Factors Influencing the Perception and Management of Chronic Pain for Immigrant Women in Saskatchewan: An Exploratory Qualitative Study

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By

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Abstract

Introduction: Chronic pain is a complex concept affected by biological, physiological, psychological, environmental, and social factors. Research has found that immigrant women are a vulnerable group because they are likely to experience higher pain intensity than non-immigrants and immigrant men due to gender roles. However, there is little qualitative research about how immigrant women perceive and manage chronic pain and the factors that aggravate their pain. An understanding of how immigrant women experience and manage their chronic pain is, therefore, important for improving healthcare outcomes for this patient group.

Purpose: The study aims to explore immigrant women's experiences with chronic pain in Saskatchewan, Canada. The following objectives guiding the study are to 1) describe the perception of chronic pain among immigrant women in Saskatchewan's context, 2) identify factors that aggravate the immigrant women's experiences of chronic pain, and 3) explore the overall management of chronic pain among immigrant women in Saskatchewan's context.

Methodology: Exploratory qualitative study design was used to explore the factors influencing the perception and management of chronic pain among immigrant women in Saskatoon, Saskatchewan, Canada. Semi-structured individual interviews were conducted with 15 participants recruited using a purposive convenience sampling strategy. The research followed the six phases of thematic analysis.

Findings: A total of 15 participants from China, Egypt, Pakistan, Bangladesh and Nigeria were interviewed in this study. All but one experienced chronic pain before immigrating to Canada. More than half of the participants reported chronic pain in multiple areas of their bodies. The study yielded four major themes: 1) culturally-shaped perception of chronic pain, 2) immigration-related experiences of chronic pain, 3) strategies for managing chronic pain, and 4) healthcare utilization for chronic pain. Participants report different perceptions of chronic pain, regarding how they verbalize and understand chronic pain. Most of our participants reported worsened chronic pain after immigrating to Canada and post-immigration experiences, including changes in socioeconomic status and the weather conditions, were responsible for aggravating the pain. To control their pain, participants used self-management, including adjusting lifestyles (behavioural, dietary, and psychological changes) and seeking help from social support. When self-management failed, they sought healthcare services both in their home countries and in Canada.

Discussion： Immigrant perceptions and perspectives of chronic pain, informed by sociocultural factors, can impact how participants make sense of their chronic pain and further impact their choice of interventions to address chronic pain. Participants experience economic stress, associated with working in physically exhausting jobs and change in weather conditions, which increase chronic pain sensitivity. Hence, it undermined their ability to cope with chronic pain. Self-management strategies were the first option to control minor pain because they are less expensive. When these strategies failed, they sought medical care to manage the pain. However, the multiple barriers they experienced such as language and cultural differences between providers and the participants, made their care experience ineffective, leading to disappointment, frustration, helplessness, and mistrust of the Canadian healthcare system.

Conclusion: Our study findings indicate how immigrant women from diverse cultural groups perceive and manage chronic pain differently. They experienced underutilization of healthcare care in Canada. Two challenges arose during the virtual data collection: the impact of COVID-19 on the conduction of qualitative research and the virtual recruitment challenge of participant diversification. The study findings provide some implications for policymakers, researchers, immigrant-serving organizations and healthcare providers about the complexity of chronic pain recognition and management among immigrant women.

Keywords:

Immigrant women, perception of chronic pain, aggravating factors, management of chronic pain

Acknowledgment

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How This Thesis is Organized

This paper-based thesis is organized into four chapters, i.e. Introduction, Methodology, Manuscript, and Reflection on Issues that Arose from the Study. Chapter 1 covers the study background, a brief literature review and the research questions. Chapter 2 is the methodology section with details about how the study was executed and also includes philosophical perspective, study design, population, sampling, sample size, data collection, data analysis, ethical consideration, and rigour. Chapter 3 is the manuscript written in a journal article format. It includes a brief introduction, literature review, methodology, findings, discussion, and conclusion. In Chapter 4, I reflect on the issues that arose from the study, recommendations for future research, as well as a conclusion to this thesis.

Definitions of Key Items

Immigration: The international movement of people from their home country to another country of which they are not natives for the settlement as permanent residents (International Organization for Migration, 2004).

Immigrant: A non-national who moves to another country to settle (International Organization for Migration, 2004).

Newcomer/Recent Immigrants: An immigrant who has established residence for a short time, usually less than five years (Lane, 2017).

Settled Immigrants: Immigrants who have settled in another country permanently for at least five years (Lane, 2017).

Pain: The International Association for the Study of Pain (IASP) defined pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (IASP, 2017, para. 1).

Chronic pain: A pain that lasts longer than the expected period of healing (usually over three months) and with or without an identifiable cause or actual tissue damage (Treede et al., 2015)

Gender: The characteristics, norms, behaviours, and roles associated with feminity and masculinity that are socially constructed. Each culture has gender-based expectations and standards of behaviours (Newman, 2002).

Culture: Culture is a complex, dynamic, historically and socially constructed phenomenon that shapes the health experiences and access to resources of various cultural grouping (Gray & Thomas, 2006; Vandenberg, 2010).

Ethnicity: A shared culture of different ethnic groups, such as ancestry, language, attitudes, religions, and the experiences associated with visible minorities, such as stigma, prejudice, and discrimination (Phinney, 1996).

Race: A group of people divided based on biology and physical characteristics, such as skin colour, facial features, and hair texture (International Organization for Migration, 2004).

Racism: Prejudice, discrimination, or antagonism directed against people based on their race or ethnicity. Three levels of racism are included (institutionalized, personally mediated, and internalized racism; Camara, 2000).

a) Institutionalized racism (no overt racism): different access to material conditions and power, such as access to appropriate healthcare information, facilities, and services.
b) Personally mediated racism (overt racism): prejudice and discrimination according to race. It includes acts of commission or omission, manifested as a lack of respect, suspicion, avoidance, verbal abuse, and hate crimes.
c) Internalized racism: members of stigmatized races accepting negative messages about abilities and self-worth, manifested as self-devaluation, resignation, helplessness, and hopelessness (Camara, 2000).

Discrimination: The unjust or prejudicial treatment of different groups of people based on their physical, social, political, economic, cultural, or historical characteristics and thereby putting them at a disadvantage (Nangia, 2013).

Acculturation: The process of shedding one's home culture and shifting toward the cultural norms, words, beliefs, values, and behaviour of the host culture (Ward & Geeraert, 2016).

Integration: The process by which another society accepts immigrants as individuals and groups (International Organization for Migration, 2004).

Chapter 1: Introduction

The issue of chronic pain which can be defined as a kind of pain that lasts over the normal time of healing (Treede et al., 2015), is both dear and near to me. Growing up in China, my family suffered and continues to suffer from chronic pain. My father has had migraine for 40 years. My mother and mother-in-law have had back pain for nearly 20 and 10 years respectively. Chronic pain has exerted substantial effects on their lives, work, society, and well-being. Although my mother and my mother-in-law both have chronic back pain, their perceptions and approaches to pain management are quite different: my mother actively tried various medical treatments, while my mother-in-law tends to endure pain and reluctance to seek medical care. In China, Chinese people tend to manage their pain through dietary modification and traditional Chinese medicine. I intend to invite my mother and my mother-in-law to visit us in Canada, and given their experiences with chronic pain, I wonder what their experiences managing it will be. This curiosity has been informed by a desire to explore the perception and experiences of managing chronic pain for immigrant women.

Immigrants are a large and growing group in Canada and currently comprise over eight million people, with half of them being immigrant women. About 1.2 million immigrants are anticipated to arrive in Canada by 2023 (News, 2020). Immigrant women reported in several research studies that they are more likely to experience a higher level of chronic pain and face challenges in managing their pain in Canada than immigrant men and Canadian-born people (Re et al., 2017; Samulowitz et al., 2018). Given the growth of the immigrant population in Canada and the hardships they face, the health of immigrants will significantly influence the health of Canadians in the future.

1.1 Concepts of Chronic Pain and Immigrants

Pain is a multidimensional and subjective feeling, and it includes both physical and mental aspects (Cohen et al., 2018). In the International Classification of Diseases, chronic pain diagnoses are not identified systematically, leading to no consensus on the definition of chronic pain (Treede et al., 2019). Some scholars defined chronic pain as lasting longer than three months (Michaëlis et al., 2015), while others define it as pain lasting more than six to twelve months (Treede et al., 2015).

The International Association for the Study of Pain (IASP) developed a systematic classification of chronic pain and physiologically classified chronic pain into seven groups: *1) chronic primary pain* (e.g., fibromyalgia, chronic migraine, and nonspecific low-back pain); 2*) chronic cancer-related pain*; 3) *chronic postsurgical or posttraumatic pain; 4) chronic neuropathic pain,* (e.g., stroke and nerve trauma); *5) chronic headache or orofacial pain* (e.g., chronic dental pains); 6*) chronic visceral pain*; and *7) chronic musculoskeletal pain,* (e.g., rheumatoid arthritis and osteoarthropathy; Aziz et al., 2019; Bennett et al., 2019; Nicholas et al., 2019; Treede et al., 2015; Treede et al., 2019). Psychological disorders are also thought to manifest as chronic pain, such as depression, anxiety, bipolar disorder, irritability, substance use disorder, and even suicidal thoughts (Gilmour, 2014; Rajapakse et al., 2014).

Chronic pain is a complex concept due to different factors, including biological, physiological, psychological, environmental, and social factors (Michaëlis et al., 2015). Social and cultural factors that influence the perception of pain include gender, age, educational level, marital status, personal and social support, socio-economic status, ethnic identity, cultural contexts, and immigration experiences (Bueno-Gómez, 2017; Re et al., 2017; Taloyan & Löfvander, 2014; Yalcin & Barrot, 2014; Zander et al., 2013). The biopsychosocial model of pain proposed by Gatchel et al. (2007) shifts the focus from the traditional biomedical model to a multi-factorial model including gender, culture, ethnicity, psychological, social and spiritual aspect, and also emphasizes the importance of a holistic approach in the evaluation and management of chronic pain which includes hear the patient’s voice and consider their experience of pain (Anonymous, 2016).

Chronic pain is a critical public health concern in Canada and puts a heavy burden on patients, healthcare providers, and society (Dueñas et al., 2016). Increasingly studies highlight the negative impact of chronic pain on patients' quality of life in several ways (Michaëlis et al., 2015; Nyen & Tveit, 2018; Penner, 2013; Re et al., 2017). Chronic pain impairs daily life activities, including increasing disability, opioid abuse, and overdose, sleep disturbance (Michaëlis et al., 2015); psychological problems such as sadness, depression, anxiety, anger, impatience, and a sense of loneliness (Dahlhamer et al., 2018; Nyen & Tveit, 2018); and also, therefore, strained social connections with their families and friends (Rostami et al., 2019). Chronic pain also interferes with social development in Canada, resulting in an annual cost for chronic pain of approximately $56 to $60 billion (Wilson et al., 2015).

Immigrants, a term that refers to people born outside a country, constitute an important aspect of the Canadian demographic landscape. In 2020, 21.5% of the Canadian population were foreign-born, of which 1.5 million are recent immigrants who arrived in Canada less than five years ago. Immigration refers to the international movement of people from their home country to another country of which they are not natives for settlement as permanent residents (Sarah, 2022). Immigration is a complex process characterized by different losses and challenges for immigrants, especially for immigrant women (Dueñas et al., 2016). Women comprised half the number of these immigrants (Statista, 2021). In 2013, 34.4% of female permanent residents were admitted under the economic class as the spouse or dependent of a principal applicant, and 34.3% were admitted under the family class (Statistics Canada, 2016). Therefore, immigrant women's health is a significant focus for researchers in Canada as they are faced with different challenges than their male counterparts (Nyen & Tveit, 2018).

Among immigrant women, 70.4% speak a non-official language as their mother tongue (Statistics Canada, 2016). The lack of proficiency in English or French means that these women must learn a new language upon arriving in Canada or upgrade their educational level. They also contend with the pressure of seeking employment, learning how the health system works, readjusting to the host country's culture, and raising a family (GreenTech Resouces, 2021). Although immigrants relocate for a better life abroad, the immigration process brings about significant losses. Immigrant women leave their familiar social, environmental, and cultural settings that have shaped their lives in their home countries (Nyen & Tveit, 2018). After moving to a new country, they often experience physical, spiritual, and material losses, changes in roles, unemployment or underemployment, loss of social status, and support from their families and social network (Nyen & Tveit, 2018).

Immigrant women also experience substantial discrimination (Vang & Chang, 2019). The Government of Canada (2022) reported that 24% of landed immigrants experienced discrimination with more women reporting than men. This discrimination is attributed to race-ethnicity, religion, language, culture and gender. In addition to these negative experiences, the process of settlement and acculturation (adopting elements of foreign culture, including words, values, norms, and behaviours) makes female immigrants more susceptible to different adverse health conditions, such as psychological problems and chronic physical pain (Dueñas et al., 2016; Kawi et al., 2019).

Overall, the current evidence demonstrates that the female immigrant population experiences unique challenges in integration in Canada than male immigrants and Canadian-born females (Kwak, 2018). Also, as immigrant women navigate living between two cultures, they are at risk of being overwhelmed as they have to take on multiple roles and endeavour to reconcile two different cultural models: the traditional culture in their home country and the Canadian culture (Phalet et al., 2018). The demands of adapting to Canada increase the risk of many health concerns related to acculturation stress, such as chronic pain (Kwak, 2018).

1.2 Chronic Pain among Immigrant Women

Immigrants' chronic pain and well-being are shaped by diverse social determinants of health, such as gender, culture, race, immigration, language proficiency, socioeconomic status, and public policies (Raphael et al., 2020). These determinants of health are primarily responsible for the erosion of the healthy immigrant effect that immigrants present at the time of immigration. In this section, the effects of immigration and culture on chronic pain are discussed.

1.2.1 Impact of Immigration on Chronic Pain

Immigration is recognized as a significant determinant of chronic pain among immigrant women (Re et al., 2017). The health conditions of immigrant women are affected by preimmigration, migration, and postimmigration experiences (Dragioti et al., 2020). Newly arrived immigrants are generally healthier than the Canadian-born population due to the healthy immigrant effect (Statistics Canada, 2019; Vang et al., 2017). However, this advantage is known to disappear within the next few years (Kim et al., 2013). Their health conditions become similar to or even worse than the general population due to challenges in adapting to a new environment and the stress of the acculturation (Kim et al., 2013).

Studies demonstrate a significant correlation between acculturation degree and experiences of chronic pain in the process of resettlement in a new country. Several studies have revealed that individuals who have higher differences in adapting to a new cultural environment tend to have a higher level of chronic pain responses (Chan et al., 2013). Among immigrants, a lower degree of acculturation is a risk for chronic pain intensity, pain interference, depression, anxiety, and analgesic overuse (Chan et al., 2013, Dahlan et al., 2019). For example, Chan et al. (2013) compared pain sensitivity among Asian Americans and European Americans in a cold pressure experiment to examine the impact of acculturation. The findings noted that the first-generation Asian American participants had a lower pain threshold, pain tolerance, and higher pain intensity than the second-generation Asian American and European American participants.

At a physiological level, chronic stress related to the resettlement process, such as unfair treatment, racism, and discrimination suffered by ethnic minorities, may lead to long-term high levels of sympathetic activation and physiological exhaustion (Won & Kim, 2016). These stressful experiences can undermine an immigrant's ability to cope with chronic pain and lead to a decrease in pain threshold and tolerance (Chan et al., 2013). Increased pain sensitivity can also be a maladaptive response to anticipation of possible stress. Chronic exposure to stress can cause maladaptive neurobiological changes in pathways related to pain processing, leading to stress-induced hyperalgesia (Jennings et al., 2014).

In many societies, women perform both paid and unpaid labour (domestic work), which exposes them to a significant level of stress (Arman et al., 2020). Women are socialized to perform more domestic labour than men, and they are expected to continue their traditional family roles while settling down in a new environment (Mustafa et al., 2020). Traditional gender norms can perpetuate immigrant women's neglect of their own needs at the expense of their families. Most immigrant women often face immense financial presume to support their families after moving to a new country. Some immigrant women find themselves to be more overeducated than native workers because the education and skills of immigrants acquired in their home country are often not readily accessible in the host country (Lu & Hou, 2020). They thus undertake low-paying menial jobs, which they are overqualified to perform, and which are generally physically demanding, low-paid, and take place in poor working environments (Dobrowolsky et al., 2018; Lu & Hou, 2020; Mustafa et al., 2020). Moreover, high-extensive physical work and unfair treatment in the workplace have become the two stressors that can cause or aggravate chronic pain. In summary, immigrant women have fewer employment opportunities and lower incomes than Canadian-born women and men counterparts in Canada which puts a substantial burden on women's physical and mental health, further increasing the risk of chronic pain (Kim et al., 2013).

1.2.2 Impact of Culture on Chronic Pain

Considering that researchers tend to study chronic pain from a biological perspective, exploring the impact of culture on pain in immigrant women is a relatively new and evolving field (Mustafa et al., 2020). Culture is a complex, dynamic, historically and socially constructed practice that shapes cultural groups' experience and social positioning and has far-reaching consequences for people over time and space (Vandenberg, 2010). This definition contradicts the essentialism view of culture, which views culture as a set of shared goals, beliefs, values, behaviours, and traditions among a group of people (Sharma et al., 2018). This perspective of culture helps scholars take into account the interaction of historical, political, and social factors shaping health and complicates the idea of treating individuals as members of a homogeneous cultural group (Vandenberg, 2010). Understanding how complex cultures are constructed and changed over time can provide important insights for healthcare providers caring for specific groups (Vandenberg, 2010).

With more people from diverse racial, religious and cultural backgrounds settling in Canada, the policy of Multiculturalism was adopted in 1971 and the Multiculturalism Act was passed in 1988 (Berry, 2020), allowing for the formal recognition and respect of cultural diversity. Hence, the freedom for people to practice their religion and customs and the full participation of ethnic minorities in all aspects of society was enshrined (Berry, 2020). Nevertheless, immigrants acculturate differently depending on diverse social and cultural attributes such as age, gender, socioeconomic status, religion and country of origin.

Culture has been shown to have a substantial effect on the health of immigrants (Brady et al., 2017; Mustafa et al., 2020). Culture is an essential determinant of health as it shapes health beliefs, self-management strategies, and seeking health behaviour of the immigrant population (Brady et al., 2017; Ransford et al., 2010). Immigrants are heterogenous groups and possess different cultural values and practices which inform their health beliefs on the perception of pain (Brady et al., 2017; Côté, 2013). For example, in a qualitative study of chronic pain in older Korean women, they found that they actively accept chronic pain as an inevitable and meaningful feature of aging rather than a problem to be solved (Dickson & Kim, 2003). A systematic analysis of cultural disparities in pain beliefs, cognitions, and behaviours revealed that African Americans are more likely than the American-born population to employ praying coping strategies for their pain rather than accessing medical treatment (Orhan et al., 2018). Cea et al. (2016) found that the major reasons for not seeking healthcare services among African American patients for their pain were concerns about addiction and tolerance of pain medications. A study by Odeh (2008) reported that Muslim women living in America attributed chronic pain to self-blame, weakness, shame, or failure, and were embarrassed and uncomfortable discussing chronic pain with male healthcare providers due to differences in gender norms in Muslim culture.

1.3 Immigrant Women's Experiences with Health Care System

Although immigrant women generally seemed to have a positive attitude toward healthcare, some underutilize the healthcare system (Michaëlis et al., 2015). Immigrants are almost 2.5 times more likely to report difficulty accessing or navigating the healthcare system during their initial years in Canada than the non-immigrant population (Salami et al., 2020). Compared with the native-born population, immigrants are less likely to have a regular physician and seek general health, mental health, and preventive care services (Pandey et al., 2021). There are various obstacles limiting immigrants' access to quality healthcare, such as language barriers, barriers to access information, cultural gaps, and discrimination (Kalich et al., 2016). Limited access to healthcare services negatively affects immigrant women's health (Ng et al., 2015). The proportion of self-reported poor health among immigrant women who reported difficulty accessing health care rose from 5% to 18%, which was higher than the proportion of immigrant women who reported no difficulty accessing health care, rising from 3% to 9% (Ng et al., 2015).

The ability of healthcare professionals to be linguistically and culturally aware of the manifestation of chronic pain is critical to providing high-quality care for patients who are not proficient in English or from a different culture (Kalich et al., 2016). Studies stated that language and cultural consistency between patients and healthcare providers facilitates effective communication, allowing more information to be gathered to make accurate diagnoses, explain treatment strategies, and guarantee the right decisions (Effective Health Care Program, 2014;

Ortega & Shin, 2021). To diagnose chronic pain appropriately, healthcare providers need to be aware of the socio-cultural determinants of pain perception and expectations of pain management. Lack of knowledge and understanding of these factors can lead to dissatisfaction with care, misdiagnosis, or underdiagnosis of chronic pain (Gushulak et al., 2011; Kalich et al., 2016; Thompson et al., 2013). This could lead to mistrust and hamper the development of a trusting relationship with the healthcare provider in the ultimate suboptimal care (Kristiansen et al., 2014; Zander et al., 2013).

Cultural differences between healthcare professionals and patients can have a detrimental effect on access to care and health outcomes for immigrants (Ortega & Shin, 2021). The cultural differences make it difficult for healthcare professionals to empower clients to make informed decisions in clinic interactions if unmitigated. Practicing cultural safety encourages healthcare providers to share their power and promote their empowerment by providing medical information and support to patients (Henderson, 2003). Cultural safety attaches great importance to considering economic, social, political, and historical factors that affect the healthcare experience to help practitioners protect their patients from any risks that may endanger their well-being (Darroch et al., 2017). Practicing cultural safety also enables providers to recognize barriers to the effectiveness of clinical care interventions caused by the inherent power imbalance between health care providers and patients (Laverty et al., 2017). By practicing cultural safety, healthcare providers create a culturally safe environment and empower patients to decide whether their clinical interactions are safe (Curtis et al., 2019).

In theory, scholars often argue that cultural safety could potentially reduce health disparities and inequities in access to healthcare services in multicultural contexts (Curtis et al., 2019; Laverty et al., 2017). Increased cultural safety of health professionals has the potential to improve patient satisfaction, treatment adherence, and treatment outcomes (Darroch et al., 2017). Yet, empirical research has not been produced to support this link (Drevdahl et al., 2008). To achieve cultural safety, health professionals and healthcare organizations need to acknowledge the potential effect of their own culture on clinical interactions with patients and examine their own "biases, attitudes, assumptions, stereotypes, prejudices, structures and characteristics that may affect the quality of care provided" (Curtis et al., 2019, p. 15). To do this, scholars suggest that healthcare practitioners and healthcare organizations need ongoing reflective self-assessment of power, privilege, and potential biases and be responsible for providing culturally safe care (Curtis et al., 2019).

Experiences of racism within the health care system can interfere with immigrant women's access to health care for chronic pain (Ben et al., 2017). Racism, including institutionalized, personally mediated, and internalized racism is a significant contributor to the limited ability to healthcare services for immigrants (Ben et al., 2017). Institutionalized racism within the healthcare system is understood as differential access to quality healthcare facilities, information, and services by race (Camara, 2000). Personally mediated racism is prejudice and discrimination according to race. It includes acts of commission or omission, manifested as a lack of respect, suspicion, avoidance, verbal abuse, and hate crimes (Camara, 2000). Internalized racism means members of stigmatized races accept negative messages about abilities and self-worth, manifested as self-devaluation, resignation, helplessness, and hopelessness (Camara, 2000).

Racism can result in lowered provider-patient trust, lowered compliance with care programs, and lowered quality of care outcomes (Ben et al., 2017). In Toronto's healthcare system, racialized healthcare clients viewed perceived racism as a key role in the challenges facing the healthcare system, leading to unequal access and under-treatment of pain; however, healthcare providers held the opposite view, partly because they think they provide exactly the same and fair services to every client (Mahabir et al., 2021). Yet, scholars emphasized that it is not possible for racialized groups to benefit equally from exactly the same care when taking accounts into cultural, racialized, linguistic, or other factors (Halwani, 2004; Kalich et al., 2016).

Newcomers may experience diverse forms of discrimination in healthcare services such as denial of or refusal of services based on immigrant status, country of origin, language, accent, culture, and religion, making it difficult to manage their illnesses in a timely manner and increasing risks for worsening of physical and mental health (Mahabir et al., 2021; Pollock et al., 2011). Moreover, these discriminations limit access to healthcare services, causing them to switch healthcare providers, and seek alternative forms of healthcare (Pollock et al., 2011).

1.4 Theoretical Framework for the Study

The Theory of Health Service Utilization (HSU) proposed by Yang and Hwang (2016) provides the theoretical framework for this study. This theory proposes a modified theoretical framework that retains the valuable components of previous health behavioural models but considers factors especially pertinent to immigrants to explain disparities in immigrant health service utilization (Yang & Hwang, 2016). Yang and Hwang (2016) explained how four categories of immigration-specific factors, including the need for healthcare, resources, predisposing factors, and contextual factors, directly and indirectly impact the disparities in immigrant HSU.

The need for healthcare is determined by the health conditions of immigrants, as self-reported and professionally evaluated health status (Yang & Hwang, 2016). Gender, ethnicity/culture, and immigration time often affect the likelihood of seeking health care. For example, women are more likely than men to access the healthcare system due to physiological and social factors (Samulowitz et al., 2018). Moreover, immigrants from different ethnicities and races may show different healthcare needs (Chan et al., 2013; Yang & Hwang, 2016). There are qualitative differences in HSU between newly arrived immigrants and earlier immigrants as new immigrants may be less likely to utilize healthcare services due to language barrier, limited financial resources, and unfamiliarity with the local healthcare system (Yang & Hwang, 2016). A poor health condition is associated with the need for healthcare and HSU (Yang & Hwang, 2016). In this study, the condition of chronic pain among immigrant women and their healthcare services utilization for chronic pain were explored.

Resource factors refer to the availability of individuals to access the healthcare system, which is determined by income, ability to obtain medical insurance that covers medication or physical therapies, and social relationships through families, friends, and relatives that can help increase their access to healthcare services (Yang & Hwang, 2016). The availability to access healthcare professionals, facilities, and interpreters is also considered a positive factor for immigrant HSU (Yang & Hwang, 2016). Financial resources typically have a higher impact on HSU for immigrants than for non-immigrants since immigrants, especially recent immigrants often work low-wage and unskilled work and are therefore less likely to afford medical coverage for services not provided by the government. Limited financial resources impede the ability to afford health insurance and medical expenses (Yang & Hwang, 2016). To explore the resource factors of HSU in this study, participants were invited to talk about their financial status and any factors that assist or prevent them from managing their chronic pain.

Immigrant-specific predisposing factors include acculturation and immigrant ethnic culture (Yang & Hwang, 2016). A higher level of acculturation to host culture may increase the rate of HSU as a higher degree of acceptance of host norms and values, including those of HSU, leads to health-seeking behaviours similar to native-born ones. The ethnic culture of immigrants has an impact on HSU since they may have significantly different beliefs on disease than the host society, as well as different expectations for and approaches to treating diseases (Yang & Hwang, 2016). Participants in this study were asked how immigration-related experiences impact their chronic pain perception and management.

Immigrant-specific contextual factors significantly impact the possibility of individual HSU, such as the context of emigration, the experience of HSU in the homeland before emigration, and the context of reception by the host country (Yang & Hwang, 2016). In this study, the experiences in the health care system for chronic pain both in their native country and Canada were asked.

This framework symmetrically explains and categorizes the conditions that are pertinent to the determination process of immigrant HSU. In the current study, I applied it to explore the chronic pain experiences of immigrant women in Saskatchewan and how they manage them, including healthcare service utilization.

1.5 Problem Statement

Immigrant women with chronic pain face diverse barriers when accessing healthcare in Canada (Taloyan & Löfvander, 2014). Language barriers, cultural sensitivity, healthcare system structure differences, and limited knowledge about the host country's healthcare system of the immigrant women are the main barriers immigrant women often face when accessing healthcare services (Nyen & Tveit, 2018; Penner, 2013; Taloyan & Löfvander, 2014). These barriers punctuate the contact of immigrants with the healthcare system, impeding effective care for this patient group and making it challenging to manage chronic pain (Ferdous et al., 2018). To provide the most effective and comprehensive healthcare for immigrant women with chronic pain, healthcare providers must be aware of the complex factors affecting chronic pain experiences and management.

Although previous quantitative studies suggest that chronic pain is a public health concern for all Canadians, there is little qualitative research about how Canadian immigrant women perceive and manage chronic pain, what factors affect their chronic pain experiences, and how they access healthcare services for chronic pain. Thus, there is a gap in the extant literature on chronic pain and immigrant women in Canada regarding the perception and management of chronic pain, factors aggravating chronic pain, and the experiences of access to healthcare for chronic pain. There is, therefore, a need to undertake qualitative research on factors influencing the perceptions and management of chronic pain for immigrant women to include the voices of this vulnerable group.

This study provides new insight into the perception and management of chronic pain and factors aggravating chronic pain among immigrant women in Saskatchewan, Canada. Thus, healthcare providers can gain a deeper understanding of the context of chronic pain among immigrant women in Saskatchewan, Canada. The outcome of this study can assist healthcare providers in taking a holistic approach to the care of immigrant women with chronic pain by facilitating culturally- and gender-sensitive interventions to improve the quality of care.

1.6 Research Questions and Objectives

The research questions for this study are:

1) How do immigrant women in Saskatchewan's context perceive chronic pain?

2) What factors aggravate the experiences of immigrant women in Saskatchewan's context living with chronic pain?

3) How do immigrant women in Saskatchewan's context manage chronic pain?

The study aims to explore immigrant women's experiences living with chronic pain in Saskatchewan, Canada. The following objectives guiding the study are to:

1) Describe the perception of chronic pain among immigrant women in Saskatchewan's context.

2) Identify factors that aggravate immigrant women's experiences of chronic pain.

3) Explore the overall management of chronic pain among immigrant women in Saskatchewan's context.

1.7 Summary

From the literature, immigrant women tend to report high levels of chronic pain compared to the native population and immigrant men. However, the extant literature on chronic pain in immigrant women mainly focuses on the general immigrant grouping and countries, such as the United States and Europe, and there are very few studies focusing on Canadian conditions and female immigrants. Moreover, the relationship between various factors and chronic pain experiences is investigated using quantitative approaches, and how subjects interpret and perceive the factors influencing their experiences and management of chronic pain remains unclear. Specifically, little is known about how immigrant women in Canada experience and manage chronic pain in context and are affected by different factors. Thus, it is incumbent to use qualitative research methods to explore the factors influencing the experiences and management of chronic pain in immigrant women in Canada. This study aims to explore factors affecting the perception and management of immigrant women with chronic pain. The next chapter describes the study's methodology and research activities.

References

Anonymous. (2016). Relieving pain in America: A blueprint for transforming prevention, care, education, and research. *Military Medicine*, *181*(5), 397–399. https://doi.org/10.7205/MILMED-D-16-00012

Arman, M., Gebhardt, A., Hök Nordberg, J., & Andermo, S. (2020). Women's lived experiences of chronic pain: Faces of gendered suffering. *Qualitative Health Research*, *30*(5), 772–782. https://doi.org/10.1177/1049732319888478

Aziz, Q., Giamberardino, M. A., Barke, A., Korwisi, B., Baranowski, A. P., Wesselmann, U., Rief, W., Treede, R.-D., & IASP Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic secondary visceral pain. *Pain*, *160*(1), 69–76. https://doi.org/10.1097/j.pain.0000000000001362

Ben, J., Cormack, D., Harris, R., & Paradies, Y. (2017). Racism and health service utilisation: A systematic review and meta-analysis. *PLOS ONE*, *12*(12), e0189900. https://doi.org/10.1371/journal.pone.0189900

Bennett, M. I., Kaasa, S., Barke, A., Korwisi, B., Rief, W., Treede, R.-D., & IASP Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic cancer-related pain. *Pain*, *160*(1), 38–44. https://doi.org/10.1097/j.pain.0000000000001363

Berry, D. (2020). *Canadian Multiculturalism Act*. https://www.thecanadianencyclopedia.ca/en/article/canadian-multiculturalism-act

Brady, B., Veljanova, I., Schabrun, S., & Chipchase, L. (2017). Integrating culturally informed approaches into the physiotherapy assessment and treatment of chronic pain: Protocol for a pilot randomised controlled trial. *BMJ Open*, *7*(5), e014449. https://doi.org/10.1136/bmjopen-2016-014449

Bueno-Gómez, N. (2017). Conceptualizing suffering and pain. *Philosophy, Ethics, and Humanities in Medicine*, *12*(1), 7. https://doi.org/10.1186/s13010-017-0049-5

Camara, P. J. (2000). Levels of racism: A theoretic framework and a gardener's tale. *American Journal of Public Health*, *90*(8), 1212–1215. https://www.proquest.com/docview/215111519/abstract/8ECB21F034194888PQ/1

Cea, M. E., Reid, M. C., Inturrisi, C., Witkin, L. R., Prigerson, H. G., & Bao, Y. (2016). Pain assessment, management, and control among patients 65 years or older receiving hospice care in the U.S. *Journal of Pain and Symptom Management*, *52*(5), 663–672. https://doi.org/10.1016/j.jpainsymman.2016.05.020

Chan, M. Y. P., Hamamura, T., & Janschewitz, K. (2013). Ethnic differences in physical pain sensitivity: Role of acculturation. *PAIN®*, *154*(1), 119–123. https://doi.org/10.1016/j.pain.2012.09.015

Cohen, M., Quintner, J., & van Rysewyk, S. (2018). Reconsidering the International Association for the Study of Pain definition of pain: *PAIN Reports*, *3*(2), e634. https://doi.org/10.1097/PR9.0000000000000634

Côté, D. (2013). Intercultural communication in health care: Challenges and solutions in work rehabilitation practices and training: A comprehensive review. *Disability and Rehabilitation*, *35*(2), 153–163. https://doi.org/10.3109/09638288.2012.687034

Curtis, E., Jones, R., Tipene-Leach, D., Walker, C., Loring, B., Paine, S.-J., & Reid, P. (2019). Why cultural safety rather than cultural competency is required to achieve health equity:

A literature review and recommended definition. *International Journal for Equity in Health*, *18*(1), 174. https://doi.org/10.1186/s12939-019-1082-3

Dahlan, R., Badri, P., Saltaji, H., & Amin, M. (2019). Impact of acculturation on oral health among immigrants and ethnic minorities: A systematic review. *PLOS ONE*, *14*(2), e0212891. https://doi.org/10.1371/journal.pone.0212891

Dahlhamer, J., Lucas, J., Zelaya, C., Nahin, R., Mackey, S., DeBar, L., Kerns, R., Von Korff, M., Porter, L., & Helmick, C. (2018). Prevalence of chronic pain and high-impact chronic pain among adults—United States, 2016. *Morbidity and Mortality Weekly Report*, *67*(36), 1001–1006. https://doi.org/10.15585/mmwr.mm6736a2

Darroch, F., Giles, A., Sanderson, P., Brooks-Cleator, L., Schwartz, A., Joseph, D., & Nosker, R. (2017). The United States does CAIR about cultural safety: Examining cultural safety within indigenous health contexts in Canada and the United States. *Journal of Transcultural Nursing: Official Journal of the Transcultural Nursing Society*, *28*(3), 269–277. https://doi.org/10.1177/1043659616634170

Dickson, G. L., & Kim, J. I. (2003). Reconstructing a meaning of pain: Older Korean American women's experiences with the pain of osteoarthritis. *Qualitative Health Research*, *13*(5), 675–688. https://doi.org/10.1177/1049732303013005006

Dobrowolsky, A., Arat-Koç, S., & Gabriel, C. (2018). *Immigrant women in Canada*. https://www.criaw-icref.ca/publications/immigrant-women-in-canada/

Dragioti, E., Tsamakis, K., Larsson, B., & Gerdle, B. (2020). Predictive association between immigration status and chronic pain in the general population: Results from the SwePain cohort. *BMC Public Health*, *20*(1), 1462. https://doi.org/10.1186/s12889-020-09546-z

Drevdahl, D. J., Canales, M. K., & Dorcy, K. S. (2008). Of goldfish tanks and moonlight tricks: Can cultural competency ameliorate health disparities? *Advances in Nursing Science*, *31*(1), 13–27. https://doi.org/10.1097/01.ANS.0000311526.27823.05

Dueñas, M., Ojeda, B., Salazar, A., Mico, J. A., & Failde, I. (2016). A review of chronic pain impact on patients, their social environment and the health care system. *Journal of Pain Research*, *9*, 457–467. https://doi.org/10.2147/JPR.S105892

Effective Health Care Program. (2014, July 9). *Improving cultural competence to reduce health disparities for priority populations*. https://effectivehealthcare.ahrq.gov/products/cultural-competence/research-protocol

Ferdous, M., Lee, S., Goopy, S., Yang, H., Rumana, N., Abedin, T., & Turin, T. C. (2018). Barriers to cervical cancer screening faced by immigrant women in Canada: A systematic scoping review. *BMC Women's Health*, *18*(1), 165. https://doi.org/10.1186/s12905-018-0654-5

Gatchel, R. J., Peng, Y. B., Peters, M. L., Fuchs, P. N., & Turk, D. C. (2007). The biopsychosocial approach to chronic pain: Scientific advances and future directions. *Psychological Bulletin*, *133*(4), 581–624. https://doi.org/10.1037/0033-2909.133.4.581

Gilmour, H. (2014). Positive mental health and mental illness. *Health Reports*, *25*(9), 3–9. https://pubmed-ncbi-nlm-nih-gov.cyber.usask.ca/16856694/

Government of Canada, S. C. (2022, February 16). *Experiences of discrimination among the Black and Indigenous populations in Canada, 2019*. https://www150.statcan.gc.ca/n1/pub/85-002-x/2022001/article/00002-eng.htm#a13

GreenTech Resouces. (2021, November 24). *Top 12 Canadian Immigration Challenges Every Newcomer Has To Face—GreenTech*. https://www.greentechresources.ca/canadian-immigration-challenges/

Gushulak, B. D., Pottie, K., Roberts, J. H., Torres, S., & DesMeules, M. (2011). Migration and health in Canada: Health in the global village. *Canadian Medical Association Journal*, *183*(12), E952–E958. https://doi.org/10.1503/cmaj.090287

Halwani, S. (2004). *Racial inequality in access to health care services*. Ontario Human Rights Commission. http://www.ohrc.on.ca/en/race-policy-dialogue-papers/racial-inequality-access-health-care-services

Henderson, S. (2003). Power imbalance between nurses and patients: A potential inhibitor of partnership in care. *Journal of Clinical Nursing*, *12*(4), 501–508. https://doi.org/10.1046/j.1365-2702.2003.00757.x

Jennings, E. M., Okine, B. N., Roche, M., & Finn, D. P. (2014). Stress-induced hyperalgesia. *Progress in Neurobiology*, *121*, 1–18. https://doi.org/10.1016/j.pneurobio.2014.06.003

Kalich, A., Heinemann, L., & Ghahari, S. (2016). A scoping review of immigrant experience of health care access barriers in Canada. *Journal of Immigrant and Minority Health*, *18*(3), 697–709. https://doi.org/10.1007/s10903-015-0237-6

Kawi, J., Reyes, A. T., & Arenas, R. A. (2019). Exploring pain management among Asian immigrants with chronic pain: Self-management and resilience. *Journal of Immigrant & Minority Health*, *21*(5), 1123–1136. https://doi.org/10.1007/s10903-018-0820-8

Kim, I.-H., Carrasco, C., Muntaner, C., McKenzie, K., & Noh, S. (2013). Ethnicity and postmigration health trajectory in new immigrants to Canada. *American Journal of Public Health*, *103*(4), e96. https://doi.org/10.2105/AJPH.2012.301185

Kristiansen, M., Irshad, T., Worth, A., Bhopal, R., Lawton, J., & Sheikh, A. (2014). The practice of hope: A longitudinal, multi-perspective qualitative study among South Asian Sikhs and Muslims with life-limiting illness in Scotland. *Ethnicity & Health, 19*(1), 1–19. https://doi.org/10.1080/13557858.2013.858108

Kwak, K. (2018). Age and gender variations in healthy immigrant effect: A population study of immigrant well-being in Canada. *Journal of International Migration and Integration, 19*(2), 413–437. https://doi.org/10.1007/s12134-018-0546-4

Laverty, M., McDermott, D. R., & Calma, T. (2017). Embedding cultural safety in Australia's main health care standards. *Medical Journal of Australia*, *207*(1). https://www.mja.com.au/journal/2017/207/1/embedding-cultural-safety-australias-main-health-care-standards

Lu, Y., & Hou, F. (2020). Immigration system, labor market structures, and overeducation of high-skilled immigrants in the United States and Canada. *International Migration Review, 54*(4), 1072–1103. https://doi.org/10.1177/0197918319901263

Mahabir, D. F., O'Campo, P., Lofters, A., Shankardass, K., Salmon, C., & Muntaner, C. (2021). Experiences of everyday racism in Toronto's health care system: A concept mapping study. *International Journal for Equity in Health*, *20*(1), 74. https://doi.org/10.1186/s12939-021-01410-9

Michaëlis, C., Kristiansen, M., & Norredam, M. (2015). Quality of life and coping strategies among immigrant women living with pain in Denmark: A qualitative study. *BMJ Open*, *5*(7), e008075. https://doi.org/10.1136/bmjopen-2015-008075

Mustafa, N., MacNeill, M., Watt-Watson, J., & Einstein, G. (2020). The lived experiences of chronic pain among immigrant Indian-Canadian women: A phenomenological analysis.

Canadian Journal of Pain, *4*(3ja), 40–50. https://doi.org/10.1080/24740527.2020.1768835

News, K. H. · C. (2020, October 30). *Federal government plans to bring in more than 1.2M immigrants in next 3 years*. Canadian Broadcasting Corporation. https://www.cbc.ca/news/politics/mendicino-immigration-pandemic-refugees-1.5782642

Ng, E., Pottie, K., & Spitzer, D. (2015, November 27). *Official language proficiency and self-reported health among immigrants to Canada*. https://www150.statcan.gc.ca/n1/pub/82-003-x/2011004/article/11559-eng.htm

Nicholas, M., Vlaeyen, J. W. S., Rief, W., Barke, A., Aziz, Q., Benoliel, R., Cohen, M., Evers, S., Giamberardino, M. A., Goebel, A., Korwisi, B., Perrot, S., Svensson, P., Wang, S.-J., Treede, R.-D., & International Association for the Study of Pain (IASP) Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic primary pain. *Pain*, *160*(1), 28–37. https://doi.org/10.1097/j.pain.0000000000001390

Nyen, S., & Tveit, B. (2018). Symptoms without disease: Exploring experiences of non-Western immigrant women living with chronic pain. *Health Care for Women International*, *39*(3), 322–342. https://doi.org/10.1080/07399332.2017.1370470

Odeh, A. R. (2008). Health beliefs, practice, and priorities for health care of Arab Muslims in the United States: Implications for nursing care. *Journal of Transcultural Nursing*, *19*(3), 284–291. https://doi.org/10.1177/1043659608317450

Orhan, C., Van Looveren, E., Cagnie, B., Mukhtar, N. B., Lenoir, D., & Meeus, M. (2018). Are pain beliefs, cognitions, and behaviors influenced by race, ethnicity, and culture in patients with chronic musculoskeletal pain: A systematic review. *Pain Physician*, *21*(6), 541–558.

Ortega, P., & Shin, T. M. (2021). Language Is not a barrier—It is an opportunity to improve health equity through education. *Health Affairs Forefront*. https://doi.org/10.1377/forefront.20210726.579549

Pandey, M., Maina, R. G., Amoyaw, J., Li, Y., Kamrul, R., Michaels, C. R., & Maroof, R. (2021b). Impacts of English language proficiency on healthcare access, use, and outcomes among immigrants: A qualitative study. *BMC Health Services Research*, *21*(1), 741. https://doi.org/10.1186/s12913-021-06750-4

Penner, J. (2013). *Chronic pain in Afghan immigrant women: An exploratory mixed methods study* [University of Saskatchewan]. https://harvest.usask.ca/handle/10388/ETD-2013-05-1058

Phalet, K., Fleischmann, F., & Hillekens, J. (2018). Religious identity and acculturation of immigrant minority youth: Toward a contextual and developmental approach. *European Psychologist*, *23*, 32–43. https://doi.org/10.1027/1016-9040/a000309

Pollock, G., Newbold, B., & Lafrenière, G. (2011, September). *Perceptions of discrimination in health services experienced by immigrant minorities in Ontario*. http://p2pcanada.ca/files/2015/09/Perceptions-of-Discrimination-in-Health-Services-Experienced-by-Immigrant-Minorities-in-Ontario.pdf

Rajapakse, D., Liossi, C., & Howard, R. F. (2014). Presentation and management of chronic pain. *Archives of Disease in Childhood*, *99*(5), 474–480. https://doi.org/10.1136/archdischild-2013-304207

Ransford, H. E., Carrillo, F. R., & Rivera, Y. (2010). Health care-seeking among Latino immigrants: Blocked access, use of traditional medicine, and the role of religion. *Journal of Health Care for the Poor and Underserved*, *21*(3), 862–878. https://doi.org/10.1353/hpu.0.0348

Raphael, D., Bryant, T., Mikkonen, J., & Alexander, R. (2020). *Social determinants of health: The Canadian facts*. Ontario Tech University Faculty of Health Sciences and Toronto: York University School of Health Policy and Management. https://www.thecanadianfacts.org/The_Canadian_Facts-2nd_ed.pdf

Re, T. S., Bragazzi, N. L., Siri, A., Cisneros Puebla, C., Friese, S., Simões, M., Candau, J., & Khabbache, H. (2017). Effects of acculturation, coping strategies, locus of control, and self-efficacy on chronic pain: Study of Chinese immigrant women in Italy – insights from a thematic field analysis. *Journal of Pain Research*, *10*, 1383–1390. https://doi.org/10.2147/JPR.S115449

Rostami, K., Zadeh, S. H., & Rakhshan, M. (2019). Chronic pain: A concept analysis. *Electronic Journal of General Medicine*, *16*(2), em130. https://doi.org/10.29333/ejgm/94098

Salami, B., Mason, A., Salma, J., Yohani, S., Amin, M., Okeke-Ihejirika, P., & Ladha, T. (2020). Access to healthcare for immigrant children in Canada. *International Journal of Environmental Research and Public Health*, *17*(9), 3320. https://doi.org/10.3390/ijerph17093320

Samulowitz, A., Gremyr, I., Eriksson, E., & Hensing, G. (2018). “Brave men” and “emotional women”: A theory-guided literature review on gender bias in health care and gendered norms towards patients with chronic pain. *Pain Research & Management, 2018,* 6358624. https://doi.org/10.1155/2018/6358624

Sarah, P. (2022, August 12). *Immigration definition, history, & facts*. https://www.britannica.com/topic/immigration

Sharma, S., Abbott, J. H., & Jensen, M. P. (2018). Why clinicians should consider the role of culture in chronic pain. *Brazilian Journal of Physical Therapy*, *22*(5), 345–346. https://doi.org/10.1016/j.bjpt.2018.07.002

Statista. (2021, July 6). *Number of immigrants in Canada by time since landing 2020*. Statista. https://www.statista.com/statistics/555797/number-of-immigrants-in-canada-by-time-since-landing/

Statistics Canada. (2016, February 23). *Immigrant women*. https://www150.statcan.gc.ca/n1/pub/89-503-x/2015001/article/14217-eng.htm#a5

Statistics Canada. (2019, April 17). *Healthy immigrant effect by immigrant category in Canada*. https://www150.statcan.gc.ca/n1/pub/82-003-x/2019004/article/00001-eng.htm

Taloyan, M., & Löfvander, M. (2014). Depression and gender differences among younger immigrant patients on sick leave due to chronic back pain: A primary care study. *Primary Health Care Research & Development*, *15*(1), 5–14. https://doi.org/10.1017/S1463423612000564

Thompson, E. B., Heley, F., Oster-Aaland, L., Stastny, S. N., & Crawford, E. C. (2013). The impact of a student-driven social marketing campaign on college student alcohol-related beliefs and behaviors. *Social Marketing Quarterly*, *19*(1), 52–64. https://doi.org/10.1177/1524500412472668

Treede, R.-D., Rief, W., Barke, A., Aziz, Q., Bennett, M. I., Benoliel, R., Cohen, M., Evers, S., Finnerup, N. B., First, M. B., Giamberardino, M. A., Kaasa, S., Korwisi, B., Kosek, E., Lavand’homme, P., Nicholas, M., Perrot, S., Scholz, J., Schug, S., … Wang, S.-J. (2019).

Chronic pain as a symptom or a disease: The International Association for the Study of Pain classification of chronic pain for the International Classification of Diseases (ICD-11). *Pain*, *160*(1), 19–27. https://doi.org/10.1097/j.pain.0000000000001384

Treede, R.-D., Rief, W., Barke, A., Aziz, Q., Bennett, M. I., Benoliel, R., Cohen, M., Evers, S., Finnerup, N. B., First, M. B., Giamberardino, M. A., Kaasa, S., Kosek, E., Lavand'homme, P., Nicholas, M., Perrot, S., Scholz, J., Schug, S., Smith, B. H., … Wang, S.-J. (2015). A classification of chronic pain for ICD-11. *Pain*, *156*(6), 1003–1007. https://doi.org/10.1097/j.pain.0000000000000160

Vandenberg, H. E. R. (2010). Culture theorizing past and present: Trends and challenges. *Nursing Philosophy: An International Journal for Healthcare Professionals*, *11*(4), 238–249. https://doi.org/10.1111/j.1466-769X.2010.00453.x

Vang, Z. M., & Chang, Y. (2019). Immigrants' experiences of everyday discrimination in Canada: Unpacking the contributions of assimilation, race, and early socialization. *International Migration Review*, *53*(2), 602–631. https://doi.org/10.1177/0197918318764871

Vang, Z. M., Sigouin, J., Flenon, A., & Gagnon, A. (2017). Are immigrants healthier than native-born Canadians? A systematic review of the healthy immigrant effect in Canada. *Ethnicity & Health*, *22*(3), 209–241. https://doi.org/10.1080/13557858.2016.1246518

Wilson, M. G., Lavis, J. N., & Ellen, M. E. (2015). Supporting chronic pain management across provincial and territorial health systems in Canada: Findings from two stakeholder dialogues. *Pain Research & Management: The Journal of the Canadian Pain Society*, *20*(5), 269–279. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4596635/

Won, E., & Kim, Y.-K. (2016). Stress, the autonomic nervous system, and the immune-kynurenine pathway in the etiology of depression. *Current Neuropharmacology*, *14*(7), 665–673. https://doi.org/10.2174/1570159X14666151208113006

Yalcin, I., & Barrot, M. (2014). The anxiodepressive comorbidity in chronic pain. *Current Opinion in Anaesthesiology*, *27*(5), 520–527. https://doi.org/10.1097/ACO.0000000000000116

Yang, P. Q., & Hwang, S. H. (2016). Explaining immigrant health service utilization: A theoretical framework. *SAGE Open*, *6*(2), 2158244016648137. https://doi.org/10.1177/2158244016648137

Zander, V., Müllersdorf, M., Christensson, K., & Eriksson, H. (2013). Struggling for sense of control: Everyday life with chronic pain for women of the Iraqi diaspora in Sweden. *Scandinavian Journal of Public Health*, *41*(8), 799–807. https://doi.org/10.1177/1403494813492033

Chapter 2: Methodology and Theoretical Underpinnings of the Study

In this chapter, I outline the philosophical perspective and study design used to conduct this study. Details of the population, sampling strategies, and sample size were discussed. The data collection phase and the detailed stages of thematic analysis are provided, including a discussion of ethical considerations and rigour.

2.1 Philosophical Perspective

The philosophical perspective is the basis for conducting research, developing theories, and improving knowledge, which determines research questions and design (Wills & McEwen, 2019). To explore the experiences of immigrant women with chronic pain, I employed a constructivist epistemological approach to guide this study. Epistemology pursues the study of knowledge, such as the nature of truth and the relationship between knowledge and belief. It is a way that we come to understand the world and acquire knowledge, which is consistent with the aim of this study (Wills & McEwen, 2019). The basic epistemological assumption of constructivism is transactional subjectivism, i.e., the assertions about reality and truth depend entirely on the information and complexity available to the individuals involved in forming these assertions (Lincoln & Guba, 1985). The constructivist paradigm attempts to understand how a person's social environment and interaction with society affect their lived experiences, which is aligned with the objectives of this study (Wills & McEwen, 2019). Knowledge is constructed through the interaction of subjects and researchers "against a backdrop of shared understandings, practices, language, and [other historical, cultural, ideological, and political aspects of social experience]" (Rodgers & Knafl, 1993. p. 197). In addition, the paradigm of constructivism asserts that social phenomena and categories are constantly revised and changed (Wills & McEwen, 2019). In applying the constructivist view, this study considered participants' perceptions and management of chronic pain, and the factors affecting the experiences of chronic pain.

2.2 Study Design

In this study, I employed a qualitative exploratory design (Creswell, 2009) to explore the lived experiences of chronic pain among immigrant women in Saskatchewan, Canada. Qualitative research allows exploratory research and is often used to study some research about the lived experience of human beings that cannot be obtained by quantitative methods (Creswell, 2009). The qualitative design is the best way when the purpose of a study is to learn from the participants in a setting the way they experience it, how they interpret what they experience, and how they understand the meaning that is socially constructed by their interaction with the world (Creswell, 2009; Richards & Morse, 2013). The qualitative approach can allow the researcher to discover and do justice to the complexity of interpretations and perceptions (Richards & Morse, 2013). The choice to explore chronic pain in Canadian immigrant women from a qualitative perspective is appropriate because this study focuses on immigrant women experiencing this phenomenon and how their interaction with the world impacts their perceptions and management of chronic pain.

The exploratory approach is suitable for this study as there is a shortage of literature on chronic pain among immigrant women in Canada. Hence, with this approach, I explored a topic, group, process, or situation with limited knowledge within the literature and form new explanations or deeper insight into the subject (Reid-Searl & Happell, 2012; Reiter, 2017). Stebbins (2001) defined the qualitative exploratory approach as "a broad-ranging, purposive, systematic, prearranged undertaking designed to maximize the discovery of generalizations leading to description and understanding of an area of social or psychological life" (Stebbins,

2001. p, 3). Exploratory research offers a qualitative approach rooted in dialectics, which provides an alternative and fruitful way to conduct social science by reflecting on internal contradictions and understanding progress as the gradual development of oppositional forces rather than a linear process (Reiter, 2017). When approaching reality dialectically, dialectics does not hide contradictions but suggests paying attention to them, starting a new interpretation from this contradiction, and then moving outward (Reiter, 2017).

2.3 Population, Sampling, and Sample Size

Fifteen immigrant women in Saskatchewan with chronic pain (pain lasting three months or longer) were able to participate in this study. Immigrant women were recruited by a non-probabilistic, purposive convenience sampling strategy. Purposive sampling focuses on people with specific characteristics who would best serve the research. It can foster the sociocultural and demographic diversity of the study population and capture the phenomena of the study (Richards & Morse, 2013). A convenient sampling strategy means the population group is easily accessible to the researcher, which is helpful to increase my ability to recruit participants within a limited time (Clark, 2017).

Inclusion criteria included participants who: (1) were immigrants; (2) were female; (3) had chronic pain (self-report having pain lasting three months or longer); (4) had sought treatment for chronic pain at least once in Canada; (5) lived in Saskatchewan; (6) could communicate in English; and (7) were 18 years old or older. Exclusion criteria are people who: (1) had cancer-related pain and (2) were unable to give consent.

The following recruitment strategies were utilized for this study. First, I searched the website for organizations serving immigrant clients and obtained their contact information. These include; Saskatchewan Intercultural Association, International Women of Saskatoon, Women's Health Centre, Mediclinic, and Regina Immigrant Women Centre through phone and email to request their assistance with participant recruitment. The brief introduction of the study and the poster that contains the contact information of the researcher were shared with them to inform potential participants in these organizations. Second, I encouraged participants to inform anyone in their community to be involved in this study through word of mouth. Interested participants who reached out through email or phone, were asked some questions (listed in Appendix D: Interview Guide- part 1) to make sure they were eligible for this study and were shared the verbal consent form. Individual interviews were then scheduled with participants who were eligible and willing to grant me an interview.

2.4 Data Collection

In-depth semi-structured individual interviews were the primary data collection method in this study (Hunter et al., 2019). Semi-structured interviews are commonly used in the exploratory research design (Hunter et al., 2019). This approach, a more conversational interview style, helps produce greater depth in the findings (Weller et al., 2018). Due to the pandemic and requirements of the University of Saskatchewan Behavioral Research Ethics Board, all interviews were conducted virtually through phone or Zoom, which is a popular and safe online video conferencing platform. During the data collection, the interviews were facilitated using the interview guide (Appendix D), which consisted of four segments of questions: (1) perception and management of chronic pain; (2) factors affecting experiences of chronic pain; (3) experiences of access to healthcare for chronic pain; and (4) additional sharing for participants. These questions were drawn from the extensive literature on the topic that aimed to explore how immigrant women perceive and manage their chronic pain, what factors affect chronic pain, and how they access the healthcare system for chronic pain. When participants were answering these questions, some probing questions according to their sharing were asked to further clarify their meaning.

The interviews were carried out from April to June 2022 after receiving ethics approval from the University of Saskatchewan Behavioral Research Ethics Board and lasted from 43 to 81 minutes. During each interview, the purpose of the study, the procedures, potential risks, confidentiality, storage of data and the right to withdraw from the study were shared with each participant before starting to ask the interview questions. The interviews were audio-recorded with the approval of the participants. All participants were provided with digital gift cards after each interview in appreciation of their participation. All interviews were transcribed for accurate and verbatim transcription. Notes related to immediate impressions were taken during each interview and used as contextual information in subsequent analysis.

2.5 Data Analysis

Thematic analysis, which entails identifying, analyzing, and reporting themes within data, will be applied to manage the data (Braun & Clarke, 2006). Green and Thorogood (2014) suggested that thematic analysis applies to the exploratory research design as this qualitative methodology aims to explore participants' experiences related to the phenomenon being studied, and thematic analysis can identify the core experiences and produce generalization.

The research followed the six phases of thematic analysis as prescribed by Braun and Clarke (2006). These include *a) becoming familiar with the data*- in this phase, I read and re-read the transcribed interviews in Microsoft Word several times and took notes to familiarize myself with the data and begin to note emerging threads, ideas, and patterns (Braun & Clarke, 2006). After that, I imported the transcripts into NVivo software, which is often used for the analysis and organization of unstructured text, audio, video, or image data, including but not limited to interviews in qualitative and mixed-methods research (Yeager, 2021); *b) generating initial codes*- I made initial codes from the raw data by coding sentence-by-sentence across the data set in NVivo. The initial codes capture essential elements and the most representative features of the data (Braun & Clarke, 2006);

The subsequent phases of thematic analysis are *c) looking for themes*- in this stage, I started analyzing the long list of codes and try to combine different codes into potential themes (Braun & Clarke, 2006); *d) reviewing the themes*- I read all the collated extracts for each theme to make sure that the topics are meaningfully and logically coherent and make sure these themes accurately reflect the meaning of the entire data set (Braun & Clarke, 2006); *e) defining and redefining the themes*- I created a working definition for each theme, conducted a detailed analysis for each theme about how it is in related to research questions, and identify if a theme contains any sub-themes (Braun & Clarke, 2006). Sub-themes provide structure for a complex theme and show the hierarchy of meaning in the data (Braun & Clarke, 2006); and *f) producing the report*- I produced a report of the analysis by providing enough data extracts, selecting compelling extract examples, and analysis related to research questions and literature (Braun & Clarke, 2006).

2.6 Ethical Consideration

Ethics approval from the University of Saskatchewan Behavioral Research Ethics Board was obtained on April 14, 2022 (Appendix A). As immigrant women from different cultural groups are considered vulnerable, maximizing ethical considerations for participants' interests are required, such as concern for welfare, volunteering, and confidentiality. Following are the measures that I have done to protect their interests.

As I considered that participants may feel stressed or upset when they talk about how they have struggled with chronic pain, a series of managing their potential risks were listed before approaching participants, including stopping the interview, providing the contact information of professional health services and detailed measurement for the protecting individuals in a crisis.

Before participants are enrolled in the study, they were informed of the study's aims and offered the opportunity to ask questions. To respect their volunteer, participants were informed of the right to participate in the study, including withdrawal from the study at any time without penalty and the right not to answer any questions there were uncomfortable with during interviews.

To protect their confidentiality, participants were identified using pseudonyms so any identifying information would not be included in the transcripts and the final manuscript. To protect the data from interviews, a Zoom meeting invitation was shared with each participant via email. Only those who have received the invitation have access to this link, which prevents uninvited people other than the interviewer and the interviewer from entering the meeting, thus protecting the content of the interview from being leaked. Any digital data were stored on a computer and other people apart from the student researcher and supervisor have no access to the data. The master list and consent forms that include the identification of the participants are stored separately from the raw data. The computer account and file containing the key and other electronic data require passwords for access.

2.7 Rigour

Ensuring rigour in a qualitative study is of vital importance to enhance the validity and credibility of the study. Rigour is defined as the quality of being accurate, exact, careful, thorough, and with strict precision in the qualitative research (Cypress, 2017). Lincoln and Guba (1985) suggested criteria to ensure rigour in a qualitative inquiry. These are; credibility, transferability, and confirmability.

Credibility refers to an accurate and truthful description of the participants' lived experiences (Lincoln & Guba, 1985). Cypress (2017) recommended continued engagement, persistent observation, peer debriefing, and member checking that help establish the credibility of study results. Credibility was applied by adopting member checking. For example, I invited the first three participants to verify the transcribed interviews to ensure that the transcript accurately records their responses to the questions posed. Due to the unstable internet connection, the interviews via the internet were sometimes compromised. I asked them to clarify so that anything they shared was not missed or misunderstood. I also asked for follow-up questions through email to clarify issues that crop up from the analysis with the participants to enrich the collected data.

Transferability means the findings of this study can be applied to a broader population or situations in future research (Shenton, 2004). This study recruited immigrant women with chronic pain in Saskatchewan, from different cultural contexts, including China, Egypt, Pakistan, Bangladesh, and Nigeria, to capture the cultural impact on their chronic pain and represent the study population. To ensure that this study can be transferred to other settings, I provided a thick description of the study, including recruitment strategies, participant characteristics, and detailed excerpts in the narratives that were created to report the study findings.

Confirmability closely corresponds to the objectivity of the outcome of the study, i.e., focuses on the actions the researcher takes to ensure that the study's findings are not being affected by the researcher's prejudice and bias (Shenton, 2004). Since I had no experience conducting interviews with participants, my supervisor, Dr. Maina, reviewed the transcripts of the first three interviews and provided insightful and detailed feedback on how I could improve the interviews, such as prompt probing questions to get deeper data. To achieve confirmability, the content of all interviews was recorded and transcribed word by word to record the participants' voices accurately. After each interview, I wrote a note to record issues arosed in these interviews and reflections for improving the quality of the following interviews. The participants also had an opportunity to express any concerns regarding the collected data and the analysis of data during the research through follow-up informal meetings.

2.8 Conclusion

In this chapter, I have noted why I conducted this study and how I applied the exploratory qualitative method and semi-structured individual interviews in the execution of my study. In the next chapter, I outline a manuscript in a journal article format, including a brief introduction, literature review, methodology, findings, discussion and conclusion.

References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Clark, R. (2017). Convenience sample. In *The Blackwell Encyclopedia of Sociology* (pp. 1–2). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781405165518.wbeosc131.pub2

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. (3rd ed.). Sage Publications.

Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, *36*(4), 253–263. https://doi.org/10.1097/DCC.0000000000000253

Green, J., & Thorogood, N. (2014). *Qualitative methods for health research*.

Hunter, D., McCallum, J., & Howes, D. (2019). Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. *Journal of Nursing and Health Care*, *4*(1), Article 1. http://dl6.globalstf.org/index.php/jnhc/article/view/1975

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.

Reid-Searl, K., & Happell, B. (2012). Supervising nursing students administering medication: A perspective from registered nurses. *Journal of Clinical Nursing*, *21*(13–14), 1998–2005. https://doi.org/10.1111/j.1365-2702.2011.03976.x

Reiter, B. (2017). *Theory and methodology of exploratory social science research*. *5*(4), 129–150. https://ttu-ir.tdl.org/handle/2346/86610

Richards, L., & Morse, J. M. (2013). *Readme first for a user's guide to qualitative methods* (3rd ed). Sage.

Rodgers, B. L., & Knafl, K. A. (1993). *Concept development in nursing: Foundations, techniques, and applications*. W.B. Saunders Company.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Stebbins, R. A. (2001). *Exploratory Research in the Social Sciences*. SAGE.

Weller, S. C., Vickers, B., Bernard, H. R., Blackburn, A. M., Borgatti, S., Gravlee, C. C., & Johnson, J. C. (2018). Open-ended interview questions and saturation. *PLOS ONE*, *13*(6), e0198606. https://doi.org/10.1371/journal.pone.0198606

Wills, E. M., & McEwen, M. (2019). *Theoretical basis for nursing* (5th edition, international edition). Wolters Kluwer.

Yeager, K. (2021, August 26). *LibGuides: Statistical & qualitative data analysis software: About NVivo*. https://libguides.library.kent.edu/statconsulting/NVivo

Chapter 3: Manuscript

Title of Paper: Factors Influencing the Perception and Management of Chronic Pain for Immigrant Women in Saskatchewan: An Exploratory Qualitative Study

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Journal: Canadian Journal of Pain

Abstract：

Introduction: Chronic pain is a complex concept affected by biological, physiological, psychological, environmental, and social factors. Research has found that immigrant women are vulnerable because they are likely to experience higher pain intensity than non-immigrants and immigrant men due to gender roles. However, there is little qualitative research about how immigrant women perceive and manage chronic pain and the factors that aggravate their pain. An understanding of how immigrant women experience and manage their chronic pain is, therefore, important for improving healthcare outcomes for this patient group.

Purpose: The study aims to explore immigrant women's experiences with chronic pain in Saskatchewan, Canada. The following objectives guiding the study are to; 1) describe the perception of chronic pain among immigrant women in Saskatchewan’s context, 2) identify factors that aggravate the immigrant women’s experiences of chronic pain, and 3) explore the overall management of chronic pain among immigrant women in Saskatchewan’s context.

Methodology: Exploratory qualitative study design was used to explore the factors influencing the perception and management of chronic pain among immigrant women in Saskatoon, Saskatchewan, Canada. Semi-structured individual interviews were conducted with 15 participants recruited using a purposive convenience sampling strategy. The research followed the six phases of thematic analysis.

Findings: A total of 15 participants from China, Egypt, Pakistan, Bangladesh and Nigeria were interviewed in this study. All but one experienced chronic pain before immigrating to Canada. More than half of the participants reported chronic pain in multiple areas of their bodies. The study yielded four major themes: 1) culturally-shaped perception of chronic pain, 2) immigration-related experiences of chronic pain, 3) strategies for managing chronic pain, and 4) healthcare utilization for chronic pain. Participants report different perceptions of chronic pain, regarding how they verbalize and understand chronic pain, which are affected by culture. Most of our participants reported worsened chronic pain after immigrating to Canada and post-immigration experiences, including changes in socioeconomic status and the weather conditions, were responsible for aggravating the pain. To control their pain, participants used self-management, including adjusting lifestyles (behavioural, dietary, and psychological changes) and seeking help from social support. When self-management failed, they sought healthcare services both in their home countries and in Canada.

Discussion: Immigrant perceptions and perspectives of chronic pain, informed by sociocultural factors, can impact how participants make sense of their chronic pain and further impact their choice of interventions to address chronic pain. Participants experience economic stress, associated with working in physically exhausting jobs and change in weather conditions, which increase chronic pain sensitivity. Hence, it undermined their ability to cope with chronic pain. Self-management strategies were the first option to control minor pain because they are less expensive. When these strategies failed, they sought medical care to manage the pain. However, the multiple barriers they experienced such as language and cultural differences between providers and the participants, made their care experience ineffective, leading to disappointment, frustration, helplessness, and mistrust of the Canadian healthcare system.

Conclusion: Our study findings indicate how immigrant women from diverse cultural groups perceive and manage chronic pain differently. They experienced underutilization of healthcare care in Canada as immigrants. Two challenges arose during the virtual data collection: the impact of COVID-19 on the conduction of qualitative research and the virtual recruitment challenge of participant diversification. The study findings provide some implications for policymakers, researchers, immigrant-serving organizations and healthcare providers about the complexity of chronic pain recognition and management among immigrant women.

Keywords:

Immigrant women, perception of chronic pain, aggravating factors, management of chronic pain

3.1 Introduction

Canada has a large and growing number of immigrants, making up almost 22% of the total population, with women comprising half the number of these immigrants (Statista, 2021). Studies show that immigrant women are more likely to suffer from chronic pain compared to non-immigrant women due to the challenges and stress when settling down in the host country that may negatively impact chronic pain (Edwards et al., 2016). How immigrant women perceive chronic pain varies and is dependent on several factors. These include variables such as culture, immigration experiences, and employment (Brady et al., 2017). Each of these factors is well-known to impact the perception of pain among immigrant women.

3.1.1 Factors Affecting Chronic Pain among Immigrant Women

Current literature studies chronic pain from a biological perspective, with pain viewed as a dynamic interaction affected by the brain, genetics, nervous system, and, immune system (Cherry, 2021; Cho et al., 2021); however, exploring the impact of culture on pain in immigrant women is a relatively new field (Mustafa et al., 2020). Culture is a complex, dynamic, historically and socially constructed practice that shapes groups' experience and the social positioning and has far-reaching consequences for people (Vandenberg, 2010). Culture has a substantial effect on the health of immigrants (Brady et al., 2017; Mustafa et al., 2020), as it shapes health beliefs, self-management, and healthcare behaviour (Brady et al., 2017). For instance, patients from America view their pain from a psychological perspective while patients from Singapore consider their pain more from a biomedical perspective than Americans do (Thong et al., 2017). Thus a cultural understanding of the pain is a critical consideration for care providers while assessing patients presenting with chronic pain.

The severity of chronic pain can be impacted by immigration experiences. Immigrant women have a higher risk of experiencing pain during the post-migration settlement than the native-born population (Edwards et al., 2016). A cross-sectional survey carried out in Sweden illustrated that the prevalence of chronic pain was associated with female (with an odds ratio of 1.91) and immigrant status (with an odds ratio of 1.83; Bergman et al., 2001). This is consistent with findings in similar studies among immigrants in Denmark and Italy that immigrant women experience a higher level of chronic pain (Michaëlis et al., 2015; Re et al., 2017). Thus, immigrant women represent a vulnerable group.

The gender roles performed by immigrant women can determine their experiences and intensity of chronic pain. In many societies, women perform unpaid labour (domestic work), which exposes them to heavy stress (Arman et al., 2020). A study by Kim et al., (2013) showed that 47.6% of female immigrants undertook unpaid labour, compared to 14.4% of men. In the Indian subculture, women are expected to sacrifice their careers and ambitions to attend to their families (Batra & Reio, 2016). Young girls are socialized to perform domestic work, such as cleaning, cooking, and raising children (Haq, 2013). Immigrant women from such a culture are expected to perform their traditional family roles while coping with challenges in the new environment (Mustafa et al., 2020).

3.1.2 Chronic Pain Management Practices of Immigrant Women

Chronic pain often becomes the focus of one's life because of the overall poor quality of life caused by chronic pain, such as long-term disability, poor performance, disruptive experiences with life, family, society etc. Therefore, individuals suffering from it devise varieties of self-care strategies to manage chronic pain. Keeping their daily activities to a minimum to offer temporary relief is one of the most common strategies for immigrant women, such as limiting physical activities, having more rest, taking pain medicines, keeping warm, and using assistive devices (Michaëlis et al., 2015). Some working immigrant women take sick leave to ease pain symptoms and take preoccupations strategies such as listening to music, walking, shopping, and massage (Penner, 2013). Talking with family and friends about their pain and keeping positive thoughts, and prayers are other strategies to cope with chronic pain.

Although immigrant women seemed to have a positive attitude toward healthcare, some underutilize the healthcare system (Michaëlis et al., 2015). Immigrants are almost 2.5 times more likely to report difficulty accessing or navigating the healthcare system during their initial years in Canada than the non-immigrant population (Salami et al., 2020). Compared with the native-born population, immigrants are less likely to have a regular physician and seek general health, mental health, and preventive care services (Pandey et al., 2021).

Language has been considered by both healthcare professionals and immigrants as the main barrier to obtaining healthcare services (Salami et al., 2020). Because most health promotion materials are written in English, they are likely not valuable for immigrants with limited language proficiency (Pandey et al., 2021). Although medical translation and interpretation services are increasingly recommended in the Canadian healthcare system and can mediate communication between a provider and a client, they can interfere with establishing confidentiality and the therapeutic relationship between healthcare providers and patients (Kalich et al., 2016).

Although the Canadian government is committed to building a medical system without financial barriers at the point of access for all patients, there is increasing evidence that socioeconomic status plays a key role in the ability to obtain healthcare services (McMaughan et al., 2020). An audit study focusing on the impact of socioeconomic status on access to Canadian primary care found that the percentage of calls resulting in an appointment being offered is 14.3% for callers of low socioeconomic status and 22.6% for those of high socioeconomic status (Olah et al., 2013). In addition, healthcare professionals provide significantly less information to patients from lower social classes, and there are fewer social sentiments and discourse about awareness and understanding of these patients due to physicians' misunderstanding of these patients' demand for information, and their ability to participate in the care process (McMaughan et al., 2020). These negative perceptions affect provider-patient communication and relationships (McMaughan et al., 2020).

The low-income rate of recent immigrants is more than twice that of non-immigrants in 2016 (Colour of Poverty, 2019). Since Canadian public funding does not cover outpatient prescriptions, immigrants who are unemployed, or have unstable employment are under overwhelming financial pressure to pay for prescription medications, further creating health inequities (Chowdhury & Chowdhury, 2018).

Health disparities related to culture are associated with the degree of healthcare utilization and the quality of care services (Salami et al., 2019). For instance, Tackett et al., (2018) conducted a literature review about barriers to healthcare among Muslim women in the United States. The authors found that Muslim women feel stressed to discuss women's health-related sensitive topics with male health professionals. Cultural differences between healthcare professionals and patients can have a detrimental effect on access to care and health outcomes for immigrants (Salami et al., 2019). The cultural differences make it difficult for healthcare professionals to empower clients to make informed decisions in clinic interactions if unmitigated (Salami et al., 2019).

The ability of healthcare professionals to assess and treat pain with clients who are not proficient in English or from a different culture is vital for immigrant women to manage chronic pain (Pandey et al., 2021). To diagnose chronic pain appropriately, healthcare providers require to gain deeper awareness and understanding of the socio-cultural determinants of perception of pain and expectation of pain management. Lack of knowledge and understanding of these factors can lead to dissatisfaction with care, misdiagnosis, or underdiagnosis of chronic pain (Kalich et al., 2016; Thompson et al., 2013). This could lead to mistrust and hamper the development of a trusting relationship with the health care prover (Kristiansen et al., 2014; Zander et al., 2013).

Experiences of racism, discrimination and prejudice within the health care system also have an impact on immigrant women's access to health care for chronic pain. Racism including institutionalized, personally mediated, and internalized racism is a significant contributor to lowered provider-patient trust, lowered compliance with care programs, and lowered quality of care outcomes (Ben et al., 2017). In Toronto's health care system, racialized health care clients viewed perceived racism as a key role in the challenges facing the health care system, leading to unequal access and under-treatment of pain; however, health care providers held the opposite view, partly because they think they provide exactly the same and fair services to every client (Mahabir et al., 2021). Yet, scholars emphasized that it is not possible for racialized groups to benefit equally from exactly the same care when taking accounts into cultural, racialized, linguistic, or other factors (Kalich et al., 2016).

Documented experiences of perceived discrimination in the healthcare system are poor quality, insensitive, unfriendly, or ignorant care provided by healthcare professionals (Pollock et al., 2012). For example, a scoping review of barriers to cervical cancer screening faced by immigrant women in Canada found that some healthcare providers are reluctant to accept immigrant women as patients because of low educational levels, lack of knowledge, language barriers, and cultural barriers (Ferdous et al., 2018). Discrimination experiences in health settings can discourage individuals from seeking or following healthcare services, inhibit meaningful relationships between patients and healthcare providers, and lead to feelings of isolation and hopelessness among immigrants (Pollock et al., 2012).

Immigrant women are vulnerable when accessing health care for chronic pain due to diverse barriers and challenges (Taloyan & Löfvander, 2014). To provide the most effective and comprehensive healthcare for immigrant women with chronic pain, healthcare providers must be aware of the complex factors affecting chronic pain experiences and management. Although previous quantitative studies suggest that chronic pain is a public health concern for all Canadians, there is little qualitative research about how Canadian immigrant women perceive and manage chronic pain, what factors affect their chronic pain experiences, and how they access healthcare services for chronic pain. There is, therefore, a need to undertake qualitative research on factors influencing the perceptions and management of chronic pain for immigrant women to include the voices of this vulnerable group.

The study aims to explore immigrant women's experiences living with chronic pain in Saskatchewan, Canada. The following objectives guiding the study are to: 1) describe the perception of chronic pain among immigrant women in Saskatchewan’s context, 2) identify factors that aggravate immigrant women’s experiences of chronic pain, and 3) explore the overall management of chronic pain among immigrant women in Saskatchewan’s context. The research questions for this study are: 1) how do immigrant women in Saskatchewan’s context perceive chronic pain? 2) what factors aggravate the experiences of immigrant women living with chronic pain? and 3) how do immigrant women in Saskatchewan’s context manage chronic pain?

3.1.3 Theoretical Framework for the Study

The theory of Health Service Utilization (HSU) proposed by Yang and Hwang (2016), has been utilized to guide this study. Yang and Hwang (2016) proposed a theoretical framework that included four categories of immigration-specific factors such as the need for healthcare, resources, predisposing factors, and contextual factors, which explained disparities in immigrant HSU. The need for healthcare is determined by the health conditions of immigrants, which mostly impact immigrant HSU (Yang & Hwang, 2016). Gender, ethnicity/culture, and immigration time are expected to affect the likelihood of health care (Chan et al., 2013; Yang & Hwang, 2016). Immigrants face special health needs due to the social-cultural impact in their native country (Yang & Hwang, 2016). For example, Afghanistan immigrants report health problems such as anxiety, depression, and post-traumatic stress disorder (PTSD) because of prolonged political violence by their government; thus they need a higher level of mental health services after immigration (Penner, 2013). In this study, the state of chronic pain among immigrant women and their healthcare services utilization for chronic pain were explored.

Resources refer to factors that enable individuals to access the healthcare system, which are divided into three categories: financial resources, social resources, and access to health services. Limited financial resources, including lower income, and inability to obtain private commercial medical insurance, are more typical among immigrants than locals since immigrants are reported to be in low-wage and unskilled work and are therefore in poor financial conditions (Yang & Hwang, 2016). Limited financial resources impede the ability to afford health insurance and medical expenses (Yang & Hwang, 2016). Social resources mean social relationships through families, friends, and relatives that can help increase their access to healthcare services (Yang & Hwang, 2016). Immigrants have more flexible access to healthcare services because they can choose between home and host country’s health care based on the price and quality of healthcare (Yang & Hwang, 2016). To explore the resource factors of HSU in this study, participants were invited to share their financial status and any factors that assist or prevent them from managing their chronic pain.

Immigrant-specific predisposing factors include acculturation and immigrant ethnic culture (Yang & Hwang, 2016). Acculturation can be measured in English proficiency and length of residence of the host. A lower degree of acculturation to the host culture may reduce the rate of HSU as low English proficiency is a major barrier to their utilization of host country healthcare. The ethnic culture of immigrants has an impact on HSU since they may have significantly different beliefs on disease than the host society, as well as varied expectations and ways of disease treatment (Yang & Hwang, 2016). Participants in this study were asked how immigration-related experiences impact their chronic pain perception and management. Immigrant-specific contextual factors, such as context of emigration, experience of HSU in the homeland, and context of reception by the host country play an important role in immigrant HSU. In this section, participants were invited to share their experiences of healthcare utilization in their homeland and the difference in healthcare experiences in their home countries and in Canada.

This theory proposes a modified theoretical framework that retains the valuable components of previous health behavioural models but considers factors especially pertinent to immigrants to explain disparities in immigrant health service utilization (Yang & Hwang, 2016). In this study, we used this theory as a framework to explore the chronic pain perceptions of immigrant women in Saskatchewan and how they manage them, including healthcare service utilization.

3.2 Methodology

A qualitative exploratory design was used to explore the lived experiences of chronic pain among immigrant women in Saskatchewan, Canada (Stebbins, 2001). The qualitative design is the best way when the purpose of a study is to learn from the participants in a setting the way they experience it, how they interpret what they experience, and how they understand the meaning that is socially constructed by their interaction with the world (Creswell, 2009; Richards & Morse, 2013). A qualitative perspective is appropriate because this study focuses on immigrant women experiencing chronic pain and how their interaction with the world impacts their perceptions and management of chronic pain. Exploratory research offers a qualitative approach rooted in dialectics, which provides an alternative and fruitful way to conduct social science by reflecting on internal contradictions and understanding progress as the gradual development of oppositional forces rather than a linear process (Reiter, 2017).

Ethics approval from the University of Saskatchewan Behavioral Research Ethics Board was obtained on April 14, 2022. Immigrant women were recruited by a non-probabilistic, purposive convenience sampling strategy through the help of non-profit organizations tailored for culturally diverse immigrants in Saskatchewan (Hunter et al., 2019). A phone call or an invitation email about the study was sent to these organizations that emailed their immigrant clients to inform them of the study. Interested participants who reached out through email or phone, were asked inclusion questions to make sure they were eligible for this study and verbal consent was obtained once they are thoroughly informed of the study. Individual interviews were then scheduled with eligible participants.

Inclusion criteria included participants who: (1) were immigrants; (2) were female; (3) had chronic pain (self-report having pain lasting three months or longer); (4) had sought treatment for chronic pain at least once in Canada; (5) lived in Saskatchewan; (6) could communicate in English; and (7) were 18 years old or older. Exclusion criteria are non-immigrant women whose pain was associated with cancer and who were not able to give consent.

In-depth semi-structured individual interviews were conducted virtually through phone or Zoom. The interviews were carried out from April to June 2022 after receiving ethics approval from the University of Saskatchewan Behavioral Research Ethics Board and lasted between 43 to 81 minutes. The interviews were audio-recorded with the approval of the participants. All interviews were transcribed for accurate and verbatim transcription. Notes related to immediate impressions were taken during each interview and used as contextual information in subsequent analysis.

Thematic analysis, which entails identifying, analyzing, and reporting themes within data, was applied to manage the data (Braun & Clarke, 2006). Six phases of thematic analysis were used in this study: becoming familiar with the transcribed interviews; generating initial codes, including the impact of chronic pain, the impact of immigration on chronic pain, factors that shape chronic pain, strategies for managing chronic pain, the experience of access to healthcare for chronic pain in Canada and the home country, and challenges experienced accessing healthcare services for chronic pain in Canada. Themes were therefore searched, reviewed, and defined: a) perception of chronic pain; b) immigration-related experiences of chronic pain; and c) overall management of chronic pain.

Credibility was applied by adopting member checking, i.e., participants were invited to verify the transcribed interviews to ensure that the transcript accurately records their responses to the questions posed. Due to the unstable internet connection, the interviews via the internet were sometimes compromised. I asked them to clarify so that anything they shared was not missed or misunderstood. I also maintained continued engagement by asking for informal follow-up questions to clarify issues that crop up from the analysis with the participants. Transferability was enhanced by the purposeful sampling method used in this study and by recruiting immigrant women with chronic pain in Saskatchewan, from different cultural contexts, including China, Egypt, Pakistan, Bangladesh, and Nigeria, to capture diverse voices and represent the study population. To achieve confirmability, the content of all interviews was recorded and transcribed word by word to record the participants' voices accurately. The participants also have an opportunity to express any concerns regarding the collected data and the analysis of data during the research through follow-up informal meetings. Since I had no experience conducting interviews with participants, my supervisor, Dr. Maina, reviewed the transcripts of the first three interviews and provided insightful and detailed feedback on how I could improve the interviews, such as prompt probing questions to get deeper data. After each interview, I wrote a note to record issues arosed in these interviews and reflections for improving the quality of the following interviews.

3.3 Findings

A total of 15 participants from diverse nationalities and ethnicities were interviewed in this study. All participants resided in Saskatoon, Saskatchewan, Canada. Table 1 below summarises the participants' demographic and chronic pain characteristics. The average age of participants in this study is 37 years old, and the average length of stay in Canada is three years. More than half of the participants reported chronic pain in multiple areas of their bodies. All but one experienced chronic pain before immigrating to Canada. The frequency of chronic pain per month varied from every day to once a month. Still, some participants reported erratic pain episodes associated with different factors, such as exercise, emotional status, weather or eating habits.

Table 1: Demographic and Chronic Pain Characteristics of Participants

Demographic Attribute	**Categories**	**No.**
Age	30-45	13
	46-60	2
Age of moving to Canada	20-35	4
	36-50	11
Duration of living in Canada	Less than 5 years	12
	5 years or above	3
Country of origin	China	10
	Nigeria	2
	Bangladesh	1
	Egypt	1
	Pakistan	1
Occupation	Employed	7
	Unemployed	8
Martial status	Married	15
Types of chronic pain	Chronic primary pain	10
	Chronic neuropathic pain	4
	Chronic postsurgical or posttraumatic pain	3
Location of Chronic Pain	Head	3
	Joint	6
	Chest	1
	Abdomen	4
	Back	5
	Pelvis	2
Duration of Chronic Pain	1 to 10 years	4
	Over 10 years	11

In this paper, I describe three themes that answer the research questions:1) How do immigrant women in Saskatchewan's context perceive chronic pain? 2) What factors aggravate the experiences of immigrant women living with chronic pain? and 3) How do immigrant women in Saskatchewan's context manage chronic pain? The themes include 1) culturally-shaped perception of chronic pain, 2) immigration-related experiences of chronic pain, 3) strategies for managing chronic pain, and 4) healthcare utilization for chronic pain.

3.3.1 Culturally-shaped Perceptions of Chronic Pain

Participants' perceptions of chronic pain regarding verbalization, beliefs, and expectancies of chronic pain varied considerably.

3.3.1.1 Verbalization of Chronic Pain. All participants considered chronic pain a physical disorder, not a psychological or mental health condition. Cultural identity informed the verbalization of chronic pain. For example, Chinese participants were open to sharing their chronic pain and management experiences with their families, friends, or other people because they believed that chronic pain was a common physiological disorder and that sharing their sufferings would help make them feel relaxed, helpful, and supportive. In contrast, a participant from Bangladesh did not like sharing her suffering with others to avoid upsetting or burdening them emotionally because of her chronic pain. Participants from Nigeria also tended to worry about chronic pain as per the culture. They believed that people incapable of enduring pain or publicly expressing or verbalizing it tend to be judged as weak, shameful, and abnormal. Also, Nigerian women were socialized to prioritize the needs of their families at the expense of themselves and their health to maintain their gender roles. In keeping with their cultural norms, they often chose to hide their pain even when experiencing it to carry out their family responsibilities. As Monica noted:

> *It's more like a mother cannot be sick because she must take care of her kids. But it's not true. But back home, it's believed that you are like a superhero who cannot fall sick. So, when they're not feeling okay, people try to hide it, to like take care of the home, take care of your man, take care of children and try to keep going on (Monica).*

This cultural belief stayed with them even after they immigrated to Canada. They still needed to take on household duties, even if they were in pain. Because they've lived in this culture for a while, it has become deeply rooted in them and their family members. This cultural belief about pain, therefore, became a barrier to effectively managing their pain.

3.3.1.2 Understanding of Chronic Pain. How participants understood chronic pain and its etiology determined their next course of action. For instance, if they considered chronic pain as a disorder or a symptom of an underlying medical condition, they are likely to take measures to address it. However, if it is seen as a normal part of life processes, the participants tended to ignore it, resulting in severe pain, for example:

> *Usually, back where we come from, we endure pain just like something we embrace as a usual way of life. We are not seeing it as a health challenge. We see it as a normal thing that you're supposed to go through. But Canadians care and want to get on top of their pain because they think there's something wrong with their bodies suffering from pain (Megan).*

Culture and religion dictated how some participants described and understood the pain and how it affected their overall well-being. For instance, Chinese participants viewed a healthy body as a harmonious whole, and chronic pain could be explained as the imbalance of hot and cold. In contrast, Pakistani participants believed their suffering was associated with God's will.

This perception impacted health-seeking behaviour and interaction with healthcare providers. As a participant from China noted:

> *I have a stomachache. Maybe it is because I have too much stomach fire. I don't know what to say in English. I mean, this is a unique Chinese traditional medicine word. Fire is not the actual fire; it shows the imbalance of the body, the imbalance of hot and cold. If I have pelvic pain, maybe there's too much "cold" in my body. But when I say these words to my family physician and my friends here, they don't understand. If they have a disease like if they have a stomachvache, they think there are problems with their stomach (Emma).*

Expression and understanding of chronic pain that varied among immigrant women from different cultures tended to inform their expectations in the management strategies for chronic pain. This could provide a challenge to healthcare providers due to a lack of knowledge about the cultural aspects that impact chronic pain.

3.3.2 Immigration-related Experiences of Chronic Pain

It was evident that the intensity of chronic pain increased after immigration. Most participants believed that post-immigration stress was responsible for aggravating the pain. This stress arose primarily from their change in socioeconomic status and the weather conditions.

3.3.2.1 Change in Socioeconomic Status. Before migrating, most participants could afford to hire domestic help or receive help from extended family members to perform domestic chores. In Canada, since they could not afford to hire somebody to perform these roles, they often needed to perform these roles unaided, in addition to engaging in other activities such as gainful employment. Having to complete domestic chores took time away from being able to manage chronic pain, thus exacerbating their pain with poor quality of life.

> *In China, my son's grandma and grandpa helped me take care of my son, so I had more time to do what I wanted. But in Canada, no one could help me......I must take care of two babies, so I don't have any personal time to do what I want (Joyce, back and shoulder pain).*

In addition to unpaid housework, participants worked outside the home to provide for the family. However, many participants reported being underemployed and underpaid based on their academic credentials and prior work experiences. Therefore, a majority had to work in low-paying jobs, such as in grocery stores, which could be physically demanding and put a heavy burden on their unusual lifestyle and could lead to adjustment problems with subsequent and worsening of their chronic pain. For example, Wendy worked as an administrative clerk before moving to Canada from China, a less labour-intensive job. However, due to her limited English proficiency, she now works in a Chinese supermarket and carries heavy goods, which causes her elbow pain:

> *I work in a supermarket, so I need to lift heavy boxes daily. I often feel my elbow pain after work (Wendy).*

To avoid doing manual labour and low-paying jobs and to get more satisfying employment, others enrolled in a degree program in Canada to work in less physically demanding jobs. However, the demand for schooling and assignments consumed their time and energy, hindering their ability to cope with chronic pain as Lara with head pain reported:

> *I wasn't interested in a survival job, like janitor jobs. I must get a license here...... I must go through exams...... so sometimes I can't have a good rest, which increases my pain (Lara).*

3.3.2.2 Change in Weather Conditions. Along with poor socioeconomic status, the change in weather conditions was perceived to increase their pain intensity. Most participants grew up in a warm and humid country. Therefore, the change in climate from a warm to a cold, dry, and windy setting such as Saskatchewan, which has long and cold winters, aggravated the pain and hindered effective coping strategies:

> *I come from Shenzhen, the weather is hot there for a whole year, but it's cold here. I feel my knees are colder in winter than the rest of my body, but I haven't felt that in China. I have bad knee pain, and my knees have sounds (Jessica).*

During the winter months, participants preferred to stay indoors, which hampered their ability to manage pain by engaging in outdoor activities. Sophia, a participant living with severe joint and back pain, believed that vitamin D from sunshine helped her manage chronic pain. During the winter months, she could not go outside and enjoy the sunshine and reported worsening her joint pains. Participants from warmer countries tended to socialize outdoors with friends and relatives, which was good for their well-being and chronic pain management. Although there were many outdoor activities during the winter month in Canada, immigrants did not embrace them; they were forced to spend a long time indoors, possibly owing to harsh winter conditions, transportation challenges, and lack of knowledge of outdoor activities in Winter. Subsequently, their mental well-being was at risk of self-reported insomnia and seasonal depression. Their mental health status tended to amplify their chronic pain. For Laura, the dry weather during winter also worsened participants' nasal pains.

> *Breathing dry air during winter hurts a lot. Also, in windy weather, the wind will blow up dust on the ground, which irritates my nose and makes my nose uncomfortable (Lara).*

Participants believed that post-immigration stress and different weather conditions were responsible for worsening their chronic pain. These factors were complex and difficult to address because they were beyond the capacity of participants or would take time to address them. Nevertheless, to mitigate the causes and effects of chronic pain, they used various coping strategies presented in the following theme.

3.3.3 Strategies for Managing Chronic Pain

Participants used diverse strategies to manage chronic pain. For most participants, self-management practices were their first choice when they have minor pain. These included adjusting lifestyles (behavioural, dietary, and psychological changes) and seeking help from social support. Adjusting lifestyles meant that women changed their daily behaviours and habits that may exacerbate their pain. These included making behavioural changes, dietary changes, and psychological changes.

Behavioural changes refer to the modification in activity level and activity pattern. Two-thirds of the participants tried to keep a minimum activity level with the perception of taking more rest or being less physically active may ease their chronic pain. During the pain attack, participants rested by sleeping, sitting on a soft couch, watching videos, or meditating until their pain was controlled or subsided:

> *Sometimes I sit down and do not do anything. I probably sit down on my couch and watch TV......Once I feel that pain, I try to slow things down, that's the only thing that works...... Relax, and watch a movie...... If I'm sick, I will find time to rest and sleep for two days nonstop, and then I'll be okay (Megan, shoulder pain).*

Other participants engaged in those activities that manage chronic pain, believing that they provided relief for chronic pain. Exercise programs used by participants in this study, including yoga, Pilates, aerobics, stretching, core and strength training and range of motion, were used as they were thought to be suitable for the functioning recovery of pain areas.

> *It (Pilates) will help change the length of the spine, and there is enough space between lumber discs, so my nerves would not be pressed, so the pain disappears......When you practice Pilates, you have more core strength in the muscle of the abdomen. This core strength will protect your spine. The pain disappears if you get good support for your spine (Sophia).*

Changing activity patterns was another way of behavioural changes participants engaged in managing chronic pain. Activity patterns that aggravated pain, such as prolonged sitting and standing, were disrupted by walking or pacing. Others learned to maintain proper sleeping postures helped them manage their pain, especially during sleep. In addition to behavioural changes, dietary changes were another commonly reported coping strategy for chronic pain related to digestive issues. This meant avoiding food that she had learned aggravated her pain.

> *I can't seek spicy food, so more reason I don't eat outside. I try to avoid fried things. I don't take caffeine. I didn't...... What do we call it? I'm trying to remember, like any caffeinated drink anyway. I don't take coffee. I don't take cola. I don't take anything that can hurt my digestion (Monica, epigastric pain).*

Some participants even without epigastric pain also believed healthy eating helped manage chronic pain. Such believed that a robust immune system due to healthy eating improved overall health, alleviating pain. Psychological adjustments were deemed to be effective for easing chronic pain in participants. Psychological changes meant adjustments to the attitude, mood status, and way of dealing with stress. To deal with pain, participants kept a positive outlook and stayed relaxed, avoiding stressful factors, and seeking work-life balance:

> *I'm still studying and trying to balance work, home, and school study, so I just tried to take things easy because I discovered that when I'm stressed, it gets exacerbated (Monica, epigastric pain).*

Participants utilized support from family members, relatives, and friends back home and continued to receive support from family members who immigrated to Canada with them by obtaining assistance from them in activities that aggravated pain, such as household chores. This help came primarily from close relatives, allowing them to rest and sleep to ease the pain.

3.3.4 Healthcare Services Utilization in Home Countries and Canada

When self-management practices failed to relieve pain, participants utilized healthcare services to manage chronic pain. Their experiences in their home countries significantly shaped how they utilized these services in Canada. Participants from China used Chinese traditional medicine (CTM) for chronic pain, including herbs, massage, acupuncture, traction, and balance needle, before coming to Canada and continued to seek the same service. They believed CTM was superior to western medicines to address the root cause of pain without experiencing any side effects. A good number of them were satisfied with the therapeutic effect of CTM. As one woman said:

> *I tried so many therapies in China, such as herbs, acupuncture, electrotherapy, and massage...... I remember I had taken herbs for over half a year, and my pain disappeared...... I had acupuncture and traction treatment in a small clinic and tried balance needles. I felt better after using balance needles (Jane, back pain).*

Participants from other countries also took cultural-alternative medications in their home counties and continued to use them in Canada. Specifically, a participant from Egypt made hot drinks with mint leaves, cinnamon and ginger to reduce pain. A participant from Nigeria noted an ointment that was effective for her chronic pain. A participant from Pakistan explained how she used traditional medicines as an alternative medication for her pelvic pain in her homeland and Canada:

> *Home remedies are like hot beverages......When I have pain, I don't drink cold water because it increases my pain. I take hot remedies for my pain, like soups, ginger tea and green tea. They are helpful (Ummel).*

Analgesics were the main form of medical management for chronic pain among participants from countries, including Bangladesh, Egypt, Nigeria, and Pakistan, and were deemed to be adequate to relieve pain. These analgesics, like those from their home countries, were prescribed by family physicians. However, some thought the prescribed medications were ineffective because they only temporarily relieved pain.

> *Western medicines can't solve the real problem. At first, their effect was noticeable; after I ingested them, my pain disappeared, but if I didn't ingest them, the pain came again. I finally found that these medicines are painkillers. They can't fundamentally solve the problem (Jane, back pain).*

When the family physicians could not solve the root cause of chronic pain, they referred participants to specialists. However, a long waitlist to see a specialist frustrated them, limited their access to healthcare and increased their severity of pain. Because of the long wait time, the health care system was viewed as unresponsive to meeting the immigrant women's needs when required compared to the one in their homeland which was simple, convenient, and accessible.

Physiotherapists and chiropractors were the most sought health professionals by participants with joint and back pain. Participants experienced mixed results when they received care from them. Jane, a participant with back pain, sought therapy from a chiropractor and a physiotherapist, with mixed experiences from the services received:

> *After seeing a chiropractor, I did an X-ray and got a massage....... But I felt more pain after I did that. Before the treatment, my back was swollen, but after that, my back was swollen and painful. I came back to my family doctor. She suggested a physical therapist. The physical therapist gave me electrical stimulation and traction. He taught me some movements and how to use my back and spine correctly.......My pain was controlled a little bit (Jane).*

Language barriers and cultural gaps between healthcare providers and participants prevented participants from fully utilizing the healthcare system to manage their chronic pain. The participants did not have the technical knowledge to describe their pain or understand the providers' communication or instruction. Cultural differences between the providers and the participants impacted their perspectives on pain, preferred treatments, and expected outcomes. As a result, there was poor communication, sometimes even misunderstanding, resulting in suboptimal care to manage pain.

> *Maybe there's a cultural difference between my family doctor and me. When I shared my pain and treatment experiences with her, I said herbs could improve me, but she didn't know much about herbs. And she referred me to some specialists, but I don't know who they are or what they will do for my pain (Lydia, back pain).*

Generally, immigrant women's chronic pain worsened after relocating to Canada. Although they employed diverse strategies to manage chronic pain, none of them were viewed as satisfying in alleviating the pain and suffering. Immigrant women continued experimenting with diverse strategies to identify one that might suit them.

3.4 Discussion

The purpose of this study was to explore immigrant women's experiences living with chronic pain in Saskatchewan, Canada. Interviews with immigrant women revealed that most of them immigrated to Canada with chronic pain, a condition that is not screened for medical admissibility. Participants had accessed healthcare in their home country for their chronic pain, including taking analgesics and culture-alternative medications. After moving to Canada, they continued to seek professional care for their pain, but the outcomes were suboptimal.

As guided by the theory framework, immigrant perceptions and perspectives of chronic pain were informed by sociocultural factors (predisposing factors) that dictated immigrant health service utilization (HSU). For instance, immigrant women who attribute chronic pain to God use passive strategies (avoidance, ignoring, rest, prayer). Conversely, those who believe chronic pain is a disorder of the body tend to utilize active strategies (exercise, dietary adjustments, and seeking healthcare services), with active strategies being related to better pain self-management outcomes (Pillay et al., 2014; Sohail, 2020). Our participants considered chronic pain to be physical, not psychological or mental, which is consistent with Bragazzi et al., (2014), who reported that immigrants tend to report somatic symptoms. Therefore, they expect it to be treated physically, while healthcare professionals might adopt a psychological framework to understand their pain (Ferdous et al., 2018). This perception and expectation gap between clients and the providers can increase the risks of misunderstanding which can hinder a timely and accurate diagnosis and hence result in dissatisfaction with the care received and poor health outcomes (Ferdous et al., 2018).

In the Theory of Health Service Utilization, the need for healthcare is associated with immigrant HSU (Yang & Hwang, 2016). In this study, the need for healthcare increased as participants reported enhanced severity of chronic pain after immigration, which is affected by financial resources as noted by Yang and Hwang (2016). Economic stress was reported to be a significant contributor to worsening chronic pain and was associated with underemployment and under remuneration of immigrant women in the work (Gilbert et al., 2017). Like most immigrant women in other studies (Smith & Fernandez, 2017), participants are underemployed and underpaid compared to immigrant men and Canadian-born women. Recent immigrant women aged 25 to 54 earned an average weekly $765 in 2019, well below the $1,060 for recent immigrant men and $965 for native women (Government of Canada, 2021). Their jobs do not provide coverage for out-of-pocket healthcare services, limiting options for managing chronic pain (Panikkar et al., 2015).

Immigrant women tend to work in labour-intensive jobs with various hazards such as excessive noise, prolonged standing, and repetitive tasks. These conditions are associated with back pain, joint pain, and musculoskeletal pain (Amer, 2020; Joseph et al., 2020). Discrimination, racism, and English deficiency have been cited as the main reasons immigrant women are excluded from low- physically demanding and high-paying jobs (Amo-Agyei, 2020; Miranda & Zhu, 2013). In line with the current literature, limited English proficiency was reported as a factor of poor working conditions among participants, which can increase the risks of mental health issues, such as depression and anxiety, and can worsen chronic physical pain (Amo-Agyei, 2020; Miranda & Zhu, 2013; Vargas et al., 2020).

A significant number of participants noted the impact of weather changes on the experiences of chronic pain, which is peculiar to this study. This finding contrasts with some studies that showed a weak or no association between weather and the severity of chronic pain (Ferreira et al., 2016; Timmermans et al., 2015). Our finding could be explained by the fact that most participants grew up in a warm country and the change in climate from a warm to a cold and windy setting that their bodies were not used to was perceived to intensify or aggravate the severity of their pain. Also, the extreme weather in Saskatchewan limited access to outdoor activities that can relieve pain. Subsequently, staying indoors for a prolonged time negatively affects their mental health and increases the risk of self-reported insomnia and seasonal depression, which can manifest as chronic pain (Valentín-Cortés et al., 2020; Zander et al., 2013). Despite harsh weather conditions that can negatively worsen chronic pain, immigrant women opt to stay in Saskatchewan instead of moving to a warmer Canadian city due to its low cost of living, which may appeal to low-income families (OMG Properties, 2019).

Immigrant women use diverse strategies to manage chronic pain through self-management and seeking professional health care services. The present findings concur with previous studies indicating that self-management strategies, including adjusting lifestyles and receiving social support, were the first option to control minor chronic pain because they are less expensive without taking public transport, medication cost, physical therapy or other allied professional cost (Re et al., 2017; Taber et al., 2015). Also, self-management strategies were empowering as participants felt a sense of control and hope and improved their well-being (Nicholas & Blyth, 2016). Nevertheless, self-management strategies require time, energy, and resources, and their impact did not last (Devan et al., 2018).

Participants sought the services of healthcare providers when self-care strategies failed. Most participants were accustomed to seeking the services of healthcare providers in their home countries. Health service utilization in the homeland impacts immigrant HSU in Canada (Yang & Hwang, 2016), as many had similar expectations regarding how care is provided in Canada. They also assumed that given Canada's superior healthcare system, their pain would be better managed here. However, their needs were not met as expected because of multiple barriers including language barriers and cultural differences between healthcare providers and participants. Similar to previous research (Ferdous et al., 2018; Guruge et al., 2018; Schoueri-Mychasiw & McDonald, 2013), the ensuing poor communication put them at risk of misdiagnosis, suboptimal management of their suffering, and dissatisfaction with the care received. Ultimately, the many encounters with the health care providers to manage their pain led to disappointment, frustration, helplessness, and mistrust of the Canadian healthcare system.

3.5 Limitation

This study has a few limitations. First, the Research Ethics Board (REB) only approved online events during the COVID-19 pandemic, so participants had to be recruited virtually. This hindered the researcher’s ability to recruit participants as potential participants were only approached through email with the help of organizations serving immigrant clients.

Second, face-to-face interviews are not allowed during the pandemic, so virtual interviews through Zoom and phone calls were conducted and recording the same. Facial expressions through face-to-face interviews can confirm participants' responses, resulting in higher quality conversations and data, while with audio interviews, it was impossible to observe facial expressions. Also, with the virtual interview, unstable Internet connections impacted the quality of audio recordings.

Third, this study was limited to immigrants proficient in English. Since most immigrant women come as dependents of the principal applicant, they are not required to show English language proficiency. Some immigrant women with limited English proficiency were excluded.

Last, the student researcher is from China. With online recruitment, more Chinese participants showed interest in this study and comprised two-thirds of the participant, which limited diversity in this study.

3.6 Conclusion

Our study findings provide some implications for policymakers and healthcare providers. Fisrt, because the perception and management of chronic pain are culturally related among immigrant women, healthcare providers must consider cultural influences when providing healthcare for immigrant women to culturally respect and provide culturally-sensitive care for this patient group. Also, interpreter services need to be implemented and popularized in the healthcare system to fill in the language gap between healthcare professionals and patients. Education materials ought to be multilingual and culturally safe to increase the availability of these materials to immigrant groups. Second, policymaking needs to understand the experiences of immigrant women regarding their perceptions, expectations, and experiences with healthcare services. By involving immigrant women in the decision-making process, they can collaborate to develop supporting interventions that empower women to engage in self-care activities to manage chronic pain.

Third, the findings of this study uncover not only the daily life challenges as immigrant women experience but also the barriers immigrant patients face when accessing the Canadian healthcare system aggravate chronic pain; thus there is a need that diverse systems work together to mitigate the challenges and barriers immigrant women have. Specifically, the government, healthcare system, and organizations serving immigrant clients could collaborate to provide health education for immigrant women with chronic pain so that their health awareness could be increased. With the interactive effort of policymakers and healthcare providers, the understanding of patients living with chronic pain can be improved by being empathetic and building a culture-appropriate team approach.

Immigrant women are a vulnerable group to experience and manage chronic pain due to strains associated with gender roles and stressful post-immigration experiences. Exploring factors influencing the experiences and management of chronic pain among immigrant women using a qualitative exploratory design allowed us to identify the perceptions of immigrant women about their experiences and management of chronic pain. The findings signify chronic pain's substantial and lingering effect on immigrant women and the medical and non-medical strategies for dealing with chronic pain. The findings highlight cultural contexts that shape their experiences and management of chronic pain. By uncovering the interwoven role of post-immigration challenges, we gain a new perspective on the complexity of chronic pain and open new doors for therapeutic understanding.

References

Amer, H. S. A. (2020). Low back pain prevalence and risk factors among health workers in Saudi Arabia: A systematic review and meta-analysis. *Journal of Occupational Health, 62*(1), e12155. https://doi.org/10.1002/1348-9585.12155

Amo-Agyei, S. (2020). *The migrant pay gap: Understanding wage differences between migrants and nationals*. 192.

Arman, M., Gebhardt, A., Hök Nordberg, J., & Andermo, S. (2020). Women's lived experiences of chronic pain: Faces of gendered suffering. *Qualitative Health Research*, *30*(5), 772–782. https://doi.org/10.1177/1049732319888478

Batra, R., & Reio, T. G. (2016). Gender inequality issues in India. *Advances in Developing Human Resources*, *18*(1), 88–101. https://doi.org/10.1177/1523422316630651

Ben, J., Cormack, D., Harris, R., & Paradies, Y. (2017). Racism and health service utilisation: A systematic review and meta-analysis. *PLOS ONE*, *12*(12), e0189900. https://doi.org/10.1371/journal.pone.0189900

Bergman, S., Herrström, P., Högström, K., Petersson, I. F., Svensson, B., & Jacobsson, L. T. (2001). Chronic musculoskeletal pain, prevalence rates, and sociodemographic associations in a Swedish population study. *The Journal of Rheumatology, 28*(6), 1369–1377. https://www.jrheum.org/content/28/6/1369

Brady, B., Veljanova, I., Schabrun, S., & Chipchase, L. (2017). Integrating culturally informed approaches into the physiotherapy assessment and treatment of chronic pain: Protocol for a pilot randomised controlled trial. *BMJ Open*, *7*(5), e014449. https://doi.org/10.1136/bmjopen-2016-014449

Bragazzi, N. L., Puente, G. D., & Natta, W. M. (2014). Somatic perception, cultural differences and immigration: Results from administration of the Modified Somatic Perception Questionnaire (MSPQ) to a sample of immigrants. *Psychology Research and Behavior Management, 7*, 161–166. https://doi.org/10.2147/PRBM.S55393

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brennan, S. A., Harney, T., Queally, J. M., O'Connor McGoona, J., Gormley, I. C., & Shannon, F. J. (2012). Influence of weather variables on pain severity in end-stage osteoarthritis. *International Orthopaedics*, *36*(3), 643–646. https://doi.org/10.1007/s00264-011-1304-9

Chan, M. Y. P., Hamamura, T., & Janschewitz, K. (2013). Ethnic differences in physical pain sensitivity: Role of acculturation. *PAIN®*, *154*(1), 119–123. https://doi.org/10.1016/j.pain.2012.09.015

Cherry, K. (2021, March 15). *The role of the biological perspective in psychology*. Verywell Mind. https://www.verywellmind.com/what-is-the-biological-perspective-2794878

Cho, C., Deol, H. K., & Martin, L. J. (2021). Bridging the translational divide in pain research: Biological, psychological and social considerations. *Frontiers in Pharmacology*, *12*. https://www.frontiersin.org/articles/10.3389/fphar.2021.603186

Chowdhury, M. Z. I., & Chowdhury, M. A. (2018). Canadian health care system: Who should pay for all medically beneficial treatments? A burning issue. *International Journal of Health Services: Planning, Administration, Evaluation*, *48*(2), 289–301. https://doi.org/10.1177/0020731417738976

Clark, R. (2017). Convenience sample. In *The Blackwell Encyclopedia of Sociology* (pp. 1–2). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781405165518.wbeosc131.pub2

Colour of Poverty. (2019). *Racialized poverty in income and social assistance*. https://colourofpovertyca.files.wordpress.com/2019/03/cop-coc-fact-sheet-6-racialized-poverty-in-income-social-assistance-1.pdf

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. (3rd ed.). Sage Publications.

Devan, H., Hale, L., Hempel, D., Saipe, B., & Perry, M. A. (2018). What works and does not work in a self-management intervention for people with chronic pain? Qualitative systematic review and meta-synthesis. *Physical Therapy*, *98*(5), 381–397. https://doi.org/10.1093/ptj/pzy029

Edwards, R. R., Dworkin, R. H., Sullivan, M. D., Turk, D. C., & Wasan, A. D. (2016). The role of psychosocial processes in the development and maintenance of chronic pain. *The Journal of Pain*, *17*(9, Supplement), T70–T92. https://doi.org/10.1016/j.jpain.2016.01.001

Ferdous, M., Lee, S., Goopy, S., Yang, H., Rumana, N., Abedin, T., & Turin, T. C. (2018). Barriers to cervical cancer screening faced by immigrant women in Canada: A systematic scoping review. *BMC Women's Health*, *18*(1), 165. https://doi.org/10.1186/s12905-018-0654-5

Ferreira, M. L., Zhang, Y., Metcalf, B., Makovey, J., Bennell, K. L., March, L., & Hunter, D. J. (2016). The influence of weather on the risk of pain exacerbation in patients with knee osteoarthritis – A case-crossover study. *Osteoarthritis and Cartilage*, *24*(12), 2042–2047. https://doi.org/10.1016/j.joca.2016.07.016

Gilbert, L. R., Spears Brown, C., & Mistry, R. S. (2017). Latino immigrant parents' financial stress, depression, and academic involvement predicting child academic success. *Psychology in the Schools*, *54*(9), 1202–1215. https://doi.org/10.1002/pits.22067

Government of Canada, S. C. (2021, April 28). *Are the gaps in labour market outcomes between immigrants and their Canadian-born counterparts starting to close?* https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021004/article/00004-eng.htm

Guruge, S., Sidani, S., Illesinghe, V., Younes, R., Bukhari, H., Altenberg, J., Rashid, M., & Fredericks, S. (2018). Healthcare needs and health service utilization by Syrian refugee women in Toronto. *Conflict and Health*, *12*(1), 46. https://doi.org/10.1186/s13031-018-0181-x

Haq, R. (2013). Intersectionality of gender and other forms of identity. *Gender in Management*, *28*(3), 171–184. http://doi.org/10.1108/GM-01-2013-0010

Hunter, D., McCallum, J., & Howes, D. (2019). Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. *Journal of Nursing and Health Care*, *4*(1), Article 1. http://dl6.globalstf.org/index.php/jnhc/article/view/1975

Joseph, L., Standen, M., Paungmali, A., Kuisma, R., Sitilertpisan, P., & Pirunsan, U. (2020). Prevalence of musculoskeletal pain among professional drivers: A systematic review. *Journal of Occupational Health*, *62*(1), e12150. https://doi.org/10.1002/1348-9585.12150

Kalich, A., Heinemann, L., & Ghahari, S. (2016). A scoping review of immigrant experience of health care access barriers in Canada. *Journal of Immigrant and Minority Health*, *18*(3), 697–709. https://doi.org/10.1007/s10903-015-0237-6

Kim, I.-H., Carrasco, C., Muntaner, C., McKenzie, K., & Noh, S. (2013). Ethnicity and postmigration health trajectory in new immigrants to Canada. *Ame https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673277/*

Kristiansen, M., Irshad, T., Worth, A., Bhopal, R., Lawton, J., & Sheikh, A. (2014). The practice of hope: A longitudinal, multi-perspective qualitative study among South Asian Sikhs and Muslims with life-limiting illness in Scotland. *Ethnicity & Health*, *19*(1), 1–19. https://doi.org/10.1080/13557858.2013.858108

Mahabir, D. F., O'Campo, P., Lofters, A., Shankardass, K., Salmon, C., & Muntaner, C. (2021). Experiences of everyday racism in Toronto's health care system: A concept mapping study. *International Journal for Equity in Health*, *20*(1), 74. https://doi.org/10.1186/s12939-021-01410-9

McMaughan, D. J., Oloruntoba, O., & Smith, M. L. (2020). Socioeconomic status and access to healthcare: Interrelated drivers for healthy aging. *Frontiers in Public Health*, *8*, 231. https://doi.org/10.3389/fpubh.2020.00231

Michaëlis, C., Kristiansen, M., & Norredam, M. (2015). Quality of life and coping strategies among immigrant women living with pain in Denmark: A qualitative study. *BMJ Open*, *5*(7), e008075. https://doi.org/10.1136/bmjopen-2015-008075

Miranda, A., & Zhu, Y. (2013). English deficiency and the native–immigrant wage gap. *Economics Letters*, *118*(1), 38–41. https://doi.org/10.1016/j.econlet.2012.09.007

Mustafa, N., MacNeill, M., Watt-Watson, J., & Einstein, G. (2020). The lived experiences of chronic pain among immigrant Indian-Canadian women: A phenomenological analysis. *Canadian Journal of Pain*, *4*(3ja), 40–50. https://doi.org/10.1080/24740527.2020.1768835

Nicholas, M. K., & Blyth, F. M. (2016). Are self-management strategies effective in chronic pain treatment? *Pain Management*, *6*(1), 75–88. https://doi.org/10.2217/pmt.15.57

Olah, M. E., Gaisano, G., & Hwang, S. W. (2013). The effect of socioeconomic status on access to primary care: An audit study. *Canadian Medical Association Journal*, *185*(6), E263–E269. https://doi.org/10.1503/cmaj.121383

OMG Properties. (2019, October 28). 14 factors to consider while choosing the location to settle down. *OMG Properties*. https://www.omgproperties.in/14-factors-to-consider-while-choosing-the-location-to-settle-down/

Pandey, M., Maina, R. G., Amoyaw, J., Li, Y., Kamrul, R., Michaels, C. R., & Maroof, R. (2021). Impacts of English language proficiency on healthcare access, use, and outcomes among immigrants: A qualitative study. *BMC Health Services Research*, *21*(1), 741. https://doi.org/10.1186/s12913-021-06750-4

Panikkar, B., Brugge, D., Gute, D. M., & Hyatt, R. R. (2015). “They see us as machines:” The experience of recent immigrant women in the low wage informal labor sector. *PLOS ONE*, *10*(11), e0142686. https://doi.org/10.1371/journal.pone.0142686

Penner, J. (2013). *Chronic pain in Afghan immigrant women: An exploratory mixed methods study* [University of Saskatchewan]. https://harvest.usask.ca/handle/10388/ETD-2013-05-1058

Pillay, T., Zyl, H. A. van, & Blackbeard, D. (2014). Chronic pain perception and cultural experience. *Procedia - Social and Behavioral Sciences*, *113*, 151–160. https://doi.org/10.1016/j.sbspro.2014.01.022

Pollock, G., Newbold, K. B., Lafrenière, G., & Edge, S. (2012). Discrimination in the doctor's office: Immigrants and refugee experiences. *Critical Social Work*, *13*(2), Article 2. https://doi.org/10.22329/csw.v13i2.5866

Re, T. S., Bragazzi, N. L., Siri, A., Cisneros Puebla, C., Friese, S., Simões, M., Candau, J., & Khabbache, H. (2017). Effects of acculturation, coping strategies, locus of control, and self-efficacy on chronic pain: Study of Chinese immigrant women in Italy – insights from a thematic field analysis. *Journal of Pain Research*, *10*, 1383–1390. https://doi.org/10.2147/JPR.S115449

Reiter, B. (2017). *Theory and methodology of exploratory social science research*. *5*(4), 129–150. https://ttu-ir.tdl.org/handle/2346/86610

Richards, L., & Morse, J. M. (2013). *Readme first for a user's guide to qualitative methods* (3rd ed). Sage.

Salami, B., Mason, A., Salma, J., Yohani, S., Amin, M., Okeke-Ihejirika, P., & Ladha, T. (2020). Access to healthcare for immigrant children in Canada. *International Journal of Environmental Research and Public Health*, *17*(9), 3320. https://doi.org/10.3390/ijerph17093320

Salami, B., Salma, J., & Hegadoren, K. (2019). Access and utilization of mental health services for immigrants and refugees: Perspectives of immigrant service providers. *International Journal of Mental Health Nursing*, *28*(1), 152–161. https://doi.org/10.1111/inm.12512

Schoueri-Mychasiw, N., & McDonald, P. W. (2013). Factors associated with underscreening for cervical cancer among women in Canada. *Asian Pacific Journal of Cancer Prevention*, *14*(11), 6445–6450. https://doi.org/10.7314/APJCP.2013.14.11.6445

Smith, W. C., & Fernandez, F. (2017). Education, skills, and wage gaps in Canada and the United States. *International Migration*, *55*(3), 57–73. https://doi.org/10.1111/imig.12328

Sohail, M. M. (2020). Belief in God’s help during hepatitis C: A qualitative study on Muslim patients in Pakistan. *Journal of Religion and Health*, *59*(2), 928–945. https://doi.org/10.1007/s10943-018-0700-5

Statista. (2021, July 6). *Number of immigrants in Canada by time since landing 2020*. Statista. https://www.statista.com/statistics/555797/number-of-immigrants-in-canada-by-time-since-landing/

Stebbins, R. A. (2001). *Exploratory Research in the Social Sciences*. SAGE.

Taber, J. M., Leyva, B., & Persoskie, A. (2015). Why do people avoid medical care? A qualitative study using national data. *Journal of General Internal Medicine*, *30*(3), 290–297. https://doi.org/10.1007/s11606-014-3089-1

Tackett, S., Young, J. H., Putman, S., Wiener, C., Deruggiero, K., & Bayram, J. D. (2018). Barriers to healthcare among Muslim women: A narrative review of the literature. *Women’s Studies International Forum*, *69*, 190–194. https://doi.org/10.1016/j.wsif.2018.02.009

Taloyan, M., & Löfvander, M. (2014). Depression and gender differences among younger immigrant patients on sick leave due to chronic back pain: A primary care study. *Primary Health Care Research & Development*, *15*(1), 5–14. https://doi.org/10.1017/S1463423612000564

Thompson, E. B., Heley, F., Oster-Aaland, L., Stastny, S. N., & Crawford, E. C. (2013). The impact of a student-driven social marketing campaign on college student alcohol-related beliefs and behaviors. *Social Marketing Quarterly*, *19*(1), 52–64. https://doi.org/10.1177/1524500412472668

Thong, I. S. K., Tan, G., Lee, T. Y. C., & Jensen, M. P. (2017). A comparison of pain beliefs and coping strategies and their association with chronic pain adjustment between Singapore and United States. *Pain Medicine*, *18*(9), 1668–1678. https://doi.org/10.1093/pm/pnw237

Timmermans, E. J., Schaap, L. A., Herbolsheimer, F., Dennison, E. M., Maggi, S., Pedersen, N. L., Castell, M. V., Denkinger, M. D., Edwards, M. H., Limongi, F., Sánchez-Martínez, M., Siviero, P., Queipo, R., Peter, R., Pas, S. van der, & Deeg, D. J. H. (2015). The influence of weather conditions on joint pain in older people with osteoarthritis: Results from the European project on steoarthritis. *The Journal of Rheumatology*, *42*(10), 1885–1892. https://doi.org/10.3899/jrheum.141594

Valentín-Cortés, M., Benavides, Q., Bryce, R., Rabinowitz, E., Rion, R., Lopez, W. D., & Fleming, P. J. (2020). Application of the minority stress theory: Understanding the mental health of undocumented Latinx immigrants. *American Journal of Community Psychology*, *66*(3–4), 325–336. https://doi.org/10.1002/ajcp.12455

Vandenberg, H. E. R. (2010). Culture theorizing past and present: Trends and challenges. *Nursing Philosophy: An International Journal for Healthcare Professionals*, *11*(4), 238–249. https://doi.org/10.1111/j.1466-769X.2010.00453.x

Vargas, S. M., Huey Jr., S. J., & Miranda, J. (2020). A critical review of current evidence on multiple types of discrimination and mental health. *American Journal of Orthopsychiatry*, *90*, 374–390. https://doi.org/10.1037/ort0000441

Yang, P. Q., & Hwang, S. H. (2016). Explaining immigrant health service utilization: A theoretical framework. *SAGE Open*, *6*(2), 2158244016648137. https://doi.org/10.1177/2158244016648137

Zander, V., Müllersdorf, M., Christensson, K., & Eriksson, H. (2013). Struggling for sense of control: Everyday life with chronic pain for women of the Iraqi diaspora in Sweden. *Scandinavian Journal of Public Health*, *41*(8), 799–807. https://doi.org/10.1177/1403494813492033

Chapter 4: Reflection on Issues that Arose From the Study

Reflecting on how this study unfolded allowed me to consider issues that were not obvious when the proposal was written. For instance, the study was conducted during the COVID-19 pandemic, meaning that face-to-face interviews were too risky to conduct. The University of Saskatchewan Research Ethics Board (REB) therefore approved the study to be conducted virtually. This implied that all events- participant recruitment, consent process and interviews should be conducted online. Four issues arose during the data collection that are discussed in detail in this chapter. These are: 1) the impact of COVID-19 on the conduction of qualitative research, 2) the virtual recruitment challenge of participant diversification, 3) the limitation of the theoretical framework applied in this study, and 4) the role of culture in chronic pain among participants. Strength of the study, a reflection on personal growth journey recommendations for future research and a conclusion to this thesis are also discussed in this chapter.

4.1 The Impact of COVID-19 on the Conduction of Qualitative Research

The COVID-19 pandemic has made a huge difference in the way research is conducted. Due to the ongoing COVID-19 pandemic and safety precautions to maintain social and physical distancing, in-person recruiting, and interviewing participants were not permitted by the REB. Therefore, researchers must develop strategies to collect data online. To comply with REB requirements, participants in this study were recruited virtually. A phone call or an invitation email including the introduction of the study and the poster was sent to 14 organizations serving immigrant groups in Saskatchewan on 14 April 2022. Nine organizations replied to me from 14 April to 02 May 2022, committed to supporting the study and then emailed their immigrant clients to inform them of the study. 18 interested participants then reached out through email and phone and 15 immigrant women were eligible and willing to participate in this study.

This approach is beneficial because potential participants are aware of the study through immigration agencies they know well, which increases their trust in the research process. Since I do not have direct and ready access to immigrant women, using organizations serving immigrant women to attract participants allowed me easy and quick access to the target groups and increased the exposure of my study again with less effort. The problem with this is that the method is out of my control, thus creating an overrepresentation of an ethnic group and a lack of cultural diversity among participants. Specifically, there were more Chinese participants than any other ethnic group and comprised two-thirds of the participant. This made the research findings more representative of Chinese participants, thus making some ethnic groups underrepresented and impeding the ability to generalize study findings on immigrant women from various ethnic groups (Palmer & Burchard, 2018).

However, several unexpected issues were raised during the virtual recruitment. As Hamade et al. (2022) reported that virtual recruitment during COVID-19 hindered personal contact with participants as researchers are not allowed to interact directly with participants. In this study, most participants reach out via email, and communication via email is not real-time, so responding to questions from interested participants via email was ineffective compared to face-to-face explanations. It took a couple of days to negotiate the recruitment process. It, therefore, took over a month to recruit enough participants for the study, which has significantly slowed down the data collection and the progress of the thesis program.

When participants are recruited online, further effort must be given to establishing the trustworthiness and authenticity of the researcher (Boydell et al., 2014). Given that the researcher was unfamiliar with the participants, the participants were reluctant to trust the researcher the way they trusted the immigration agency when they contacted me by email, so it took time to screen participants for inclusion criteria, as trust also needed to be established between them and the researcher. It is also time-consuming to get the trust of the participants to be willing to involve in this study and gain their rich and in-depth sharing during the interview.

Prior to the pandemic, face-to-face interviews were the mainstay form of qualitative data collection, which allowed for observation of body language and facial expressions resulting in deeper and richer data and a comprehensive understanding (Creswell & Poth, 2016). However, in-person interviews were altered by virtual interviews because the REB encouraged virtual events to protect both participants and researchers. In the proposal stage, I intended to take notes based on observation data to discover insights that may not be gleaned from what the participants shared. However, audio interviews make observations not available, which may result in less rich data. To address this, I tried to gain additional information from their wording, tone, and expression. From these details, I deduce their insights or responses to interview questions to get rich data. When there were some issues or questions about the interviews that cropped up during data analysis, informal follow-up questions that have been approved by the REB were asked with some participants via email to clarify those questions.

Zoom audio conferencing for data collection presented unique challenges regarding the safety of data. Although I make every effort to safeguard the study data, the privacy of the data cannot be guaranteed, due to the technical vulnerabilities inherent to all online video conferencing platforms. The REB requires researchers to develop a detailed plan to protect the confidentiality of participants during the data collection and prevent the loss of data due to insecure data storage. To protect the confidentiality of the interview, a Zoom meeting invitation was shared with each participant via email. Only those who have received the invitation have access to this link, which prevents uninvited people other than the interviewer and the interviewer from entering the meeting, thus protecting the content of the interview from being leaked. However, Zoom requires a meeting duration to be set when a meeting is set up. The interview time was set to 1 hour, but some participants were still answering questions when the interview exceeded an hour, so the interview was forcibly terminated. Even if they came into the room again, the shared content is interrupted, so the quality of the data may be affected.

Furthermore, the internet network sometimes was unstable or even interrupted during the interview. The poor internet connectivity distorted the information recorded, which may threaten the integrity of the data collected. The interrupted network also negatively affects the sharing of the participants. Re-establishing interviews became more challenging because some participants forgot previous conversations or even became less willing to share, which may affect the richness of the data. This disruption would have impacted data analysis and fidelity of study findings. When the technology failed, the participant and I enter the meeting room again through the link I shared with them via email. I restarted the conversation and reminded the participant if she forgot the topic.

However, virtual interviews have advantages. Virtual conferencing is typically inexpensive as Zoom is free. It is also time-saving as participants can take part without having to travel, which is especially beneficial for participants in this study who are overwhelmed by overload house chores. The virtual mode avoids direct contact thus protecting the participants and me from being infected while travelling and interviewing. Indeed, participants having interviews virtually enjoy the convenience and flexibility of the online platforms (Gray et al., 2020). For the interviewees, this approach was beneficial because they preferred to discuss chronic pain, a personal and private topic, in a comfortable space of their choice. Last, participants can stop and withdraw from the interview at any time, which may be less embarrassing than ending a face-to-face interview in an unfamiliar settings (Gray et al., 2020).

The COVID-19 pandemic has made a huge difference in research and challenges to researchers. It is critical to develop strategies to manage risks and issues that may arise from the study.

4.2 Virtual Recruitment and Participant Diversification

The intention of the study was to recruit participants from diverse backgrounds by including participants from diverse cultural and ethnic backgrounds. Lack of diversity among research participants can have serious research consequences, such as hindering the transferability of the findings and decreasing equity for certain population groups in accessing the benefits of research findings (Palmer & Burchard, 2018).

In my endeavour to have a diverse pool of participants, I contacted the Saskatchewan Intercultural Association and International Women of Saskatoon, two organizations that provide services for immigrants from diverse cultures. I also searched community service centers in Saskatchewan for immigrants from different countries. Yet, based on participants that responded to this recruitment to the study, there were more Chinese participants than any other ethnic group and comprised two-thirds of the participant. I learn that a Chinese employee of one of the immigration organizations was actively promoting my research to the Chinese immigrants she knew. I presumed that she wanted to help me given that I am Chinese too. Therefore, these participants contacted me with interest in participating in the study.

Given the passive recruitment strategies that I had to employ, the passage of time did not provide more opportunities to diversify my study participants. I reluctantly accepted to recruit a disproportionate big number of Chinese participants due to the following reasons. One is the need to respond to and respect any participants who reached out to me by email expressing interest to participate in the study. It would have been unethical to exclude any interested participants who are eligible for this study merely because they were Chinese-provided, and they met the inclusion criteria. Two, as an international student, I was constrained for time, and resources to actively recruit participants through other means. Also, I did not possess the social capital required to engage members of ethnic groups outside of my own. Three, given the COVID-19 restrictions, there were no options for face-to-face recruitment strategies were not available to me.

I deduced from this experience that the ethnic alignment of participants and researcher, due to name recognition, enhanced participation from members of my ethnic group as there are fewer communication barriers due to cultural consistency (Hughson et al., 2016). This excludes other ethnic groups that are underrepresented from the potential benefits of study participation.

Besides the challenge of virtual recruitment strategies, the requirement that participants be English proficient may have inadvertently disqualified immigrant women who would have provided diverse voices about their experiences. Translators can bridge the barriers between the researcher and the participants who would not proficient in English. However, that option was not available to me given the lack of funding for this purpose.

In summary, participant diversification is limited due to the virtual recruitment strategies and the inclusion that participants be English proficient.

4.3 The Limitation of the Theoretical Framework Applied in This Study

A theoretical framework can strengthen a study by helping researchers focus on specific variables and guiding the way researchers take when collecting, understanding and analyzing data (Alyse, 2022). The theoretical framework of this study is the Theory of Health Service

Utilization (HSU) proposed by Yang and Hwang (2016). Yang and Hwang (2016) explained how four categories of immigration-specific factors, including the need for healthcare, resources, predisposing factors, and contextual factors, directly and indirectly, impact the disparities in immigrant HSU. In this study, I apply it to explore the chronic pain perceptions and management of immigrant women in Saskatchewan, including healthcare service utilization, and factors affecting their perceptions and management of chronic pain. Specifically, I asked participants questions during the interviews based on the four categories, such as how immigration to Canada impacted participants' chronic pain, what factors they think to affect their chronic pain, what their experiences of the Canadian healthcare system compared to their home country regarding the management of chronic pain, and what challenges have they experienced accessing healthcare services for chronic pain in Canada.

The Theory of Health Service Utilization proposed by Yang and Hwang (2016) is based on the context of the United States, which is different from the Canadian condition. The health status of immigrants in the United States and Canada is often explored together in the extant literature as the United States is similar to Canada in many relevant respects, such as advanced capitalist societies, welcoming immigration policies, and large immigrant population (Sanders, 2020; Siddiqi et al., 2009). However, the two countries have dramatically different policies regarding access to healthcare insurance (Siddiqi et al., 2009). The Canadian healthcare system supports universal healthcare while the US does not, so this theory based on the context of the United States emphasizes the significant impact of medical insurance on immigrant HSU (Yang & Hwang, 2016). Although Canada aims for universal coverage, some prescribed medications and physical therapy for chronic diseases are not covered by Canadian public insurance but are instead covered through employer-based private commercial insurance (Siddiqi et al., 2009). Over half of our participants are unemployed, which is in line with previous research that immigrant women have lower employment rates than immigrant men and Canadian-born women (Kim et al., 2013). Unemployment status means participants only have Canadian public insurance, so they have to face heavy economic burdens to obtain out-of-pocket health care services for chronic pain management. Therefore, some concepts, such as medical insurance, are tailed to be appropriate for this study as well as for the Canadian immigrant situation.

The theoretical framework can provide a foundation for the researcher's choice of research methods (Siddiqi et al., 2009). In the Theory of HSU, Yang and Hwang (2016) only listed the factors that affect immigration HSU but did not rank the influence of these variables. A theoretical framework can indicate which essential variables influence phenomena, as well as underline the importance of investigating how and under what conditions these key variables differ (Siddiqi et al., 2009). According to the theoretical framework chosen by this study, it may be more appropriate to use mixed methods, that is, use an exploratory qualitative study design to identify which factors affect the perceptions and management of chronic pain among Canadian immigrant women, and then use quantitative method to measure which factors are more important to immigrant women living with chronic pain.

The theoretical framework should guide all phases of the study, including the explanation of how the chosen theoretical framework supports the analysis of the research questions and the interpretation of the study findings in the discussion section of the paper (Siddiqi et al., 2009). It is a paper-based thesis, rather than a traditional thesis, meaning that Chapter 3 is the manuscript in a journal article format, with limited in word counts and space. I used the theoretical framework to guide the discussion of the main findings of the study in the discussion section in Chapter 3, but it is impossible to include every variable impacting immigrant HSU that is stated in the theoretical framework due to the space restriction.

The Theory of HSU has been used throughout the study. Targeted use of content/variables in the theoretical framework and selection of appropriate research methods can help to use the theoretical framework to guide research more effectively

4.4 The Role of Culture in Chronic Pain among Participants

As discussed in Chapter 1 of this paper, exploring the impact of culture on pain in immigrant women is a relatively new and evolving field (Mustafa et al., 2020). In this study, participants were asked about the influence of culture on their experience and management of chronic pain. Further explanations were given to participants to help them better understand the concept of culture, such as how the language, norms, and values in their home country and Canada perceive chronic pain differently and do they think people in their home country experience chronic pain differently from people in Canada.

According to the extant literature, culture has a substantial effect on the health of immigrants, including chronic pain (Mustafa et al., 2020; Penner, 2013). Surprisingly, most participants did not believe that culture influenced their experience of chronic pain. Some patients, after hearing an explanation of culture, mentioned that limited English proficiency prevented them from effectively managing chronic pain as it was a barrier to receiving healthcare services for their chronic pain in Canada. It was hard for them to describe their experiences and symptoms of chronic pain in English, as well as understand terminologies shared by physicians about chronic pain treatment, resulting in communication barriers between this patient group and healthcare providers, dissatisfaction and frustration with, and underutilization of healthcare services. Since culture exists in people's both conscious and unconscious assumptions, people may not always be aware of the impact that culture has on their lives (Ferry, 2020). Also, the concept of culture is too abstract and generalized for people to define and understand (Ferry, 2020). In spite of this, in this study, I found that perceptions and management of chronic pain are significantly affected by culture. Perception differences varied according to the ethnic and cultural identities of the participants. For example, participants from Africa believed that people incapable of enduring pain or publicly expressing it tend to be judged as weak, shameful, and abnormal. Hence, they chose to hide their pain even when experiencing it in keeping with their cultural norms. On the other hand, participants from Asia believed that chronic pain was a common physiological disorder, so they actively sought coping strategies to control their pain, such as adjusting diety habits, taking medications, and utilizing physical therapies. The cultural-based perception and management differences in chronic pain among immigrant women increase the difficulty for Canadian healthcare providers in providing services to patients with diverse perceptions and needs, as well as to provide culturally adapted care services.

Another perception difference relates to the healthcare providers' understanding of chronic pain. Participants emphasized that physicians showed significant differences in understanding, verbalizing, treating, and expecting chronic pain. Without proper and adequate treatment from family physicians, they sought alternative coping strategies on their own, while immigrant women's limited resources hampered their ability to cope with chronic pain.

It is therefore evident that culture plays a key role in chronic pain among immigrant women. Therefore, further research on how to mitigate cultural gaps between healthcare professionals and immigrant patient groups helps healthcare professionals to provide culturally safe care.

4.5 Strength of the Study

Chronic pain is known to be more proficient among immigrant women and is affected by diverse factors (Mustafa, 2020). As such, this study contributes to the understanding of how the perception of chronic pain among immigrant women impacted by cultural context, socio-economic status, and weather conditions as well as how they manage chronic pain under the influence of these factors. Through this study, immigrant women may have identified potential barriers to effectively managing chronic pain in Canada, which could foster confidence and increase awareness to make positive changes and seek help that could help them better experience and control chronic pain in Canada

Our study findings are significant to the current literature. First, this study contributes to the extant literature as most of the research in chronic pain in immigrants has been focusing on the general immigrant population and has been conducted in the United States and Europe, and there is a dearth of research focussing on female immigrants and Canadian conditions. Thus, this study deepens the understanding of immigrant women in Canada, who are often underrepresented in research including their perception and management of chronic pain. Secondly, exploring the impact of culture on pain in immigrant women is a relatively new and evolving field (Mustafa et al., 2020). By focusing on the social-cultural factors and how they impact chronic pain, this study fills the gap in the role of culture in chronic pain among immigrant women.

4.6 A Personal Growth Journey

Undertaking this study on chronic pain among immigrant women in Canada has been an incredibly rewarding experience. Not only did it allow me to delve deeper into a subject that is deeply personal to my family, but it also provided an opportunity to shed light on the struggles faced by immigrant women with chornic pain in Canada.

As I began this research, I started with a clear agenda - to explore the factors influencing the perception and management of chronic pain among immigrant women in Canada. I wanted to better understand the perception of chronic pain that immigrant women have and to identify any gaps in healthcare that were hindering the effective management of chronic pain. Through this research, I have come to realize the complex and multifaceted nature of chronic pain. It is not just a physical ailment, but rather a condition that is deeply intertwined with a person's social and cultural context. I learned that immigrant women face unique challenges in experiencing and managing their chronic pain in Canada.

This research has not only helped me gain a deeper understanding of chronic pain but has also allowed me to provide my family with valuable insights into the condition. Through our conversations, I have been able to share potential challenges my family may face and tell them ways in which we can better manage chronic pain in Canada. Through the self-management practices shared by participants in this study, I learned that appropriate exercises, such as Pilates and yoga, can help to restore the function of the painful area in the lower back.In addition, as the participants in my study shared that improving dietary habits to boost immunity can result in overall improvement in their well-being and then alleviate chronic pain. My mother-in-law has been in Canada for some time now, and I often share these effective management strategies with her to help her control their pain.

I have come to understand that weather conditions can also impact chronic pain, as limiting outdoor activity and prolonged indoor confinement can result in mental health issues, leading to the onset or exacerbation of physical pain. When my mother-in-law arrived in Canada in late December last year, I suspected that she would struggle both mentally and physically to adapt. She was unaccustomed to the extreme cold and prolonged winter season in Canada, and felt depressed and bored from being cooped up indoors for long periods of time. To help alleviate her chronic pain, I shared with her some indoor activities such as yoga, swimming, and stretching, as well as some enjoyable movies and music to prevent boredom and frustration from exacerbating her condition. She was grateful that those strategies were effective for her pain.

Overall, this research has been a significant personal growth opportunity for me. It has helped me develop a more nuanced understanding of chronic pain and the challenges faced by immigrant women in Canada. I hope that the findings from this research will contribute to improving healthcare policies and practices and provide a voice for those who have been marginalized in this area.

4.6 Future Research

I am aware that the findings of this study may not reflect the experiences and management of all immigrant women due to the small sample size. The sample manages to capture a variety of factors affecting experiences and management of chronic pain among immigrant women, but its small size of 15 limits the generalizability of the findings. Further research based on a larger sample size should be conducted to capture more voices of immigrant women with chronic pain thus increasing the generalizability of the findings.

Most immigrant women relocate as a dependent of a permanent resident applicant and as such, they are exempted from English language proficiency tests. The lack of English proficiency is a limitation in diverse ways. For example, they face barriers when communicating with healthcare providers for their chronic pain, leading to misunderstanding and disappointment with the treatment outcomes. Their voices need to be captured to understand how they experience chronic pain and how a lack of English language proficiency impacts their management of chronic pain. To ensure that they participate in the research, provisions need to be made to provide translation services. Due to a lack of funding for this study, translation services were not affordable. Therefore, the recommendation for students wishing to conduct research with such is to apply for funding to support the thesis when or even before proposing the thesis, By doing this, more participants with limited English proficiency can be included in the research and receive benefits from the research.

Chinese participants were overrepresented in this study, comprising two-thirds of the participants. It leads to the findings of this study as more representative of the condition of Chinese women and impedes the ability to generalize study findings on immigrant women from various ethnic/culture groups. Thus, it is important to recruit participants from diverse cultural contexts to capture the variety of culture-related chronic pain experiences and management and thus to better understand the impact of culture on chronic pain of immigrant women. This may be achieved by approaching a variety of community representatives to inform more immigrant women from multiple ethnicities/cultures.

In this study, participants reported experiencing post-immigration stress in daily life activities and barriers to accessing Canadian healthcare for their chronic pain. I inferred that the healthcare system working with settlement organizations to provide health education to raise awareness of chornic pain for immigrant women would be helpful. Also, it has the potential to bridge the language and cultural gaps between healthcare professionals and immigrant patients by providing translation services and education materials in multiple languages and providing culturally sensitive care for this patient group. However, I am curious to know if immigrant women with chronic pain share the same sentiments. I wonder what improvements they would like to see in the Canadian healthcare system to better manage their chronic pain and how we can intervene in all those challenges and barriers that worsen chronic pain of immigrant women in Canada. Therefore, further exploration is needed to understand how immigrant women with chronic pain hope to be helped to prevent and overcome the post-immigration challenges and barriers associated with increased chronic pain.

4.6 Conclusion

This study has contributed to our understanding of chronic pain among immigrant women in Canada. The findings of this study reveal how vulnerable immigrant women are to the experience and management of chronic pain. To ensure that immigrant women can better manage their chronic pain, they need social support to help them address the challenges and frustrations they face in dealing with pain. The findings of this study have important implications for practice, research, and policy. Healthcare providers need to understand how the perceptions and management of chronic pain among immigrant women are affected by different factors, such as culture, socio-economic status, and weather conditions. Thus, providing cultural-sensitive care for this patient group is important rather than providing the same services as natives. Translation services in the healthcare system should be provided to help immigrant women overcome language barriers. Also, the materials ought to be multilingual and culturally safe.

This study contributes to the current literature by revealing the factors impacting the perceptions and management of chronic pain among immigrant women. However, further research is needed to address the limitations of this study and expand the current knowledge base, such as recruiting more participants to the study, including non-English speaking participants and participants from a variety of ethnicities. Policymakers should design and develop policies and programs directed at immigrant women with chronic pain, considering the needs and interests of this population group.

References

Alyse, J. (2022, May 25). *LibGuides: Educational leadership: Theoretical framework*. https://libguides.lamar.edu/c.php?g=369302&p=3015608

Boydell, N., Fergie, G., McDaid, L., & Hilton, S. (2014). Avoiding pitfalls and realising opportunities: Reflecting on issues of sampling and recruitment for online focus groups. *International Journal of Qualitative Methods*, *13*(1), 206–223. https://doi.org/10.1177/160940691401300109

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. SAGE Publications.

Ferry, K. (2020, January 17). The truth about why culture change is so hard. *Korn Ferry Focus*. https://focus.kornferry.com/the-future-of-work/the-truth-about-why-culture-change-is-so-hard/

Gray, L. M., Wong-Wylie, G., Rempel, G. R., & Cook, K. (2020). Expanding qualitative research interviewing strategies: Zoom video communications. *The Qualitative Report, 24*(5), 1292–1302.

Hamade, N., Bhavsar-Burke, I., Jansson-Knodell, C., Wani, S., Patel, S. G., Ehrlich, A. C., Paine, E., Hosseini-Carroll, P., Menard-Katcher, P., & Fayad, N. (2022). Virtual gastroenterology fellowship recruitment during COVID-19 and its implications for the future. *Digestive Diseases and Sciences*, *67*(6), 2019–2028. https://doi.org/10.1007/s10620-021-07014-1

Hughson, J., Woodward-Kron, R., Parker, A., Hajek, J., Bresin, A., Knoch, U., Phan, T., & Story, D. (2016). A review of approaches to improve participation of culturally and linguistically diverse populations in clinical trials. *Trials*, *17*(1), 263. https://doi.org/10.1186/s13063-016-1384-3

Kim, I.-H., Carrasco, C., Muntaner, C., McKenzie, K., & Noh, S. (2013). Ethnicity and postmigration health trajectory in new immigrants to Canada. *American Journal of Public Health*, *103*(4), e96. https://doi.org/10.2105/AJPH.2012.301185

Mustafa, N., MacNeill, M., Watt-Watson, J., & Einstein, G. (2020). The lived experiences of chronic pain among immigrant Indian-Canadian women: A phenomenological analysis. *Canadian Journal of Pain*, *4*(3ja), 40–50. https://doi.org/10.1080/24740527.2020.1768835

Palmer, N., & Burchard, E. (2018). *Diversity in research participation: Why it's important*. https://recruit.ucsf.edu/diversity-research-participation-why-its-important

Penner, J. (2013). *Chronic pain in Afghan immigrant women: An exploratory mixed methods study* [University of Saskatchewan]. https://harvest.usask.ca/handle/10388/ETD-2013-05-1058

Sanders, R. (2020, July 21). *A layered look at Canadian and U.S. immigration*. https://www.wilsoncenter.org/article/layered-look-canadian-and-us-immigration

Siddiqi, A., Zuberi, D., & Nguyen, Q. C. (2009). The role of health insurance in explaining immigrant versus non-immigrant disparities in access to health care: Comparing the United States to Canada. *Social Science & Medicine*, *69*(10), 1452–1459. https://doi.org/10.1016/j.socscimed.2009.08.030

Yang, P. Q., & Hwang, S. H. (2016). Explaining immigrant health service utilization: A theoretical framework. *SAGE Open*, *6*(2), 2158244016648137. https://doi.org/10.1177/2158244016648137

Bibliography

Alyse, J. (2022, May 25). *LibGuides: Educational Leadership (Ed.D.) : Theoretical Framework*. https://libguides.lamar.edu/c.php?g=369302&p=3015608

Amer, H. S. A. (2020). Low back pain prevalence and risk factors among health workers in Saudi Arabia: A systematic review and meta-analysis. *Journal of Occupational Health*, *62*(1), e12155. https://doi.org/10.1002/1348-9585.12155

Amo-Agyei, S. (2020). *The migrant pay gap: Understanding wage differences between migrants and nationals*. 192.

Anonymous. (2016). Relieving pain in America: A blueprint for transforming prevention, care, education, and research. *Military Medicine*, *181*(5), 397–399. https://doi.org/10.7205/MILMED-D-16-00012

Arman, M., Gebhardt, A., Hök Nordberg, J., & Andermo, S. (2020). Women's lived experiences of chronic pain: Faces of gendered suffering. *Qualitative Health Research*, *30*(5), 772–782. https://doi.org/10.1177/1049732319888478

Aziz, Q., Giamberardino, M. A., Barke, A., Korwisi, B., Baranowski, A. P., Wesselmann, U., Rief, W., Treede, R.-D., & IASP Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic secondary visceral pain. *Pain*, *160*(1), 69–76. https://doi.org/10.1097/j.pain.0000000000001362

Batra, R., & Reio, T. G. (2016). Gender inequality issues in India. *Advances in Developing Human Resources*, *18*(1), 88–101. https://doi.org/10.1177/1523422316630651

Ben, J., Cormack, D., Harris, R., & Paradies, Y. (2017). Racism and health service utilisation: A systematic review and meta-analysis. *PLOS ONE*, *12*(12), e0189900. https://doi.org/10.1371/journal.pone.0189900

Bennett, M. I., Kaasa, S., Barke, A., Korwisi, B., Rief, W., Treede, R.-D., & IASP Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic cancer-related pain. *Pain*, *160*(1), 38–44. https://doi.org/10.1097/j.pain.0000000000001363

Bergman, S., Herrström, P., Högström, K., Petersson, I. F., Svensson, B., & Jacobsson, L. T. (2001). Chronic musculoskeletal pain, prevalence rates, and sociodemographic associations in a Swedish population study. *The Journal of Rheumatology, 28*(6), 1369–1377. https://www.jrheum.org/content/28/6/1369

Berry, D. (2020). *Canadian Multiculturalism Act*. https://www.thecanadianencyclopedia.ca/en/article/canadian-multiculturalism-act

Boydell, N., Fergie, G., McDaid, L., & Hilton, S. (2014). Avoiding pitfalls and realising opportunities: Reflecting on issues of sampling and recruitment for online focus groups. *International Journal of Qualitative Methods*, *13*(1), 206–223. https://doi.org/10.1177/160940691401300109

Brady, B., Veljanova, I., Schabrun, S., & Chipchase, L. (2017). Integrating culturally informed approaches into the physiotherapy assessment and treatment of chronic pain: Protocol for a pilot randomised controlled trial. *BMJ Open*, *7*(5), e014449. https://doi.org/10.1136/bmjopen-2016-014449

Bragazzi, N. L., Puente, G. D., & Natta, W. M. (2014). Somatic perception, cultural differences and immigration: Results from administration of the Modified Somatic Perception Questionnaire (MSPQ) to a sample of immigrants. *Psychology Research and Behavior Management*, *7*, 161–166. https://doi.org/10.2147/PRBM.S55393

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brennan, S. A., Harney, T., Queally, J. M., O'Connor McGoona, J., Gormley, I. C., & Shannon, F. J. (2012). Influence of weather variables on pain severity in end-stage osteoarthritis. *International Orthopaedics*, *36*(3), 643–646. https://doi.org/10.1007/s00264-011-1304-9

Bueno-Gómez, N. (2017). Conceptualizing suffering and pain. *Philosophy, Ethics, and Humanities in Medicine*, *12*(1), 7. https://doi.org/10.1186/s13010-017-0049-5

Camara, P. J. (2000). Levels of racism: A theoretic framework and a gardener's tale. *American Journal of Public Health*, *90*(8), 1212–1215. https://www.proquest.com/docview/215111519/abstract/8ECB21F034194888PQ/1

Cea, M. E., Reid, M. C., Inturrisi, C., Witkin, L. R., Prigerson, H. G., & Bao, Y. (2016). Pain assessment, management, and control among patients 65 years or older receiving hospice care in the U.S. *Journal of Pain and Symptom Management*, *52*(5), 663–672. https://doi.org/10.1016/j.jpainsymman.2016.05.020

Chan, M. Y. P., Hamamura, T., & Janschewitz, K. (2013). Ethnic differences in physical pain sensitivity: Role of acculturation. *PAIN®*, *154*(1), 119–123. https://doi.org/10.1016/j.pain.2012.09.015

Cherry, K. (2021, March 15). *The role of the biological perspective in psychology*. Verywell Mind. https://www.verywellmind.com/what-is-the-biological-perspective-2794878

Cho, C., Deol, H. K., & Martin, L. J. (2021). Bridging the translational divide in pain research: Biological, psychological and social considerations. *Frontiers in Pharmacology*, *12*. https://www.frontiersin.org/articles/10.3389/fphar.2021.603186

Chowdhury, M. Z. I., & Chowdhury, M. A. (2018). Canadian health care system: Who should pay for all medically beneficial treatments? A burning issue. *International Journal of Health Services: Planning, Administration, Evaluation*, *48*(2), 289–301. https://doi.org/10.1177/0020731417738976

Cohen, M., Quintner, J., & van Rysewyk, S. (2018). Reconsidering the International Association for the Study of Pain definition of pain: *PAIN Reports*, *3*(2), e634. https://doi.org/10.1097/PR9.0000000000000634

Colour of Poverty. (2019). *Racialized poverty in income and social assistance*. https://colourofpovertyca.files.wordpress.com/2019/03/cop-coc-fact-sheet-6-racialized-poverty-in-income-social-assistance-1.pdf

Côté, D. (2013). Intercultural communication in health care: Challenges and solutions in work rehabilitation practices and training: A comprehensive review. *Disability and Rehabilitation*, *35*(2), 153–163. https://doi.org/10.3109/09638288.2012.687034

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. (3rd ed.). Sage Publications.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. SAGE Publications.

Curtis, E., Jones, R., Tipene-Leach, D., Walker, C., Loring, B., Paine, S.-J., & Reid, P. (2019). Why cultural safety rather than cultural competency is required to achieve health equity: A literature review and recommended definition. *International Journal for Equity in Health*, *18*(1), 174. https://doi.org/10.1186/s12939-019-1082-3

Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, *36*(4), 253–263. https://doi.org/10.1097/DCC.0000000000000253

Dahlan, R., Badri, P., Saltaji, H., & Amin, M. (2019). Impact of acculturation on oral health among immigrants and ethnic minorities: A systematic review. *PLOS ONE*, *14*(2), e0212891. https://doi.org/10.1371/journal.pone.0212891

Dahlhamer, J., Lucas, J., Zelaya, C., Nahin, R., Mackey, S., DeBar, L., Kerns, R., Von Korff, M., Porter, L., & Helmick, C. (2018). Prevalence of chronic pain and high-impact chronic pain among adults—United States, 2016. *Morbidity and Mortality Weekly Report*, *67*(36), 1001–1006. https://doi.org/10.15585/mmwr.mm6736a2

Darroch, F., Giles, A., Sanderson, P., Brooks-Cleator, L., Schwartz, A., Joseph, D., & Nosker, R. (2017). The United States does CAIR about cultural safety: Examining cultural safety within indigenous health contexts in Canada and the United States. *Journal of Transcultural Nursing: Official Journal of the Transcultural Nursing Society*, *28*(3), 269–277. https://doi.org/10.1177/1043659616634170

Devan, H., Hale, L., Hempel, D., Saipe, B., & Perry, M. A. (2018). What works and does not work in a self-management intervention for people with chronic pain? Qualitative systematic review and meta-synthesis. *Physical Therapy*, *98*(5), 381–397. https://doi.org/10.1093/ptj/pzy029

Dickson, G. L., & Kim, J. I. (2003). Reconstructing a meaning of pain: Older Korean American women’s experiences with the pain of osteoarthritis. *Qualitative Health Research*, *13*(5), 675–688. https://doi.org/10.1177/1049732303013005006

Dobrowolsky, A., Arat-Koç, S., & Gabriel, C. (2018). *Immigrant women in Canada*. https://www.criaw-icref.ca/publications/immigrant-women-in-canada/

Dossa, P. (2008). Creating politicized spaces: Afghan immigrant women's stories of migration and displacement. *Affilia*, *23*(1), 10–21. https://doi.org/10.1177/0886109907310462

Dragioti, E., Tsamakis, K., Larsson, B., & Gerdle, B. (2020). Predictive association between immigration status and chronic pain in the general population: Results from the SwePain cohort. *BMC Public Health, 20*(1), 1462. https://doi.org/10.1186/s12889-020-09546-z

Drevdahl, D. J., Canales, M. K., & Dorcy, K. S. (2008). Of goldfish tanks and moonlight tricks: Can cultural competency ameliorate health disparities? *Advances in Nursing Science*, *31*(1), 13–27. https://doi.org/10.1097/01.ANS.0000311526.27823.05

Dueñas, M., Ojeda, B., Salazar, A., Mico, J. A., & Failde, I. (2016). A review of chronic pain impact on patients, their social environment and the health care system. *Journal of Pain Research*, *9*, 457–467. https://doi.org/10.2147/JPR.S105892

Edwards, C. L., Fillingim, R. B., & Keefe, F. (2001). Race, ethnicity and pain. *PAIN*, *94*(2), 133–137. https://doi.org/10.1016/S0304-3959(01)00408-0

Edwards, R. R., Dworkin, R. H., Sullivan, M. D., Turk, D. C., & Wasan, A. D. (2016). The role of psychosocial processes in the development and maintenance of chronic pain. *The Journal of Pain*, *17*(9, Supplement), T70–T92. https://doi.org/10.1016/j.jpain.2016.01.001

Effective Health Care Program. (2014, July 9). *Improving cultural competence to reduce health disparities for priority populations*. https://effectivehealthcare.ahrq.gov/products/cultural-competence/research-protocol

Ferdous, M., Lee, S., Goopy, S., Yang, H., Rumana, N., Abedin, T., & Turin, T. C. (2018). Barriers to cervical cancer screening faced by immigrant women in Canada: A systematic scoping review. *BMC Women's Health*, *18*(1), 165. https://doi.org/10.1186/s12905-018-0654-5

Ferreira, M. L., Zhang, Y., Metcalf, B., Makovey, J., Bennell, K. L., March, L., & Hunter, D. J. (2016). The influence of weather on the risk of pain exacerbation in patients with knee osteoarthritis – A case-crossover study. *Osteoarthritis and Cartilage*, *24*(12), 2042–2047. https://doi.org/10.1016/j.joca.2016.07.016

Ferry, K. (2020, January 17). The truth about why culture change is so hard. *Korn Ferry Focus*. https://focus.kornferry.com/the-future-of-work/the-truth-about-why-culture-change-is-so-hard/

Gatchel, R. J., Peng, Y. B., Peters, M. L., Fuchs, P. N., & Turk, D. C. (2007). The biopsychosocial approach to chronic pain: Scientific advances and future directions. *Psychological Bulletin*, *133*(4), 581–624. https://doi.org/10.1037/0033-2909.133.4.581

Gilbert, L. R., Spears Brown, C., & Mistry, R. S. (2017). Latino immigrant parents' financial stress, depression, and academic involvement predicting child academic success. *Psychology in the Schools*, *54*(9), 1202–1215. https://doi.org/10.1002/pits.22067

Gilmour, H. (2014). Positive mental health and mental illness. *Health Reports*, *25*(9), 3–9. https://pubmed-ncbi-nlm-nih-gov.cyber.usask.ca/16856694/

Government of Canada, S. C. (2021, April 28). *Are the gaps in labour market outcomes between immigrants and their Canadian-born counterparts starting to close?* https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021004/article/00004-eng.htm

Government of Canada, S. C. (2022, February 16). *Experiences of discrimination among the Black and Indigenous populations in Canada, 2019*. https://www150.statcan.gc.ca/n1/pub/85-002-x/2022001/article/00002-eng.htm#a13

Gray, L. M., Wong-Wylie, G., Rempel, G. R., & Cook, K. (2020). Expanding qualitative research interviewing strategies: Zoom video communications. *The Qualitative Report*, *24*(5), 1292–1302.

Gray, P., & Thomas, D. J. (2006). Critical reflections on culture in nursing. *Journal of Cultural Diversity*, *13*(2), 76–82. https://pubmed-ncbi-nlm-nih-gov.cyber.usask.ca/16856694/

Green, J., & Thorogood, N. (2014). *Qualitative methods for health research*.

GreenTech Resouces. (2021, November 24). *Top 12 Canadian Immigration Challenges Every Newcomer Has To Face—GreenTech*. https://www.greentechresources.ca/canadian-immigration-challenges/

Guruge, S., Sidani, S., Illesinghe, V., Younes, R., Bukhari, H., Altenberg, J., Rashid, M., & Fredericks, S. (2018). Healthcare needs and health service utilization by Syrian refugee women in Toronto. *Conflict and Health*, *12*(1), 46. https://doi.org/10.1186/s13031-018-0181-x

Gushulak, B. D., Pottie, K., Roberts, J. H., Torres, S., & DesMeules, M. (2011). Migration and health in Canada: Health in the global village. *Canadian Medical Association Journal*, *183*(12), E952–E958. https://doi.org/10.1503/cmaj.090287

Halwani, S. (2004). *Racial inequality in access to health care services*. Ontario Human Rights Commission. http://www.ohrc.on.ca/en/race-policy-dialogue-papers/racial-inequality-access-health-care-services

Hamade, N., Bhavsar-Burke, I., Jansson-Knodell, C., Wani, S., Patel, S. G., Ehrlich, A. C., Paine, E., Hosseini-Carroll, P., Menard-Katcher, P., & Fayad, N. (2022). Virtual gastroenterology fellowship recruitment during COVID-19 and its implications for the future. *Digestive Diseases and Sciences*, *67*(6), 2019–2028. https://doi.org/10.1007/s10620-021-07014-1

Haq, R. (2013). Intersectionality of gender and other forms of identity. *Gender in Management*, *28*(3), 171–184. http://dx.doi.org/10.1108/GM-01-2013-0010

Henderson, S. (2003). Power imbalance between nurses and patients: A potential inhibitor of partnership in care. *Journal of Clinical Nursing*, *12*(4), 501–508. https://doi.org/10.1046/j.1365-2702.2003.00757.x

Hughson, J., Woodward-Kron, R., Parker, A., Hajek, J., Bresin, A., Knoch, U., Phan, T., & Story, D. (2016). A review of approaches to improve participation of culturally and linguistically diverse populations in clinical trials. *Trials*, *17*(1), 263. https://doi.org/10.1186/s13063-016-1384-3

Hunter, D., McCallum, J., & Howes, D. (2019). Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. *Journal of Nursing and Health Care*, *4*(1), Article 1. http://dl6.globalstf.org/index.php/jnhc/article/view/1975

International Association for the Study of Pain (IASP). (2017). *IASP terminology*. https://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698#Pain

International Organization for Migration. (2004). *International migration law: Glossary on migration*. https://publications.iom.int/system/files/pdf/iml_1_en.pdf

Jennings, E. M., Okine, B. N., Roche, M., & Finn, D. P. (2014). Stress-induced hyperalgesia. *Progress in Neurobiology*, *121*, 1–18. https://doi.org/10.1016/j.pneurobio.2014.06.003

Joseph, L., Standen, M., Paungmali, A., Kuisma, R., Sitilertpisan, P., & Pirunsan, U. (2020). Prevalence of musculoskeletal pain among professional drivers: A systematic review. *Journal of Occupational Health*, *62*(1), e12150. https://doi.org/10.1002/1348-9585.12150

Kalich, A., Heinemann, L., & Ghahari, S. (2016). A scoping review of immigrant experience of health care access barriers in Canada. *Journal of Immigrant and Minority Health*, *18*(3), 697–709. https://doi.org/10.1007/s10903-015-0237-6

Kawi, J., Reyes, A. T., & Arenas, R. A. (2019). Exploring pain management among Asian immigrants with chronic pain: Self-management and resilience. *Journal of Immigrant & Minority Health*, *21*(5), 1123–1136. https://doi.org/10.1007/s10903-018-0820-8

Kim, I.-H., Carrasco, C., Muntaner, C., McKenzie, K., & Noh, S. (2013). Ethnicity and postmigration health trajectory in new immigrants to Canada. *American Journal of Public Health*, *103*(4), e96. https://doi.org/10.2105/AJPH.2012.301185

Kristiansen, M., Irshad, T., Worth, A., Bhopal, R., Lawton, J., & Sheikh, A. (2014). The practice of hope: A longitudinal, multi-perspective qualitative study among South Asian Sikhs and Muslims with life-limiting illness in Scotland. *Ethnicity & Health*, *19*(1), 1–19. https://doi.org/10.1080/13557858.2013.858108

Kwak, K. (2018). Age and gender variations in healthy immigrant effect: A population study of immigrant well-being in Canada. *Journal of International Migration and Integration*, *19*(2), 413–437. https://doi.org/10.1007/s12134-018-0546-4

Lane, V. (2017). *Dietary intake, physical activity, food security and nutritional status of newcomer children in Saskatchewan* [University of Saskatchewan]. http://hdl.handle.net/10388/7809

Laverty, M., McDermott, D. R., & Calma, T. (2017). Embedding cultural safety in Australia’s main health care standards. *Medical Journal of Australia*, *207*(1). https://www.mja.com.au/journal/2017/207/1/embedding-cultural-safety-australias-main-health-care-standards

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.

Lu, Y., & Hou, F. (2020). Immigration system, labor market structures, and overeducation of high-skilled immigrants in the United States and Canada. *International Migration Review*, *54*(4), 1072–1103. https://doi.org/10.1177/0197918319901263

Mahabir, D. F., O’Campo, P., Lofters, A., Shankardass, K., Salmon, C., & Muntaner, C. (2021). Experiences of everyday racism in Toronto’s health care system: A concept mapping study. *International Journal for Equity in Health*, *20*(1), 74. https://doi.org/10.1186/s12939-021-01410-9

McMaughan, D. J., Oloruntoba, O., & Smith, M. L. (2020). Socioeconomic status and access to healthcare: Interrelated drivers for healthy aging. *Frontiers in Public Health*, *8*, 231. https://doi.org/10.3389/fpubh.2020.00231

Michaëlis, C., Kristiansen, M., & Norredam, M. (2015). Quality of life and coping strategies among immigrant women living with pain in Denmark: A qualitative study. *BMJ Open*, *5*(7), e008075. https://doi.org/10.1136/bmjopen-2015-008075

Miranda, A., & Zhu, Y. (2013). English deficiency and the native–immigrant wage gap. *Economics Letters*, *118*(1), 38–41. https://doi.org/10.1016/j.econlet.2012.09.007

Mustafa, N., MacNeill, M., Watt-Watson, J., & Einstein, G. (2020). The lived experiences of chronic pain among immigrant Indian-Canadian women: A phenomenological analysis.

Canadian Journal of Pain, *4*(3ja), 40–50. https://doi.org/10.1080/24740527.2020.1768835

Newman, L. K. (2002). Sex, gender and culture: Issues in the definition, assessment and treatment of gender identity disorder. *Clinical Child Psychology and Psychiatry*, *7*(3), 352–359. https://doi.org/10.1177/1359104502007003004

News, K. H. · C. (2020, October 30). *Federal government plans to bring in more than 1.2M immigrants in next 3 years*. Canadian Broadcasting Corporation. https://www.cbc.ca/news/politics/mendicino-immigration-pandemic-refugees-1.5782642

Ng, E., Pottie, K., & Spitzer, D. (2015, November 27). *Official language proficiency and self-reported health among immigrants to Canada*. https://www150.statcan.gc.ca/n1/pub/82-003-x/2011004/article/11559-eng.htm

Nicholas, M. K., & Blyth, F. M. (2016). Are self-management strategies effective in chronic pain treatment? *Pain Management*, *6*(1), 75–88. https://doi.org/10.2217/pmt.15.57

Nicholas, M., Vlaeyen, J. W. S., Rief, W., Barke, A., Aziz, Q., Benoliel, R., Cohen, M., Evers, S., Giamberardino, M. A., Goebel, A., Korwisi, B., Perrot, S., Svensson, P., Wang, S.-J., Treede, R.-D., & International Association for the Study of Pain (IASP) Taskforce for the Classification of Chronic Pain. (2019). The IASP classification of chronic pain for ICD-11: Chronic primary pain. *Pain*, *160*(1), 28–37. https://doi.org/10.1097/j.pain.0000000000001390

Nyen, S., & Tveit, B. (2018). Symptoms without disease: Exploring experiences of non-Western immigrant women living with chronic pain. *Health Care for Women International*, *39*(3), 322–342. https://doi.org/10.1080/07399332.2017.1370470

Odeh, A. R. (2008). Health beliefs, practice, and priorities for health care of Arab Muslims in the United States: Implications for nursing care. *Journal of Transcultural Nursing*, *19*(3), 284–291. https://doi.org/10.1177/1043659608317450

Olah, M. E., Gaisano, G., & Hwang, S. W. (2013). The effect of socioeconomic status on access to primary care: An audit study. *Canadian Medical Association Journal*, *185*(6), E263–E269. https://doi.org/10.1503/cmaj.121383

OMG Properties. (2019, October 28). 14 factors to consider while choosing the location to settle down. *OMG Properties*. https://www.omgproperties.in/14-factors-to-consider-while-choosing-the-location-to-settle-down/

Orhan, C., Van Looveren, E., Cagnie, B., Mukhtar, N. B., Lenoir, D., & Meeus, M. (2018). Are Pain Beliefs, Cognitions, and Behaviors Influenced by Race, Ethnicity, and Culture in Patients with Chronic Musculoskeletal Pain: A Systematic Review. *Pain Physician*, *21*(6), 541–558.

Ortega, P., & Shin, T. M. (2021). Language Is not a barrier—It is an opportunity to improve health equity through education. *Health Affairs Forefront*. https://doi.org/10.1377/forefront.20210726.579549

Palmer, N., & Burchard, E. (2018). *Diversity in research participation: Why it's important*. https://recruit.ucsf.edu/diversity-research-participation-why-its-important

Pandey, M., Maina, R. G., Amoyaw, J., Li, Y., Kamrul, R., Michaels, C. R., & Maroof, R. (2021b). Impacts of English language proficiency on healthcare access, use, and outcomes among immigrants: A qualitative study. *BMC Health Services Research*, *21*(1), 741. https://doi.org/10.1186/s12913-021-06750-4

Panikkar, B., Brugge, D., Gute, D. M., & Hyatt, R. R. (2015). “They see us as machines:” The experience of recent immigrant women in the low wage informal labor sector. *PLOS ONE*, *10*(11), e0142686. https://doi.org/10.1371/journal.pone.0142686

Penner, J. (2013). *Chronic pain in Afghan immigrant women: An exploratory mixed methods study* [University of Saskatchewan]. https://harvest.usask.ca/handle/10388/ETD-2013-05-1058

Phalet, K., Fleischmann, F., & Hillekens, J. (2018). Religious identity and acculturation of immigrant minority youth: Toward a contextual and developmental approach. *European Psychologist*, *23*, 32–43. https://doi.org/10.1027/1016-9040/a000309

Phinney, J. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, *51*, 918–927. https://doi.org/10.1037/0003-066X.51.9.918

Pillay, T., Zyl, H. A. van, & Blackbeard, D. (2014). Chronic pain perception and cultural experience. *Procedia - Social and Behavioral Sciences*, *113*, 151–160. https://doi.org/10.1016/j.sbspro.2014.01.022

Pollock, G., Newbold, B., & Lafrenière, G. (2011, September). *Perceptions of discrimination in health services experienced by immigrant minorities in Ontario*. http://p2pcanada.ca/files/2015/09/Perceptions-of-Discrimination-in-Health-Services-Experienced-by-Immigrant-Minorities-in-Ontario.pdf

Pollock, G., Newbold, K. B., Lafrenière, G., & Edge, S. (2012). Discrimination in the doctor’s office: Immigrants and refugee experiences. *Critical Social Work*, *13*(2), Article 2. https://doi.org/10.22329/csw.v13i2.5866

Rajapakse, D., Liossi, C., & Howard, R. F. (2014). Presentation and management of chronic pain. *Archives of Disease in Childhood*, *99*(5), 474–480. https://doi.org/10.1136/archdischild-2013-304207

Ransford, H. E., Carrillo, F. R., & Rivera, Y. (2010). Health care-seeking among Latino immigrants: Blocked access, use of traditional medicine, and the role of religion. *Journal of Health Care for the Poor and Underserved*, *21*(3), 862–878. https://doi.org/10.1353/hpu.0.0348

Raphael, D., Bryant, T., Mikkonen, J., & Alexander, R. (2020). *Social determinants of health: The Canadian facts*. Ontario Tech University Faculty of Health Sciences and Toronto: York University School of Health Policy and Management. https://www.thecanadianfacts.org/The_Canadian_Facts-2nd_ed.pdf

Re, T. S., Bragazzi, N. L., Siri, A., Cisneros Puebla, C., Friese, S., Simões, M., Candau, J., & Khabbache, H. (2017). Effects of acculturation, coping strategies, locus of control, and self-efficacy on chronic pain: Study of Chinese immigrant women in Italy – insights from a thematic field analysis. *Journal of Pain Research*, *10,* 1383–1390. https://doi.org/10.2147/JPR.S115449

Reid-Searl, K., & Happell, B. (2012). Supervising nursing students administering medication: A perspective from registered nurses. *Journal of Clinical Nursing*, *21*(13–14), 1998–2005. https://doi.org/10.1111/j.1365-2702.2011.03976.x

Reiter, B. (2017). *Theory and methodology of exploratory social science research*. *5*(4), 129–150. https://ttu-ir.tdl.org/handle/2346/86610

Richards, L., & Morse, J. M. (2013). *Readme first for a user's guide to qualitative methods* (3rd ed). Sage.

Rodgers, B. L., & Knafl, K. A. (1993). *Concept development in nursing: Foundations, techniques, and applications*. W.B. Saunders Company.

Rostami, K., Zadeh, S. H., & Rakhshan, M. (2019). Chronic pain: A concept analysis. *Electronic Journal of General Medicine*, *16*(2), em130. https://doi.org/10.29333/ejgm/94098

Salami, B., Mason, A., Salma, J., Yohani, S., Amin, M., Okeke-Ihejirika, P., & Ladha, T. (2020). Access to healthcare for immigrant children in Canada. *International Journal of Environmental Research and Public Health*, *17*(9), 3320. https://doi.org/10.3390/ijerph17093320

Salami, B., Salma, J., & Hegadoren, K. (2019). Access and utilization of mental health services for immigrants and refugees: Perspectives of immigrant service providers. *International Journal of Mental Health Nursing*, *28*(1), 152–161. https://doi.org/10.1111/inm.12512

Samulowitz, A., Gremyr, I., Eriksson, E., & Hensing, G. (2018). “Brave men” and “emotional women”: A theory-guided literature review on gender bias in health care and gendered norms towards patients with chronic pain. *Pain Research & Management*, *2018*, 6358624. https://doi.org/10.1155/2018/6358624

Sanders, R. (2020, July 21). *A layered look at Canadian and U.S. immigration*. https://www.wilsoncenter.org/article/layered-look-canadian-and-us-immigration

Sarah, P. (2022, August 12). *Immigration definition, history, & facts*. https://www.britannica.com/topic/immigration

Schoueri-Mychasiw, N., & McDonald, P. W. (2013). Factors Associated with Underscreening for Cervical Cancer among Women in Canada. *Asian Pacific Journal of Cancer Prevention*, *14*(11), 6445–6450. https://doi.org/10.7314/APJCP.2013.14.11.6445

Sharma, S., Abbott, J. H., & Jensen, M. P. (2018). Why clinicians should consider the role of culture in chronic pain. *Brazilian Journal of Physical Therapy*, *22*(5), 345–346. https://doi.org/10.1016/j.bjpt.2018.07.002

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Siddiqi, A., Zuberi, D., & Nguyen, Q. C. (2009). The role of health insurance in explaining immigrant versus non-immigrant disparities in access to health care: Comparing the United States to Canada. *Social Science & Medicine*, *69*(10), 1452–1459. https://doi.org/10.1016/j.socscimed.2009.08.030

Smith, W. C., & Fernandez, F. (2017). Education, skills, and wage gaps in Canada and the United States. *International Migration*, *55*(3), 57–73. https://doi.org/10.1111/imig.12328

Sohail, M. M. (2020). Belief in God’s help during hepatitis C: A qualitative study on muslim patients in Pakistan. *Journal of Religion and Health*, *59*(2), 928–945. https://doi.org/10.1007/s10943-018-0700-5

Statista. (2021, July 6). *Number of immigrants in Canada by time since landing 2020*. Statista. https://www.statista.com/statistics/555797/number-of-immigrants-in-canada-by-time-since-landing/

Statistics Canada. (2016, February 23). *Immigrant women*. https://www150.statcan.gc.ca/n1/pub/89-503-x/2015001/article/14217-eng.htm#a5

Statistics Canada. (2019, April 17). *Healthy immigrant effect by immigrant category in Canada*. https://www150.statcan.gc.ca/n1/pub/82-003-x/2019004/article/00001-eng.htm

Stebbins, R. A. (2001). *Exploratory Research in the Social Sciences*. SAGE.

Taber, J. M., Leyva, B., & Persoskie, A. (2015). Why do people avoid medical care? A qualitative study using national data. *Journal of General Internal Medicine*, *30*(3), 290–297. https://doi.org/10.1007/s11606-014-3089-1

Tackett, S., Young, J. H., Putman, S., Wiener, C., Deruggiero, K., & Bayram, J. D. (2018). Barriers to healthcare among Muslim women: A narrative review of the literature. *Women's Studies International Forum*, *69*, 190–194. https://doi.org/10.1016/j.wsif.2018.02.009

Taloyan, M., & Löfvander, M. (2014). Depression and gender differences among younger immigrant patients on sick leave due to chronic back pain: A primary care study. *Primary Health Care Research & Development*, *15*(1), 5–14. https://doi.org/10.1017/S1463423612000564

Thompson, E. B., Heley, F., Oster-Aaland, L., Stastny, S. N., & Crawford, E. C. (2013). The impact of a student-driven social marketing campaign on college student alcohol-related beliefs and behaviors. *Social Marketing Quarterly*, *19*(1), 52–64. https://doi.org/10.1177/1524500412472668

Thong, I. S. K., Tan, G., Lee, T. Y. C., & Jensen, M. P. (2017). A comparison of pain beliefs and coping strategies and their association with chronic pain adjustment between Singapore and United States. *Pain Medicine*, *18*(9), 1668–1678. https://doi.org/10.1093/pm/pnw237

Timmermans, E. J., Schaap, L. A., Herbolsheimer, F., Dennison, E. M., Maggi, S., Pedersen, N. L., Castell, M. V., Denkinger, M. D., Edwards, M. H., Limongi, F., Sánchez-Martínez, M., Siviero, P., Queipo, R., Peter, R., Pas, S. van der, & Deeg, D. J. H. (2015). The influence of weather conditions on joint pain in older people with osteoarthritis: Results from the European project on steoarthritis. *The Journal of Rheumatology*, *42*(10), 1885–1892. https://doi.org/10.3899/jrheum.141594

Treede, R.-D., Rief, W., Barke, A., Aziz, Q., Bennett, M. I., Benoliel, R., Cohen, M., Evers, S., Finnerup, N. B., First, M. B., Giamberardino, M. A., Kaasa, S., Korwisi, B., Kosek, E., Lavand'homme, P., Nicholas, M., Perrot, S., Scholz, J., Schug, S., … Wang, S.-J. (2019). Chronic pain as a symptom or a disease: The International Association for the Study of Pain classification of chronic pain for the International Classification of Diseases (ICD-11). *Pain*, *160*(1), 19–27. https://doi.org/10.1097/j.pain.0000000000001384

Treede, R.-D., Rief, W., Barke, A., Aziz, Q., Bennett, M. I., Benoliel, R., Cohen, M., Evers, S., Finnerup, N. B., First, M. B., Giamberardino, M. A., Kaasa, S., Kosek, E., Lavand'homme, P., Nicholas, M., Perrot, S., Scholz, J., Schug, S., Smith, B. H., … Wang, S.-J. (2015). A classification of chronic pain for ICD-11. *Pain*, *156*(6), 1003–1007. https://doi.org/10.1097/j.pain.0000000000000160

Valentín-Cortés, M., Benavides, Q., Bryce, R., Rabinowitz, E., Rion, R., Lopez, W. D., & Fleming, P. J. (2020). Application of the minority stress theory: Understanding the mental health of undocumented Latinx immigrants. *American Journal of Community Psychology*, *66*(3–4), 325–336. https://doi.org/10.1002/ajcp.12455

Vandenberg, H. E. R. (2010). Culture theorizing past and present: Trends and challenges. *Nursing Philosophy: An International Journal for Healthcare Professionals*, *11*(4), 238–249. https://doi.org/10.1111/j.1466-769X.2010.00453.x

Vang, Z. M., & Chang, Y. (2019). Immigrants' experiences of everyday discrimination in Canada: Unpacking the contributions of assimilation, race, and early socialization.

International Migration Review, *53*(2), 602–631. https://doi.org/10.1177/0197918318764871

Vang, Z. M., Sigouin, J., Flenon, A., & Gagnon, A. (2017). Are immigrants healthier than native-born Canadians? A systematic review of the healthy immigrant effect in Canada. *Ethnicity & Health*, *22*(3), 209–241. https://doi.org/10.1080/13557858.2016.1246518

Vargas, S. M., Huey Jr., S. J., & Miranda, J. (2020). A critical review of current evidence on multiple types of discrimination and mental health. *American Journal of Orthopsychiatry*, *90*, 374–390. https://doi.org/10.1037/ort0000441

Ward, C., & Geeraert, N. (2016). Advancing acculturation theory and research: The acculturation process in its ecological context. *Current Opinion in Psychology*, *8*, 98–104. https://doi.org/10.1016/j.copsyc.2015.09.021

Weller, S. C., Vickers, B., Bernard, H. R., Blackburn, A. M., Borgatti, S., Gravlee, C. C., & Johnson, J. C. (2018). Open-ended interview questions and saturation. *PLOS ONE*, *13*(6), e0198606. https://doi.org/10.1371/journal.pone.0198606

Wills, E. M., & McEwen, M. (2019). *Theoretical basis for nursing* (5th edition, international edition). Wolters Kluwer.

Wilson, M. G., Lavis, J. N., & Ellen, M. E. (2015). Supporting chronic pain management across provincial and territorial health systems in Canada: Findings from two stakeholder dialogues. *Pain Research & Management: The Journal of the Canadian Pain Society*, *20*(5), 269–279. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4596635/

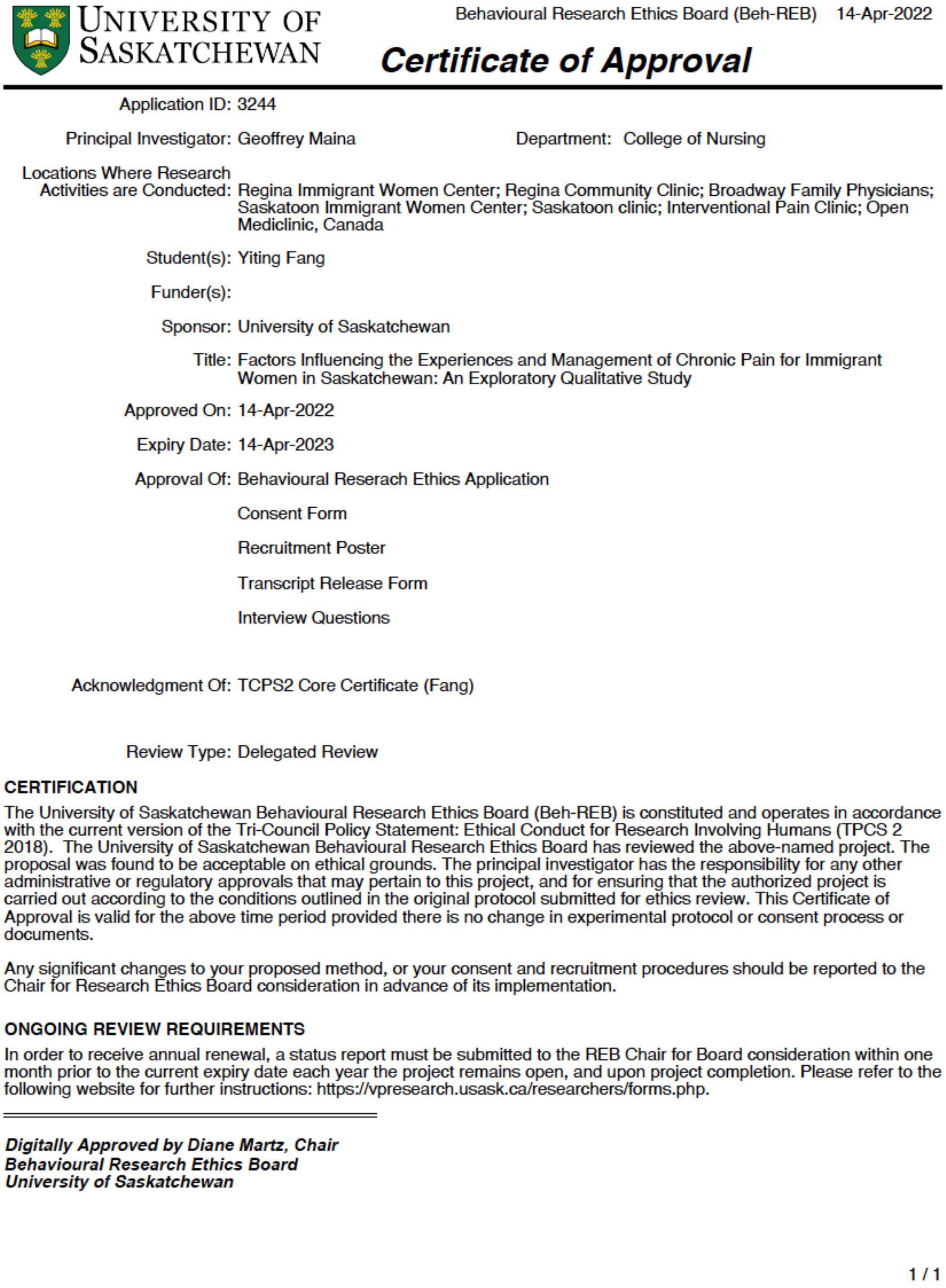
Won, E., & Kim, Y.-K. (2016). Stress, the autonomic nervous system, and the immune-kynurenine pathway in the etiology of depression. *Current Neuropharmacology*, *14*(7), 665–673. https://doi.org/10.2174/1570159X14666151208113006

Yang, P. Q., & Hwang, S. H. (2016). Explaining immigrant health service utilization: A theoretical framework. *SAGE Open*, *6*(2), 2158244016648137. https://doi.org/10.1177/2158244016648137

Yeager, K. (2021, August 26). *LibGuides: Statistical & Qualitative Data Analysis Software: About NVivo*. https://libguides.library.kent.edu/statconsulting/NVivo

Zander, V., Müllersdorf, M., Christensson, K., & Eriksson, H. (2013). Struggling for sense of control: Everyday life with chronic pain for women of the Iraqi diaspora in Sweden. *Scandinavian Journal of Public Health*, *41*(8), 799–807. https://doi.org/10.1177/1403494813492033

Appendix A: Ethics Approval



UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB) 14-Apr-2022

Certificate of Approval

Application ID: 3244

Principal Investigator: Geoffrey Maina

Department: College of Nursing

Locations Where Research Activities are Conducted: Regina Immigrant Women Center; Regina Community Clinic; Broadway Family Physicians; Saskatoon Immigrant Women Center; Saskatoon clinic; Interventional Pain Clinic; Open Mediclinic, Canada

Student(s): Yiting Fang

Funder(s):

Sponsor: University of Saskatchewan

Title: Factors Influencing the Experiences and Management of Chronic Pain for Immigrant Women in Saskatchewan: An Exploratory Qualitative Study

Approved On: 14-Apr-2022

Expiry Date: 14-Apr-2023

Approval Of: Behavioural Reserach Ethics Application

Consent Form

Recruitment Poster

Transcript Release Form

Interview Questions

Acknowledgment Of: TCPS2 Core Certificate (Fang)

Review Type: Delegated Review

CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board (Beh-REB) is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TPCS 2 2018). The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this project, and for ensuring that the authorized project is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month prior to the current expiry date each year the project remains open, and upon project completion. Please refer to the following website for further instructions: https://vpresearch.usask.ca/researchers/forms.php.

Digitally Approved by Diane Martz, Chair
Behavioural Research Ethics Board
University of Saskatchewan

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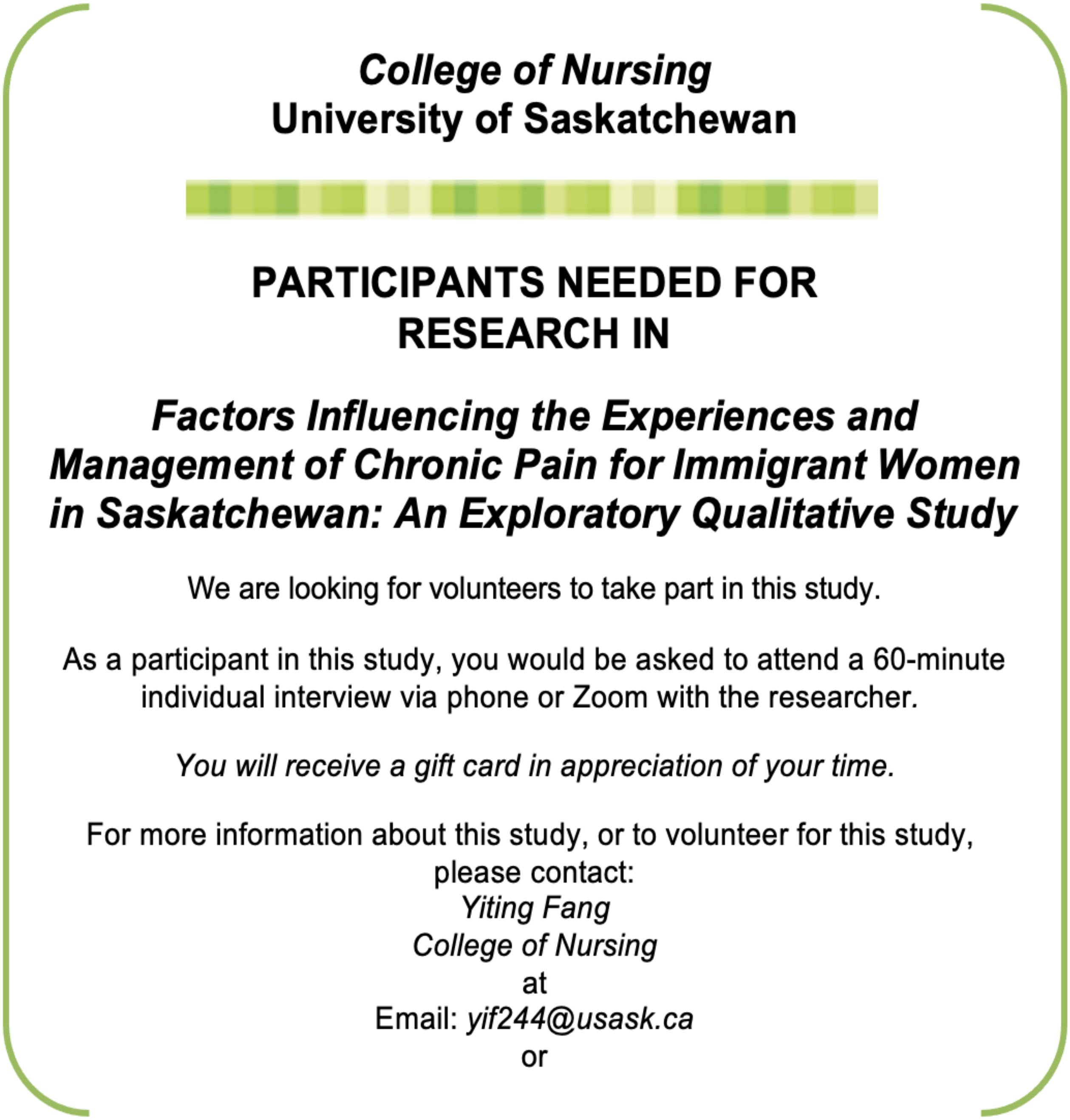
Appendix B: Study Recruitment Poster



College of Nursing
University of Saskatchewan

PARTICIPANTS NEEDED FOR RESEARCH IN

Factors Influencing the Experiences and Management of Chronic Pain for Immigrant Women in Saskatchewan: An Exploratory Qualitative Study

We are looking for volunteers to take part in this study.

As a participant in this study, you would be asked to attend a 60-minute individual interview via phone or Zoom with the researcher.

You will receive a gift card in appreciation of your time.

For more information about this study, or to volunteer for this study,
please contact:
Yiting Fang
College of Nursing
at
Email: *yif244@usask.ca*
or

Appendix C: Participant Consent Form by Phone or Videoconference

You are invited to participate in a research study entitled: *Factors Influencing the Experiences and Management of Chronic Pain for Immigrant Women in Saskatchewan: An Exploratory Qualitative Study*

Student Researcher: Yiting Fang, graduate student, College of Nursing, University of Saskatchewan, phone number for College of Nursing: 306-966-6221, email address: yif244@usask.ca.

Principal Supervisor: Dr. Geoffrey Maina, faculty, College of Nursing, University of Saskatchewan, phone number for College of Nursing: 306-765-3887, email address: geoffrey maina@usask.ca.

Purpose of the Research:

The aim of the study is to explore immigrant women's experiences living with chronic pain in Saskatchewan. The purpose of this study is to learn how immigrant women perceive and manage their chronic pain, what factors would affect chronic pain, and how they access the healthcare system for chronic pain.

Procedures:

You are invited to participate in an interview because you have indicated that you are an immigrant woman with chronic pain lasting more than three months. This individual interview will last for one hour and the focus will be on your experiences with chronic pain. The interview will be conducted via phone or Zoom, which is a popular and safe online video conferencing platform (please see the link to the platform's privacy policy: https://explore.zoom.us/en/trust/privacy/). Please do not make an unauthorized recording of the interview.

You are free to not answer any question you don't want to, or even ask to terminate the interview if you don't want to proceed with it. The interview will be audio-recorded under your permission so that the interview information can be transcribed after the interview. Only the student researcher and PI will interact with the raw data and the student researcher will transcribe the recordings. You can request that the recorder be turned off at any time without giving a reason. After your interview, and before the data being included in the final report, you will be given the opportunity to review the transcript of your interview, and to add, alter, or delete information from the transcript as you see fit. You will have one week to review the transcripts and return the revisions. If we do not receive any revisions within a week, we will use your data as is. Please feel free to ask any questions regarding the procedures and goals of the study or your role.

We may invite you to a follow-up interview to clarify your responses.

Potential Risks:

You may feel stressed or upset when you talk about your experience of immigration or how you have struggled with chronic pain during the interview. If you feel stressed or sick, the interview will be immediately stopped, and you can have a rest. If, after the interview, you feel unhappy, it may be helpful to discuss it with a support person, such as your family or friend who could help you relax. If you feel suicidal or in a crisis, you can call the Saskatchewan Health line at 811; National Suicide Prevention Lifeline (Lifeline) at 1-800-273-TALK (8255), or text the Crisis Text Line (text HELLO to 741741; 24-hour service) for counselling with a mental health professional.

Potential Benefits:

There will be no direct benefit to you, but your participation is likely to help the researcher find out more about how Canadian immigrant women perceive and manage chronic pain, what factors affect their chronic pain experiences and how to access healthcare services.

Compensation:

Participants will receive a $15 gift card. You can keep it, even if you withdraw during the interview. Please note that we will keep a record of your receipt of this compensation for seven years for audit purposes.

Confidentiality:

Please note that although the researcher will make every effort to safeguard your data, the privacy of your data cannot be guaranteed, due to the technical vulnerabilities inherent to all online video conferencing platforms. The videoconference or phone interview will be conducted in a private area of the researcher's home or office that will not be accessible by individuals outside of the research team during the data collection. It is better for you and the study if you have the interview in your home or a private location, which could help protect your confidentiality. The information obtained in the study will be used for research purposes only. You will be identified using pseudonyms and you can choose your pseudonym or, if you prefer, will be assigned a pseudonym. Besides, the information recorded is confidential, and no one else will access the information recorded during your interview apart from the PI and the student researcher. The results of this research will be used in the student researcher's thesis; the results may also be presented at other conferences and/or published (e.g., in an academic journal). All results presented or published will be in aggregate; you will not be identified individually. The data will be kept for 5 years after the final publication. After this time, all documents will be confidentially shredded and electronic data, including the recordings, will be permanently erased.

Please put a checkmark on the corresponding line(s) to grant or deny permission. If you choose not to be recorded, we will make a record of the interview using field notes:

I grant permission to be audio recorded	

Storage of Data:

The use of Zoom allows the user to restrict the routing of the data to servers in certain regions, such as Canada, which ensures that all data transmitted using their software will only be routed through Canadian servers. The principal supervisor’s password-protected Usask computer will store the electronic data during data collection and analysis. The data will also be backed up on the principal supervisor’s Usask DataStore. The principal supervisor’s computer account and the file containing the key and other electronic data will be encrypted with a password. A master list will be created that links your identifiers, including names and contact information, to your pseudonyms and data. The master list and consent forms that include the identification of the participants will be stored separately from the raw data on the PI’s DataStore for 5 years after the final publication and the access to the data will be restricted to appropriate parties. All physical data and forms (e.g., consent form) will be stored behind at least two locks in a locked cabinet in the PI’s locked University of Saskatchewan office for 5 years after the final publication, after which it will be destroyed.

Right to Withdraw:

Your participation in this research is entirely voluntary. It is your choice whether to participate or not and you can choose not to answer any questions you’re not comfortable with. If you choose to withdraw or not to participate in the study, there will be no consequences to you whatsoever. Your participation or non-participation will not affect your access to services (such as health care or school), employment, or how you will be treated. After participation in this research, if you wish to withdraw, you can withdraw within one week after receiving the transcript of your interview as your data will be analyzed after that time. If you choose to withdraw before the deadline, any of your data will be deleted from the research project and destroyed.

Follow up:

If you want to know the research results, please feel free to contact the researcher (phone number: 306-966-6221; email address: yif244@usask.ca). A brief summary of the research results that is easily and understandably accessible would be available by August.

Questions or Concerns:

If you have any questions, please do not hesitate to contact the researcher: yif244@usask.ca. This research project is approved on ethical grounds by the University of Saskatchewan Behavioral 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.

Oral Consent:

I read and explained this consent form to the participant before receiving the participant’s consent, and the participant had knowledge of its contents and appeared to understand it

______________________________	______________________________	________________
Name of Participant	*Researcher’s Signature*	*Date*

Appendix D: Interview Guide

Part 1: Screening questions for inclusion in the study

Date: ______________________ Name (pseudonyms): ______________________

1. How old are you?
2. Which country are you from?
3. At what age did you move to Canada?
4. How long have you lived in Canada?
5. Please tell me all the areas in your body where you have had pain
6. How long you have experienced chronic pain?
7. How often the pain occurred per month?
8. What caused your pain?

Part 2: Draft Interview Questions

Segment 1: The perception and management of chronic pain.

2. How has moved to Canada affected your chronic pain experiences or how has living in Canada affected your chronic pain (after you move to Canada, the living or working environment may change, how do these changes affect your experiences of chronic pain)?

3. How does your chronic pain affect you (quality of life; mental health; occupation; social development)?

4. Do you think people in your home country experience chronic pain differently from people in Canada?-- Why are you not doing what Canadians are doing regarding chronic pain?

5. Do you have specific strategies for managing/decreasing your chronic pain? --what type of medicine you are taking? who is prescribing them?

6. Does anyone help you manage your chronic pain, and if so who (family, friends, professionals etc.)?

7. Is there anything that prevents you from managing/decreasing your pain?

Segment 2: Factors affecting your experience of chronic pain.

8. the first one is about culture. culture is explained as the language, norms, values and beliefs. And there are some differences between Chinese culture and Canadian culture. so I wonder how these cultural differences affect your chronic pain?

9. What other factors might shape your experiences of chronic pain

Segment 3: Experiences of access to healthcare for chronic pain.

10. Have you sought health care for chronic pain (Western therapies; alternative therapies)?

11. What are your experiences of the Canadian healthcare system compared to your home country regarding the management of chronic pain?

12. What challenges have you experienced accessing health care services for chronic pain (language; transport; the cultural difference between the provider and the client)?

13. Have you experienced discrimination, prejudice or racism while accessing health care for your chronic pain (institutionalized, personally mediated, and internalized racism)?

Segment 4: Last remarks

14. the last question is would you like to share anything else that has not been discussed yet in this interview?

15. How are you feeling right now? (*Ensure that the participant is comfortable with the content that was shared*)

You have very good ideas. Our questions ended there. Thank you very much.