

INDIGENOUS PEOPLES' EXPERIENCES WITH PHARMACY EDUCATION IN CANADA

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By

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ABSTRACT

In my dissertation my concern is the individual and collective experiences of Indigenous Peoples with pharmacy education in Canada. Indigenous Peoples are drastically underrepresented in the pharmacy profession. As an Indigenous (Saulteaux) pharmacy professional myself, I have my own lived and living experiences as an Indigenous person in Canadian pharmacy education and practice that I reflect on with respect to the underrepresentation of Indigenous Peoples in the pharmacy profession; however, there is no available literature regarding the experiences of Indigenous Peoples with pharmacy education in Canada. Following the release of the Truth and Reconciliation Commission of Canada's Calls to Action in 2015, post-secondary institutions have collectively engaged in decolonization, Indigenization, and reconciliation efforts. To respond to the Calls to Action related to health and education, more Indigenous pharmacy professionals are required. Unfortunately, though, Indigenous representation in the pharmacy profession remains low and with unclear explanations for the continued underrepresentation. This PhD dissertation will, for the first time, examine the holistic experiences Indigenous Peoples have had throughout their first professional degree in pharmacy and offer suggestions for post-secondary pharmacy programs to engage in decolonization, Indigenization, and reconciliation.

I passionately share my rationale for why I am doing this work. Literature review findings are shared regarding Indigenous Peoples in pharmacy education and practice. Specifically, the general tensions between Indigenous and Western paradigms are described through a summary of the critiques of Indigenous scholars worldwide. Specific tensions between each paradigm with respect to pharmacy education and practice are also summarized. Limited findings from the literature with respect equity, diversity, inclusion, accessibility, and belonging are also shared. Indigenous methodologies is described and summarized with examples of specific methods, including the conversational method used in this PhD research. Key findings related to the isolation experienced by Indigenous Peoples in pharmacy education and practice are described, as well as the roles white settler colonialism and white supremacy play in the educational and practice experiences in pharmacy for Indigenous Peoples in Canada. Following a critical discussion, I conclude with an offering of strategies for post-secondary pharmacy programs in Canada to improve the experiences, retention, and celebration of Indigenous Peoples in pharmacy.

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DEDICATION

I dedicate this work to every Indigenous scholar in pharmacy who came before me, every Indigenous scholar currently in a pharmacy program, and every Indigenous scholar who will experience pharmacy education over the next seven generations. It is my sincere desire that this work will contribute to ongoing positive change among the pharmacy education landscape in Canada and beyond, especially as it relates to Indigenous Peoples considering, applying to, entering, progressing, and graduating from pharmacy programs. We have a collective responsibility as Indigenous Peoples in pharmacy and I am so thankful to be amongst previous, current, and future Indigenous pharmacy professionals as we shape the future of pharmacy education and practice.

TABLE OF CONTENTS

PERMISSION TO USE	i
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
TABLE OF CONTENTS	v
LIST OF ABBREVIATIONS	vii
CHAPTER ONE - WHY AM I DOING THIS WORK?	1
My research wonder.....	5
CHAPTER TWO - LITERATURE REVIEW	9
Indigenous Peoples, Indigeneity, and pharmacy education.....	9
Findings and implications from literature review.....	12
Indigenous knowledges and worldviews.....	13
Western intellectual traditions, science, and Western knowledge systems.....	17
Manifestations of the tensions between Western and Indigenous worldviews in health professions education and practice.....	21
Evidence-based medicine and what constitutes evidence and truth.....	24
Compartmentalization of knowledge, health, and wellness.....	29
Exclusion of land, place, and spirituality.....	33
Decolonizing and Indigenizing post-secondary learning.....	35
How diversity and difference is taken up in pharmacy education literature.....	39
Students in pharmacy with disabilities.....	39
Pharmacy students of colour (visible minorities).....	42
Female pharmacy students.....	44
Indigenous pharmacy students.....	46
Sexually and gender diverse pharmacy students.....	47
Other realms of diversity among pharmacy students.....	49
Overall conclusions of literature review.....	51
CHAPTER THREE - METHODOLOGY AND METHODS	55
Indigenous paradigm.....	55
Relationality.....	56
Reciprocity.....	57
Storytelling.....	58
Indigenous theory and Indigenous theorizing.....	59
Metaphoric framing in Indigenous methodologies and research.....	61
My own metaphoric framing of Indigenous methodologies.....	62
Indigenous research method example #1: Kapati Method.....	67
Indigenous research method example #2: Storywork.....	69
Indigenous research method example #3: Conversational Method.....	71
Method used for this study.....	73
Recruitment of participants.....	74
Cultural protocols associated with gifting of story.....	74
Conversational prompts.....	75
COVID-19 pandemic consideration.....	75
Method of analysis used in this study.....	75

CHAPTER FOUR - FINDINGS: ISOLATION OF INDIGENOUS PEOPLES IN PHARMACY EDUCATION	78
Introduction.....	78
Being 'othered'.....	78
Tokenization.....	86
Indigeneity not reflected or supported in pharmacy faculties or in the profession.....	89
CHAPTER FIVE - FINDINGS: WHITENESS, WHITE SUPREMACY, AND THE INCOMPLETE CURRICULUM IN CANADIAN PHARMACY EDUCATION	97
Introduction.....	97
Worldviews, whiteness, white supremacy, and epistemic racism.....	98
Indigenous Peoples and ways of being (almost) don't exist in the pharmacy curriculum and experiential learning.....	109
CHAPTER SIX - DISCUSSION	115
Introduction.....	115
Discussion of isolation of Indigenous Peoples in Canadian pharmacy education	116
Discussion of being 'othered'.....	117
Discussion of tokenization.....	121
Discussion of Indigeneity not being reflected or supported in pharmacy faculties or in the profession.....	122
Discussion of worldviews, whiteness, white supremacy, and epistemic racism.....	124
Discussion of Indigenous Peoples and ways of being (almost) don't exist in the pharmacy curriculum and experiential learning.....	128
Discussion of my own experience.....	130
CHAPTER SEVEN - CONCLUSION AND RECOMMENDATIONS	135
Recruitment and retention.....	137
Admissions	138
Curriculum and pedagogy.....	139
Assessment and evaluation.....	139
Experiential learning.....	140
General program considerations.....	140
REFERENCES	142
APPENDIX A - CALL FOR PARTICIPANTS	157
APPENDIX B - LETTER OF INVITATION	158
APPENDIX C – PARTICIPANT CONSENT FORM	160
APPENDIX D – CONVERSATION PROMPTS	164

LIST OF ABBREVIATIONS

AFPC: Association of Faculties of Pharmacy of Canada

CCAPP: Canadian Council for the Accreditation of Pharmacy Programs

CSHP: Canadian Society of Hospital Pharmacists

CPhA: Canadian Pharmacists Association

CPRB: Canadian Pharmacy Residency Board

IPPC: Indigenous Pharmacy Professionals of Canada

NIHB: Non-Insured Health Benefits

PDF: Portable Document Format

PharmD: Doctor of Pharmacy

CHAPTER ONE

WHY AM I DOING THIS WORK?

Pharmacists have a unique role in the health care system as the most accessible health care professional in Canada (Berardi, 2016). In addition to their high level of accessibility, pharmacists are consistently ranked as one of the most honest, ethical, and trusted professionals (Berardi, 2016; Marotta, 2016). While the majority of pharmacists in Canada work in community practice, pharmacists can be found working in hospitals, industry, government, and universities (Berardi, 2016). Given such overwhelming accessibility and positive perceptions, pharmacists have an incredible responsibility to serve and care for the people of Canada and beyond. Recognizing Canada's rich diversity, pharmacists should be best prepared to work effectively, efficiently, and in a culturally safe¹ manner with people and communities of diverse backgrounds, which includes the First Peoples of Canada. Indigenous² Peoples in Canada are known to have a life expectancy of seven to fifteen years less than the non-Indigenous population and experience poorer health outcomes versus the non-Indigenous population (Allan & Smylie, 2015). The visibility of pharmacists as front-line health practitioners places them in an ideal position to not only respond to Indigenous health inequities, but also to proactively and collaboratively work toward closing the health care gaps experienced by Indigenous Peoples in Canada.

In spite of the potential for pharmacists to act as catalysts for change in this area, learning outcomes specific to Indigenous Peoples have generally been absent in Canadian pharmacy

¹ Culturally safe care constitutes a focus for the delivery of quality care through changes in thinking about power relationships and patients' rights (Papps & Ramsden, 1996).

² The term Indigenous is used throughout this document as a synonym for Aboriginal. In Canada, the term Aboriginal is a government imposed, legally defined term collectively referring to all of the Indigenous Peoples of Canada and their descendants. The Canadian *Constitution Act* of 1982 specifies that the Aboriginal Peoples in Canada consist of three groups: First Nations (Indians), Inuit, and Métis (Allan & Smylie, 2015).

curricula and for the accreditation³ of Canadian faculties of pharmacy (AFPC, 2017). While concepts related to cultural competency and cultural safety can be found within the learning outcomes and accreditation standards set for Canadian pharmacy programs, such concepts are subject to being taught and learned without any reference to Indigenous Peoples, the intergenerational effects of colonization, or to the landscape of Indigenous Peoples' health in Canada. For example, without specific guiding language in the accreditation standards, educators may satisfy the accreditation requirements to teach students about cultural competency and cultural safety through examination of other cultural groups and ethnicities without a critical examination of Indigenous history and relations in Canada. Further, the lack of Indigenous knowledges in pharmacy curricula is glaringly absent in most faculties of pharmacy across Canada (Lillie, 2019). This inclusion is less likely to take place without any First Nations⁴, Métis⁵, or Inuit⁶ individuals in the administrations of programs of pharmacy across Canada, and

³ Accreditation of Canadian faculties of pharmacy is offered by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP), which is composed of representatives appointed by the Association of Faculties of Pharmacy of Canada, the Canadian Pharmacists Association, the Canadian Society of Hospital Pharmacists, the National Association of Pharmacy Regulatory Authorities, The Pharmacy Examining Board of Canada, and the Canadian Pharmacy Technician Educators Association. There is also a non-pharmacy member on the Council. Non-academic appointees form a majority of the Board of Directors that is responsible for establishing the Accreditation Standards, setting policy and managing the accreditation process. CCAPP currently accredits pharmacy academic programs offered at ten Canadian universities. Graduates from a Canadian CCAPP accredited program may apply directly for the Qualifying Examination of The Pharmacy Examining Board of Canada. Graduates from a non-accredited university pharmacy degree program must first pass the PEBC Evaluating Examination, designed to determine if the program of study completed is comparable to one accredited by CCAPP. CCAPP also accredits a large number of pharmacy technician programs offered at community and regional public colleges and private career colleges in Canada (CCAPP, 2020).

⁴ The term First Nations describes the First Peoples of Canada and came into common use in the 1970s to replace Indian, which some people found offensive. Despite its widespread use, there is no legal definition for this term in Canada. The Canadian government classifies First Nations/Indian people according to whether or not they are registered under the federal Indian Act. Status Indians are registered under the Act. First Nations/Indian people who are not registered under the Act are referred to as non-status Indians (Allan & Smylie, 2015).

⁵ The Métis are a group of Indigenous Peoples whose ancestry can be traced to the intermarriage of European men and First Nations/Indian women in Canada during the 17th century. Individuals of mixed Indigenous and non-Indigenous ancestry who are not directly connected to the Métis of the historic northwest may also identify themselves as Métis (Allan & Smylie, 2015).

⁶ The Inuit traditionally lived above the tree line of what is now Canada and are part of a larger circumpolar Inuit population that includes Greenland, Alaska, and Russia. Inuk refers to an individual Inuit person (Allan & Smylie, 2015).

with only one known self-identified Indigenous instructor of pharmacy in the country (Lillie, 2019).

It is known that non-Indigenous instructors often describe challenges and high levels of discomfort in teaching Indigenous content in their programs, which often translates to inauthentic representations of Indigenous history and knowledge, tokenized Indigenous teachings by inviting one-off Indigenous guest lecturers, and/or avoiding teaching Indigenous content altogether (Tupper, 2014). As such, the absence of mandatory Indigenous learning outcomes, courses, and accreditation standards, coupled with just one Indigenous faculty member in pharmacy in the country, Canadian faculties of pharmacy are left with an enormous opportunity for growth and preparing learners in pharmacy to practice in culturally safe manners with Indigenous Peoples, families, and communities in Canada.

In 2016, the population of Indigenous Peoples in Canada was reported to be 1,673,785, which is approximately 4.9% of the population of Canada (Statistics Canada, 2016). The number of Indigenous Peoples in Canada is expected to increase to between 1,965,000 and 2,633,000 by 2036 (Statistics Canada, 2016). As a proportion, this constitutes an increase from 4.9% in 2016 to approximately 6% in 2036. The implications for pharmacy practice will continue to be significant as, like the general population, the number of Indigenous Peoples in Canada has been rising and will continue to rise (Statistics Canada, 2022). The provinces of Manitoba and Saskatchewan are projected to continue to have the largest Indigenous population relative to the size of the total population of each province (Statistics Canada, 2016). The proportion of Indigenous Peoples is expected to rise to between 17.6% and 21.3% in Manitoba and between 18.5% and 22.7% in Saskatchewan by 2036 (Statistics Canada, 2016). Additionally, the number

of Indigenous students is increasing in post-secondary education; however, enrolment in the sciences, including pharmacy, is lagging (Hogue, 2012; “Indigenous Youth,” 2016).

One of the 94 Calls to Action published in the Truth and Reconciliation Commission of Canada⁷ called on health professional education programs, like pharmacy, to not only include Indigenous education in all health professional training programs but also to increase the number of Indigenous health professionals (Truth and Reconciliation Commission, 2015). Recognizing the importance of mentorship and the impact of seeing one’s self reflected in a program of study (e.g., instructors, administrators, staff, and other students), the abysmally small proportion of Indigenous students, staff, and faculty members in pharmacy programs across Canada likely further hinders the recruitment and persistence of, and sense of belonging for, Indigenous students in pharmacy programs (Usher, Miller, Turale, & Goold, 2005).

It is well-known that Indigenous students face unique barriers in post-secondary education (Battiste, Bell, & Findlay, 2002; Kanu, 2011; Sinclair, 2004); however, little is known about the experiences of Indigenous students in pharmacy, such as experiences of racism, discrimination, inclusion (or exclusion), and paradigm tensions in their application to pharmacy and/or throughout pharmacy school and into their post-licensure practice. Until research is conducted in the area of pharmacy education of Indigenous students, we are left with turning to scholarly literature on the educational experiences of Indigenous students in similar health science disciplines, such as nursing and medicine. Despite efforts to make health professions schooling more inclusive, for example, the system of teaching and learning is primarily reflective

⁷ The Truth and Reconciliation Commission of Canada was a multi-year process to listen to Survivors, communities and others affected by the Residential School system. The resulting collection of statements, documents and other materials now forms the heart of the National Centre for Truth and Reconciliation. The outcome of the Truth and Reconciliation Commission of Canada was 94 Calls to Action published in the Fall of 2015 that call on all Canadians, all levels of government, educational institutions, and others to learn and share Canada’s truth and engage in reconciliation with the Indigenous Peoples and communities of Canada (Truth and Reconciliation Canada, 2015).

of white, Western, and/or Eurocentric interests (Sherwood & Edwards, 2006). Additionally, Indigenous approaches to teaching and learning are more than differences in perspective (e.g., versus Western perspectives) and, instead, focus on one's relationship with the universe, the Creator, and the land (Sinclair, 2004), which appears to be missing in pharmacy education. With so few Indigenous students in pharmacy across Canada (Lillie, 2019), it is important that future research in this area centers the voices of Indigenous students. Further, opportunities and pathways for Indigenous students who are knowledgeable of Indigenous knowledge systems and who may speak Indigenous languages to pursue graduate studies in pharmacy and take on faculty roles is critical to ensure Indigenous worldviews, knowledges, and pedagogies are present and shared in faculties of pharmacy.

We have not heard the voices of Indigenous students in pharmacy education and, therefore, we can only assume (for now) that Indigenous students experience oppression in pharmacy education, as is known to be true for minoritized students in other post-secondary and health professional programs (Thurman, Johnson, & Sumpter, 2019). Within post-secondary education in general, racialized students are treated and responded to differently and receive less attention from faculty members than white students (Henry, Dua, James, Kobayashi, Li, Ramos, & Smith, 2017; St. Denis, 2007), which is expected to also be witnessed in pharmacy education.

My purpose for this PhD research is to center the voices of both current and former Indigenous students in pharmacy across Canada as they share their stories about both their general and specific (e.g., discrimination) experiences leading up to, throughout, and, for some, following their pharmacy education journey. Specifically, my research wonder' is: ***What are the affirming and challenging experiences of Indigenous students during their time in pharmacy school in Canada and how might their experiences inform future directions of Canadian***

pharmacy programs? As an Indigenous person and pharmacist myself with ongoing connections with a selection of current and former Indigenous students in pharmacy, I had a strong sense of what I would hear and discover through this research; however, ethical research must be, and was, undertaken to fully elucidate and share the voices and experiences of former and current Indigenous students in pharmacy across Canada. This research shows the unique experiences of Indigenous students in pharmacy education across Canada and may inform the future directions pharmacy faculties across Canada may take in their efforts to respond to the Truth and Reconciliation Commission of Canada's Calls to Action and to optimize strategies for the recruitment and retention of Indigenous students in pharmacy.

In a more selfish sense, I wanted to do this work to find and feel a sense of community in my profession and also to have my own experiences validated. I wondered if other Indigenous Peoples' experiences in pharmacy mimicked my own. If others experiences were similar to mine, I knew that not only would my own experiences be validated, but I would then also have a body of evidence and stories to 'use' to effect change in pharmacy education and practice. I truly had never sought out pharmacy as a career path and, instead, I feel that pharmacy sought *me*. Applying to pharmacy was rather serendipitous for me and, at the time, my application to pharmacy had no connection to my Indigeneity whatsoever. I wondered if other Indigenous Peoples had sought out a career in pharmacy and, if so, *how* and *why* they chose pharmacy and what their experiences were like both before and after their decision to apply. Additionally, being the only known Indigenous pharmacy faculty member in Canada, I felt and still feel an overwhelming sense of responsibility to move toward Truth and Reconciliation in the pharmacy profession, but such work should be informed by a collection of Indigenous voices in pharmacy and not just my own.

This research illuminates the affirming and challenging experiences of Indigenous students during their time in pharmacy school in Canada and how their experiences may inform future directions of Canadian pharmacy programs. In keeping with a ‘nothing about us without us’ philosophy, a critical mass of Indigenous scholars and instructors in pharmacy is required to most appropriately realize decolonization, Indigenization, and reconciliation goals in pharmacy education in Canada. A critical mass of Indigenous scholars and instructors in pharmacy will require strategic and equitable opportunities for Indigenous pharmacy graduates to be recruited and retained in graduate studies, who will then go on to be faculty members and provide mentorship to Indigenous students in pharmacy and offer the opportunity for Indigenous Peoples to see themselves reflected in the profession and faculties of pharmacy across Canada.

Organization of the Study

The study is organized into seven chapters. Chapter one provided an introduction to the research, described my research wonder, and outlined why I am doing this work. Chapter two provides a review of the literature with respect to Indigenous Peoples and the profession of pharmacy, as well as a review of how pharmacy education research takes up the topic of diversity and equity-deserving groups. Chapter three provides a description of the methodology and outlines the methods and theoretical framework of the study. Chapters four and five present the research findings, which are organized into two main themes: isolation of Indigenous Peoples in pharmacy education and whiteness, white supremacy, and the incomplete curriculum in Canadian pharmacy education, respectively. Chapter six walks through a discussion of the findings from the study, touching on the main themes of the findings and several sub-themes, including but not limited to concepts of tokenization, being othered, and my own experience in pharmacy education. To conclude, chapter seven provides concluding remarks and a series of

recommendations for pharmacy education that arose from the gifted stories of the study's participants.

CHAPTER TWO

LITERATURE REVIEW

Introduction

With a strong sense that this would be the first time the topic of Indigenous Peoples' experiences in pharmacy education would be examined, the literature search and review required flexibility and reflexivity to reveal a foundation for how to go about this work. A series of search terms were identified that reflected the diversity of Indigenous Peoples globally to discover if indeed the topic is new to the global body of literature in pharmacy education. Given my research wonder for this work (*What are the affirming and challenging experiences of Indigenous students during their time in pharmacy school in Canada and how might their experiences inform future directions of Canadian pharmacy programs?*), I was interested in discovering anything and everything related to Indigenous Peoples and the profession of pharmacy, as well as searching and evaluating how other equity-deserving groups and identities have been studied and shared in the literature, if at all.

Indigenous Peoples, Indigeneity, and Pharmacy Education

In an attempt to discover all relevant literature for the concepts and questions that would be examined by this research project, a series of comprehensive searches were performed on PubMed, MEDLINE, ERIC (Ovid), PsycINFO, and Google Scholar. The search terms “decolonize,” “decolonizing,” “decolonization,” and “Indigenize,” “Indigenizing,” and “Indigenization” were combined with “pharmacy,” which yielded zero results (with the exception of one publication written as an introductory piece to this research project). The same terms were then combined with “health” and “education,” yielding 12 results. No further results

were yielded with the addition of terms to describe specific Indigenous groups (“First Nations,” “Inuit,” and “Métis”), including terms no longer socially accepted in Canada (e.g., Indian, Eskimo, Native) and terms specific to the first peoples of other geographic areas (e.g., American Indian, Native American, Alaska Native). Given the variabilities in interpretations of decolonization and Indigenization, all publications that included either or both terms and within any realm of health professions education (e.g., curriculum, assessment, evaluation, instructional design, etc.) were reviewed, which totaled to be five articles at the time the literature search was conducted.

Other search strategies were employed to capture available literature regarding other foci of this research as it relates to minority or underrepresented groups in pharmacy education, recruitment, and retention of Indigenous students in health professional programs of study, and inclusive learning environments in pharmacy, especially as it relates to the intersectionalities⁸ of identities across Indigenous Peoples/students (and, of course, non-Indigenous persons, too). Essentially, the purpose of a dedicated search about diversity was to capture how ‘difference’ in among pharmacy students is taken up in the literature. The Canadian Business and Current Affairs Database was used to search for scholarly articles about “pharmacy education” *and* “diversity,” with no other descriptors or restrictions, yielding 68 results published between 1997 and 2021. Unfortunately, though, the vast majority of the articles retrieved were about interprofessional education and other unrelated articles, such as elementary music education in Japan, toilet training, and the gender pay gap. After reviewing abstracts of all 68 results, zero articles were about the education of diversity groups, such as Indigenous students, in pharmacy.

⁸ Intersectionality is a theoretical framework rooted in the premise that human experience is jointly shaped by multiple social positions (e.g. race, gender), and cannot be adequately understood by considering social positions independently. (Crenshaw, 1989)

A search for “pharmacy education” *and* “diversity” *or* “marginalized” in the ERIC (Ovid) Education Resource Information Center database yielded one result, although the article was about bridging the gap between the basic sciences and clinical practice in pharmacy education, with the same search terms yielding zero results in PsycINFO. In the Education Database search engine, a search for “pharmacy education” *and* “diversity” with limits to peer-reviewed scholarly work, pharmacy, and English language, yielded 234 results. After reviewing yielded results and removing articles unrelated to this literature review (e.g., articles about team-based learning, self-authorship, competency-based assessments for experiential learning, annual meeting minutes of the American Association of Colleges of Pharmacy, etc.), 7 articles were kept. Google Scholar was used to identify any articles not indexed by other sources; however, only two additional articles relevant to the topic of this review were identified and the other results were either duplicates of articles already identified or not relevant.

The ERIC (Ovid) Education Resource Information Center database yielded 16 results for “Indigenous” *or* “Aboriginal” *and* “Mentorship,” although zero of the yielded results were relevant to this research project. With the same database, as well as Google Scholar and PsycInfo, “Indigenous” *and* “recruitment” *and* “pharmacy” yielded zero results. Seven additional articles of relevance were identified via review of the reference list of other identified articles (e.g., reviews, commentaries, reports) that capture principles of health professions education for diverse or marginalized students, although still not directly within the scope of this research project. While a number of other articles were screened for inclusion, the populations and programs evaluated were not likely to be directly transferrable to First Nations, Métis, or Inuit pharmacy students in Canada (e.g., Indigenous patient recruitment in clinical trials, South African physician recruitment, etc.). Of all abstracts and articles screened, only one was directly

relevant to Indigenous students in pharmacy; however, the study focused exclusively on *Māori* students in the health sciences, with just five of the 95 student participants enrolled in pharmacy (Curtis, Wikaire, Kool, Honey, Kelly, Poole, Barrow, Airni, Ewen, & Reid, 2015).

Findings and implications from literature review

It is anticipated that dedicated and strategic decolonization⁹ and Indigenization¹⁰ efforts would forge a pathway for Indigenous Peoples to consider, apply to, and graduate from pharmacy school in Canada. As such, much of the literature review for this study focused on decolonization and Indigenization across the educational programs for various health professions, as no published literature was available regarding the same concepts in pharmacy education. While the study of decolonization in teaching and learning is decades old, there has been a resurgence in recent years, particularly as a means of responding to the Truth and Reconciliation Commission of Canada's Calls to Action (2015). There is a noticeable dearth of literature, however, that focuses on decolonization and Indigenization within educational programs for the health sciences, including pharmacy education. As such, the more recent emergence of conversations and literature on decolonizing and Indigenizing health professions education leaves a number of gaps. Despite the gaps in literature, noticeable patterns do exist in other post-secondary settings that may inform similar processes and understandings in pharmacy education in Canada. Additionally, although there is no available literature that captures the experiences of Indigenous Peoples in pharmacy, the literature reviewed in this space will inform

⁹ Decolonization, as it pertains to the content in this paper, is understood to be a “multilateral process of understanding and unpacking the central assumptions of domination, patriarchy, racism, and ethnocentrism that continue to glue the academy’s privileges in place” (Battise, Bell, & Findlay, 2002, p. 84).

¹⁰ While there may be a number of interpretations of how Indigenization is defined, this paper uses the following definition: “the transformation of the existing academy by including Indigenous knowledges, voices, critiques, scholars, students and materials as well as the establishment of physical and epistemic spaces that facilitate the ethical stewardship of a plurality of Indigenous knowledges and practices so thoroughly as to constitute an essential element of the university. It is not limited to Indigenous people, but encompasses all students and faculty, for the benefit of our academic integrity and our social viability” (Pete, 2016, p. 1).

how my work may supplement what has already been done. A summary of findings is presented below and categorized into themes.

Indigenous knowledges and worldviews

The perspective about the nature of relationships between all life forms in creation has been called a worldview (Atleo, 2004). For Indigenous Peoples, Indigenous worldviews have deep connections to tribe-specific creation stories and have lived, and continue to live, not through the written word but through oral history and storytelling (Deloria, 1997). The validity of Indigenous knowledges is delimited by its geographic and ecological setting for those who hold it, and therefore is called ‘place-based’ knowledge (Aikenhead, 2007, Battiste & Henderson, 2000; Hampton, 1995; Kawagley & Barnhardt, 1999). Unfortunately, the term ‘Indigenous knowledge’ itself is embedded within a Eurocentric epistemology and is therefore often replaced with a more appropriate phrase devised by Indigenous communities, such as ‘Indigenous ways of living’ and ‘ways of being’ (Aikenhead, 2007). In fact, in the prevailing Eurocentric concept of school, ‘knowledge’ (an accumulation of specific information, concepts, and skills within a school subject) has no direct translation into most Indigenous languages because the Eurocentric concept of knowledge is largely foreign to most Indigenous worldviews (Aikenhead, 2007). The best English expression for what Indigenous Peoples express as knowledge is ‘ways of living,’ for which the word ‘learn’ means ‘coming to knowing’ (Ermine, 1995), a concept closely related to Dewey’s (1916) participatory learning. “Knowledge is not a commodity that can be possessed or controlled by educational institutions but is a living process to be absorbed and understood” (Battiste, 2002, p. 15).

A variety of interrelated interpretations exist in terms of how Indigenous knowledges are defined. The United Nations Educational, Scientific, and Cultural Organization (UNESCO)

qualifies Indigenous knowledges as “the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings” (United Nations Educational, Scientific, and Cultural Organization, [UNESCO], 2017). UNESCO has also noted that “[Indigenous] knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, rituals and spirituality” (UNESCO, 2017). Indigenous knowledge has also been defined as local knowledge that is held by Indigenous Peoples or local knowledge unique to a given culture or society (Warren, Slikkerveer, & Brokensha, 1995). Indigenous knowledge systems correspond to the entire spectrum of philosophy, history, heritage, ethics, flora and fauna, educational processes, and much more (Snively & Williams, 2016). Doaxter (2004) described Indigenous knowledge as “reasonable, deliberate, and useful for making sense of life” (p. 620). Similarly, Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) described the right of Indigenous Peoples to maintain, control, protect and develop their traditional knowledges (UNDRIP, 2007, p. 22-23).

Indigenous worldviews are often admired for the rich place-based oral histories that live within First Nations, Métis, Inuit, and other Indigenous nations; however, in the Western scientific community of positivism and perceived objectivity, Indigenous worldviews are cast aside as romantic and mythical ideas of the past and ways of being (Battiste, Bell, & Findlay, 2002; Deloria, 1997). Deloria proposed that “...there are literally millions of observed facts which simply do not appear in scientific writing because they would tend to raise doubts about the prevailing paradigm” (Deloria, 1997, p. 35). Seemingly, then, the fundamental difference between Western intellectual traditions and Indigenous worldviews is a traceable written history.

Deloria (1997) postulated that “the non-Western tribal equivalent of science is the oral tradition, the teachings that have been passed down from one generation to the next over uncounted centuries” (p. 36). Such oral traditions (or, ‘Indigenous science’), composed of loosely held collections of anecdotal material that, when taken together, “explains the nature of the physical world as people have experienced it and the important events of their historical journey” (Deloria, 1997, p. 36). Deloria (1997) suggested that only 10% of the information that Indians possess is presently in print and available for discussion (p. xiv). Without a traceable written history of Indigenous science, “information possessed by Indigenous Peoples becomes valid only when offered by a white scholar recognized by the academic establishment; in effect, the color of the skin guarantees scientific objectivity” (Deloria, 1997, p. 35). The Indigenous explanation, as Deloria (1997) described, “is always cast aside as a superstition, precluding Indians from having an acceptable status as human beings, and reducing them in the eyes of educated people to a pre-human level of ignorance” (p. 7). The survival of Aboriginal peoples for tens of thousands of years, based on each nation’s Indigenous knowledge, already legitimizes its content validity (Cajete, 2000).

In an Indigenous paradigm, knowledge is made available to Indigenous Peoples by visions and dreams, birds, animals, rivers, and mountains, which is inaccessible to modern science (Deloria, 1997). Atleo (2004) too described the acquisition of knowledge via the variety of visions that humans experience, whether in a nocturnal dream, waking dream, meditative vision, group vision, or solitary vision and highlighted the spiritual experience itself that results in the acquisition of knowledge in this way. Castellano (2000) referred to this way of learning as ‘revealed knowledge.’ Recognizing these important ways of knowing, knowledge is personal for non-Western peoples and impersonal for the Western scientist (Deloria, 1997). Euro-centric

Western people believe that anyone can use knowledge; for Indigenous Peoples, though, only those people given the knowledge by other entities can use it properly (Deloria, 1997).

Additionally, “the major difference between Indigenous views of the physical world and Western science lies in the premise accepted by Indigenous Peoples and rejected by scientists: the world in which we live is alive” (Deloria, 1997, p. 40).

Frustratingly, sometimes the evolution and ‘modernization’ of Indigenous knowledges is viewed as inauthentic Indigenous knowledge. Atleo (2004) suggested that “change is not unusual to any culture or civilization, yet it is assumed that as soon as change is introduced to Indigenous cultures, they can no longer be authentic” (p. 76). Inaccurately, and unfairly, “authentic Indigenous cultures are thought to be those that have had no contact with the colonizing Westerner. It is a most arrogant position to hold because it attributes inordinate and unreasonable powers of transformation to the colonizers” (Atleo, 2004, p. 76). Like Western science and Western intellectual traditions, Indigenous knowledges are expected to evolve and grow, just as the places, spaces, animals, spirits, and peoples who hold knowledge also evolve.

Beyond the acquisition of knowledge, its dissemination may also exist in culturally and tribal-specific ways. As Atleo (2004) highlighted, a Western scientist may work alone for years until a breakthrough is made, at which point the research outcome is disseminated through papers, publications, and conferences, whereas an Indigenous knowledge-seeker may also spend years until something of great significance happens that affects the whole community and only then the outcome is conveyed in songs, dances, and appropriate ceremonial displays. Of course, Indigenous Peoples may (and do) also elect to disseminate knowledge in ways that are congruent with typical Western methods, such as papers, publications, and presentations; however, often

the paradigm from which the Indigenous ‘researcher’ is coming from will shine through in their use of storytelling in both written and oral dissemination methods, for example.

Western intellectual traditions, science, and Western knowledge systems

Describing Western intellectual tradition poses a significant challenge as Western scientists do not have to repeatedly strive to validate themselves and their ways of knowing and are simply accepted by scholars and in the literature, which are grounded in Western intellectual thought and Western (or, non-Indigenous) knowledge systems. While innovation and novel ideas certainly are still presented in Western intellectual bodies, they are scrutinized, evaluated, and disseminated by people and programs that are grounded in the same Western (non-Indigenous), positivistic, and ‘scientific’ worldviews. Even as a word, ‘science’ privileges a very narrow meaning (the canonical Western science content taught in universities), which today can act in a neocolonizing way (Aikenhead, 2007). The word ‘science’ was “...intentionally chosen in 1831 when some natural philosophers founded the British Association for the Advancement of Science and thereby professionalized natural philosophy into a new social institution, which they called ‘science’ for very political reasons” (MacLeod & Collins, 1981).

Since the professionalization of natural philosophy into ‘science,’ we have been taught that “...scientists are always right, that they have no personal biases, and that they do not lie, three fictions that are impossible to defeat” (Deloria, 1997, p. 7). Deloria (1997) highlighted the obedience of scientists and scholars to the consensus opinions of their profession(s) and suggested this “...usually means they pay homage to the opinions of scholars and scientists who occupy the prestige chairs at Ivy League and large research universities or even dead personalities of the past” (p. 28). Deloria (1997) also offered a critical reflection regarding the evolution of science and its marginalizing nature:

Institutionalization of science took many forms: the increasing tendency of people to look to scientists for reliable explanations about the world, the development of universities and colleges, sponsorship of scientific research by wealthy patrons and eventually the state. Most of all, however, it meant that scientists would come to act like priests and defer to doctrine and dogma when determining what truths would be admitted, how they would be phrased, and how scientists themselves would be protected from the questions of the mass of people whose lives were becoming increasingly dependent on them. In our society we have been trained to believe that scientists search for, examine, and articulate truths about the natural world and about ourselves. They don't. But they do search for, take captive, and protect the social and economic status of scientists. As many lies are told to protect scientific doctrine as were ever told to protect "the church." (p. 5)

Clearly science and the involvement in science was and still is a source of privilege and attempts to disrupt its rigid structure are unlikely to be successful.

Deloria (1997) highlighted the positivistic nature of Western intellectual traditions and scientific thought in the following statement:

We have been trained to believe that science is infallible in the sense that, while science does not know everything, its processes of investigation and experimentation are the best available so that, given time and resources, the truth will eventually be discovered. (p. 26)

Western intellectual traditions and the paradigm of Western science leave little, if any, room for multiple truths. When multiple truths exist, each truth is forever considered a theory until proven

otherwise, using the scientific method (Shuttleworth, 2008), unlike Indigenous paradigms which have space for multiple truths. For example, when several randomized clinical trials of the same drug or intervention show different results, the data from all trials are combined in a meta-analysis in order to arrive at a single truth.

The body of Western scientific paradigm continues to be protected in peer-reviewed scholarly journals, versus the oral history and land-/place-based knowledge witnessed in Indigenous knowledge systems. Deloria (1997) argued that journals do not reflect science or human knowledge and instead "...represent the subjects that are not prohibited in polite discussion by a few established personalities in the larger intellectual world" (p. 29). Widely respected as an Indigenous philosopher, Deloria (1997) offered critical thoughts about Western science and the (dis)inclusion of Indigenous intellectual traditions:

Two things need to be done, in my opinion, before there can be any exchange of views between American Indians and Western science. First, corrective measures must be taken to eliminate scientific misconceptions about Indians, their culture, and their past. Second, there needs to be a way that Indian traditions can contribute to the understanding of scientific beliefs at enough specific points so that the Indian traditions will be taken seriously as valid bodies of knowledge. Both changes involve a fundamental struggle over the question of authority, since even when Indian ideas are demonstrated to be correct there is the racist propensity to argue that the Indian understanding was just an ad hoc lucky guess – which is perilously close to what now passes for scientific knowledge. (p. 45)

Naming and evaluating such tensions between Western intellectual traditions and Indigenous worldviews in pharmacy education and practice is not only critical to understand the dominance

of Western paradigm in pharmacy but also to attempt to consider the tensions experienced by Indigenous learners and practitioners in pharmacy and the care and education patients receive from students and graduates of pharmacy. Similar to Aikenhead's (2007) description of Indigenous students in science courses in primary and secondary school, Indigenous learners in pharmacy are often expected to set aside their Indigenous ways of knowing, "...which combines the ontology of spirituality with holistic, relational, and empirical practices in order to celebrate an ideology of harmony with nature for survival" (p. 1). When school science does not nurture students' Indigenous identities or strengthen their resiliency, most students are not inclined to participate or achieve in these courses (Cajete, 2000; MacIvor, 1995; Kawagley, Norris-Tull, & Norris-Tull, 1998; Sable, 2005; Sutherland, 2005), which is likely to remain true for Indigenous students in pharmacy. The tensions between Indigenous identities and Western science ideologies can be severe for Indigenous students and often creates a sense of feeling unwelcome in school science (Aikenhead, 2007). In a program like pharmacy, the tensions between Indigenous and Western worldviews are likely to also be realized by Indigenous patients and families who receive care and education from students and graduates of pharmacy, whether Indigenous or not.

Scholars like Armstrong (2013) have suggested that integration of Indigenous ways of knowing and being in the world might minimize the tensions experienced between Western intellectual traditions and Indigenous worldviews. Minimizing such tensions might positively contribute to the recruitment and retention of Indigenous people applying to and graduating from health science programs like pharmacy, for which people in Canada have specifically been called to action (Truth and Reconciliation Commission of Canada, 2015). Integrating multiple knowledge systems and worldviews in 'evidence-based' health care and education,

defragmenting the teaching, learning, and clinical approaches to health and wellness, and addressing the importance of land, place, and spirituality is expected to ease the tensions experienced between Western intellectual traditions and Indigenous worldviews inherent within pharmacy education and practice. While such tensions can and should be minimized, it is anticipated these tensions will always exist in pharmacy education; however, like a braid of sweetgrass, some tension is required when multiple strands (of knowledge systems) come together. So, as Hester and Cheney (2001) noted, “as the Euro-American tradition refines its truths, resolving the contradictions by adding more and more exceptions and greater and greater complexity, these truths may eventually more nearly resemble stories” (p. 332). In the meantime, though, “[Indigenous] Peoples will be waiting at the fire already telling some good ones” (Hester & Cheney, 2001, p. 332).

Manifestations of the tensions between Western and Indigenous worldviews in health professions education and practice

Western knowledge systems created, and continue to inform, the oppressive nature of health professions education, including pharmacy education in Canada. The teachings of Western medicines, for example, have completely overturned traditional knowledge. Western medicines have become the foundation of teaching and learning in pharmacy schools across Canada, with the original medicines and knowledges of this land being given the official designation of Complementary and Alternative Medicine (CAM) (National Cancer Institute at the National Institutes of Health, 2015). Education, in the context of Canadian post-secondary institutions, has “serially obstructed and evaded [Indigenous] knowledge in a way that shelters and sanitizes a destructively colonial and Eurocentric legacy,” (Battiste, Bell, & Findlay, 2002, p.83) with pharmacy education being no exception. Operating from, and teaching with, the

understanding that Western medicines and health practices are superior to other methods, undermines the contributions of Indigenous Peoples to the practice of medicine. As such, the question stands if the hierarchical and pervasive nature of Western medicines and health practices within the education and practice of pharmacy function as a deterrent for Indigenous Peoples in their consideration of applying to and/or persisting through pharmacy education.

Anecdotally, Indigenous, and non-Indigenous, students who pursue Canadian pharmacy education are systematically socialized to devalue non-Western medical approaches and medicines. The perpetuated presumption of the superiority of Western medicine "...attempts to impose cognitive assimilation on Indigenous students while denying the reform required to achieve a respectful and productive liberation for [Indigenous] peoples from the educational apparatuses of colonialism" (Battiste et al., 2002, p.83). In addition, Indigenous knowledges are often "...dismissed as ignorance or valued as an exotic addendum or romantic access to the primitive and pristine" (Battiste et al., 2002, p.86). As such, pharmacy students are socialized to develop similar ideologies regarding Indigenous knowledges in the health sciences and the practices of medicine and pharmacy.

Nursing education is also known to experience similar challenges. Western science, which dominates nursing education through processes of Eurocentrism and systemic racism, is linked with whiteness and historical accounts of nursing's evolution as a profession render invisible the leadership of Indigenous nurses (McGibbon, Mulaudzi, Didham, Barton, & Sochan, 2014). McGibbon et al. (2014) discussed the colonization of nursing textbooks and nursing education whereby racism and white privilege play unofficially official and central roles. Recognizing the dominance of settler and Western knowledge and ways of knowing, the process and experience of education for students in nursing becomes homogenized, whether consciously

realized and acknowledged or not (McGibbon et al., 2014). Despite efforts to make nursing schooling more inclusive, for example, the system of teaching and learning is primarily reflective of white, Western, or Eurocentric interests (McGibbon et al., 2014). The privileged Western knowledge renders less resistance for white students to succeed when the primary modes of instruction, the content, evaluation, and design of the faculties of health professions is grounded in whiteness; therefore, the knowledge and lived experiences of those who are white is privileged over others (e.g., Indigenous students) and also through racist practices such as assessment, instruction, and discipline (Schick & St. Denis, 2005).

In the context of health professions education, Western knowledge systems dissect knowledge and health into compartments and categories or boxes, whereas Indigenous knowledge systems are not separate and instead exist in a holistic model (Sherwood & Edwards, 2006). Educating students in the health professions in this way not only further contributes to cognitive assimilation in how students think about and approach the care of their patients, but it also risks the loss and devaluation of traditional Indigenous approaches to health and wellness that Indigenous students may or may not have been fortunate enough to grow up practicing. For both Indigenous and non-Indigenous students, regardless of their own upbringings and familial or traditional knowledge systems, the Western approaches to teaching and learning in health professions education likely also risks disengagement and difficulties developing rapport with students' future Indigenous patients who practice traditional ways of knowing, thinking, being, and doing. Additionally, the idea that Western knowledge is superior to Indigenous knowledges supports racist beliefs about Indigenous patients, regardless of worldviews and/or languages spoken.

The Indigenous approach to teaching and learning is more than a difference in perspective (e.g., versus Western perspectives) and, instead, focuses on the difference in perception of one's relationship with the universe, the Creator, and the land (Sinclair, 2004). Decolonizing pedagogy in the context of social work education, for example, requires shifting away from a 'banking' concept of education whereby students are seen as a blank slate to be filled with education from the educator/expert (Freire, 1974). Instead, faculties should adopt an Indigenous approach by which both the educator and student must involve themselves in the process of healing, learning, and developing a path guided by Indigenous epistemology (Sinclair, 2004).

Canadian faculties of pharmacy, for example, are left with the challenge of accomplishing meaningful progress without a critical mass of Indigenous staff and faculty (J. Cooper, personal communication, June 6, 2018). Recognizing that decolonization and Indigenization of pharmacy education involves much more than integrating Indigenous content into the curriculum, the expectation for Canadian faculties of pharmacy to decolonize and Indigenize their approaches to teaching and learning without Indigenous staff and faculty members to lead such developments is therefore often met with resistance and slow progress. Striving to decolonize and Indigenize pharmacy education in ways that are grounded in Indigenous worldviews without such worldviews existing within faculties of pharmacy, faculties are vulnerable to inauthentic Indigenous approaches to teaching and learning.

Evidence-based medicine and what constitutes evidence and truth

Pharmacy education and practice are extraordinarily allegiant to what is referred to as Evidence-based Medicine (EBM). Evidence-based medicine has been described as "...the conscientious, explicit, judicious and reasonable use of modern, best evidence in making

decisions about the care of individual patients” (Masic, Miokovic, & Muhamedagic, 2008, p. 219). EBM “...requires new skills of the clinician, including efficient literature-searching, and the application of formal rules of evidence in evaluating the clinical literature” (Masic, Miokovic, & Muhamedagic, 2008, p. 219). Gazing from and through an Indigenous paradigm, the definition of EBM in and of itself is problematic and oppressive. If evidence-based medicine truly was “the conscientious, explicit, judicious and reasonable use of modern, best evidence in making decisions about the care of individual patients” (Masic, Miokovic, & Muhamedagic, 2008, p. 219), it would encompass more than Eurocentric Western knowledge systems. The critical, although unnamed, factor of what constitutes evidence-based medicine is really about *who* is defining what is conscientious, explicit, judicious, reasonable, and what is considered to be *best* evidence.

The second part of Masic, Miokovic, and Muhamedagic’s (2008) description of evidence-based medicine showcases the oppressive nature of EBM. They noted that “EBM requires new skills of the clinician, including efficient literature-searching, and the application of formal rules of evidence in evaluating the clinical literature” (Masic, Miokovic, & Muhamedagic, 2008, p. 219). As such, to participate in EBM one must be a clinician, be educated in navigating scholarly literature, and be allegiant to the ‘rules’ of evidence when evaluating clinical literature. Who is considered a clinician? Who and what determines whom can or cannot become a clinician? What ‘evidence’ and knowledge systems are captured in scholarly literature? Who created the ‘rules’ of evaluating clinical literature? Who teaches the rules? At every stage of evidence-based medicine, Indigenous Peoples and Indigenous ways of knowing are erased and not included in what constitutes evidence-based medicine.

The phenomenon of Eurocentric Western-based EBM is incestual and all powerful. Goldstein and Goldstein (1978) stated that “facts are what all observers agree on” (p. 21). The institution of science, pharmacy, and medicine are well-aware of this and feed the fruits of their knowledge systems to hungry public and governments, desperate and responsible for contributing to the common good. Governments allocate public dollars to major agencies that release calls for research to be produced, such as the Government of Canada’s allocations to the Canadian Institutes for Health Research (CIHR) (CIHR, 2019). The CIHR is considered to be an independent and non-partisan health research agency that is accountable to the Canadian Federal Minister of Health; however, the CIHR’s mission “to create new scientific knowledge and to enable its translation into improved health, more effective health services and products, and a strengthened Canadian health care system” (CIHR, 2019), is entirely rooted in a Eurocentric Western-based paradigm. It was not until 2019 when the CIHR’s Institute for Indigenous Peoples’ Health, and only this one institute of thirteen, allowed non-academics and research agencies to apply for and hold grant dollars (CIHR, 2019). As such, researchers funded by the CIHR have been, and continue to be, applying from and operating within the confines of Eurocentric Western-based paradigms of science and research as they are accountable to the colonial Government of Canada and therefore also to the citizens of Canada. Intuitively, then, the CIHR is wholeheartedly not independent and not non-partisan; they are dependent on the trust of the public and scientific community and partisan to Western colonial ideas of what constitutes science and research.

Eurocentric Western-based science, for which pharmacy education and practice are strong subscribers, becomes incestual by continuing to fuel public and scientific knowledge and approaches to health care, while at the same time being the sole source of describing what the

remaining gaps are in science and health care knowledge. This then prompts public and government bodies to release more public research funds to address such gaps, and the cycle continues. As a result, the literature around pharmacy education and practice, and health care practices in general, continue to be fueled by a single paradigm and knowledge system, which then translates into this single knowledge system and paradigm constituting what is taught and learned in pharmacy education. Additionally, as the growing body of ‘evidence’ continues to expand, both public and private dollars turn to funding the outcomes of such evidence. For example, the outcomes of health and pharmacy research, which are grounded in Eurocentric Western ideas of what health and evidence are, inform professional clinical practice guidelines about what constitutes ‘best’ practice. In turn, clinical practice guidelines constitute the ‘evidence’ that inform what governments and insurance companies will consider as fundable and reimbursable health care services, which further erases Indigenous contributions to science and health care.

In this day and age with a growing appreciation for equity, diversity, and inclusion, we are evolving in our appreciation for other knowledge systems; however, Indigenous, and virtually all other, practices and knowledge systems that are *not* rooted in Eurocentric Western science, are given an entirely different category referred to as Complementary Alternative Medicine (CAM) (National Cancer Institute, 2016). In pharmacy education and practice, EBM is the underpinning paradigm for all learning and CAM is ‘the other.’ As such, pharmacy education does not provide the opportunity for learners to even consider Indigenous knowledges as ever being part of EBM since it never has been part of EBM in the first place.

Within each knowledge system, defining and accepting what is true and what is not true is something of a private club. Goldstein and Goldstein (1978) described what they consider to be the duties required to join such a private club:

Often, one cannot judge the truth of some claimed observation without going to the trouble of learning a lot of things that most people do not automatically know. Is the sparkplug removed from the motor of this car burned out or not? This is a question of fact, but not everyone knows offhand how to verify it. One must be not only an observer but also an informed and interested observer. (p. 22)

Goldstein and Goldstein (1978) go on to suggest that this allows for the possibility that those who are informed and interested observers could all be wrong, which has indeed happened and will continue to happen. They suggested, though, this is the best we can do and that it is what makes science possible (Goldstein & Goldstein, 1978). Does this very same definition not also therefore admit that much, if not all, of what the science community knows could actually be wrong? While there may be informed and interested observers, perhaps there is still more to be informed about.

In a Western science-based educational program and profession like pharmacy, thinking like a scientist often means that "...positivistic notions of scientific knowledge are combined with ontologies of realism and Cartesian duality, to feed on reductionistic and mechanistic practices in order to celebrate an ideology of power and dominion over nature. Science is not value neutral" (Aikenhead, 2007, p. 1). Pharmacy education and practice subscribe to the same ideology of a single truth and only Eurocentric Western-based knowledge systems are employed to qualify and quantify evidence, truth, and 'best practice.' The impetus for all students and

professionals in pharmacy, and particularly for Indigenous students and professionals, to think like a Eurocentric Western-paradigm scientist is an ongoing method of colonization where all educational programs and professional practices in pharmacy are complicit. By trying to force a Eurocentric science curriculum on all Indigenous students and professionals, we continue the colonization of the past, a process today called “cognitive imperialism” (Battiste, 1986, p. 23) and “neo-colonialism” (Ryan, 2006, p. 179).

Indigenous students must leave their culture at the door and adopt Western approaches to education and curriculum to succeed (Hogue, 2014). Historically, the academic environment, including pharmacy education, has not enabled Indigenous academic success in any way other than from a Western perspective (Hogue, 2014). We need to strengthen students’ Indigenous self-identities as they learn to master and critique Western scientific ways of knowing present in pharmacy education without, in the process, sacrificing their own culturally constructed ways of knowing, that is, their Indigenous knowledge (Kanu, 2005). Throughout our discussions of evidence-based medicine and in pharmacy education and practice, our aim should be to nurture Indigenous students’ and professionals’ scientific literacy so they can successfully “walk in both worlds,” Indigenous and Euro-Canadian (Battiste, 2000, p. 202; Cajete, 1999; MacIvor, 1995).

Compartmentalization of knowledge, health, and wellness

Indigenous concepts of knowledge, health, and wellness are extraordinarily holistic and interrelated. The concept of the medicine wheel as a representation of health and wellness is well-known to Indigenous Peoples. While varying interpretations of the medicine wheel exist, the concepts of mental, spiritual, emotional, and physical well-being comprising a person’s whole being is a shared understanding (Bell, 2016; Ragoonaden & Mueller, 2017). Whether utilizing a medicine wheel philosophy or otherwise, Indigenous conceptualizations of health and

wellness are unlike the compartmentalized and fragmented understandings of health present in Eurocentric Western paradigm and omnipresent in pharmacy education and practice.

Deloria (1997) discussed the compartmentalization of science, in general, and noted that our knowledge of the world became “badly fragmented” when the sciences became divided (p. 42). With the specialization, or fragmentation, of science topics, phenomena and data that do not fit were discarded (Deloria, 1997). Deloria (1997) further elaborated on the discarding of data in specialist subject areas:

Rejected data were called anomalies, and no single discipline assumed responsibility for including anomalies in any of the smaller disciplinary paradigms. Thus, there are literally millions of irrefutable facts which science simply dismisses, even though they go to make up entities and events which composed our world. (p. 42)

Despite Western science’s adoption of relativity theories, Deloria (1997) postulated that “if scientists *really* believed in the unity and interrelatedness of all things, their emphasis would shift dramatically,” including ceasing the use animals for lab research, adopting considerably different ways of studying water and landscapes, and dealing seriously with the by-products of their experiments (p. 42).

Pharmacy education and the profession of pharmacy in general are rooted in a Western science paradigm and are therefore subjected to the same fragmentation of knowledge, particularly as it relates to science and knowledge about health and wellness. While the concept of holistic health and wellness is present in pharmacy education and practice, it is shared as a stand-alone topic and not as the *approach* for teaching and learning all topics (Association of Faculties of Pharmacy of Canada, AFPC, 2017). Atleo (2004) affirmed that “the need to focus on

isolated variables automatically obscures any assumption about the general nature of interrelationships and connections between variables” (p. xiii). Atleo (2004) offered further criticism on the fragmentation of knowledge and isolation of variables in Western science:

...if two variables are found not to be related, does this language not indicate that the universe is fragmented according to scientific criteria? Not only does this use of language, “not significantly related,” reflect a scientific view of existence, but it is also reflected generally in the fragmentation of Western thought – in the separation of church and state, for example – and furthermore in Western policies and practices.” (p. xiii)

While the Western science that fuels pharmacy education indeed yields powerful insights into isolated fragments, the sum total of these insights is a disconnected, inadequate description of the whole (Knudtson & Suzuki, 1992). Indigenous ontologies, however, always assume a meaningful relationship between variables (Atleo, 2004). Additionally, Indigenous ontologies may never be completely substantiated because of human limitations, which is an accepted reality, unlike Western intellectual traditions that will repeatedly attempt to reduce knowledge into variables and describe the relation, or lack of relation, between them. Consider an example offered by Goldstein and Goldstein (1978) regarding studying the cause(s) of lung cancer. After identifying as many people with lung cancer as possible and an equal number of people who do not have the disease, Western-based scientists will list the circumstances attending each case: age, sex, employment, ethnic origin, smoking history, dietary habits, income, the number, age, and sex of children, marital status, neighbourhood lived in, type of house lived in, number of rooms, type of furniture, street, age of parents and cause(s) of their death, details of education, model of car driven, likes and dislikes in books and music, and more (Goldstein & Goldstein,

1978). It quickly becomes apparent that the list has a tremendous number of individual details and with virtually no end. Goldstein and Goldstein (1978) suggested that if one objects that most of the details in the list are irrelevant, the answer must be, “How do we know?” and that “it is only because we already have some feeling, even if hazy, as to possible causes of cancer that we can rule out most of the detailed circumstances of the list” (p.20). Goldstein and Goldstein (1978) concluded that “...many of the great scientific discoveries resulted from recognizing the relevance of facts that were previously overlooked and putting aside facts previously considered important” (p. 20), which sheds light on the interconnectedness of all things.

When it comes to teaching and learning in pharmacy education and practice, concepts of health and wellness are compartmentalized into various human body systems and disease states. When holistic approaches are examined, as well as critical evaluation of the social determinants of health and wellness, it is often performed in an independent way and outside of the context of each individual human body system and/or disease state. Learning outcomes and accreditation standards for pharmacy education in Canada do not necessitate teaching and learning about health and wellness *through* holistic and social determinant approaches and instead only specify teaching *about* holistic and social determinant approaches (Canadian Council for the Accreditation of Pharmacy Programs, CCAPP, 2018; AFPC 2017). As such, both teachers and learners in pharmacy education are individually responsible to determine what, if any, connections can be made between human body systems and/or individual disease states and other external (e.g., social, environmental, political, ecological, etc.) factors, if ever. As a result, teaching and learning in such compartmentalized and fragmented ways continues to privilege and perpetuate Western understandings and approaches to health and wellness in pharmacy education.

Exclusion of land, place, and spirituality

While similar to the compartmentalization of knowledge, health, and wellness, the exclusion of land, place, and spirituality in Eurocentric Western-based science and pharmacy education is worthy of its own evaluation. Within the confines and ‘objectivity’ of the Western scientific method, the roles of the land, place, and spirituality are positioned as untouchable and subjective addendums to the teaching and learning of the health, wellness, disease processes, and healing captured in pharmacy education and practice. Meyer (2013) referred to such subjectivity as “...the stain Science and research has not yet been able to wash away” (p. 96). Regarding spirituality, specifically, Meyer (2013) suggested “...the topic of spirituality has become a pink crystal New Age embarrassment to all forms of science” (p. 94). Meyer (2013) used what she refers to as “holographic epistemology” to design a “(k)new understanding of the philosophy of knowledge, inclusive of all three aspects of nature: physical, mental, *and* spiritual” (p. 94). The inclusion of spirituality in Western-science-based professional programs like pharmacy is, as Meyer (2013) described, “...not a religious idea, *we just think it is*” (p. 97). Spirituality, as both a concept and as a word, does not even appear in the national learning outcomes nor accreditation standards for pharmacy education in Canada (AFPC 2017, CCAPP 2018). The exclusion of spirituality from pharmacy education creates a significant tension for Indigenous learners who operate with the understanding that “...*we are more than our bodies*, more than our minds,” and believe that “*matter is not separate from spirit*” (Meyer, 2013, p. 97).

Deloria and Wildcat (2001) shared critical and insightful remarks about the role(s) of spirituality, land, and place. Wildcat noted that “a great deal of what we experience cannot be explained within the metaphysics of Western science” (Deloria & Wildcat, 2001, p. 12), which is certainly outside of the realm of what is captured in pharmacy education and practice, too.

Despite the intimate connections, relations, and dependency on other living beings, land, air, and water of the Earth's biosphere, science, and certainly pharmacy education and practice, fails to adequately capture such relationships (Deloria & Wildcat, 2001). Western notions of reality and corresponding ideas of knowledge marginalize an entire realm of human experience, such as spirituality, declaring such experiences as unknowable and, consequently, left out of serious consideration (Deloria & Wildcat, 2001). "Our continued existence as part of the biology of the planet," as Wildcat described, "is inextricably bound up with the existence and welfare of the other living beings and places of the Earth: beings and places, understood as persons possessing power, not objects" (Deloria & Wildcat, 2001, p. 12-13). Considering such an intimate relation, and dependency, on land and place, particularly as it is understood by Indigenous Peoples, representing health, wellness, and a variety of disease states in pharmacy education and practice without regard to spirituality, land, and place, is entirely non-Indigenous. Science, and pharmacy education and practice, anesthetizes its students and practitioners to the reality of living peoples' experiences of spirituality (Deloria & Wildcat, 2001).

Western knowledge "rests itself on a foundation of *reason* to understand the true nature of the world, yet it also privileges itself as the fiduciary of all knowledge with the authority to authenticate or invalidate other knowledge (when it gets around to it)" (Doaxter, 2004, p. 618); however, the roles of spirituality, land, and place in health and wellness, particularly in the context of pharmacy education and practice, are simply ignored (AFPC, 2017; CCAPP 2018). Kellert (2005) commented on the importance of connection to nature for children's intellectual, emotional, social, physical and spiritual development. Indigenous Peoples' perceptions of the land, as replicated by Haig-Brown and Hodson (2009), is that "the land...is a complex being – a spiritual and material place from which all life springs" (p. 168). Our Elders have taught us about

the role and meaning of the land and the land's connection to our well-being (Bell, 2016; Desmoulins, 2016; Restoule, Gruner, & Metatwabin, 2013). In a direct and literal sense of the land's connection to human health and wellness, we also know that approximately 25% of the drugs prescribed worldwide are derived from plants (Sahoo, Manchikanti, & Dey, 2010). Unfortunately, though, none of these concepts and realities were ever shared with me in either of my bachelor or doctoral degrees in pharmacy, nor are they mentioned in the educational outcomes and accreditation standards for pharmacy education in Canada (AFPC 2017, CCAPP 2018).

For Indigenous Peoples, land has always been a defining element of Indigenous cultures (King, 2012). As King (2012) described, "land contains the language, the stories, and the histories of a people. It provides water, air, shelter, and food. Land participates in the ceremonies and the songs. And land is home. Not in an abstract way" (p. 218). In a health profession like pharmacy, it is alarming for the irrefutable connections between the land and the health and wellness of individuals and populations to not be required learning, regardless of the inclusion of Indigenous knowledges and perspectives of health and wellness. This disregard of land, place, and spirituality in pharmacy education perpetuates the privileging of Western intellectual traditions and further delegitimizes and erases Indigenous worldviews.

Decolonizing and Indigenizing post-secondary learning

Ottmann (2013) suggested decolonizing teaching and learning begins in the classroom and illustrated ways in which educators, Indigenous or non-Indigenous, can act as decolonization change agents in educational institutions. To begin the process of decolonizing teaching, educators must ask: "Who am I? Where did I come from? Where am I going? What are my responsibilities?" (Ottmann, 2013, p. 15). Such questions instigate a deeply introspective journey

for educators to explore their own truth and then meaningfully and passionately transfer learning to their students (Ottmann, 2013). Recognizing that organizational change begins with individuals, educators are therefore the rate-limiting step who will either further the cause of decolonization and Indigenization or impede it (Ottmann, 2013). In Canadian faculties of pharmacy, specifically, where just one known self-identified Indigenous faculty member exists, much of the progress toward decolonization and Indigenization of pharmacy education is and will continue to be reliant on non-Indigenous educators. Ottmann (2013) highlighted that educators exploring the counter-story subsumed within their teaching will provoke a different story that can open and shift their horizon, which then might "...open the door to learning about others (knowing self, knowing others)," and therefore "...lead to transformation of being and doing for the individual and institution, resulting in authentic relationships, then the addressing of injustices" (p. 16).

Similar ideology to Ottmann's approach to decolonizing and Indigenizing post-secondary teaching and learning is illustrated by Pete, Schneider, and O'Reilly (2013). Universities, they described, have typically served to marginalize and oppress Indigenous Peoples, their ways of knowing, and their histories (Pete, Schneider, & O'Reilly, 2013). The same can be said about pharmacy education in that all students, Indigenous and non-Indigenous, are cognitively assimilated to value Western medicines and approaches to health and wellness over that of Indigenous populations. Just as Ottmann (2013) described, progress can be made, though, even in settings like Canadian faculties of pharmacy where there are limited Indigenous staff and faculty. Pete et al. (2013) emphasized the criticality of introspection and exploring the counter-story subsumed within educators' teaching as a means of decolonizing and Indigenizing teaching and learning. It is anticipated that similar processes and explorations should occur across

Canadian faculties of pharmacy as part of the journey to decolonize and Indigenize pharmacy education and, therefore, providing a more comfortable and familiar territory for Indigenous Peoples in pharmacy.

When efforts to decolonize and Indigenize post-secondary programs do include curricular changes, significant opportunity exists to ensure Indigenous worldviews are incorporated into the curriculum. Ragoonaden and Mueller (2017) shared their experience of developing a university course in collaboration with local First Nations communities and the staff and faculty of the Faculty of Education at the University of British Columbia. Key discoveries at the conclusion of the first offering of their newly revised curriculum included three themes: the importance of learning, peer mentoring, and the relationship with the instructor (Ragoonaden & Mueller, 2017). Recognizing that students who are culturally diverse have a tenuous relationship with schools whose educational practices emphasize Eurocentric and normative approaches, the authors' story of their Indigenized course serves as an excellent exemplar of how the relationship between culturally diverse students, including Indigenous students, and the educational institution can be enhanced.

The impacts on students from decolonizing and Indigenizing health professions education, specifically, can be profound. Such impacts are not only likely to be experienced by the Indigenous Peoples, patients, and communities that students will ultimately serve, but also by the Indigenous students themselves. Indigenous students pursuing audiology and speech therapy, for example, experienced disengagement and detachment from their professional roles and even risked forgetting their own personal practical knowledge¹¹ (Clandinin, 1985) when their lived experiences were not valued, discussed, nor acknowledged throughout their professional learning

¹¹ Personal practical knowledge is knowledge which is imbued with all the experiences that make up a person's whole being, which is comprised of the person's professional and personal experiential history (Clandinin, 1985).

journeys (Pillay & Kathard, 2015). Interactions between a professional and a patient of the same Indigenous community became awkward and a distance was felt between them, which was hypothesized to be rooted in the fact that white culture dominated the teaching and practice of the professionals and made it more challenging for the professionals to remember who they and their patients are (Pillay & Kathard, 2015). As such, effective decolonization and Indigenization of pharmacy education is presumed to promote enhanced experiences among patients they will serve and also for the students themselves.

As faculties of health professions programs, like pharmacy, engage in decolonization and Indigenization, where there are often few Indigenous faculty members to lead such developments, it is recognized that Indigenous Peoples external to the faculty and/or institution are often consulted for assistance. When engaging with such external persons and/or communities, following culturally appropriate protocol is critical. Sasakamoose and Pete (2015) shared a number of essential stories to emphasize the importance of moving forward in a good way. For example, when asking Elders for their guidance in decolonizing and Indigenizing health professions programs, honoraria is usually given; however, institutional processes do not usually facilitate cash honoraria payments and therefore Elders often end up owing tax money and may also see reductions in their old age security payments (Sasakamoose & Pete, 2015). Since reciprocal and genuine relationships are foundational to effective partnerships with and between Indigenous Peoples and communities, avoiding such consequences is imperative when requesting the assistance of Elders, for example. As such, post-secondary faculties and institutions as a whole must ensure that their policies evolve to be conducive to including Indigenous Peoples in their decolonization and Indigenization processes, whether through smudging policies, cash payments for Elders, or catering certain traditional foods to the

institution that were not prepared by an officially ‘recognized’ caterer (Sasakamoose & Pete, 2015). In what is arguably a considerable challenge already, the absence of such policies in faculties of pharmacy will only complicate efforts to decolonize and Indigenize.

How diversity and difference is taken up in pharmacy education literature

Findings from the literature in this area are described below through a series of categories: the four official equity-seeking groups legislated in Canada (people with disabilities, racialized persons, women, and Indigenous individuals) (Government of Canada, 2018), followed by sexually and gender diverse students (e.g., 2SLGBTQ+), and ‘other realms’ of diversity. Findings from (or the absence of) scholarly literature in pharmacy education is summarized for each subgroup and, in cases where there was little or no published scholarly work, findings from related health education programs (e.g., medical and nursing education) are highlighted.

Students in Pharmacy with Disabilities

Unfortunately, only two articles were identified that had a focus on disability in pharmacy education (Boyd, McKenzie, & Holmes Jr., 1999; Smith, Roth, Okoro, Kimberlin, & Odedina, 2011). Smith et al. (2011) focused primarily on the need to include disability within cultural competency in pharmacy education and *not* the education of students with disabilities in pharmacy, although it raises important questions about where and how disability fits in to greater conversations about culture, equity, diversity, and inclusion in pharmacy education. Boyd, McKenzie and Holmes Jr. (1999) focused on revealing the prevalence of learning disabilities among pharmacy students and, with reference to literature in dentistry education, suggested methods for ensuring such students achieve academic success and progress toward becoming licensed pharmacists. Boyd et al. (1999) administered learning disability testing, reported to have

a 82.9% accuracy rate, with 214 pharmacy students across the first, second, and third years of their four-year pharmacy program at Campbell University, in North Carolina, United States of American (USA). Thirty-four of the 214 students (15.9%) had learning disability scores in the 'extreme' value range, consistent with what is seen in the general population and in a similar study with students in dentistry (Boyd et al., 1999). While the accuracy of the screening instrument used was 82.9%, definitive testing may be desired by students, which (at the time of publication in 1999) requires 8-12 hours of testing and has a price point of \$500-1000 USD.

Boyd et al. (1999) suggested that in-house learning disability coordinators and an in-house learning disability program in pharmacy faculties could be offered with the revenue achieved from disability testing; however, applicability of this possibility is uncertain in 2019 (and later) and in other countries, such as Canada. Regardless of the provision and cost of testing, however, Boyd et al. (1999) described a number of advantages to students in pharmacy with learning disabilities when pharmacy educators are made aware of such learning disabilities. For example, allowing such students additional time on exams, providing the opportunity to read examinations out loud, and allowing for students who are weak notetakers to tape-record lectures may significantly improve their performance (Boyd et al., 1999). Improving the education of learning-disabled students will permit them to practice their chosen profession more effectively; however, workplace accommodations are likely to be different than what is available in the classroom and throughout the pharmacy program (Boyd et al., 1999).

People with physical disabilities have been left out of the scholarly literature regarding the education of diversity groups in pharmacy. Boyd, McKenzie and Holmes Jr.'s (1999) exploration of pharmacy students with *learning* disabilities is an excellent addition to the conversation about educating diverse students in pharmacy; however, little attention was paid to

the lived/living experiences of such students and no evaluation of pedagogical practices to accommodate such students was provided. Instead, authors described the potential for increased revenue and relied on the experiences of similar evaluations performed in dentistry education. Understanding the experiences of students with learning and/or physical disabilities in pharmacy education would be of value to ensure pedagogical delivery of pharmacy education is equitable. Depending on the students' disabilities (e.g., type, severity), it would also be helpful for pharmacy educators to be enlightened by such students' transitions from student life into life as a working professional as a way of informing pharmacy educators and faculties about how well (or not well) we are preparing students with disabilities for the work force.

The available literature does not identify if any professional pharmacy skills labs or pharmaceuticals labs are conducive for students with certain physical disabilities, nor any pharmacy practice sites that may or may not be accommodating. This does not mean, however, that colleges and educators of pharmacy and employment sites for pharmacists have not, or would not, engage in accommodating pharmacy students/pharmacists with limitations of certain physical abilities. It would be interesting to know, however, if people living with physical disabilities anticipate not having their disabilities accommodated in pharmacy education and subsequently as a pharmacist and therefore do not apply to pharmacy in the first place. With such stark neglect of disability in pharmacy education, both in 2010 when Smith et al. (2011) submitted their manuscript and still now in 2019 as revealed in this comprehensive literature review, it is unlikely that pharmacy education programs have invested considerable time or resources into educating students in pharmacy living with learning or physical disabilities. Certainly, there may be pharmacy educators who independently employ pedagogical

practices that are sensitive to and inclusive of students in pharmacy with disabilities, although no such practices can be found in the scholarly literature in pharmacy education.

Pharmacy Students of Colour (Visible Minorities)

Little peer-reviewed scholarly literature in pharmacy education exists regarding the education of pharmacy students of colour (Bush, McLaughlin, & White, 2017; Nkansah et al., 2009). Within such limited scholarly work, pharmacy students of colour are grouped into a category authors refer to as underrepresented minority students (Alonzo, Bains, Rhee, Htwe, Russell, De Vore, Chen, Nguyen, Rajagopalan, Schulte, & Doroudgar, 2019; Bush, McLaughlin, & White, 2017; Hayes, 2008; Nkansah et al., 2009). Each peer-reviewed publication that focuses on underrepresented minority students in pharmacy has been the product of American institutions of pharmacy and education and define underrepresented minority students to include Black persons, American Indians/Alaska Natives, Hispanics of Latinos, and Hawaiian or Pacific Islanders (White et al., 2013). Reflecting on parallel literature in medical education, Nkansah et al. (2009) noted that underrepresented minority students, regardless of campus diversity, were more likely to plan to practice in underserved areas. Other studies, albeit not within *pharmacy* education, have validated this trend (AACN, 2004). The few articles that do address pharmacy students of colour / underrepresented minorities focus primarily on what they refer to as ‘pipeline programs’ that recruit, encourage, and/or assist such students in applying *to* pharmacy and do not focus on the teaching and learning of these students who may already be *in* a school of pharmacy.

While the overall lack of literature regarding the education of pharmacy students belonging to diverse and marginalized groups is concerning, it is particularly disconcerting to witness so few examinations into the education and experiences of students of colour / visible

minorities in pharmacy programs when there are decades of scholarly work in this area for education in general. When it comes to the study of students from diversity groups and considering the students who are marginalized, authors like Freire (1970) have contributed extensive thought. In his discussion about those who are oppressed, such as students of colour / visible minorities, Friere (1970) shared:

The truth is, however, that the oppressed are not “marginals,” are not people living “outside” society. They have always been “inside” – inside the structure which made them “beings for others.” The solution is not to “integrate” them into the structure of oppression, but to transform that structure so that they can become “beings for themselves.” (p. 74)

This paradigm is absent in the pharmacy education literature. Publications that capture the education of pharmacy students belonging to marginalized groups is predominantly presented by and from the ‘oppressors’ and is most often limited to demographic and admission-related data.

We have not heard the voices of the oppressed in pharmacy education and, therefore, we can only assume – from an outsider’s perspective – that visible minorities experience oppression in pharmacy education, as is known to be true for visible minorities in other post-secondary and health professional programs (Thurman, Johnson, & Thumper, 2019). In post-secondary education in general, racialized students are treated and responded to differently and receive less attention from faculty members than white students (Henry, Dua, James, Kobayashi, Li, Ramos, & Smith, 2017, St. Denis, 2007), which is expected to also be witnessed in pharmacy education. As Friere (1970) questioned, “who are better prepared than the oppressed to understand the terrible significance of an oppressive society? Who suffer the effects of oppression more than the oppressed?” (p. 45). Research in pharmacy education must center the voices of racialized

pharmacy students and should tell us more than simply the proportions of racialized students in pharmacy or survey responses of students' experiences. Pharmacy education researchers should engage in a variety of research methodologies to capture and center the voices of pharmacy students of colour, such as through the use of decolonizing and/or Indigenous methodologies. Additionally, such research should be led by pharmacy faculty members of colour (Turner, González, & Wood, 2008).

Female Pharmacy Students

One peer-reviewed article was identified that focused on female students in pharmacy (Janzen, Fitzpatrick, Jensen, & Suveges, 2013). Yanchick, Baldwin, Bootman, Carter, Crabtree, and Maine (2014) provided an analysis of women in pharmacy education in their report of the 2013-2014 Argus Commission on diversity and inclusion in pharmacy education, although the focus was on female pharmacy educators and not female pharmacy students. An increase in the number of female pharmacy graduates between 1989 and 2009 was noted, along with an increase in the percentage of female pharmacy educators in the USA from 20.7% to 45.5% during the same time period, although these increases were not unpacked or scrutinized (Yanchick et al., 2014). Yanchick et al. (2014) hypothesized that the visibility of women and their officially recognized contributions to pharmacy and pharmacy education would likely reflect what was witnessed in veterinary medicine, where an evaluation of 250 years of individuals celebrated in veterinary medicine were virtually all White males. Such revelations of the realities of the profession and workforce are likely to have direct impacts on female students in the respective discipline.

In a survey performed by Janzen et al. (2013), students of all genders showed a low level of understanding about gender-based differences and barriers within the profession of pharmacy.

Pharmacy professionals have deemed the work of Janzen et al. (2013) to indicate a lack of preparation among female pharmacy students for the barriers they will face in their workplace and a lack of general strategies and skills to overcome such barriers (CPhA, 2019). Additionally, there is “a lack of awareness among men in the pharmacy profession of the role they can play in dismantling gender-based barriers for their female colleagues” (CPhA, 2019, p. 10). None of the resources identified in this review revealed nor analyzed teaching and learning practices in pharmacy education as it relates to women as a marginalized group in various pharmacy environments and/or their experiences of enduring pharmacy school as women. Further, none of the identified literature employed feminist theory as the theoretical framework for their inquiries into what pharmacy education looks like for women.

The pharmacy profession has historically been male dominated, although women have comprised 60-70% of pharmacists in Canada between 2007 and 2016 (CPhA, 2019). Despite 60-70% of pharmacists in Canada being women, only 40% of deans, chairs, and directors of colleges and schools of pharmacy in Canada, and 30% in the USA, are women (CPhA, 2019). Although the work of Janzen et al. (2013) examined both male and female pharmacy students’ perceptions of gender differences in pharmacy, a survey methodology was used at just one site and focused on the pharmacy workforce versus pharmacy education. While the pharmacy student body continues to be female dominated (CPhA, 2019), it is unknown what the experiences of women are in pharmacy education. Although post-secondary education literature tells us that women ask less questions than men and are frequently interrupted by their male classmates (Henry et al., 2017; hooks, 1994), for example, such realities have not been assessed in pharmacy education.

How many of the most frequently used pharmacy textbooks and resources used in pharmacy classrooms are authored by men? Are there differences in assessment outcomes between identically or similarly answered questions on examinations and other assignments in pharmacy when there is an assumption or confirmation the student is female? There are likely many experiences of female pharmacy students, and numerous faults of pharmacy educators, that account for the discordance between women comprising the vast majority of pharmacy classrooms but the minority of leadership positions in pharmacy; however, scholarly literature in pharmacy education and the education of diverse and marginalized students in pharmacy has yet to invest in understanding the specific experiences of women.

Indigenous Pharmacy Students

Only one peer-reviewed work was available regarding the teaching and learning of Indigenous students in pharmacy (Swidrovich, 2019). Although the review offered by Swidrovich (2019) did not find any published peer-reviewed literature about pharmacy education for Indigenous students, a number of ways pharmacy education might change in order to better-serve Indigenous students in pharmacy were described. Such suggestions included integrating Indigenous (First Nations, Métis, and Inuit) knowledges into pharmacy education, ensuring representation of Indigenous staff and faculty in post-secondary programs of pharmacy who are available to teach and mentor Indigenous pharmacy students, and decolonizing structures and processes in pharmacy education to make space for Indigenization of pharmacy education. Additionally, actions related to evolutions in recruitment, admissions processes, instructional design, assessment, and creating safe and familiar places and spaces are suggested as means to nurture Indigenous students in pharmacy programs (Swidrovich, 2019). In the Canadian context in particular, Swidrovich (2019) proposed that decolonizing and Indigenizing practices in

pharmacy education are expected to not only create positive academic experiences for both Indigenous and non-Indigenous students in pharmacy, but improved health outcomes experienced by Indigenous people in Canada will likely also be witnessed.

It is well-known that Indigenous students face unique barriers in post-secondary education (Battiste, Bell, & Findlay, 2002; Kanu, 2011; Sinclair, 2004); however, little is known about the experiences of Indigenous students in *pharmacy education* (Swidrovich, 2019). Until research is conducted in the area of pharmacy education of Indigenous students, we are left with turning to scholarly literature on the educational experiences of Indigenous students in similar health science disciplines, such as nursing and medicine. Despite efforts to make health professions schooling more inclusive, for example, the system of teaching and learning is primarily reflective of white, Western, or Eurocentric interests (Sherwood & Edwards, 2006). Additionally, Indigenous approaches to teaching and learning are more than a difference in perspectives (e.g., versus Western perspectives) and, instead, focus on one's relationship with the universe, the Creator, and the land (Sinclair, 2004), which appears to be missing in pharmacy education. With so few Indigenous students in pharmacy across Canada (Lillie, 2019), it is important that future research in this area centers the voices of these Indigenous students and to not be presented from the paradigm and voices of non-Indigenous students, faculty, and researchers. Further, opportunities and pathways for Indigenous students to pursue graduate studies in pharmacy and take on faculty roles is critical to ensure Indigenous worldviews, knowledges, and pedagogies are present and shared in faculties of pharmacy.

Sexually and Gender Diverse Pharmacy Students

At the time this literature search was conducted, there were no identifiable publications regarding the education of sexually and gender diverse (e.g., lesbian, gay, bisexual, transgender,

queer, Two Spirit, and others, or 2SLGBTQ+) students in pharmacy. Some of the identified literature about diversity in pharmacy education fail to mention 2SLGBTQ+ students throughout their manuscripts. A few of the scholarly publications regarding pharmacy education for diverse students indicate the paucity of information about educating 2SLGBTQ+ students in pharmacy, although no literature has been dedicated to centering the experiences of such students in pharmacy, as was also identified in 2009 by Nkansah et al. No suggestions in the published scholarly work in pharmacy education evaluate the presence of homophobic or transphobic language, the use of pronouns in classrooms and professional laboratory experiences, or other instances of erasure of sexually and gender diverse students. Additionally, none of the identified articles made mention of self-identification or disclosure of students' sexual or gender identities and, therefore, the proportion of sexually and gender diverse students in pharmacy education is unknown.

Queer theory and queer pedagogy are absent in the scholarly literature for pharmacy education. Sexual and gender diversity does appear, however, as a curricular topic in relation to providing patient care to sexually and gender diverse persons (Redfern & Jann, 2019). Scholarship in pharmacy education, therefore, has much to learn from other health disciplines with extensive study in queering classrooms and using queer theory, such as social work education (MacKinnon, 2011). The inclusion of 2SLGBTQ+ perspectives and experiences in the classroom is necessary to adequately include 2SLGBTQ+ students and prepare graduates to practice effectively (Wagaman, 2018). Queering the classroom builds skills in students beyond practice with 2SLGBTQ+ people and communities, thereby enhancing their capacity to engage diversity in practice more generally and to advance human rights and social justice (Wagaman, 2018).

Scholarship in social work education also informs us that 2SLGBTQ+ students experience harmful discourse in classrooms where they are often misgendered, tokenized, and erased through cis-/heteronormative language and classroom teachings (Atteberry-Ash, 2019; Britzman & Gilbert, 2004). Understanding the experiences of 2SLGBTQ+ students in pharmacy classrooms is an area that warrants future research. In addition to evaluating harmful discourse, assessing the presence of institutional homophobia/transphobia in pharmacy education, textbooks, curricula, admissions processes, etc., is critical to ensure inclusion of sexually and gender diverse persons in pharmacy classrooms. Ideally, future research in this area will be performed by 2SLGBTQ+ pharmacy educators and through feminist, queer, and decolonizing theoretical frameworks.

Other Realms of Diversity in Pharmacy Students

Other realms of diversity are noted in the limited scholarly literature regarding pharmacy education and the education of diverse or marginalized groups. Yanchick et al. (2014) described diversity as also including cognitive diversity (e.g., thought, perspective), which they differentiate from identity diversity (e.g., race, ethnicity, gender); however, as a review publication, there was no investigation or study into such diversity other than simply naming the various ways diversity is captured in the pharmacy education literature. Not captured elsewhere, Nohria, Adams, and Garrison (2019) investigated the inclusion of socioeconomic status as a measure of diversity in their efforts to produce a holistic pharmacy school admission process. Socioeconomic status was measured using a novel indicator, referred to as the education and occupation (EO) indicator, which is based on complex parental education and occupation information provided by applicants (Nohria, Adams, & Garrison, 2019). The EO indicator was used to describe acceptance patterns within each pharmacy application cycle, explore

correlations with other demographic and academic indicators, and develop a regression model to understand the impact of this indicator on applicants' acceptance into pharmacy school (Nohria, Adams, & Garrison, 2019). Following admission into pharmacy school, an investigation into the experiences of students from/in low socioeconomic status during pharmacy school was not offered by Nohria, Adams, and Garrison (2019).

Nohria, Adams, and Garrison (2019) investigated the inclusion of socioeconomic status as a measure of diversity in their efforts to produce a holistic pharmacy school admission process; however, their study did not consider the lives and educational journeys of such students *after* being admitted into pharmacy. Classism is present in academic settings (Langhout, Rosselli, & Feinstein, 2007) and is also likely to exist within pharmacy classrooms. Classism, much like sexism, is witnessed when people occupying lower social class levels are treated in ways that exclude, devalue, discount, and separate them (Loft, 2002, as cited in Langhout, Rosselli, & Feinstein, 2007). As such, questions may be raised about the overall wellbeing and sense of belonging for pharmacy students admitted through equity seats reserved for students from low socioeconomic status. Opportunity for future study also exists in other broad concepts of diversity in pharmacy students, such as the diversities of identities and of cognitive diversity as described by Yanchick et al. (2014).

Another missing area of study in pharmacy education is discourse related to political and religious diversity in pharmacy students and how, or if, pharmacy classrooms and curricula may be perceived or experienced to be discriminatory. For example, as polarization in political ideologies continues to grow in North America, certain topics in pharmacy education may further contribute to polarization and disagreement between pharmacy students (and pharmacy educators), such as vaccinations, medications for the management of addictions/substance use

disorders, and medications for the abortion of pregnancy. Understanding the clash of political and religious diversity among pharmacy students with topics taught and learned in pharmacy classrooms, if any such clash indeed exists, will be important for pharmacy educators to navigate their pedagogical approaches to such topics and for their preparation of students to navigate the same discussions with the future patients, families, and communities they will work with.

Overall conclusions of literature review

Reflecting on the evaluated literature, actualizing decolonization, Indigenization, reconciliation, and honouring diversity in Canadian faculties of pharmacy will require significant work across a variety of facets of pharmacy education. Not only must Canadian faculties of pharmacy increase efforts to teach Indigenous content, but also must adapt to the changing landscape of Canada's population to be more inclusive of Indigenous learners, staff, and faculty, especially considering the rapid growth of Indigenous populations in Canada. Committed and meaningful efforts to recruit and retain Indigenous staff and faculty must be a priority. Actions related to Indigenous engagement and the development, inclusion, and teaching of Indigenous content should be led or co-led, where possible, by Indigenous staff and faculty, in keeping with a 'nothing about us without us' philosophy. In faculties of pharmacy with no or few self-identified Indigenous staff/faculty, human resources personnel who specialize in the strategic recruitment and retention of Indigenous employees should be consulted for assistance. Attaining a critical mass of Indigenous staff and faculty across Canadian faculties of pharmacy will not only ensure a more representative workforce, especially in the prairie provinces where the Indigenous population is proportionally the highest, it but may also ease the discomfort of non-Indigenous instructors who may be responsible for the development and teaching of Indigenous

content. For Indigenous learners who are considering or who are already in a pharmacy program, having Indigenous staff/faculty mentors can be exceptionally inspiring and encouraging.

This review also examined diversity-related pharmacy educational research as it takes up the pharmacy education and the education of diverse groups. Disappointingly, scholarly literature regarding pharmacy education and the education of diversity groups is few and far between. Although a number of peer-reviewed publications were identified with respect to pharmacy education for students belonging to diverse or marginalized groups, much of this literature *called for* diversity-related research rather than *shared* diversity-related research already carried through in pharmacy education. The scholarly literature appears to focus on diversity either before or after pharmacy education and not *during* pharmacy school, or about diversity education for all students as a curricular topic as it applies to eventually working with diverse patients. As such, we are left with little information about the experiences of diverse and marginalized student groups throughout their pharmacy school careers. Interestingly, most of the literature identified was from the United States of America and almost all resources were published in the *American Journal of Pharmaceutical Education*, which raises questions about the applicability to pharmacy students in other countries around the world.

Disappointingly, the scholarly literature in pharmacy education is missing critical theories, topics, and pedagogical practices, such as anti-racist/anti-oppressive education, critical race theory, queer theory, feminist theory, disability theory, and no identifiable usage of decolonizing or Indigenous methodologies in pharmacy education research. Although there are a number of pharmacy education publications regarding the admission statistics of diverse groups, there is much left to be investigated in the area of pedagogical practices, assessment and evaluation, curricular innovation, and other classroom and programmatic strategies to foster a

culture of equity, diversity, and inclusion in pharmacy classrooms. Additionally, as the scholarly literature in pharmacy education grows in the area of pharmacy education for students belonging to diverse groups, future research must also name and attempt to navigate intersectionalities of such diverse identities in pharmacy education.

Recognizing the high level of visibility, accessibility, and presence of pharmacists in health care, it is critical to embark, or continue, on a research path that interrogates concepts of equity, diversity, and inclusion in pharmacy education. Future research in this area should inform educators and faculties of pharmacy of best and promising practices to ensure no students are 'left behind' in pharmacy classrooms. Pharmacy graduates will be serving communities that are ever evolving in terms of diversity and modelling the fostering of equity, diversity, and inclusion in pharmacy classrooms is also imperative to ensure pharmacy graduates are prepared to operate in a similar way once they enter their professional practices. Employing a variety of research methods, from a variety of theoretical frameworks, will be important in all research efforts that capture pharmacy education for students from diverse and marginalized groups.

The existing scholarly literature in pharmacy education does little to change the norms of a traditional culture not originally intended for minorities, women, and others federally protected groups. Enhancing the compositional diversity, or the structural diversity is often the first step in creating a nurturing environment as diversity must be present for changes in perceptions and behaviours to occur. However, as Bush et al. (2017) described, increasing the number of diverse individuals in a school or college of pharmacy is not sufficient and this act independent of deeper measures will not promote an improved climate. Certainly, navigating a path forward in better understanding how to best educate pharmacy students of diverse and/or marginalized groups will

be a struggle. However, as Friere (1970) eloquently stated, “And in this struggle this pedagogy will be made and remade” (p. 48).

CHAPTER THREE

METHODOLOGY AND METHODS

Kovach (2009) noted that “any methodology is both a knowledge belief system (encompassing ontology and epistemology) and the actual methods” (p. 25). Unlike other methodological approaches that may be rooted in Eurocentric Western paradigms, Indigenous methodologies are deeply rooted in the distinct commonalities in worldview that are shared across Indigenous Peoples. Indigenous worldviews correspond to the entire spectrum of philosophy, history, heritage, ethics, flora and fauna, educational processes, and the relationalities between all beings and ideas – material and non-material (Snively & Williams, 2016). In a research context, relationality is not only recognized to be about interpersonal relationships and the research subjects a researcher is working with, but also the relationship with all of creation (Wilson, 2008). In research, Wilson (2001) noted that the researcher is answerable to *all* their relations. Expressing such concepts and relationalities, Indigenous methodologies will often use metaphoric framing to contextualize the research process and research findings (Cajete, 2000). I first discuss three major components of what constitutes an Indigenous paradigm, then introduce Indigenous theory that is informed by a thematic analysis, followed by a summary of the use of metaphoric framing to broadly discuss Indigenous methodologies. Finally, I describe the method (conversational method) that was used in this research.

Indigenous Paradigm

Indigenous methodologies are distinct from other methodologies because of their flow from an Indigenous paradigm (Gone, 2019; Kovach, 2010; McGuire-Adams, 2019). It is understood that “tribal epistemologies are the centre of Indigenous methodologies, and it is this

epistemological framework that makes them distinct from Western qualitative approaches” (Kovach, 2009, p. 25). As such, while there are shared commonalities between Indigenous methodologies and qualitative methodologies, for example, Indigenous paradigm is the ultimate driving force behind Indigenous methodologies. As such, the description, understanding, and practice of Indigenous methodologies requires a fundamental understanding of Indigenous paradigm. While the number of aspects of an Indigenous paradigm is limitless, I briefly highlight three specific foundational and personal concepts as an attempt to broadly introduce Indigenous paradigm: relationality, reciprocity, and storytelling.

Relationality

From a personal perspective, I define relationality as the relationships that exist between all beings and ideas – material and non-material. Relationality has defined all of my life experiences no matter how small or large. I believe nothing exists independently and everything and everyone are interconnected. My successes, and my failures, have always been deeply rooted in the relationships that have nurtured me and guided me on my path. Graham (2014) described this Indigenous relationality as “an elaborate, complex and refined system of social, moral, spiritual and community obligations that provided an ordered universe for people” (p. 17). Knowledge itself is described to be relational and shared with all creation (Wilson, 2008).

In a research context, relationality is not only recognized to be about interpersonal relationships and the research subjects a researcher is working with, but also the relationship with all of creation (Wilson, 2008). In research, Wilson (2001) noted that the researcher is answerable to *all* their relations. Wilson further explained relationality in Indigenous methodologies in the following way:

For research it is important to think about our relationship with the ideas and concepts that we are explaining. Because this relationship is shared and mutual, ideas or knowledge cannot be owned or discovered. Appropriation of Indigenous culture and knowledge has taken place in the past when proper relationships have not been established and honored between researchers and their subjects. Knowledge and peoples will cease to be objectified when researchers fulfill their role in the research relationship through their methodology. (p. 177)

As such, researchers must be guided by and move forward with a strong foundation of relationality to genuinely employ Indigenous methodologies in their research and ensure that the research relationship is mutually beneficial (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada [TCPS2], 2014).

Reciprocity

In research, the practice of reciprocity should still be observed. In fact, Indigenous methodologies expect reciprocity in all research engagements. The notion of reciprocity in research involving First Nations, Métis, and Inuit peoples is noted in various policies and guidelines, such as in Chapter 9 of the Tri-council Policy Statement second edition (TCPS2, 2014). In contrast with observational techniques often employed in research that attempt to be unobtrusive and not influence the environment studied, Indigenous methodologies require respectful and reciprocal relationships within the communities where the research is taking place (Windchief, Polacek, Munson, Ulrich, & Cummins, 2018). Doing research following Indigenous methodologies implies doing something good for Indigenous communities (Drugge, 2016, p. 39). “Reciprocity in Indigenous research rests on the necessary relationship between the scholar and

the community that is studied. When the scholar gets something from the community to be able to produce a scholarly work, she has to give something back to the community” (Drugge, 2016, p. 40-41). It is both reassuring and unique that Indigenous methodologies practice the Indigenous paradigm characteristic of reciprocity.

Storytelling

Stories have fascinated and captivated me for as long as I can remember. Stories shared with me not only educate me but also strengthen my relationship with the storyteller. Additionally, in my own walk of life and also commonly practiced across Indigenous communities, stories are often offered in return to being told a story. As such, relationality, reciprocity, and storytelling are all interconnected and help facilitate one another. I have often wondered how and why storytelling has become as rigorous and structured as it has in Western research methods and academia in general. Why is it that a person’s story suddenly becomes ‘valid’ once it is ‘researched,’ written down, peer-reviewed, and then published? The story is the same regardless of the medium by which it is shared.

In doing Indigenous methodologies, storytelling may become the primary method used. In research initiatives that do not utilize storytelling for the acquisition of knowledge, it is likely that the researcher(s) will engage in storytelling for the purpose of relationship building and as a means of reciprocity necessary for authentic Indigenous methodologies. Using traditional storytelling as a research method “links Indigenous worldviews, shaping the approach of the research; the theoretical and conceptual frameworks; and the epistemology, methodology, and ethics” (Datta, 2018, p. 35). Archibald and Smith (2019) have beautifully described such a research method as ‘storywork,’ which is discussed in detail later in this chapter. One methodological approach used in Indigenous research is the conversational method (Kovach,

2010). The conversational method “is of significance to Indigenous methodologies because it is a method of gathering knowledge based on oral storytelling tradition congruent with an Indigenous paradigm” (p. 40). Indigenous Peoples and their ways of understanding do not receive attention and, in most cases, Indigenous voices get lost within Western forms of data analysis and academic writing (Datta, 2018). As such, storytelling is a central component in both Indigenous paradigm and in Indigenous methodologies.

Indigenous Theory and Indigenous Theorizing

Being conscious of theory in all research is critical and “...is particularly key when it comes to Indigenous research, as it can help the researcher avoid the deficit theorizing of Indigenous Peoples, which happens regularly, intentionally or not, when Western theory is applied to Indigenous experience” (Kovach, 2020). Theory is philosophical, conceptual, and intellectual and, consciously or unconsciously, reveals our beliefs and influences our actions (Kovach, 2020). Indigenous theory in general, like specific Indigenous theories across the world such as Kaupapa Māori theory (Smith, 1997), is drawn from an Indigenous paradigm. Million (2014) beautifully captured this concept when she said, “Indigenous scholars recognize orally based communal knowledge as organized epistemic systems that *do* exist and whose influence is active even though they might not be recognized as legitimized by academia” (p. 35). Kovach suggested that “as sentient beings, we acquire theories through living in the world from family, schooling, social media, and the like” (Kovach, 2020, p. 180).

Indigenous theory is wholistic, multi-layered, and encompasses the spiritual, emotional, mental, and physical elements of being, which acknowledge the past, present, and future (Abolson, 2010). It is important to note that Indigenous paradigm and Indigenous theory are different, although related. An Indigenous paradigm, which forms the epistemological basis, is

about how a person goes about research from the onset of the work. In other words, Indigenous paradigm covers the big picture design of a person's research, whereas Indigenous theory is specific to analysis. Kovach (personal communication, February 25, 2024) has decried Indigenous paradigm as the big picture Eagle's view, which includes epistemology and axiology. The eagle sees all of the research, including how we come to determine our questions, how we shape our methods, our care, and attention to ethics, as well as our choice of Indigenous theory. The field mouse's view, however, is more detailed and specific. The field mouse's gift is in the realm of theory in that theory concerns itself specifically with analysis and meaning-making. The field mouse uses Indigenous theory to ensure that the Indigenous stories we hear are analyzed, interpreted, and represented in an Indigenous way (Kovach, personal communication, February 25, 2024). Indigenous theory includes the following considerations: 1) Indigenous knowledge as distinct, 2) Historical and contextual background of the Indigenous community I focused on¹² for my research, and 3) Colonial (past and present) implications on Indigenous lives (Kovach, 2020). I analyzed my findings and generated themes based on these conditions in mind and from an Indigenous paradigm, which include the three elements discussed above (relationality, reciprocity, and storytelling).

Like Kovach (2020), I see a theoretical framework (e.g., Indigenous theory) as relevant in every aspect of research. With respect to Indigenous theory and Indigenous theorizing, I side with Charmaz (2010) in that my preference is for theorizing as it is a practice that is animate, active, alive, and evolving, whereas theory (versus theorizing) tends to thingify (Kovach, 2020). Each of the three emphasis areas in Indigenous theorizing (Kovach, 2020) were critical in this study. The axiological-cultural emphasis "... has, as a focus, Indigenous beliefs, values, and

¹² The Indigenous community focused on in this research is the collective of First Nations, Métis, and/or Inuk persons who were drawn to, applied for, and experienced (or are still experiencing) pharmacy education in Canada.

practices found within Indigenous cultures” (Kovach, 2020, p.188). The decolonizing, anti-colonial emphasis focuses on “...the colonial power dynamic between Indigeneity and Eurocentrism, as it exists within contemporary zones of contact” (Kovach, 2020, p. 189). The decolonial emphasis in Indigenous theorizing “... reveals the Indigenous-settler power relationship so as to advance the aim of social justice for Indigenous Peoples” (Kovach, 2020, p. 188). Indigenous theory can open the door to theorizing differently or theorizing about issues the literature has not yet fully recognized, lending itself well to the consideration of this study’s research wonder (Bruton, Zahra, Van de Ven, & Hitt, 2021). Finally, the shared-space – liminal space emphasis “... focuses on how differing worldviews might coexist together in a non-assimilative, respectful manner” (Kovach, 2020, p. 189). Kovach (2020) noted that, in research, if the theory syncs with an Indigenous epistemic foundation and Indigenous voices are included in the articulation, it is Indigenous theorizing. Given this research was performed by an Indigenous person, with only Indigenous participants, and given that the challenges and opportunities of Indigenous Peoples and their worldviews within a Western-dominated institution and profession, Indigenous theorizing was the most logical, and natural, approach for this work. As such, Indigenous theorizing was alive and active throughout this project and informed the interpretation and presentation of findings.

Metaphoric Framing in Indigenous Methodologies and Research

The emphasis on stories and storytelling as central components to Indigenous methodologies that are rooted in an Indigenous paradigm feeds into the use of metaphorical framing, which is another distinguishable difference between Indigenous methodologies and other research methodologies. Stories are powerful methods of teaching, learning, and discovery, and often are framed with metaphors (Foy, 2009). Metaphor is an important source of evidence

for understanding the ways we think and act and may enhance learning through the innate linguistic and socio-cultural nature of the metaphor(s) used (Lavellee, 2009; Snively & Williams, 2009). Fiddler (2014), for example, used the *Nehiyaw* cultural tradition of *mosahkina wihkaskwa* (harvesting and braiding sweetgrass) as a conceptual framework for her research. The practice of *mosahkina wihkaskwa* involves preparation,

seeking proper guidance and permission, adhering to ethics and protocol, gathering only what is needed, sorting according to size, ensuring everything fits together, taking care in storage and sharing with others, and guaranteeing that it is used for the well-being of self and others. (Fiddler, 2014, p. 55)

Each step of *mosahkina wihkaskwa* corresponds to a parallel practice of doing Indigenous methodologies and, in Fiddler's (2014) case, the conversational method. Fiddler's use of the harvesting and braiding of sweetgrass as a conceptual framework is also reminiscent of Kimmerer's (2013) stories about braiding sweetgrass and the bringing-together of knowledge systems, which resonates with the conceptual framework used in this study. Such use of metaphor in research provides an opportunity to examine phenomena from a unique and creative perspective. Metaphors can be used to provide structure to the data, to understand a familiar topic in a new light, to identify situation-specific interventions, and to evoke emotion (Carpenter, 2008).

My Own Metaphoric Framing of Indigenous Methodologies

The metaphor I am offering to frame Indigenous methodologies and research is water in its various physical states. While my focus will be on Indigenous methodologies and research, I will also discuss Western methodologies using the same metaphor of water as a way of emphasizing both similarities and, more importantly, differences between Indigenous and

Western methodologies. I have chosen water in its liquid form to represent Indigenous knowledges, methodologies, and research, while water in its solid form (ice) will represent Western knowledges, methodologies, and research.

Liquid water, which I am using to represent Indigenous knowledges, methodologies, and research, not only provides life but also houses life. Major bodies of water, such as oceans, lakes, and rivers, carry incredible and diverse life forms that call the water home. The life, stories, and histories that exist within the Earth's water are astounding and with much more to be discovered and revealed; however, it is likely there are some parts of our oceans, lakes, and rivers that will never, and should never, be revealed to the outside world. Our water systems in and of themselves are their own ecosystems. In addition, the relationships that our waters and the world around and within the water have is another ecosystem. The vast waters that cover Mother Earth can only be fully understood (or not) in its entirety and not by any one or more fraction of the vast waters. It is unreasonable, though, to ever make an attempt to fully understand all of the Earth's water and the relationships it exhibits with the world around it in its entirety. Perhaps, then, the Earth's waters may best be left alone and our role as humans should instead be to understand and analyze our own relationships with the water instead of the water itself.

In a research context, why do we take, study, and analyze small portions of our Earth's water and assume to 'understand' it? We may indeed come to know something instead of nothing, but without the context of the world around and within that water, we have only a constructed a fragmented and incomplete understanding of the water. Such small portions of 'researched' water supply do not exist in the global and relational context of the water's actual life, so what are we really learning from the microanalyses of water?

Indigenous methodologies “require exploration of identity, an ability to be vulnerable, a desire for restitution, and an opening for awakenings” (Kovach, 2016, p. 217). Indigenous methodologies cannot be done “without having a comprehension of tribal knowledge systems and how *Indigenous epistemology* fits within it” (Kovach, 2016, p. 218). As such, how can we dissect and analyze the Earth’s water without first truly understanding it, being part of it, exploring our own relationship with it, and including the water itself in the process and interpretation of the research? I ask this question, though, from an Indigenous paradigm, which I am not sure a common researcher from a Western paradigm may even consider.

Indigenous Peoples and our ways of understanding “do not receive attention and, in most cases, Indigenous voices get lost within Western forms of data analysis and academic writing” (Datta, 2018, p. 35). I believe the water metaphor is conducive to describing this phenomenon. I see Indigenous voices and knowledges as liquid water (our oceans, lakes, and rivers) and Western forms of data analysis and academic writing as water, too, but in its solid-state (ice). A Western methodological approach attempts to capture and ‘freeze’ knowledge (data), which is not (always) how such knowledge exists within the context of our living world. Researching our Earth water systems, through a Western approach, can be considered as scooping water from our water system and freezing it into a large block of ice. While the ice indeed contains the entirety of the water that was retrieved (or ‘researched’), it no longer exists in the context of its natural state and the relationship any other entity used to have with that selected volume of water will now exist in an entirely different and foreign contextual relationship. In its frozen physical state, water loses its fluidity, or flux, which is described to be “the experiential quality of how energy moves in the form of an animated holism” (Kovach, 2016, p. 220). It is understood that “within Indigenous holism, Indigenous Elders and philosophers have articulated the movement of

energies as an important aspect of tribal knowledges” (Kovach, 2016, p. 200). As articulated earlier, “tribal epistemologies are the centre of Indigenous methodologies, and it is this epistemological framework that makes them distinct from Western qualitative approaches” (Kovach, 2009, p. 25). As such, freezing liquid water into ice – or, attempting to study Indigenous knowledges using Western methodologies and/or coming from a non-Indigenous paradigm – isolates and fragments knowledge, limiting potential possibilities (Kovach, 2016).

Considering the same metaphorical framing of classifying Indigenous knowledges, methodologies, and research as liquid water, Western methodologies, when used to research Indigenous knowledges, peoples, and ways of being, acts as a water purification system that filters out what is wanted and what is not wanted. In such a scenario, what is wanted versus what is not wanted is determined by the filter (researcher) and not by the water (Indigenous knowledges, peoples, and ways of being). Indigenous knowledges, peoples, and ways of being should not be ‘filtered’ and broken down in this way. It should not be up to the researcher or data analysts to compartmentalize and/or filter the ‘water.’ An Indigenous paradigm “consists of notions of constant flux, wholeness and interrelationship, all creation being animate and imbued with spirit, and space (land) being the main reference point to relate to all else, and the manifestation of the constant flux in cycles, phases and repetitive patterns” (Little Bear, 2004, as cited in Kovach, 2016, p. 220). Incongruencies between non-Indigenous paradigm and the methodologies and research that attempt to explain Indigenous entities or ideas loses the holism, relationality, and flux inherent within such entities and ideas. In fact, Western science itself can assist in explaining this metaphor in that the chemical bonds in liquid water are in a constant flux of breaking and re-connecting to other molecules of water (H₂O); however, in its solid state (ice), the chemical bonds between molecules of water form a strong, sturdy, and rigid hexagonal

structure (Zumdahl, 2019). Thus, even though the water is still water, its structure and relationship with the world around it becomes changed entirely.

Liquid water – or, Indigenous knowledges, methodologies, and research – follows an eternal cycle (Government of Canada, 2013). Just as water has been constant in quantity and continuously in motion since the beginning of time, so have Indigenous knowledges. Indigenous knowledges are held in the relationships and connections formed with the environment that surrounds us and there is no distinction made between relationships made with other people and those made with the environment (Wilson, 2008). Like the eternal cycle of water, Indigenous knowledges are in constant flux and undergo evaporation, transpiration, percolation, precipitation, condensation, and more; it is never ‘lost,’ but rather it is dynamic, mobile, and what knowledge is acquired from the land will eventually be returned to the land and almost certainly will be returned to the land in a different place than where it was found previously. As such, to apply research methodologies to learn about the water, the paradigm and methodologies used to do so must be sensitive, reactive, and adaptive in the consideration of all creation that water may have cycled through. In a humanistic sense and through an Indigenous paradigm, each individual human is not a single entity but rather each human carries, and eventually contributes to, the eternal cycling of knowledge that has taken place since the beginning of time.

I situate myself, a person of both Saulteaux and Ukrainian bloodlines, as a subscriber to both knowledge systems and methodologies – a consumer, facilitator, and producer of both liquid water and ice. I am not, though, exclusively one or the other and my entire being does not and cannot exist in a world of duality. While water may move from liquid to solid form, or solid to liquid form, there is an in-between phase that is often unseen – this phase is vapour. As a person and as a researcher, I live within the vapour. At times I will find myself closer to a liquid

phase and other times closer to a solid phase. Part of my role as a researcher in the realm of Indigenous methodologies, is to extract (and also return) stories (the currents that never wane and connect all life forms together) to maneuver my way within and between the phases of water and make meaning of the stories that in a way that will engage with, but not disrupt, the constant flux of water's phases. Conversation and the sharing of stories can be visualized through this metaphor of water in that the movement is unrestricted, alive, and frequently changing directions. Like water, stories shared through conversation may flow on a surface level or rise up from great depths but regardless of origin, no story exists in isolation of another and the movement of story from one being to another will always be mutually impactful.

Indigenous Research Method Example #1: Kapati Method

Indigenous methodologies are carried through in/with/by Indigenous communities and by Indigenous researchers around the world. Ober (2017) shared about kapati (cup of tea) time as a traditional and familiar family and cultural practice in Aboriginal and Torres Strait communities in Australia and New Zealand and presented 'kapati time' as a data collection method in Indigenous research. Kapati time, as described by Ober (2017), "is really about making the space and time for social interaction in a culturally appropriate and safe way" (p. 9). Within the kapati space, "the process of knowledge sharing is through family members interacting through negotiation, disagreement, debating and arguing" (Ober, 2017, p. 9). Ober (2017) stressed how stories, which are actively shared and interacted with through the kapati method, make knowledge accessible, alive and real for Aboriginal people as they are consistent with Indigenous epistemologies and ontologies, reflective in the always animate and flowing water both within and across all of its phases.

Despite many differences between Indigenous communities around the world, storytelling, or ‘yarning,’ “is embedded within the processes and structure of Aboriginal society” (Ober, 2017, p. 8). In using storytelling via the kapati method, and consistent with Indigenous methodologies as a whole, the researcher must be true to themselves, not forget who they are, and bring their whole self into the research domain to ensure they are working in an ethical, authentic, genuine and respectful way (Ober, 2017). Ober (2017) reflected on this notion in the following way:

As an Aboriginal researcher I can’t help but draw on my epistemologies and ontologies, our ways of being, knowing and thinking, because this is me. I’m in this research as an Aboriginal person who is seeking to engage with Aboriginal participants, and to do that I need to be true to myself and draw on our ways of doing things. (p. 13)

Ober (2017) suggested that a strong sense of self-awareness in research with Indigenous Peoples, as is required in the kapati method, is a “common-sense” approach (p. 10).

As is witnessed in the kapati method, being wholly present and storying and re-storying lives and experiences shares similarities with a narrative inquiry methodology. Ober (2017) cited Bell’s (2002) description of how narrative inquiry rests on the epistemological assumption that we as human beings make sense of random experience by the imposition of story structures. The kapati method of data collection draws on the narrative inquiry approach where the participants’ stories are collected and analyzed to denote how participants draw on their social, cultural and linguistic repertoire to make meaning of new knowledges (Ober, 2017). In addition to teaching about cultural morals, behavior, boundaries, rules, attitudes, values, and making meaning of new knowledges (Ober, 2017), Indigenous voices, as captured in *Warrior Women: Remaking postsecondary places through relational narrative inquiry* (Young, Joe, Lamoureux, Marshall,

Moore, Orr, Parisian, Paul, Paynter, & Huber, 2015), have described that our life experiences become our stories and our stories become our gifts and “it is through stories that we can connect with our ancestors,” (p. 59). Grounded in Indigenous epistemologies, ontologies, and ways of being, thinking, and doing, the kapati method is an Indigenous methodology that is likely to feel natural, comfortable, and safe for an Indigenous researcher working with Indigenous research participants.

Indigenous Research Method Example #2: Storywork

In an attempt to fully examine Indigenous knowledges and Indigenous ways of knowing within academia and in a way that could be investigated from an Indigenous perspective with rigour acceptable to the academy, Archibald (2008) coined the term ‘storywork’ as a specific Indigenous methodology. Storywork has interrelational dimensions that transcend time and space, facilitating connection on deeper levels of understanding with each other, with all living things, with the earth and the multiverse (Archibald, 2019). Archibald (2019) described Indigenous storywork as action, as process, and as the seeking of meaning in community, which allows researchers to go deeper into Indigenous storyworlds in ways that the colonizing constraints of Western theories and paradigms cannot. Indigenous storywork may be considered a genre of decolonizing methodologies and, in the action of giving voice to Indigenous research participants, also moves to exemplify an Indigenous methodology (Archibald, 2019).

The power of stories and storytelling is not a new discovery. Indigenous storywork aims to tell and re-tell stories that may have otherwise been told from the perspectives of the powerful and dominant voices that have assumed the right to tell the stories of the colonized and oppressed that have been re-interpreted, re-presented, and re-told through their own lens (Archibald, 2019; Chilisa, 2012). Colonial Western research of traditional Indigenous stories and research stories of

Indigenous Peoples have been used to define, destroy, and deter the valuing of Indigenous knowledges, peoples, and practices (Archibald, 2019). As such, Indigenous storywork not only promotes transformative action in pursuit of social justice for Indigenous Peoples in academic settings, its decolonizing nature and activity as an Indigenous methodology also values and validates Indigenous knowledge systems (Archibald, 2019). Additionally, Archibald provocatively and truthfully described Indigenous storywork as a methodology that disentangles Indigenous Peoples from entrapment in knowledge institutions and shifts away from a reliance on “dead white man theories,” clearing a path towards “a clearer and fiercer reclamation of Indigenous meaning-making and lived experience” (Archibald, 2019, p. 13).

Foundational to the practice of Indigenous storywork as an Indigenous methodology are seven key principles that must be followed: respect, responsibility, reverence, reciprocity, holism, interrelatedness, and synergy (Archibald, 2008). The principle of respect is in relation to “respect for cultural knowledge embedded in the stories and respect for the people who owned or shared stories as an ethical guide” (Archibald, 2018, p. 36). Responsibility in research encompasses many meanings (Wilson, 2008), including taking responsibility for any mistakes in the researcher’s work because “those who shared their knowledge with [the researcher] did so with great care and often [say] that they spoke the truth as they knew it” (Archibald, 2008, p. 24). Reverence in Indigenous storywork, and in other decolonizing and Indigenous methodologies (Kovach, 2009; Wilson, 2008), is demonstrated through prayers, songs, and the ethical and deeply respectful ways in which the researcher approaches their work and the handling of Indigenous Peoples’ stories (Archibald, 2008).

Ever-present in an Indigenous paradigm and as witnessed in Indigenous research (Drugge, 2016; Wilson, 2008), reciprocity in Indigenous storywork emphasizes the criticality of

giving back to the people with whom the researcher works with – both in-action and following the closure of the research relationship/encounter(s) (Archibald, 2008). In the practice of storywork, Archibald (2008) defined the principle of holism as “the interrelatedness between the intellectual, spiritual (metaphysical values and beliefs of the Creator), emotional, and physical (body and behavior/action) realms to form a whole healthy person” (p. 11). Similarly, interrelatedness as a principle of storywork honours the interrelationship between the story, storytelling, and listener and how each entity and each whole person become connected through story, if such connection(s) did not already exist (Archibald, 2008). Finally, Archibald (2008) offered an explanation of the concept of synergy as a principle of Indigenous storywork in the following way:

The power created during the storytelling session seemed interrelational as it moved along the storyteller and the story listeners in the storytelling situation. This interaction created a synergistic story power that had emotional, healing, and spiritual aspects. The synergistic story power also brought the story “to life.” (p. 100)

As a collection, Archibald’s (2008) seven principles of Indigenous storywork are positioned to guide the storyworker and also serve as an ethical framework for research with Indigenous (and non-Indigenous) communities (Davidson, 2019).

Indigenous Research Method Example #3: Conversational Method

Akin to the kapati method, storytelling, and storywork, Kovach (2010) presented the conversational method as a means of gathering knowledge found within Indigenous research. Each method resembles the natural multidirectional and constant flow of water as sharing stories, regardless of a specific method, is and will always be relational and alive. While the conversational method is found within Western qualitative research and similarities exist

between the conversational method and narrative inquiry (Barrett & Stauffer, 2009, as cited in Kovach 2010), for example, the conversational method is positioned within Indigenous methodologies if and when it flows from an Indigenous paradigm (Kovach, 2010). When used as an Indigenous framework, the conversational method requires several distinctive characteristics:

a) it is linked to a particular tribal epistemology (or knowledge) and situated within an Indigenous paradigm; b) it is relational; c) it is purposeful (most often involving a decolonizing aim); d) it involves particular protocol as determined by the epistemology and/or place; e) it involves an informality and flexibility; f) it is collaborative and dialogic; and g) it is reflexive. (Kovach, 2010)

With each of these characteristics at play, we can see how the conversational method may then be identified as an Indigenous research method.

It is recognized that Indigenous methodologies are a paradigmatic approach based upon an Indigenous philosophical positioning or epistemology and therefore the conversational method must hold true to this notion to be differentiated from other methodologies that use conversation (Kovach, 2010). The research method in and of itself is not sufficient to be qualified as an Indigenous methodology, but rather “the interplay (the relationship) between the method and paradigm and the extent to which the method, itself, is congruent with an Indigenous worldview” (Kovach, 2010, p. 40). In particular, the relational nature of an Indigenous paradigm and Indigenous methodologies is frowned upon by certain Western research paradigms because of its potential bias to research; however, Indigenous methodologies like the conversational method embrace relational assumptions as central to their core epistemologies (Kovach, 2010). In combination with an Indigenous worldview that honours orality as a means of transmitting knowledge, the relationality inherent within the conversational method is expected to result in

deeper conversations and richer insights into the research question (Kovach, 2010). When the time comes for the researcher to analyze their data, ongoing conversation between the researcher and participant(s) is required to avoid, or at least minimize, fragmenting participants' stories (Kovach, 2010).

The conversational method came to life throughout Fiddler's (2014) research on *Examining the influence of Aboriginal literature on Aboriginal students' resilience at the University of Saskatchewan*. Fiddler (2014) employed the conversational method as an Indigenous methodology as she conducted one-to-one conversations between the participants and herself (the researcher) and in locations chosen by the participants where their comfort and privacy would be afforded. As also described and practiced by Kovach (2010), Fiddler (2014) practiced frequent journaling and self-reflection, including tribal methods of reflection such as paying close attention to the importance of her dreams and what her dreams were telling her during the entire timeframe of her research. After positioning herself in her research and writing and offering her traditional practice of harvesting and braiding sweetgrass (*mosahkina wihkaskwa*) as a metaphor for her conceptual framework, Fiddler (2014) went on to fulfill all other characteristics in her work that ultimately identifies her way of gathering knowledge as an Indigenous methodology.

Method Used for this Study

The conversational method (Kovach, 2010) was used in my research. I gathered knowledge from the study participants through story, which is congruent with an Indigenous paradigm (Kovach, 2010). The conversational method is dialogic and relational at its core. While similarities exist between the conversational method and what is typically considered an interview, the conversational method flows from an Indigenous paradigm, thus qualifying the

conversational method as an Indigenous research method. Additionally, the conversational method “involves an open-ended structure that is flexible enough to accommodate principles of native oral traditions and is thus differentiated from a more traditional interview process” (Kovach, 2009, p. 125).

Recruitment of Participants

Five individuals participated in this study, with each participant engaging in three separate conversations for a total of 15 conversations. The criteria were self-identification of Indigeneity (First Nations, Métis, or Inuit) and must be currently enrolled in, or a former graduate of, an entry-to-practice pharmacy program in Canada. Participants were recruited through direct communication with Indigenous individuals across Canada who I know are current or previous Indigenous pharmacy students, as well as through pharmacy advocacy bodies’ e-mail and social media (Canadian Pharmacists Association, Canadian Society of Hospital Pharmacists, the University of Saskatchewan’s College of Pharmacy and Nutrition). I also recruited participants through my personal social media (e.g., Facebook, Instagram, and Twitter), and through the Association of Faculties of Pharmacy of Canada’s Truth and Reconciliation Special Interest Group, which I created and chair (Appendix A). Five interested individuals were then sent an official letter of invitation to participate (Appendix B). Each participant was assigned a pseudonym to protect their identity and stories.

Cultural Protocols Associated with Gifting of Story

Prior to engaging in the research conversations, participants read and signed a consent form (Appendix C). Tobacco and a small gift was offered to each participant to show acknowledgement of the relationship and respect for the insights being offered, which is

congruent with Saulteaux tribal epistemology, relational accountability, and respect for Saulteaux (and other tribal) protocol.

Conversational Prompts

A series of semi-structured conversational questions were developed to prompt conversation where the participant and researcher co-create knowledge (Kovach, 2010). (Appendix D). Each conversation therefore, at minimum, covered the prompts described but the flow and both the number and nature of follow-up questions asked varied between each participant.

COVID-19 Pandemic Consideration

The COVID-19 pandemic and its most strict protection measures spanned the length of this PhD study. University of Saskatchewan research guidelines and ethics were amended during this time period to only permit virtual data collection for most forms of research, including this study. Although the development and ongoing nature of relationality looks different in the virtual environment, it is achievable and indeed was achieved.

Method of Analysis Used in this Study

I used Indigenous theorizing and a decolonizing approach in the analysis of my findings, as discussed earlier in the section on Indigenous Theory and Indigenous Theorizing. Some aspects of Indigenous theorizing include asserting a relationist holism, valuing both tangible and intangible knowledge sources, recognizing that knowledge comes from multiple sources including empirical, spiritual, and personal knowledge, and valuing high empathy quotient practices, such as compassion, kindness, humour, and love (Kovach, 2020). Decolonizing approaches to research and the analysis of research findings requires deconstructing colonial ideologies of the superiority and privilege of Western thought and involves dismantling

structures that perpetuate the status quo, problematizing dominant discourses, and addressing unbalanced power dynamics (Antoine, Mason, Mason, Palahicky, & Rodriguez de France, 2018). Through Indigenous theorizing, Indigenous interpretation, and a decolonizing approach, I independently categorized and identified themes (Kovach, 2020). Although thematic analysis is a form of empirical research because it is based on observing patterns, it is not inconsistent with Indigenous ways of knowing (Brant Castellano, 2000). The approach to thematic analysis, however, must not stop with solely the empirical and should also integrate traditional knowledge and revealed knowledge.¹³ As such, my approach to arriving at themes honoured all forms of knowledge, whether shared by participants or through the relationality and reflexivity of my own knowledge, regardless of where or how such knowledge was acquired. Evident in the analysis and sharing of findings, my anti-colonial theory provided a lens that helped me to see the racism and colonialism in participants' stories. The Indigenous theoretical lens helped me to see the value of Indigenous approaches to health.

I intentionally chose not to use qualitative data analysis software programs as I strongly believe they dissect stories and meaning in a way that is inconsistent with the storyteller's intentions and disregards the relationality and holism of the interaction between the researcher and participant. Too often, Indigenous experiences (e.g., Indigenous student voices) have been interpreted from some form of Eurocentric theory (e.g., Post-Modernism, Constructivism, etc.). By using Indigenous theory, the experiences of the Indigenous participants were interpreted from

¹³ Brant Castellano described that the knowledge valued among Indigenous societies is derived from multiple sources, including traditional teachings, empirical observation, and revelation. Traditional knowledge is knowledge handed down more or less intact from previous generations. Empirical knowledge is gained through careful observation accumulated over time. Revealed knowledge is acquired through dreams, visions, and intuitions that are understood to be spiritual in origin (Brand Castellano, 2020).

an Indigenous vantage point. Without anti-colonial and Indigenous/wholistic theory, participants' stories would be vulnerable to interpretation through deficit theorizing.

I recognize my own personal practical knowledge and positionality in this research and, as such, digested my findings, frequently participated in ceremony (e.g., smudge, sweat lodge, prayer) to keep myself grounded, made meaning of my findings, and sought the approval and validation from all participants before finalizing any conclusions (i.e., shared each participant's transcript with respective participant and shared my preliminary analysis). Through Indigenous theory, Indigenous theorizing, and a decolonizing approach, a holistic perspective ensued, which offered me a perspective where participants could share differing perspectives on their lives. The decolonial and Indigenous theoretical lens from which I am coming from did not force theory on the data/stories but rather the explicit identification and sharing of my overall theory is about being honest and transparent about my approach to this work and the analysis. In fact, the shared stories very closely resembled my own story.

CHAPTER FOUR

FINDINGS: ISOLATION OF INDIGENOUS PEOPLES IN PHARMACY EDUCATION IN CANADA

Introduction

This chapter will examine and discuss study participants' lived/living experiences of isolation in pharmacy education in Canada. Each participant described feelings of isolation, which manifested in various ways. Two ways in which isolation was experienced by participants were being othered and/or being tokenized, which seemed to depend on whether or not their Indigenous identity was known. Other experiences of isolation were related to not seeing Indigeneity reflected in the pharmacy profession, including never communicating with another Indigenous pharmacist and, therefore not having Indigenous role models in pharmacy, and not having access to Indigenous student groups in pharmacy, which led them to join Indigenous student groups, events, and ceremonies organized through faculties of medicine and nursing. Without having Indigenous counterparts, or in some cases only a single Indigenous counterpart, Indigenous Peoples in pharmacy school described feeling frustrated not having any peers, staff, or faculty to validate their positionality, worldview, and expectations about various pedagogical practices. Although disappointing and heartbreaking to hear at times, participants' stories were validating for me and put an end to how I received gaslighting from others and also from myself.

Being 'Othered'

Each participant did not describe feeling othered prior to their entry to pharmacy school. In fact, none of the participants noted their Indigeneity playing a role with respect to considering pharmacy, taking pharmacy pre-requisites, and applying to pharmacy school; however, some

participants did take note of and/or apply for Indigenous equity seats, where available. The Indigenous equity seats for admission to pharmacy programs was perhaps the first event in feeling othered in their pharmacy journeys. Gabrielle described how applying for an Indigenous equity spot at her university's pharmacy program was convoluted and othering as non-Indigenous applicants did not have to navigate the same process:

I knew there was an Indigenous spot that I could apply for, but when I went to do the application, there is nowhere on the application that you can submit that you are applying with the Indigenous spot, from what I remember. I remember I had to email to the student services and say that I am applying to the Indigenous spot, so I don't remember there being a specific part on the application, so you know, I don't know if that was maybe because I was really keen and I decided to email them anyways, or it was like, I never received confirmation, like I for sure know I didn't receive confirmation that I was applying with the Indigenous spot, so even then I still, if I even emailed then I felt the need to email because it wasn't clearly communicated to me that that was something. So I feel like uhm having a pathway for Indigenous students to apply is very important. And instead of just, I mean obviously the application has to remain the same, but the fact that there's not even a different way to approach it, shows that it hasn't been considered, and it's like an after thought of their application. (Gabrielle recorded interview, August 6, 2021)

Gabrielle recalled her faculty of pharmacy holding recruitment events on campus each year but did not ever recall an Indigenous-specific one. She shared, "I know for sure that there is no Indigenous-specific one that the faculty does. So, to me, it also seems strange that they would

say, ‘Oh we have this Indigenous specific spot that we care about,’ and then they have absolutely no method of attracting people to that spot” (Gabrielle recorded interview, August 6, 2021).

After entering the pharmacy program, the Indigenous equity spot continued to contribute to Gabrielle’s feeling of being othered and in a racist way:

I remember when I first got into pharmacy school and I would tell people that I got accepted. Our class had 131 students – we’re supposed to have 130 every year, but 131 with the Indigenous spot, so then you know, like obviously that was mentioned for our class numbers. They do mention why our class is more numbers, and actually I think it was 133 because we had two, they said we had two exchange students from China, so they mentioned why our class is this number, and you know I am obviously visibly Indigenous compared to the other people in my class. So that was something that when people heard that I applied with the Indigenous spot, I remember people asking my GPA, which was really icky, like that felt really bad. (Gabrielle recorded interview, August 6, 2021)

The othering caused by Gabrielle’s application to the single Indigenous equity spot stayed with her and eventually caused her to feel shame. She explained:

It’s just like, but it was the idea, the discrimination, the idea that my GPA was lower because I was Indigenous. Like, that was really horrible when I first got into pharmacy school and I think that feeling of being ashamed of being Indigenous, to tell people I applied with the Indigenous spot, that I didn’t, I didn’t really speak about it in my first year, like I didn’t try to own my Indigeneity fully. (Gabrielle recorded interview, August 6, 2021)

Gabrielle noted this sense of shame continued to cloud her pharmacy school experience for a few years, even though she knew she would have been admitted to the program without the Indigenous equity seat, especially given her high GPA versus the average GPA of individuals who were admitted into the same pharmacy class.

Feeling othered also arose as a result of faculty member comments toward Gabrielle who said, “Oh, I knew you were becoming more outspoken about Indigenous issues because you started wearing Indigenous earrings more” (Gabrielle recorded interview, August 6, 2021). Such examples of being othered led Gabrielle to ask herself questions about the intersections of her Indigeneity and being a pharmacist:

What type of focus would I be focusing on if I wasn't characterized as the Indigenous student? Like, would I be focusing on respiratory, because I really love respiratory. Well, no – I am an Indigenous pharmacist so that means I have to focus on mental health in Indigenous heavy spaces, which is like inner city and addictions and all of those things. (Gabrielle recorded interview, August 6, 2021)

Being othered through the comments of others and through policies and practices like Indigenous equity seats contributed to Gabrielle's ongoing experiences of isolation in pharmacy school.

Other participants noted the same sense of being othered with respect to Indigenous equity spots in their own pharmacy programs. Destiny (recorded interview, August 31, 2021) shared, “At the time, they had 120 students plus one seat for an Indigenous person, basically.” She noted that she was pretty sure she was given the Indigenous spot and vaguely recalls being asked to send in a copy of her Indian Status Card. Similar to Gabrielle's experience, Destiny shared the following:

Once we started classes, there was 121 of us and everybody was kind of like, why is there 121? It's supposed to be 120. And then somebody had actually had a story that she I guess was accepted late, and so everybody figured okay, it must be her that because she was so late, that's probably why there's 121 of us, and I was kinda like hmm, I think it's because of me. (Destiny recorded interview, August 31, 2021)

When asked if people in her class knew she was First Nations throughout pharmacy school, Destiny (recorded interview, August 31, 2021) said, "People close to me, I would say my circle of friends, they knew." Destiny described how all students in her pharmacy class were given the same backpack in their first year of pharmacy school and, to help differentiate themselves, her peers would attach buttons or patches. Destiny (recorded interview, August 31, 2021) attached an Ojibway-style painting luggage tag to her backpack and a white classmate flipped it over and asked, "Are you Indigenous?" Destiny confirmed her Indigeneity with the white classmate who then said, "Oh, I knew you were something" (Destiny recorded interview, August 31, 2021). Dealing with such events of othering seemed to be a regular occurrence for Destiny, who found support with another Indigenous student in her class who she discovered at random and then became her best friend throughout the entire degree. Destiny (recorded interview, August 31, 2021) noted that the other Indigenous student was "a quarter Blackfoot," but "identified as being from Newfoundland, moreso."

Destiny recalled feeling othered much earlier than pharmacy school when her parents told her not to tell anyone she is Indigenous. She reflected on a time in elementary school when her grade 6 teacher wanted to find the Indigenous students in the class and pulled Destiny aside and asked Destiny if she was Indigenous. She did end up telling her teacher she was Indigenous,

despite her parents' request not to tell anyone. Additionally, Destiny's parents frequently told her to not only withhold her Indigenous identity from others but also to not disclose that she was being funded by her band. As such, and in recollection of being othered with respect to the Indigenous equity seat in her pharmacy program, Destiny never shared publicly in pharmacy school that she was Indigenous or received funding from her band.

Some participants, particularly those with fairer features and who considered themselves to be 'white-passing,' generally withheld their Indigenous identity throughout pharmacy school but still described similar experiences of being othered, like Gabrielle and Destiny. Regarding Indigenous equity spots in pharmacy programs, Oaklynn reflected on the constant ups and downs throughout her pharmacy degree with respect to her own Indigenous equity seat:

I think getting that position in school, getting that job, getting that whatever it is, when you use your identity, that's one thing. But then there were definitely times when I was in pharmacy school and I started to struggle, I would always think "is it because I shouldn't actually be here? Did I actually prove myself enough? Or did they just let me in because I'm First Nations?" Whereas my initial standpoint of that was, "No, I can prove that I should be here, I do belong here," and then every time it started to get difficult or I started to struggle I was like, "well maybe I shouldn't be. Maybe I'm only here because I'm First Nations. Do I actually deserve to be here?" (Oaklynn recorded interview, August 24, 2021)

Oaklynn did not recall any other Indigenous students in her class or any other classes of pharmacy while she went to pharmacy school; however, she acknowledged that because she could pass as white, she withheld her own Indigenous identity and recognized that other students may have done the same.

Callie (recorded interview, September 2, 2021) shared similar stories and said, “I just remember feeling very alone. There were no other Indigenous students that I know of.” Regarding Indigenous equity spots and applying to pharmacy school, however, Callie shared, “At the time I would say my Indigeneity probably didn’t have much of an impact, just because at that time I hadn’t really started reclaiming it” (Callie recorded interview, September 2, 2021). While Callie did not describe the same level of being othered as Gabrielle, Destiny, and Oaklynn, she noted:

During pharmacy school I was still I would say, I hate to say it this way, but I almost felt like a closeted Indigenous person, you know? It wasn’t really something I shared with a lot of people. And of course, me being white-passing, no one really knew for a good portion of pharmacy school that I was Indigenous. So, personally I didn’t experience any direct racism or discrimination in that way because I was a white woman going to pharmacy school. (Callie recorded interview, August 19, 2021)

However, in Callie’s fourth and final year of pharmacy when she applied for her Secure Certificate of Indian Status,¹⁴ she had the following overt experience of being othered:

I was just waiting for my status application to be reviewed and finalized, and I had mentioned that I was doing this. I mentioned it to a friend that I was planning on getting status. She just started talking about, “Oh, well it’s so unfair you get all these tax exemptions and you get all this free money, but you’re not really Indigenous, you’re white. It’s unfair that you’re getting that.” I remember

¹⁴ A Secure Certificate of Indian Status (SCIS), otherwise known as a Status Card, is the Government of Canada’s most recent iteration of an Indian Status Card. The SCIS can be used as proof of ancestry as well as for crossing the USA/Canada borders, for example (Government of Canada, 2022).

that was at the point when I was starting to try to share this part of me with people and I was really nervous about it, and to hear comments like that is just so disheartening. There's just a lot of misinformation and stereotypes, and I remember I didn't tell anyone else about my status application after that, because I didn't want a repeat of that conversation. (Callie recorded interview, August 19, 2021)

Callie (recorded interview, August 19, 2021) described not feeling "Indigenous enough" and that she "shouldn't be allowed to claim [that] part of [herself]." When asked why she felt like a closeted Indigenous person, she explained, "I think I was just really afraid to hear that echo heard in other peoples' comments. I already felt like a fraud or an imposter and I didn't want to hear that from other people, because then it would make it real" (Callie recorded interview, August 19, 2021). Callie (recorded interview, August 19, 2021) emphasized that "going through the world as a white woman is definitely easier than as an Indigenous woman," and also, referring to being feared as being overtly othered, she said, "I just didn't want to feel like an outcast."

Experiences of being othered were also minimal for Kayla, who described herself as being a very white-passing Métis woman who was still not fully comfortable saying she is a Métis woman. Kayla learned of her Métis ancestry in her third year of university, prior to applying to pharmacy. Kayla recalled one of the two pharmacy programs she applied to had at least one Indigenous equity spot and the other did not have any that she was aware of, although she felt all pharmacy programs should have Indigenous equity spots. After being accepted into both programs, Kayla chose the program that did not have the Indigenous equity spot; however, this decision was based on proximity to family and cost of the program in comparison to the other program. Kayla was not aware of any other Indigenous students in her class until she

signed up for a leadership program at her university that was specifically for Indigenous students. To her surprise, one of her pharmacy classmates was there and disclosed Métis ancestry, too. Kayla (recorded interview, August 5, 2021) shared, “I’m sure there are others and there, a) might be people who are just not comfortable saying it or, b) they actually just don’t know, right?” The only other Indigenous pharmacy student or pharmacist Kayla could identify was one of the other participants in this study who had spoken to Kayla’s class after they had graduated. Despite only knowing three Indigenous pharmacy students / practicing pharmacists, including herself, Kayla commented less on being the one who is othered and, instead, noted how Indigenous Peoples in general were othered in the classroom. Moving forward, though, Kayla shared:

I am trying to embrace the identity as a bisexual Métis woman. That’s a lot to kind of process and get through, but I think having support from you and just knowing that there’s other people feeling these things, I think that is really comforting to me knowing that I'm not the only one thinking oh, I want to do all these things but I can’t. And it’s like oh, well I feel the same way. Okay, well maybe we could feel scared together. Kind of figure this out. (Kayla recorded interview, August 5, 2021)

Still on her Métis identity reclamation journey, Kayla again commented that being othered as an Indigenous person was not something she had experienced yet, but identified the likelihood of this happening as she advances in her reclamation and publicly sharing her Métis identity.

Tokenization

The only participants who shared stories of tokenism and the mixed feelings, downfalls, and also opportunities associated with tokenism were also the only participants whose

Indigeneity was known by others. Gabrielle (recorded interview, August 6, 2021), for example, shared, “There was the tokenism of the faculty, which it’s really hard to label tokenism as discrimination because, like, you benefit from tokenism.” She then elaborated:

You know, I guess I can’t say it was all benefits, it was like a tokenism that it’s like, it’s like, secretly like you are being valued but not for you, like it doesn’t, it’s not part of the idea that I am trying to live as an integrated person and that’s how I see myself when I see the world, it’s like only one aspect of myself. So, the tokenism was you know, in some aspects it allowed me to feel supported by the faculty because they took what I was saying seriously, but it made me feel like they were only taking me seriously because they want to protect their image.

(Gabrielle recorded interview, August 6, 2021)

Gabrielle kept using the word ‘weird’ to describe how the ongoing tokenization felt for her as what felt like being the only Indigenous student in the program. She shared:

In my last year of university they made an Indigenous scholarship and you know I received it. I was the, what do they call it, the inaugural recipient of the Indigenous scholarship, and I was really happy about it. Obviously it was great, but it was really weird. It was just at that time it felt like, ‘Here’s money – you’re Indigenous, let’s take a photo about it.’ Like, there wasn’t really any requirements to it, there weren’t really anything about it, like just like, ‘Here – you’re Indigenous.’ I was graduating soon, too, and I was like, ‘Is it because I am about to leave soon?’ (Gabrielle recorded interview, August 6, 2021)

As Gabrielle continued to consider being tokenized in her faculty, she emphasized:

A part of tokenism is that I don't know [if the faculty actually cared] and it doesn't feel genuine and it doesn't make me feel supported – it just makes me feel seen. I guess it's a little different, it's like I am noticed but I am not like supported or like appreciated for everything that I can do or whatever...It felt like they didn't care what my knowledge was. 'You're Indigenous – can you talk about this?' And be like, 'What? I don't know about that.' I feel like their idea is tokenism and they don't know how to extend past that to, like, meaningful contribution. Probably because it's just white faculty members talking about it.

(Gabrielle recorded interview, August 6, 2021)

Gabrielle (recorded interview, August 6, 2021) noted that being a graduated and practicing pharmacist was a major shift with respect to tokenism and was finally seen as a pharmacist when she is at work and not as “the Indigenous pharmacist.”

For Oaklynn, tokenism came up after she was describing the Indigenous equity seats in her program, but this time in relation to her application for a pharmacy residency, which follows graduation from pharmacy school. She shared:

I think it's similar with the residency program. They don't have dedicated spots or anything like that. But in my resume, you can see that I've worked with [Indigenous organizations and programs], so I've received this award. Or in speaking in some of the interviews they ask you about your family. Or in the, not so much the interview questions, but we had to give a lot of presentations and it was always about like your personal whatever. So [my Indigeneity] came up. And it was always, 'Do I take this stuff off of my resume so that they don't just admit me as the token Indigenous person? Or do I show them that yes, I was

the sole representative for all of [my province] for [Indigenous organization], and yes, I was the [specific Indigenous award] winner.’ Like, all of these achievements that I believe are true achievements in my family and community that I come from that I'm proud of, do I hide that so that they don't just use me as this token person? Or do I talk about it and then accept that this entire past year [of my pharmacy residency], I was wondering, ‘Am I only here as their token person? Am I actually smart enough, because I really don't feel like it most of the time.’ (Oaklynn recorded interview, August 24, 2021)

The idea that she was perhaps only admitted to pharmacy school because she was Indigenous stayed with her up to and throughout her pharmacy residency, too, continuing the cycle of her questioning herself if she truly deserved it, if she was smart enough, or if her admission to such programs were a tokenistic effort on the part of both her faculty and residency program.

Indigeneity not reflected or supported in pharmacy faculties or in the profession

With the exception of the two participants who later identified a fellow Indigenous classmate, four of the five participants had never personally interacted with another Indigenous pharmacist who was not a current or former classmate. In fact, my conversations with them were the first times they communicated directly with another Indigenous pharmacist. None of the participants had Indigenous professors throughout their pharmacy programs, with the occasional exception of a single guest lecturer. None of the participants had Indigenous mentors in pharmacy. Two participants identified a clerical non-pharmacist Indigenous staff member in their faculty whom did not teach in their program and did not play a role in their overall pharmacy experience. In fact, the two participants only knew about their single Indigenous staff member because that staff member was featured on their faculty’s website. For three

participants, their first and only time witnessing a lecture or presentation from an Indigenous pharmacist was when they either had me as a guest lecturer or when they attended a conference presentation of mine. There were no opportunities in their respective faculties for each of the participants to learn about Indigeneity, connect with other Indigenous Peoples in pharmacy, or to participate in Indigenous ceremony or events.

Feeling isolated in pharmacy, several participants sought to be part of an Indigenous community on their respective campuses; however, since none of the participants had Indigenous programming available to them in their pharmacy faculties, they sought groups and opportunities coordinated by either the faculty of medicine or nursing at their universities. Two participants shared that their first experiences with various Indigenous ceremonies, such as a sweat lodge, was because of Indigenous programming offered through their university's faculty of medicine. Every participant shared that their pharmacy faculties did not play a role in their personal growth with respect to their Indigeneity. One participant saw a poster on campus about a student group in the faculty of medicine that was looking for Indigenous students, so she joined. Another participant, through an employment opportunity in her fourth and final year of her pharmacy degree, learned about an Indigenous centre that existed on campus, which she would have loved to be part of if she had known it existed. In fact, this participant wanted to know about supports right from the moment she applied:

Once I got into pharmacy, nobody cared. There was no outreach. I identified myself in my application, and then there was nobody reaching out to say, "These are the supports, these things you might be interested in, these are resources for you." There was none of that. (Oaklynn recorded interview, September 2, 2021)

Oaklynn (recorded interview, September 2, 2021) elaborated by sharing that her faculty, like other faculties of pharmacy, advertised their interest to admit Indigenous students into the program, but then “[they’re] not going to do anything about it for the four years that they’re there.” She noted that if she wanted Indigenous supports, programs, etc., she would have had to go seek it out on her own. She added, “if there were supports anywhere, it was definitely not within the college of pharmacy. The department of health sciences, maybe the university? Maybe the city? But, within the college? Absolutely not” (Oaklynn recorded interview, September 2, 2021). Oaklynn (recorded interview, September 2, 2021) noted she was capable of seeking supports on her own and said, “But otherwise, the pharmacy school was of no help in that area. And they needed *my* help.”

Gabrielle also commented on how her faculty needed her help because there was no Indigenous representation within the faculty. She discussed how isolation led to being even further isolated when her faculty would ask her to provide Indigenous education and shared the following:

It’s not beneficial. It doesn’t improve – it basically, in my mind, might improve a bit of the knowledge of the faculty, but at the expense of an actual Indigenous person, which is like anti to the, to being a safe place for Indigenous people overall. I would have liked if these things were already developed in the faculty and I could just go to the faculty knowing they existed. I didn’t, I don’t want to have to feel responsible for the education of my peers and my own program.

(Gabrielle recorded interview, September 6, 2021)

Similar to the tokenization experienced by Gabrielle, she felt further isolated because of the lack of Indigenous representation in her faculty and having to be what felt like the single Indigenous educator for her program. She further explained:

I would like for the faculty to, when they're asking about education, find Indigenous scholars and be able to ask them that – not the one Indigenous student that's in their program. So I feel like basically it singles out students. And in that sense, it makes them feel othered, which is like, I don't want to feel othered for being Indigenous, I want to feel included, I want to feel supported. And the program is same as the other students. So I just want those supports to be available. And I think that means I don't, it's really frustrating because I don't know how to just tell the faculty to just do it do the work. Don't ask me to do the work for you. Just start doing the work. I think it's like really frustrating, I don't know how you're gonna boil that down...If they really wanted to make a space they would. There would be a person in each faculty hired for this, not just a white-led team in each faculty that's having a few meetings with Indigenous people, it would be an Indigenous person leading it. (Gabrielle, September 6, 2021)

Recollecting such stories and re-living some of her experiences in pharmacy school left Gabrielle feeling frustrated:

So I feel frustrated. Today, my vibe is feeling frustrated. That is something that's frustrating is, I felt a really heavy burden of that during school. And part of that, I feel a bit of resentment about that coloring my education versus it not. I would not be where I am without all of that, but I wonder where I might be without all

of that, if that makes sense. If I was like able to grow into my identity on a positive path instead of one out of necessity because of hearing these things and of people around me that I felt was not right. So I think that's the main thing.

(Gabrielle recorded interview, September 6, 2021)

In this case, Gabrielle appreciated she still grew and learned from having to be her faculty's 'Indigenous person,' but noted she would have rather not needed to fulfil such a role and, instead, focus on her studies.

When asked about what a safer space could look like in pharmacy school for an Indigenous learner, Gabrielle shared the following:

I feel like it would be something without bureaucracy, something that doesn't, that's not so structured that it's suffocating. It would be a very casual environment. In my mind, I feel like every faculty should be able to have an Indigenous person in charge of doing these educational spaces and helping with the curriculum and doing all these things. And at the same point, if I'm making a safe space for students and I could imagine there being an office or whatever, something very casual. Being able to go in and speak with this person like how I would be on my reserve. You will just go over to someone's house and be like, "Hey." You don't even ask to come in. People are always coming to visit my grandma and grandpa, just coming over to their house and being, sharing community and sharing space without having to have it be scheduled for a reason or a purpose. I think that would be, that would, to me, seem like the most safe space. (Gabrielle recorded interview, September 6, 2021)

Gabrielle recognized there are spaces like this on many campuses, but described why other general Indigenous spaces may not best suit the needs of an Indigenous pharmacy student:

It seems like the universities already have an Indigenous safe space like that. I can always go into my First People's house and go and sit in there and hang out and do whatever. But it's different because if it's not people who are in the health care profession, there's already a different worldview. Having a healthcare worldview and Indigenous worldview, like, those are things that put you in a different space than other learners. So it would be nice to be able to find, have a community, in my opinion. Even if it's just you and this other person, just to have – it's available, and there is a space. That space is one where I don't feel like I'll be singled out. I don't feel like we're teaching a lecture about Indigenous things, and everyone stares at me like I am supposed to contribute to the conversation. (Gabrielle recorded interview, September 6, 2021)

Gabrielle shared that the pharmacy faculty would not need to hire an Indigenous pharmacist, per se, but that they should hire an Indigenous person who works in sciences because, it is too different to reconcile a healthcare view with a non-science background. She noted the importance of having other Indigenous Peoples in the pharmacy faculty to prevent feelings of isolation and said, “It’s very heavy pressure to be existing in this space by yourself, because I don’t think Indigenous people should exist in any space alone. Community to me is really a backbone” (Gabrielle recorded interview, September 6, 2021).

Gabrielle continued to emphasize the necessity of community both because it is the right thing to do and because it would minimize the sense of isolation for Indigenous students in pharmacy. She shared the following:

I think because when I was starting pharmacy school, and throughout all of it, I felt like the only First Nations pharmacist. I knew there were other people who were Métis, but I think sometimes Métis people get shy about being Métis. They have a lot more internalized shame, I think, because of a lot of the people I know who are Métis are white presenting. So I really just felt like the only First Nations pharmacist ever. I didn't see anybody. There was no rotations in there, there's no speakers in here. There's nothing. (Gabrielle recorded interview, September 6, 2021)

Gabrielle then recalled seeing me speak at a national pharmacy student conference, which was the first time she saw another First Nations pharmacist:

So when I saw you speaking, you're like the first First Nations pharmacist I knew existed. It was really surprising. So I feel like that probably is similar across the country, because while there might be a number of Indigenous pharmacists at any one time going through the program, you're pretty solely one of the only Indigenous students. (Gabrielle recorded interview, September 6, 2021)

Even just the research conversations alone were impactful for Gabrielle:

I really appreciated having these conversations because the idea you were talking about, I think it feels so rare to be able to have a conversation that is understanding of a lot of my identities because always in any space, I don't feel - I don't feel listened to for my Indigenous worldview, even though people ask for all the time. I don't actually ever feel listened to about it, or that somebody appreciates that worldview. I'm like, "Why are you asking me about it?" Like,

it's so nice to be able to discuss with people who, even if you are not Indigenous, even any person who would actually show that they're listening and trying to understand, that's so rare in conversation. And I think that's really special that you've been able to get to this point and do your research project and have these wonderful, brilliant, institution shattering ideas. I think that's a really special place and I want to thank you. (Gabrielle recorded interview, September 6, 2021)

While it is unfortunate and disappointing that Gabrielle and most other participants of this study experienced their first conversation with another Indigenous pharmacist *because* of this study, they each shared their feelings of appreciation, validation, and enjoyment with respect to their participation in this study. Tired of feeling isolated in the pharmacy profession, each participant also noted willingness to contribute to forming a community of Indigenous pharmacy professionals.

CHAPTER FIVE

FINDINGS: WHITENESS, WHITE SUPREMACY, AND THE INCOMPLETE CURRICULUM IN CANADIAN PHARMACY EDUCATION

Introduction

This chapter will showcase participants' stories about whiteness¹⁵ in pharmacy education and the roles white supremacy¹⁶ and epistemic racism¹⁷ play in pharmacy education in Canada. Participants shared stories about the differences between their worldviews and the dominant worldview showcased in pharmacy education, how whiteness is produced and reproduced in pharmacy education and practice, and how white supremacy is reflected in pharmacy curricula. With respect to pharmacy curricula, participants commented on the performative, inauthentic, and, at times, problematic instructional methods used by exclusively non-Indigenous instructors, if Indigenous content and/or pedagogical practices were even used. Further, participants noted that existing and learning within a culture of whiteness and white supremacy created challenges with forming their professional identity as pharmacists, which, in

¹⁵ Whiteness is described as a social and cultural construct that encompasses the privileges, advantages, and assumptions associated with being perceived as white within a racialized society. It is a system of power and privilege that positions whiteness as the normative standard against which other racial and ethnic groups are marginalized and subordinated. Whiteness operates through both explicit and implicit mechanisms, shaping social, political, and economic systems and perpetuating racial inequalities (Dyer, 1997; Frankenberg, 1993; Lipsitz, 2006; McIntosh, 1988; Roediger, 1999).

¹⁶ White supremacy refers to the belief in the inherent superiority of the white race and the promotion of policies, practices, and ideologies that prioritize and maintain white dominance over other racial and ethnic groups. It is a system of power and privilege that reinforces and perpetuates racial hierarchies, discrimination, and oppression (Bonilla-Silva, 2017; DiAngelo, 2018; Frederickson, 2002; Mills, 1997; Omi & Winant, 2014).

¹⁷ Epistemic racism refers to the ways in which racial biases and assumptions are embedded within knowledge production, dissemination, and acquisition processes. It recognizes that knowledge is not neutral but shaped by power dynamics and social hierarchies that marginalize and exclude certain racial groups. Epistemic racism encompasses the ways in which knowledge is produced, validated, and distributed, reinforcing racial inequalities and perpetuating the dominance of certain racial perspectives (Lugones, 2010; Maldonado-Torres, 2007; Mills, 2017; Tuhiwai Smith, 2012; Yancy, 2018).

continuation from the previous chapter, also contributed to feelings of isolation in pharmacy education and practice.

Worldviews, Whiteness, White Supremacy, and Epistemic Racism

Gabrielle shared a story about her recommendation to her faculty that pharmacy students take the free Indigenous Canada Massive Open Online Course available through the University of Alberta because her faculty was discussing adding more Indigenous content to their curriculum. Gabrielle noted how quick and simple the course was and was informed by her faculty that they would consider her recommendation. After following up, Gabrielle was told that her recommendation was shot down and to not ask about it again because it is not something that will happen. Gabrielle recalled a white faculty member saying to her, “If we force people to learn about Indigenous worldview, the people who have those discriminatory worldviews – it will just make them stronger” (Gabrielle recorded interview, August 6, 2021). Gabrielle shared that she was thinking, “Do you not understand how education works?” (Gabrielle recorded interview, August 6, 2021). As Gabrielle recalled this incident, she also shared:

It was really weird, and that felt really discriminatory that they would just be like, “Well, no – it’s too much to make it a prerequisite,” even though its free, or its like \$50 if you want to get the certificate, and its only 12 hours, but no. Yeah so those are all kind of the moments that I like really recognized that it was really discriminatory in school. And if I wasn’t who I was and I wasn’t able to be more self assured, you know I wouldn’t be, after all of these incidences, I would have been, I never would have spoke again to the faculty. I would’ve never spoken again to my profs, and even sometimes with some of my classmates. I don’t remember now exactly cause like that stuff was really hurtful, I don’t really

remember, I am pretty sure I blocked it out. I know there were a few times in class where I felt like really unsupported by the views of my classmates but I don't remember those times anymore. (Gabrielle recorded interview, August 6, 2021)

For Gabrielle, the clash of her own worldview and that of the Faculty's was not inferred but rather overtly noted by her faculty. In fact, white faculty members avoided integrating free Indigenous education into their pharmacy program to protect white and non-Indigenous¹⁸ peoples' feelings and leave their discriminatory assumptions and ideas untouched.

Oaklynn described the large magnitude of effect that the clash in worldviews caused for her. She explained:

I think the biggest thing I noticed with regards to my education in pharmacy, with regards to health and medications is really the focus of pharmacy school. And that perspective, the Westernized, medical dominant worldview of medicine obviously differs from what – and this is my experience with my community, and it's not to say that every obviously Indigenous person would feel this way or reflect this way ... the feel I got from the classroom and the professor sometimes was that natural health products were a joke, and that in Western medicine, we use 'real' drugs. And natural health products we got taught about because you have to watch for side effects and you have to watch for drug interactions. And a lot of my classmates would kind of huff and haw, "Why do we have to learn this? This is boring. This isn't useful. This doesn't work. This isn't helpful to anybody." Never, not once [did we learn about Indigenous medicines]. (Oaklynn recorded interview, September 2, 2021).

¹⁸ Non-Indigenous people is used in this work to identify people who are not First Nations, Métis, and/or Inuit with ancestral connection to the land now known as Canada.

Noting the clash in worldview between what is represented in pharmacy school and her own worldview, Oaklynn elaborated:

Whereas growing up, we were talking about like four sacred medicines. It's the standard – the baseline. But then there was always berry picking and the benefits that that provides you, and the Three Sisters, the beans and the corn. Just those teachings that – food is medicine is one thing, I think that was like, not really incorporated. We had one nutrition lecture or something in school, not the focus of pharmacy school, right? And then – this isn't really a natural health product so this isn't a good example. But when we were younger, if my sister or I would catch a cold, we had a big cedar tree in our backyard. And so mom would take us out with a little offering of tobacco, we would offer tobacco, we'd pick the cedar, and we would boil the cedar, sit under a blanket, and breathe that in. And that always made me feel better than any Tylenol or Advil or a cough drop that they gave me. And I know that it was a practice in our community and our culture, it's not something they're gonna teach in class. And if you were to, blanket statement, talk about like the four – at least the bare minimum – the four medicines in class, I think it would just – people really wouldn't understand it unless you went in depth. And I think they just didn't therefore, like, was never really talked about. (Oaklynn recorded interview, September 2, 2021)

Oaklynn was disappointed to never hear about Indigenous medicines or practices that aligned with her worldview, especially when she *did* learn about traditional Chinese medicine, homeopathy, and other non-Western medicines and practices.

In addition to the absence of discussion about Indigenous medicines and practices, Oaklynn also discussed the absence of more general worldview differences between her own and that of the dominant worldview in pharmacy. She shared the following about Indigenous versus Western worldviews with respect to approaching health and wellness:

You have your mental, emotional, physical, spiritual, like, areas of health, right?

You're not necessarily a well rounded, healthy being, if not all of those are aligned, or if all of those aren't doing well, right? There's more than – way more – to that than I just said. But in pharmacy school, we obviously focus on physical care, about why someone's physically sick, and a little bit more on the emotional side with regards to mental health... Mental health is getting more attention. There is a focus on that in pharmacy school for sure, with regards to the mental aspect of health. With regards to Indigenous teachings and spiritual health, those are not ever touched on and I don't even think that they necessarily should be. Maybe that's not – you don't go to pharmacy school to learn about spiritual health, but it's perhaps something to bring up somewhere. (Oaklynn recorded interview, September 2, 2021)

Oaklynn continued to elaborate and shared how the absence of teaching about spiritual health and wellness in pharmacy education, for example, could become problematic for pharmacists providing care for Indigenous patients:

Just that if you have these patients, like they might be considering all of these areas of their health, whereas you're just throwing these physical things at them, and they might need to be checking in on these other aspects ... we had two lectures that even touched on Indigenous. One was a woman who worked for

NIHB [Non-Insured Health Benefits], and she came in to talk to us about how to navigate the PDF [Portable Document Format] and the website and how to check if, whatever. And she gave a little intro about Indigenous health, it was here and there. It was more than nothing, at least it was something and she didn't just jump into how to cover these drugs for these patients. She tried. And when she described the mental, emotional, physical, and spiritual divisions of health, someone asked, "What's the difference between mental and emotional?" And you could tell she was stumped, and she was just, "Yeah, they're kind of the same and they just break them up, but they're pretty much the same." And so I reached out to that classmate later and I was like, "They're not the same. I can tell you more if you want to know." That was the one lecture we got. And then the other lecture, it was in our fourth year, I think ... obviously wasn't impactful. (Oaklynn recorded interview, September 2, 2021)

So, even when Indigenous concepts *were* shared, they were shared by a white instructor and shared incorrectly. Like other participants in similar situations, Oaklynn felt the responsibility to clarify wrong information shared in the classroom.

Oaklynn described how the inauthenticity of rare Indigenous content and the constant clashing of worldviews became problematic for her with respect to forming her professional identity as a pharmacist. In her own words, Oaklynn shared:

Pharmacy is so heavily – and medicine, Western medicine is so heavily focused on evidence based medicine and trials and studies and [pharmacokinetic] data, and all of these things that Indigenous medicine, don't want to say doesn't care about but, that's not how teachings are passed along. And that's not why people

believe that something works for them. And I think, as Western learners, even myself, I find myself asking, “What is the evidence?” You find a hard time believing something if there's no evidence behind it or accepting that something might be okay or work for someone, if there's no evidence. And that was heavily [focused on]. In our [natural health products] lectures, we always looked at the evidence, and we always looked at the Cochrane¹⁹ trials, and we always – what does this meta analysis say about this [natural health product] that you can't really study because it has different amounts of this root and this root – it just doesn't make sense. And then do you really disband something because it doesn't have evidence? I struggled with that a lot. I wanted to be, you know an evidence based medicine pharmacist, where you needed the evidence and the research and the studies to back something up. But just because there isn't evidence to support something doesn't mean that it's not helpful. I think a lot of my classmates struggled with that as well. We were told to look for the evidence. And suddenly, if there's no evidence to support this [natural health product], it's garbage. But is it? (Oaklynn recorded interview, September 2, 2021)

Oaklynn realized how her education in pharmacy did not prepare her to work with Indigenous patients who do not subscribe to the dominant worldview in pharmacy education and who instead, or jointly, live by a traditional Indigenous worldview.

¹⁹ The Cochrane Database of Systematic Reviews (CDSR) is the leading database for systematic reviews in health care. The CDSR includes Cochrane Reviews (systematic reviews) and protocols for Cochrane Reviews as well as editorials and supplements. The CDSR is owned and produced by Cochrane, a global, independent network of researchers, professionals, patients, carers, and people interested in health (Cochrane, 2023).

Beyond differences in worldview, Oaklynn recalled how whiteness and white supremacy surfaced in her curriculum. Sharing a story about problem-based learning in her program, she explained:

So we're given a case, and then we got together as a group, and we all worked through this case. And something myself and a few of my other classmates noticed was that these cases were developed however many years ago, and they're too lazy to develop new ones. If the patient was Black, it would say that. If the patient was Chinese, they would say that. But if the patient, if they didn't say anything, it meant they were white. They would never say a white male, they would just say a 56 year old male. It was – if we needed to know that it was a Black male, it would say that. And otherwise, we all assumed white. (Oaklynn recorded interview, September 2, 2021)

Also noted by other participants, the positioning of white people as the norm and therefore not requiring mention of their race is certainly a major manifestation of white supremacy in pharmacy education.

Other participants shared stories that mirrored Oaklynn's experiences. Like Oaklynn, Kayla reflected on the absence of a holistic view of health and wellness and, primarily, the absence of discussion about spiritual health:

[Spiritual health] was something I think pharmacy didn't touch on too much. We talked a lot about – there are discrepancies in healthcare equality, but there's more than just the physical discrepancies, there's also discrepancies in people's emotional health and spiritual health and whether or not that has anything to do with their physical space, but them as a person. So, I think that wasn't really

touched on in pharmacy school, but that's also really hard to touch on, right?

Because people have different thoughts and opinions on that. (Kayla recorded interview, August 12, 2021)

In addition to noting the absence of spiritual health teachings, Kayla shared similar sentiments to Oaklynn regarding the positionality of non-Western medicines in pharmacy education:

I think it is hard because we do so much focus on the Western medicine and what we know, and then we talk about natural medicines and patients who really want to use them, and it's just like, we have no information ... It's not an enthusiastic or even equal level conversation. I feel like you're already looking down on them for [using non-Western medicine]. I know I hold that bias for sure, but it's hard because it's been so instilled in you to focus on the Western medicine ... We're never exposed to anything beyond a Western lens, so I think there's gaps all around, but it's – how do we hit all these gaps but still make sure we're focusing on the whole premise, which is a Western pharmacy degree, right? So, it's hard to balance out. (Kayla recorded interview, August 12, 2021)

Kayla recognized the contrasting worldviews, between Indigenous worldviews and the Western worldview of pharmacy, and the way Western medicines are positioned as superior in pharmacy education; however, Kayla also appreciated that the program is a Western pharmacy program and struggled to identify what a perfect balance might look like.

Like Oaklynn, Kayla took note of problematic ways that Indigenous Peoples were represented in her pharmacy curriculum. Kayla noted that in her program they “definitely talked about lots of the health inequalities Indigenous Peoples face, but it was almost more of a fact-stating, like no, whatever 40% of Indigenous Peoples have diabetes, whatever it is. But never

really how to deal with that” (Kayla recorded interview, August 12, 2021). Kayla continued to describe the problematic nature of representing Indigenous Peoples in this way:

You can’t just state the fact without how we got there. So, that’s a really interesting almost educational point of instead of throwing those epidemiology facts, have a background lecture ... It kind of stops – perpetuating racism. I think it’s really important. (Kayla recorded interview, August 12, 2021)

Both Kayla and Oaklynn took issue to the way Indigenous Peoples would be name-dropped as a statistic and/or simply being listed as being a risk factor for a particular disease state without any context. Each of them connected the effect such practices have on creating and recreating racism and stereotypes about Indigenous Peoples instead of focusing on the policies and practices of white supremacy that resulted in Indigenous Peoples faring in such ways.

Gabrielle shared a similar story with respect to Indigenous Peoples being listed as being at risk for certain diseases and therefore also being prioritized for certain interventions, but without context or an anti-racist lens. Regarding the Covid-19 vaccine rollout in her province, she noted, “It said all these people, plus Indigenous people over 45, but everyone else over 65. It’s just lazy – it’s lazy writing. I’m disgusted about that” (Gabrielle recorded interview, August 19, 2021). As Gabrielle ruminated on the topic, she came to the realization that although *she* knows the context behind why Indigenous Peoples are represented in such ways, she said, “I never realized other people might not. My mind is blown from that. Like, I am still processing that” (Gabrielle recorded interview, August 19, 2021). This realization left her feeling more disgusted with how Indigenous Peoples are portrayed in pharmacy education and practice and highlighted the need for a decolonized, trauma-informed, and anti-racist approach to pedagogy in pharmacy.

In addition to her disgust with respect to how Indigenous *patients* are described and perceived in pharmacy education, Gabrielle articulated how white supremacy in pharmacy has also painted her as an Indigenous person as being unprofessional. She explained:

Another difference in worldview that is really big for me is that you are an inappropriate healthcare provider if you share personal details with your patients – the idea that you are crossing professional boundaries, that you are an inappropriate healthcare professional, that you are not doing your job properly if I share with my patients, that no I have those same experiences, that no I understand what you are going through, you know I have family members who are going through that. Like, the idea that like if you share that, suddenly you are being a danger to your patients, which is very strange. It's very strange and I haven't been able to quite think of that yet, it's an idea that's bugging me, but like it's very hard to navigate because I don't want to be labeled as a bad healthcare professional. And of course there's all these consequences, you know, if you're deemed a bad healthcare professional like you can lose your license and blah blah blah, and all these things. Like, it's become, it becomes very, it becomes very like human to me. It becomes, "I'm a human, my patients are a human, but like Western society doesn't like that idea." So, it's like I, I, don't like when I can't be fully integrated as a person in everything that I'm doing.

(Gabrielle recorded interview, August 19, 2021)

Gabrielle noted how whiteness informs pharmacy education and practice and teaches students and practicing professionals to be 'the pharmacist,' and not to disclose details about their own

lives – not even their last names. This definition and expectation of ‘professionalism’ left Gabrielle uneasy, and even fearful, about being herself in the pharmacy profession:

It almost feels dangerous to like be yourself because of the consequences that might happen because of it, and how it’s like really looked down upon by other staff members, other healthcare professionals, and whatever – like, you know, suddenly I become unprofessional. Like woe is me that I actually care about my patients and want to talk with them, but like the idea that suddenly I become unprofessional [for sharing details about my own life], and then somehow that makes me untrustworthy in the eyes of a medical discipline. So excuse me, it’s really weird ... It’s also anti-Indigenous when people ask you to pick out just a part of your identity, like – people are not even realizing that it’s not done, like – you don’t do that. You *can’t* do that, in my opinion. (Gabrielle recorded interview, August 19, 2021)

Gabrielle’s First Nations worldview not only clashed with the dominant worldview in pharmacy, but put her in a position of risk with respect to being seen as unprofessional.

Gabrielle’s worldview was not the only part of her Indigeneity that has contributed to being seen as unprofessional with respect to white supremacy in pharmacy education and practice, but also her attire. Gabrielle shared:

I’ve actually been called unprofessional for wearing moccasins and the woman was like, she was my preceptor so it was really annoying, too. Like, “You can’t be wearing slippers to work.” And I was like, “Moccasins are a *shoe* older than Canada.” I was like, “SHOE.” And then she got me to read the [provincial]

guidelines about what to wear, and I was like, “My shoes are fine. It says so.”

(Gabrielle recorded interview, August 19, 2021)

She revisited the instance, discussed previously, when a faculty member shared that they thought Gabrielle was becoming more of an activist because she started wearing more Indigenous earrings. So, instead of simply existing as a pharmacy student, Gabrielle had to exist as an *Indigenous* pharmacy student and be ‘under watch’ because of it.

Indigenous Peoples and Ways of Being (almost) Don’t Exist in the Pharmacy Curriculum and Experiential Learning

Closely linked with whiteness, white supremacy, and epistemic racism, the exclusion of Indigenous Peoples, content, and pedagogical practices was discussed by all participants. When asked about Indigenous content in her curriculum, Destiny said, “I would say in our school there wasn’t a lot of content at all. The only portion that I remember was just them talking about [our city] being a very multi-cultural city” (Destiny recorded interview, September 9, 2021). Destiny shared that not even the Non-Insured Health Benefits (NIHB)²⁰ program was taught in her program. Regarding NIHB, Destiny said, “I still get frustrated with coworkers because they still call it Indian Affairs. You shouldn’t call it Indian Affairs – you’re going to get your head ripped off sometime” (Destiny recorded interview, September 9, 2021). Recognizing Destiny’s pharmacy curriculum did not include Indigenous content, she was asked if she has had any avenues for learning Indigenous content as a practicing pharmacist and said, “I would say not very much” (Destiny recorded interview, September 9, 2021). Destiny described growing as an Indigenous person throughout her pharmacy education, but when asked if her growth had anything to do with what was taught and learned in pharmacy school, she said, “No. It was

²⁰ The Non-Insured Health Benefits (NIHB) program is the federal health program that provides health coverage for status First Nations and some Inuit in Canada. (Government of Canada, 2023)

probably all on my own accord. Even that group with the medicine students, that was also on my own accord. I just saw a poster on the wall and they were looking for Indigenous students, so yeah” (Destiny recorded interview, September 9, 2021).

With respect to the curriculum, Oaklynn expressed significant frustration with the assessment and evaluation in her pharmacy program. She explained:

I think that the way we get tested in pharmacy schools is absolute garbage. I think multiple choice is ridiculous. And with regards to learning, education in community, it was always storytelling of sorts, right? Or conversation. And, obviously, pharmacy school is very didactic, and multiple choice, it's right or wrong. Or even in an interview setting to get into pharmacy school. I really hate interviews where you just get asked a question and then you answer, you get asked a question, you answer. I've been part of interviews that are like that, obviously. Then I've also been part of interviews where you just kind of get to chat and you're answering questions while you're chatting. Discussion, that seems so much more natural to me. And I don't I don't know if that's just maybe me as a person, or if it has to do with my community and growing up, but I'd much prefer that. (Oaklynn recorded interview, September 2, 2021)

Oaklynn recognized how her traditional Indigenous ways of being and doing were not reflected in her pharmacy curriculum and, specifically, the admissions, assessment, and evaluation processes. Specifically, regarding the absence of curricular content about Indigenous Peoples in her pharmacy program, Oaklynn hypothesized why Indigenous content may have been left out:

I sense that sometimes it was out of fear, or letting the wrong things happen and be said. They don't want to talk about it, because they don't want to talk about it

wrong, right? Or they don't want to get it wrong, or they don't want to say the wrong thing. And then sometimes it's maybe just better to not do it at all. I think it would be important to just acknowledge, maybe we don't know everything, and we're sorry if we say the wrong things, but like having the conversation is better than not doing anything at all. (Oaklynn recorded interview, September 17, 2021)

In her pharmacy residency education, however, Oaklynn was delightfully surprised to hear that her residency program was providing a session on Indigenous Peoples. Initially, she thought, “Oh my God, this is so cool,” but after feeling as though it was a performative action on the part of the residency program, especially since “throughout the rest of residency, [they] never talked about it” (Oaklynn recorded interview, September 17, 2021). Oaklynn (recorded interview, September 17, 2021) described the experience as feeling as though they were told, “Sit down in front of your screen and watch this video from 2015,” and that, while she was happy *something* was included, it was not deemed relevant or helpful for someone’s practice as a hospital pharmacist.

Regarding the same video and experience, Oaklynn noted that a few pharmacists were annoyed at the training schedule and felt it was a waste of time to be watching such videos, when they could otherwise be ‘useful.’ She elaborated:

And on one side, I was like, I agree because this sucks. It's so important, especially if you're a pharmacy student coming from a pharmacy school that didn't teach you how to be culturally appropriate or respectful. But in a hospital residency program, especially [mine], a level three teaching center, where we're getting Indigenous patients from [the North] and the surrounding communities,

there's a really large population of Indigenous patients, I really just see it like, there's nothing. And you could tell that some of those pharmacists didn't care about that. (Oaklynn recorded interview, September 17, 2021)

Although appreciative that *some* Indigenous content was included in her residency education, Oaklynn did not feel that independently watching an aged video on her computer screen about Indigenous Peoples was the best use of time or beneficial for pharmacists-in-training, while at the same time being hurt by other peoples' comments about the irrelevance of watching a video about Indigenous Peoples versus learning specific pharmacy skills.

The theme of having little to zero Indigenous content in pharmacy curricula was replicated by Callie's story, too. In fact, Callie shared this before being asked:

I'm sure you'll ask about the curriculum [about] Indigenous people, but it wasn't really something that was ever brought up or discussed much other than one lecture in first year that was one hour long, and never was brought up again.

There were no clubs and no awareness of Indigenous people. (Callie recorded interview, August 19, 2021)

Like Oaklynn, Callie also went on to do a pharmacy residency and mentioned that, for her too, Indigenous content did not come up at all. Callie noted that the first time Indigeneity ever came up during her pharmacy learning journey was when she attended a presentation of mine at a national pharmacy conference. She explained:

I remember really resonating with that and being, "Wow, I can't believe this is the first time that this has really come up in my whole pharmacy education." It really just made me really want to try to help with – I don't know, bringing Indigenous people and their health into the limelight of pharmacy education and

in the workplace, because really that was the first time I had encountered it other than that one lecture in school. And around that time was when I was really knees deep in learning or trying to learn my traditional language and doing a lot more readings and learning the teachings and all that. So yeah, in case you ever wondered the impact that you have on people, there you go. (Callie recorded interview, September 2, 2021)

So, after seeing herself reflected in the pharmacy profession and being educated about Indigenous Peoples in the context of pharmacy, Callie felt seen and became motivated to make Indigenous education in pharmacy the norm and not the exception.

In addition to noting the lack of Indigenous content in the curriculum, Callie also took note of the lack of Indigenous knowledges and Indigenous pedagogical practices in her pharmacy curriculum. Although personally a fan of didactic-style lectures, Callie expressed that including Indigenous ways of teaching, such as storytelling, would be a positive addition to the curriculum. She felt that pharmacy instructors and preceptors should be taught about Indigenous pedagogical practices and should also receive other Indigenous education – versus just the students in pharmacy:

I think also having some kind of training or education for the preceptors or teachers or people who are like the administrators of the residency, just because even in my experience there, hearing racist or discriminatory comments and I think, I feel maybe preceptors aren't being prepared necessarily for having Indigenous students, so I think that would be some place to start for sure, because I did have some negative experiences in that regard. (Callie recorded interview, September 2, 2021)

Callie recognized the importance of not only having Indigenous content in pharmacy education, but ensuring that the educators who teach, or will teach, such content should be educated themselves.

Participants also identified that Indigenous content should be mandatory *before* entering a pharmacy program. None of the participants' pharmacy programs required any Indigenous education of any kind in order to be considered for and accepted into their pharmacy programs. Additionally, with respect to the content of the application process to pharmacy, all participants intentionally avoided applying to pharmacy programs that required the Pharmacy College Admissions Test (PCAT),²¹ noting the racist nature of such tests that are rooted in white supremacy. Whether noting admissions processes rooted in whiteness, differences between Indigenous and Western worldviews, discussing Indigenous content that is taught or not taught, or commenting on the physical barrier that seems to always separate pharmacists from their patients, all participants reflected on how whiteness, white supremacy, epistemic racism, and the lack of Indigenous curricula and pedagogical practices casted a shadow on their pharmacy education and practice experiences.

²¹ The Pharmacy College Admissions Test (PCAT) is a highly standardized test that is similar to the Medical Colleges Admissions Test (MCAT) and the Law School Admissions Test (LSAT). (American Association of Colleges of Pharmacy, 2023)

CHAPTER SIX

DISCUSSION

Introduction

This doctoral dissertation centered around bringing the voices of Indigenous (First Nations, Métis, and/or Inuit) Peoples who have experienced or who are still experiencing pharmacy education in Canada to the forefront. The experiences of Indigenous Peoples in pharmacy education has been minimally studied worldwide and has not been studied in Canada. As a Saulteaux (Status First Nations / Indigenous) person myself, this research was deeply connected to my own experiences as an Indigenous person within the education and profession of pharmacy. In addition to my personal attachments to this work, Chapter 1 also presented further justifications for why I engaged in this work. This study was based in Indigenous research methodologies and, specifically, used the conversational method. I met with five different Indigenous Peoples who have graduated or were still progressing through pharmacy school in Canada during the time of our conversations together. I had a series of three conversations with each of the five participants, which were spaced out by a minimum of a week between consecutive conversations with the same individual. Through Indigenous theorizing, I categorized my findings into two major thematic areas: the first broadly described as the isolation of Indigenous Peoples in Canadian pharmacy education and the second being whiteness, white supremacy, and the incomplete curriculum in Canadian pharmacy education. Although my research wonder was asking the question about what the affirming and challenging experiences of Indigenous students during their time in pharmacy school in Canada were and how their experiences may inform future directions of Canadian pharmacy programs, very few

experiences of affirmation were shared and the majority of experiences shared were indeed challenges, hence the overall themes of the results of this study. Consideration of how the experiences shared may inform future directions of Canadian pharmacy programs is shared in the conclusions and recommendations chapter (Chapter 7). It is noted that all participants identified as either First Nations or Métis and no participants identified as Inuk/Inuit. An evolution of this work would ideally include First Nations, Métis, and Inuit, as well as at least one participant who has experienced pharmacy education from each of Canada's now eleven pharmacy programs.

Discussion of isolation of Indigenous Peoples in Canadian pharmacy education

Perhaps the most saddening, yet personally affirming, finding was the extreme isolation felt by each participant throughout their time in pharmacy school. Disappointingly, the participants who described being tokenized were the ones who described themselves as being visibly identifiable as First Nations or Métis. All participants, however, described being 'othered,' although to varying degrees, at some point and/or throughout their pharmacy schooling. Experiences of isolation were magnified for all participants with respect to their inability to identify any other Indigenous students in the classes or programs, except Destiny who serendipitously found an Indigenous classmate later in her pharmacy school experience. All participants, with the exception of Gabrielle, could also not identify any Indigenous staff or faculty members in their respective pharmacy schools during their time as a pharmacy student. As an Indigenous person myself who has graduated from two separate pharmacy degrees (Bachelor of Science in Pharmacy and Doctor of Pharmacy) and from two separate institutions, as well as 8+ years as the first and only Indigenous faculty member in pharmacy in Canada, the stories of isolation actually contributed to feeling a sense of community. For too long I gaslit myself into believing that my experiences were because of me as an individual and not because

of me as an Indigenous person. Although it is possible that each of us (each of the participants and I) simply had similar individual experiences, participants' stories suggest otherwise. Based off the stories of participants and my own experience, Indigenous Peoples in pharmacy school experience isolation due to their/our Indigeneity, which is often the result of racism, discrimination, and lack of representation.

Discussion of being 'othered'

Particularly striking was the fact each participant did not describe feeling 'othered' *prior* to their entry to pharmacy school. Experiences of feeling othered seemed to begin during the application process to pharmacy, particularly when applying for an Indigenous equity spot, if available. Although all participants supported Indigenous equity seats in pharmacy programs across Canada, the overall sentiment is complex. Having one single Indigenous equity seat was problematic for participants who applied for that single seat, despite not having any confirmation they were being considered and admitted into the equity spot. In one pharmacy program, the Indigenous equity seat was an *additional* seat in the class versus a 'regular' seat that is allotted for an Indigenous student. Participants felt embarrassed when their class sizes were shared and it made them gaslight themselves into wondering if they were worthy or 'smart enough' to be there, which stayed with them throughout their pharmacy schooling. This negative thought pattern about perhaps not being deserving of a spot in the class was further magnified when participants' classmates shared similar assumptions.

When such othering is prolonged over a long period of time, a person may start to internalize their perceived otherness. LaRocque (2010) discussed the concept of internalization as not being perfectly understood; however, much of it appears to be an unconscious process. Indigenous Peoples' ideas about themselves may start to mimic the racist and discriminatory

ideas others carry about Indigenous Peoples after being subjected to social and ideational hatred based on their racial, cultural, and ethnic groupings as ‘Indians’ over a sustained period of time (LaRoque, 2010). Eventually, feeling ashamed becomes a common feeling and a person may not only feel shame from being an ‘Indian’ themselves, but they may also start to be ashamed of other ‘Indians’ (LaRoque, 2010). Such deficit theorizing about Indigenous Peoples in pharmacy and their deservingness of a seat in pharmacy may grow from being non-Indigenous Peoples’ ideas about Indigenous Peoples into Indigenous Peoples ideas about themselves.

Racist assumptions about Indigenous Peoples and, specifically, Indigenous Peoples applying to and those who are accepted into pharmacy school contributed to feelings of shame, isolation, and fuelled participants’ decisions to not disclose their Indigeneity. For participants self-described as being visibly identifiable as Indigenous, they did not usually have the opportunity to decide whether or not to disclose their Indigeneity. Not wanting to be othered or experience racism and discrimination, self-described white-passing participants consciously withheld their Indigeneity as long as possible throughout (and following) pharmacy school, with the exception of speaking up in class or other pharmacy settings when incorrect, racist, and/or discriminatory remarks were made. Across many Indigenous cultures, we are taught about the importance of responsibility – to ourselves, to community, to the land, etc. – and it therefore not surprising to learn that although some participants wanted to continue withholding their Indigenous identity, they ‘outed’ themselves (as Indigenous) in situations that were either immediately problematic or had the potential to become problematic (e.g., negatively affect care of Indigenous patients). These findings suggest there may have been other Indigenous students in one or more of the participants’ pharmacy classes who may also have chosen not to disclose their

Indigeneity; however, especially for those who have already graduated, it may never be known if the participants had any Indigenous classmates in pharmacy school.

Among other reasons participants shared that led to them being othered and isolated was withholding information about how their education was funded. Free education for all Indigenous Peoples in Canada is a longstanding myth (Monkman, 2016). Participants who received funding from their community, whether a small or large amount, did not share information about their funding with their classmates. This was an experience seemingly only lived by a single Indigenous student in each of the participants' pharmacy classes, further contributing to their feelings of isolation in pharmacy school. If/when Indigenous students in pharmacy school already felt othered, the application to/acceptance of an Indigenous equity seat and receiving funding from their community made them more likely to withhold their Indigeneity from their peers and/or pharmacy programs. Perhaps perceived as dishonest by some, participants' non-disclosures of Indigeneity, Indigenous equity seat occupation, and/or community funding were decolonial acts of self-protection and survival. If Indigenous students have not already experienced feeling othered or being victims of racism and/or discrimination, we all have people in our families and communities who have and, therefore, we follow advice given to us to withhold such information as a means of protecting ourselves from mistreatment. This was as true for me as it was for participants.

Another witnessed phenomena amongst some participants was feeling othered and not disclosing their Indigenous identity but for reasons of not feeling 'Indigenous enough.' Participants described themselves as 'a closeted Indigenous person,' an 'impostor,' and 'not worthy of calling themselves Indigenous.' Historical and current colonial policies and practices, as well as the legacy of assimilationist and genocidal practices (e.g., Residential Schools, 60s

Scoop) are the main drivers behind the loss of attachment Indigenous Peoples' experience with respect to their culture, community, and identity as a First Nations, Métis, and/or Inuk person and often is a strong predictor of Indigenous students' persistence through or early leaving from post-secondary education (Herkimer, 2021; Indspire, 2018). The results of this study validate such findings from Herkimer (2021) and Indspire (2018) in that participants considered leaving their pharmacy programs as a result of feeling isolated, othered, and from racist and discriminatory experiences. It is known that, in general, Indigenous students in post-secondary education strive to achieve a sense of community, belonging, and safety through their post-secondary years (Herkimer, 2021; Indspire, 2018); however, these aspirations were not achievable for any of the participants within their pharmacy faculties alone. Each participant, especially those who did not feel 'Indigenous enough,' shared stories about learning more about their Indigeneity and finding community and belonging in other areas of their campus, including their university's medical school. After taking advantage of opportunities to learn about themselves, their cultures, and to have their Indigeneity nurtured during their post-secondary education experience, participants felt a stronger sense of ownership over their Indigenous identity. Interestingly, though, participants' occurrence and/or magnitude of reclamation of their Indigenous identity did not impact their decisions to not disclose their Indigeneity to their peers or programs, which therefore maintained their sense of isolation and feeling othered.

The participants who described themselves as white-passing and/or not feeling 'Indigenous enough' were also the only participants who did not identify experiences or incidents of racism and discrimination during their time in pharmacy school, with the exception of general comments on differential treatment of Indigenous Peoples as represented in the curriculum or issues around Indigenous equity seats, for example. It may be delineated that being

a white-passing Indigenous pharmacy student, with or without a strong personal connection to their own Indigeneity, they are perhaps less likely to identify microaggressions or some instances of overt racism, likely due to a lifelong reality of *being seen* or *seeing themselves* as non-Indigenous or white. What remained true, though, were consistent stories of feeling isolated and othered throughout pharmacy school, regardless of connection to or disclosure of participants' Indigeneity.

Discussion of tokenization

Experiences of tokenization were only shared by the three participants whose identity was known or made known during their time as a pharmacy student. Experiences of tokenism were primarily related to being/feeling tokenized by participants' faculties as a whole. One participant shared her dilemma of labeling or 'complaining' about being tokenized by her faculty because she benefitted from it. Participants who shared stories of tokenization credited societal and institutional pressures to decolonize and Indigenize their programs and universities and noted that because each of their programs had no or few other identified Indigenous Peoples in their faculties of pharmacy, their faculties' only opportunity to satisfy such societal and institutional pressures was to place a spotlight on – or, tokenize – the participants. One participant reflected on how jarring the experience was from moving from being 'the Indigenous student' to becoming 'just' a pharmacist. In her practice as a pharmacist, she was not labelled as or known as 'the Indigenous pharmacist,' perhaps because her practice was a locally owned and operated pharmacy that may not experience the same pressures as post-secondary institutions to decolonize and Indigenize.

One participant, however, did continue to feel tokenized after graduating from her pharmacy program. Interestingly, though, this participant found herself in another pharmacy

learning environment: a hospital pharmacy residency program. Although never formally discussed, her Indigeneity could be inferred from her *curriculum vitae* (CV) and from her responses to various questions during the residency interview process. This participant questioned, and still questions, if her acceptance into either or both her pharmacy school program and pharmacy residency was a tokenistic effort or if she was ‘actually smart enough’ to be there. All participants’ stories of tokenism resonated with me as I believe I experienced the same as both a student as a post-licensure professional. The experiences of being tokenized stay with you and have you constantly reflecting back on if your achievements were truly noteworthy achievements or if your place of study or work simply wanted to push an assumption of being inclusive and supportive of Indigenous students, staff, and/or faculty members. Additionally, the tokenization of Indigenous Peoples in pharmacy tends to be made visible and known, whether through publications, newsletters, websites, social media, awards, and other avenues, which often leads to resentment from peers/colleagues and assumptions of preferential treatment and therefore unworthiness of the Indigenous person in question.

Discussion of Indigeneity not being reflected or supported in pharmacy faculties or in the profession

Feelings of isolation were further magnified for participants with respect to the absence of Indigenous representation in their school’s staff and faculty, too. Four of the five participants had never spoken to another Indigenous pharmacy professional prior to this study. None of the participants had ever had an Indigenous instructor or professor in pharmacy or in their pre-pharmacy studies, with the exception of what was described as ‘one-off’ guest lecturers. In instances where there was an Indigenous guest lecturer, they were not a pharmacy professional. As such, participants found it challenging to see themselves reflected not only in their specific

program and university, but also in the pharmacy discipline as a whole. Throughout their four years of pharmacy school, none of the participants were even aware of another Indigenous pharmacy professional, with the exception of three of them who had later seen me present at a conference. Certainly, not seeing or being able to name any other Indigenous pharmacy professionals – anywhere – felt isolating for all participants, just as it did for me, too.

Within participants' own pharmacy programs, there were a variety of clubs, causes, and activities that reflected other ethnicities, disease states, or populations; however, none of these initiatives were inclusive, nurturing, or celebratory of Indigeneity, leaving participants to seek community and affirming spaces outside of their pharmacy programs and pharmacy spaces. In fact, of all the participants who had taken part in at least one sweat lodge prior to my conversations with them, each of them credited their sweat lodge participation to cultural initiatives put on by their university's medical school, which was exactly my own experience, too. The glaring lack of Indigenous Peoples, spaces, initiatives, etc., left participants, at times, having to pick up their faculty's slack and felt them feeling like the single Indigenous educator for their faculty and their classrooms. These findings are consistent with the findings of Indspire's (2018) nationwide post-secondary survey of Indigenous students, including Indspire's third and final recommendation to realize the Truth and Reconciliation Commission of Canada's Calls to Action and support Indigenous students in post-secondary spaces: Strengthening of Indigenous culture, identity, and belonging through mentorship on campus and beyond. Indspire (2018) noted that meeting the cultural needs that strengthen Indigenous students' sense of self and supporting their community connections during their time in a post-secondary space must be a major priority. Although it is likely that most Indigenous Peoples believe and would say the same thing, similar findings have been shared in the literature (Hallett, D., Want, S. C., Chandler,

M. J., Koopman, L. L., Flores, J. P., & Gehrke, E. C., 2008; Huffman, 2001; Johnston-Goodstar, K., & Roholt, R. V., 2017; Joseph, D. H., & Windchief, S. R., 2015; Martinez, 2014) and are likely to be applicable in pharmacy education for Indigenous learners, too.

Discussion of Worldviews, Whiteness, White Supremacy, and Epistemic Racism

Considering the stories shared by participants, and reflecting on my own stories, whiteness, white supremacy, and epistemic racism are unavoidable in pharmacy education. Particularly off-putting was one participant's story about a faculty member sharing their decision to not incorporate a free Indigenous education course into the pharmacy program to protect white and non-Indigenous Peoples' feelings and leave misinformation and anti-Indigenous racism untouched. Participants were left confused about the lack of Indigenous knowledges and perspectives in their pharmacy education, especially considering topics like traditional Chinese medicine, homeopathy, and other non-Western medicines and practices *were* present in participants' curricula. With respect to certain non-Western medicines and practices, though, participants shared stories about how such medicines and practices were seen 'as a joke.' In fact, in my own pharmacy education, I recall being shown what was considered to be a comedic video about an 'alternative medicine' emergency room. It was a literal joke that was shared with everyone in my class. Although such 'jokes' were not specifically about Indigenous medicines or practices, the same rhetoric of non-Western medicines and practices being a joke can be, and certainly are, extrapolated to Indigenous medicines and practices, too.

It is not surprising that Canadian pharmacy education has not done justice to Indigenous knowledges, medicines, and practices, especially considering the glaring absence of Indigenous Peoples not only within the pharmacy profession at large, but specifically within the academic pharmacy sector. Some participants commented on how their education in pharmacy did not

prepare them to work with patients, families, and other folks from their own communities or other Indigenous communities, as well as all other people who do not exclusively subscribe to a Western worldview. It may be argued that perhaps this is not the role of a Western discipline like pharmacy; however, it is widely known that people who *do* believe in and consume Western medicines also participate in non-Western practices and consume non-Western medicines (Esmail, 2017). In fact, over half of Canadians report using Complementary Alternative Medicines and practices (Esmail, 2017).

The entire (Western) approach to health and wellness throughout pharmacy education was noted to be a major clash that participants could not turn away from. For example, multiple participants commented on their own (Indigenous) understandings of health and wellness, such as the Medicine Wheel model that includes four dimensions of each person's health and wellness: mental, emotional, physical, and spiritual. All participants noted the absence of the inclusion of the spiritual realm of health and wellness. For Indigenous students in pharmacy, this disinclusion may be interpreted as the Medicine Wheel model not being valued, valid, or worthy of discussion. I worry about this devaluation and disinclusion of the Medicine Wheel understanding of health and wellness for multiple reasons, including not adequately equipping Indigenous and non-Indigenous pharmacy students (and later, pharmacists) to effectively educate and counsel Indigenous patients, families, and communities. I also worry about the implications this has on recruiting Indigenous Peoples into pharmacy programs.

Pharmacy faculties often discuss the importance of recruiting Indigenous applicants and then later having them work with Indigenous patients, families, and communities as Indigenous pharmacists. Unfortunately, though, there is little to no opportunity to practice this kind of intra- or inter-cultural patient education and counselling that is inclusive of Indigenous worldviews. So,

although the goal might be to have Indigenous Peoples become Indigenous pharmacists who will go on to work with Indigenous Peoples, this does not end up becoming the reality in colonial curricula or programs that do not employ Indigenous educators to assist students in honing such knowledge and skills. This is especially concerning given the drastically poorer health outcomes experienced by Indigenous Peoples versus non-Indigenous Peoples in Canada.

Whiteness and white supremacy surfaced in various participants' stories, including how patients and patient cases are represented in pharmacy education. Participants noted how patient cases would always signify the ethnicity of the patient unless they were white. This practice normalizes whiteness as being the standard or reference point for patient care. Additionally, indicating the ethnicity for all patients in various cases, except white patients, suggests to learners that something separate or different needs to be done because of the patient's ethnicity, which may or may not be true. Further, students are socialized through this practice to perceive non-white patients as being 'more work.' All participants suggested that the ethnicity be noted for *all* patients in paper and non-paper cases, which may assist in re-socializing pharmacy students to be cognizant of the ethnicity of all patients, including white folks, and what their ethnicity might mean, if anything, with respect to their care with and for such patients.

In situations where participants described Indigenous content being taught in their program, it was most often taught by a white person and also often contained incorrect information. If an Indigenous person taught the material, they were not a pharmacist and sometimes not even a health professional. For example, one participant recollected a white guest lecturer telling her class that mental and emotional health were the same thing. Others reflected on receiving extremely generic and basic information about Indigenous Peoples. This is concerning and problematic as students cannot and should not be expected to connect the dots

between generic and basic Indigenous history and Canadian history and what they should do as pharmacy students and future pharmacists to provide best possible care for Indigenous patients, families, and communities.

In lectures and experiential learning when Indigenous Peoples would be mentioned, it was usually with respect to Indigenous Peoples being most commonly affected by a particular disease state or seeing being Indigenous listed as a risk factor for various disease states, infections, and other experiences. Participants expressed their concerns about Indigenous Peoples being representing in such problematic ways instead of through anti-racist / anti-oppressive modalities. For example, participants took note of how when learning about diabetes, for example, Indigenous Peoples were listed as being disproportionately affected. When the classroom instruction is limited to simply listing Indigenous Peoples are being more likely to develop diabetes, learners may be left with an assumption that there is something genetically inferior about or innate to being Indigenous that causes Indigenous Peoples to be more likely to develop diabetes. Without a dedicated discussion about the various social determinants of health at play, for example, learners are socialized to believe that Indigenous Peoples are simply less healthy, whether because of genetics or because of their own doings. Not only should the social determinants of health be emphasized in such situations, but the *actual* reasons Indigenous Peoples are at higher risk of, or overrepresented in, certain disease states should be explicitly noted so that students are not left alone in ‘connecting the dots’.

Having whiteness as the so-called standard in pharmacy education and practice, participants also shared stories about how their physical representation of being Indigenous was seen as unprofessional. Specifically, one participant was reprimanded by an experiential learning preceptor for wearing moccasins and told to wear ‘actual shoes,’ despite moccasins satisfying the

footwear requirements for their pharmacy education and experiential learning. The same participant was also unsettled by having a faculty member tell her they could tell she was becoming more outspoken because she started wearing Indigenous earrings. Although difficult to pinpoint each problematic facet of such a statement, the inappropriateness is undeniable. For this participant, simply being herself meant being seen as unprofessional and argumentative ('outspoken'). If her pharmacy program was an Indigenous pharmacy program, for example, it is likely that her mocassins and/or earrings would either not be noticed or, if noticed, would be complimented on versus as being seen as outspoken and 'different.'

Discussion of Indigenous Peoples and Ways of Being (almost) Don't Exist in the Pharmacy Curriculum and Experiential Learning

Closely linked with worldviews, whiteness, white supremacy, and epistemic racism, the exclusion of Indigenous Peoples, Indigenous content, and Indigenous pedagogical practices was discussed by all participants. Such exclusions translate into pharmacy students and pharmacy graduates being less prepared to work with Indigenous Peoples versus non-Indigenous populations and therefore perpetuating substandard care experienced by Indigenous Peoples in Canada (Allan & Smylie, 2015). Unfortunately, the exclusion of Indigenous knowledges and Indigenous content starts *prior* to pharmacy school since none of the now 11 pharmacy schools in Canada requires Indigenous studies as a pre-requisite to pharmacy school. As such, students are entering pharmacy school with unknown baseline understandings of Indigenous Peoples, Indigenous history, Canadian history, and current contexts. Even in situations where students may indeed have taken at least one Indigenous studies course in arts and science, it is likely they did not approach their participation and learning in the course with a pharmacist or health professional mindset, just as it is likely their professor(s) did not approach teaching and assessing

course content in the same way. These realities leave a major gap, but also a major opportunity, in pharmacy students' and pharmacists' awareness, knowledge, and higher-order thinking with respect to Indigenous Peoples in Canada.

Not only was Indigeneity missing in the curriculum prior to and during pharmacy school, but participants also discussed their desires to have had admissions processes that are more inclusive of Indigenous Peoples, especially if recruiting and retaining Indigenous students is a priority. Indigenous Peoples have been overwhelmingly positive about various Indigenous-specific application policies and processes around the world, including pharmacy and other health science programs (Indspire, 2018; University of Auckland, 2022). Participants described feeling like their respective faculties wanted them (an Indigenous student) to apply, be admitted, and graduate; however, their experiences throughout pharmacy school suggested otherwise. Where there were efforts to increase the number of Indigenous students in a pharmacy program (e.g., Indigenous equity seat(s)), participants wrongfully assumed there would be some level of coordination, contact, and relationship building between the faculty and the Indigenous student. This is, perhaps, not a surprising finding given that there are most often zero Indigenous Peoples part of pharmacy faculties and therefore one would assume there are zero, or at least very few, Indigenous Peoples on admissions committees and involved in other admissions policies, processes, and activities.

In both the classroom and in experiential learning, participants expressed how Indigenous ways of being were not celebrated and, at times, overtly discouraged. Most participants commented on the differences in general approaches to relationship building between Indigenous ways of being and what is taught and practiced in pharmacy. Commonly discussed was the expectation in pharmacy school and experiential learning to never share more than your first

name when interacting with patients, which are concepts usually captured in professionalism and pharmacy ethics courses. Participants credited how whiteness informs pharmacy education and practice and teaches students and practicing professionals to be ‘the pharmacist,’ and not to disclose details about their own lives – not even their last names. The clash between Indigenous ways of being and what is taught and expected in pharmacy school and experiential learning left some participants worried about being seen as unprofessional by their instructors and/or preceptors and also worried about the possibility of failing a course or experiential learning placement. Participants wanted to converse more authentically with patients and their families, share stories, talk about where they are from, include personal anecdotes in their conversations with patients, and share other ‘personal’ information that is usually seen as ‘the norm’ among Indigenous Peoples but conversely is seen as inappropriate or unprofessional in the Western pharmacy profession and other Western health professions. Although all participants were thankful for their pharmacy education and all of them have remained in the pharmacy discipline, each of them shared stories about how a shadow was cast on their pharmacy education and practice experiences because of their Indigeneity.

Discussion of my own experience

I was not a research subject in my own study; however, I wanted to provide a few narrative summaries of my own experiences in pharmacy education and practice and discuss how they compared to the experiences of the study participants. Although I am the great-grandson and grandson of residential school survivors and the son of a 60s Scoop survivor, I am thankful I was able to reclaim my Indigeneity throughout my childhood, with my stronger reconnection efforts taking place in high school. In fact, I attended a separate Indigenous grade 12 graduation in Saskatoon, Saskatchewan, Canada, at the Saskatoon Indian and Métis Friendship Centre

(SIMFC) where Indigenous Peoples graduating from grade 12 across the city and from any district (e.g., public, catholic, private, etc.) celebrated and were celebrated together. I was the valedictorian for the graduate ceremony at SIMFC and fondly recall sharing a story about my (Saulteaux) mother who had just recently finished her Master of Arts in Native Studies at the University of Saskatchewan, which was followed by period of loud cheers and clapping to recognize my mom's hard work and success. Things just felt different and correct with the SIMFC community versus my general high school community. As such, I continued to seek Indigenous experiences and opportunities following high school and now reflect back on my post-secondary years being a time of immeasurable transformation when my dominant worldview shifted from being primarily Western to being primarily Saulteaux.

During this transition in my dominant worldview, my struggles and tensions were similar to each of the participants, but not the same. Growing up with a primarily Western worldview and mastery of Western education, my pre-pharmacy studies, my application to pharmacy, and my progression through pharmacy school was met with minimal resistance; however, the level of resistance and discordance between my changing worldview and the dominant worldview within pharmacy continued to grow. I was never recruited to pharmacy school at any point in my life and certainly not through any Indigenous-specific recruitment. My application process to pharmacy in 2005/2006 felt familiar and consistent with my primary, secondary, and post-secondary experiences thus far. I especially appreciated the 'Personal Profile' component of my pharmacy school application process, which was essentially a written interview, although I would have much preferred an in-person interview versus showcasing myself in a stressful, timed, and high stakes examination environment.

Like the study participants, I chose to not disclose my Indigeneity to my classmates and program, with the exception of a few close friends in my class. As time progressed, though, situations kept occurring in the classroom or experiential learning environments where something problematic or incorrect was said and I felt responsible to speak up and clarify. For example, in my second year of pharmacy school the instructor mentioned giving tobacco to an Indigenous person (referring to traditional protocol) and my classmates started laughing. The instructor was not able to answer the questions of my peers, so I ‘outed’ myself by virtue of how I clarified the misunderstandings about gifting tobacco. Referring to misunderstandings about being Indigenous and getting ‘free tuition,’ people would then say things like, “I didn’t know you were Indigenous! That’s such a huge benefit!” There was very much a rhetoric of having ‘additional benefits’ in life and as a student, coupled with a complete disregard for the realities of my family, extended family, and even my own lived and living experiences.

In my entire four-year bachelor of science in pharmacy degree I had one single lecture about Indigenous Peoples, which was delivered by someone who worked for the local health authority but was not a health professional. While appreciative to have had *something*, I wish my classmates and I had received much more Indigenous content and for such content to be delivered by Indigenous Peoples who are patients, family members, and health workers – especially in the pharmacy profession. Since that single guest lecture was our only exposure to Indigenous Peoples, our only assessment or evaluation about Indigenous health were a few trivial questions in that particular course’s final examination. All other assessments, Indigenous-related or not, were most reflective of standard Western approaches to assessment, such as multiple choice and short answer questions that needed to be answered within a specified period of time and scored with a specific percentage. I recall receiving marks that I felt did not reflect what I

knew about the topic(s) and asking a few of my professors if they could give me a patient case or put a human being in front of me and assess my knowledge in that way. Their response, of course, was always, “No,” and instead of *them* making adjustment that better fit *me* (and perhaps other Indigenous and non-Indigenous students), *I* had to make adjustments to perform better on *their* ideas of what assessment and evaluation should look like. The result was me, and others like me, perfecting the craft of multiple choice and short answer exams versus truly focusing on what is important and necessary for us to go on to become competent and confident pharmacists. I never *did* perfect it, though, which is reflected in the absence of academic awards and other scholarly achievements during my time as a pharmacy student.

In the experiential components of my pharmacy education, I was deeply saddened to see how much my people (Indigenous folks) were overrepresented in pharmacy and other health care spaces. My hospital pharmacy experiences in Saskatoon and Regina, Saskatchewan, Canada, were eye-opening with respect to the number of Indigenous Peoples I witnessed. I also noticed how common Indigenous practices and ways of being were not welcomed in such spaces, such as limiting the number of people with a patient in the hospital or at a pharmacy or forbidding smudging, discouraging traditional Indigenous medicines, and hearing health professionals tell Indigenous patients and their families that there was ‘no evidence’ for the various Indigenous medicines and practices they employed in their health and wellness. Additionally, like some of the participants in this study, I was reprimanded for being ‘too personal’ with some patients and not allowed to showcase or share my last name. I understood and still understand what ethical relationships look like, but I also understood and still understand that ethical relationships can and do look different depending on who the individuals or parties are in a particular relationship. I *needed* to share my last name, my mother’s last name, and the other last names in my

(Indigenous) family line in order for Indigenous folks to ‘place’ me, which I will always continue to do despite what might be encouraged in pharmacy textbooks or practice standards.

My greatest struggles, though, with respect to my experiences as an Indigenous person in pharmacy education has been ‘on the other side’ as a faculty member in pharmacy. A detailed account of my experiences as an Indigenous faculty member in pharmacy will (eventually) be shared; however, I will share these experiences via an avenue other than my PhD dissertation. I will, however, emphasize how affirming and validating this study was for me. I cannot help but wonder if I might experience the same sense of affirmation and validity once I meet and share stories with other Indigenous faculty members in pharmacy – whenever that day might be. Until then, I will continue on with my work and do whatever I can to realize a critical mass of Indigenous Peoples in the pharmacy student body and profession across Canada, including staff and faculty at each of the eleven schools of pharmacy across the country. I am thinking about the next seven generations but I pray we witness such changes much sooner than seven generations from now.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

Hearing, sitting with, analyzing, and reporting the stories shared by participants felt like swimming among the five Great Lakes. The water of the Great Lakes flows from one to the other and across various terrains that filter and make the water more clear. Eventually, yet temporarily, the vast waters are reduced to a small river (St. Lawrence River), before then making its way to the Atlantic Ocean, which connects and uplifts every land and being around the globe. Like the Great Lakes, each participant's story is connected, animate, and part of something bigger. I had to let the stories flow and over time, they came together in a smaller and clearer stream where meaning-making became less vast of a task. I now have the responsibility to keep the stories flowing so until they reach the ocean – or, the global collection of stories and literature.

This study is the first time we have heard the voices of Indigenous Peoples in Canada regarding their affirming and challenging experiences in pharmacy education *and* told through the research and storytelling of an Indigenous (First Nations) pharmacist. Writing this 'final chapter,' feels like anything but 'final,' especially considering this study, and the work that will come after it, will comprise the rest of my career and the careers of others long after I am gone. Perhaps the most important conclusion and recommendation from this work was that Indigenous Peoples in pharmacy education and practice feel extraordinarily isolated in their places of study and work and they are eager to meet and learn from other Indigenous Peoples in pharmacy and to feel a sense of community and belonging. The recommendation that resulted from this finding was that a national organization should be created for Indigenous pharmacy professionals in Canada, inclusive of pharmacy assistants, pharmacy technicians, pharmacists, and students in

each of these programs. I prioritized this final conclusion and recommendation over finishing my PhD because I felt an overwhelming sense of responsibility to be the person who brings together Indigenous pharmacy professionals across the country and for us to be brought together immediately.

I knew and still know that this was the right thing to do and at the right time – for me, anyway. Throughout the duration of my PhD I was hired as an Assistant Professor (tenure-track) in the College of Pharmacy and Nutrition at the University of Saskatchewan and then later resigned in Summer 2021 because of intolerable racism, discrimination, and harassment, which I believe transpired because of my Indigeneity and also because of my Two-Spiritedness, my queerness, and my young age. I was then hired by the University of Toronto and started a position as Assistant Professor, Teaching Stream, with the Leslie Dan Faculty of Pharmacy in Fall 2021. During this same time period, my family was struggling with my younger sister's debilitating and life-threatening chronic pain, we experienced a global pandemic, I met, dated, and broke up with my first boyfriend and the first partner I loved, and the worst of all, my mother received a Stage IV colon cancer diagnosis in June 2021, which she died from in November 2022 on my parents' 41st wedding anniversary. Amidst all of these catastrophic challenges, I reached my mental, physical, emotional, and spiritual limits and took a mental health leave. Striving to find something to bring me hope, to energize me, and to give me a sense of meaning, I (finally) embarked on a journey to create what has now become the Indigenous Pharmacy Professionals of Canada (IPPC).

Since becoming an official organization in June 2022, the IPPC has dramatically impacted and changed my life, just as I know it has for my peers who are also involved. In fact, three of the five participants from this study are now board members of IPPC. After IPPC's first

year, nearly a million dollars in funding, and hiring of two staff members (part-time Chief Executive Officer and part-time Chief Operating Officer), and following the worst part of my grieving process after losing my mom while also starting a new job, I returned to this PhD after taking a two-year leave and I returned feeling proud of what had already resulted from this work – the Indigenous Pharmacy Professionals of Canada.

Beyond the unplanned creation of IPPC, my research wonder was to consider how the experiences shared by participants may inform future directions of Canadian pharmacy programs. As such, other conclusions (presented in the form of recommendations) that are likely to improve the experience of Indigenous Peoples in pharmacy school and what should be considered by Canadian pharmacy education programs include the following:

A. Recruitment and Retention:

1. Indigenous Peoples should be informed about pharmacy as a possible career while in primary and secondary school.
2. Pharmacy school recruitment activities for Indigenous Peoples should be different (versus ‘regular’ recruitment strategies), ongoing, and led or co-led by Indigenous Peoples.
3. Indigenous pharmacy role models should be engaged in the recruitment of Indigenous Peoples into pharmacy programs.
4. Develop and maintain scholarship and bursary opportunities for Indigenous Peoples in pharmacy school.
5. Recruit, hire, and retain Indigenous staff and faculty who will provide continuous support and belonging for Indigenous Peoples in pharmacy school.

6. Faculties of pharmacy should facilitate the connections of Indigenous Peoples in pharmacy school with one another within and across each class in the program.
7. Establish and maintain a minimum of two Indigenous equity seats in every Canadian pharmacy program that are part of the total number of allotted seats (versus in addition to the allotted number seats in the program), with a recommended allotment per program that matches the proportion of Indigenous Peoples in each respective province. Consider separate allocations for First Nations, Métis, and Inuit.
8. Create and maintain physical and virtual spaces that may be familiar and welcoming to Indigenous Peoples who may be considering or who already undertaking pharmacy education.

B. Admissions:

1. Create and continuously re-evaluate a separate admissions pathway for Indigenous Peoples that is led or co-led by Indigenous Peoples.
2. Include Indigenous Peoples on Admissions Committees and, where applicable, as interviewers and/or assessors.
3. Enforce a minimum of one introductory university course in Indigenous Studies as a required prerequisite for the application to pharmacy.
4. *Repeat:* Establish and maintain a minimum of two Indigenous equity seats in every Canadian pharmacy program that are part of the total number of allotted seats (versus in addition to the allotted number seats in the program), with a recommended allotment per program that matches the proportion of Indigenous

Peoples in each respective province. Consider separate allocations for First Nations, Métis, and Inuit.

5. Screen/assess all pharmacy school applicants for anti-Indigenous racism during the admissions process.

C. Curriculum and Pedagogy:

1. Include Indigenous content of meaningful scope, breadth, and depth in pharmacy curriculum, inclusive of trauma-informed care, anti-Indigenous racism, and the Truth and Reconciliation Commission of Canada's Calls to Action #18-24.
2. Indigenous content and especially Indigenous Knowledges should be taught or co-taught by Indigenous Peoples, with a preference for Indigenous pharmacy professionals or other Indigenous health care professionals.
3. Utilize Indigenous pedagogical practices (e.g., storytelling, relational pedagogy, etc.).
4. Defer unanswerable questions in the classroom environment about Indigenous topics to be answered at a later time and do not request or imply an expectation that Indigenous students educate their peers.

D. Assessment and Evaluation:

1. Diversify opportunities for assessment and evaluation of knowledge and skills (e.g., less reliance on multiple choice, more case-based learning, Indigenous community assessment/evaluation of student work that is relevant to Indigenous communities, etc.).
2. Intercultural competency and cultural safety knowledge and skills relevant to Indigenous Peoples should be assessed by Indigenous Peoples.

E. Experiential Learning:

1. Provide Indigenous and non-Indigenous pharmacy students with multiple opportunities to work with and within Indigenous communities for both direct patient care and non-direct patient care placements.
2. Encourage Indigenous Peoples in pharmacy school to consider experiential learning opportunities with the Indigenous Pharmacy Professionals of Canada.
3. Mandate training in anti-Indigenous racism for all preceptors of pharmacy student experiential rotation placements.

F. General Program Considerations:

1. Observe all major Indigenous dates of significance (e.g., June 21 – National Indigenous Peoples’ Day, September 30 – National Day for Truth and Reconciliation / Orange Shirt Day, etc.).
2. Offer and re-offer opportunities for students and alumni to self-declare or undeclare their Indigeneity.
3. Adopt Indigenous identity verification policies and procedures with and for Indigenous Peoples in pharmacy, if/when an award, scholarship, or other opportunity for Indigenous Peoples in pharmacy is offered.
4. Showcase and celebrate Indigenous Peoples in pharmacy across a variety of achievements and through a variety of communications methods (versus only showcasing Indigenous Peoples in pharmacy with respect to Indigenous engagement or diversity).
5. Discontinue white coat ceremonies. Consider a separate or supplemental event for Indigenous Peoples in pharmacy school to invite their family, friends, and

community members to celebrate their admission/progression through (and, later, graduation from) pharmacy school.

It is with great pride and strong emotions that I present these recommendations to Canadian pharmacy programs, which may also be considered by other post-secondary health discipline programs in Canada and around the world. At the time of writing this, I am an Assistant Professor, Teaching Stream, and Indigenous Engagement Lead with the Leslie Dan Faculty of Pharmacy at the University of Toronto. Informed by participants' many gifted stories, these recommendations will serve as a roadmap for my work as Indigenous Engagement Lead, as well as my work as the founder and chair of the Truth and Reconciliation Special Interest Group through the Association of Faculties of Pharmacy of Canada, and as the founder and chair of the Indigenous Pharmacy Professionals of Canada. Let's get to work!

~chi miigwetch~

REFERENCES

- Abolson, K. (2010). Indigenous wholistic theory: a knowledge set for practice. *First Peoples Child & Family Review*, 5(2), 74-87.
- Afshar, S. (2022). Standardized testing is a perpetuation of white supremacy. *The Tribune*. Available from: <https://www.thetribune.ca/opinion/standardized-testing-is-a-perpetuation-of-white-supremacy-02152022/>
- Aikenhead, G. (2007). Towards decolonizing the pan-Canadian science framework. *Canadian Journal of Science, Mathematics and Technology Education*, 6(4):387-399.
- Allan, B. & Smylie, J. (2015). *First Peoples, second class treatment: The role of racism in the health and well-being of Indigenous peoples in Canada*. Toronto, ON: Wellesley Institute.
- American Association of Colleges of Nursing (AACN). (2004). Missing Persons: Minorities in the Health Professions. A Report of the Sullivan Commission on Diversity in the Healthcare Workforce. Accessed October 29, 2019 from <http://www.aacn.nche.edu/Media/pdf/SullivanReport.pdf>.
- American Association of Colleges of Pharmacy. (2023). Pharmacy College Admissions Test. Available from: <https://www.pearsonassessments.com/graduate-admissions/pcat/about.html#:~:text=The%20Pharmacy%20College%20Admission%20Test,specifically%20for%20colleges%20of%20pharmacy.>
- Antoine, A., Mason, R., Mason, R., Palahicky, S. & Rodriguez de France, C. (2018). *Pulling Together: A Guide for Curriculum Developers*. Victoria, BC: BCcampus. Available from <https://opentextbc.ca/indigenizationcurriculumdevelopers/>
- Anzaldúa, G., Cantú, N. E., & Hurtado, A. (2012). *Borderlands: the new mestiza = la frontera*. San Francisco: Aunt Lute Books.
- Archer, L. (2008). Younger academics' constructions of 'authenticity', 'success' and professional identity. *Studies in Higher Education*, 33(4), 385-403
- Archibald, J., & Smith, L.T. (2019). *Decolonizing Research: Indigenous Storywork as Methodology* (Aboriginal education collection).
- Armstrong, H. (2013). Indigenizing the curriculum: the importance of story. *First Nations Perspectives*, 5(1):37-64.
- Association of Faculties of Medicine of Canada. (2018). Admission requirements of Canadian faculties of medicine. <https://afmc.ca/publications/admission-requirements-canadian-faculties-medicine>. Accessed February 17, 2019.

- Association of Faculties of Pharmacy of Canada (AFPC). (2017). *AFPC educational outcomes for first professional degree programs in pharmacy in Canada 2017*. Ottawa, ON.
- Atleo, R. (2004). *Tsawalk: A Nuu-chah-nulth worldview*. Vancouver: UBC Press.
- Atteberry-Ash, B. (2019). Does it get better? LGBTQ social work students and experiences with harmful discourse. *Journal of Gay & Lesbian Social Services*, 32(2), 223-241.
- Barcan, R. (2018). Paying dearly for privilege: conceptions, experiences and temporalities of vocation in academic life. *Pedagogy, Culture and Society*, 26(1) 105-121.
- Battiste, M. (1986). Micmac literacy and cognitive assimilation. In J. Barman, Y. Herbert, & D. McCaskell (Eds.), *Indian education in Canada, Vol. 1: The legacy* (pp. 23-44). Vancouver: University of British Columbia Press.
- Battiste, M., & Henderson, J.Y. (2000). *Protecting Indigenous knowledge and heritage*. Saskatoon, SK, Canada: Purich.
- Battiste, M. (2002). *Indigenous knowledge and pedagogy in First Nations education: A literature review with recommendations*. Ottawa: Indian and Northern Affairs Canada.
- Battiste, M., Bell, L., & Findlay, L.M. (2002). Decolonizing education in Canadian universities: an interdisciplinary, international, Indigenous research project. *Canadian Journal of Native Education*, 26(2):82-95.
- Bell, N. (2016). Mino-Bimaadiziwin: Education for the Good Life. In Deer, F., & Falkenberg, T. (Eds.), *Indigenous perspectives on education for well-being in Canada* (pp. 7-20), Winnipeg, MB: Education for Sustainable Well-Being Press.
- Berardi, C. (2016). *PAM 2016: Changing roles help pharmacists do more for patients*. Ottawa, ON: Canadian Pharmacists Association.
- Bonilla-Silva, E. (2017). *Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the United States*. Rowman & Littlefield.
- Brant Castellano, M. (2000). Updating Aboriginal traditions of knowledge. In Sefa Dei, G. , Hall, B. , & Rosenberg, D. (Eds.) *Indigenous knowledges in global contexts: Multiple readings of our world* (pp. 21–36). Toronto, Canada: University of Toronto Press.
- Britzman, D., & Gilbert, J. (2004). What will have been said about gayness in education. *Teacher Education*, 15(1), 81-96.
- Bruton, G., Zahra, S., Van de Ven, A., & Hitt, M. (2022). Indigenous theory uses, abuses, and future. *Journal of Management Studies*, 59(4), 1057-1073.

- Bush, A.A., McLaughlin, J.E., & White, C. (2017). A review of contemporary diversity literature in pharmacy education. *American Journal of Pharmaceutical Education*, 81(7), 1-9.
- Cajete, G. (1999). Part two: Science education and the cultural perspective. In G. Cajete, *Igniting the spark: An Indigenous science educational model*, pp. 33-50. Skyand, NC: Kivaki Press.
- Cajete, G. (2000). Indigenous Knowledge: The Pueblo Metaphor of Indigenous Education. In *Reclaiming Indigenous Voice and Vision*, edited by M. Battiste, 192-208. Vancouver: University of British Columbia Press.
- Canadian Council for the Accreditation of Pharmacy Programs (CCAPP). (2018). Accreditation standards for Canadian first professional degree in pharmacy programs. Toronto: Leslie Dan Faculty of Pharmacy. Retrieved September 18, 2019 from <http://ccapp-accredit.ca/wp-content/uploads/2016/01/Accreditation-Standards-for-Canadian-First-Professional-Degree-in-Pharmacy-Programs.pdf>
- Canadian Council for Accreditation of Pharmacy Programs (CCAPP). (2020). *About CCAPP*. Retrieved from <https://ccapp.ca/about-ccapp/>.
- Canadian Institutes for Health Research (CIHR). (2019). About us. Retrieved September 18, 2019 from <http://www.cihr-irsc.gc.ca/e/37792.html>.
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada. (2014). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. Ottawa, ON: Secretariat on Responsible Conduct of Research.
- Carpenter, J. (2008). Metaphors in qualitative research: shedding light or casting shadows? *Res Nurs Health*, 31(3), 274-282.
- Casey, Z. (2016). *A pedagogy of anticapitalist antiracism: whiteness, neoliberalism, and resistance in education*. Albany, NY: State University of New York Press.
- Chalmers, J. (2017). The Transformation of Academic Knowledges: Understanding the Relationship between Decolonising and Indigenous Research Methodologies. *Socialist Studies*, 12(1), 97-116.
- Champagne, D. (2015). Centering Indigenous nations within Indigenous methodologies. *Wicazo Sa Review*, 30(1), 57-81.
- Charmaz, K. (2010). *Constructing grounded theory: a practical guide through qualitative analysis*. Thousand Oaks, CA: Sage Publications.
- Chilisa, B. (2012). *Indigenous research methodologies*. Los Angeles: SAGE Publications.

- Chisholm, M., Spivey, C., Billheimer, D., Schlesselman, L., Flowers, S., Hammer, D., Engle, J., Nappi, J., Pasko, M., Ross, L., Sorofman, B., Rodriques, H., & Vaillancourt, A. (2012). Multi- institutional study of women and underrepresented minority faculty members in academic pharmacy. *American Journal of Pharmaceutical Education*, 76(1), Article 7.
- Clandinin, J. (1985). Personal practical knowledge: a study of teachers' classroom images. *Curriculum Inquiry*, 15(4), 361-385.
- Cochrane. (2023). Cochrane database of systematic reviews. Available from: <https://www.cochranelibrary.com/cdsr/about-cdsr#:~:text=Article%20types-.Cochrane%20Reviews.answer%20a%20specific%20research%20question.>
- Cote-Meek, S. (2014). *Colonized classrooms. Racism. Trauma and resistance in post-secondary education*. Nova Scotia: Fernwood Publishing.
- Coulthard, G. S. (2014). *Red skin white masks: Rejecting the politics of recognition*. London: University of Minnesota Press.
- Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum*, 1989(1):139-167.
- Curtis, E., Wikaire, E., Kool, B., Honey, M., Kelly, F., Poole, P., Barrow, M., Airni, Ewen, E., & Reid, P. (2015). What helps and hinders indigenous student success in higher education health programmes: a qualitative study using the Critical Incident Technique. *Higher Education Research & Development*, 34(3), 486-500.
- Datta, R. (2018). Traditional storytelling: an effective Indigenous research methodology and its implications for environmental research. *AlterNative*, 14(1), 35-44.
- Davidson, S. (2019). Following the song of k'aad'aaw: using Indigenous storywork principles to guide ethical practices in research. In J. Archibald, J. Lee-Morgan, & J. De Santolo (Eds.). *Decolonizing research: Indigenous storywork as methodology*. London, UK: Zed Books.
- Davis, L., Gaywish, R., & VanEvery-Albert, C. (2008). Section one editorial: Indigenous methodologies. *Canadian Journal of Native Education*, 31(1), 9-10,318-319,322.
- Dei, G.S. (2000). Towards an anti-racist discursive framework. In G.S. Dei & A. Calliste (Eds.), *Power, knowledge, and anti-racist education: A critical reader* (pp. 23-39). Halifax, NS, Canada: Fernwood Publishing.
- Delgado Bernal, D. (2002). Critical race theory, Latino critical theory and critical race- gendered epistemologies: Recognizing students of colour as holders and creators of knowledge. *International Journal of Qualitative Studies in Education*, 8(1), 105-26.

- Deloria, V. (1997). *Red earth white lies: Native Americans and the myth of scientific fact*. Canada: Fulcrum Publishing.
- Deloria, V.J., & Wildcat, D. (2001). American Indian metaphysics & Indigenizing education: Playing to our strengths. In V. Deloria & D. Wildcat, *Power and place: Indian education in America* (pp. 1-20). Golden, CO: Fulcrum Publishing.
- Deloria, V. (2002). *Evolution, creationism, and other modern myths: A critical inquiry*. Golden, CO: Fulcrum
- Dewey, J. (1916). *Democracy and education*. New York: Macmillan.
- DiAngelo, R. (2018). *White Fragility: Why It's So Hard for White People to Talk About Racism*. Beacon Press.
- Doaxter, M. (2004). Indigenous Knowledge in the Decolonial Era. *American Indian Quarterly*, (28)3/4, 618-633.
- Drugge, A. (2016). *Ethics in Indigenous research. Past experiences – future challenges*. Umeå: Vaartoe – Centre for Sami Research.
- Dyer, R. (1997). *White: Essays on Race and Culture*. Routledge.
- Echeverri, M., & Dise, T. (2017). Racial dynamics and cultural competence training in medical and pharmacy education. *Journal of Health Care for the Poor and Underserved*, 28(1), 279-302.
- Ermine, W. (1995). Aboriginal epistemology. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 5-46). Vancouver, Canada: University of British Columbia Press.
- Esmail, N. (2017). *Complementary and Alternative Medicine: Use and Public Attitudes 1997, 2006, and 2016*. Fraser Institute. Available from: <https://www.fraserinstitute.org/studies/complementary-and-alternative-medicine-use-and-public-attitudes-1997-2006-and-2016>
- Fanon, F. (1963). *The wretched of the earth*. New York: Grove Press.
- Fanon, F. (1952). *Black skin White masks*. New York: Grove Press.
- Fiddler, C. (2014). *Examining the influence of Aboriginal literature on Aboriginal students' resilience at the University of Saskatchewan* (Unpublished master's thesis). University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
- Foy, J. (2009). Incorporating talk story into the classroom. *First Nations Perspectives*, 2(1), 25-53.

- Frankenberg, R. (1993). *White Women, Race Matters: The Social Construction of Whiteness*. University of Minnesota Press.
- Fredrickson, G. M. (2002). *Racism: A Short History*. Princeton University Press.
- Freire, P. (1974). *Pedagogy of the Oppressed*. New York: Continuum.
- Geiger, H.J. (2001). Racial stereotyping and medicine: the need for cultural competence. *CMAJ*, 164(12), 1699-1700.
- Goldstein, M., & Goldstein, I.F. (1978). Chapter 2 Facts, in *How we know: An exploration of the scientific process*. New York: De Capo Press Ltd.
- Gone, J. (2019). Considering Indigenous research methodologies: critical reflections by an Indigenous knower. *Qualitative Inquiry*, 25(1), 45-56.
- Government of Canada. (2016). Indigenous youth – post-secondary education and the labour market. <https://www.aadnc-aandc.gc.ca/eng/1451931236633/1451932655379>. Accessed February 17, 2019.
- Government of Canada. (2022). Registration under the Indian Act and applying for a status card, what's the difference. Retrieved from: <https://www.sac-isc.gc.ca/eng/1641932747043/1641932770031>
- Government of Canada. (2023). Non-insured health benefits for First Nations and Inuit. Accessed from: www.sac-isc.gc.ca/eng/1572537161086/1572537234517
- Graham, M. (2014). Aboriginal notions of relationality and positionalism: a reply to Weber. *Global Discourse*, 4(1), 17-22.
- Haig-Brown, C., & Hodson, J. (2009). Starting with the land: toward Indigenous thought in Canadian education. In Philip Woods and Glenys Woods (Eds.), *Alternative education for the 21st century: Philosophies, approaches, visions* (pp. 167-187).
- Hallett, D., Want, S. C., Chandler, M. J., Koopman, L. L., Flores, J. P., & Gehrke, E. C. (2008). Identity in flux: Ethnic self-identification, and school attrition in Canadian Aboriginal youth. *Journal of Applied Developmental Psychology*, 29(1), 62-75. <https://doi.org/10.1016/j.appdev.2007.10.008>
- Hampton, E. (1995). Towards a redefinition of Indian education. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 5-46). Vancouver, Canada: University of British Columbia Press.
- Henry, F., Dua, E., James, C., Kobayashi, A., Li, P., Ramos, H. & Smith, M. (2017). *The equity myth: Racialization and Indigeneity at Canadian Universities*. UBC Press: Vancouver.

- Herkimer, J. (2021). Holding our ground: Indigenous student post-secondary persistence and early leaving. Indspire. <https://indspire.ca/wp-content/uploads/2021/12/Holding-Our-Ground-Report-EN-Final-WEB1.pdf>
- Hester, L., & Cheney, J. (2001). Truth and Native American epistemology. *Social Epistemology*, 15(4), 319–334.
- Hogue, M. (2014). Interconnecting Aboriginal and Western paradigms in post-secondary science education: an action research approach. *Journal of the Canadian Association for Curriculum Studies*, 10(1), 77-114.
- hooks, b. (1994). Feminist scholarship: Black scholars. In bell hooks, *Teaching to transgress: Education as the practice of freedom* (pp. 119-127). New York: Routledge.
- Huffman, T. (2001). Resistance theory and the transculturation hypothesis as explanations of college attrition and persistence among culturally traditional American Indian students. *Journal of American Indian Education* 40(3), 1-23.
- Indigenous youth – post-secondary education and the labour market*. (2016). Retrieved April 7, 2018, from Government of Canada website: <https://www.aadnc-aandc.gc.ca/eng/1451931236633/1451932655379>
- Indspire. (2018). Post-secondary experience of Indigenous students following the Truth and Reconciliation Commission: summary of survey findings. <https://indspire.ca/wp-content/uploads/2019/10/PSE-Experience-Indigenous-Students-Survey-Summary-Sept2018.pdf>
- Janzen, D., Fitzpatrick, K., Jensen, K., & Suveges, L. (2013). Women in pharmacy: a preliminary study of the attitudes and beliefs of pharmacy students. *Canadian Pharmacists Journal*, 146(2): 109-116.
- Johnston-Goodstar, K., & Roholt, R. V. (2017). “Our kids aren’t dropping out; They’re being pushed out”: Native American students and racial microaggressions in schools. *Journal of Ethnic & Cultural Diversity in Social Work*, 26(1-2), 30-47. <https://doi.org/10.1080/15313204.2016.1263818>
- Joseph, D. H., & Windchief, S. R. (2015). Nahongvita: A conceptual model to support rural American Indian youth in pursuit of higher education. *Journal of American Indian Education*, 54(3), 76-97.
- Kanu, Y. (2005). Teachers’ perceptions of the integration of Aboriginal culture into the high school curriculum. *Alberta Journal of Educational Research*, 51, 50-68.
- Kanu, Y. (2011). *Integrating Aboriginal perspectives into the school curriculum: Purposes, possibilities, and challenges*. Toronto, ON: University of Toronto Press.

- Kawagley, O., & Barnhardt, R. (1999). Education indigenous to place: Western science meets Native reality. In G.A. Smith & D.R. Williams (Eds.), *Ecological education in action* (pp. 117-140). Albany, NY: SUNY Press.
- Kawagley, A.O., Norris-Tull, D., & Norris-Tull, R.A. (1998). The indigenous worldview of Yupiaq culture: Its scientific nature and relevance to the practice and teaching of science. *Journal of Research in Science Teaching*, 35, 133-144.
- Kellert, S. R. (2005). *Building for Life: Designing and Understanding the Human-Nature Connection*. Washington, DC: Island Press.
- Kimmerer, R. (2013). *Braiding sweetgrass*. Minneapolis: Milkweed Editions.
- King, T. (2012). *The inconvenient Indian: a curious account of Native people in North America*. Toronto: Doubleday Canada.
- Knudtson, P., & Suzuki, D. (1992). *Wisdom of the elders*. Toronto, ON: Stoddart.
- Kovach, M. (2009). *Indigenous methodologies: characteristics, conversations, and contexts*. Toronto: University of Toronto Press.
- Kovach, M. (2010). Conversational method in Indigenous research. *First Peoples Child & Family Review*, 5(1), 40-48.
- Kovach, M. (2020). *Indigenous methodologies: characteristics, conversations, and contexts. 2nd Edition*. Toronto: University of Toronto Press.
- Langhout, R., Rosselli, F., & Feinstein, J. (2007). Assessing classism in academic settings. *The Review of Higher Education*, 30(2), 145-184.
- LaRocque, E. (2010). Chapter 2: Dehumanization in text, In *When the other is me: Native resistance discourse 1850-1990* (pp. 37-58). Winnipeg, MA, Canada: University of Manitoba Press.
- Lavellee, L. (2009). Practical application of an Indigenous research framework and two qualitative Indigenous research methods: Sharing circles and Anishnaabe symbol-based reflection. *International Institute for Qualitative Methodology*, 8(10).
- Leonardo, Z. (2009a). Pale/ontology: The status of whiteness in education. In M. Apple, W. Au & L.A. Gandin (Eds.), *The Routledge International Handbook of Critical Education* (pp. 123-136). New York: Routledge.
- Leonardo, Z. (2009b). *Race, whiteness, and education*. New York: Routledge.
- Lillie, E. (2019). *The State of Indigenization in Canadian Pharmacy Programs*. Paper presented at the meeting of the Association of Faculties of Pharmacy of Canada, Edmonton, AB.

- Lipsitz, G. (2006). *The Possessive Investment in Whiteness: How White People Profit from Identity Politics*. Temple University Press.
- Lugones, M. (2010). Yawar Mallku: An Indigenous Philosophy of Knowledge. *Hypatia*, 25(1), 42-60.
- MacIvor, M. (1995). Redefining science education for Aboriginal students. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 73-98). Vancouver, BC: University of British Columbia Press.
- MacKinnon, K. (2011). Thinking about queer theory in social work education: a pedagogical (in)Query. *Canadian Social Work Review*, 28(1), 139-144.
- MacLeod, R., & Collins, P. (Eds.) (1981). *The parliament of science*. Northwood, Midx., UK: Science Reviews.
- Maldonado-Torres, N. (2007). On the Coloniality of Being: Contributions to the Development of a Concept. *Cultural Studies*, 21(2-3), 240-270.
- Marotta, R. (2016). *Pharmacists remain among most trusted professions*. Cranbury, NJ: Pharmacy Times.
- Martin, K. (2003). Ways of Knowing, Ways of Being and Ways of Doing: a theoretical framework and methods for Indigenous re-search and Indigenist research. *Journal of Australian Studies*, 76, pp. 203-214.
- Martinez, D. (2014). School culture and American Indian educational outcomes. *Procedia-Social and Behavioral Sciences*, 116, 199-2015. <https://doi.org/10.1016/j.sbspro.2014.01.194>
- Masic, I., Miokovic, M., & Muhamedagic, B. (2008). Evidence based medicine – new approaches and challenges. *Acta Inform Med*, 16(4):219-225.
- McGibbon, E., Mulaudzi, F., Didham, P., Barton, S., & Sochan, A. (2014). Toward decolonizing nursing: the colonization of nursing and strategies for increasing the counter-narrative. *Nursing Inquiry*, 21(3), 179-191.
- McGuire-Adams, T. (2019). Paradigm shifting: centering Indigenous research methodologies, an Anishinaabe perspective. *Qualitative Research in Sport, Exercise and Health*, 12(1), 34-47.
- McIntosh, P. (1988). *White Privilege and Male Privilege: A Personal Account of Coming to See Correspondences through Work in Women's Studies*. Wellesley College Center for Research on Women.
- Meyer, M. (2013). Holographic epistemology: Native common sense. *China Media Research*, 92(2):94-101.

- Million, D. (2014). There is a river in me: theory from life. In A. Simpson & A. Smith (Eds.), *Theorizing Native Studies* (pp. 31-42). Durham, NC: Duke University Press.
- Mills, C. W. (1997). *The Racial Contract*. Cornell University Press.
- Mills, C. W. (2017). *Black Rights/White Wrongs: The Critique of Racial Liberalism*. Oxford University Press.
- Monkman, K. (2016). Debunking the myth that all First Nations people receive free post-secondary education. CBC News. Available from: <https://www.cbc.ca/news/indigenous/debunking-the-myth-that-all-first-nations-people-receive-free-post-secondary-education-1.3414183>
- Morgensen, S.L. (2012). Destabilizing the settler academy: the decolonial effects of Indigenous methodologies. *American Quarterly*, 64(4), 805-808.
- Nakamura, N. (2010). Indigenous methodologies: suggestions for junior researchers. *Geographical Research*, 48(1), 97-103.
- Nakata, N.M., Nakata, V., Keech, S., & Bolt, R. (2012). Decolonial goals and pedagogies for Indigenous studies. *Decolonization: Indigeneity, Education & Society*, 1(1):120-140.
- National Cancer Institute at the National Institutes of Health. (2015). *Complimentary and alternative medicine*. Retrieved from <https://www.cancer.gov/about-cancer/treatment/cam>
- Nkansah, N.T., Youmans, S.L., Agness, C.F., & Assemi, M. (2009). Fostering and managing diversity in schools of pharmacy. *American Journal of Pharmaceutical Education*, 73(8), 152. doi:<http://dx.doi.org/10.5688/aj7308152>
- Ober, R. (2017). Kapati time: storytelling as a data collection method in Indigenous research. *International Journal of Learning in Social Contexts: Special Issue – Decolonising Research Practices*, (22)1, 8-15.
- Omi, M., & Winant, H. (2014). *Racial Formation in the United States*. Routledge.
- Ottmann, J. (2013). Indigenizing the academy: Confronting “contentious ground.” In K. Anderson & M. Hanrahan (Eds.), *The Morning Watch: Indigenizing the Academy*. (pp. 8-24).
- Papps, E., & Ramsden, I. (1996). Cultural safety in nursing: the New Zealand experience. *Int J Qual Health Care*, 8(5), 491-497.
- Pete, S. (2016). 100 ways to Indigenize and decolonize academic programs and courses. *Aboriginal Policy Studies*, 6(1), 81-89.

- Pete, S., Schneider, B., & O'Reilly, K. (2013). Decolonizing our practice – Indigenizing our teaching. *First Nations Perspectives*, 5(1), 99-115.
- Pillay, M., & Kathard, H. (2015). Decolonizing health professionals' education: audiology and speech therapy in South Africa. *African Journal of Rhetoric*, 7, 193-227.
- Pothier, D., & Devlin, R. (2006). Introduction. In D. Pothier & R. Devlin (Eds.), *Critical disability theory: Essays in Philosophy, Politics, Policy, and Law* (pp. 1-22). Vancouver: UBC Press.
- Ragoonaden, K., & Mueller, L. (2017). Culturally responsive pedagogy: Indigenizing curriculum. *Canadian Journal of Higher Education*, 47(2), 22-46.
- Ray, L. (2012). Deciphering the “Indigenous” in Indigenous methodologies. *AlterNative: An International Journal of Indigenous Peoples*, 8(1), 85-98.
- Redfern, J.S., & Jann, M.W. (2019). *Transgender Health, ahead of print*: <http://doi.org/10.1089/trgh.2018.0038>
- Richardson, T. A. (2015). Indigenous methodologies and educational research for meaningful change: parsing postpositivist philosophy of science and mixed methods in collaborative research settings. *Journal of American Indian Education*, 54(1), 33-62.
- Ritenburg, H, Young Leon, A., Linds, W., Nadeau, D., Goulet, L., Kovach, M., & Marshall, M. (2014). Embodying Decolonization: Methodologies and Indigenization. *Alternative*, 10(1), 67-80.
- Rockich-Winston, N., Bush, A.A., McLaughlin, J.E., & White, C. (2018). Critical race theory for pharmacy diversity Curriculum/Response to critical race theory for pharmacy diversity curriculum. *American Journal of Pharmaceutical Education*, 82(2), 194-197.
- Roediger, D. R. (1999). *The Wages of Whiteness: Race and the Making of the American Working Class*. Verso.
- Ryan, A.E. (2006). “Dancing yet to the dimdins’ beat”: *Dilemmas in postcolonial science curricula: The case of Papua New Guinea*. Unpublished doctoral dissertation. Monash University, Clayton, Australia.
- Sable, T. (2005). *Emerging identities: A proposed model for an interactive science curriculum for First Nations students*. Unpublished doctoral dissertation, University of New Brunswick, Fredericton, Canada.
- Sahoo, N., Manchikanti, P., & Dey, S. (2010). Herbal drugs: standards and regulation. *Fitoterapia*, 81(6):462-71.

- Sasakamoose, J., & Pete, S. (2015). Towards Indigenizing university policy. *Education Matters*, 3(1), 1-11.
- Schaeffer Amaya, F. (2018). Spirit Matters: Gloria Anzaldua's Cosmic becoming across human/Nonhuman borderlands. *Journal of Women in Culture and Society*, 43(4), 1005-10029.
- Schick, C., St. Denis, V. (2005) Troubling national discourses in anti-racist curricular planning. *Canadian Journal of Education*, 28(3), 295-317.
- Sherwood, J., & Edwards, T. (2006). Decolonisation: a critical step for improving Aboriginal health. *Contemporary Nurse*, 22(2), 178-190. doi: 10.5172/conu.2006.22.2.178
- Shuttleworth, M. (Sep 16, 2008). Truth and Theory. Retrieved Sep 18, 2019 from Explorable.com: <https://explorable.com/truth-and-theory>
- Sinclair, R. (2004). Aboriginal social work education in Canada: decolonizing pedagogy for the seventh generation. *First Peoples Child & Family Review*, 1(1), 49-61
- Smith, D., McAlister, S., Tedford Gold, S., & Sullivan-Bentz, M. (2011). Aboriginal recruitment and retention in nursing education: a review of the literature. *International Journal of Nursing Education Scholarship*, 8(1), 1-22. doi: 10.2202/1548-923X.2085
- Smith, G. (1997). The development of Kaupapa Māori: theory and praxis. Unpublished doctoral dissertation. University of Auckland, Auckland, NZ.
- Smith, L. T. (2013). *Decolonizing Methodologies: Research and Indigenous Peoples* (2nd edition). London: Zed Books.
- Smith, W.T., Roth, J.J., Okoro, O., Kimberlin, C., & Odedina, F.T. (2011). Disability in cultural competency pharmacy education. *American Journal of Pharmaceutical Education*, 75(2), 1-26.
- Snively, G., & Williams, W.L. (Eds.). (2016). *Knowing Home: Braiding Indigenous Science with Western Science*. Victoria, BC: University of Victoria. Retrieved from <https://pressbooks.bccampus.ca/knowinghome>
- St. Denis, V. (2007). Aboriginal education and anti-racist education: Building alliance across cultural and racial identity. *Canadian Journal of Education*, 30(4), 1068-1092.
- Statistics Canada. (2016). *Projections of the Aboriginal population and households in Canada, 2011 to 2036*. Catalogue no. 91-552-X.
- Statistics Canada. (2017). Aboriginal peoples in Canada: key results from the 2016 census. <https://www150.statcan.gc.ca/n1/daily-quotidien/171025/dq171025a-eng.htm>. Accessed June 10, 2019.

- Statistics Canada. (2022). Indigenous population continues to grow and is much younger than the non-Indigenous population, although the pace of growth has slowed. <https://www150.statcan.gc.ca/n1/daily-quotidien/220921/dq220921a-eng.htm>. Accessed March 9, 2024.
- Steinhauer, P. (2001). Situating Myself in Research. *Canadian Journal of Native Education*, 25(2), 183-187.
- Sutherland, D.L. (2005). Resiliency and collateral learning in science in some students of Cree ancestry. *Science Education*, 89, 595-613.
- Swidrovich, J. (2019). Decolonizing and Indigenizing pharmacy education in Canada. *Currents in Pharmacy Teaching and Learning*. doi: 10.1016/j.cptl.2019.11.018
- Taylor, C. (1992), "The Politics of Recognition," in *Multiculturalism: Examining the Politics of Recognition*, A. Gutmann (ed.), Princeton: Princeton University Press, p. 25–73.
- Thurman, W., Johnson, K., & Sumpter, D. (2019). Words matter: an integrative review of institutionalized racism in nursing literature. *Advances in Nursing Science*, 42(2), 89-108.
- Toombs, M. (2016). The intersection between research and ethics, as it applies to Indigenous methodologies. *Aboriginal and Islander Health Worker Journal*, 40(1), 8-10.
- Truth and Reconciliation Canada. (2015). *Honouring the truth, reconciling for the future: Summary of the final report of the Truth and Reconciliation Commission of Canada*. Winnipeg: Truth and Reconciliation Commission of Canada.
- Turner, C. S. V., González, J. C., & Wood, J. L. (2008). Faculty of color in academe: What 20 years of literature tells us. *Journal of Diversity in Higher Education*, 1(3), 139.
- Tsosie, R. (2005). The new challenge to Native identity: An essay on "indigeneity" and "Whiteness." *Journal of Law and Policy*, 18, 55-98.
- Tupper, J. (2014). The possibilities for reconciliation through difficult dialogues: treaty education as peacebuilding. *Curriculum Inquiry*, 44(4), 469-488.
- UNESCO. 2017. Local Knowledge, Global Goals. UNESCO: Paris.
- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). United Nations. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf. Published 13 September 2007. Accessed 17 September 2019.

- University of Auckland. (2022). Māori and Pacific Health Career Pathways: Undergraduate Handbook 2022. Available from: <https://www.auckland.ac.nz/content/dam/ua/auckland/fmhs/study-with-us/docs/2022/mapas-2022-prospectus.pdf>
- Usher, K., Miller, M., Turale, S., & Goold, S. (2005). Meeting the challenges of recruitment and retention of Indigenous people into nursing: outcomes of the Indigenous Nurse Education Working Group. *Collegian*, 12(3), 27-31.
- Wagaman, M. (2018). Queering the social work classroom: strategies for increasing the inclusion of LGBTQ persons and experiences. *Journal of Teaching in Social Work*, 38(2), 166-182.
- Warren, D. M., Slikkerveer, L. J., & Brokensha, D. (Eds.). (1995). The cultural dimension of development: Indigenous knowledge systems. London, UK: Intermediate Technology Publications.
- Wheeler, W. (2010). Cree Intellectual Traditions in History. In A. Finkel, C. Carter, & P. Fortna (Eds.). *In the West and beyond: New perspectives on an imagined region*. Athabasca: Athabasca University Press.
- White, C., Louis, B., Persky, A., Howell, D. T., Griffin, L. M., Simmons-Yon, A., & Scolaro, K. L. (2013). Institutional strategies to achieve diversity and inclusion in pharmacy education. *American Journal of Pharmaceutical Education*, 77(5), 97. doi:<http://dx.doi.org/10.5688/ajpe77597>
- Williams, R. A. (1997). Vampires anonymous and critical race practice. *Michigan Law Review*, 95(4), 741-765.
- Wilson, S. (2001). What is Indigenous research methodology? *Canadian Journal of Native Education*, (25)2, 175-179.
- Wilson, S. (2008). *Research is ceremony: Indigenous Research Methods*. Winnipeg: Fernwood Publishing.
- Windchief, S., Polacek, C., Munson, M., Ulrich, M. & Cummins, J. (2018). In reciprocity: responses to critiques of Indigenous methodologies. *Qualitative Inquiry*, 24(8), 532-542.
- Yanchick, V.A., Baldwin, J.N., Bootman, J.L., Carter, R.A., Crabtree, B.L., & Maine, L.L. (2014). Report of the 2013-2014 argus commission: Diversity and inclusion in pharmacy education. *American Journal of Pharmaceutical Education*, 78(10), 1-6.
- Yancy, G. (2018). *Backlash: What Happens When We Talk Honestly about Racism in America*. Rowman & Littlefield.

Young, M. I., Joe, L., Lamoureux, J. Marshall, L., Moore, D., Orr, J-L., Parisian, B. M., Paul, K., Paynter, F., & Huber, J. (2015). *Warrior Women: Remaking postsecondary places through relational narrative inquiry*. Bingley, UK: Emerald Group Publishing.

APPENDICES:

APPENDIX A

CALL FOR PARTICIPANTS

RESEARCHER: Jaris Swidrovich, PhD Candidate
Department of Educational Foundations, College of Education
University of Saskatchewan
28 Campus Drive, Saskatoon, SK S7N 0X1
Tel: (306) 966-2835

Calling all current or graduated Indigenous (First Nations, Métis, and Inuit) pharmacy students!

Are you an Indigenous (First Nation, Metis, Inuit) student in an entry-to-practice pharmacy program in Canada?

I am seeking participants who meet these criteria for my study on Indigenous students' experiences with pharmacy education in Canada.

The purpose of this study is to learn about the experiences of Indigenous students in pharmacy school, including the journey toward applying, the decision to apply, the application procedure(s), the schooling itself, and the actual or anticipated journey following graduation from pharmacy school.

You'll be asked to do three one-to-one interviews with me and will be asked about your experiences in the areas listed above. Each interview will last approximately 30-60 minutes and take place at a mutually convenient time and virtually via WebEx.

Your participation in this research study is much appreciated. Thank you!

For more information, contact:

Jaris Swidrovich, PhD Candidate
Educational Foundations, College of Education
University of Saskatchewan
jaris.swidrovich@usask.ca
Tel: 306-966-2835

Please leave a message with your name and phone number.

APPENDIX B

LETTER OF INVITATION FOR PARTICIPANTS

JARIS SWIDROVICH

Department of Educational Foundations, College of Education

University of Saskatchewan

28 Campus Drive, Saskatoon, SK S7N 0X1

EMAIL: jaris.swidrovich@usask.ca

Supervisor's EMAIL: shaun.murphy@usask.ca

Supervisor's Telephone: (306) 966-7586

March 2021

Dear current (or former) Indigenous pharmacy student:

My name is Jaris Swidrovich and I am currently an Educational Foundations PhD student in the College of Education at the University of Saskatchewan.

I am conducting research for my thesis that will be titled "Indigenous students' experiences with pharmacy education in Canada." I will be collecting data for the study between January 2021 and March 2021. The study will provide you with an opportunity to share your experiences regarding pharmacy school. This study is a chance to create a collective voice within pharmacy academia in Canada and may motivate positive changes related to the experiences of Indigenous students in pharmacy and may also inform a growing evolution of integrating Indigenous content in pharmacy programs.

I am interested in interviewing you to hear about your experiences considering and applying to pharmacy, as well as your journey through pharmacy school thus far (or, through all of pharmacy school and afterward, if you have already graduated). I realize that you may have a busy schedule but would be grateful if you can provide your time for the interview at a place, date, and time that is most convenient and comfortable for you.

The interview will consist of three interview sessions lasting approximately 30-60 minutes each, with the option of an additional (or less) time, if necessary. You can be assured of your anonymity in the study as you will be identified by an alias name that you may choose, or I can choose one for you. Any information you supply will be treated with the strictest confidence. Once the interview has been transcribed, you will be asked to review the transcript and to add, delete, or alter information as you see fit.

The full PhD dissertation that summarizes the findings will be made available to you and any other person or agency interested in the study. This dissertation will group the findings so individual participants are not identified.

A copy of the interview prompts is included for your perusal. Providing that you consent to participate in the study, a consent form is provided for your signature. To confirm you are willing to participate, please contact me through email. Please be aware that signing the consent form does not mean that you are bound to participate in the study, as you are free to withdraw your consent at any time with no repercussions or negative consequences.

If you require further information you can contact me at any time at the email provided.

Thank you / miigwetch,

Sincerely,

Jaris Swidrovich, PhD student

Participant Consent Form

***You are invited to participate in a research study entitled:
Indigenous students' experiences with pharmacy education in Canada.***

Student Researcher(s):

Jaris Swidrovich, PhD Student
Department of Educational Foundations
College of Education
University of Saskatchewan
306-966-2835
jaris.swidrovich@usask.ca

Supervisor:

Dr. Shaun Murphy
Professor
Department of Educational Foundations
University of Saskatchewan
306-966-7586
shaun.murphy@usask.ca

Purpose and Objective of the Research:

- The purpose of this study is to learn about the experiences of Indigenous students in pharmacy school, including the journey toward applying, the decision to apply, the application procedure(s), the schooling itself, and the actual or anticipated journey following graduation from pharmacy school.

Procedures:

- Three one-to-one conversations will be held.
- Audio recording will be used to aid in transcription. You may request that the recorder be turned off at any time without giving a reason.
- The location of the interview will be virtual (WebEx).
- Each of the two interviews is expected to take 30-60 minutes, with the option for additional (or less) time.
- After your interview, and prior to the data being included in the final report, you will be given the opportunity to review the transcript of your interviews, and to add, alter, or delete information from the transcript as you see fit. A timeline for the review and return will be discussed and mutually be agreed on.

- A third party will be hired to transcribe the interview and they will be required to sign a strict confidentiality agreement.
- Please feel free to ask any questions regarding the procedures and goals of the study or your role.

Funded by:

- Unrestricted research funds of the researcher's (Jaris Swidrovich)

Potential Risks:

- There are no known or anticipated risks to you by participating in this research; however, it is recognized that some stories shared may cause discomfort – especially if such experiences caused trauma.
- You will be free to not answer questions. There will not be any penalty or negative consequence for not answering a question or for ending a response prematurely.

Potential Benefits:

- There is no guarantee of a personal benefit to your participation in this study; however, future generations of Indigenous students in pharmacy are anticipated to benefit from the stories you share, as well as current and future staff and faculty in pharmacy programs across the country.

Compensation:

- You will receive an offering of tobacco and a small gift for your participation in this project.

Confidentiality:

- To protect your confidentiality, an alias name will be assigned for you.
- Your real name will not be used in my notes and will not be captured on audio for the third-party transcriptionist to hear; however, you will have the option to have your real name used (with your explicit consent below).
- The location of our interview will be your choice, so considerations for maintaining confidentiality will be followed based on the location chosen.
- Data from this study will be used in the full PhD dissertation and will be submitted for publication in journal articles or other academic media; however, your identity will remain anonymous.
- If there are any possibly identifying features related to your stories and/or participation, we will mutually work out a plan for how you would like to be represented in the work.

Please put a check mark on the corresponding line(s) to grant or deny your permission:

I grant permission to be audio recorded	
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Please only select one option below:

I wish for my identity to be confidential	
I wish for my identity to be confidential, but you may refer to me by an alias name. The alias name I choose for myself is: _____	
You may quote me and use my alias name	
I would like to be acknowledged for contributing to the research	

Storage of Data:

- Physical data will be stored behind two locks (locked cabinet in locked office or locked home). Electronic data will be stored on a password-protected computer during analyses and then moved to a USask system (OneDrive) for long-term storage.
- Data will be stored for five years and then will be destroyed.

Right to Withdraw:

- Your participation is voluntary, and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time without explanation or penalty of any sort.
- Should you wish to withdraw, let the researcher know and he will have your data destroyed.
- Whether you choose to participate or not will have no effect on your position (e.g., employment, academic status, access to services) or how you will be treated.
- As research dissemination will take place in the months and years to follow the complete PhD dissertation, it may not be possible to withdraw your data that would have previously been disseminated; however, if you would like your data withdrawn at a much later date, we will ensure your data is not shared further.

Follow up:

- I will share the results from the study with you, unless you choose otherwise.

Questions or Concerns:

- Contact me using the information at the top of page 1.
- This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: ethics.office@usask.ca; 306-966-2975; out of town participants may call toll free 1-888-966-2975.

Signed Consent:

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

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

Name of Participant

Signature

Date

Researcher's Signature

Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.

APPENDIX D

Conversation Guide (Anticipated to be ~60 minutes)

1. Tell me about your journey toward considering and applying to pharmacy school.
2. As a current/former Indigenous student, what was the experience of applying to pharmacy school like?
3. Tell me what pharmacy school is/was like as an Indigenous student.
 - a. Did you experience or witness racism in pharmacy school? Discrimination?
 - b. Tell me about your feelings of inclusion and/or exclusion as an Indigenous student in pharmacy school.
 - c. Tell me about any differences you may have witnessed between your own worldview and the dominant worldview in pharmacy.
 - d. What can you tell me about Indigenous content that was taught/learned in pharmacy school?
 - e. Did/has your personal and/or professional identity shift(ed) during pharmacy school? Was it challenged or supported? Did it change throughout? Did it change after?
4. Tell me about what you think life will be like (or what it already is like) as an Indigenous pharmacist / graduate of pharmacy.
5. How might Canadian pharmacy programs be a better place for Indigenous students?

Follow-up Conversation Guide (Anticipated to be ~15-30 minutes)

1. What would you like to elaborate on from our last conversation, if anything?
 - a. *Summarize what was talked about in the first conversation with the participant.*
 - b. *Repeat the conversation prompts from the first conversation and allow for additions/changes, if desired.*
2. *Summarize the next steps of the research.*