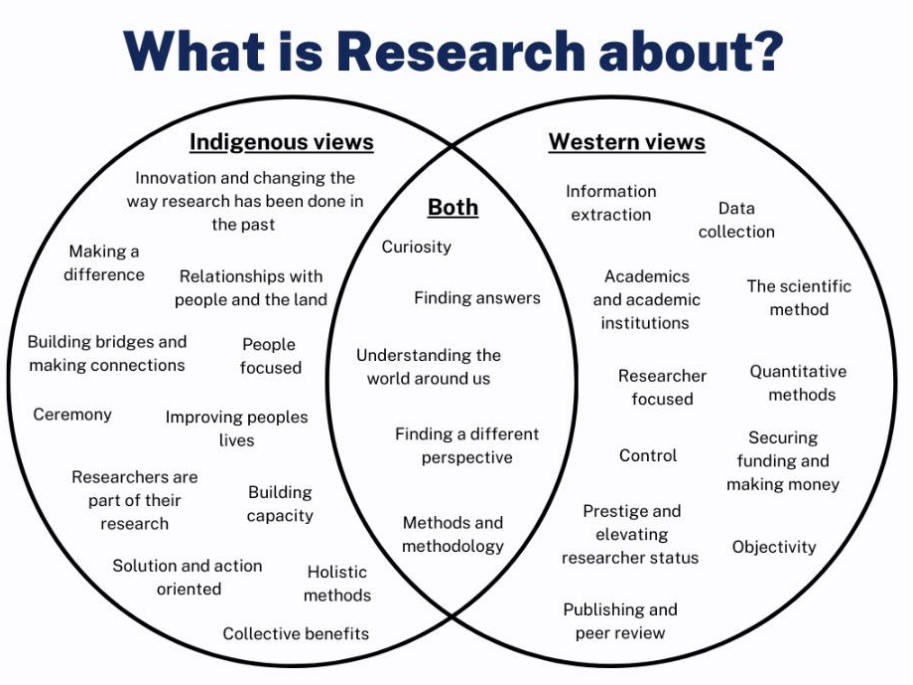

Fig. 1. Venn diagram displaying the differences and similarities between Indigenous and Western views of research.

Shavon also shared what research means to her and how she deals with the differences between Indigenous and Western research and finds value in each:

> "When I think about research, I often think about my mom and the importance, and my mom's teaching, an Anishinaabe teaching. When we talk about research, and we put an Indigenous perspective to it, we talk about being "ogitchidaa". All of us First Nations, the young ones, are "ogitchidaa" or warriors. We are meant to be modern-day warriors. My mum said we have to use research of the settlers; the colonizers and we have to figure out how to apply it to our First

> Nations…I know in my heart that all of us First Nations scholars are ogitchidaa and we are part of society in a modern way. So, when I think about research, I think about my mom and that teaching" (Shavon).

Indigenous people have always understood the value of research, it is embedded in Indigenous values, teachings, and traditions. One of the ways Indigenous people conducted research was through observations that were passed down and built upon through generations. For example,

> "Indigenous communities all across Canada had incredibly well-researched, well-developed plant knowledge. We knew exactly what things were. We understood every (plant) part…the roots, the stem, the leaves, and the flower all have different medicinal properties; we understood the vitamin content in them, and we understood how they could support our diets or mental and physical health needs. We knew those things because we did research" (Nicki).

Indigenous people are and have always been conducting research. They know what they are doing and how they want to do it. Many of the research concepts used in Western academia are also used in Indigenous research but may be approached in different ways. "We are definitely breaking down barriers of what the past did hold for us. We saw mostly non-Indigenous researchers doing Indigenous research, but today I feel extremely proud of being an Indigenous student and researcher" (Taylor). With a growing interest in research from Indigenous communities, and a growing number of Indigenous researchers there is a lot of good work happening that is helping communities address things that are important to them.

Indigenous research must be about addressing issues in the community. "If the research and the data that you're collecting is to address the issues, then I think that the community should be the ones collect the data and should be supported in whatever ways they need" (Fiona). Indigenous people should be involved in research projects that take place in their communities because they know what is best, and what the best ways are of approaching research. Partnering with researchers, especially if they are Indigenous can be very beneficial for Indigenous research. Indigenous researchers have a role to play in developing and strengthening Indigenous research and research methods.

4.2.1 Indigenous Researchers' Role in Promoting Indigenous Research

Doing Indigenous research, as an Indigenous researcher is an opportunity to revitalize Indigenous languages, cultures, and ways of producing knowledge. Research that is grounded in Indigenous values and, ways of knowing and doing is important because of what has been lost and taken. Putting Indigenous methods and approaches at the forefront of research that is about Indigenous people, and their lands should come before Western approaches.

Indigenous researchers should always put their knowledge first to Western education if they want their work to represent them and their culture and if they want to work towards creating space for Indigenous research in academia. It can be difficult to be an Indigenous researcher, this is discussed at length in the section on “Barriers for Indigenous Researchers”, this is why everyone interviewed was asked what advice they wished to pass on to Indigenous researchers. The advice given to Indigenous researchers is words of encouragement, strength, and resilience; and can be viewed in Appendix 4.

Indigenous researchers are important for pushing Indigenous-led research forward because they can do work that non-Indigenous researchers can not. “It's also a lot more encouraging and empowering to see Indigenous researchers within the communities … because we know our own stories” (Taylor). Indigenous researchers understand the knowledge systems and the importance of connections to water and land. “We're seeing more Indigenous researchers coming in and doing this type of work that non-Indigenous researchers couldn't do because of our knowledge systems, and connections with the land and the water…We are the natural stewards of our lands. We know these communities and these bushes and these trails like nobody else's business” (Taylor).

Indigenous research must benefit the people and communities it is about. Having Indigenous researchers and the community involved ensures this, as there are benefits that come from Indigenous people doing research.

4.2.2 Benefits of Indigenous People Doing Research

There are many benefits of Indigenous people doing research. “Indigenous research should open the doors further, to allow First Nations to be the ones to analyze the data, create the structure, and the approaches they are using to collect it. At the same time, research and data can also be used for proposals and opportunities” (Shavon).

There is a sense of fulfillment in seeing a research project succeed, especially for youth. Involving youth and community members in research so they can see a project through is inspiring and it encourages people to get involved in their community and connect with the land. Research creates opportunities for people to reconnect with their history and culture. “Communities are capable and want to understand our territories, map it out and find the traditional names for places” (Nicki)

When Indigenous people conduct research it puts money into Indigenous hands and gives them control over the outcomes and opportunities. “It was always this white man doing it or the government would just get these people to do the work for us and they don’t understand us … instead of, other people getting these dollars, it should flow back to the Indigenous community” (Errol).

Aside from community and monetary benefits, there are personal benefits for Indigenous people researching as it can be an opportunity to heal.

> "I don't know how many times I cried. I don't know how many times I broke down. I honestly feel like my connection to the research that I created wasn't for me; the MA wasn't about the MA. It was about justice for my mother, which I don't feel that I will ever get. It was about honouring her, as well as all other MMIWG2S, and trying to help other people like me who have been impacted. I thought I was past that. Twenty years is a long time. But to actually sit down with that, I feel like that was a part of my healing, to do that and to create that. So, it was worth it, the healing that I received from sitting with that" (Tammy).

There are various ways Indigenous people and communities can benefit from doing research on their own and being involved in research projects that are about them and their lands. Indigenous-led research projects are beginning to emerge but there is not enough of it happening. There is skepticism about whether projects are just claiming to be Indigenous-led, meanwhile, the non-Indigenous researchers are the ones making all the decisions. Considering what Indigenous-led means and what it should look like needs to be explored as it lacks clear guidelines and requirements.

4.2.3 Indigenous and Community-Led Research

Indigenous-led research suggests that it may be better research but that isn't necessarily true. What first comes to mind when you think of Indigenous-led research is that the research is led by someone Indigenous from beginning to end. An Indigenous person or community being brought in for meetings once throughout a project does not make it Indigenous-led. What Indigenous-led means is that the questions originate with someone Indigenous, and that person determines how the research is conducted and later disseminated.

There are inherent problems within "Indigenous-led" research approaches. "There are Indigenous people that think very Western they have very Western ideas about explaining the earth, so I think just because it's Indigenous-led, it doesn't automatically mean that it's going to have an Indigenous basis" (Moneca). The Indigenous person leading the research may be a cultural outsider and may not have the best interest of the group they are working with in mind. "I do think that there's a lot more work to be done because I think even Indigenous peoples doing work with Indigenous communities don't always get it right" (Nicki). Some feel that *Community*-led research is what is needed.

Community-led research is important because it focuses on the community leading the research instead of just ensuring that an Indigenous person (who may or may not be a cultural or community outsider) is the one leading the research. Communities leading their research is a good approach to

Indigenous research because it allows the community to have input into the research that is about them. Yet, community-led research is not the way research is generally approached. Research tends to start with an individual researcher, not a community. “Indigenous-led researcher needs to be planned, born, and/or adopted from the community” (Shavon). Even when researchers go to a community to ask for feedback, they are still going in with finished proposals only asking for participation after the projects are developed and the proposal is written; this does not make it community-led. This happens when the non-Indigenous and Indigenous researchers do not come from the same cultural understanding of the community where they are conducting research, making them a cultural outsider.

It is easy to make mistakes and even Indigenous researchers do not always get it right when it comes to understanding cultural protocols and how to work in effective and safe ways. Things are far from perfect, and there are still numerous barriers to Indigenous research experience by Indigenous researchers, non-Indigenous research, and Indigenous communities.

4.3 Barriers to Indigenous Research

There are many barriers Indigenous people experience when conducting research. Fig. 2. highlights the Barriers to Indigenous research that are explained throughout this section, which may be similar to the discussion raised in the previous section as it is difficult to separate community and individual research understandings.

Fig. 2. Mind map showing the 8 research barriers that have been identified.

Indigenous communities are hesitant about doing research because of past experiences and the ongoing impact of colonialism, and people don’t trust researchers or research institutions. “Communities have already been harmed and exploited by research for a long time” (Nicki). Non-indigenous researchers do not understand customs or traditions and they have different ways of approaching research that often clash with Indigenous worldviews and research approaches causing

misunderstandings and miscommunications. The pan-indigenizing of Indigenous people in government, institutions, and media, and the general lack of representation of Indigenous cultures are other barriers to research. Indigenous needs around health and wellbeing are not being met, people are also dealing with traumas making it difficult for Indigenous people to conduct research or participate in projects. Communities interested in pursuing research do not have the resources or opportunities to do so. Power dynamics in research and institutions, and the vulnerability of being taken advantage of are barriers because there is nothing in place protecting communities from substandard research or researchers. Additionally, Institutional, and systemic barriers prevent good research from being done and prevent Indigenous people from succeeding academically, professionally, and personally.

Indigenous knowledge is not seen as valid in Western institutions; this, and the personal and systemic barriers Indigenous people experience make it difficult for Indigenous people to pursue post-secondary education and academic careers in Western institutions.

> "I didn't think I was good enough for academics but I turned out in the end…I kind of feel like I defeated settler society, but when I got into this world I realized that I didn't. There are a lot more barriers to be fought yet. It's a challenge living in a justice system and in a society that's not structured the way we were intended to live or the way our grandfathers and grandmothers intended us. So it is a big challenge. Academics is a tough thing for (Indigenous) people (coming from community)" (Errol).

The Western world wasn't built for Indigenous people to succeed and there are a lot of barriers that they need to overcome. These barriers have been expanded on in Fig. 3. and will be further discussed in the following section.

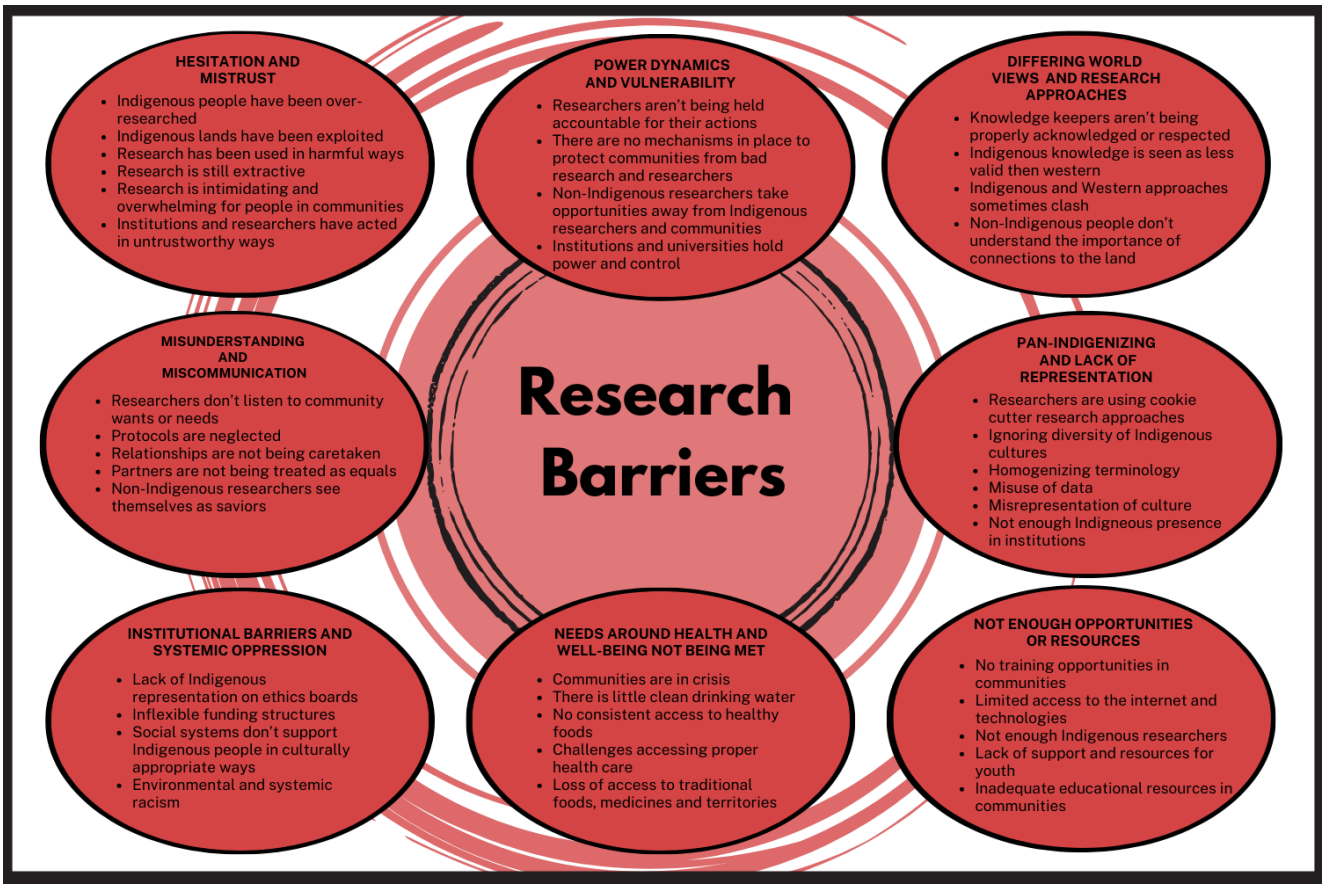

Fig. 3. Detailed graphic showing the 8 "barriers" to Indigenous research that have been identified. The mind map also includes the ideas that are discussed in the rest of the chapter.

4.3.1 Hesitation and Mistrust

The thought of research is overwhelming for many Indigenous people and communities. "The academic world and Indigenous world have trust issues stemming from the universities using research for their own gain…It can be intimidating for an Indigenous community, just the word research" (Errol). One of the reasons research projects are so intimidating is because they are extractive, and the impacts of the past have made communities skeptical. Indigenous people don't trust researchers or research institutions because they have used Indigenous knowledge and data for their own gain. Earning trust from communities is difficult because they are hesitant, and rightfully so. Each community has their own unique experiences working with researchers and depending on what those experiences are, it affects how open communities are to being involved in a research project. "We put up a shield to protect ourselves from the Western world because of, treatment in the past and people coming in and doing research and never hearing from them again" (Taylor).

Indigenous people and their lands have been exploited for a long time and Indigenous people are tired of being harmed by research and researchers. “Whether it's in Manitoba, Saskatchewan, BC, Ontario, every First Nation I visited has made one statement. ‘We have been researched to death’” (Shavon). Many people in Indigenous communities have negative views of research because it has been used to harm them. Even if communities have research interests there is a risk that research will be used to make them look bad. “I do see the plus for research and data for First Nations but at the same time, I'm also seeing how some of that data works against First Nations too. So, it's kind of like a catch-22” (Shavon). The mistrust towards research runs deep and hesitation from communities isn’t only towards universities and non-Indigenous researchers, but communities are hesitant of research in general even if it is research being done by an Indigenous researcher.

> “It is disheartening because for me, coming out of this Westernized institution, and wanting to be this change that I want to see … it is so incredibly hard now … they (communities) are questioning, ‘Are you sure you're here for the right reasons?’, and I (as someone Indigenous) need to actually put in the work and show that I'm not here to write a paper, (like other researchers have done). I am here to make a change” (Ashley).

Researchers and communities do not always have the same motivations for doing research, but researchers are often in a position of power, so it is often their vision and their motivations that are pursued; this reality means that communities must consider things before they enter a research project. Communities are no longer willing to work with institutions and researchers in the same way, but it can be difficult to assert control because communities are vulnerable and there are unequal power dynamics within research and research partnerships.

4.3.2 Power Dynamics and Vulnerability

Communities are vulnerable to being taken advantage of because nobody is protecting them from bad research and researchers. Data sovereignty principles are not being used often enough in research projects and researchers are working with communities to further their own careers without being held accountable for the way they work with Indigenous communities because they are in a position of power.

> “What I've heard most out of communities is that we're not listening to their wants. It's more about what we're looking for, for our research papers. Western scientists and international students are coming and boasting about their work and the accomplishments that they've been able to get through with Western academia and with Westernized institutions; It is a big concern with First Nations communities, they don't want that. No offence to all these scholars who are doing this amazing work. They (communities) want to focus on community, they want the researchers to be focused on what is happening in community, not the work that they

> (researchers) are doing and what they (researchers) are hoping to achieve with the research that they're doing. They don't want to hear that anymore. That's why a lot of Western institutions aren't being called anymore because it's been so researcher-focused that it hasn't been focused on the community needs, what the community wants, and what the community is asking for. Because it's not being heard" (Ashley).

Research is still very focused on the researcher. Even with existing guidelines, like the "Working in Good Ways" framework developed out of the University of Manitoba's Community Engaged Learning Center, and data sovereignty principles, like OCAP, there is no mechanism in place that ensures people are following the proper steps and adhering to the proper protocols for Indigenous research.

> "OCAP is a set of guiding principles, but the principles have no teeth. They have no enforcement mechanisms in place, so you don't actually have to do them. Somebody could say, 'Oh, yeah, I reviewed the Working in Good Ways Framework, or I've reviewed OCAP', but they don't have to spend time building relationships first. They don't have to put in the work of doing the personal and professional development that's asked for in the literacy section, because they are principles and so nothing is forcing them to act" (Nicki).

Since there is no mandatory training for OCAP or for learning the protocols that researchers who want to work with Indigenous communities should know, it is left up to communities to enforce OCAP and make sure that researchers work with them in the way they want to work.

> "Communities have to enforce these things. It's the community that would have to lift up the work in good ways framework and say, 'This is how we're going to work together' or they (the community) would have to look up OCAP and say, 'We're aware of this and we will hold you to this' because there is no larger body right now. The onus of that falls on the community to enforce those things" (Nicki)

Even if a Researcher follows OCAP and includes it in their research plan oftentimes after the project is over and the researcher is gone the communities have no way of storing the data and retrieving it unless they are also skilled researchers; this speaks to the privilege and power dynamics at play when researchers hold all the power. "Who is the expert? Where does the copyright go? All those things are always going to benefit the university and the university has the advocacy and ability to make sure that always happens, whether it is their unions or whatnot. Those power dynamics are really strong" (Daniel). The power dynamics within research and research projects are another factor contributing to the vulnerability Indigenous communities have around research. Researchers are the ones with the

opportunities and the funding, giving them all the power and making it so communities are forced to rely on them if they want to be involved in research.

Research methods also have power dynamics within them. Mixed methods often favour Western Methods over Indigenous Methods meanwhile claiming it is ‘Indigenous led’ and ‘good research’.

> “Within these mixed approaches, there are still these inherent power dynamics and we generally still tend to sort of lean towards more Western approaches, and then just kind of feed in little aspects of Indigenous research and protocol on ethics and accountability elsewhere. And so just recognizing that there are power dynamics at play in mixed approaches…it's still cool to use them but I think we want people to use them in ways that they're aware of these things and also see how that's potentially playing out in their methodology” (Nicki).

Two-Eyed Seeing is a mixed-method approach that has good intentions, but it is not always used in a way that is very inclusive of Indigenous ways of knowing. “It (Two-Eyed Seeing approaches) was intended to kind of drive students towards more STEM degrees and get them more involved in environmental fields and things… I don't know, sometimes it feels a bit more like an assimilation approach more than integration or an actual support of Indigenous knowledge resurgence” (Daniel).

In the end, it is left up to communities to choose who they work with, protect themselves and make sure that they are not going to be taken advantage of, that the tight methods are being used, and that the research is going to be done in a good way that benefits all involved. What makes this difficult is that Western and Indigenous societies view the world, and research in different ways.

4.3.3 Differing World Views and Research Approaches

“There is a completely different worldview that Indigenous people have and live by” (Tammy). Differing ways of viewing the world can cause conflicts between Indigenous and Western societies. These conflicts often arise in research and academic situations because Indigenous knowledge and research approaches aren’t considered valid unless validated by Western institutions and governments. Traditional knowledge keepers are not acknowledged as experts and communities have to fight to have a space and recognition in academia and academic institutions; these conflicts make research challenging.

Research collaborations are difficult when there is a fundamental difference in the way people view the world and knowledge. “There is a clash between the institutions and First Nations because it goes against a lot of how we do things in a First Nations community” (Shavon). This can make it hard to build partnerships, especially when ‘partnership’ has different meanings to different people. “When we do research in the communities…If you say partnership, they're gonna expect the roles to be equal, or you're gonna have to define those roles in the beginning” (Shavon).

Many First Nations people practice equality and relationally view the world. Errol explains this in the following quote.

> "Everybody is equal, that's assumed in their (Indigenous) religion, that everyone is equal. That is how our economy works. Settler and Indigenous economics are different… (for example) If I have a nice sweater and a nice hat, I have to give either my nice hat or sweater to a person from another tribe because everybody must be equal…nobody can have better things than another. That's how it was before (colonialism) and our (Western and Indigenous) economic systems often clash because of those kinds of fundamental differences" (Errol).

Indigenous People view the world, and society in a different way, because of this they have different research approaches. Western approaches tend to be rigid whereas Indigenous approaches are often more fluid. Western and institutional approaches are all about the data collection and the researcher's vision, while Indigenous approaches are about the people. "I feel like research isn't just data collection, that's the colonial way" (Tammy). Not one way is better than the other, and sometimes they can even work together, "there is a correlation between the two. Definitely. And I do see how both need to work hand in hand…it's harder when there is resistance" (Shavon).

Indigenous people are often forced to work in two systems, two worlds that don't always work well together; this sometimes means they must bend the rules to make the research work.

> "Whenever we talk about Indigenous research and Indigenous data, we talk about money. We talk about those opportunities and that's problematic because that's what government does. They bring us these big, obscene amounts of money, but when you're working directly with the communities and want to respect their cultures, their customs, their traditions, but also still meet the needs of the research. It's not enough because our First Nation, traditional knowledge keepers are not recognized as, as a professional. So, we have to bend rules, just to get them paid or honoured" (Shavon).

It can be complicated for Indigenous researchers when they are trying to navigate the academic and Indigenous worlds at the same time; it creates another set of barriers specific to Indigenous researchers.

4.3.3.1 Research Barriers for Indigenous Researchers

Being Indigenous in the academic world is challenging and it can be very overwhelming because it is like living in two worlds. "We all get wrapped up in this Western world of education; needing to write in a certain way, reference in a certain way, conduct our research in a very certain way, and I think that's very loaded as an Indigenous student" (Taylor). There is a pressure that as an Indigenous person,

you need to know it all and must be the top standard as a student and as a researcher; but it can be hard for Indigenous students and researchers not to get caught up in academia and lose themselves in the Western world after spending so much time in it.

Having to remind yourself who you are and where you come from is something that non-Indigenous researchers don't have to think about. "Once you start writing these things, you forget about why you're doing this in the first place, and that's to revitalize what's been lost or what's been taken from us and so why do you want to put that second to your Western education" (Taylor). Indigenous researchers are constantly having to prove that their knowledge and Indigenous knowledge are valid and have just as much value as Western forms of knowledge; meaning that they must prove themselves in the Western system to be taken seriously. Ashley shared a story about the experiences she has had going through the Western educational system:

> "Before I got my degree, growing up as a First Nations-identified woman, I grew up with my grandparents and grew up through the education system that I did in a pretty white Mennonite schooling system. Going to a German Christian school, there is a lack of awareness and a lack of education when it comes to who First Nations people are. That was a huge barrier I had to face and then coming and having to confront teachers from kindergarten all the way until grade 12 saying, 'Hey, this isn't right. What you're saying is not okay', and consistently being told, 'No, you don't know what you're talking about, this is what the textbook says,'. I had to just deal with the stereotypical things that we had to do. But now that I have a piece of paper, from an institution that says that I know exactly what I'm talking about, now, I'm getting taken seriously, and I just, completely understand the overwhelming feeling that youth are having right now in community because I'm going through it myself. So if I'm going through this as a 36-year-old woman, a Mother, an auntie, the whole nine yards, and these kids are just coming straight off, either straight from community or straight from the north, or what have you. The barriers that they're facing right now, it's unimaginable, but I'm going through it. Being an Indigenous student is really tough. It's frustrating to the point where it's almost a slap in the face, it's like 'Oh, well, now you have your piece of paper we will take you seriously. And now we're actually going to listen to what you have to say" (Ashley).

Another challenge for Indigenous researchers is that often the work they are doing is very personal and the issues are close to home but when you are an insider to the research (meaning you have a shared lived experience with the research and research participants) there is also a sense of obligation to continue doing the work.

> "We need more Indigenous people doing research, but it's almost like a double-edged sword because we see Indigenous researchers conducting research on important issues that they're impacted by but I feel like that almost is a barrier because you hear people saying, 'Wow, that must be so tough that you're doing that' and, 'Is it your responsibility to be doing this research?' And then on the other hand, you hear people saying, 'Oh, well, you're the perfect person to do this research', but the emotional, mental, physical, and spiritual investment in that research is like nothing else" (Tammy).

It can be taxing on a person to take on so much, especially when you have a personal connection to the research topic. "It was really hard to do my research as an Indigenous person as an Indigenous woman, as an inside researcher. There were times when I was just completely exhausted and not just physically exhausted. I was emotionally, I was mentally, I was spiritually exhausted" (Tammy).

Being an insider is also challenging because as a researcher you have responsibilities to the institution you are based out of, but you also have responsibilities to your community. Sometimes these responsibilities can be conflicting, and researchers are forced to make compromises in their research and with their community. Indigenous researchers must find a balance and have a plan when the research gets overwhelming. "As an Indigenous researcher, I'm not saying that Sundance is the only … but there has to be something there to help that person because, it's not just an academic approach, it's also a spiritual approach for a First Nation and that's hard because you're walking in two worlds, but your meeting in one line…So you have to take care of yourself" (Shavon). Finding ways to caretake yourself on a personal and spiritual level is important for all Indigenous researchers and can be challenging when you are balancing the pressures and expectations of Western academia and commitments as an Indigenous person.

There are still a lot of growing pains that both Indigenous and non-Indigenous researchers are working through. Sometimes Indigenous researchers work with communities or cultures that are not their own making them a cultural outsider. Being a cultural outsider, as an Indigenous researcher comes with its own set of challenges. One of these challenges is that customs and protocols may be different from their own culture. "Even when I'm in communities as an Indigenous woman, I can still be a cultural outsider and I think it's easy for us to make mistakes. That doesn't mean that we can't move past them. But I don't think things are perfect. I think that we have a long way to go" (Nicki).

Whether you are a non-Indigenous person, a research insider, or an Indigenous researcher who is a cultural outsider working with communities, there are many challenges to work through to find better ways of doing things. Accepting different views of the world and different approaches to things, such as research, is important but still largely not happening. The result is misunderstandings and

miscommunications that make it difficult to form working research relationships and collaborations that lead to successful research projects.

4.3.4 Misunderstanding and Miscommunication

Miscommunications and misunderstandings often occur between researchers and communities. Institutions and (non-Indigenous) researchers don't know how to work with communities in the right ways because they don't understand Indigenous protocols, customs, and traditions; and they don't how to work with communities in good ways. Ignoring protocols because it 'makes research easier' speaks to the fundamental misunderstandings that non-Indigenous people have towards Indigenous Peoples, their culture, and their connections to each other and their land.

Nicki shared a story about a researcher who snuck on the land when she was working with a community to take water samples because they wanted to use it to prove that the water was contaminated so that the community could potentially receive funding to fix it. It hadn't crossed their mind that they had to follow the same protocols when working with the land as they would have to if they were doing research with the people.

> "It speaks to this fundamental misunderstanding of the role that land and the kinship that we have with the land…Our land is sacred to us, and we have sacred relationships with this land. And we have kinship structures that define these relationships and the ways that we live together. So, for the community, sneaking into the land and taking these ditch samples was like disrespecting those relationships" (Nicki). (See Appendix 6 for the full story).

Another misunderstanding that occurs is that the peer review process and criticism from colleagues are not appropriate in Indigenous research; it is a very colonial model. Asking an Indigenous person to review work that has already been done so it has an 'Indigenous voice' comes across as checking a check box because the work has already been done; this can make it awkward for people because if they aren't included from the beginning their feedback isn't likely going to be taken.

Institutions and researchers don't understand the importance of in-person meetings and interactions. Bringing Indigenous people in after a project is already completed is not inclusive and doesn't engage Indigenous people or communities in a meaningful way. Researchers often go into communities with already developed projects and fully formed question guides because they feel like the research must be their vision. This doesn't leave any room for communities to provide input and without input, there is a chance the work being done won't be very useful. This relates to the fact that researchers aren't putting in the effort to build relationships before they begin a project with a community. "Instead of going to the community and asking what kind of research they want to do. That is a problem with the

way that the funding structure, but it is also because there's no relationship building happening beforehand" (Nicki).

Following protocols can be difficult in the confines of a short research project. For graduate students who want to work with communities there often isn't enough time to build a relationship with the community before the work starts; this makes it difficult to include the community in the development of the research question and plan. "I think it's impossible, almost, as a graduate to do work the way that communities are asking us to do it… one of the biggest concerns is really about time. We need to start from a place of learning, reflection and relationship building. That takes time. It takes longer than a two-year master's program" (Nicki). Since researchers don't understand the importance of relationships, they are neglecting the steps necessary for building and caretaking them in the long term.

Maintaining long-term relationships is important because people in communities are tired of explaining themselves to researchers. "I think it's extremely important to maintain long-term relationships because I don't like dealing with researcher after researcher after researcher and explaining myself over and over and over again in the same way and sharing the same stories and sharing the same issues. I just feel like a broken record having this rotating door of researchers coming in" (Taylor). Researchers tend to move around a lot without realizing the impact that has on their relationships with communities. Communities are looking for relationships that are supportive, and long-lasting.

> "Dr. Niigaan Sinclair said something like, 'When you make a research relationship with a community, that's a lifelong relationship. If you're asking people to give you their knowledge, then you are their family now, and you respect and live that relationship. They are like family for the rest of your life; you bring your kids there; you do all your research there', but I think we have a tendency to jump around and not really understand the role that relationship plays in research" (Nicki).

At a certain point, communities aren't going to want to work with researchers who don't acknowledge what they are asking for in research partnerships; trusting relationships that last and are based on mutual respect.

Without developing a relationship that is based on trust and respect, knowledge-keepers in communities will not share their knowledge. Non-Indigenous researchers expect people in communities to pass on their knowledge readily because they don't understand the sacredness of Indigenous generational knowledge. Nicki shared a story about an experience she had at a conference for Indigenous Graduate students. During the conference, a (non-Indigenous) Ph.D. student who was attending was frustrated because they felt that the community, they had been working with wasn't giving them the

information they wanted. The student wanted to know why the community wasn't telling them what they wanted to know and how they could get the community to give the information. For most of the people at the conference, it was clear that something hadn't been going right in this relationship if the community was holding back after several years had passed. To others at the conference, it seemed obvious that the community didn't trust that student and likely thought that the student was only there for personal gain; to take their knowledge and use it for themself instead of using it in a way that would benefit the community. This student probably didn't make an effort to build a relationship with the community so that the community could trust them. (See Appendix 6 for the full story).

Misunderstandings often relate to the general lack of knowledge that non-Indigenous people have about Indigenous cultures. This fault can at large be blamed on the government and the education systems' lack of effort to do so; but if non-Indigenous people want to work with Indigenous communities, they should be seeking to learn and understand for themselves. This is a barrier to good research as diverse cultures are often lost under the term "Indigenous" leaving it so that people must read between the lines to determine who the research is talking about. Researchers don't indicate which groups they are working with and who they are representing leading to the pan-indigenization of Indigenous cultures.

4.3.5 Pan-Indigenizing and Lack of Representation

Indigenous people have been mistreated and misrepresented in data and research and cultural diversity has been blurred under blanket terms, such as "Indigenous". "Indigenous research is a supportive term, but it can be homogenized very easily" (Fiona). Ignoring diversity among Indigenous cultures is another form of assimilation. Many researchers a guilty of pan-indigenizing their research claiming it to be "Indigenous" when in fact it only represents one cultural group or even just a few individuals from a group or community. Each specific Indigenous group, whether it is one of the 50 First Nations, 8 Inuit ethnic groups, or Métis communities each have different cultures and protocols and also have their own unique experiences, worldviews and approaches to research. The generalization of Indigenous groups by governments, post-secondary institutions and researchers has led to the use of cookie-cutter research approaches, ignoring diversity and community-specific protocols. This in part relates to the fact that many governments and researchers don't understand Indigenous cultures or the differences between them.

The general lack of understanding about different Indigenous cultures is reflected in the fact that there is very little representation of Indigenous people and their cultures in government and institutions. Post-secondary Institutions don't have enough Indigenous students, researchers, or teachers; and school curriculums often fall short of educating non-Indigenous people about the people who originally inhabited the land. A result of the lack of representation in institutions is that Indigenous students don't feel

encouraged or supported by the way that educational systems are structured and they often feel unwelcome.

If institutions want to make Indigenous people feel more included, they need to have more Indigenous educators so that Indigenous students can see themselves represented in academic spaces. “When you have non-Indigenous people trying to teach Indigenous kids what it means to be Indigenous, it can be problematic” (Ashley). Non-Indigenous educators shouldn’t be giving Indigenous teachings because it takes opportunities away from Indigenous educators and knowledge holders and it squanders any chance of having different cultures, teachings, and approaches to education in post-secondary education institutions.

Institutional barriers and systemic oppression also prevent Indigenous people from being able to conduct research.

4.3.6 Institutional Barriers and Systemic Oppression

The institutional barriers and systemic oppression that Indigenous people experience often prevent them from succeeding economically, financially, socially, and professionally. These barriers also make it difficult for Indigenous people to assert their sovereignty.

4.3.6.1 Institutional barriers

Institutional barriers occur because institutions are based on a colonial structure. As a result, the structures don’t work well for Indigenous research, and they make it difficult for researchers to work with communities in the way they want to work.

Ethics and funding structures developed by institutions and funding agencies don’t have Indigenous representation. Western research institutions use Eurocentric forms of ethics to determine if research should go forward, but it doesn’t take into consideration the ways Indigenous communities interact with research and researchers, and the appropriate ways to protect them in a research project. “I have an issue with ethics board committees because a lot of those policymakers and decision-makers don’t understand Indigenous research methodologies” (Shavon). Indigenous research should be reviewed by Indigenous people. When there is no one sitting on funding committees that are properly informed about Indigenous cultures and procedures, there is no understanding.

Funding organizations can sometimes act like gatekeepers and are ignorant when it comes to Indigenous research methods and methodologies. “I was trying to find some methodology to support my proposal for Mitacs because they came back saying “this is not Indigenous enough’…even though we wrote it with an Indigenous elder and I helped write it and I am Métis” (Fiona). When funders hold the power to decide what research should be done, and what the “right” way is to approach Indigenous

research is (despite their being very little Indigenous representation on these committees), opportunities for good research can be lost.

Following the guidelines and the procedures laid out by universities and research institutions is not how Indigenous communities work, and it does not support Indigenous sovereignty. “Doing the work and listening to the university's guidelines, policies and procedures is not sovereignty. That's not how we do things” (Errol).

Another barrier that arises from institutions is issues with research timelines. Those writing and approving research proposals don’t consider how community timelines differ from institutional ones. Research with communities often requires more time to ensure protocols are followed and respected. Communities are very close-knit and if something happens in the community things go on hold; this makes the tight time restraints of most research projects very difficult for communities to stick to.

Institutional barriers often occur in research and post-secondary education but other barriers also make it difficult for Indigenous people to assert their ways of doing things. “What I'm finding like it's not just institutional, it’s systemic too, it is education and health, social, CFS. So I think that goes hand in hand with institutional barriers” (Shavon). In addition to the institutional barriers, Indigenous people also experience systematic oppression.

4.3.6.2 Systemic Oppression

Indigenous people experience systemic oppression in most aspects of their lives; an oppression that began with colonialism. “You have all these systematic things coming at you when you're a First Nation. It is identity, it is gender, it is social, it is governance and now it’s research, and that's a lot for First Nations” (Shavon). Indigenous people have to overcome many obstacles set up by the systems they have been placed in. Indigenous people and children have been made to believe that there was something wrong with them and their culture, that they weren’t good enough. “I used to think our regions where I was working in and then born in, were bad” (Shavon). The systematic oppression people experienced in the past and are still experiencing today has caused trauma that has spread through generations. Trauma is something that many Indigenous people must work through.

Working through personal and generational trauma can make being a researcher difficult especially when you are told from a young age that you aren’t good enough. “Based on my research with day school, I understood that completely. The reason being is when you're four years old, and you attended a day school and told that you are stupid, you are going to believe it. This is the line that we come from, we were told we were dumb at a very young age. It is like that right across the country”

(Errol). The legacy of residential schools, which was an attempt to wipe out Indigenous cultures through systematic oppression and cultural genocide continues to impact Indigenous people today.

The systemic oppression Indigenous people have experienced comes in many forms. One way Indigenous people can overcome oppression is by asserting their sovereignty so they can control what happens to them but some barriers make doing so a challenge.

4.3.6.3 Barriers to Indigenous Sovereignty

"It's been hard up to this point for Indigenous people to assert their sovereignty in so many different ways" (Tammy). Systematic oppression that stems from the legacies of colonialism has created barriers to sovereignty; these barriers include systemic racism; lack of resources and access to traditional lands; loss of Indigenous knowledge, language, culture, and traditions; and generational trauma.

> "People know the actions of what sovereignty means. They know that philosophical thinking but it's hard to act on that philosophy when you as an individual are still dealing with trauma and with everyday issues that require a lot of energy because it's a lot of energy work. And, to put that philosophy into action means that lots of stuff around you must be dealt with…Indigenous sovereignty is going to be a difficult thing because people are still working out a lot of issues that are still happening in the world. If you're still working on everyday issues, it's really hard to develop a mind where you can work outside that framework. I think that we can work towards sovereignty, and we can keep doing that work, but we still have a lot of 'isms' to work on, like racism, and sexism, and those things play a big part in people's development as human beings when you're constantly told you don't matter" (Moneca).

When you are dealing with systemic racism and are trying to live in a system that doesn't understand you, and often works against you, it is hard to work towards sovereignty. Many Indigenous people are treated poorly and not seen as people who matter; many people experience prejudice daily.

> "When you're dealing with just everyday situations, like for example, for me, when I go to the store, I know 99% of the time I'm going to be followed, and I have to prepare myself for that. I know that certain things happen to me that I just deal with and then I have to go into the academy and pretend like this just doesn't happen to me. But it does still happen…when you live in a society where those kinds of things happen on a daily basis and then you have to do research and think in a different way. I mean, it can be done, but you need lots of people to be well to be able to do sovereign work because if we only have one person who's able to do sovereign research and develop the idea of sovereignty, it becomes more difficult…there are very few Indigenous people that are doing research in sovereignty" (Moneca).

Racism is often still seen in politics with political leaders and people in positions of power still refusing to recognize Indigenous people and the experiences they have had.

> "An MLA in the province the provincial lead from the PC government decided that September 30 (The National Day for Truth and Reconciliation) wasn't going to be a date made official in Manitoba. We have to think about what that does to people's psyche. It tells me as a person that I don't matter and that our historical trauma isn't valid enough for people to look at as someone valuable in this province. To me, when those things happen, it plays a big part in who you are as a human being. So, when we're constantly having to let people know we exist, it's harder to develop your mind so that you can work in a greater capacity" (Moneca).

Many people aren't yet in a place where they can think about sovereignty, or bettering their communities when they are struggling to make things better for themselves. It makes it hard to imagine that true sovereignty for Indigenous people will happen in Canada when there are not enough people available to work toward it and support each other.

It also may not be possible for Indigenous people to have complete sovereignty within (or outside) the Canadian system. The word sovereignty has colonial origins, it is not a word used in Indigenous cultures. "A lot of people probably don't even know what the word sovereignty means" (Taylor). Some question if sovereignty is really what is needed and if sovereignty is even possible with the structure of the Canadian government. "Sovereignty is you controlling your entire people and having your own unique governance entirely, not being affected by the Canadian government. So, I don't know if true Indigenous sovereignty can ever really be achieved to the standard that it was pre-colonialism" (Fiona). Sovereignty would require the government to give back what was taken from Indigenous people and give them the means to have self-determination and control over their own lives and people. But that is not something easily done, and it may not be the right thing to do or the right way to do it.

> "The big problem is that in the colonial context, they (the government) would have to give all this stuff back to support us (Indigenous people) being sovereign. They would have to give it to the Indigenous people and let them use the tools and train them how to use it and back them up. I don't how that could happen today in the colonial world. I don't know how to have complete sovereignty like that" (Errol).

Métis people share some similar experiences with systemic and institutional barriers, but they also have their own unique ones. For Métis people, barriers to sovereignty have to do with reclaiming culture and language. "When you think Indigenous in Canada, there are these predetermined thoughts of

what that is, and Métis people don't quite fit into that" (Fiona). Métis people have their own distinct culture and have their own set of problems they face in Western society.

> "On Facebook earlier, there was this fight happening about people who are Métis aren't Indigenous … I feel like we (Métis) still face a lot of lateral violence from Indigenous kin and it's a lot of constant education of who we are and why folks are just reclaiming now in adulthood, their identity. It is because Grandma went into hiding because Grandpa was killed for being Métis. So, we did what we needed to do to survive. I don't want to blame our grandparents for that. They survived, right? But does that mean that their grandkids shouldn't be able to find their way home to the community?" (Nicki).

Métis people experience lateral violence from other Indigenous groups causing many Métis people to internalize the thought of 'not being Indigenous enough'. "I went to COP26 last year, and when I was nominated, I internally said I'm not Indigenous enough to be here or to represent Indigenous people…I almost didn't go" (Fiona). Many Métis people hid their identities and buried the traumas they and their ancestors experienced. Many Métis people have only recently begun to share their experiences with the younger generations. This means many people who are Métis are disconnected from their culture and language and never grew up with the customs.

Many Indigenous people are beginning to claim their identity and culture, this is important for Indigenous sovereignty, but it is difficult when there are so many things coming at you as a person who is First Nations, Inuit or Métis. With all the personal and social obstacles people are facing, research and sovereignty are hard to think about and work towards. Experiences with institutional barriers and systemic oppression impact people and prevent Indigenous people from meeting their potential for personal and community health and wellness.

4.3.7 Needs Around Health and Wellbeing Needs are Not Being Met

A major barrier to both research *and* sovereignty is that communities are still trying to meet a bare minimum quality of life. Basic needs for health and wellness need to be addressed before Indigenous communities can focus on research. "There are communities out there that have higher issues at the moment, they need to focus on getting access to fresh clean drinking water, reducing poverty, improving job access, and better access to nutritious healthy foods. I think all those things take higher precedence" (Fiona). There are more pressing matters in communities than conducting research. Drug and alcohol abuse are also very real problems throughout First Nations communities.

> "This is an actual emergency. Kids are dying, aunties are dying uncles, Kookums, Mooshums, all of the same drugs, and we need a place for them near a place for them to heal. We don't have that

> as Indigenous people. The government should be red-flagging that, but they're not. They're just letting us die off. When you have a 16 to 17-year-old, you have to try to do something because there is an epidemic…and that's making us sadder and sadder and sadder. We have to do something about it" (Errol).

Many Indigenous communities are in crisis. Medical services aren't locally available or culturally appropriate and health services don't always support what people in the community need. Governments aren't acting, and it is left up to the people in the communities to figure out how to deal with crises happening in their communities, crises that have largely been inflicted on them by the government and the lasting impacts of colonialism.

> "As Indigenous people, we are still going through a lot of traumas. We still have a lot of things that we need to work through, but we are always working on it and that's what working in good ways means. It means that we still continue to do the job despite what's happening to us because we have this heart that's going to tell us that we need to continue to do this work. If we don't, then we need to find someone else. To me, that's what happens in a lot of research because people don't understand that ... yeah, we do have a lot of traumas happening but that doesn't mean that you just sidestep the way that person works because that's not good. Then the community suffers because of that" (Moneca).

People are working through traumas that have been passed on through generations. Traumas that compromise health and wellness. These traumas make pursuing research difficult, especially if the individual has a personal connection to the research but the work still must get done. "Maybe there aren't people who are not in that in that space and they're not in that level of healing to be able to do that" (Tammy). One might understand what is required for research or sovereignty, but it can be exhausting for people to move past traumas.

Communities have lost access to their traditional lands and systemic oppression has left many Indigenous groups disconnected from their cultures, lands, and traditions. "I feel that over time, we've lost our way a little bit when it comes to a traditional more subsistence lifestyle. It needs to be revived in the hearts and spirits of the people of the community to understand that we can continue to live a good life with traditional foods and traditional ceremonies and things like that, but there's not enough access to them" (Taylor). Having a connection with the land is an important determinant of health and Wellness for Indigenous people. Not having access to the land makes it difficult for people to be well. Environmental racism and impacts from resource extraction have contributed to disconnecting Indigenous people from their lands. People are unable to access traditional foods and medicines because they are not given access

to their traditional lands, and those they can access limiting access are at risk of pollution and contamination that comes from resource extraction activities like mining and Hydro Dam development.

Indigenous people aren't only prevented from accessing health resources and traditional foods and lands, but they also aren't being given the opportunities or resources to better their communities and their situations. One way to access resources and opportunities is through research.

4.3.8 Not Enough Opportunities or Resources

People in communities are interested in doing research but don't often have the opportunity to do so. This relates to a lack of resources and access to resources available to communities, and a lack of education and training. There is no one available to teach and run workshops that engage people in the community, including youth and elders; and there are currently not enough Indigenous researchers. "There's not a lot of research going on right now and that definitely needs to change because that's going to bestow that drive within people. If they see us getting things done here with different types of research projects, then maybe they will be more encouraged to participate" (Taylor). Research is one way to get people excited about their community and feel like they can play a part in changing the way things are.

Schools on reserves don't have the resources they need. Classrooms are often integrated, and students aren't getting the same quality of education that people in the city are getting. There are not enough teachers available and there is a very high turnover rate meaning youth in communities aren't being given the support or opportunities they need to succeed in their education.

> "There is this sense of failure that's instilled within us from a very young age and that's mainly because of lack of access to academic or educational resources … holding back the older students from prepping them for post-secondary education and life beyond high school. The people who are supposed to be guiding them down this type of path don't give them the motivation and empowerment that they need. They (youth) think that they can't do it. They think they can't do University" (Taylor).

Without adequate educational resources, Indigenous people and youth don't always have the right credentials (determined by Western society) to do research and therefore miss out on opportunities. "There's still a lot of barriers for First Nations to access funding and especially research because, without the credentials for the First Nations, they most likely won't receive it" (Shavon). Indigenous people must pass the "white man's test" to be viewed as professionals and to prove themselves in the Western world if they want to be taken seriously and be able to access funding and other resources. There are not enough Indigenous researchers doing the work that communities want to do. "We need to get more academics, more people that pass the white man's test. Sadly, it has to be that way. But, look at the world we live in,

you have to find a way … using the tools from the government against them to better our people and getting non-Indigenous people to help us" (Errol).

Communities are interested in working with non-Indigenous researchers to access resources and opportunities, but it is no good when Indigenous researchers must compete with non-Indigenous researchers for the same funding opportunities. "I worked on a project that allowed them (the community) to build capacity in the areas of language and culture. But at the same time, we're still competing with non-Indigenous researchers, and still applying under the same category" (Shavon).

Communities often have to start from square one because they don't have any good research that has been done before to reference from. Without a baseline for doing research, it makes it difficult to find a place to start. Just using the same research methods, mixed methods or undefined 'Indigenous' is not the answer. Indigenous researchers are stuck having to answer big questions and having to develop nation-specific methodologies whereas other researchers don't have to do that; there is no funding for that so Indigenous researchers are missing out on funding and research opportunities.

> "To do things in a good way, we are stuck doing that (coming up with nation-specific research methods). Whereas other academics can out-compete Indigenous researchers every time because they don't have to do those things. They will get more accolades, more resources, and more mainstream support like that. I think it just creates an uneven playing field and further emphasizes those power dynamics" (Daniel).

Indigenous people aren't being given the opportunity to develop their research approaches and methodologies; meanwhile, non-Indigenous researchers are being given the funding and the opportunities. Research categories should be separate so that research opportunities aren't taken away from Indigenous researchers and communities by non-Indigenous people.

Technology is another resource that isn't always available to communities; this creates yet another barrier to research and a barrier to accessing opportunities and resources as the world becomes increasingly digitized.

4.3.8.1 Technological Resources

Technology can be seen as a barrier to Indigenous research in both its use and its lack of availability. Communities need somewhere where they can store their data and sometimes require different tools for collecting it. "They might need infrastructure and technical resources. It might be nice to have transcription applications or video recording equipment. I think it depends on the nature of the research being done" (Nicki).

Using technology can be a problem as it can make it difficult to follow protocols such as meeting in person and passing tobacco, therefore, using technology isn't always appropriate when working with Indigenous communities. "We need to talk about what is culturally appropriate, we need to think about what requires human interaction and in-person community engagement" (Shavon).

For youth, technology is useful, and it provides new opportunities. "I think that there's an importance with the younger generation but not so much with our elders and older knowledge keepers" (Taylor). Elders who are often knowledge keepers are sometimes uncomfortable, and hesitant about using technology. When Elders do choose to use technology, they often require assistance from younger people.

Not only is technology useful for research and youth but it also is a means of accessing job opportunities, education, health resources, media, and other services as they become increasingly available online, but many communities are still not connected to the internet.

As listed above there are many barriers that prevent Indigenous people from reaching their full potential in research or otherwise. COVID-19 was yet another barrier people in communities had to face, with very little support.

4.3.9 The Effects of the COVID-19 Pandemic on Research

The pandemic shone a light on the realities of many Indigenous communities. The COVID-19 Pandemic has been difficult for all, but Indigenous communities were hit harder than most other places in Canada, especially at the beginning. COVID-19 made evident that there are many issues Indigenous communities are facing; especially issues of poverty, lack of resources and barriers to accessing health care.

Despite this research taking place during the COVID-19 pandemic, the people interviewed didn't have much to say regarding it. What one person did mention was that protocols were difficult to follow because of the isolation. Meeting face-to-face is an important protocol for working with Indigenous people, the COVID-19 Pandemic made this impossible. The pandemic made it very difficult for researchers to get funding, and to conduct research, especially social research. "Over Zoom, it is really hard. I wanted to conduct all my research on the land and then I got a letter from ethics, and it was a cease and desist and it was over before it started" (Nicki).

The reality is that research just didn't happen in communities during the pandemic, communities were busy dealing with the crisis and panic and making sure people had food and water. Even though research was put on hold, the COVID-19 pandemic created a unique circumstance in that Indigenous people had to assert control to protect their communities and it pushed people into action, into wanting to make a difference and find ways to overcome the many barriers they face.

In the interviews conducted for this research, several supports were identified that can help enable Indigenous communities and researchers to conduct research.

4.4 Supports for Indigenous Research and Responding to Barriers

Indigenous communities have been clear about how they want to work with researchers. They want transparency, they want ownership over their data, and they want partnerships and relationships that are real and last beyond the scope of a research project. Communities want respect and researchers to follow existing protocols and guidelines, like OCAP to make up the foundation of how researchers work with them.

Fig. 4. Mind map showing the ideas for what can support Indigenous research.

Fig. 4. shows what supports can help facilitate Indigenous research because, with the proper support, communities can conduct research for themselves. “If you help us acquire the tools and techniques that we need, we can do it ourselves, then we don't need non-Indigenous people coming in with all this fancy grant money saying that they can help us they can save us. We can protect ourselves” (Taylor). Giving the right kind of support is needed, and not having researchers do all the work.

> “In our institutions, whether it is for graduate degrees, or as faculty or as others doing this work, I think it is so much easier for us to take on the administrative burden and think through stuff, and then work with Community later ... One of the things we heard a lot while we were doing consultations for the Working in Good Ways Project was that it takes so much time to build these kinds of relationships with communities and also, communities don't want you to foist the administrative work on them. So, there is this kind of balance that needs to be met around what it looks like … How do you create these relationships and this trust, that allows you to work with

communities in a way to make really strong research proposals that address the needs of communities, without them having to take on more work that they don't want to take on?" (Nicki).

The types of support communities need depend on the community and the project. Researchers interested in working with communities should have conversations with people in the community about what research they would like to do and how they would like to do it. By asking people in the community how research has been done in the past, people might remember, and it might be an opportunity to revive ways of doing things. Communities are interested in building relationships with researchers where these kinds of conversations can occur because it is helpful for communities to have support from established researchers who know how to work with communities in good ways. Many researchers at universities hold positions of power through their connections to resources like money and job security. It can be hard for Indigenous communities to access funding opportunities and to take on the extra burden of research without support from researchers and institutions. Researchers can use their advantages to support Indigenous research in communities and help them overcome research barriers.

The various ways Indigenous people are responding to research barriers are depicted in Fig. 5. These responses include:

- Following existing Data Sovereignty and research principles.
- Increasing awareness as a researcher and trying to include education, and training within research projects so that people can learn from one another through collaborations.
- Institutions finding ways to be more inclusive, by indigenizing, and decolonization their curricula and approaches to research and having more Indigenous educators.
- Celebrating cultural diversity in institutions and recognizing that research is an opportunity to do this.
- Including culture and protocol in research and researchers learning about the cultures they want to work with and what the appropriate protocols are so they can work in good ways.
- The promotion of Indigenous and community-led research.
- The recognition of Indigenous resurgence and promotion of Indigenous sovereignty.
- And lastly, developing partnerships between allies, institutions, and communities that are meaningful, trusting, and lasting is crucial for Indigenous Research Sovereignty.

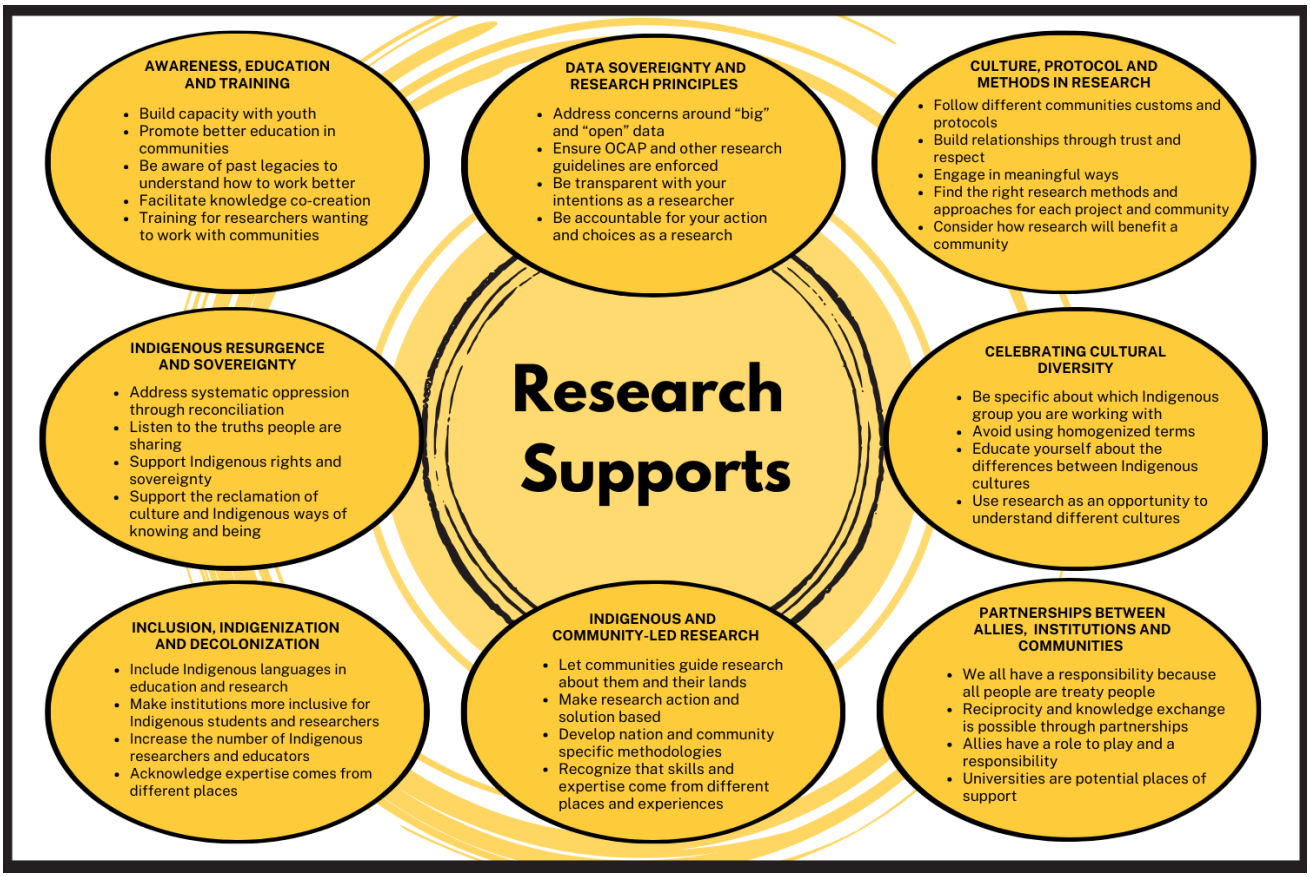

Fig. 5. Detailed graphic showing the 8 "supports" to Indigenous research and a highlight of the ideas that will be shared in the following sections.

4.4.1 Data Sovereignty and Research Principles

Using Data Sovereignty and research principles is one way to address barriers to Indigenous research. Indigenous people and communities should have access to and own the data that is about them. Researchers and the government shouldn't be the ones who own Indigenous data, they should be getting permission from the community to use the data, not the other way around. "It's extremely important that not only research is conducted in an ethically respectful way, but at the end of the day, they (Indigenous communities) own the research. The researcher should have to get permission to use it, instead of the researcher owning it and giving it to the community" (Fiona). OCAP (Ownership, Control, Access, and Possession) are Indigenous Data Sovereignty Principles that address some of the issues around Indigenous data. Researchers should be educating themselves on data sovereignty principles, like OCAP.

Data sovereignty principles are important because they address concerns around big and open data and the misuse and misrepresentation of Indigenous people in research. OCAP was developed to give communities access to data that already exists, but researchers should consider how they will be using OCAP principles while planning new projects because of the unique needs Indigenous people have around data. Following the baseline standard isn't enough because one size doesn't fit all, and different

communities have different experiences and needs. OCAP should be used as a guideline and moulded to fit each different project because 4 principles often aren't enough. "It (OCAP) is a good place to start. I fear with any kind of acronym, or anything wrapped too sweetly with a bow that you're missing out on other parts of it by just breaking it down to those four principles" (Fiona).

> "I feel like OCAP isn't the end all be all. There's always more work that can be done and that is kind of how I feel when we look at Indigenous research when we look at documents that have been created. I always … go back to the Manitoba justice inquiry, then came the UNDRIP, and then we had the 94 calls to action, and then we had the National Inquiry. These documents are all building blocks that affect how people view systemic problems that Indigenous people are still facing So, when we look at OCAP there's always going to be something to build on it to make it better" (Tammy).

What was never considered when OCAP was developed is if Indigenous people should be the ones creating their own data, or at the very least deciding what data is being collected, how it is being collected, and how it is being used afterwards. Researchers working with communities must choose to follow OCAP and do what is right for the communities because there is nothing in academia, or in the colonial sphere that is going to make them follow existing data sovereignty and research principles. Being aware of these things and learning how to work in good ways with communities is how to develop successful research projects with communities and support Indigenous research.

4.4.2 Awareness, Education and Training

To support Indigenous research, researchers should learn what barriers Indigenous people face. Understanding why communities are hesitant about working with researchers, and what they want out of research projects is how to support them and their research goals. Including training in research projects, and involving youth is a way of supporting Indigenous research and building capacity in communities.

Many researchers aren't aware of the experiences that communities have had with research and research institutions, but they would benefit from knowing it. "Communities have already been harmed and exploited by research for a long time. So, let's shift the way we work" (Nicki). Understanding why communities are skeptical of researchers and universities is how researchers can learn what not to do and how to work in better ways moving forward. "I think they (communities) probably need more research, and they probably need a lot of training and education. Not necessarily an onerous amount, but they probably need support from more established researchers who may (or may not) exist within their community" (Nicki).

Training should be included in research projects so people in the community can be more engaged with the research happening around them. “I think where possible and when possible, Indigenous peoples should be at the ground level collecting data” (Fiona). When you work *with* Indigenous communities, include them in the research, and provide training, it creates an opportunity for people to learn from each other through collaboration. If training and learning opportunities aren’t provided, research projects often flop after the project is over. If researchers don’t engage the community in community projects, it doesn’t benefit anyone, and no one learns or gains anything from the experience.

Before beginning a project, researchers should think about what kind of skills they are going to help the people in the community develop. “There are people who are perfectly capable of doing research themselves in the community. It just goes back to educating them on what they need to know” (Taylor). There is a growing number of educated Indigenous people who can conduct research projects if they are given the right support.

Providing education and training opportunities through research projects is one way to build capacity in communities. Education is important for sovereignty because it empowers people to have control over their information. Building capacity with youth is a way of overcoming barriers to research because youth are the future, and they bring a different perspective and set of skills.

> “Whether it's in health, in education, in EMR, youth is important, and they are the key. We have to train them, and we have to build capacity with the youth because they are the ones who are going to be our researchers. They are the ones that are going to collect the data, and they are also going to be our voice, so it is key for us as researchers to include building capacity with the youth in First Nations” (Shavon).

Youth can benefit from learning both Indigenous and Western education. Many Indigenous people, especially youth have been disconnected from their cultures and teaching so having more availability of knowledge and opportunities to learn would benefit the youth. Research projects could provide those opportunities.

> “I've worked with the youth out here for many, many years and I'm seeing them all getting older. Now they're all graduating high school, which is incredible, and they're all very interested in learning about medicines and teachings and how to protect our community. Yet, there's nobody out here to run those types of workshops. I think that is where more of an academic research-led project would be very beneficial because they can be shown the science behind things but also the traditional knowledge and that's where these Indigenous researchers would be very crucial to the future of this type of work” (Taylor).

If researchers and universities want to support Indigenous research and ensure the work is beneficial to the community, then they need to understand the communities they are working with and provide training and education opportunities. It would be easier to include Indigenous people in research if institutions were more inclusive of Indigenous people and other ways of knowing, learning, and doing. The indigenization and decolonization of academic institutions is one way to address barriers to Indigenous research.

4.4.3 Inclusion, Indigenization and Decolonization

Universities and institutions have the potential to change the way things are done and support Indigenous research, academics, students, and communities. If institutions were decolonized and indigenized, they could be places that provide opportunities for Indigenous students to connect with their culture, language and teachings. The more Indigenous people in academia, the easier it will be to make universities more inclusive spaces because there will be more people there to promote Indigenous knowledge and determine how Indigenous research and education can be supported. Universities also have the power to change dominating narratives about Indigenous people.

Universities are places of learning, knowledge, and research but they gatekeep those things and can be unwelcoming to different views and approaches. They control the way knowledge is formed and shared and they control how people learn. Universities need more voices, louder voices that will challenge the status quo. “Institutions are behind the ball and we need more Indigenous students to come in here (institutions) and start speaking up and start saying something because otherwise, it's not going to change” (Ashley). Currently, there are only a handful of passionate people in universities who are trying to push things forward and challenge the inherent power dynamics within them.

> “Power dynamics shouldn't be an afterthought. Western perspectives on approaching environmental work, or even health, should have an Indigenous perspective and (Indigenous) knowledge at the forefront. It is something we need to improve. And I guess, as (Indigenous) researchers at universities, it's on us, unfortunately, to push the people who have those seats at the table to try and make these positive changes. But it really is difficult” (Fiona).

Currently, universities are often difficult spaces for Indigenous people to work in, let alone thrive as students, researchers and professionals. “It’s very disheartening just how bad the situation is. I think what’s not recognized is the impact research has … and the weight it has on the person doing it. I don't think it's often very discussed, the way it weighs on you individually” (Fiona). There should be more support for Indigenous students so they can thrive. Increasing the number of Indigenous educators is important so Indigenous students can see themselves in those spaces. Indigenous educators as well as

knowledge keepers can also help indigenize curriculum in different programs and disciplines and provide greater representation of different Indigenous cultures.

Representation in curriculum is just one place universities can be indigenized, there should also be greater Indigenous representation on ethics boards and committees. All Institutions should have Indigenous research ethics boards that oversee Indigenous research that is conducted by, for and with Indigenous people because they understand Indigenous perspectives and cultures. Different groups of First Nations, Métis, and Inuit people (and academics) should be more meaningfully included in important decision-making and the development of policies.

Increasing Indigenous presence in academic, and other colonial spaces is one way to indigenize. If there is more Indigenous presence, there will be more representation. Representation is important in academic spaces because it can encourage students to be part of academia and pursue research careers where they can make a difference and take control of their narratives. “I'm always encouraging people to come join us in academia. I feel like the Indigenous worldview is so different from the Western worldview. So, I feel like that, plays a big part in why I feel that's important because the narrative needs to shift” (Tammy).

Decolonizing research and academia support Indigenous people, their education, and their research. Decolonization and indigenization both involve the acknowledgment that expertise doesn’t only come from institutions and post-secondary education. Decolonizing calls for a reordering of the way things are done. Change has to start somewhere, and on a small scale, it is occurring. “We are in a time where Indigenous voices are finally speaking louder than they have in the past. And I find that seeing the type of research being done and seeing community members getting involved is what's important .... Indigenous knowledge systems and Indigenous science (is what I call it) is an attempt to decolonize research and science” (Taylor). Indigenous Knowledge systems and language must be put at the forefront of Indigenous education and research in academic spaces if they are going to be seen as decolonized. “I try to bring language into every single project I do, and I'll title everything in my language, and I always put my grandmother's teachings before I'll put a reference to a scientific research paper” (Taylor).

Including Indigenous knowledge and recognizing its validity is how to move toward the decolonization and Indigenization of research and academic spaces.

4.4.3.1 *Recognition of Indigenous Knowledge.*

If Universities and institutions want to support Indigenous research, then there must be a formal recognition of Indigenous knowledge, and knowledge acquisition. Indigenous knowledge is just as valid as Western knowledge, it is just different. Indigenous knowledge has sustained its people for thousands of

years, so of course it is just as credible. “You are going to learn more about a community and their ways of life when it is firsthand from somebody who's lived there their whole life and watched it change throughout the years” (Taylor). Indigenous people in communities hold knowledge that researchers and post-secondary institutions don’t have; the reason is that Indigenous people are oral-based people and Indigenous knowledge is generational; passed down through stories as a collective knowledge.

> “I think it's important to keep those oral teachings and oral stories and that type of ways of knowing at the forefront because that is the way that we've always been since forever… we are an oral-based Peoples and that is how we communicate best, through stories and passing down those types of knowledge systems…I say we a lot because I don't do this work myself. And I haven't learned all these things myself. It has been passed down to me by a lot of great people” (Taylor).

It is important that Indigenous knowledge is portrayed in Indigenous research and that the oral-based nature of Indigenous knowledge is recognized.

Recognizing Indigenous knowledge is important, as is recognizing the different skills and expertise that people in communities have. “We think only academics or researchers can ask and answer the big questions. There are so many people in the community who don't have advanced degrees who are doing really great work. Sometimes in partnership with faculty or other academics, and sometimes on their own, and I think we tend to overlook the researchers that already exist in the community” (Nicki).

Many people in Indigenous communities have skills but they aren’t seen as valid because they don't have the right credentials deemed by institutions. “Folks who already have these skills are sitting down with the aunties and uncles and asking the questions and analyzing and interpreting that data … I think it is an ego thing and I experienced the same thing. We've studied these things, but often, sometimes they (people in communities) have more practical experience” (Nicki). In fact, people in communities might be more qualified to do research than some academics, especially young ones starting off, because they have done the work, and they have lived it. “I know a lot of folks I graduated with my master’s with who have no research skills at all, no practical experience but we will look at them as more of an expert than we would look at somebody in community. So, I think it's about us starting to shift these ideas of where some of the expertise in these areas lies around research methodologies, research protocols, and even interpreting and analyzing data” (Nicki).

Breaking down the ideas of what constitutes knowledge and who the “expert” is how Universities and institutions can be more inclusive of Indigenous people, their Indigenous knowledge, and research. Another important support to Indigenous research that relates to Indigenous knowledge is the inclusion of

culture and protocol and the understanding that Indigenous people don't only have different approaches to education and knowledge acquisition, but they have different research methods as well.

4.4.4 Culture, Protocol and Methods in Research

Knowing the roles of culture and protocol in Indigenous research is one of the ways to support it. Research protocols and guidelines differ for each community and therefore should be nation and community-specific. Research approaches should be moulded to fit individual community needs, as a researcher, don't just follow the baseline standards, take the extra step, and figure out how the community wants to work. Things to consider when working with Indigenous communities are what Permissions and customs are important; how the research benefits the community; how the community is engaged and how input and feedback will be considered and incorporated; what the right methods and methodologies to use are; the importance of building relationships with the community; and the importance of fostering trust, respect, and transparency within those relationships.

4.4.4.1 Permissions and Customs

Notifying the Chief and Council, passing tobacco and gift-giving are all important protocols and customs when engaging with an Indigenous community through research or otherwise.

Meeting with Chief and Council is a central protocol when doing research with First Nations people. Projects are always more effective when there is trust, and the only way to have trust is to be open and get to know the Chief and Council and the community. "It takes a village, and it takes the whole community … you need to get Chief and Council on board, you need to have relationships within those spaces and with those people to get that okay (from Chief and Council) if you want to do it (research) in a good way" (Tammy).

Passing tobacco is like a contract for First Nations people, it is how you acknowledge the sacred knowledge being shared. Passing tobacco also applies to Métis people and is not just a First Nations protocol, but it can have a different meaning. Passing Tobacco to someone who is Métis is affirming to them that their knowledge is also Indigenous knowledge. "All of the research that I've ever conducted as a Métis person, I've passed tobacco, and I've never had a single Métis person say 'No'. I think Métis people are appreciative of having their knowledge acknowledged at that same level as others…this is sacred knowledge; this is Indigenous knowledge" (Nicki).

In addition to passing tobacco, giving is also a protocol in most Indigenous cultures. Food sharing is an important research protocol when working with Indigenous people because food is central to building relationships and engaging with communities. When you share food, conversations become more relational and personal. People become more open, and formalities drop. Nicki shared a story about an

experience she had when meeting with a community. She and her fellow researchers didn't bring food causing awkwardness at the meeting. The following is an excerpt from the story she shared (see Appendix 6 for the full story):

> "The literal stories they were telling changed. Now they were suddenly telling personal stories and they were giving us exactly what we had asked for, but they had fought us for two hours. I always wonder now; would we have gotten those stories in the first two hours if we had brought food because it totally set their hackles. They must have thought, 'Oh, you're just more people that don't know how to work in good ways with us.' The food is so important" (Nicki).

Protocols don't only apply when doing social research, "protocols apply, whether you're doing quantitative environmental research or qualitative, people-centred, or human-centred studies" (Nicki). Protocols are important for all research that relates to Indigenous people, their culture, and their lands.

4.4.4.2 Connections to the Land

Many researchers don't understand the connection Indigenous people have with the land. Nicki shared a story about a graduate student who had taken water samples without asking permission first, ignoring the protocols. This ruined the research project and the relationship with the community, regardless of the student's good intentions.

> "During the "Working in Good Ways", consultations … I heard one story, it always really stuck with me where a group of students, I think there were I think entirely non-Indigenous or mostly non-Indigenous students themselves. And some of them were also international students. They had been provided with training on how to do research with Indigenous communities and they were going to be doing environmental science research…I guess they had been provided training on OCAP and all this stuff. Most of the students ended up working in a pretty good way like notifying Chief and Council and working with the community. A graduate student snuck into the community under the cover of night, from what I understand to take water samples from the ditches. And their thought process was, 'I'm doing good research that's going to benefit the community because we're going to find out that this water is contaminated. And then they can use this data to petition the government to provide water treatment'. So, they had a good motivation, I guess, but when finally, the Chief and Council got wind of it, they pulled all of the students and data and didn't let them continue the project. So, the student got royally screwed. But rightly so in a sense, because they were fully aware of the requirements of what they were supposed to be doing. Then the student, later on, said something like, 'But I wasn't doing people-centred research, so I figured why did I have to contact them? I was just going to take a sample'" (Nicki).

Researchers must be sure that they are giving respect to both the people they are working with and their lands. Indigenous communities have a deep connection with the land, if you disrespect it, you disrespect them. “If you are doing quantitative research, what are the protocols? I think in some cases, they are still the same. I would still offer tobacco to the land, and I might, depending on the nature of the research, leave out a spirit plate, or something like that or provide some sort of gift” (Nicki).

Following protocols with people and their land is important in Indigenous research, as is finding the proper methods and methodologies.

4.4.4.3 Choosing the Right Methods and Methodologies

Knowing what methods and methodologies are available and the pros and cons of each is important when doing Indigenous research. No one way works best, and different methods and methodologies work best for each researcher, project, and community.

For non-Indigenous researchers who can’t use Indigenous methods, using mixed-methods approaches is more appropriate than Western methods because they combine Western and Indigenous research approaches. Any methods that use conversational approaches are often a good way to approach research with Indigenous communities. “The beauty of the conversational method is that there isn't an agenda guiding the conversation, you let the conversation go where it's gonna go. And people take it to a place where they feel,’ I need to share about this or I need you to know about this’, and so you're getting to the most important stuff without realizing” (Nicki).

A mixed methods research approach that is being used by some researchers is a Two-Eyed Seeing approach which utilizes both Wester and Indigenous approaches together.

4.4.4.4 Two-Eyed Seeing

Using Western and Indigenous knowledge together is a way of overcoming research barriers. Two-Eyed Seeing was initially developed to drive students toward STEM research but it has become a common approach in different fields; it uses both Indigenous and Western methods to conduct research and is more geared towards First Nations research. First Nations views and Western views are sometimes incompatible, but they can still work together if people are open-minded and willing to try different approaches.

> “People are always talking about Two-Eyed Seeing and it doesn't mean that you see from one eye, a specific way and you see from another eye from a specific way. You see the Western way and you see an Indigenous way but, in the middle, there is something that works together. And it's not just acknowledging I have a Western Way and Indigenous ways. It's those two eyes working together and there has to be something in the middle that allows us to work together in good

ways. It's a concept, there are no checkpoints but it's working together and having that messiness; having a space for people to actually converse, and figure things out" (Moneca).

Like, Two-eyed seeing, the Two-worlds approach is another mixed-method approach to Indigenous research. These approaches make the most sense for non-Indigenous researchers to use but caution is still needed because they are broad and not nation-specific. "I think the Two-Worlds Approach and Two-Eyed Seeing make a lot more sense to for non-Indigenous researchers who are wanting to say, 'I will be using Western methods, but also Indigenous methods that are gonna be more appropriate to the communities that I might be working with.' But those (methods) should still be nation-specific" (Nicki).

Mixed-methods approaches that aren't nation or community-specific can be problematic because of the power dynamics that are inherent in research and research processes. "Universities are very mixed. There are a lot of different ideas, that are coming from a bunch of different places. Good things are happening but the power dynamic never helps the community in the relationships, it helps universities, whether it's through the ethics process or funding" (Daniel).

Despite the problems with mixed-methods approaches, like Two-Eyed seeing they aren't all bad. It is just important to recognize that there are power dynamics at play and they have to be used appropriately and mindfully. One way to ensure that the right research approaches are being used is to let the community guide the research approaches so that they are specific to the community or the nation.

4.4.4.5 Nation and Community-Specific Methodologies

An important part of Indigenous research is moving Indigenous research methods and methodologies forward. Non-Indigenous researchers are using outdated research methods when working with communities. Most Indigenous methods are broad and what you find when looking at research done by Indigenous people is that they are using specific methods to themselves and their nation or community. This is because the Indigenous method should be nation-specific, and if you are an Indigenous researcher, the method should be specific to you and your project (in addition to the community). "We can't talk about Indigenous methodologies because we need to talk about nation-specific methodologies too because they can be so different…folks are doing interesting, good research and focusing on developing nation-specific methodologies" (Nicki).

Being open to different research approaches is an important part of doing research with Indigenous communities. Unlike First Nations research, it is difficult to find Métis specific research methods, which is another reason why it is important to give the community the opportunity to guide the research and the research methods used.

4.4.4.6 Metis Research Approaches

There is a significant amount of information and articles available about First Nations research, but conversations about Métis research and research methods are only just beginning to emerge. There currently is a lot of research that claims to use Métis research methods, but it uses mixed methods approaches that combine Western and Indigenous methods that are the "best fit".

Two-Eyed Seeing, Two Worlds Seeing and Metissage are not inherently Métis approaches, they are mixed approaches. "Using Western approaches mixed with sort of hodgepodge of Indigenous approaches that seem to fit. Métis people have specific Indigenous ancestry and specific methodologies and approaches to doing research…Métis people aren't mixed, and Métis research isn't mixed" (Nicki). It has only been in the last couple of years that there has been the development of true Métis-specific methods and methodologies.

> "In the last two or three years, there have been some publications and some, research studies that have really been driving Métis specific methodologies forward, but it's really new…one of the biggest Métis-specific methodologies being put forward right now is Kitchen Table and Conversational methods. Where you literally would just sit down with the aunties and (have a conversation about) here's what's going on in the community. How do we fix it? And now you're having a solution-oriented discussion where you're contextualizing a problem. And figuring out solutions" (Nicki).

Using the correct methods is important for ensuring research represents the people the research is about. Approaching Indigenous research in a way that results in action is how to enact change and improve communities and the lives of the people in it.

4.4.4.7 Action-based and Solution-Oriented Research

Another Indigenous approach to research is to make research action-based or solution-oriented because Indigenous research isn't just about data collection, it is about people, their lands, and their lives and livelihoods. Indigenous research should be action-based and solution-oriented because communities are facing innumerable barriers. "You need to take a look at it from a collective point of view" (Shavon). Research that doesn't address community needs and strive to improve people's lives doesn't benefit the community, it takes away from the community and prevents them from focusing on the things they want to be focusing on.

> "I don't think that the problem itself always needs to be researched. What I feel is that solution-based research is needed and specifically looking at the people who are impacted, because this is not a problem that has ended because we've had a National

> Inquiry. This is a this is an ongoing problem. Even for myself. I lost my mom 20 years ago. Is it still impacting me today? Yes. Was her murder ever solved? No, it wasn't. Did I ever receive justice? So, I feel like it needs to keep going and I feel like despite that, the research needs to continue in this community until the solution is found" (Tammy).

Indigenous research must focus on improving people's lives. Action-based research or research that looks to find solutions ensures that there are clear benefits for a community in the outcomes of the project.

> "Take Indigenous content off the paper and put it into action. And what I mean by that is in order for research to be conducted, you need to write a proposal, and a lot of these proposals and grants and many people that I know are guilty of putting Indigenous knowledge within these types of proposals to help their chances of getting grant money but it's complete bullshit unless you actually put those words into action" (Taylor).

Research is one way to address the issues and barriers that people in communities are facing around research and health, sovereignty, governance and more; but it must have results in the end, real results and real solutions to the problems; this is why ensuring that the research has clear benefits for the community it is about is a very important support for Indigenous Research.

4.4.4.8 Community Benefits

Considering how a research project will benefit a community is one of the most important guidelines when working with Indigenous people because of the past experiences Indigenous communities have had with research and researchers. Research that originates from outside researchers and academic institutions is based on colonial systems. Researchers who want to work with a community must think about how the entire community will benefit. Unless the research is done by, for and with the community, and it includes their direct input and involvement, it is unlikely the research will have the communities' best interests at heart.

Research benefits a community when it addresses the community's concerns and needs. The only way to ensure research is addressing community needs is to let the community lead the research. "I fully think that research is incredibly beneficial. I think that it can help move a community's desires and interests forward and, can address their needs. But I think we need to use the right approaches" (Nicki). Researchers need to make the effort to truly understand the community and what approaches to use that work best for the community and the project because each community has their own unique needs.

If a project is at a regional level, one should also consider regional benefits and how a project can build something for that region, while also keeping in mind how the individual communities might be

impacted, or what needs they might have. "We have to take a look at how is this gonna benefit our community because First Nation communities are systematically oppressed…I think that community benefits should always be the number one guideline, whether it's research projects or whatever. We always have to take a look at how research is going to benefit the community, not the individual, not the Chief and Council, not the institution and not even the funders" (Shavon).

One research approach that benefits communities is developing a project that builds capacity within the community, as mentioned earlier in the chapter in the section, "Awareness, Education and Training". Many Indigenous communities and researchers will not partner on a project unless the project includes collective benefits for the community and builds capacity.

Another way to ensure research is beneficial for the community is by using Indigenous knowledge. Indigenous knowledge should always be used in Indigenous research because it is part of reclaiming culture and sovereignty. "If you're going to use Indigenous knowledge. Consider how will it benefit the community. Are you just gonna take that knowledge and then write a paper? Or are you going to actually use that knowledge for something that's going to benefit the community?" (Moneca).

Research can be about advocating and activism and giving voices to people who have been oppressed. "There have been studies that have been done for, by and with the community, I always think about grassroots movements. For myself, I am super into activism and advocating and I have been doing this work for so long, before coming into academia and being in the space of being able to do research. I feel like that gives voice and I feel like it's benefiting the community. It's benefiting further research" (Tammy).

People will be more interested and engaged in research if it is about things that are important to them.

4.4.4.9 Community Engagement

Community engagement is another important guideline in Indigenous research. People should be included in research projects about them and their lands. Interacting directly with people in the community by asking them what they want out of the project and working together to plan is how effective research projects are implemented.

> "When we are talking about doing research with the community and what it looks like to engage with the community around things like the proposal right from the onset of the research. Ask the community, what questions they want to know. What do you want this to look like? What approaches do we use? I think that this is a key aspect of doing research with communities, one that we generally overlook" (Nicki).

Involving people gets them excited about research and encourages them to get passionate about their communities and their lands. “That firsthand experience is crucial to the research because you can see it, feel it, touch it” (Shavon).

Engaging with different people in the community is also important, not just the Chief and Council. Elders, youth, and everyone in between should be involved because everyone has something different to bring to a project. “Why wouldn’t you want to include the Indigenous people who you're ultimately trying to help? I think it's extremely important that on the ground level, Indigenous people and their voices are being heard” (Fiona). Including elders is important for research projects because they hold a lot of knowledge. Elders should be informed about what the project is, and its purpose, and they should also be given the opportunity to provide input *before* the project begins.

Moneca shared a story about a project she was involved with where the researchers held a workshop with facilitators that helped guide the conversations between the researchers and the community. This experience, though tense at first allowed everyone to share their ideas and find different ways of doing the research that wasn’t the same old approaches. The community wanted something different. “In the end, the whole project changed. The questions that were asked were different, and what the epidemiologists were going to be looking for. They decided to make a video and do some podcasting and write some newsletters for the community…they were completely different from the original research that they submitted” (Moneca). (See Appendix 6 for the full story).

Everyone benefits when there are opportunities to collaborate and learn from each other. “In the communities, if you do the job well or engage the community, they're willing to work with you again…It's always that exchange of knowledge, services, and partnerships. Those are the opportunities research gives to First Nations” (Shavon).

An important part of community engagement is building honest and open relationships.

4.4.4.10 Building Relationships

Building relationships is a guideline in Indigenous research that is frequently discussed. This is because of the past experiences and resulting hesitation communities have towards researchers and research institutions. Approaching research through relationship-building leads to successful research projects and changes the way the project unfolds. When you build relationships with the people you are working with the research becomes more meaningful and the information you are collecting becomes more than just data, it becomes a story about people, their lives, and their land. Every person interviewed for this research brought up the importance of building relationships. “My advice for non-Indigenous

folks or allies would be to do relationship building and do that work before the work. It's going to be your biggest help in doing good research and establishing a good reputation with the community" (Nicki)

When getting to know a new community, meeting face-to-face is often important for a relationship and partnership to form. Relationships go both ways, and researchers and institutions shouldn't expect First Nations and Indigenous communities to mould to what they do and put in all the efforts. "Institutions have advanced technologically with the expectations that First Nations are too but what I am finding is they (First Nations) still want that human interaction, no matter what. It is about shaking a hand, seeing a person eye to eye, feeling that energy, that is what First Nations do, they still follow the old way, even in research" (Shavon).

It is important to have researchers who understand how to build relationships with the communities they are working with. "You really have to have someone that knows about relationship building because that is important. To be able to do that, and to build a relationship with the community and give them skills at the same time so they can feel like they can do the project" (Moneca).

Relationships include reciprocity and reciprocity means giving something back to the community. After a project is finished the community should be left with some sort of action plan so that they can succeed. Also, leaving contact information for people to reach out to if they run into any problems is important for ensuring a project succeeds; this is also part of building and maintaining relationships.

Relationships you build with communities are meant to last beyond the research project. Maintaining relationships means committing to a community long-term, beyond the research project. "I think the research team leaving after they complete their tasks, leaving the community high and dry afterward, saying there's no more money for funding is no good … We have to stay and support their efforts and continue getting grants for the community. Build long-term relationships and build trust" (Errol). If you put in the effort to maintain long-term relationships with a community, the relationships you build with a community as a researcher could support your entire career. Long-term commitments are the kinds of relationships communities are interested in. Researchers are beginning to understand what is required of them to build the right kinds of relationships with Indigenous communities.

> "We are starting to contextualize what we might see and experience in the community and I think that's key, and we are doing that self-reflection work to understand who we are and what our motivations are for doing research and working with communities … We are building relationships with communities that are meant to be sustained beyond the research period…The relationship doesn't end when the research ends, it continues and will sustain your Ph.D. research

> and then your career, but it's not about that. It's not about your career. At some point, it's going to shift into that you just really care about the community" (Nicki).

Building relationships with communities requires putting in extra work before the project begins so that the community is comfortable with the researcher, and the researcher is comfortable with them. Putting in the work is necessary, and it is something researchers need to consider before entering research partnerships with Indigenous communities.

> "I've built that relationship with them based on honesty and truth, and I make sure that I am checking in on them outside of my work to be sure that they are okay. I ask them 'How's the community doing?', and 'What's going on?'. So, now I am at the point where they're able to call me just personally when they're down in the south and say, 'Hey, we need a hand, can you help us do this?', 'Yes, I will get in my car and help you', because that's what we're supposed to be doing. So, I hear what others are saying. We have to do the extra work but that is because it is the work that needs to be done and it's a lot, there's a lot to have to think about" (Ashley).

Researchers need to work on building trust and respect before they can expect a community to want to enter into a partnership with them. "If we have long-term relationships with researchers, we build that trust, and that trust is like truth and honesty, and that is part of our seven sacred teachings" (Taylor). Normally trust and respect would be inherent in building and maintaining relationships but they are more important in this circumstance because of what has happened in the past and what continues to happen today between Indigenous and Western/ Settler societies.

4.4.4.11 Trust and Respect

The lack of trust between Indigenous and non-Indigenous people needs to be addressed. Trust and respect are especially important because of the harm Indigenous communities have experienced (and to an extent still do) from researchers and research institutions. "I think respect above all else is important to have, especially if you think of the history of Indigenous research in Canada. That was never there. I think in some regards, we have to overdo it to make up for what has been done in the past" (Fiona).

Building trust, like building relationships takes time and effort from both sides. "The university needs to trust how Indigenous people trust and it will go like wildfire" (Errol). "One of the greatest things that you possibly could do is build that trustworthy relationship with First Nations people because once we trust you, you are in the family" (Taylor). Trust is how relationships are built, and building trustworthy relationships based on mutual respect is how good research gets done.

Respect involves listening to the community and following their timeline and suggestions. Yet, many researchers don't give communities that level of respect and allow them to provide input or try to

understand that communities work differently and have different ways of doing things. Researchers should not go into communities with already developed plans, expecting communities to just go along with it; that is not how to build a relationship or respect, or how to set up a research project to succeed. “If you just go in saying this is what we're going to do and don't have that level of respect to try to build a relationship, then it's not going to work out long term” (Fiona). Involving people from the community in the research is one of the ways that trust is built.

> “If you (researchers) are going to work with Indigenous communities and incorporate our knowledge (in your research), then don't just have a sharing circle or don't just have an advisory board or don't just have a committee, have people in the field with you every single day, doing every single piece of research you're doing. Have someone there to shadow you so they know what's happening. That's part of the trust that you're going to build with them” (Taylor).

Providing opportunities for people in the community to be involved in research also contributes to transparency in research because then they know what is happening with the research, how it is happening, what the outcomes of the research are and how it will be used.

4.4.4.12 Transparency

Transparency is another important Indigenous research guideline. Researchers must be open and honest about research projects and clear about what their intentions are, this is how trusting and respectful relationships are built. It is important to give communities opportunities to ask questions and give feedback on research projects that take place in their community. A Researcher should indicate what information they are using from the project, how they will be using it, and to whom it will be available. “There needs to be a lot more information from the researchers coming in and actually getting to sit down and know and talk to them (the community) because what has happened in the past hasn't always been the best” (Taylor).

In addition to being transparent with the community they are working with about their research; researchers should also be clear in their research about who they did the work with, and which community or culture is being represented in the work because celebrating cultural diversity among Indigenous groups is important for Indigenous research.

4.4.5 Celebrating Cultural Diversity

Different cultures should be represented in Indigenous research. Researchers must Indicate if their research is Metis, Inuit, or First Nations and also include which group is being worked with, who they are and where they are from to avoid using homogenized terms that pan-Indigenize Indigenous people.

Research is an opportunity to learn about different cultures and celebrate cultural diversity" It's important to include the different cultures within Indigenous research because there are many different cultures and communities within the Indigenous groupings" (Shavon).

To avoid generalization, researchers must be clear about who they are working with and representing in their research. To do this, researchers must understand that every community is different, but it is a challenge for many. "I've been running into a lot of situations where researchers will call research 'Indigenous', but it's just First Nations. It raises the question of why not just call it First Nation research in the first place" (Fiona). Most current research about Indigenous people (which often comes from non-Indigenous researchers) tends to generalize Indigenous cultures and communities.

> "Everything is considered Indigenous when often it is more just First Nation or just Anishinaabe. If it is something specific then it should have more distinction. I think that we do the same thing with the concept of community. It's like, 'Oh, we have talked to the community' but in reality, what that looks like, for us is, we have built relationships with people in a community and we expand from there. There's a lot of work that gets done where the community is actually just a person, a single contact from a community. We hear that a lot with some of the bad examples in academia. So that is another thing I think has to be interrogated, even just to remind ourselves 'Am I speaking with the community? Or am I speaking with, George, or George and like his family?' Every, community is quite diverse, right? So, there's a lot there to think about" (Daniel).

Researchers should take time to get to know the differences between Indigenous cultures and consider how different cultures approach research by educating themselves and getting to know the people they are planning on working with.

> "You really need to get to know the community first and foremost. Get to know the people that you're working with, because there are so many various groups of Indigenous people, and we all have different stories and different things that need to be done within our communities. So, get to know the Anishinaabe from the Cree and just get to know the area in which you're in and a little bit about the history" (Taylor).

Getting to know a community and its culture is one way to avoid pan-indigenizing Indigenous people and is a support for Indigenous research. Letting the community lead research is another important support and it also ensures that it reflects the community and their culture, while also meeting their needs and interests.

4.4.6 Indigenous and Community-Led Research

Promoting research that is Indigenous or community-led is essential for Indigenous research. The prevalence of Indigenous-led research and initiatives from Indigenous organizations has been growing in recent years. Indigenous-led and Community-led research is important because research is a powerful tool, but it is much more impactful when it is conducted by the people who are impacted by the research. Many communities are asking for more control over research that is about them. Researchers should learn what community and Indigenous-led research is. “Understand what community-led and Indigenous-led research looks like and try to allow that to happen in whatever way makes the most sense” (Nicki). Supporting communities and their research is important for Indigenous sovereignty because communities should have the opportunity to lead their own research, and control the methods and outcomes.

Doing research with communities should be viewed as a partnership. It is helpful to have an existing relationship with a community so there is trust already established, but it is not necessary. In a research partnership, partners work together to come up with the research approaches and expected outcomes for the project. “Listening and actually taking into account what the communities want. That's a really big thing these days that I'm hearing from the communities” (Ashley). In research partnerships with Indigenous communities, researchers can allow them to take the lead, and provide support however they can.

> “We feel as researchers that we need to come up with everything and that it has to be very personal. It has to be perfectly in line with your own vision. But the reality is that there is something beautiful that happens when you say to the community ‘What’s the best way for me to answer this (research) question?’, it is not going to be what you were thinking… I think that letting the community guide the research in that way can have such cool outcomes” (Nicki).

If a project is about a community and their lands, then the focus of the project should be on what is best for the community.

Communities as a whole should be the ones making decisions about what research projects and partnerships they enter into because they know what their priorities are. The decisions shouldn’t be only made by the Chief and Council. “What motivates me to keep working and keep doing what I'm doing is that I want to be able to make enough money to actually help because when it gets into Chief and Councils’ hands, it's not good. And then when it’s not in good hands when it's within 10 or 20 people only about 100 people benefit. But if the community does it, we can get 10,000 people to benefit” (Errol).

Community-led research is in a way superior to Indigenous-led research because it has the interests of the entire community, not just a handful of people.

Indigenous-led research has the interests of the person who is Indigenous leading the research; community-led research has the interests of the community leading the research. If researchers want to work with communities then they need to listen to the community's needs and pursue research communities are interested in; and, let the community take the lead on how to approach the research and choose the methods and methodologies.

If researchers are not willing to work with communities in the ways they want to work, then they will not engage with that researcher. Indigenous communities are beginning to assert themselves by no longer allowing non-Indigenous researchers and institutions to control the way research is done with them.

4.4.6.1 Indigenous Resilience in Research.

Indigenous people are beginning to claim research and make it their own by approaching it in ways that work best for them. The term "research" is a Western concept and isn't the term that would have been used traditionally but Indigenous people are taking what the colonizers have created and they are making it their own. "They create these policies, they create these systems for us, First Nations, well, let's use them and make them our own" (Shavon). Some Indigenous groups are adapting and claiming Western methodologies, and research approaches, and applying them to their research, their health systems, and their governance by aligning traditional teachings with what is learned in academia.

> "First Nations are now understanding the potential of how we can use research and I think we've always had an understanding, but it wasn't in a colonial context of thinking, we've always done those things, but now it's kind of switched. We are integrating and aligning the two ... First Nations are skilled professionals today. We have learned the systems of the colonizers and we've adopted them, and we've aligned them with our societies" (Shavon).

Communities are beginning to refuse to enter into research projects and they are beginning to shut them down if they see researchers are not following through with what they say they are doing or if they are not working in good ways.

> "We hear the same three or four names, everywhere about folks doing bad work. Then, in other areas, we are hearing about the new ways people are working but it's also the new ways communities are working. Communities, I think, are saying 'We don't need to engage with these extractive harmful research relationships anymore'. And some people still get bamboozled. Some

communities still get bamboozled. But I think I see the shift happening in that way too, that is why Indigenous or community-led (research) is important too" (Nicki).

People in communities are becoming more aware of the impacts of research partnerships and are more cautious about whom they decide to work with and the type of research they are willing to be a part of. "We need to be more responsible for the people that come in and be more responsible for our own actions because it's our community. And we all need to be responsible for what happens within our community. It's not just leadership that's responsible. It's us who live off the land and who hunt and who trap and who fish and do all these types of things" (Taylor). Communities as a whole are holding institutions and governments accountable for what has happened in the past and what continues to happen today around research, governance, health, etc.

Indigenous communities are resilient, and they are asserting their rights around research, among other things. "They (Indigenous people) are asserting their collective rights and they're saying, 'No, this is us. And we're going to govern ourselves this way'" (Shavon). This resilience in research is part of larger movements occurring around Indigenous resurgence and Indigenous sovereignty.

4.4.7 Indigenous Resurgence and Sovereignty

Indigenous resurgence and sovereignty are important for Indigenous research. Movements around Indigenous rights and sovereignties are important for addressing the systematic oppression, racism, and other systematic barriers that Indigenous people face. Part of these movements includes bringing to light the truth about the experiences people have had and the realities they live in and taking control of what the future will bring. Part of Indigenous resurgence is the reclamation of culture. Massive cultural resurgences are occurring throughout Indigenous societies. People are claiming their identities as First Nations, Inuit, and Métis. Especially for Métis people, there is a huge resurgence of people reclaiming their identities. There are now more opportunities for Indigenous people to connect to their community, culture, and language.

Understanding what Indigenous sovereignty is, is important for Indigenous research because sovereignty is about control and self-determination.

4.4.7.1 Understanding Indigenous Sovereignty from a Different Point of View

The word sovereignty is a Western term with European origins; because of the etymological origins of the word sovereignty, First Nations[1] people view and understand sovereignty in a different way than Western society.

[1] Note that in this section, the term First Nations has been used instead of Indigenous because the information shared about what sovereignty means came from two of the First Nations people interviews. Therefore, it cannot be said

First Nations may not view Indigenous sovereignty in the same way as settlers do because there is a lot of importance placed on sharing and exchange. “I don't know if we could make that declaration about Indigenous sovereignty because I do not view it that way. I view it as we're still practicing sovereign collective thinking and collective networking” (Shavon).

The idea of collectivity conflicts with sovereignty because sovereignty is about control over one’s own and therefore the benefits of one’s own, whereas collectivity is about working together and the benefits of many. “First Nations are breaking down that concept of sovereignty. First Nations cannot say that they have that right now. Why? Because First Nations still practice collectivity” (Shavon). Collectivity is an important part of First Nations cultures.

> “Working together is reconciliation and it trumps sovereignty. You have to look at those words and individualize them because I think reconciliation for the next 25 years is going to be the main word. Sovereignty is about being in charge of your own nation. But how do nation-to-nation relationships work under sovereignty? Nation to nation, that isn’t sovereignty. Reconciliation is about understanding each other” (Errol).

In this understanding of sovereignty, reconciliation and reciprocity are seen as more important than having control over one’s own. Whether it is sovereignty, collectivity, reconciliation, or all three, Indigenous research has a role to play.

4.4.7.2 How Does Indigenous Research Relate to Sovereignty?

Indigenous sovereignty includes sovereignty over research. Indigenous research and Indigenous sovereignty relate to each other because research is about decisions and actions; sovereignty is what gives one control over those decisions and actions.

> “I think it (research) is another way of validating that (sovereignty). We know we're here. We exist. We've existed. We can make our own choices and decisions and so I do think that they (research and Indigenous sovereignty) are related. Indigenous sovereignty means conducting our own. Research means controlling the research that is done about our communities” (Nicki).

Indigenous people can make their own choices and decisions and they must be the ones to do this if they are going to decide the direction they are headed. “First Nations are the ones who will determine

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that other Indigenous groups feel the same way about sovereignty. In this research, the use of the term “First Nations” specifically refers to the cultural groups Anishinaabe (Ojibwa), Nēhinan (Cree), Saulteaux in Manitoba and Saskatchewan.

where they're going to go. It can't be the institutions" (Shavon). If research is going to be sovereign, then communities should have input in every aspect of a project.

> "Instead of having researchers coming into our communities and saying, 'Oh, hey, we want to do all this great stuff for your community. We have all this funding.' Why don't we sit down and interview them and conduct these types of conversations? So, we know what they're all about, what they're trying to do, what they're doing with this information where this information is going. That's a part of that Indigenous sovereignty and data sovereignty" (Taylor).

When communities have control over research it means they are also in control of the research narrative. "Up to this point, the narrative has been led by non-Indigenous people. So, when Indigenous people have the opportunity to lead their own narratives, I feel like that is an act of sovereignty" (Tammy).

If research sovereignty is going to work, it is important to consider what level it operates on. Things can get challenging depending if research is occurring on a regional level, national level, or community level. If research occurs at a higher level, then who gets to decide on what happens and how does this affect each individual community and their rights to determine what the research activities and outcomes are and how the research will be done; many questions emerge. "I think if it is a more community-based idea of Indigenous research sovereignty, then I fully agree that we should be determining the direction of our research, the purpose of our research, and the methods" (Nicki). Indigenous research sovereignty operating on a community level often makes more sense because then the decisions and research will be more representative of the community.

For some, the idea of sovereignty, and in particular, research sovereignty is attainable, but others feel that research might not be the right approach to addressing Indigenous desires for sovereignty. "I don't think research is the way to go about Indigenous sovereignty because it is still so tied to colonial ways. At the end of the day, who has the entire say over the project? If it's truly Indigenous-led, do they (the Indigenous person or community) get 50% of the say, or does the researcher still have that 51/49? If so, then it's not really sovereignty" (Fiona).

One thing is certain, the only way research can impact Indigenous sovereignty is if it is led by Indigenous people and communities. "I think research could help (sovereignty) as long as it's moving and evolving. If it's staying stagnant, then it probably won't help. But I think if it's moving and evolving, it will help" (Moneca).

Regardless of whether research is the right approach to sovereignty or not, it is something that will always be around, and it can be a useful tool for Indigenous communities and people who are trying to take control of what goes on in their communities. “I think when research is working within Indigenous realms; First Nations realms, and Metis realms. It (research) is a really good tool to have in your belt for Indigenous rights, and sovereignty” (Errol). People in Indigenous communities are interested in the potential that research has to change the way things are. If research facilitates action and change, then it can help mobilize sovereignty.

4.4.7.3 Mobilizing Sovereignty

Mobilizing sovereignty is important for Indigenous research because it is about communities having the means to control what happens to them. Indigenous people should be the ones who initiate conversations about sovereignty because they must be the ones leading it. “Academics need to stop making those declarations for us. First Nations need to say, ‘No listen, when we talk about Indigenous sovereignty, research, we need to define it. We know what our research methods and methodologies are’… I would like us First Nations to take that term, those terms and let's really claim them and let us define them” (Shavon). Individual Indigenous nations have their own ideas of sovereignty and research; therefore, they need to be the ones defining what it means to them and how it should be done; this is what Indigenous research sovereignty is about; self-determination.

Indigenous scholars and researchers have been exploring the ideas of sovereignty and how to move towards it. There are still a lot of things to work out, things that will take time.

> “I think sovereignty is a good philosophy and I think people are working towards it but not in my lifetime will I see it. But if I keep working towards it, that is the goal, you just keep working towards it and hoping that someone will pick it up in the next generation. It is like a relay race; you just keep handing the baton over and you hope that one day it will become a reality … all we can do is just keep working towards that future. I think that is part of sovereignty is that we just keep working towards a future. It's easy to develop these ideas but the work is when you have to physically do it and keep moving towards it and just not giving up … I think right now there's a lot of good talk about it (sovereignty) because that's where it's at, the talking stage and the actual action stage may not happen I think not in my lifetime but maybe in the next lifetime people will start actually taking action. It's like any philosophy it takes, generations for it to be put into action and patience is the big thing that we work with right now and having the patience to keep going despite” (Moneca).

Ideas of sovereignty are difficult to mobilize, and it will take the effort of many to put sovereignty into action. Research is one of many pieces that can contribute to and mobilize sovereignty moving forward.

Indigenous researchers have a role to play in promoting Indigenous research sovereignty. “When we start seeing Indigenous researchers doing this type of work, it encourages and empowers them (communities) to know that they can also do that type of work as well. So, it will lead to Indigenous sovereignty” (Taylor). Indigenous people engaging in research and taking control of it is an act of sovereignty.

Universities also can potentially play a role in helping to mobilize sovereignty by giving Indigenous people and communities the support that they are asking for. “If it's true sovereignty, that's what it will be about … that is what it has to be…having the community do it, and having a strong relationship with the university, as well because they (Indigenous people) have that experience and knowledge of how Indigenous people work. The Indigenous way is that the friendship never ends” (Errol).

It will take time to work towards sovereignty but there are many ways that Indigenous people can be supported in both their research and their sovereignties. Partnerships between communities and researchers (especially Indigenous researchers) are important for Indigenous research. “Whenever we talk about Indigenous research, I feel passionate that First Nations scholars, First Nation academics, we need to have them working directly with First Nations communities and to figure out a way to develop meaningful partnerships, where it allows that community to own that data, own the materials and the resources that come out of that” (Shavon). Partnerships between allies, institutions and other communities are one way that Indigenous sovereignty and research can be supported.

4.4.8 Partnerships between Allies, Institutions and Communities

Moving Indigenous research and Indigenous sovereignty forward can not be done in isolation; allies and non-Indigenous people also have a role to play. “I always feel like this work can't just be done by Indigenous people alone. We need supporters and allies who are coming in and doing and learning how to do this type of work in a good way” (Tammy). Building partnerships and relationships is an important part of reconciliation between Indigenous and non-Indigenous people. Partnerships lead to opportunities for reciprocity and knowledge exchange. “It has to do with relationships. That's where my mind always goes because work cannot be done by itself. So, if one person has this great idea then what they need is to build those partnerships and those relationships with people out there who are like-minded, and they will have the same goal” (Tammy).

Although it may be easier to work with like-minded people, partnerships shouldn't just occur between people with the same worldview. It is in the unlikely partnerships that progress, and new ideas may occur. "It's easier for people to get comfortable with people that have the same ideas and thoughts and thinking and patterns as them and sometimes it's more challenging when you're working with people that don't have the same thinking as you and the same thought patterns and the same way of doing things and it makes it uncomfortable. But I think that in discomfort is where all the work gets done because then you're hashing out all the ideas" (Moneca).

Finding the right research partner can be difficult, but partnerships and collaborations give people a chance to learn from each other. Partnerships between communities, Allies, Institutions, and universities are important for supporting Indigenous Research.

4.4.8.1 Community-community Partnerships

Indigenous communities can benefit from partnerships with other communities because they can learn from each other to enhance the way that they do research. "The knowledge I'm accumulating from working with a different First Nation group is different. It's changing, shifting and challenging my views around Indigenous research and data because I'm working with a different demographic, different people, different culture" (Shavon).

Different communities have had their own set of challenges and experiences. By working together and learning for each other, there will be more resources and knowledge to draw from and communities won't have to always rely on universities and researchers.

> "The way the universe works is if you try hard on something, good things will happen to the people around you as well…it will make it even better if the Metis support us. If we support each other … We don't need to be bullied around by the university or follow any of the rules only in a particular way when it pertains to data and research. That is how I'm trying to utilize our research…to make a difference" (Errol).

Communities supporting each other in research is important but allies are also people who have the potential to be very useful in supporting Indigenous research because they often have access to funding and resources that communities don't.

4.4.8.2 Allies

Indigenous people need supporters who know how to work with them in a good way. "I always feel like this work can't just be done by Indigenous people. So, to have supporters and to have allies who are coming in and doing and learning how to do this type of work in a good way and learning how to do that in partnership with Indigenous people" (Tammy).

Many Indigenous people agree that allies have a role to play in supporting Indigenous communities and their research. “I love that allies are wanting to do really good work with Indigenous folks, and I think that's important” (Nicki). “Allies are very, very important for Indigenous research, especially with First Nations” (Shavon). Partnerships with allies are useful because if they are researchers, they are likely in a place of privilege and they can use that privilege to support Indigenous communities who don’t have access to the same resources.

It is important to understand what being an ally means. Just because you are working with a community or want to work with a community, doesn’t mean you are an ally. Non-Indigenous researchers may have good intentions but they don’t always have connections or relationships with communities; nor do they know how they should be going about making them. Certainly, non-Indigenous people don’t want to assimilate or appropriate knowledge but they don’t know how to go about doing it.

Allies are not just people who work with Indigenous people or want to work with them, they are people who have actively worked with Indigenous people to improve their lives. “I see change taking place in particular areas. I know a lot of Indigenous or allied researchers, and when I say allied, I'm using it in a particular way, like, not just non-Indigenous researchers, but non-Indigenous researchers who have really devoted their lives and careers to this work” (Nicki). True allies understand the responsibilities that they take on.

All the people who participated in this research were asked what advice they would give to Allies and non-Indigenous researchers. The most important thing people who want to work with Indigenous communities can do is to build relationships with the community they want to work with; this means building your literacy as a researcher about the people you are working with and being clear about who you are and reflect on what your motivations are for working with Indigenous people. Following data sovereignty principles, protocols, and community guidelines, and listening to how the community wants to work is how to work in communities in good ways. Also providing training and educational opportunities within research projects is important. Researchers should never do research with communities for personal gain or to further their own careers. Being flexible and open to doing things differently and allowing communities to provide input and participate in the research is important. After a research project is done, follow up with the community; this is how long-term relationships are built and how accountability works. This advice is also summarized in Appendix 5. The Working in Good Ways Framework developed by the Community-Engaged Learning Center at the University of Manitoba is another very useful resource for Indigenous and non-Indigenous researchers wanting to work with communities.

Universities should be providing more guidance for researchers wanting to work with Indigenous communities. Researchers should be provided with resources and required to learn what is required to work with Indigenous communities. This is important because universities have the potential to be important supporters of Indigenous Research.

4.4.8.3 University and Institutional Partnerships

What role do universities have in supporting Indigenous research? Are universities even necessary for helping Indigenous research move forward? Should universities have a role or should Indigenous communities and organizations be taking the lead in research for themselves? And, if universities are going to have a role in Indigenous research, how are the inherent power dynamics within university structures going to be addressed? These are all important questions and communities are clear about how they want to work with researchers and research institutions.

Partnerships between academic institutions and Indigenous communities are important because Institutions have access to resources that communities don't. "We need to talk about storage. What about a First Nation database at these institutions for the communities? I would love to see something like that. Or archives at the University of Manitoba. What if we had our own databases housed at universities? … It is going be interesting when First Nations start demanding the institutions to support them about storing and collecting data" (Shavon). Indigenous communities are interested in being supported by universities around data storage, and data analysis, but they don't need to be told how to do things, or what policies to follow. "I think the university can help by confirming the data. We can create our own policies, we can make our own ways, we can copy what you guys (setters) gave us, and we can create that on our own. But to get the university just to confirm the data and research, and show we are not lying on it" (Errol). Communities don't need to be told by researchers what research to do and how to do it; they need partnerships that are based on trust and respect and partners that are willing to support them how they want to be supported.

Research partnerships are more effective when researchers have existing relationships with communities because when funding opportunities come up, researchers can call the community and get them involved right from the beginning and ask them what kind of work they are interested in doing. Unfortunately, many researchers don't have these relationships and funding agencies haven't required communities to be consulted for the research proposal; so often researchers submit the proposals and consult the community later. The way funding structures are set up is part of the problem but mostly the issue is that there is no relationship-building happening beforehand. "The power dynamics need to be broken up. I would love to see people with funding say, 'Okay, we got this money from SHERC, and it's now going to sit with each of our community partners, and they will pay us from that', rather than the

other way around. I think it's gonna take things like that to just break it, break the power structure" (Daniel). The communities should be the ones who control the research and research activities, and employ the researchers to work for them, rather than the other way around.

Funding bodies are starting to recognize good research from bad research, but there are still fundamental problems with the way research is being done. "Things are changing. Those funding bodies are starting to catch on and are starting to make folks prove that they have done the work with the community and that the community has had input and had a chance to provide feedback on the proposal but there are still inherent problems" (Nicki).

Researchers are developing "community-based" research projects before approaching the community; they fill out the grant applications, and question guides, determine the methodology and then once that is all figured out they approach the community. The problem with this is that it doesn't leave much room for the community to have input into what research is going to be done and how it will happen.

> "I think that communities are getting wiser and they are saying, 'We don't have to work with you anymore and we don't want to, and you're not working in a way that's respectful and you're not listening to our input. And so we're just going to pull the plug,'. We are hearing about that more often, which is such an interesting dynamic. But then the researcher really kind of fudges that story when they come back to the institution. There is still very little responsibility and accountability being taken by the researcher. They say 'Something went wrong, it just wasn't the right fit' but in reality, no, they were given feedback that they weren't listening to or being respectful. (Researchers) need to sit with that before going partner shopping again. But we're not seeing that" (Nicki).

Universities need to recognize that doing things in the same ways they have always been done isn't working; it isn't inclusive, and it is not how partnerships are built. Researchers need to think about how they can develop more meaningful partnerships with communities if they want the research to be meaningful and the partnerships to last. Universities could be setting up programs or initiatives to build relationships with communities and connect researchers and communities that have similar interests. By facilitating these partnerships, some of the problems and power dynamics that still exist might start to change.

If universities and research institutions want to reconcile relationships with communities, they should ask communities how they can support them and be open to doing things in different ways.

Developing partnerships is just one of many supports that can be used to promote Indigenous Research and Indigenous Sovereignty and put it into action.

4.5 Taking Action to Promote Indigenous Research Sovereignty

There is value in people coming together and having a conversation about how to work in good ways with Indigenous people and their communities. In the focus group session, all the participants were asked what they felt were actions that could be taken to promote Indigenous research sovereignty; there were several things identified:

- Conferences and workshops that share and celebrate Indigenous research to facilitate information sharing. Holding a research methodologies conference to share and celebrate Indigenous research to facilitate information sharing. “I think more information sharing about that (research) needs to happen. I would love to see a research methodologies conference where graduate students can go and present their work…and then we could just celebrate all that” (Nicki).
- Gatherings to discuss research and sovereignty, and how they can be supported and mobilized.
- More opportunities for collaboration between researchers and communities and more research opportunities in communities. “The way sovereignty can be completed is if the university community and committed researchers get on board to work together and get it done… I think it could help a lot of people” (Errol).
- Better education for non-Indigenous people or mandatory sessions for those wanting to work with communities to ensure that they are doing so in good ways and with the right intentions.
- Lastly, there should be a declaration about what Indigenous research is to ensure that universities are not engaging in Indigenous research unless they are following certain steps and adhering to certain ways of working. “I could see a statement like, the Canadian university should not engage in Indigenous research or call themselves Indigenous, unless they're, like, doing X, Y Z or something, like that. It would require some gathering of Indigenous researchers and having discussions” (Daniel).

Discussions are important, but what is more important is action. Without action, things will stay just as they are. Action is important for both Indigenous research and Indigenous Sovereignty.

5 Discussion

Many of the supports to Indigenous research are direct responses to the barriers and a lot of the themes that arose in the results and interviews related to the topics explored in the literature review. Understanding the barriers to and supports for Indigenous research is contributing to conversations and building upon ideas already being explored in the literature. The impacts of colonialism; recovering and using Indigenous knowledge; the importance of decolonizing academia; addressing the lack of resources and opportunities in communities; the necessity of using data sovereignty and governance, and using the appropriate cultural protocols in Indigenous research; the importance of having Indigenous people involved in projects and giving them the opportunities to lead and collaborate; and the need for Indigenous research to be action based are all themes that emerged in the results section.

Two articles in the literature review explore Indigenous research sovereignty; “Stories as data: Indigenous Research Sovereignty and the “Intentional Fire” podcast” by Murveit et al. (2023) and “Indigenous Peoples’ Right in Data: A Contribution towards Indigenous Research Sovereignty” by Hudson et al. (2023). Both articles bring up important topics around Indigenous Research sovereignty, but both mention the need for a greater understanding. Murveit et al. (2023) explain that there needs to be more guidance for collaborations between Indigenous communities and universities to achieve Indigenous research sovereignty. Hudson et al. (2023) explain that the apparent inequities in research activities, funding, policy, and resource allocation have revealed a narrative that promotes a growing need for Indigenous Research Sovereignty (Hudson et al.). The results of this research revealed the importance of understanding the barriers and supports to Indigenous Research and further contributing to the narrative around Indigenous Research Sovereignty.

Colonialism has resulted in the systematic oppression of Indigenous Peoples; it has prevented them from reaching their potential and has created barriers to Indigenous research and sovereignty. Many of the barriers identified are the result of colonial legacies and the experiences Indigenous people have had (and continue to have) with researchers and research institutions. An overarching theme is that past experiences with research and current experiences of systemic racism and oppression have caused hesitation and mistrust in Indigenous communities towards governments and institutions. It is important to recognize this moving forward to ensure the same mistakes aren’t made. To address research barriers around hesitation and mistrust, researchers should be aware of why communities feel that way and learn about past experiences with research, and the legacies of colonialism; also, researchers should learn how to work in good and respectful ways by understanding the role of culture and protocol in research, and the appropriate research methods to use.

Another impact of colonialism is that there is a lack of social and cultural resources for health and wellness which perpetuates social inequalities for Indigenous people and communities. Many people in communities are just meeting a minimum quality of life and are still processing personal and generational trauma. This isn't their fault; this is the result of colonialism and the fact that the social systems developed by settler society weren't built to support Indigenous people. Needs aren't being met and people don't have access to healthy foods and clean water. Reservations were moved off traditional territories, and communities are still being dispossessed, making it difficult for people to access their traditional foods and medicines. The reality is that very few people in communities are in a position where they can take on a research project or search for ways to improve their communities and the lives of the people in them. For those in a space where they are interested in pursuing research and education, there are not enough educational and economic opportunities in communities; this is another theme that comes up throughout the barriers section of the results.

The literature review also examines Internet access and communication technologies, highlighting the fact that many communities don't have technologies, and many don't have reliable internet access. These are also barriers that not only make research difficult but also make it difficult for Indigenous people who are living in their communities to access the growing number of resources online.

The literature review contains a section which looks at current research policies and ethics guidelines present to protect Indigenous people from bad research which relates to the theme throughout that the power dynamics in educational and research institutions, policy, and ethics boards are problematic and are largely not being addressed. Policy statements made by funding agencies are beginning to be more aware of how they can better protect Indigenous communities from researchers who might not have the best intentions, or who are just unaware of the important protocols when it comes to working with Indigenous communities. Part of the problem is that institutions were made by settlers and colonial society, they were built on those principles and are therefore not currently set up to support other ways of doing things. As was discussed in the results chapter, there is still a lot going wrong and researchers and institutions have a long way to go if they want to be more inclusive of Indigenous people. There are many ways to address institutional barriers and systemic oppression that prevent Indigenous people from achieving their goals for research and sovereignty. Promoting and supporting Indigenous sovereignty is one way to address systemic oppression that continues to harm Indigenous communities by giving them control. Institutions must ensure that culture and protocol are addressed in Indigenous research and be more open to Indigenous research methods. Openness also includes addressing the way research projects work from ethics, funding and so on and ensuring that it is inclusive of Indigenous people. Partnering with different and like-minded people, allowing communities to lead the research that

is about them, and decolonizing and indigenizing academic spaces also address barriers within institutions.

The fact that Indigenous people are not being included in spaces where decisions are made is discussed I something that emerged in the literature review. Indigenous people are also not being involved meaningfully in research that is about them. The differences between the way Western society views knowledge production and dissemination cause problems for Indigenous people and communities wanting to research because their knowledge and approaches aren't being seen as valid. These differences and the impacts of colonialism make it difficult for Indigenous people to produce their own knowledge. When barriers occur because of different views of the world and research conflict, they can be addressed in several different ways: awareness and understanding that Indigenous people have different world views are important; learning the appropriate customs and protocols, the role of culture, and which methods are best; and having Indigenous people and communities lead the research that is about them, their lands, and their knowledge. Having Indigenous researchers and communities lead research can also address barriers around lack of representation and the often pan-indigenization of Indigenous cultures in research and institutions. When Indigenous people and communities lead research that is about them it is an opportunity to avoid generalizations by celebrating different cultures and their research approaches.

Understanding that Indigenous people have been prevented from reaching their potential socially and economically is important for governments and researchers, as this is the 'truth' part of truth and reconciliation. Another important theme around barriers that arose in the results section is the need for non-Indigenous people, and researchers to better educate themselves and increase their awareness of Indigenous people and their cultures; this is both their responsibility, as well as the government, and educational institutions as it is an important part of Truth and Reconciliation. If non-Indigenous people were better educated, and if institutions were more supportive of Indigenous ways of learning, knowing, and doing, it would help researchers understand how they can support Indigenous people in their research instead of extracting knowledge and taking opportunities away from them. These are all ways to ensure that different views of the world and research approaches are represented and used appropriately. Recognizing that Indigenous people view sovereignty differently is also important. It is easier to understand these things when Indigenous people are included in academic space and when institutions are Indigenous in their approaches to research and education.

There are barriers to research that stem from vulnerability and the unequal power dynamics within research and academia. Indigenous resurgence and sovereignty give Indigenous people control over their communities, and it addresses the vulnerability they have when outside researchers and governments come in and try to make changes, or 'improve' things in the way they deem is 'best'.

Sovereignty over research gives Indigenous communities control and addresses the inherent power dynamics within research and institutions. Data sovereignty principles also address vulnerability by protecting Indigenous data and promoting the idea that Indigenous people should decide what happens to their data. Determining how data is used, collected, and disseminated; is Indigenous data sovereignty. Determining how and what research is pursued, is Indigenous Research Sovereignty.

Data sovereignty principles, as well as culture and protocol, are important for Indigenous research sovereignty. This is a theme that emerged in the literature review, as well as the results sections that look at what supports are available for Indigenous research. Researchers must learn how to work with communities in the ways they want to work because there is a lot to make up for. Understandings that communities have different and unique cultures, and following existing protocols is how to work with Indigenous communities in good ways. Researchers, governments, and institutions must learn how to respect Indigenous data and acknowledge who the owners of it are; this is the purpose of data sovereignty and governance principles. There already exists within the literature guidelines that highlight good work that has been done with Indigenous communities; these guidelines utilize empirical examples from successful projects and include data sovereignty and research principles, the use of Indigenous knowledge, and other suggestions on how to work in good ways with communities to ensure the work being done is meaningful and beneficial but there is no standard. It is all on the researcher to do this, with little accountability from the institutions they are working out of. What the literature also doesn't often mention is how communities might achieve and conduct research for themselves. The guidelines are all made with the assumption that the majority of researchers working with communities don't already know this information, meaning they are coming from the outside. Certainly, guidelines are important, and many of the ideas discussed in this research have been established in the literature. What previous researchers have failed to look at is how sovereignty plays an important role in research, and how sovereignty over research gives the community the ability to control and conduct research for themselves. Allies are important but Indigenous communities should have the opportunity to decide to conduct research for themselves and not be forced to rely on allies for research to get done. That being said, many communities are still interested in collaboration, as long as partnerships are equal.

Research creates the opportunity to develop new ideas through collaborations with different people and different knowledge systems but there are not enough opportunities or resources for Indigenous communities wanting to do research. If Indigenous people had greater control over their communities, they would be able to create their own opportunities and have their own resources to access; and, by leading their own research, communities could conduct the sort of research they are interested in. Partnerships between researchers, institutions, allies, and communities are ways of providing

opportunities and resources for Indigenous research; but researchers, institutions and allies are responsible for learning community customs and protocols. Partnerships lead to relationships and relationships between Indigenous and non-Indigenous people are essential for reconciliation. One of the most important themes that arose in the results is that partnerships and relationship-building are crucial to Indigenous research. Indigenous communities need support because they don't have as much access to resources as researchers do. Building a relationship is about building trust and respect based on honesty; it is also about learning from one another and finding ways to work together. Universities can help promote Indigenous research sovereignty if Indigenous people are leading the way and deciding how this happens.

An important outcome of this research that was not found in the literature is the recognition that community-based research is often superior to Indigenous-led research. Research that is led by the community is important if the research is going to benefit Indigenous community priorities and goals is another theme. This is important because research MUST benefit communities. If it does not benefit the community, it should not be done. Simple as that. Only people from a community will know what they need and what type of research should be done. Having Indigenous people lead research, and supporting Indigenous research is how to break down the dominant colonial structures. Innate in Indigenous research is collaboration, collective benefits, and real outcomes. Indigenous research must be about addressing issues and recovering knowledge.

Decolonizing and indigenizing our systems and institutions so that they are more inclusive of Indigenous people and their needs is how to address the barriers around health and wellness. If Indigenous people had sovereignty or more control over themselves, their communities, their health care, and their governance, then they could make sure that their needs are being met in the appropriate ways. Recognizing Indigenous resurgence and promoting Indigenous sovereignty is important, especially considering the increase in public awareness and the growing number of movements around Indigenous rights. Supporting Indigenous research through the decolonization of education, learning and research is a theme present throughout the "Supports for Indigenous Research and Responding to Barriers" section. Two main benefits come from decolonizing and Indigenizing; first, it makes spaces more inclusive of Indigenous people and supports them; second, it helps educate non-Indigenous folks about Indigenous people and their cultures and facilitates reconciliation through truth and education. This also relates to another theme which is to find ways of making space for Indigenous people to define and determine what research means to them, and how knowledge should be pursued and passed on; this kind of determination is important for Indigenous sovereignty. Educating oneself and striving to understand the experiences Indigenous people have had with research is important for addressing the barriers around misunderstandings and miscommunications that often occur between Indigenous communities and

researchers. Recognizing that Indigenous knowledge is valid and has a place in Indigenous research and education within universities and institutions is important because they are places that have the potential to change the way research and education are done. For researchers, incorporating data sovereignty principles is a way to ensure research is beneficial for the community and addresses any miscommunications which might occur. Understanding that Indigenous cultures are vastly different and being aware of the role of culture and protocol in research, and what research methods exist is how to ensure that research respects the community and addresses misunderstandings. Again, if more spaces were indigenized, it would help with awareness. Partnerships can also address misunderstandings and miscommunications because it is about working together and seeking to understand each other through research relationships.

Lastly, one of the most important outcomes of this research is that Indigenous research must be action and solution-based. Research should always be about working towards finding solutions and taking action to change and improve the way things are.

6 Conclusions

There are many barriers to Indigenous Research and Indigenous Sovereignty but there are also many supports. The graphic in Fig.6. highlights the barriers and supports to Indigenous research. The idea of interconnectedness is important for this research as there are many connecting ideas throughout. This is why there is a tree connecting the 8 supports, and 8 barriers together, because they all affect and are affected by each other. One way of looking at barriers and supports is by viewing them in terms of truth and reconciliation. The barriers are the roots of the tree; they are the truths being told, the realities that have been lived and the legacies of colonialism. Supports are the branches; they are the answers to reconciliation; how to overcome the barriers (or the truths), and how to find ways to improve Indigenous people's experiences with research and with Western society. Reconciliation itself is a support for Indigenous Research Sovereignty because it is about supporting Indigenous people and addressing the barriers they face, by understanding the truths behind them. Part of reconciliation must be about building better relationships between Indigenous and non-Indigenous people. Universities need to reconcile their relationships with Indigenous communities by educating researchers and guiding them to learn about how they can work in better ways with communities. One of the most important parts of working in better ways is learning how to build relationships that are based on trust, honesty, and respect.

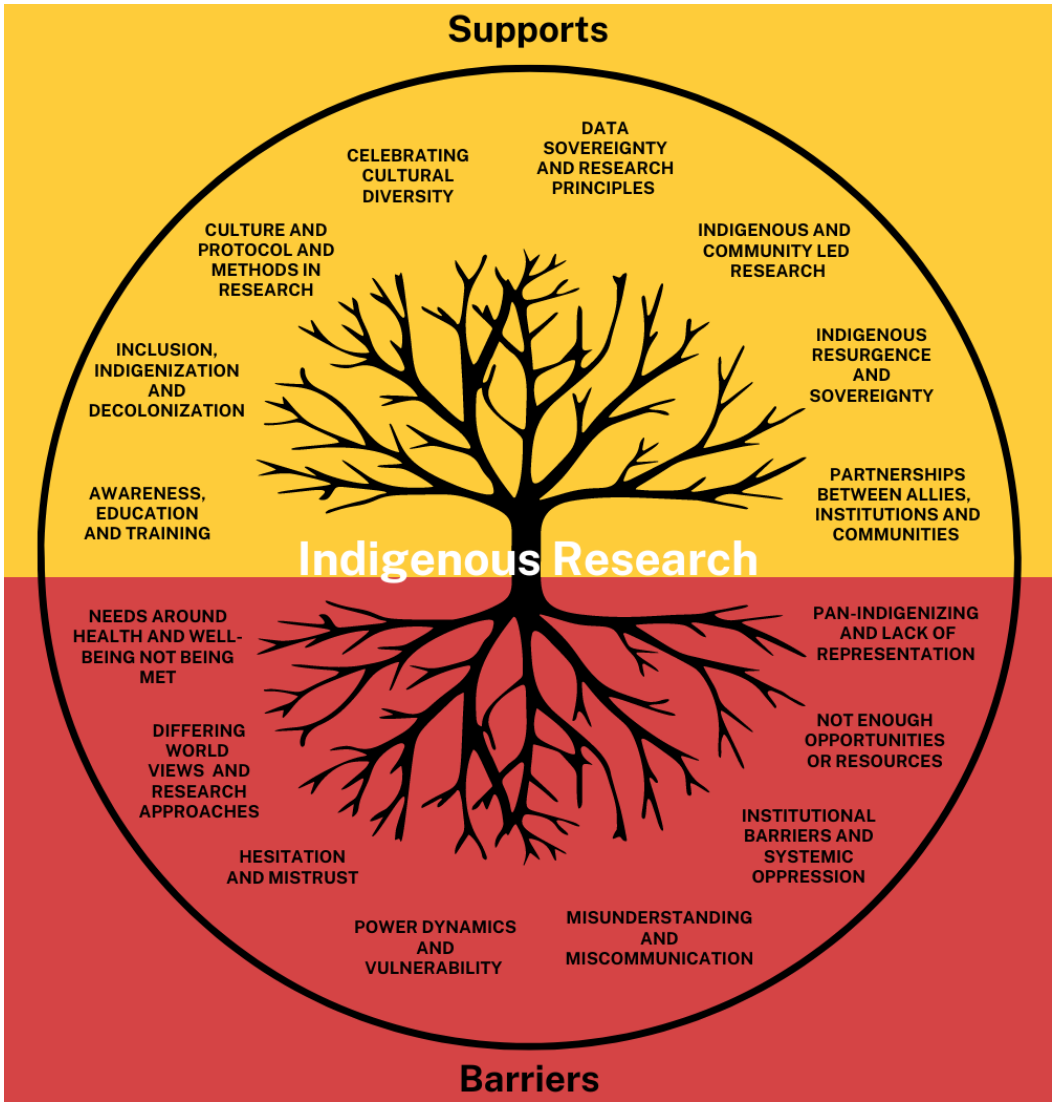

Fig. 6. A diagram which displays the barriers and supports to Indigenous research.

As for a definition of Indigenous Research Sovereignty, it is like the data sovereignty principles of OCAP and the data governance principles of CARE; it is about control, access, possession, and ownership; collective benefit, Authority to Control, Responsibility and ethics. As it suggests in the name, Indigenous Research Sovereignty is also about being able to determine what research means and how it will be done through self-determination. Indigenous people must be the ones leading the way for research and sovereignty, and they must be the ones who determine how they want to be included in colonial spaces. Indigenous people and Indigenous researchers being involved in research are important for decolonizing and Indigenizing academia. Using Indigenous knowledge and language in research is an important part of decolonizing spaces and promoting Indigenous sovereignty in research. Fig.7. shows how all these different pieces contribute to Indigenous Research Sovereignty. Data Sovereignty and Research Sovereignty contributes to Indigenous Sovereignty if they facilitate nation-based and

community-based decision-making, promotes Indigenous and community-led research, and celebrates cultural diversity. Community-led research is often superior to Indigenous-led research because it will always hold the values of an entire community. Universities have a responsibility to find ways to create a more inclusive space and make room for Indigenous peoples, their knowledge, and research approaches through understanding and collaboration. Discussions are important, but what is more important is action. Action is necessary for both Indigenous research and Indigenous sovereignty. but without action, things will stay as they are. Actions are bigger than words. Words are meaningless unless there are actions behind them.

Fig. 7. Graphic showing the different components of Indigenous Research Sovereignty.

7 Reflections

This isn't my research. This is collective research. This research contains the voices of people I have had the pleasure of working with and meeting and understanding. This research is their voice, and this research doesn't belong to me. At first, I wanted to believe I could allow all this information to pass through me, unfiltered and unaffected by my perceptions. But 'There is no objectivity in research', echoes the voices of feminist researchers. So, I cannot remove myself from this research. I cannot be just a vessel through which this knowledge passes. I must be part of it, and I should be part of it. Reconciliation

involves everyone, Indigenous and non-Indigenous. So, I acknowledge that as the information passes through me, and therefore must contain my perceptions of the world. Although, I have tried my best to keep everyone's voice. Keep their stories and keep their messages intact and as they intended. I am here to weave a narrative from the knowledge imparted to me by others.

When I began writing the methods and methodologies section for this research, I found myself flip-flopping mostly in ignorance on whether to use Indigenous methods or Western methods. It occurred to me that using Western methods seemed wrong because this research is about and for Indigenous people, so it ought to use Indigenous methods. So, I consulted the literature…a lot of literature, and people that I know until I realized that I couldn't use Indigenous research methodologies because I am not Indigenous. They are not meant for me, they are meant for Indigenous research but, I also can't use Western methods. Using mixed methods also seemed wrong. It wasn't until I came across one word that changed everything, "informed". I was going to use Western research methods informed by Indigenous research methods to do this research. The way I use the information I learn and the way I present it will be done in a way that respects and acknowledges Indigenous approaches to research.

The reason I am doing this research, and why I have asked these questions is because I could not find answers that satisfied my questions. I do not discredit anyone who has come before, they just had different questions, different approaches, different perspectives. In perhaps a selfish way this research meets my interests and questions I have had. In searching for information, I was unsatisfied with what I found so I decided to find it for myself. I now only hope that others find the answers they are looking for in this research and I hope that it encourages them to keep searching, keep learning, and keep asking questions even if they are hard and uncomfortable.

Some may feel that I, someone not Indigenous, should not be asking these questions. I have felt this at times, and I have wondered if I am the right person to do this, but these doubts are my own burden, not that of others. I have thought at times that this work would be so much more meaningful if it were done by someone Indigenous, it would have a different meaning, because research can't help but be a reflection of ourselves. Everyone has a different perspective and different perspectives working together is an important part of partnerships, relationships, and reconciliation; and also, collaborations to find solutions to the problems we face because knowledge is something that should be co-created not gatekept. I found myself in a position to ask these questions and I accept that I have been given this opportunity. Therefore, I am honoured to do this work and I am humbled that the people chose to share their stories and their perspectives with me.

Building relationships and reciprocity are both important for doing research with Indigenous communities but it looked a bit different for this specific research because I was not working with any one community, but a group of individuals that span different communities, who worked in academic and non-academic spaces. So, the relationship building, and reciprocity happened for me on an individual level, rather than a community level. The reason that relationships were formed with individuals rather than the community was a reflection of the pandemic and the reality that most of this work was done remotely and meetings were almost entirely virtual.

I write this all from the perspective of an Ally, a word I use with hesitation because I am not sure what I did that allows me to call myself an ally. I believe it is something that must be earned but what is the role of an ally anyhow? Is it someone who wants to help or someone who does help? At what point does one become an ally? Regardless, I now have the responsibility to share this information. To pass it on and to live it and breathe it in everything I do. Whatever path I take after this; I will let what I have learned in the last 3 years guide me as I move forward. So, I call myself an ally, acknowledging the responsibility this holds, so it can be something to work towards.

8 Recommendations

Inuit groups and many other First Nations groups have been left out of this research due to the limitations of this project; namely time and the fact that this is only a master's project. My recommendation for furthering this research is to have more group discussions with more people to discuss how Indigenous Research can be mobilized into the future. Having a group discussion would allow people to collaborate and come up with attainable solutions and steps to achieve the goals of Indigenous research sovereignty. The initiation of programmes for Indigenous research must come from Indigenous people and communities as it is their knowledge that is central to Indigenous research development. Although ideas moving forward must come from Indigenous people and communities, it doesn't mean that it should be done in isolation from non-Indigenous people and government. Part of this discussion may also include how allies and even institutions like universities can play a supportive role in the future development of Indigenous research and Indigenous Research Sovereignty.

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Appendix 1

Acting on Indigenous Research Sovereignty:

Anishinaabe, Nēhinan and Métis voices from Manitoba and Saskatchewan

Verbal consent to take part in research (read through at the beginning of each recorded interview)

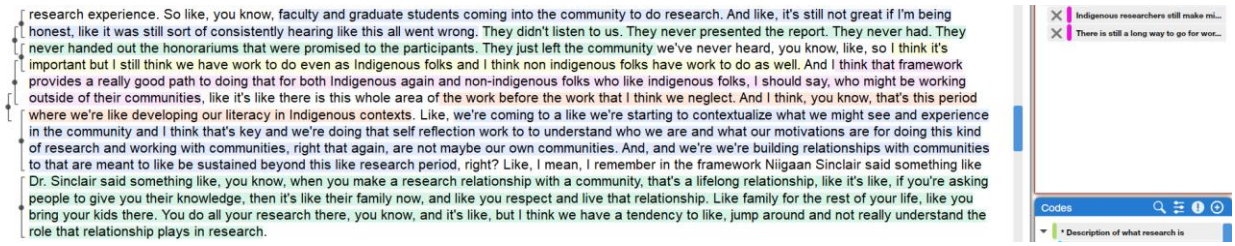
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview transcript has been provided, in which case the material will be deleted.
- I understand that the purpose and nature of the study is to mobilize Indigenous research by understanding the barriers and identifying solutions; and I have had the opportunity to ask questions about the study.
- I understand that participation involves an interview around my knowledges and experiences.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded. If done over Zoom, the Video recording produced will be deleted and only the audio recording will be kept.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous if I chose to be. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that extracts from my interview may be quoted in Rebecca Filopoulos' Master's Thesis and presentation, and possibly published papers and if they are those extracts and the context they are used will be provided for me to verify.
- I understand there is an Honorarium involved in the project.
- I voluntarily agree to participate in this study.

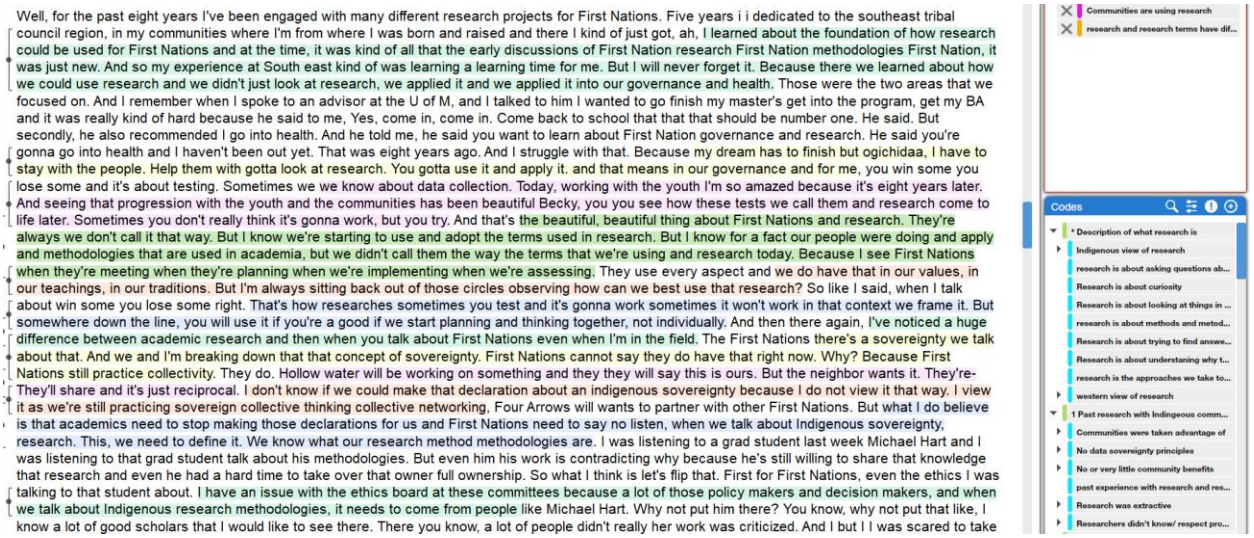
Rebecca Filopoulos
Masters Student, and interviewer
Bachelor of Environmental Studies
(University of Manitoba)
[redacted]

Dr. Stephane McLachlan
Masters Advisor (University of Manitoba)
PhD, York University (1997) - Biology
MSc, University of Guelph (1993) - Agriculture
B.Sc. .(hon) McMaster University (1990) –
[redacted]

Appendix 2

Screenshot of Dedoose showing how the data analysis was done.



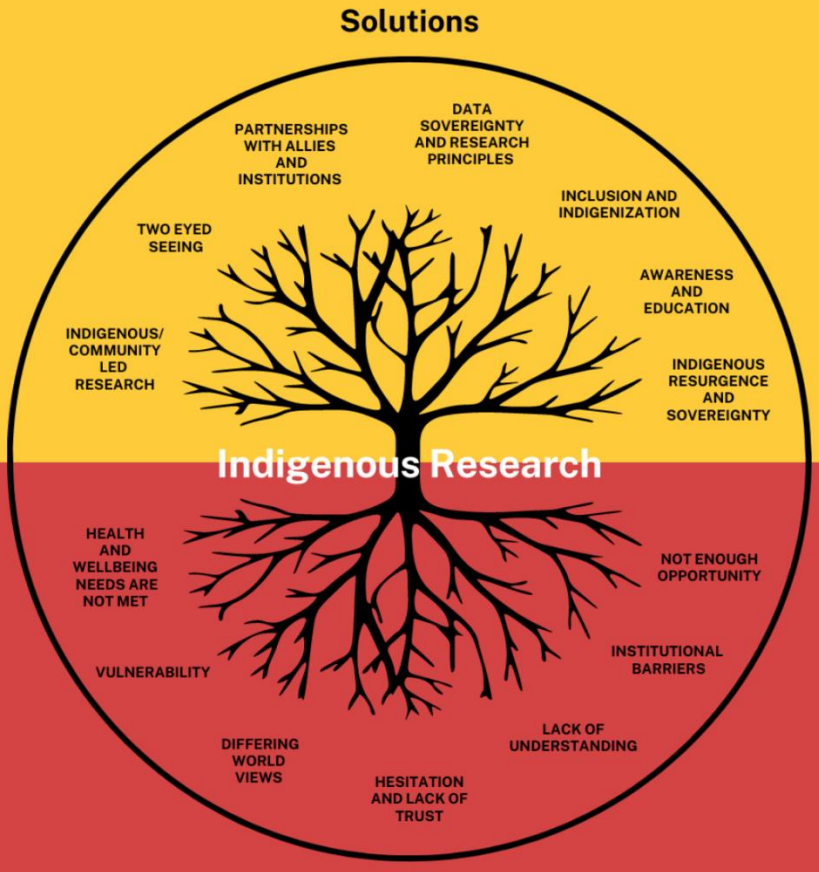


Appendix 3

A newsletter created to share with the interview participants for group discussion.

BARRIERS AND SOLUTIONS TO INDIGENOUS RESEARCH SOVEREIGNTY IN CANADA:

ANISHINAABE, NĒHINAN AND MÉTIS VOICES FROM MANITOBA AND SASKATCHEWAN



THESIS FOR MASTERS OF ENVIRONEMNT, UNIVERSITY OF MANITOBA
BY REBECCA (BECKY) FILOPOULOS
MAY 2023

Context

There is a significant amount of scholarly literature that discusses the meaning and importance of Indigenous data sovereignty and governance but there is a lack of dialogue about Indigenous Research Sovereignty. In fact, a quick Google search on the term “Indigenous Research Sovereignty” yields information only about data sovereignty and governance. Consulting the literature yields very information about Indigenous research sovereignty; there is only one single article that comes up about Indigenous research sovereignty that is not yet published but is said to be available at some time this year (2023). Although little information exists about Indigenous research sovereignty there is a bountiful of information on topics that relate to it such as Indigenous methods and methodologies, Indigenous-led research, Indigenous data sovereignty, and Indigenous sovereignty and resurgence; but, nothing connecting these ideas together and bringing them under the umbrella of Indigenous research sovereignty. A critical content analysis and synthesis conducted by Diaz Rios et al in 2020 looked at how institutions and organizations can conflict with commitments by governments to involve Indigenous People more holistically (and not just symbolically) by decolonizing research. However, Dias Rios et al (2020) ultimately found little progress had been made.

Numerous Indigenous scholars are working towards decolonizing academic space and Indigenizing research methods and methodologies, but there aren’t as many discussions as possible about the role of communities who are also striving to achieve this (Andersen & O’Brien, 2016; Andersen & Walter, 2013; Innes, 2010; Moreton-Robinson, 2016; Smith, 2021d; Warrior, 2016); this relates to a lack of resources, support and technology that enable communities to conduct their own research (Winter & Boudreau, 2018). There are still many questions around Indigenous research that still need to be answered and therefore this research aims to start a dialogue about what barriers exist for Indigenous people and communities who want to conduct research, why those barriers are there and most importantly what are the alternatives and solutions that enable communities to overcome the barriers so that Indigenous people might take control over the research about them, their lands and their future.

Goals of this research

The overall goal of this research is to explore the need for and implications of Indigenous research sovereignty in Canada and how they have evolved over time. The objectives for achieving this goal are as follows:

1. Document experiences Indigenous people have had around conducting research.
2. Determine whether and how Indigenous Research Sovereignty is currently being addressed.
3. Gain an understanding of the needs and priorities Indigenous communities have when conducting research.
4. Identify best practices for conducting Indigenous research sovereignty projects and ideas for promoting research sovereignty in the future.

Progress

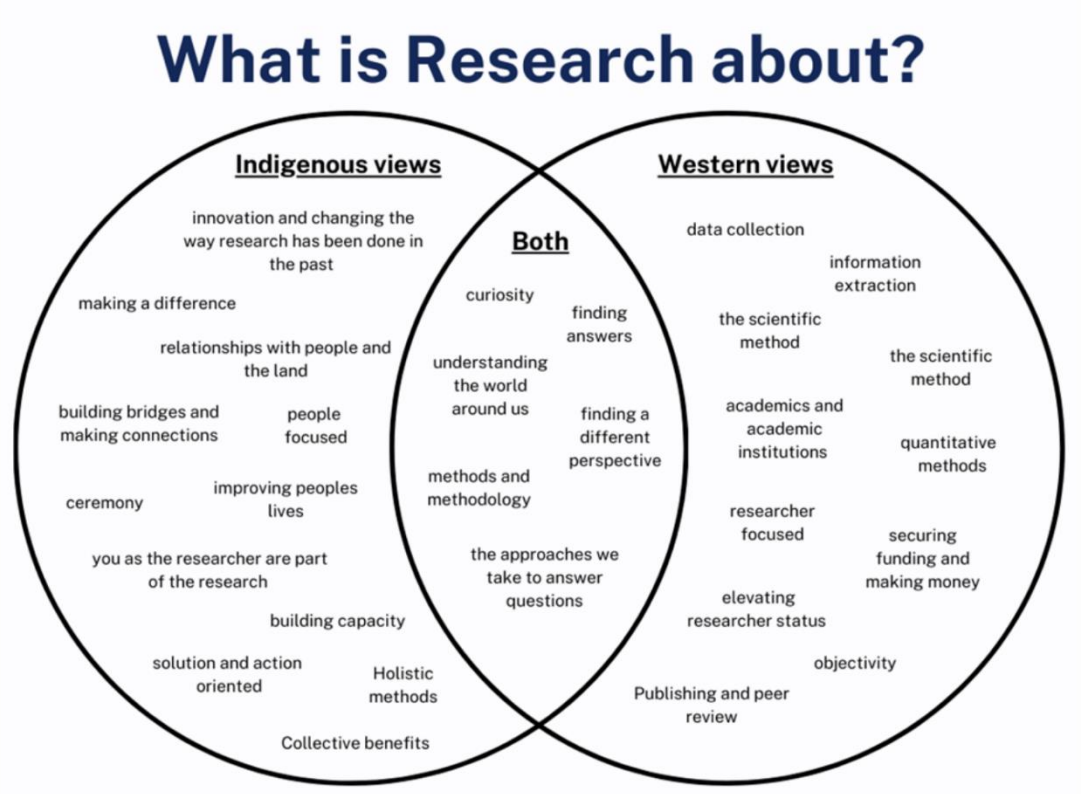
At this point, I conducted all of the individual interviews and began to weave together the stories and ideas people shared in the interviews into a narrative around research sovereignty. I have identified themes and made graphics that visually depict the results of my research to share with people for awareness and feedback.

Focus Group Rationale

Before I go further in writing up the results for my thesis and drawing the conclusions of this research, I wanted to check in with the people I interviewed and create a space where a dialog can occur and open discussion about the results. Getting feedback on how I analyzed my results adds an extra layer of Indigenous voices to this research. Additionally, the focus group is also an opportunity for people to discuss and explore ideas on how to mobilize Indigenous research, and what actions can be taken whether it be in academia, or in communities.

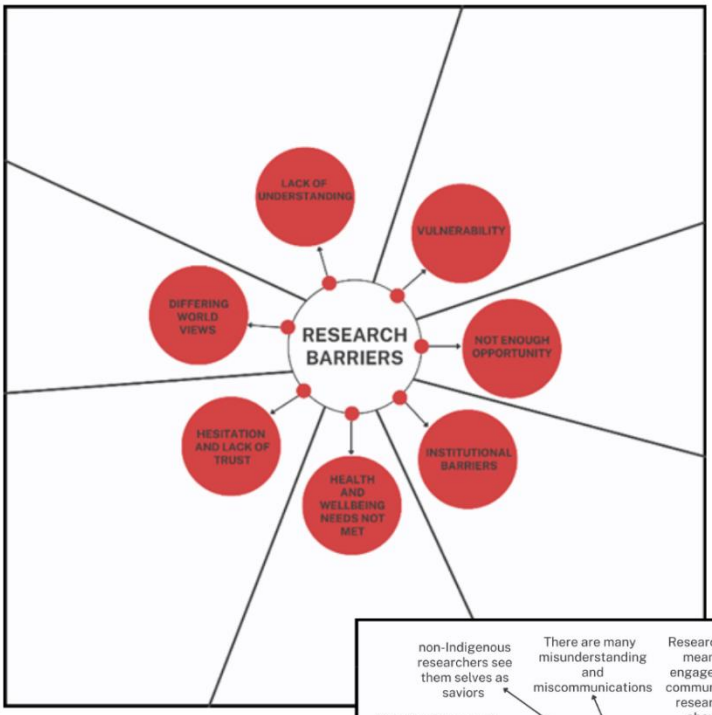
Results

Each person interviewed was asked what came to mind when they think of research. From the responses it was clear what the differences and similarities are between Indigenous and western views of research. Indigenous views are more holistic and include people, relationships and finding solutions to improve peoples livelihoods as integral parts of research. Western views of research are more focused on data collection and objectivity; viewing things from an outsider point of view instead of immersing oneself within the research subjects, especially when it comes to social research.



There were several over arching themes that emerged from the interviews. Themes around barriers, solutions, and working in good ways with Indigenous people that are highlighted in the following pages.

Barriers

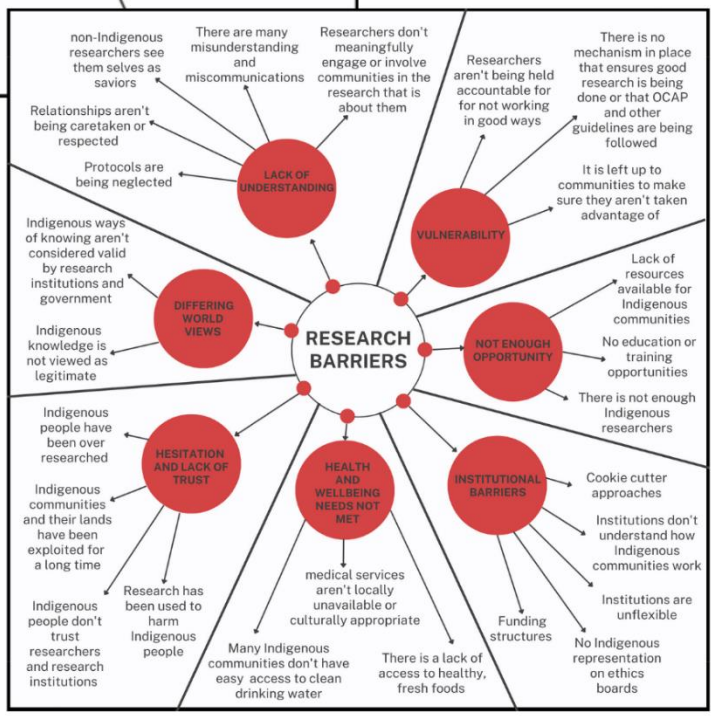


Themes around barriers:

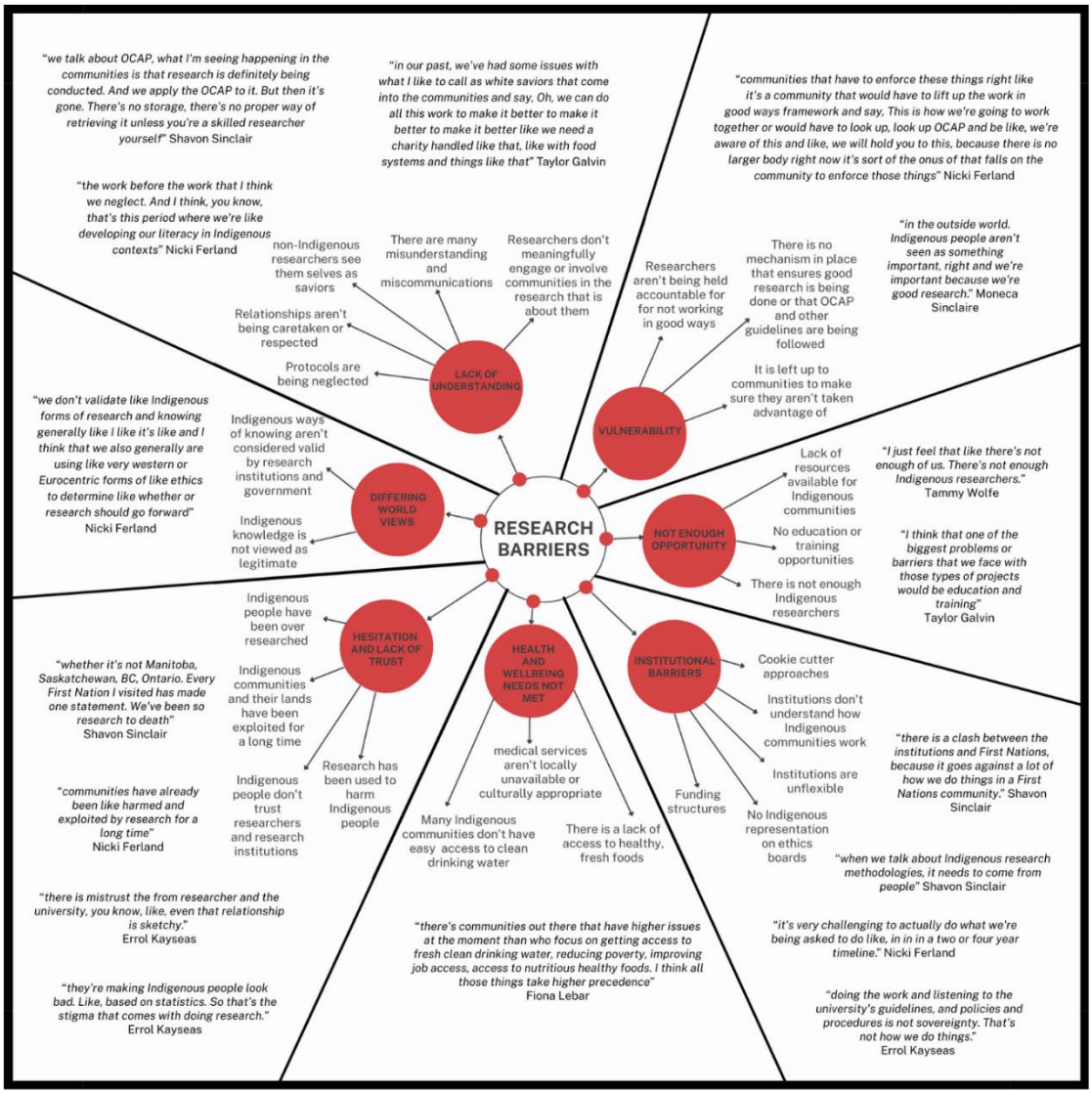
1. Oppression as a result of colonialism is a barrier to Indigenous research.

2. Misunderstandings that stem from systemic racism is a barrier to Indigenous research.

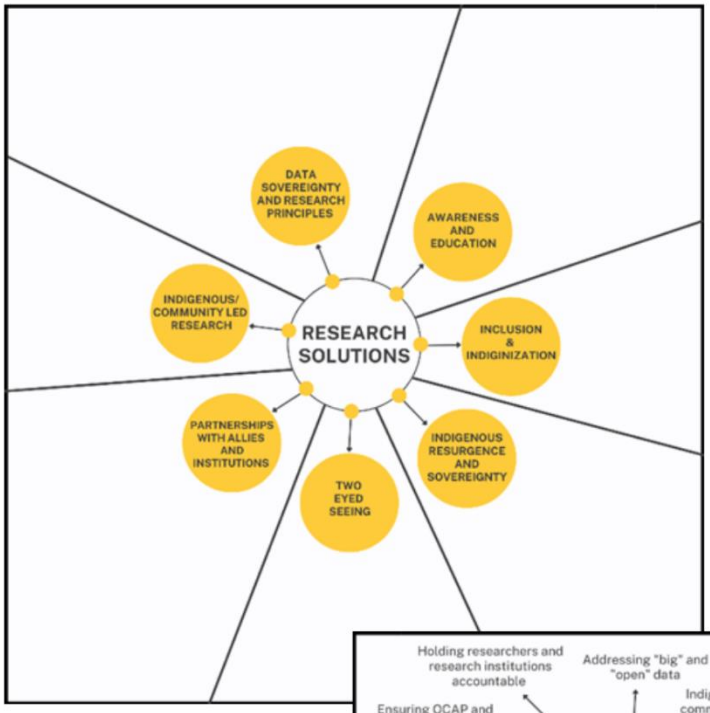
3. Exposing truths about the experiences Indigenous people have had with research.



The mind maps shared on the previous page and below all arose from what people said in their interviews. These mind maps were made by reading through interviews and connecting people's thoughts by grouping similar ideas into categories (in the red bubbles) and subcategories (the thoughts connected to the bubbles) while still trying to keep the ideas as intact as possible. After breaking things down, I closed the loop by going back to the original ideas shared (a selection) of them and included the quotes which the categories arose from. These mind maps are about barriers to research that Indigenous people experience when conducting and being involved in research.



Solutions

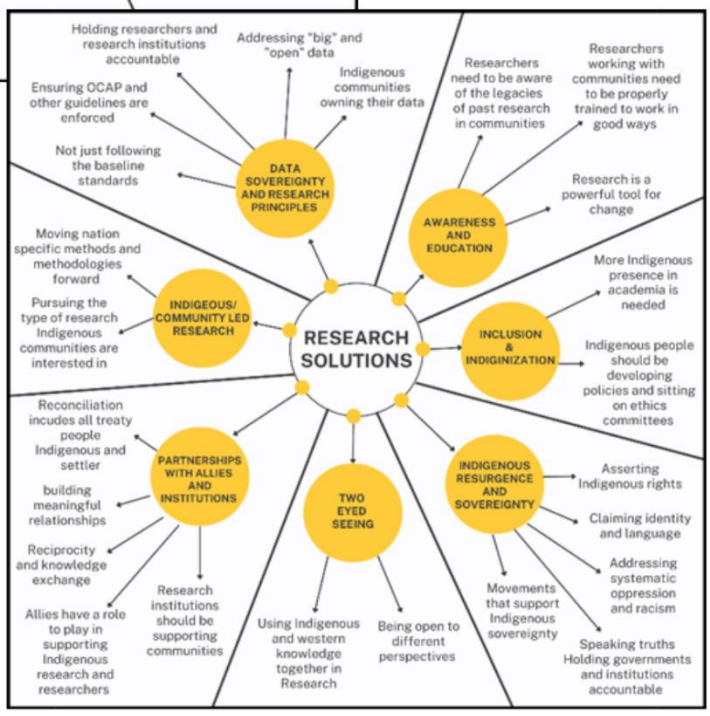


Themes around solutions:

1. Reconciliation and partnerships are important for supporting Indigenous people and their sovereignty.

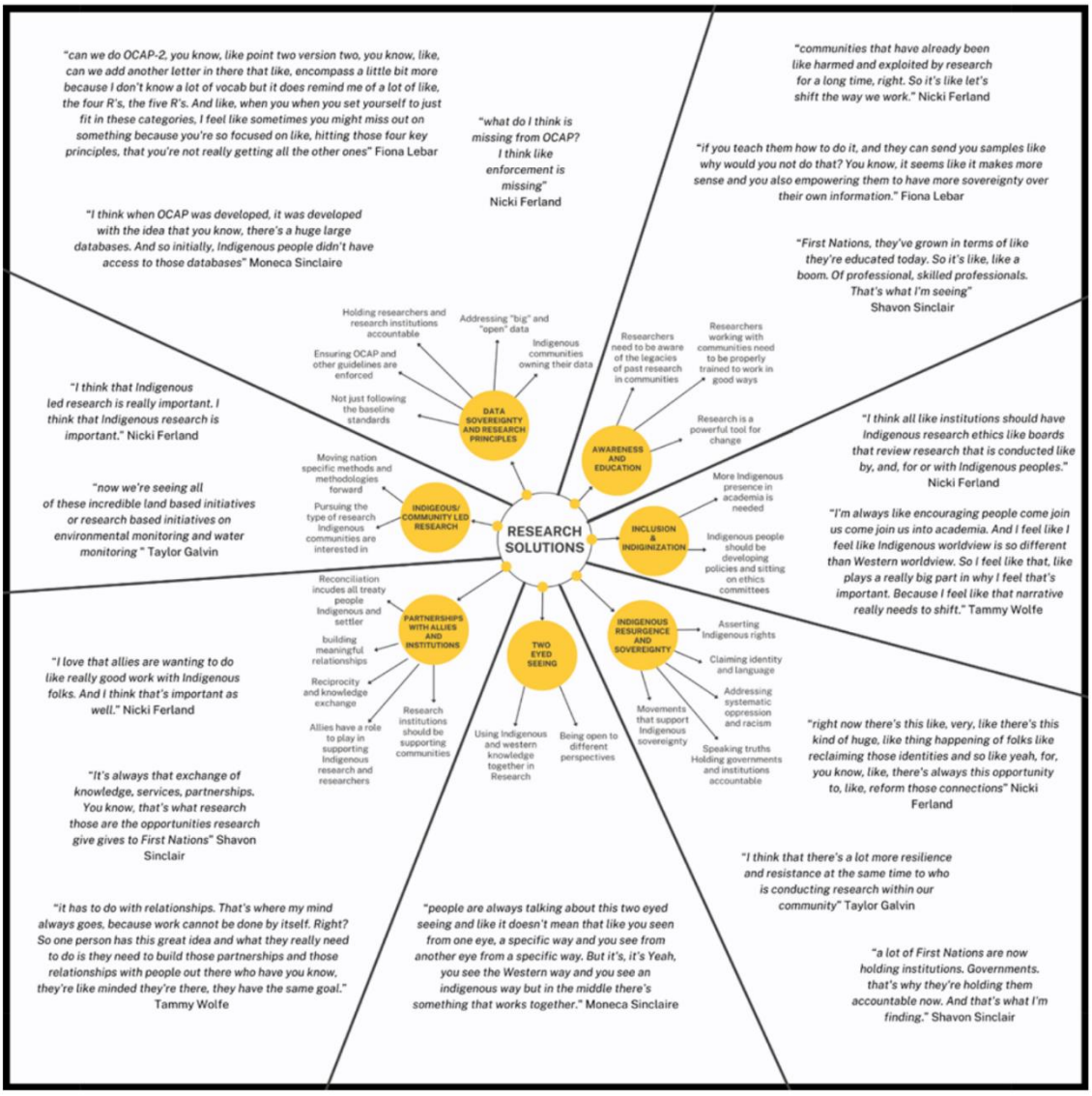
2. Data and Research Sovereignty can contribute to Indigenous Sovereignty because they both facilitate nation-based and community-based decision-making moving forward.

3. Indigenous people need to be the ones leading the way for sovereignty and determining how they want to be included in colonial spaces.



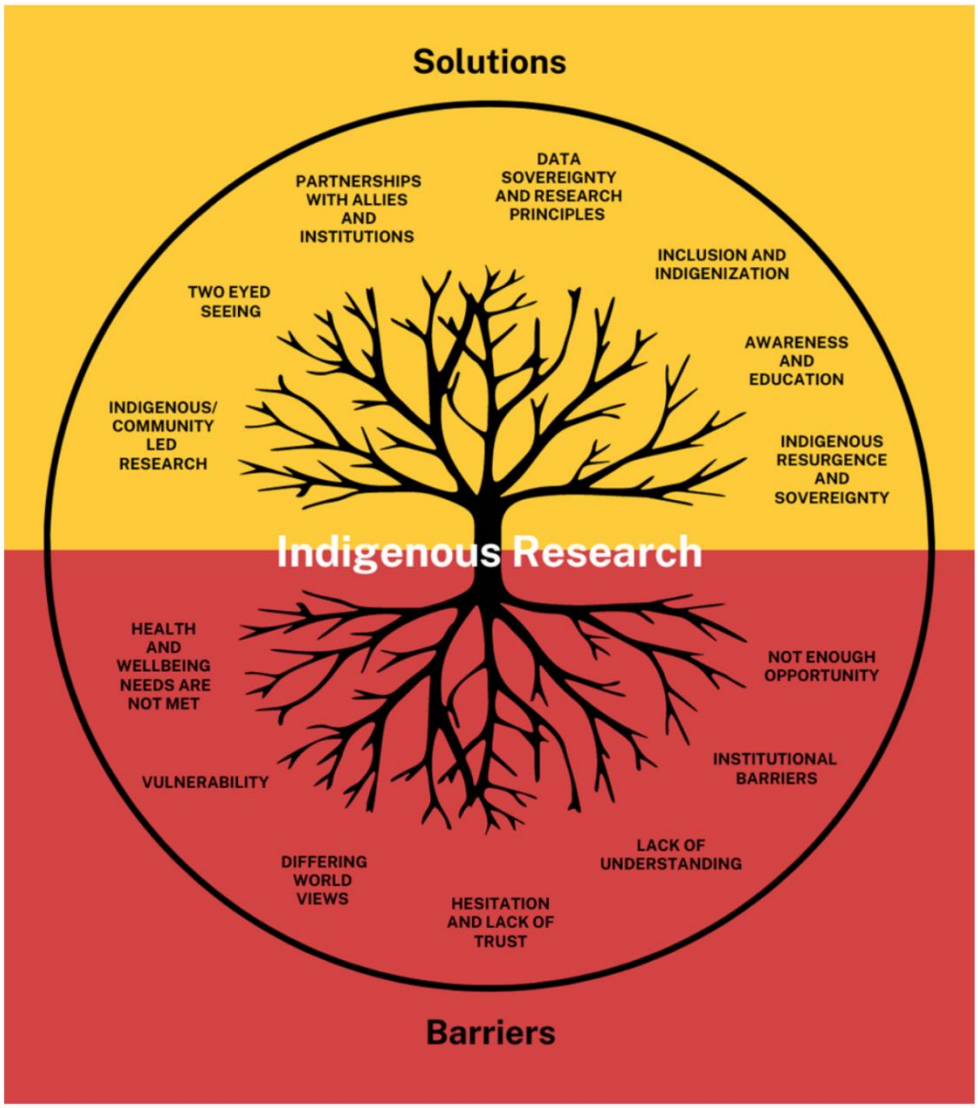
6

As explained on page 4, the mind maps shared on the previous page and below all arose from what people said in their interviews. The mind maps (in the yellow theme) are about solutions and how to overcome the barriers aforementioned along with a selection of quotes from the people interviewed for this research project.



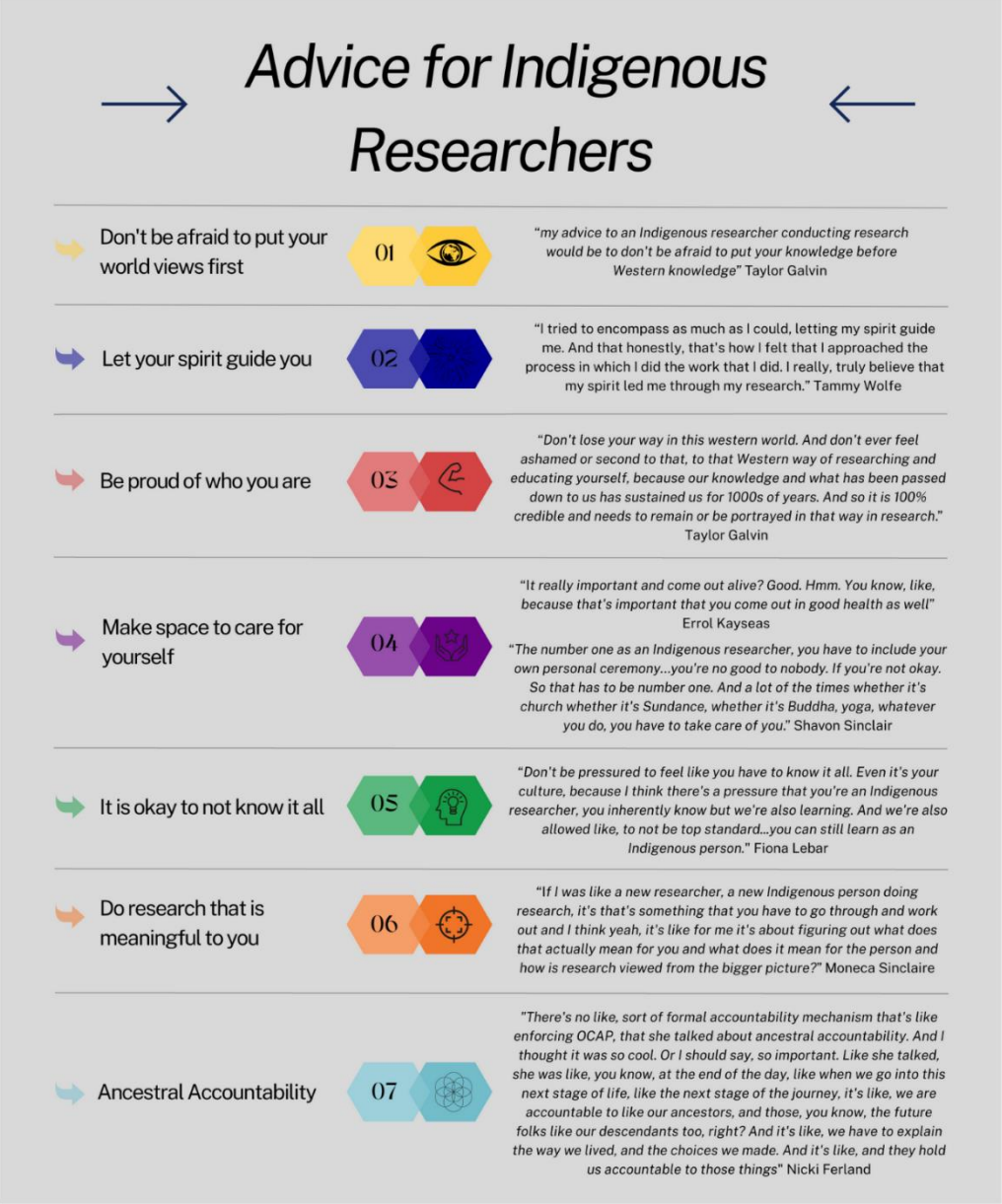
7

After examining the barriers and solutions separately I wanted to connect them. One way of looking at barriers and solutions is by viewing them in terms of truth and reconciliation. The barriers are the truths being told, the realities that have been lived and the result of colonialism. Solutions are the answers to reconciliation; how to overcome the barriers, the truths, and realities and improve the way things are done and the lives of Indigenous people. Reconciling through understanding between Indigenous and non-Indigenous people.



Moving Forward and Working in Good Ways

Part of moving forward is addressing the way things have been done by changing the way we do things. The advice was given to both Indigenous researchers and Allies/ non-Indigenous researchers on how they can work with and support Indigenous people and communities who are interested in doing research.



The advice given to Indigenous researchers are words of encouragement, strength and resilience. The type of advice for Allies and non-Indigenous research is about how to work with Indigenous people and communities in good ways; through respect and open mindedness, and most importantly willingness to put in the extra work.

Discussion Questions

1. Feedback on the results and graphics shared in the newsletter document.

2. Explore ideas on how we can better support Indigenous research with in research institutions, and communities, and how we can move towards Indigenous Research Sovereignty.

***Please note**: any quotes used in this document are just for the purpose of this group discussion. Anyone who's quotes are being used in the final thesis will be informed of the quote, the context it is being used in, and given the opportunity to edit the quote or give feedback on the way it is being used.

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Appendix 4

Advice for Indigenous Researchers.

Advice	Quote
Don't be afraid to put your world views first	"My advice to an Indigenous researcher conducting research would be to don't be afraid to put your knowledge before Western knowledge" (Taylor) "I feel like Indigenous people need their space…as an Indigenous person who has conducted research in the colonial sphere, and the house of colonialism as I like to call it sometimes. I feel like I tried to encompass my Indigenous worldview" (Tammy)
Let your spirit guide you	"I tried to encompass as much as I could, letting my spirit guide me. And honestly, that's how I felt that I approached the process in which I did the work that I did. I really, truly believe that my spirit led me through my research" (Tammy)
Be proud of who you are and your world views.	"Don't lose your way in this western world. And don't ever feel ashamed or second to that, to that Western way of researching and educating yourself, because our knowledge and what has been passed down to us has sustained us for 1000s of years. And so, it is 100% credible and needs to remain or be portrayed in that way in research" (Taylor) "I acknowledged the Western world, Western concepts, and ideologies that you have to follow within the Western academic space. But I feel like being true to yourself being true to your spirit, being true to your worldview" (Tammy)
Make Space to care for yourself	"It's really important and come out alive because that's important, that you come out in good health as well" (Errol) "The number one as an Indigenous researcher, you have to include your own personal ceremony … you're no good to nobody. If you're not okay. So that has to be number one. And a lot of the times whether it's church whether it's Sundance, whether it's Buddha, yoga, whatever you do, you have to take care of yourself" (Shavon)
It is okay to not know it all	"Don't be pressured to feel like you have to know it all. Even if it's your culture, because I think there's a pressure that you're an Indigenous researcher, you inherently know but we're also learning. And we're also allowed to not be top standard ... you can still learn as an Indigenous person ... it's okay not to have the answer … especially for Métis people who haven't grown up in that community and culture and are afraid to get involved because they just don't know but you will never learn if you never start" (Fiona)
Do research that is meaningful to you	"If I was like a new researcher, a new Indigenous person doing research, it's that's something that you have to go through and work out and I think yeah, it's like for me it's about figuring out what does that actually mean for you and what does it mean for the person and how is research viewed from the bigger picture?" (Moneca)
Ancestral Accountability	"One of the best things that I ever heard, but I feel like this may not resonate for non-Indigenous researchers, the way that it really resonated for me as an Indigenous woman was I had attended a research workshop or presentation, it was offered at the university Winnipeg a few years ago, and they had two speakers who were like giving keynotes and then we're on a panel discussion. It was Linda Tuhiwai Smith, whom I went for because I was so excited…and

	then Bonnie Healy, whom I had never heard of before. But it ended up being Bonnie Healy that I stayed for because she was one of the women who was involved in creating the OCAP principles. She shared something that really changed my research approach. She talked about accountability and the importance of accountability… there is no formal accountability mechanism that is enforcing OCAP. She also talked about ancestral accountability, and I thought it was so cool. Or I should say, so important. She talked about how at the end of the day when we go into this next stage of life, the next stage of the journey, we are accountable to our ancestors, and the future folks, our descendants too. And we have to explain the way we lived and the choices we made. And they will hold us accountable for those things. I could do bad research. I could do harmful research. I could do research that's only about advancing my own personal career, with little concern for how it might impact the communities that I'm actually working with, but at the end of the day, I am accountable for those decisions on a spiritual level. And so, for me, that's always been a really powerful guiding force in the ways that I structure my approach to research and my methodologies and my analysis, and even what I'm reporting on and stuff like that … It is a consciousness about how this impacts me and my ancestral accountability… I have always found that to be a very powerful motivator for doing good work" (Nicki)
Make sure you like what you do and be prepared for when things get hard.	"Be prepared. And make sure you love what you're doing. Make sure it has meaning to you understand the meaning of it. So, when times get hard, you are prepared" (Errol)

Appendix 5

Advice for allies and non-Indigenous researchers.

Advice	Supporting Quote
Spend time building relationships before the research begins and reflect on what motivates you to work with Indigenous people.	"Really spend the time to build relationships and to do the literacy work and the self-reflection to know why you're motivated to work with Indigenous communities" (Nicki)
Be accountable for the work you are doing and how you are doing it	"When OCAP and stuff like that aren't enforced, somebody needs to hold us accountable and maybe that's our self" (Nicki)
Follow protocols and guidelines but also be willing to go beyond	"When you do Indigenous research, you have to gauge as to where you are personally…before you go into a community like do you feel like you need more support or working more with OCAP and understanding what that means, or can you move a little bit beyond that?" (Fiona)
Listen to how the community wants to work and provide support	
Develop your literacy in Indigenous contexts	"The work before the work is what I think we neglect. And I think we are developing our literacy in Indigenous contexts" (Nicki)
Provide training and learning opportunities	
Be clear about who you are and what your research is about	
Take into consideration how the work you are doing will benefit the people you are working with	
Don't do research with Indigenous people for personal gain or glory	"Don't do it for any personal gain because there is none. It is just to help a community if you want to make a difference on a grand scale, like changing lives" (Errol)
Allow communities to provide input and participate in the research	
Be flexible and open to doing things in different ways	"The support of a consultant or researcher who's going to be mindful of the timeframe and how things can get done. So having that person there, but then making sure that they understand that the time required to get from A to B might take longer in this community" (Fiona)
Follow up after the research is completed, relationships are lifelong.	"Dr. Sinclair said something, when you make a research relationship with a community, that's a lifelong relationship. If you're asking people to give you their knowledge, then you are like family now, and you respect and live that relationship. You are family for the rest of your life, you bring your kids there, you do all your research there. But I think we have a tendency to jump around and not really understand the role that relationship plays in research" (Nicki)
Include data sovereignty principles in research. If you aren't willing to put in the extra work, don't work with Indigenous communities	"Sometimes these (OCAP) principles add a lot of extra work. I get that it's difficult, but what we say in the Working in Good Ways Framework is if you aren't willing to do the extra work, then don't do research with Indigenous communities" (Nicki)

Appendix 6

Full stories from the results section.

Story 1 on Page 60:

"During the Working in Good Ways consultations, I heard one story in particular, that always really stuck with me where a group of students…they were I think entirely non-Indigenous or mostly non-Indigenous students and some of them were also international students. So, they had been provided with training on how to do research with Indigenous communities and because they were going to be doing environmental science research, if I remember correctly, this was like years ago, so the details are pretty muddy. So, I guess they had been provided training on OCAP, like all this stuff. So, most of the students I think, like ended up working in a pretty good way like notifying Chief and Council, working with the community, and stuff like that. But in this one case a young student, a graduate student snuck into the community, like under the cover of night, from what I understand, to take ditch samples, water samples from the ditches. And their thought process was like, 'I'm doing good research that's going to benefit the community because we're going to find out that this water is contaminated and then they can use this data to petition the government to provide water treatment stuff', or whatever. So, they had a good motivation, I guess. Anyways, when finally, the Chief and Council got wind of it, they pulled all of the student's data and didn't let them continue the project. So, the student got royally screwed. But rightly so, in a sense, because they were fully aware of the requirements of what they were supposed to be doing. Then the student later on said something like, 'But I wasn't doing people-centered research, so I figured why did I have to contact them? I was just going to take a sample.' For me, it speaks to this fundamental misunderstanding of the role that land and the kinship that we have with the land…Our land is sacred to, us and we have sacred relationships with this land. And we have kinship structures that define these relationships and the ways that we live together. So, for the community, sneaking into the land and taking these ditch samples was like disrespecting those relationships. I think protocols apply, whether you're doing quantitative environmental research or qualitative, people-centred, or human-centred studies or whatever" (Nicki)

Story 2 on Page 62:

"I remember during the course of that project, this is not a story that I share in the framework, because it happened outside of the consultations, but it happened while I was a graduate student, I attended an Indigenous graduate student conference and everyone's like presenting their research. And there was a keynote about Indigenous research methodologies that was presented by my wife. And so I was at the keynote, and so afterwards, this guy, he was like an older guy, too. He was, probably, at least in his 50s.

And he was uh, he introduced themselves as like a PhD student who's studying law and he taught and then he gave the context for his question. He said that he had been working on his like PhD research for a couple of years. He had been working with an Indigenous community and his research was focused on sacred law. So, I don't know if you're familiar with sacred law at all. It is the sort of guiding principles that guide the ways that we live like natural it's sometimes called natural law…And so anyways, his research was folk his law degree like Ph.D. was focused on this and it is very sacred knowledge and it's also very distinct like amongst different communities. And so anyways, so he stands up, he gives us context. And then he says to my wife, 'I've been trying to get them to tell me like to share their natural law with me', but it is sacred knowledge. So it is, sort of secretive. And he said, 'They won't tell me. So, how can I get them to tell me?' And he was a non-indigenous guy. And my wife was so flustered, she was like, wait, what? And she told him, 'I do what I think you just need to like to spend more time getting to know the community and building relationships with them because they'll share that information with you when they trust you when they know that you're going to be using it for good reasons. And when they know you are not being extractive … when they trust you and they have a relationship with you, and then you're accountable to them, and they're accountable to you. And he was like, 'oh'. So, he stands back up and he says 'Yeah, I've been doing that for two years and they still won't tell me. So, what can I do to make them tell me?' Everyone in the room was looking at each other like a lot… So, I guess my advice for allies would be to be very cognizant of things like that, right? It is very obvious when things aren't going well. For example, if your community is refusing to work with you and to share their knowledge with you. I assume this person at the outset said, I want to do this, and they (the community) decided that they would sit with him (the researcher) and get to know him, and that did not go well because they were refusing to share the information with him, and he couldn't get it. He was trying to convince my wife, the keynote, during her talk on Indigenous research to tell him how to compel this community into giving him the Knowledge in front of a group of Indigenous graduate students. Were all just aghast" (Nicki)

Story 3 on Page 81:

"When we had gone to that community in northern Manitoba to conduct research, and we sat down and they were like, 'Where are our doughnuts?' And we were like, 'Ha-ha', and they were like, 'No, really like, you didn't bring us any food or anything' and it was the most uncomfortable two hours of my life. They would not stop pointing out that we had come empty-handed without food. And then afterwards, they didn't give us an inch. They had had a very negative experience. And so, they were very much reacting to that and we're like, 'Why would we trust you or tell you anything when we know you are like other folks.' It wasn't even U of M, it was another institution but, it's like 'You just screw us and lie to us and whatever.' But then, they invited us to stay for a fish fry. So, I went back a few times and kept having

to stay for their food, but when they invited us to stay, at that moment, things changed. The moment that we agreed to stay for lunch we started helping them get the plates out and prepare things. It was like folks started being like, 'Okay, well, let me tell you about my experience' and the literal stories they were telling changed. Now there were suddenly telling personal stories and they were giving us exactly what we had asked for, but they had fought us for two hours. I always wonder now if we would have gotten those stories in the first two hours if we had brought food because it totally set their hackles. They were like, 'Oh, you're just more people that don't know how to work in good ways with us right.' The food is so important" (Nicki)

Story 4 on Page 87:

"We got them together, invited them to do a Workshop, a two-day workshop and the workshop was asking people what do you think is? What is heart health to you? What does that mean to you? So, we had these physicians, epidemiologists, and Indigenous people, and the people that led the workshop were two Indigenous people. So, on the first day, there was a lot of tension in the room because people had to say what they think is important for them. Then the other people were also saying what's important for them and Indigenous people are saying what's in it for them. So, you have all these things that are going on and the facilitators that were hired were really good because they allowed that space for people to have opinions and to have their moments of disagreement and, then they finished off the day and then we started the next day and people still had their opinions, but by the afternoon people started to let go of things and then in the last two hours people started to actually work as a group and figure things out. How do they want this work to go how is this work going to be beneficial for Indigenous people and how is it going to be very short for non-Indigenous people do we want to do the same old research? Just, you know, count the numbers, report the numbers…we already know that and that was one of the things that came up in the discussion. We don't want research where we know the numbers and how bad things are because we already know that we want something different, and we want to know what you know about us too. So, in the end, the whole project changed. The questions that were asked were different, and what the epidemiologists were going to be looking for. In the end, they decided to make a video and do some podcasting and write some newsletters for the community. I think there were, like, five different things that they did. And they were completely different from the original research that they submitted" (Moneca)