

**Exploring International Graduate Nursing Students' Experiences With, and Response to,
the COVID-19 Pandemic and Public Health Measures in Canada:
An Interpretive Descriptive Study.**

A Thesis Submitted to the
College of Graduate and Postgraduate Studies
In Partial Fulfillment of the Requirements
For the Degree of Master of Nursing
In the College of Nursing
University of Saskatchewan
Saskatoon

By

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Abstract

Background: The COVID-19 pandemic and public health measures affected international graduate nursing students in diverse ways. The COVID-19 pandemic brought about the closure of educational institutions and the migration to remote teaching and learning. These and related actions limited access to resources such as office spaces and library services for students. In addition, many international students who worked on and off-campus lost their jobs, triggering financial crises. The lockdown and ban on international travel to protect the public from the COVID-19 virus meant that international students could not leave Canada to visit their loved ones abroad. These restrictions had a potential to affect the wellbeing of international students.

Aim: The aim of the study was to explore international graduate nursing students' experiences with, and response to the COVID-19 pandemic and associated public health measures at a university in a Prairie Province.

Method: Interpretive Description (ID) was used to explore the experiences of eight international graduate nursing students in a nursing program located in a Prairie Province, Canada. Semi-structured individual interviews were conducted with participants after which the data were then transcribed and analyzed using six phases of thematic analysis.

Findings: The study yielded three major themes: a) COVID-19's Disruptions; b) Coping with COVID-19 Disruptions; and c) Finding Meaning and Growing amid COVID-19's Disruptions.

Participants reported financial difficulties due to the loss of financial support and jobs.

International students who continued working in essential services such as long-term care facilities at the peak of the pandemic were exposed to the COVID-19 infections, however; the jobs provided financial stability for them. International students reported fear and worry about loved ones abroad, as some developed symptoms of mental health disorders as a result.

Conclusion: The COVID-19 pandemic affected international graduate nursing students' wellbeing in various ways. Despite the impact on their wellbeing, they were resilient and continued their studies. They employed coping mechanisms such as talking to family members and friends via social media channels. Some also sought help from mental health specialists to mitigate difficult challenges of the COVID-19. Loss of community on campus may have been the most profound loss to the international graduate nursing students.

Keywords:

COVID-19; pandemic; international graduate nursing students; Interpretive Descriptive.

Acknowledgment

I want to sincerely express my appreciation to the international graduate nursing students who took part in this study. For making time to share your insight and experiences of the COVID-19 pandemic, thank you! Special thanks to everyone who assisted me throughout my Masters of program. I am grateful for your support and your insightful feedback on my work. I want to express my most sincere appreciation to my academic supervisors Dr. Arlene Kent-Wilkinson and Dr. Geoffrey Maina for making time for my work and giving me the needed advice, encouragement, and the insightful feedback on my work. I appreciate you both! Thank you for the patience you had for me. Each of you brought a different perspective to my life in general and my perspective about academic life which helped broaden my understanding. You both have coached me well. To my thesis research committee, Dr. Li and Dr. Bally, thank you so much for all you did for me. To my family and friends who encouraged and kept me going even in the most difficult times, many thanks to you all. To all who inspired me along the way and kept me going, thank you. God bless you all!

Dedication

This work is dedicated to the Almighty God for His unwavering love and protection all these years. I also dedicate this work to my family and friends for the unrelenting support and prayers to make this happen. To my late kid brother, Bosco Asayah who passed on to glory in 2018, I dedicate this work to you, may the Lord keep you safe! I also dedicate this work to my wife, Stella Atuguba for her support and prayers.

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List of Abbreviations

APA–American Psychological Association
CBC–Canadian Broadcasting Corporation
CIC–Immigration and Citizenship Canada
CofN–College of Nursing
COVID-19–Coronavirus Disease
DASS–Depression, Anxiety Stress Scale
GAD–General Anxiety Disorder Scale
ID–Interpretive Description
IES–Impact of Event
IRCC–Immigration, Refugee and Citizenship Canada
ISSAC–International Students and Study Abroad Centre
MERS–Middle East Respiratory Syndrome
MHA–Mental Health America
MN–Master of Nursing
PHAC–Public Health Agency of Canada
REB–Research Ethics Board
SARS–Severe Acute Respiratory Syndrome
USASK–University of Saskatchewan
WHO–World Health Organization

Chapter 1: Introduction

Studying overseas expands one's worldview, increases career opportunities, and grants students international experience and access to high-quality education in foreign countries (Banjong et al., 2016; Calder et al., 2016). Canada is a preferred destination for international students, behind only the United States of America and Australia globally (Citizenship & Immigration Canada [CIC] News, 2020, February 20).

There are about 642,000 international students in Canadian post-secondary institutions, representing more than twenty percent of the post-secondary student population (CIC News, 2020, February 20). Affordability, availability of preferred program choice, strong quality education, Canada's reputation as a safe, multicultural and tolerant society, and the opportunity to obtain permanent residency are cited reasons that draw international students to Canada for their education (Calder et al., 2016; CIC News, 2020, February 20; Curry, 2020, May 1).

My experience as an international student during the COVID-19 pandemic was the primary motivation for conducting this study. Some challenges faced by international graduate students in foreign countries include financing and cultural differences. Having experienced both these challenges, I struggled in adjusting to my new environment coupled with the stress of the COVID-19 pandemic. I therefore felt the need to inquire about the experiences of other international graduate students during the pandemic. This experience inspired my thesis topic: *Exploring International Graduate Nursing Students' Experiences With, and Response to, the COVID-19 Pandemic and Public Health Measures in Canada.*

Public health measures are actions taken by individuals and institutions, local and national governments, and international bodies to slow or stop the spread of an infectious disease, such as COVID-19 (Ayouni et al., 2021). These measures include: travel restrictions,

quarantine of travelers arriving from affected countries, provincial lockdowns, school closures, restrictions of mass gathering, isolation and quarantine of confirmed cases and close contacts, social distancing measures, compulsory mask wearing, contact tracing and testing, and personal protective equipment use among health workers. The measures are believed to be effective in mitigating the spread of COVID-19 (Ayouni et al., 2021).

I chose the manuscript format thesis option over the traditional chapter format, however both options would ensure my findings are made known to educational institutions and the public and add to the body of nursing knowledge. My thesis is organized into five chapters:

1.1 Organizational Overview

- Chapter 1 is the introduction to the thesis. In this chapter, I present international graduate student experiences at a university in the Prairie Provinces in Canada, and the declaration of COVID-19 a pandemic and early public health measures instituted by the provincial government. The study objectives, research questions, and significance of the study are presented in this chapter.
- Chapter 2 is the literature review and focusses on international students' experiences with, and response to the COVID-19 pandemic and public health measures in one Canadian post-secondary institution. The search strategy of the review is described, along with the key search terms, scope of the review, data bases searched, inclusion and exclusion criteria, and gaps in the literature.
- In chapter 3, I describe the methodological approach to the study, the study methods, settings, recruitment procedures, data collection, management, and analysis. Rigor and ethical considerations have also been presented in this chapter.

- Chapter 4 is a manuscript that was developed from the study findings. Findings from the study including: COVID-19's Disruptions; Coping with COVID-19 Disruptions; and Finding Meaning and Growing amid COVID-19's Disruptions have been discussed. Implications for future education, practice, and research, have been also presented in this chapter.
- Chapter 5 covers four emerging issues from the study: Concerns arising from conducting research with students; conducting research during the COVID-19 pandemic; therapeutic value of interviews; and, ethical issues of international students providing care during COVID-19 in Spring/Summer of 2020.
- The references for all chapters and appendices are provided at the end of chapter five.

1.2 International Students Experience at the College of Nursing, University of Saskatchewan

The College of Nursing (CofN), University of Saskatchewan (USask) offers various graduate programs for registered nurses to advance their nursing career (USask, 2020a). These programs include Master of Nursing (MN) (Course-Based and Thesis), Primary Health Care Practitioner (NP), Post-Graduate Nurse Practitioner Certificate (NP), and the Doctor of Philosophy in Nursing (PhD) (USask, 2020a). Distributed, online and remote teaching and learning options make the nursing program accessible to students from anywhere (USask, 2020a). Many students, however, choose to attend programs in person in order to participate in and benefit from extracurricular opportunities, including the personal and professional benefits of living in Canada, participating in Canadian lifestyles, forming professional networks, and accessing state-of-the-art academic resources.

In my own case, I chose USask for my master's degree because it is one of Canada's fifteen research intensive universities (U15). Additionally, at \$6730.80 per year in 2020-2021, the cost of tuition was much lower than that the \$8700 and \$8776.74 annual fees at the Universities of Alberta and Manitoba respectively (Marianne, 2020, August 17; University of Alberta, 2020). The comparatively low cost of living in Saskatoon was another attractor, as was the perception that Saskatchewan, compared to other jurisdictions, offered a facilitated pathway to Canadian Permanent Residency (Canada Permanent Residency, 2018, November 12).

I arrived in Canada in September of 2019 and commenced my graduate program. I struggled to settle into the nursing program at the CofN, primarily because of the instructional differences between this university and the University of Ghana, where I completed my undergraduate education. My undergraduate education was comprised of in-person instruction, which increased instructor-student interaction. Thus, I took time to adjust to the asynchronous model of instruction used to teach graduate courses at the CofN. Like many international students taking the Master of Nursing Courses, I struggled with lack of resources including a printer for schoolwork, a good laptop, and most especially challenges navigating the then Blackboard online learning management system (now Canvas). Therefore, I required more than average support from the CofN librarian to access library resources. I also found that the scholarly writing used in Canada: *i.e.*, using American Psychological Association (APA, 2020), is a requirement for all students at the CofN.

Although I was optimistic regarding self-support for my program, unforeseen circumstances brought significant financial uncertainty. Since most nursing scholarships and bursaries are only available to Canadian citizens and permanent residents, international students, including myself, needed to find alternative ways to meet our financial obligations. This added

pressure to the existing stress that international students often experience settling into a new environment and learning to use an unfamiliar online platform and writing style.

To the CofN's credit, despite these early challenges, supervisors and faculty members were supportive of international students. This support was crucial to the quick acclimatization of international students at the CofN. As I began to settle into my program, close to the end of the fall 2019, when starting to integrate well into the Canadian way of life, the COVID-19 pandemic beginning in March, 2020 brought turmoil and chaos that was unpredicted, for myself and other international students. The COVID-19 pandemic changed the world, as many countries went into lockdown with strict public health measures to contain the virus. These public health measures affected all aspects of life for all people globally. All students had to quickly adjust to a new normal of learning (completely remote or online) in the COVID-19 pandemic.

1.3 Declaration of COVID-19 a Pandemic

The coronavirus (COVID-19) is an infectious disease caused by a newly discovered novel coronavirus. The COVID-19 is contracted by breathing in droplets containing the virus (World Health Organization [WHO], 2020d, September 14). The COVID-19 virus can be contracted via aerosol; the liquid droplets that come out when we talk, cough, and sing (Jimenez, 2020, August 25; Morawska, 2020, August 24). The WHO (2020d, September 14) reports that people with underlying medical conditions including cardiovascular diseases, cancer, diabetes, chronic respiratory disease, and the elderly are more likely to develop complications requiring special treatment when infected with the COVID-19 virus. Some manifestations of the COVID-19 infections include: fever, tiredness, loss of taste or smell, cough, shortness of breath, and more severely, an infected person can develop pneumonia, severe acute respiratory syndrome or death (WHO, 2020d, September 14).

First recognized in Wuhan City, China, the COVID-19 virus rapidly spread globally and was declared a pandemic by the WHO (2020b) on March 11, 2020. The federal Government of Canada in 2020, in consultation with Public Health Agency of Canada (PHAC), responded to the WHO's declaration of COVID-19 as a global pandemic by putting measures in place intended to limit the spread of the virus (Public Health Agency of Canada [PHAC], 2021, August 20). These measures included: intensifying public education about the virus and how to limit its spread through social and physical distancing, hand washing, encouraging quarantine, and self-isolation for those suspected or confirmed to be infected by COVID-19; instituting mandatory self-isolation of international travellers; and, closing international borders (PHAC, 2021, August 20).

Due to the rate of spread of the virus, the Canadian Government announced the closure of borders to all international travellers except Americans, and few other exceptions on March 20, 2020. The closure of international borders meant that international travel was impossible for most international students (Firang, 2020, July 14; USask, 2020f, March 10). At the provincial level, in consultation with the Saskatchewan Health Authority, the province of Saskatchewan declared a COVID-19 state of emergency on March 18, 2020 (Government of Saskatchewan, 2020, March 18). The provincial government, in its effort to stop or contain the spread of the virus, reemphasized the directives of the federal government aimed at stopping the spread of the COVID-19 virus. These included encouraging social and physical distancing, self-isolation for those exposed or infected with the COVID-19 virus, mask-wearing, and tightening of the borders (Government of Saskatchewan, 2020, March 18). These public health measures, just like the federal government's, also had implications for international students in the province of Saskatchewan.

To assist Saskatchewan residents during these times of COVID-19, the province established the Social Services Pandemic Response Ministry to provide additional funding to emergency shelters across the province for vulnerable citizens and organizations (Government of Saskatchewan, 2020, March 18). The provincial government also instituted financial relief programs such as the Temporary Wage Supplement for low-earning essential workers. The City of Saskatoon waived bus transit fees for a couple of months from March through to June 2020, from which the researcher benefited.

In response to the provincial public health emergency, USask officially moved to remote learning on March 19, 2020, for the remainder of the 2020 winter term and subsequently extended it through the spring/summer terms, as well as the Fall 2020 term (USask, 2020d, January 27; 2020g, March 19; 2020h, March 20). The university also suspended all non-essential campus activities and gatherings, including international student gatherings, cautioned international students travelling home, and reinforced strict adherence to the public health guidelines (USask, 2020c; 2020f, March 10; 2020g, March 19). The USask also made the wearing of face masks compulsory for members of the university community as it gradually resumed limited on-campus activities in August (USask, 2020i, August).

The swift migration to remote learning and the university closure was challenging to some students, who struggled to adjust to online learning. Moreover, campus closure led to a loss of income for students who worked at Canadian universities (Firang, 2020, July 14). The USask provided relief measures such as freezing tuition for the 2020/2021 academic year, postponement of deadlines for tuition payments, and provisions of bursaries and interest-free loans to students (Education News Canada, 2020, May 11), even though not all students benefited from these awards and bursaries. The university also made available mental health services for students

experiencing mental health and psychological challenges amid the uncertainties of the COVID-19 pandemic and its public health measures (USask, 2020e, March 3). However, students may choose not to utilize these services due to the stigma related to mental health (Andrew, 2020, September 19).

1.4 Purpose of the Study

The COVID-19 pandemic is a recent public health crisis with unique public health measures such as the closure of educational institutions, ban on international travel, lockdown orders and social and physical distancing. Therefore, the purpose of the study was to explore international graduate nursing students' experiences with, and response to the COVID-19 pandemic and public health measures put in place to protect the public from the virus at a nursing program in the Prairie Provinces. An international graduate nursing student population was chosen for this study given that reaching out to them to participate in the study would not be challenging as a nurse colleague who also experienced the COVID-19 pandemic. My own experience as a graduate nursing student was one other motivating factor to my choice of this population for the study.

1.5 Research Questions

The following research questions guided the research:

1. What have been the experiences of international graduate nursing students with the COVID-19 pandemic and public health measures instituted?
2. How did international graduate nursing students cope with the COVID-19 pandemic and the public health measures?

1.6 Significance of the Study

The protocols to prevent the spread of COVID-19 and the impact of the pandemic itself may have had a tremendous impact on international graduate nursing students. Understanding their experiences was critical as this study explored how international graduate nursing students registered at a nursing program of a university were affected by the pandemic and associated public health measures. The study findings can inform educational institutions on how to better prepare and support international students, not only for the short term, but in the long run during unforeseen crises. Moreover, study findings may help implement interventions that focus on mental health and wellbeing among international graduate students.

Another major significance of this study was that the findings broadened our understanding of the experiences among international students in Canadian universities and the challenges they faced, which added to the existing body of knowledge. Given that there was little information about the impact of a global pandemic on international students, the study findings may improve nursing practice as healthcare professionals could draw on international students' COVID-19 experiences.

1.7 Summary of Chapter 1

In summary, this chapter addresses the experiences of some graduate students in a nursing program of a university in a Prairie Province in Canada and early measures taken by the federal and provincial Governments to contain the COVID-19 pandemic. In this chapter I discussed the early impact of the pandemic on international graduate nursing students in Canada. The study's purpose and objectives have also been outlined in this chapter.

Chapter 2: Literature Review

The impact of the COVID-19 pandemic and the public health measures instituted to ensure public safety was overwhelming for international graduate students due the swift migration to remote teaching and learning and the university closure. Some students struggled to adjust to online learning. Moreover, campus closure led to a loss of income for students who worked on campus. The fact that international students could not travel back to their home countries due to the international travel ban was challenging. The literature review explored international graduate nursing students' experiences with, and response to the COVID-19 pandemic and instituted public health measures. Both published and grey literature were searched to uncover information about these experiences.

Due to the rapid succession of events that occurred after March 11, 2020 when COVID-19 was declared a global pandemic (WHO, 2020b), there were corresponding publications in the literature early in spring of 2020 about the effects of the pandemic. By the end of 2020, an anomaly was evident in the grey and published literature produced in 2020, clearly showing the progression of outcomes occurring within the time frame of March 2020 to about March, 2021, exactly a year when COVID-19 was declared a pandemic. For this reason, although it is not correct by current American Psychological Association (APA, 2020) standards, the author has chosen to include the full year, month and day with the citations showing the exact dates within 2020 and 2021 of the publications of the research/studies and when public health measures were instituted.

2.1 Type of Literature Review

A targeted or focused literature review was done for this study. This is a non-specific literature review that is meant to be informative, rather than all-encompassing, review of the

literature (Huelin et al., 2015). A focused review takes an in-depth but not systematic approach to a specific research question. This type of review may or may not follow a predefined protocol or be based on a selection of current high-quality articles on the topic of interest.

Targeted review was more appropriate given that the aim of the study was to provide information on the experiences of international graduate nursing students to the pandemic and how they responded to the public health measures. The targeted or focused literature review, a non-systematic review provides comprehensive approach to a specific research question based on selection of current relevant articles on the topic of interest (Huelin et al., 2015). Therefore, available relevant articles on the topic of interest were reviewed.

2.2 Inclusion and Exclusion Criteria

To gain a broader knowledge about the impact of the COVID-19, and with limited research on the research topic, the literature review covered the overall experiences of the COVID-19 pandemic and the public health measures on college or university students. Papers published in languages other than English were also excluded.

2.3 Search Strategy

A literature search across the health disciplines was conducted by searching four academic databases: PubMed, PsychINFO, Scopus, and Web of Science databases from March 2020 to October 2020, when COVID-19 was declared a pandemic. Also, this was the timeframe when the student researcher conducted the literature review and applied for ethics approval after a successful proposal defence. Relevant studies were reviewed after data collection to add to the international students' experiences of the pandemic from the time the literature review was done. The search terms included "Wellbeing" OR "Experience" OR "Response" OR "Psychological health" OR "Stress" OR "Anxiety" OR "Depression" AND "impact" AND "Coronavirus" OR

“COVID-19” OR “Pandemic” OR “Crisis” OR “Ebola” OR “Severe Acute Respiratory Syndrome” OR “Middle East Respiratory Syndrome” OR “H1N1 influenza” AND “International students” OR “Immigrant students” OR “Foreign students” "Pandemic" OR "Crisis."

2.4 Search Results

The literature search at the time yielded the following studies that discussed the implications of the COVID-19 pandemic to college/university students in general with no specific mention about international graduate nursing students (Cao et al., 2020, May; Kaparounki et al., 2020, May 19; Mackolil & Mackolil, 2020, May 8; Nguyen & Balakrishnan, 2020, October 2; Novo et al., 2020, July; Odriozola-Gonzalez et al., 2020, May 19; Rajkumar, 2020, April 10; Zhai & Du, 2020, April 17; Zhang et al., 2020, May 25). One study only discussed the impact of the COVID-19 pandemic and the public health measures on international students studying in post-secondary institutions in Canada (Firang, 2020, July 14). These search results were reviewed to provide a general overview of how the pandemic might impact international graduate nursing students' wellbeing at the U15 University.

Grey literature or non-peer reviewed reports about international students' experiences with, and response to the COVID-19 pandemic and the public health measures in Canada and students worldwide were also reviewed. This literature provided earlier information about the implications of the pandemic on international students, as published literature was not available in the early days of the COVID-19 pandemic. International students' experiences and challenges (cultural and environmental, language concerns, and financial concerns) in Canadian post-secondary institutions before the pandemic, and impact of COVID-19 on international students (wellbeing impact) have been discussed in the following sections. Racism targeting international

students of Asian origin, as well as the coping strategies to mitigate these impacts are briefly discussed below.

2.5 International Students Experiences in Canadian Post-Secondary Institutions

A requirement of the Canadian immigration service for study permit approval is that international students have a proof of financial support to sustain themselves. Therefore, international students are expected to support themselves for the entire duration of the program. However, the reality is that most international students only have the financial ability to support a section of their studies and must raise money for their tuition and subsistence through working on and off-campus. In Canada, Isabella (2020, May 6) found that, international students have limitations on when and for how long they can work off-campus. Besides the difficulties of securing a part-time job, available jobs that international students can have are not well paying, making it challenging to meet their financial needs (Isabella, 2020, May 6).

Mainich's (2013) study of persistence on the academic, social, and migratory experiences of international graduate students enrolled at the University of Montreal, identified financial limitations, and cultural and social shock as the most common challenges facing international graduate students at the University of Montreal and Canada in general. Moreover, working while studying is an added strain to international students who must also contend with loneliness and isolation, as some students do not have a social network to support them (Mainich, 2013). The ensuing transition difficulties can lead to psychological problems if not mitigated (Mainich, 2013).

According to Kelly and Moogan's (2012) study on the relationship between cultural shock and higher education performance, they found that it is mostly due to the vast differences between the host country's culture and the international students' native culture that often delays

international students' settlement and integration into their new environment. Kelly and Moogan (2012) found that international students struggle with cultural immersion and culture shock, which may prolong their settlement process. This subsequently has an impact on their academic performances. Most international students also struggle with extreme weather conditions, Canadian food, and understanding the Canadian way of life.

International students' ability to settle or integrate with the host country may be aggravated with communication challenges if they are not proficient in English or the language of instruction (Yuerong et al., 2017). International students' social adjustment and academic success may be directly affected by their level of English language proficiency. Besides language proficiency, Yuerong et al. (2017) noted that international students also face discrimination for their non-native accents, which is seen by native speakers, a standard for higher academic and social status. Thus, a deficiency in language proficiency and nonstandard accent may hamper participation in classroom activities and social engagements that otherwise would have helped them integrate into their new environment. Given the challenges international students face, they are at greater risk of experiencing mental strain if support is not adequate.

2.6 Mental Health Impact of COVID-19 Pandemic and Public Health Measures on Post-Secondary Students Globally

The COVID-19 pandemic and associated public health measures to contain the virus have tremendously affected the economic, social, and emotional wellbeing of populations worldwide including students (Cao et al., 2020, May; Franckowiak-Sochanska, 2020, April 14; Maalouf et al., 2021, January; WHO, 2020c, March 18). Most often, the decision to study abroad has personal, social, and financial implications for many international students (Yuerong et al., 2017). Yuerong and colleagues' review of the challenges facing Chinese international students

studying in the United States identified academic, social and cultural differences, language barriers, discrimination, financial stressors, and mental health concerns.

Fried et al. (2020, April 24) conducted a correlational study at Leiden University to assess the relationship between COVID-19 and the public health measures, and mental health problems among 80 students using the Depression Anxiety Stress Scale (DASS-21). Their findings revealed a low number of mental health problems among students in the first few days of their correlational study but realized an increase in mental health problems towards the end of the study. Their study participants were primarily undergraduate students and excluding graduate students. Two other studies in China showed the COVID-19 pandemic and the lockdown public health measures have indeed affected students' mental health as findings revealed an increase in anxiety, depression, stress, and substance abuse of students (Cao et al., 2020, May; Tang et al., 2020, May 13).

Furthermore, Cao et al. (2020, May) conducted a correlational study with 7143 college students in a Chinese university to evaluate the mental health situation of college students during an epidemic, the public health measures, and factors influencing students' anxiety. Their findings revealed that college students' mental health was affected by the COVID-19 pandemic and the related stay-at-home orders. The COVID-19 related stressors such as family financial challenges or instability and academic delays due to the pandemic and university closure. As well, fear of getting infected with the COVID-19 virus were associated with college students' anxiety levels using the General Anxiety Disorder (GAD-7) scale (Cao et al., 2020, May). International students live with prolonged stress while adjusting to the daily reality of the COVID-19 pandemic and the public health measures, alongside their academic activities (Mental Health America [MHA], 2020, April 21; Novo et al., 2020, July).

Mackolil and Mackolil (2020, May 8), in their review reported increased anxiety and depression among students (Kaparounaki et al., 2020, May 19; Rajkumar, 2020, April 10; Zhai & Du, 2020, April 17; Zhang et al., 2020, May 25). Misinformation, seriousness of the disease, as well as uncertainties and isolation, were associated with an increase in anxiety and depression among many individuals (Rajkumar, 2020, April 10; Tull et al., 2020, May 12). Similarly, Wang and colleagues' (2020, March 6) cross-sectional study with 1210 of the Chinese public found that individuals suffer higher levels of depression and anxiety as they navigate through the COVID-19 pandemic and public health measures. According to Wang and colleagues' study, an individual's anxiety was exacerbated by reports of a growing number of infections and death rates of the virus.

Likewise, Odriozola-Gonzalez and colleagues' (2020, May 19) conducted a cross-sectional study using the DASS-21, and Impact of Event Scale (IES) on the psychological impact of COVID-19 in a university community of 2530 participants in Spain. Their results showed a significantly higher level of depression, anxiety, and stress among students compared to other university workers. An implication from their findings is that students are the most vulnerable members of the university community to suffer any form of mental illness. They assert that students suffer from mental disorders due to the many factors that they encounter during their studies. These factors amongst others include social and financial factors. This explains why students are more prone to the consequence of the COVID-19 pandemic and the public health measures than other members of the university community in their findings. Social and financial factors that students encounter in their studies, as well as the disruptions to their academic activities by the COVID-19 pandemic and the protective public health measures have exacerbated their stress levels, anxiety, and depression, ultimately affecting their mental health

(Firang, 2020, July 14; Zhai & Du, 2020, April 17). Firang's (2020, July 14) study implies that international students may suffer the consequences of COVID-19 pandemic and the lockdown public health measures more than domestic students due to their vulnerability.

Tang et al. (2020, May 13) explorative study on post-traumatic stress disorder with 2485 participants recruited from six universities in China, argued that extreme fear of contracting the virus or a family member getting infected by the COVID-19 virus was one risk factor for the psychological distress among students. As well, the radical and unexpected changes to social life as a result of the protective public health measures due to the pandemic makes COVID-19 a social trauma, thereby putting more stress on individuals especially students (Franckowiak-Sochanska, 2020, April 14). Post-traumatic stress due to the COVID-19 pandemic has caused psychological problems, including extreme anxiety and depression to many individuals, including students (Tang et al., 2020, May 13).

Extreme fear of contracting the COVID-19 virus or a family member getting infected was one risk factor for the psychological distress among students (Tang et al., 2020, May 13). Also, Asian students were subjected to racism and discrimination in Australian, the United Kingdom, and the United States of America as they were blamed for the pandemic since the COVID-19 virus was first reported in China (Andrew, 2020, September 19; Nguyen & Balakrishnan, 2020, October 2). The psychological distress was therefore pronounced among Asian international students, as they had to deal with the fear of contracting the COVID-19 virus, not being able to travel home, and then racism. Racism undermines individuals' mental health, and people who are marginalized experience lives differently from those whose lives have not been devalued (David & Williams-Morris, 2010).

Racism is a mental health issue because it causes trauma and loss of self-worth, which precipitates or risks mental illness (David & Williams-Morris, 2010). A study by David and Williams-Morris (2010) on how racism affects African Americans' mental health showed that racism causes socioeconomic difficulties, access to resources, and substandard living conditions for the affected individuals. Most mental health issues people experience today may be a result of past traumas (David & Williams-Morris, 2010). Discrimination and derogatory remarks stimulate psychological and physiological reactions, which affects the mental health of the victims (David & Williams-Morris, 2010).

Sleep quality was found to be directly linked to the number of deaths arising from the COVID-19 pandemic. Zhang and colleagues' (2020, May 25) study with 66 college students assessing the adverse impact of the COVID-19 outbreak on Chinese college students' mental health showed that death count arising from COVID-19 affects sleep quality and has negatively impacted emotions, stress, and anxiety of these students. According to the authors, inadequate or insufficient sleep quality directly impacts an individual's stress level, which may affect their mental health. Fear of the virus, anger due to the unprecedented changes to social life due to the public health measures, and inefficient sleep quality due to the numbers of fatalities arising from the pandemic had a negative connotation on students' wellbeing (Torales et al., 2020, March 31; Zhai & Du, 2020, April 17; Zhang et al., 2020, May 25).

Notably, fear was one significant risk factor to contribute to the mental health challenges of people, as seen in Torales and colleagues (2020, March 31) systematic review, linking fear of the COVID-19 virus to the lack of sleep and the subsequent mental health issues. Likewise, other researchers argued how fear of contracting the virus and infecting loved ones could impact the wellbeing of individuals (ITV News, 2020, October 14; Tang et al., 2020, May 13).

2.6.1 Substance Abuse as Students' Coping Mechanism

Substance abuse was reported as one of the coping mechanisms by students to temporarily manage their frustrations brought about by the COVID-19 pandemic and associated public health measures. The lockdown measures disrupted students' way of life as they could not meet on campus. Students, especially international students were hence, disconnected from friends and their compatriots due to the university closure, as the university served as a common meeting ground for them (Zhai & Du, 2020, April 17). They study remotely without their friends, and some struggle with loneliness and isolation, which is frustrating to them (Kaparounaki et al., 2020, May 19; Zhai & Du, 2020, April 17). Consequently, some resorted to maladaptive coping mechanisms such as using substances to temporarily cope with their frustrations and distress, resulting in suicidal ideation/thoughts and suicide since substance abuse is a risk factor for suicide (Zhai & Du, 2020, April 17).

Additionally, some students' research projects and internships were halted due to the closure of university campuses. The delay in planned projects and graduation due to the pandemic caused heightened frustrations, anxiety, and depression for students (Kaparounaki et al., 2020, May 19; Zhai & Du, 2020, April 17). Hence, some students abused substances to temporarily manage their frustrations (Torales et al., 2020, March 31; Zhai & Du, 2020, April 17).

2.6.2 Dealing with Anxiety and Fear

Since COVID-19 is still prevalent worldwide, its impact on the wellbeing of populations is of significance. People are continually adapting to the new normal in their daily routines to meet the requirements of the ever-changing government and public health directives. Students must adjust to these ever-changing new routines with a lot of stress and anxiety. The stress,

anxiety, and depression are related to the fear of the pandemic, grief about the loss of a loved one, loss of income, and isolation from loved ones (WHO, 2020a, January 23). As people gradually return to work, and businesses slowly reopening, the anxiety and fear associated with COVID-19 continually increase. Many people are anxious about possibly exposing themselves and their families to the virus (ITV News, 2020, October 14).

Undergraduate student nurses in the United Kingdom recruited to fight the COVID-19 crisis shared their experiences of how overwhelming the COVID-19 pandemic was to them and the fear it presented to them as frontline workers (ITV News, 2020, October 14: Ramluggun, 2020, August 10). In a report on ITV News about a chapter in a published book entitled '*Living with Fear: Reflections on COVID-19*' published in August 2020, the students indicated it was challenging to overcome the pandemic fear and anxiety of exposing their loved ones to the virus as they fought the pandemic (Ramluggun, 2020, August 10).

2.7 Gaps in the Literature and Limitations

With COVID-19 being a novel coronavirus, few published studies had been done on international graduate students' experiences with, and response to the COVID-19 pandemic and the related public health measures. The literature search to establish international students' experiences in previous pandemic/epidemics and crises did not yield the desired results; instead, the results indicated the experiences of immigrants in general, with no mentioning of international students. The results implied that studies of international graduate students' experiences in previous pandemics or crises had not been well documented.

The literature review on the topic was based on available published studies at the time the review was conducted. For a master thesis with limited timeline, there had to be limits to what was feasible as the pandemic persisted with new studies springing out daily. Although there

was an abundance of studies published worldwide on topics relevant to this research, studies published in the early months when the COVID-19 pandemic was just beginning to take hold with public health measures taking effect provided unique contributions to this study. The early months of the pandemic was crucial and overwhelming for all, as the world was brought to a standstill by the COVID-19 pandemic and the public health measures. Initially, in March and April of 2020, the grey literature came out ahead of the published studies conducted. As the relevant peer reviewed studies were reviewed after data collection and because new studies were coming out daily, it was important to include the exact dates in 2020/2021 month/day of when the studies were published in the in-text citation.

There was not much known about the COVID-19 situation in a North American context and how it would affect international students given their sociodemographic and economic profiles are different from those of previous studies. Qualitative research in the North American context was thus, ideal to reveal experiences of international graduate nursing students with the COVID-19 pandemic and the associated public health measures. This would provide valuable information to better support international students in future crises.

2.8 Summary of Chapter 2

In summary, in this chapter, I covered what the grey and published literature had to say about the experiences of international graduate students in post-secondary institutions during the COVID-19 pandemic from the time frame of March 2020 to March 2021. The impact of the pandemic on international students in Canada and globally have been highlighted.

Chapter 3: Methodological Approach

To explore international graduate nursing students' experiences with, and response to the COVID-19 pandemic and the associated public health measures, I adopted the Interpretive Descriptive (ID) approach (Thorne, 2016). The Interpretive Descriptive (ID) design is a qualitative research design that focuses on what can be applied in practice settings (St. George, 2010).

Interpretive Description was the appropriate choice for this study, and for researchers who aim for a description of a phenomenon of interest, especially when the researchers seek to know more about the how, when, where, what, who was involved in the research (Thorne, 2016). The ID approach to research bases on conducting smaller-scale qualitative investigation of a clinical phenomenon of interest to the discipline of nursing. This helps in capturing themes which allows for a deeper understanding of people's lived experiences (Thorne, 2016). The aim of ID is to understand aspects of health and illness that may have implications on the clinical field (Teodoro et al., 2018). Thorne believes in interpretation of the subjective experiences of study participants, and the potential formation of themes from the collected data (Thorne, 2016).

Health researchers in the past relied mainly on the methodologic approaches from the social sciences in the conduct of their research. The assertion by the borrowed methods from the social sciences was that conclusions drawn from studies depended on the integrity of the study methods used. Instead of depending on the social sciences for nursing research, Thorne believed there was the need to have a qualitative approach to analyzing data specific to the nursing discipline (Thorne, 2016). The ID hence, generated from this need to have a qualitative research approach that generates an understanding of experiences that occur in a health practice context and to the field of nursing which would support clinical practice (Thorne, 2016).

Thorne's ID requires an integrity of purpose deriving: 1) an actual real-world question, 2) an understanding of what we do and don't know based on all available empirical evidence, and 3) an appreciation for the conceptual and contextual realm within which a target audience receive the answer we generate (Thorne, 2016). Interpretive Description provides direction to generating questions from applied disciplines and pushes the researcher into the field in a logical and systematic way. The ID also creates the context in which engagement with the data extends beyond clinical wisdom and what has already been established (Thorne, 2016).

The ID approach offers the potential to generate new insights and translate them into practice. The ID was therefore a way to breach the gap between theoretical knowledge and subjective or real-life experience (Thorne, 2016). Nurses and other applied health researchers have hence embraced the ID approach to qualitative research, as they believe the ID approach provides the appropriate philosophical orientation to inform decision making in qualitative studies (Thorne et al., 2004).

3.1 Philosophical Assumptions of Interpretive Description

The assumption of ID is that instead of constructing a theory to produce meaningful knowledge that may be applicable in the future, ID produces information that can be acted upon in a crisis (Thorne, 2016). The goal of studies that employ an ID approach is to reveal the lived subjective experiences or information of people or situations that aid in providing immediate assistance or care for such people or situations (Thorne, 2016). Interpretive Descriptive as an approach to qualitative research has a philosophical alignment with the interpretive naturalistic orientation (St. George, 2010). The ID approach uses experiences of the individual to begin the inquiry, as an individual's subjective experiences are contextual (Thorne, 2016). The ID

approach thus, acknowledges the constructed and contextual nature of human experiences, which allows for shared realities (Thorne et al., 2004).

The ID method was chosen over other methodological approaches due to its flexibility and alignment to naturalistic orientation to inquiry, generating knowledge relevant for clinical context of applied health disciplines (Thorne et al., 2004). This ID study utilized semi-structured interviews to elicit an in-depth account of how COVID-19 and the associated public health measures impacted international graduate nursing students. The interviews were conducted via WebEx as face to face was not recommended during the pandemic.

3.2 Research Setting

This study was conducted among only international graduate nursing students at one university in one of the Prairie provinces. All 13 international graduate nursing students enrolled at this university were invited to participate in the study and eight agreed to participate. An invitation was extended to international graduate students with a nursing background from their School of Public Health, to have a few more participants for this study since all international graduate students from their nursing program did not respond to the invitation. There were no responses from the public health department. However, Thorne (2016) indicated that a small sample size is suitable for an ID study if it can sufficiently answer the research questions.

3.3 Recruitment Procedures

The recruitment of participants for this study was purposive (Richards & Morse, 2013). This recruitment technique was appropriate since it offered the researcher the opportunity to invite individual participants that gave in-depth information to the purpose of the study (Thorne, 2016). The recruitment process started after ethics approval was received from the Ethics Behavioral Review Board, and an operational approval to conduct the study. In consultation with

the research supervisors, an information and invitation letter (see Appendix A) was sent to the nursing program's Coordinator, who emailed the international graduate nursing students about the intended study. Eight international graduate nursing students who were interested in participating in the study directly contacted the student researcher to express their interests. WebEx interviews were scheduled with participants after they signed and returned the informed consent form.

3.4 Data Collection Procedures

The data collection procedures included: the interview location/mode, interview processes, and data transcription and storage. Interpretive Description fits this study as it sought solutions to a pressing problem. The research questions were explored through interview questions around the following categories of impact: academic/program, employment/financial, mental health concerns/management, and the impact of the COVID-19 pandemic itself. Interviews are often conducted in interactive or face-to-face format (Richards & Morse, 2013). However, for this study, semi-structured individual interviews were conducted through WebEx due to the public health social and physical distancing measures. After receiving the signed consent forms from participants, individual WebEx interviews were scheduled with participants. The Demographic Questionnaire (see Appendix B) were asked and recorded during the interviews to capture the sociodemographic descriptive data.

Semi-structured interviews were conducted among eight international graduate nursing students (see Appendix C). This interview type was appropriate for the study as it allowed participants to express their experiences in their own words (Richards & Morse, 2013). The semi-structured interview guide included participants self-reported experiences of the COVID-19 pandemic and the public health measures on their wellbeing (emotional/psychological impact,

socioeconomic impact, and physical impact). The interview guide also included participants sources of support and how they coped during the pandemic. With consent from participants, WebEx interviews were recorded which lasted sixty to ninety minutes.

The semi-structured interviews allowed participants to share their experiences of the COVID-19 pandemic and the public health measures. Observations that were least expected, such as international students' involvement in care at the peak of the pandemic, therapeutic value of interviews noted during the interviews were included in the field notes. This information became valuable during the data analysis stage as it provided added information and explained participant's experiences of the pandemic.

3.4.1 Data Management

The researcher transcribed all the interviews conducted. Transcripts were read several times to identify any discrepancies and to contact participants for clarification if necessary. Participants were contacted for confirmation to ascertain that the transcribed interviews were truthful, and participants' experiences were not distorted by the researcher's own bias and presuppositions. The member checking and confirmation procedure also ensured that participants' suggestions were integrated in the final analysis. Participants' identifying attributes were removed from the primary data and replaced with quote numbers. All identifying attributes of participants including names, contact information, consent forms were stored electronically in a password-protected computer, only accessible to the student researcher.

3.5 Data Analysis

Data analysis in ID was derived from other qualitative methodologies, mostly grounded theory (Thorne, 2016). The field notes and memos taken during the individual interviews helped contextualize the data during the analysis process (Thorne, 2016). The transcribed data were read

several times to develop a sense of emerging patterns. In the early stages of the analysis, I looked at the broader perspective of the issues arising from the interviews not to limit the study findings. To get a better understanding of relationship of each transcript from which various relevant themes emerged, Thorne (2016) recommends that the researcher moves from a particular transcript to the whole during the initial stages of the analysis. Therefore, the researcher moved from transcript to transcript in the initial stages of the analysis.

3.5.1 Data Analysis Procedures

Thorne (2016) also recommends that the researcher use various tools and techniques in analyzing the data after the initial stage, such as coding and the use of software. However, Thorne cautioned that coding should not start early in the analysis process, as this can impede the researcher's ability to understand and question the data. Field notes were taken that became valuable during the data analysis stage as it gave the researcher added information about the data.

The ID approach to data coding follows the grounded theory approach to data coding, i.e., open, axial and selective coding. However, alternative data coding methods can be utilized due to the flexibility of ID (Thorne, 2016). Data analysis for this study hence, followed the thematic analysis procedure with six phases as outlined by Braun and Clarke (2012). The thematic approach was chosen due to its flexibility and personal familiarity with the method. The thematic analysis is a method for identifying, analyzing, and interpreting patterns of meaning (Braun & Clarke, 2012). Thematic analysis provides systematic and accessible procedures for generating themes and codes. This method also emphasizes the active role of the researcher in the data analysis processes. Thematic analysis can be used to identify patterns across and within data concerning the participants' lived experiences (Braun & Clarke, 2012). Thematic data analysis

can be used to analyze both small and large data sets, as well as in deductive and inductive analyses.

The analysis procedure started after reading through the entire data set at least once, as ideas and identification of possible patterns shaped as I read through. Braun and Clarke (2012) outlined six phases to analyzing qualitative data which include: familiarizing yourself with the data, generating initial codes, searching for themes, reviewing potential themes, defining and naming themes, and producing the report. These six phases were followed in identifying the themes. The transcripts were emailed to participants to confirm what was recorded during the individual interviews. Participants then emailed back the transcripts to confirm that the transcripts captured exactly what they had intended to say during the interviews. This was done to ensure that the recorded interviews were accurate and reflected participants' lived experiences.

The transcripts were printed and read several times while making notes directly on them to familiarize myself with the data and develop a sense of the whole. Preliminary codes were then assigned to the data to describe the content and to search for patterns or themes in the assigned codes across the different transcripts. The themes were reviewed, defined and named, and reported in three themes as will be described later in the findings.

3.6 Rigor

The credibility of this study depended on the data collection techniques, and the use of appropriate methods and design (Thorne, 2016). The use of purposeful sampling to recruit participants with a wealth of lived experiences ensured the study's credibility. Informant feedback was also utilized to ensure that the data collected reflected participants' experiences. Transferability was ensured by using the same data collection methods for all participants. A detailed description of the research method, and the step-by-step repetition to identify similar

themes were done to maintain dependability. Confirmability of the study was ensured by discussing the data with the two research supervisors and a conclusion drawn on what needed to be reported in the findings.

A description of the analysis, interpretation and how conclusions were reached also enhanced the confirmability of the study. Finally, verbatim quotes from the participants to report findings were included to ensure authenticity. Also, my experience as an international student did not influence the data collection, rather, was beneficial to better understand participants' experiences. Ethics approval through the Ethics Review Board and operational approval through the Research and Graduate Studies were obtained before data collection commenced as seen in appendices.

3.7 Reflexivity

Reflexivity typically involves examining your own judgements, practices, and belief systems during data collection processes (Richards & Morse, 2013). The goal of being reflexive is to identify personal beliefs that may incidentally affect the research process. As an international student, I shared a lot in common with the study participants including being away from family, not being able to travel home due to the international travel ban, socioeconomic difficulties due to the pandemic. Without reflexivity the data could be influenced in so many ways. Reflexivity was monitored throughout the research process by being mindful of researcher's own situatedness (e.g., background, beliefs, and experiences) that might influence the interaction between study participants and the researcher, and interpretations of the data (Berger & Sarnyai, 2015). To ensure reflexivity, the researcher made memos about participants' comments and his own thoughts during the interviews as soon as possible after interviews,

developed and continually edited his own subjective statements. Also, the researcher remained objective during the interviews and did not influence participants reactions to questions asked.

The researcher's experiences on the impact of COVID-19 did not influence or interfere with this study's outcome either before, during, or after the data collection procedures. Though ID methodology borrows from other qualitative methodologies, it contrasts with suspending or bracketing one's experiences about a given subject matter (Thorne, 2016). Researchers who use ID approach believe in transparency and do not entirely suspend their perspectives or experiences about the topic (Thorne, 2016). Interpretive descriptive researchers believe that it is difficult for a researcher to separate their feelings, experiences, and knowledge from the research study, especially if they find themselves in similar circumstances as the study participants (Thorne, 2016). The researcher found himself similar in situation to study participants. This similarity was beneficial to better understand the participants lived experiences.

3.8 Ethical Considerations

The study involved the lived experiences of international nursing graduate students; hence, ethical considerations were at the forefront, as participants' safety, dignity, and confidentiality needed to be protected. Ethics approval through the Behavioural Research Ethics Board and an operational approval through the Research and Graduate Studies of the university in the Prairie Provinces were obtained before data collection began. The study was conducted by following the ethical guidelines defined in the Tri-Council Policy Statement of the Government of Canada (Government of Canada, 2018). The researcher reaffirmed to participants the study's purpose and their role and expectations during the individual interviews. The researcher also declared to participants that participation was entirely voluntary, and participants had the right to

withdraw from the study anytime they chose to do so. Study participants were offered an honorarium of twenty dollars (\$20) to show appreciation for their participation.

3.9 Summary of Chapter 3

In this chapter, I have described why and how I applied Interpretive Description in the execution of my research project. I have also described how I used reflexivity and rigor in the study.

Chapter 4: Manuscript

Title of Paper: Exploring International Graduate Nursing Students' Experiences With, and Response to, COVID-19 Pandemic and the Public Health Measures in Canada:

Authorship: Asayah, S., Kent-Wilkinson, A., Maina, G., Li, H., & Bally, J.

Journal: Canadian Journal of Nursing Research/Journal of Community and Public Health Nursing, and Quality Advancement in Nursing Education (QANE)

Abstract

Background: The COVID-19 pandemic and public health measures affected international graduate nursing students in diverse ways. The COVID-19 pandemic brought about the closure of educational institutions and the migration to remote teaching and learning. These and related actions limited access to resources such as office spaces and library services. In addition, many international students who worked on and off-campus lost their jobs, triggering financial crises. The lockdown and ban on international travel to protect the public from the COVID-19 virus meant that international students' travel was restricted, and they could not leave Canada to visit their loved ones abroad.

Aim: The aim of the study was to explore international graduate nursing students' experiences with, and response to the COVID-19 pandemic and associated public health measures at a university in the Prairie Provinces.

Method: Interpretive Description (ID) was used to explore the experiences of eight international graduate nursing students in a nursing program in the Prairie Provinces in Canada. Semi-structured individual interviews were conducted with participants; the data were then transcribed and analyzed using six phases of thematic analysis.

Findings: The study yielded three major themes: a) COVID-19's Disruptions; b) Coping with COVID-19 Disruptions; and c) Finding Meaning and Growing amid COVID-19's Disruptions. Participants reported financial difficulties due to the loss of financial support and jobs. Those who continued working in essential services such as long-term care facilities at the peak of the pandemic were exposed to the COVID-19 infections. However, the jobs provided financial stability for such students. International students reported fear and worry about loved ones abroad, as some developed symptoms of mental health disorders as a result.

Conclusion: The COVID-19 pandemic affected international graduate nursing students' wellbeing in various ways. Despite the impact on their wellbeing, they were resilient and continued their studies. They employed coping mechanisms such as talking to family members and friends via social media channels. Some also sought help from mental health specialists to mitigate difficult challenges of the COVID-19. Loss of community on campus may have been the most profound loss to international graduate nursing students.

Keywords:

COVID-19, pandemic, international graduate nursing students, Interpretive Description

4.1 Study Background

The coronavirus disease known commonly as COVID-19, is an infectious disease caused by a newly discovered novel coronavirus, mainly transmitted through breathing in droplets containing the virus when one is in close proximity with an infected person when they cough, sneeze or exhale (World Health Organization [WHO], 2020a, January 23; 2020d, September 14). Evidence suggests that the virus can be transmitted through aerosol from an infected person, i.e., the tiny, lightweight viral particles/droplets that can float and linger in the air for extended periods of time when the infected person talks, coughs, sings, or laughs (Morawska, 2020, August 24). First recognized in Wuhan City in China, the COVID-19 virus rapidly spread globally and was declared a pandemic by the WHO (2020b) on March 11, 2020. It had been one hundred years since the world experienced a pandemic of this magnitude (i.e., Spanish flu, 1918-1920).

The federal government of Canada responded to the WHO's declaration of COVID-19 by putting protective measures in place to limit the spread of the virus. These measures included public education about the COVID-19 virus and ways of limiting its spread through: a) social and physical distancing; b) hand washing; c) quarantine and self-isolation for those suspected or confirmed to be infected by COVID-19; d) instituting mandatory self-isolation of international travellers; and, e) closing international borders (Public Health Agency of Canada, 2021, August 20). Due to the fast spread of the virus, the Canadian government announced the closure of borders to international travellers. The closure of international borders meant that both in-coming and out-going international travel were impossible for international students (Firang, 2020, July 14).

The provincial government where study participants lived reemphasized the directives of the federal government aimed at limiting the spread of the COVID-19 virus. These public health measures had implications for international students. In response to the declared provincial public health emergency, the university where participants studied officially moved to remote learning on March 19, 2020 for the remainder of the 2020 winter term and subsequently extended it through the 2021 Fall term. The University also suspended all non-essential campus activities and gatherings including international student get-togethers, cautioned international students about travelling home. The university also reinforced strict adherence to the public health guidelines with its weekly COVID-19 updates on current states of the pandemic and any revised public health measures. The swift migration to remote learning was challenging to some students who struggled to adjust to online learning. Moreover, campus closure led to a loss of income for students who worked at Canadian universities (Firang, 2020, July 14).

The closure of educational institutions and the subsequent transition to remote learning forced students to quickly adapt to an unfamiliar mode of instruction while uncertainties about the pandemic persisted. Students could not access university resources such as office space, study rooms and libraries that supported their learning. Furthermore, many international students who worked on and off-campus lost their jobs due to the pandemic restrictions and subsequently lost the needed income to support themselves, thereby triggering financial crises.

International students are vulnerable to mental stress because of settlement, acclimatization, and different demands in a new country. The COVID-19 pandemic and associated public health measures made the students more vulnerable, such as financial challenges and mental health problems due to loneliness and social isolation. If unmitigated, these stresses are likely to cause significant mental and emotional anguish and increase their risk

for developing mental health disorders. Despite the challenges that international students faced, there is limited research on the impact of COVID-19 on international students, especially from the perspectives from the students using qualitative approach. Thus, the current study aimed to explore the lived experiences of these students during the pandemic that could impact their wellbeing and investigate the adaptation and coping strategies they employed to mitigate these impacts.

4.2 Literature Review

Published and grey literature were searched to uncover information about international graduate nursing students' experiences with, and response to the COVID-19 pandemic and the public health measures. A rapid succession of events occurred after March 11, 2020 when COVID-19 was declared a global pandemic (WHO, 2020b). There were corresponding publications in the literature. Towards the end of 2020 saw an anomaly as a plethora of literature had been produced. This showed the progression of outcomes occurring within the time frame of March 2020 to about March, 2021, exactly a year when COVID-19 was declared a pandemic. The author has chosen to include the full year, month and day with the citations showing the exact dates within 2020 and 2021 of the publications of the research/studies and when public health measures were instituted.

A literature search across the health disciplines was conducted by searching four academic databases: PubMed, PsychINFO, Scopus, and Web of Science databases from March 2020 to October 2020, when COVID-19 was declared a pandemic. This was the timeframe when the student researcher conducted the literature review and applied for ethics approval after a successful proposal defence. Relevant studies were reviewed after data collection to add to the international students' experiences of the pandemic from the time the literature review was done.

To gain a broader knowledge about international graduate nursing students' experiences with, and response to the COVID-19 pandemic and the public health measures, the literature review was extended to capture the experiences of college or university students in general due to the limited available literature on international graduate nursing students. Studies on international students' experiences in past pandemics/epidemics were reviewed. This literature search was done to ascertain some information about the experiences of international students and how they have responded in previous pandemics/epidemics. Papers published in languages other than English were excluded.

In the early spring of 2020, it became evident that the impact of COVID-19 and associated public health measures to contain the spread of the virus negatively affected the wellbeing of populations worldwide including students (Cao et al., 2020, May; WHO, 2020c, March 18). Fried et al. (2020, April 28) conducted a correlational study among 80 students at Leiden University in the Netherlands to assess the relationship between COVID-19 and mental health problems using the Depression Anxiety Stress Scale (DASS-21). Their findings revealed a low number of mental health problems among students in the first few days of their study but realized an increase in mental health problems towards the end of the study. Some studies conducted in China on the impact of the COVID-19 pandemic and the public health measures on college students revealed that the pandemic affected students' mental health. The findings revealed increased anxiety, depression, stress, and substance abuse (Cao et al., 2020, May; Tang et al., 2020, May 13).

Cao et al. (2020, May) study on the mental health of college students during an epidemic reported that stressors such as family financial challenges, academic delays, and the fear of contracting the COVID-19 virus were associated with college students' anxiety levels, using the

General Anxiety Disorder (GAD-7) scale. Mackolil and Mackolil (2020, May 8) reported increased anxiety and depression among students associated with COVID-19 lockdown. Misinformation, uncertainties and isolation, have been associated with increased anxiety and depression among many individuals (Rajkumar, 2020, April 10; Tull et al., 2020, May 12). International students may suffer these consequences more than domestic students due to their vulnerability (Firang, 2020, July 14).

Fear of contracting the COVID-19 virus or a family member getting infected was one risk factor for the psychological distress among students (Tang et al., 2020, May 13). This distress was more pronounced among international students of Asian origin who were subjected to racism and discrimination in Australia, Canada, the United Kingdom, and the United States of America, and blamed for the pandemic since the virus was first reported in China (Andrew, 2020, September 19; Nguyen & Balakrishnan, 2020, October 2; Tessler et al., 2020, June 10).

To cope with the mental health impact of the COVID-19 pandemic, some students resorted to using illegal substances to temporarily manage their frustrations. Isolation that was occasioned by the closure of universities created conditions for substance misuse to happen as the students struggled to cope with their frustrations and distress (Zhai & Du, 2020, April 17).

The COVID-19 pandemic and associated public health measures had implications on the wellbeing of populations worldwide. However, what is not known is the extent to which the COVID-19 pandemic and the public health measures have impacted international graduate nursing students in Canadian post-secondary institutions, because of the limited studies on the topic. Therefore, the aim of this study was to explore international graduate nursing students' experiences with, and response to the COVID-19 pandemic and associated public health measures in Canada.

4.3 Methodology

The Interpretive Description (ID) method (Thorne, 2016) was used to explore international nursing graduate students' experiences with, and response to the COVID-19 pandemic and the associated public health measures at a university in one of the Prairie Provinces in Canada. Interpretive Descriptive study applies techniques from other qualitative research methodologies such as the coding procedure/methods from the grounded theory approach, to learn more about complex social, psychological, and health related issues (Thorne, 2016). Interpretive Descriptive design is based on the premise that instead of constructing a theory to produce knowledge that may be applicable in the future, Interpretive Descriptive researchers produce information that can be acted upon in a crisis (Thorne, 2016).

The goal of studies that employ an ID approach is to reveal the lived subjective experiences or information of participants or situations that aid in providing immediate assistance or care for such people or situations (Thorne, 2016). Interpretive Descriptive approach to qualitative research has a philosophical alignment with the interpretive naturalistic orientation. The ID approach uses experiences of the individual to begin the inquiry, as an individual's subjective experiences are contextual (Thorne, 2016). The ID approach thus, acknowledges the constructed and contextual nature of human experiences, which allows for shared realities (Thorne et al., 2004). International graduate nursing students' experiences with the COVID-19 pandemic and how each participant responded to the crisis and the public health measures were subjective. Hence the chosen research approach (ID) was appropriate given that, the subjected circumstances/experiences of the study participants were explored and recommendations made to support international graduate nursing students in future crises.

4.3.1 Recruitment of Study Participants

Recruitment of participants for this study was purposive, given that the researcher chose to explore the experiences of only international graduate nursing students of the university. Purposive sampling technique was appropriate as it enabled the researcher to invite individual participants that could provide intensive and exhaustive data to the purpose of the study. The recruitment of participants started after ethics approval was received from the ethics and behavioural review board. Operational approval was granted through the nursing program of the university in one of the Prairie Provinces before data collection.

An information and invitation letter was sent to the program coordinator who emailed all international graduate nursing students in the masters and PhD programs to inform them of, and invite them to participate in the study. The study information including informed consent was sent to study participants two weeks before interview. All participants gave informed consent to the study before data collection commenced.

4.3.2 Data Collection

The semi-structured interviews were conducted via WebEx (a platform similar to Zoom), as face-to-face interviews were not recommended during the pandemic. Participants' experiences were explored using semi-structured individual interviews lasting 60-90 minutes. Each participant was interviewed once. After the data transcription was completed, member checking and confirmation were done for participants to confirm what they said during the interviews. Field notes were taken during the interviews, however; notes taken during the first few interviews helped the researcher probe in more depth in subsequent interviews to capture significant findings in the data.

Memos made up of participants' information and the researcher's subjective opinion on issues arising from the interviews were recorded. These memos were recorded immediately after the interviews to not distort participants' experiences with the researcher's subjective opinions during the data analysis. The recorded information became valuable during the researcher's interpretation of the study findings and the data analysis stages.

4.4 Data Analysis

The recorded interviews were transcribed verbatim by the student researcher and analyzed thematically using Braun and Clarke's (2012) processes/phases. Data collection, coding, and analysis were iterative. The transcripts were emailed to participants to confirm what was recorded during the individual interviews. Participants then emailed back the transcripts to confirm they captured accurately what participants had intended to say during the interviews. This was done to ensure that the transcripts accurately captured participants' experiences and their response to the COVID-19 pandemic and the public health measures. The transcripts were printed and read several times while making notes directly on them to familiarize myself with the data and develop a sense of the whole. Preliminary codes were then assigned to the data to describe the content and to search for patterns or themes in the assigned codes across the different transcripts.

The ID approach to data coding follows the grounded theory approach to data coding; i.e., open, axial and selective coding. However, alternative data coding methods can be utilized (Thorne, 2016). Data analysis for this study hence, followed the thematic analysis procedure with six phases (Braun & Clarke, 2012). The thematic approach was chosen due to its flexibility and personal familiarity with the method. Thematic analysis is a method for identifying, analyzing, and interpreting patterns of meaning (Braun & Clarke, 2012). The method also provides

systematic and accessible procedures for generating themes and codes. Thematic analysis also emphasizes the active role of the researcher in the data analysis processes.

Braun and Clarke (2012) outlined these six phases to analyzing qualitative data which were followed accordingly: familiarizing yourself with the data by reading through the individual transcripts, generating codes which included: worry about family, fear of COVID-19 virus, loss of financial support, not able to socialize, frustration with international travel ban, working at long-term care in spite of the COVID-19 pandemic, anxiety, stress, depression, challenges with remote studies, lack of access to university resources, increased family responsibilities, financial hardship, emotional challenges, loneliness, increased appetite, weight loss due to poor eating habits, weight gain due to boredom and poor emotional state, insomnia, oversleeping and poor sleeping habits.

Codes about international graduate nursing students' response to the pandemic and the public health measures include: emotional and financial support from family and friends, spirituality, hobbies and exercises, residents at long-term care provided company and emotional support, mental health support, and support from the university in the form of bursaries and loans. Themes were therefore searched, reviewed, defined, and named: a) COVID-19's Disruption; b) Coping with COVID-19 Disruptions; c) Finding Meaning and Growing amid COVID-19's Disruption. These themes were reported as findings from the study after consultation with the research supervisors.

4.5 Rigor

The credibility of this study depended on the data collection techniques, and the use of appropriate methods (Thorne, 2016). The purposeful recruitment of participants with lived experiences ensured the study's credibility. Informant feedback was also utilized to ensure that

the data collected accurately reflected participants' experiences. Transferability was ensured by using the same data collection methods for all participants. A description of the research method, and a description of how themes were identified ensured dependability.

Confirmability of the study was ensured by discussing the data with the two research supervisors and a conclusion drawn on what needed to be reported in the findings. A description of the analysis, interpretation and how conclusions were reached also enhanced the confirmability of the study. Verbatim quotes from the participants to report findings were included to ensure authenticity. Reflexivity was exercised throughout the research process. The researcher was mindful of their own situation, e.g., background as an international student without the family here, not being able to travel home, and worries about family abroad.

As well, the researcher's personal beliefs and experiences that might influence the interaction between study participants were recorded in a memo (Berger & Sarnyai, 2015). The researcher's experience as an international student did not influence the data collection given that his personal beliefs and experiences were documented in a memo. The researcher's experiences may have been beneficial to better understand participants' experiences.

4.6 Findings

The COVID-19 pandemic and the associated public health measures instituted by the federal and provincial governments to protect Canadians against the COVID-19 virus impacted participants' physical, emotional, social, and spiritual wellbeing, both positively and negatively. The following section highlights international graduate nursing students' experiences with, and response to the COVID-19 pandemic and the associated public health measures.

In this study, eight international graduate students in the nursing program at a U15 university were recruited. Participants had diverse sociodemographic characteristics and were in

different stages of their graduate studies. Below is the table summarising the social demographic characteristics of the participants.

4.6.0 Demographic Data of Participants

Demographic Attribute	No.
Age	
21-30	4
31-40	2
41-50	2
Gender	
Male	2
Female	6
Marital Status	
Married	4
Single	4
Children	
Yes	3
No	5
Continent of Origin	
Africa	6
Asia	1
South America	1
Religion	
Christian	5
Islam	1
Sikh	1
N/A	1
Program of Study	
Masters	5
Doctoral	3
Length of Time in the Program	
1-2 years	7
3-4	1

Although the number of participating international graduate nursing students for this study was small, it did represent how international students and their countries have been impacted by COVID-19 pandemic. The male to female ratio of study participants was 1:3, similar to the lower ratio of male to female nurses in Canada which in 2019 was 8–9 percent

male (Canadian Nurses Association, 2021, March; Statista, 2019, August 9). Both male and female genders were affected equally by the COVID-19 pandemic and the public health measures. Half of the participants were married and had children who were back in their home countries. They were therefore very worried about their families especially their children.

The other demographic attributes such as age, religion, program of study, and length of time in program had no impact on the extent to which the pandemic and the public health measures affected study participants as all participants were affected alike. However, the main countries the participants came from were a typical cross-section of most international Canadian students' continent of origin: African countries, Asia, and South America. Some of the countries where participants came from such as Brazil and India, were global epicentres of the COVID-19 pandemic, hence participants being away from home were also very worried about their families.

Three major themes were developed from the semi-structured interviews with the participants. These themes are: a) COVID-19's Disruptions b) Coping with COVID-19 Disruptions; and c) Finding Meaning and Growing amid COVID-19's Disruptions. To keep confidentiality, pseudonyms were used for all study participants.

4.6.1 COVID-19's Disruptions

The COVID-19 pandemic had profound negative consequences on the physical and mental wellbeing of the participants. During the early months of the pandemic, the provincial lockdown discouraged people leaving housing accommodations for non-essential errands. A significant number of participants found themselves idle or unengaged and resulted in overeating. With no avenue to exercise, overeating brought about an increase in weight which may lead to obesity. The physical symptoms participants experienced because of the pandemic

could as well be an indicator of depressive disorders. Two participants confirmed to have sought specialist care for depressive symptoms. One participant had this to say:

My appetite increased, so did my weight, if I stay at home there's nothing much to do. If I want to have a break, the only thing I think of is 'let's have something to eat', you want to prepare something new and experiencing different kinds of food trying from different cultural backgrounds because I have time, I can make those dishes. I'm eating a lot and have gained weight. –(SME03).

For others, the stress and apprehension associated with the public health measures such as the stay-at-home orders caused them to lose their appetite, and with it came weight loss. One participant reported that she lost her appetite due to financial challenges brought about by the COVID-19 pandemic because she did not have enough money to vary her diet, as this one participant stated:

I lost interest in eating because there is nothing even to eat, if you don't have money to pay your bills, how do you buy food for yourself? So basically, you're on one particular diet and you get fed up with it.– (HFG01).

Also, in the early days of the COVID-19 pandemic, the fear and anxiety surrounding the pandemic caused some participants to experience difficulty with their sleep. The constant worries about loved ones abroad, and not sure when they would ever see them again due to the international travel ban caused sleepless nights for some participants. For others, the provincial lockdown was strange to them as they found it difficult adjusting to the new norm of managing activities of daily living, hence causing difficulty in sleep, as a participant stated:

At a point when the stress set in, I couldn't sleep. There were days I couldn't sleep, I just laid down, and I watched movies throughout the night till morning – (HFG01).

Because of the limits imposed by COVID-19 public health measures such as the provincial lockdowns, some participants were less engaged and found themselves oversleeping. Although oversleeping for some participants did help to mitigate the stress brought about by the pandemic and its public health measures, it negatively affected their academic work and performance, as a participant stated:

Usually, I use to go to bed early and wake up early, but now I find myself going to bed really late. I tried to not go to bed late, but there's nowhere to go, so I find that I go to bed late at night and wake up later in the day, and again, I become guilty about that and I might be harder on myself.--(KMK05).

Changes in eating and sleeping patterns could be positive symptoms of depressive disorders. The COVID-19 pandemic and its associated public health measures took a psychological toll on nearly all participants, which potentially increased their risks of developing mental health problems. At the onset of the COVID-19 pandemic, not much was known about the virus and its mode of transmission. Therefore, international travel was discouraged, and the international borders were closed. Most participants who had planned to travel over the summer were emotionally distraught as they could not be with their families in such difficult times of the pandemic. Participants had to rely on social media channels to keep in touch with family members. Time differences and internet connectivity was often a hindrance to effective communication on this platform. The ensuing social exclusion generated anxiety which was also exacerbated by participants' fear of getting infected by the virus. Participants also worried about family members testing positive for the virus or succumbing to it. Without any relief in sight, some participants developed depressive symptoms. Another participant commented:

My main concern is wanting to go home, but I can't go home because I'm not sure whether I can come back. Aside that, I'm also not home, my husband and my children are all alone back home where I used to support and so my fear also is for them that if they do contract it who cares for them? It has affected me a lot. It gave me a lot of stressful nights. It stressed me mentally to the point that you wake up in the morning, you don't even feel like reading for school.– (HFG01).

The social wellbeing of participants was also significantly impacted by the COVID-19 pandemic. Following the declaration of COVID-19 as a pandemic, the provincial government instituted a lockdown, as per the public health directives that led to the closure of businesses. With it came the loss of financial support for many people through layoffs. As a result, participants reported financial hardships and disruption in their studies as those who supported them, were laid off from work. The uncertainty around when the lockdown would be lifted caused the financial crisis to persist. Though some participants were employed part-time or held casual jobs in long-term care facilities and group homes, their earnings were insufficient to meet their financial obligations, as they had to fulfill other family financial responsibilities for relatives living abroad. The ensuing financial hardships and participants' ineligibility to apply for government relief programs due to their temporary residence status as study permit holders caused mental stress, thus, triggered mental health instability, as a participant stated:

I would say it really did affect me a lot, and that also results in a lot of mental instability because you wake up thinking about how you will settle your bills, and also study. It wasn't easy. When you think about the family back home, that was another thing. My children are in school, they need to pay their fees back home and I need to pay my fees here, and the little support that I would get was not coming due to the pandemic, so it

really stressed me a lot, mentally and it did impact my performance at that point.—
(HFG01).

With the lockdown came the closure of the University, which international students depended on for community and socialization. Thus, participants' way of life was disrupted as they could no longer meet on campus. Furthermore, the campus closure also meant that participants could not access university resources such as the library and study spaces. The inability to access recommended textbooks through the university library due to its closure compelled some participants to buy textbooks that they would otherwise have accessed freely had it not been the pandemic. Coupled with academic work that required shifting from classroom to remote format, the social impact of the COVID-19 indirectly affected participants' mental health, as exemplified by a participant:

It has not been easy being an international student and self-isolating; usually I would go to school and be in the office and meet people and it was better that way psychologically, getting to see people and meeting people like that worked better than now self-isolating alone in the house and doing what I'm supposed to.

Working from home has been challenging; you don't see people as much, not motivated to do schoolwork, you know which is all you have.—(KMK05).

As much as participants' social wellbeing was negatively affected by the COVID-19 pandemic, participants were able to continue with their studies as none of them had to withdraw from their program or defer to a future term. Domestic students had the luxury of time to defer their programs of study to a future term or withdraw from their programs without any consequences if they are mentally stressed and not able to continue with their academic work. Unlike domestic students, international students have limitations to their study permits as they

can only take leave from studies for a limited period. The immigration rules of the study permit of international students require that the student is in school and studying. The international student is expected to complete their program of study within a specific time frame.

Participants in this study therefore continued studying despite the impact of the COVID-19 pandemic and the public health measures on their wellbeing. They adjusted to the new way of learning in a pandemic and studying from home, as withdrawing from their programs was not an option, as it may have implications to their study permits. The COVID-19 pandemic and its associated public health measures also affected participants' spirituality (way of worship). Although some participants were able to take part in church services remotely, they could not attend these services in person. Other participants could not attend church services at all during the pandemic.

Overall, the COVID-19 pandemic impacted participants' physical, emotional, social, and spiritual wellbeing, both positively and negatively. To mitigate this impact, participants used different coping mechanisms. These coping strategies are presented in the following themes:

4.6.2 Coping with COVID-19 Disruptions

Coping mechanisms refer to the various strategies participants employed to deal with or manage the impact of the COVID-19 pandemic on their wellbeing. Some of the coping mechanisms were healthy while others were unhelpful. These coping strategies include changes to their eating and sleeping patterns, emotional support through their families and friends, and engaging in spiritual exercises, and engaging in hobbies. Some students eventually experienced symptoms of mental illness due to the impact and needed the support of mental health specialist to manage.

Due to the stay-at-home public health orders and the closure of the university, participants had more time on their hands to try out new things such as learning new recipes and therefore tried different dishes. This helped them to cope with the COVID-19 pandemic and the public health measures, as stated by one participant:

...I used to eat a lot, I used to cook a lot and eat,...I would find new recipes and cook ... I wouldn't usually eat as much if I was working--(KMK05).

In addition to overeating, participants also employed sleeping as a physical coping strategy to maintain their wellbeing. Three participants disclosed that they tended to sleep more than they used to since there was nothing else to do when they were not inspired to do academic work and could not visit friends. Oversleeping being an impact of the COVID-19 pandemic for some participants, also helped other participants to mitigate the stress brought about by the pandemic and its lockdown measures.

Emotional support was the primary coping strategy employed by all participants to manage their mental health issues during the pandemic. Since participants could not travel home due to international travel restrictions, they resorted to connecting with family members and friends via social media channels. Many participants depended on emotional support from family members and friends to cope with their mental health challenges and other emotional difficulties brought about by the COVID-19 pandemic. A few others also received various support and counselling from their study supervisors and faculty. However, two participants sought the support of mental health professionals/specialists to cope with the impact of the COVID-19 pandemic, as the emotional support from family and friends was not enough to help them deal with their mental health challenges, as stated by one participant:

If I have stress, I think I wanna let it out to my brothers, I guess I will share my concern with them. I increased the time I'm spending with my phone just talking to them, just chatting with them and with friends– (SME03).

Participants also reportedly employed social coping mechanisms to manage their mental health issues during the COVID-19 pandemic. Since participants' socioeconomic status was impacted by the COVID-19 pandemic and associated restrictions, financial support from family members and friends was a source of financial relief for participants and helped them cope. The university and the provincial government also provided some financial relief to a few participants, which, according to them, relieved them of some financial stress and helped them to cope with the COVID-19 pandemic and associated public health measures. In addition to the financial support, engaging in hobbies including: cooking, playing soccer, going to the gym, hiking, and reading were some coping strategies used by a few participants to manage the stress of the pandemic. A participant stated the following:

So, in a way the university did help us, I remember they supported us through a bursary, and then I was working in health, but my pay scale was low so the government also supported me, so those two factors also come into consideration how I was supported financially. –(AFI04).

Engaging in spiritual activities such as praying was reported as another coping mechanism that participants employed. Through prayers, participants endeavoured to cope with the uncertainties surrounding the pandemic and had absolute faith in God. Two participants indicated they were closer to God during the pandemic than they ever were before. Participants employed both private prayers and joined religious services virtually, and that, according to them, was important to their coping. Also, participants' connection with family members and

friends through various social media channels, especially other international graduate students, was another spiritual coping strategy that helped them cope with the isolation brought about by the COVID-19 pandemic and associated restrictions, as stated by a participant:

... praying, I have a very strong belief in God, we are Christians in my family.

We believe in God that what God cannot do does not exist and that really helped me a lot--(UFN07).

Despite the uncertainties COVID-19 brought, especially soon after it was declared a pandemic and over time, participants found diverse ways to thrive. For many, this time intensified their spiritual engagement as a vehicle to draw meaning during these uncertain times. Common religious activities that participants engaged in were prayers done privately or joining virtual religious activities. In so doing, they felt empowered to manage the adversity that the pandemic caused, as evidenced by a participant stating the following:

... I just focused on the best things that I can do by myself, and I was able to go to the mosque for prayers and that also helped me a lot-- (SME03).

The caregiver role participants assumed at the long-term care facilities during the pandemic helped them, as caregivers, cope with the emotional challenges of the pandemic and associated restrictions, as stated by a participant:

I've been able to secure a part-time job for myself which is where I'm getting a little income to support myself, so even though I'm not getting the money from back home, working here in is adding it, I'm getting some income from working here especially being able to support yourself.--(SFG02).

Although the COVID-19 pandemic persists, participants maintained their wellbeing through social support, financial aid, engaging in hobbies and spirituality.

4.6.3 Finding Meaning and Growing Amid COVID-19 Disruptions

Study participants found meaning and grew through the public health crisis, despite the COVID-19 and public health measures impact on their wellbeing. Early into the COVID-19 pandemic, long-term care facilities were the epicentres of COVID-19 transmission. To mitigate the spread of the infection and ensure continued care to the residents, more support workers were needed. Though ineligible to practice as registered nurses in Canada, international graduate nursing students possessed the requisite skills to provide supportive care to the residents. By taking supportive care job opportunities that became available, participants were able to earn some income to support themselves.

Although working as support workers in long-term care guaranteed an income at a time of great economic uncertainty, it also brought significant risks for contracting COVID-19 infection. Nonetheless, it brought satisfaction that by assuming the caregiver role, they felt needed and useful at a time when the health care system was under immense stress. Also, since residents in long-term care facilities were isolated from their families, participants caring for these residents found peace in their company as health care workers since they were the only people who could visit them. Given such challenging circumstances of the pandemic, seeing smiles on the faces of residents was a joy, as they found solace in caring. The joy of providing care helped participants manage through their own stress of the pandemic, as a participant had the following to say:

I think the fact that I could go to work and make changes in the elderly people's daily living because they were also all alone, they were isolated, their families couldn't visit them, healthcare workers were the only people who could visit them at their homes and

long-term care centers. I found that really great because I found peace in their company, and they also found peace in my company.-(AFI04)

The risks imposed by the pandemic were overwhelming to everyone, especially those who worked in the long-term care facilities. Some Canadians were unwilling to continue working in the health sector and quit their positions at the peak of the pandemic due to the risks of exposure to the COVID-19 virus (Lightman, 2021, July 30). The federal government thus, relaxed immigration rules, allowing international students (who are usually on a twenty-hours per week work regulations per their study permit requirements) to work full-time to provide the needed care to residents (Immigration, Refugee & Citizenship Canada [IRCC], 2020, April 22).

Even though some participants received their first doses of the COVID-19 vaccines earlier than their age bracket by working in long-term care facilities, their roommates and immediate household were not vaccinated, hence, putting those in their households at risk of contracting the virus. Participants ensured that they protected themselves and others well by observing all the public health measures in place not to infect the residents they cared for and their roommates or family members.

There are ethical and moral implications of the federal government's decision to relax immigration rules that allowed international students in essential services to work unlimited hours from April 22, 2020 to August 31, 2020. Relaxation of the immigration rules where international students were engaged more in the health sector - considered high-risk COVID-19 exposure setting while domestic students and other Canadian residents stayed home played to the vulnerability of international student. International students usually go the extra mile to do jobs that are well paying, especially with the economic uncertainties brought about by the pandemic. Although the federal government of Canada launched a temporary pathway to permanent

residency to compensate immigrant workers in essential services during the COVID-19 pandemic such as the health sector (Brown, 2021, April 20), the international students involved in this study did not meet the eligibility criteria to apply for various reasons. International students normally had difficulties getting jobs at all in the health sector, since they were not registered nurses in Canada, had it not been for the pandemic. Nevertheless, participants were able to balance the risks and the opportunities of such engagement. A participant stated the following:

I was not working until COVID hit, and then I suddenly got two jobs when COVID started, so that was really hard here. The initial precautions were kind of daunting, like what if I am asymptomatic and I look after other people? So there was a lot of concerns and I had to make sure that I am taking care of myself, but also making sure that I do not infect anyone else with the virus, we need to be extra cautious. I could say I just was ready to give up on one of my jobs, but I didn't want to because I wanted to get the experience because it was so interesting, so I struggled to balance it both ways.-(AFI04).

Working in long care facilities during the pandemic came with its risks and opportunities to participants. However, providing care to residents, also helped the participants find meaning despite the mental and emotional stress of the COVID-19 pandemic.

The remote learning came with many challenges, coupled with the mental stress of the pandemic. However, participants overcame the challenges raised by continuing their studies despite the pandemic impact on their mental wellbeing. They made sure that they were not falling behind the academic expectations of the University. Participants' determination to

succeed in their programs was key to their success as they studied from home, and none of the participants withdrew from their programs. One participant stated the following:

I always see stress as though it may be a challenge, I see it as a way to make the best out of it. I have this thing about me, I always say to myself that whenever there is a problem just know in the end everything will be alright, I'm always optimistic, I always see light at the end of every tunnel that even though I am going through this situation, it will never be permanent because I've never seen any problem that has been permanent in my life, and this has kept me going. So I like to stay positive and hopeful. – (SFG02)

The migration of learning from face-to-face to virtual or asynchronous learning necessitated the development of skills that were hitherto unknown to participants. The sudden migration was challenging at the onset with issues of technology and internet connectivity; however, participants adjusted well to this new learning experience while the pandemic persisted with its uncertainties. The participants learned both positive and negative experiences of the pandemic, which has a long-lasting impact on their wellbeing.

My experience is that it has also made me gain some skills. Because if we are doing online learning and you need to present your research or do your presentation, you need to be able to share. So, I think that's one of the things it has done for me – (UFN07).

Despite the resultant difficulties of the COVID-19 pandemic and the lockdown measures, especially in the early days of the pandemic, participants remained steadfast and found ways to connect with loved ones and friends. They connected via various social media channels and adjusted well to the new way of communication via this platform. The campus closure disrupted participants' international communities, as they could no longer meet face to face. However,

participants made sure their international community was not lost as they connected and checked in with one another through social media channels. They cultivated the belief in their abilities to cope with the challenges of the pandemic and stayed connected to their sources of support.

In summary, the COVID-19 pandemic impacted international students in diverse ways. To mitigate the impact of the pandemic on their wellbeing, they employed various coping mechanisms while building resilience and opportunities for growth during the pandemic. The discussion section below highlights a deeper understanding of the study findings, as with the literature.

4.7 Discussion

The COVID-19 and associated public health measures impacted international students studying in Canadian post-secondary institutions in diverse ways. The closure of campuses led to the loss of campus connection, which significantly affected students' academic outcomes (Firang, 2020, July 14; Nguyen & Balastrahnan, 2020, October 2). The swift migration to remote learning due to university closure was challenging to some students, who struggled to adjust to online learning (Sahu, 2020, April 4). Students found it difficult to stay focused on academic activities due to pandemic controversies and emotions (Patterson et al., 2021, May 20).

Moreover, the public health measures increased isolation, limited resources students needed to thrive, such as in-person library access, study spaces, academic support from faculty and decreased motivation to study or regularly join online lectures (Patterson et al., 2021, May 20), which is consistent with Firang's (2020, July 14) study. Firang's (2020, July 14) and Sahu's (2020, April 4) reported that campus closure led to a loss of income for students who worked there, loss of scholarships, and delay in student programs, and compromised academic performances (Patterson et al., 2021, May 20). The COVID-19 pandemic not only disrupted the

social life of students, but also caused emotional distress, and loss of self-worth and social support, which is consistent with the reviewed literature. In contrast to the literature, findings from this study indicated that, the stress associated with COVID-19 restriction caused physical impact such as changes in eating and sleeping patterns and were also predisposed to mental health illnesses.

International students who participated in this study shared numerous similar experiences of COVID-19 pandemic and the public health measures such as risks of contracting the virus, and concern for their extended families' contracting and dying from COVID-19. The impact of COVID-19 pandemic and the public health measures on international students was aggravated by international travel ban which brought additional stress and anxiety. The suspension of international travel to limit the spread of the COVID-19 virus meant that international students wishing to travel home during holidays could not do so. They therefore could not reunite with their families during the pandemic. Those who travelled home before the travel ban could not return to Canada. Although some participants wanted to travel home to be with their families, they did not travel due to the fear of not been able to return to Canada given the COVID-19 pandemic.

To connect with extended families, most international students interviewed for this study depended on technology such as Skype, phone calls, and other social media, whose effectiveness was often hampered by connectivity issues. Additionally, with university closure, international students lost social networks forged on campus, this was unique findings to what was in the literature. Whereas domestic students had their families and friends around to provide the needed emotional support during the lockdown, international students felt isolated with devastating psychological consequences (Elmer et al., 2020, July 23; Firang, 2020, July 14).

While the pandemic public health measures were needed to curb the spread of the COVID-19 virus, the emotional and socioeconomic costs of these measures on international students were not factored (Firang, 2020, July 14). Findings from this study and related literature indicate that international students, especially those from developing countries, experienced more intense challenges compared to domestic students (Firang, 2020, July 14). Furthermore, consistent with related literature was that, the closure of non-essential businesses caused many international students to lose part-time jobs, and since they were not eligible for financial reliefs provided by the federal government, they found themselves in a dire financial crisis with limited options for a reprieve (Khan, 2020, July 9; Patterson et al., 2021, May 20).

The temporary relaxation of the work permit for international students allowed them to work off-campus for unlimited hours from April 2020 to August 2020 (IRCC, 2020, April 22), provided financial relief to participants, the majority of whom found work as support workers. However, these students worked out of necessity, putting their lives at risk of contracting COVID-19 without adequate government support such as health coverage for themselves and their families in any unlikely event. The resultant psychological impact of working in risky environments to meet their sustenance expenses may increase risks for mental illnesses for international students (Ganson et al., 2021, November 9). Nonetheless, and unique to this study, the participants found meaning and purpose in working as care aides as it made them feel needed and valued, and brought them closer to the clients, albeit in a different capacity.

Despite the impact of the COVID-19 pandemic and associated public health measures on participants, participants adapted both healthy and unhealthy coping mechanisms to manage the impact. These include changes to their eating and sleeping patterns, emotional support through

their families and friends, seeking professional support to manage difficult mental health issues, engaging in spiritual exercises, and immersing themselves in hobbies.

International graduate nursing students' engagement with family members and friends via various social media channels was a source of emotional support during such difficult times when they could not travel abroad. Those who had unresolved symptoms of mental health challenges sought professional assistance to manage the impact of the pandemic on their wellbeing. International graduate nursing students intensified their relationship with their maker and were more prayerful by joining online prayer sessions and having their private prayers during the pandemic peak.

Compared to the literature, there are more revelations from the study findings in this study. For example, the existing literature mainly focused on the psychological aspect of the impact of the COVID-19 pandemic to international students' wellbeing, and excluded the physical, and spiritual aspects of the impact. In the literature, some students employed the use of substances to mitigate the effect of the pandemic on their wellbeing; this contrasts findings from this study as none of the participants engaged in the act of substance use/abuse to manage their wellbeing.

Also, distinctive to this study, and not in the literature, with the lockdown, participants had ample time at home due to the restricted movement; hence, they found delight in preparing different dishes to cope with the restricted movement. As such, some international graduate nursing students resorted to unhealthy coping practices; ate more than they would have in response to the psychological impact of the pandemic which helped some to cope with the impact. Others also engaged in oversleeping as a mechanism to cope with the impact of the pandemic, which was peculiar to this study.

4.8 Implications for Future Education, Practice, and Research

The COVID-19 pandemic has revealed how vulnerable international students are to the disruptions that the pandemic has caused. To ensure that the international students survive and thrive in times of emergencies, they need societal support to meet their physical, mental, and emotional needs. Findings from this study have important implications for academic institutions, clinical work, and public health. First, academic institutions should anticipate and respond to potential mental health problems that international students experience due to isolation and disruption of their social networks. Considering that international students already face stress related to the acculturation demands of studying abroad, any additional stress may be amplified such as the one brought about by this public health crisis, as it can aggravate their mental health vulnerabilities. This stress can be alleviated by providing services to address mental health needs and creating supportive and accommodative instructional environments, reaching out to students in dire psychological challenges and being flexible with deadlines for assignments.

In addition, faculty should be sensitive to the mental distress brought about by COVID-19 and associated public health measures and encouraged to adapt supportive pedagogical practices to support international students they teach. Given the isolation that the university closure caused to international students, the nursing program needs to proactively reach out to international students to understand their needs and provide assistance. By including students in the decision-making process, they can collaboratively develop interventions that are student-centred such as student-led support or self-help groups, and academic support. Future research should be conducted to explore the long-term impact of the COVID-19 pandemic and associated public health measures on the entire international student body in this and other universities.

4.9 Summary of Chapter 4

Discussion about the study background and methodology have been described in this chapter/manuscript. The study findings and a discussion of the findings linked to the literature have also been presented. Implications for future education, practice, and research have been reviewed as well in this chapter.

The final chapter of the thesis mainly examined some issues that arose from conducting this study such as: concerns arising from researching with students/peers; conducting research during the COVID-19 pandemic; research as therapy; and the moral and ethical implications of international students providing care during the pandemic. Limitations, recommendations, the pandemic evolution since the data collection, and a conclusion to the study are reviewed in this chapter.

Chapter 5: Reflection on Other Critical Issues that Arose from the Study

Research was conducted during the COVID-19 pandemic to explore the experiences of international graduate nursing students with, and response to the COVID-19 pandemic and public health measures. The experiences of the participants were in many ways in the same circumstances as the researcher. Reflecting on the process and the outcome of the study allowed the researcher to consider issues that were not obvious at the time of writing the proposal, which speaks to the uniqueness of the topic, i.e., researching fellow students about their experiences and responses to a unique public health crisis, and the timing of this project during my graduate program.

Four significant issues arose during this study that, although not directly related to the purpose of the study, had a significant impact on my understanding of engaging participants experiencing similar issues to me. These reflective points are drawn from the extensive field notes recorded during data collection and analytical notes I created during the data analysis phase. These are: 1) concerns arising from researching with students/peers; 2) conducting research during the COVID-19 pandemic; 3) research as therapy; and, 4) moral and ethical implications of international students providing care during the pandemic. Study limitations, future research directions and recommendations are highlighted in this final chapter as well as a conclusion to the thesis.

5.1 Concerns Arising from Conducting Research with Fellow Students

In seeking ethics approval for my study, I learned that the Research Ethics Board (REB) pays close attention to studies involving students at a university. Given that the REB is an established entity of the university, it is extra cautious with studies involving students to ensure that participation in research studies does not negatively impact their overall student experiences.

Therefore, the REB has stringent criteria and safeguards to protect students because of this vested interest in students' welfare. The strict requirements imposed by the REB before approving my study was beyond my depth and necessitated the intervention of my supervisors to help me respond to the REB questions. The REB was concerned that since my supervisors taught in the graduate program, their position could potentially influence participants' engagement with the study.

The REB also needed extra confirmation to be confident that participants would be anonymized such that the supervisors would not be able to identify students who participated and those that declined the invitation to participate in the study. To add another layer of protection for my participants and as a usual expectation of REBs, I was required to store the data securely and remove participants' demographic data that may be identified by my supervisors due to the small number of participants. I was to anonymize the study population (name of college) for conference presentations and journal publications to maintain participants' confidentiality.

The REB imposed many conditions on the project. First, because I was researching with my colleagues, who were students. Second, because of the sensitivity of the topic. Given that I was conducting a study on the students' experiences with and response to the COVID-19 pandemic and the public health measures, their psychological wellbeing, a critical component of their wellbeing, at the time, there were a lot of unknowns. The REB anticipated that as a result of participating in the study, students might need to contact a counsellor. Therefore, I was expected to provide participants with the student wellness center contact number in the information sheet and the consent form. At the time of approving the study, and the challenges of addressing the REB's concerns, little did I know it was critical to have these measures in place before the conduct of the interviews. I was only eager to have the study approved and to start data

collection; for instance, the recommendation to have the student wellness clinic contact number for assistance should the need arise during the interview. However, during the individual interviews, participants' outpouring of emotion and some having to seek specialist intervention proved how relevant the REB's concerns were regarding this study. It was therefore in its right order that, the REB ensured safety measures were put in place before the conduct of the interviews.

5.2 Conducting Research During the COVID-19 Pandemic

Prior to the COVID-19 pandemic, the traditional face-to-face interview was considered the usual method of conducting qualitative research. The face-to-face interviewing mode is more natural and helps the researcher create connections and establish rapport with the participant due to the proximity, which makes the participant comfortable opening up discussions during interviews (Self, 2021, September). The face-to-face mode was, thus, the acceptable practice of data collection by the REB of the U15 university for students and faculty. However, the persistence of the COVID-19 pandemic and the worldwide safety precautions of social and physical distancing regulations hindered in-person and direct observation data collection, thereby forcing the REB to revise its criteria in approving studies brought before them. The REB thus adopted and approved the virtual means of conducting studies as researchers had to strategize to conduct their studies online rather than waiting for an undetermined time to have in-person interviews.

Compared to the face-to-face interview, conducting interviews virtually and recording the same was innovative with both positive and negative consequences. Positively, conducting interviews virtually is less time-consuming, less costly as the researcher does not need to travel to interview participants. The virtual mode does not pose safety threats to the researcher, allows

more scheduling flexibility, and is not geographically restrictive (Self, 2021, September).

Nonetheless, the virtual mode also has its drawbacks including, participants must have access to a computer or reliable internet connectivity, delays arising in transmission across the internet, and participants being familiar with the use of technologies including WebEx, Zoom, Microsoft teams and many others (Self, 2021, September; Torrentira, 2020).

Data quality is a source of concern for the use of virtual platforms for data collection compared with face-to-face data collection. The reason is that sometimes because of poor or weak internet connectivity, recording the interviews via the internet is compromised and the information recorded may be distorted. Also, facial expression is important as it adds weight and confirms the responses being elicited from participants. This layer of data quality check is unavailable especially when the virtual interview is conducted via audio because of poor internet connectivity. It is, therefore, not out of place when the REB requested that applicants prove they have the resources to protect participants' privacy and confidentiality with their chosen platform. Reflecting on this study, the REB recommended that the researcher includes the policies and privacy links to my chosen platform (WebEx) in the informed consent forms for participants to review before accepting to participate in the study.

For me, the virtual mode for conducting interviews was beneficial. I did not have to travel to do interviews in person for those participants located out of town. Moreover, participants and I feared contracting the COVID-19 infections; hence, the virtual mode ensured that we avoided direct contact. My study was approved based on the condition of conducting the interviews using the WebEx platform. Participants, who were students like the researcher were all familiar with the WebEx platform which was to my advantage. The COVID-19 pandemic changed many things including conducting interviews, and perhaps going forward, the REBs would accept a

combination of face-to-face and virtual means of data collection across the world in approving future studies in a post-pandemic era.

5.3 Therapeutic Value of Interviews

Emotions provide essential information about how people understand and experience happenings around them (Ezzy, 2010). Engaging in research interviews can heal broken emotions of both the researcher and those researched in many ways (Walsh, 2014). This is because sharing experiences in difficult situations could serve as a learning, healing, and adaptation process to others in similar circumstances. Though my engagement with participants was intended to answer the research questions, I was oblivious that enquiring international graduate nursing student' experiences with, and response to the COVID-19 pandemic and the public health measures would have therapeutic value to participants and to myself. The research process inadvertently created a safe space to explore deep-rooted emotions, frustrations, stress and feelings (Ortiz, 2001). McConnell-Henry and colleagues (2010) noted, listening to someone's frustrations and unresolved stress provides the platform for them to release their emotions and stress. Words of comfort from the listner helps in the healing process.

A few participants expressed relief, as they felt their concerns were listened to and shared by a fellow student and researcher. For instance, one participant noted she felt relieved knowing that someone had an interest in knowing her plight during the pandemic. I believe some felt a sense of belonging to an international student body that they had found someone who had an interest in their troubles. Ortiz (2001) and McConnel-Henry et al. (2010) seemed to capture exactly what the participants experienced during the interviews, as the participants shared their experiences, frustrations, fears, and emotional burden of COVID-19 pandemic and social restrictions on their lives. Listening to the participants' stories was beneficial to me as the

researcher; though I concealed my emotions during the interviews, perhaps I benefited more from the interviews than the study participants as I had the opportunity to listen to all participants share their experiences. Some of these experiences included strategies in coping with the COVID-19 pandemic and the associated public health measures. Prudent financial management, including reducing unnecessary expenses and regular exercise to keep mentally and physically sound, were some of the benefits I took away from hearing their experiences.

Also, I learned from discussing the early interviews with my supervisors that, when engaging in research that is as intimate as seeking to understand peer's experiences with COVID-19, one could have been tempted to engage in therapeutic conversation, especially after the interview was over. I needed to constantly remind myself that our conversations reinforced the objective role only I had as the researcher.

Prior to this study, I had not anticipated that engaging in a research could generate therapeutic or healing benefits to both the participants and the researchers. Although not all interviews generate therapeutic value, the researcher should be vigilant to avoid this undesired effect, as it is not the purpose of the study. These experiences resonate with Ezzy's observation (2010, p. 166) that qualitative "interviews can be performed and experienced as more or less like communion or conquest," which in my case, it was more of communion than a conquest, as I interacted with the participants, listened to their stories, and shared in and connected with their experiences.

5.4 Ethical Issues of International Students Providing Care During COVID-19 in Spring/Summer of 2020

The COVID-19 pandemic claimed many lives in Canada and internationally (Hsu et al., 2020, June 4). Early in the pandemic, long-term care facilities were the hot spots for the COVID-

19 pandemic in Canada and worldwide (Hsu et al., 2020, June 4; Lightman, 2021, July 30). At the start of the pandemic, many Canadian citizens and permanent residents were reluctant to continue working in long-term care facilities for fear of contracting the COVID-19 virus and infecting their loved ones at home. Many quit their jobs, creating a critical need for more health care support staff (Lightman, 2021, July 30). Health care aides, mainly immigrants on work and study permits, provided supportive services and were the backbone in those settings providing essential daily care to this most vulnerable group (Hsu et al., 2020, June 4; Lightman, 2021, July 30; Lightman & Baay, 2021, March 18).

Many internationally trained nurses are underemployed as health care aides as they wait to receive Canadian licences as registered nurses. Working in these settings is the closest internationally trained nurses can get to providing care to clients. For international graduate nursing students, the study permit allows the students to work twenty hours per week when school is in session and unlimited hours during vacations. This restriction ensured that the student could focus on studying while gaining Canadian experiences and earning income for sustenance.

Early on in the pandemic, there was a need for temporary immigrants, including international students to get involved in providing care to clients in long-term facilities. The Immigration Refugee and Citizenship Canada (IRCC) relaxed the twenty-hour per week immigration rule allowing international students in essential services such as those in health care settings and grocery stores to work full-time (IRCC, 2020, April 22). Out of necessity, while many were shrinking from working for fear of contracting COVID-19, international students exposed themselves to these occupational risks to earn much-needed income.

On the surface, it appeared that the opportunity presented to international students, i.e., to work full time during the pandemic, was a win-win situation given that international students were not eligible for either both federal or provincial governments pandemic reliefs, and therefore were provided with an opportunity to earn income through these difficult times. Some international graduate nursing students involved in this study, including the researcher, were able to work full-time hours due to the relaxed immigration rules to curb the staffing situation at the long-term care facilities (IRCC, 2020, April 22). They became the primary source of physical and psychological support for residents of these facilities as they did not have many options (Lightman & Baay, 2021, March 18). International students, although happy to have employment, were at undisputable risk of contracting the virus.

The researcher just like the study participants, worked full-time at a long-term facility during the pandemic. Although there were moments the researcher considered not going to work for fear of getting COVID-19, the pressure to pay expenses meant that the options were limited. There were risks of infections everywhere we went- bus, public spaces and in the long-term care facilities. Personal protective equipment (PPE) were inadequate and therefore, the risk for contracting COVID-19 virus at work was real (Hsu et al., 2020, June 4). In spite of the risks for contracting the virus, many international graduate nursing students felt compelled to provide the needed care to residents whose relatives were unable to visit them and as our only way to provide for ourselves.

In many ways, given how vulnerable international students were before and during the pandemic, creating conditions where they had to work in risky environments felt like an exploitation, with students used to keep the health care system functional. Although international

graduate nurses were not obliged to work in those settings, the moral and ethical dilemma regarding their involvement in health care was discriminatory to them.

The federal government launched a temporary immigration pathway that would allow over 90,000 temporary residents to gain permanent residency in Canada for temporary residents who risked working at the peak of the pandemic (Brown, 2021, April 20). This included temporary workers in health care, and other essential job categories, and international students who graduated from Canadian post-secondary institutions (Brown, 2021, April 20). However, most participants in this study, including the researcher, did not meet the eligibility criteria to apply for this program since we are still in our graduate programs, and did not have the required number of hours from our care jobs to be eligible.

5.5 Summary of Chapter 5

In this chapter, I have reflected on four issues and what I learned in the process of conducting research on "*Exploring international graduate nursing students' experiences with, and response to the COVID-19 pandemic and public health measures.*" There are extra safeguards in place to obtaining ethical clearance when researching students. The COVID-19 pandemic has impacted ethics boards as it has affected students, hence, virtual interviews would continue to be an option to face-to-face interviews. Also, qualitative interviews have therapeutic value to the study participants and in my case, to the researcher. The ethical and moral implications of international students' increased involvement in healthcare settings due to relaxed policies played at their vulnerability. Finally, this research came about because of the pandemic, and conducting it was not only therapeutic but rewarding with regard to research process during a pandemic.

5.6 Limitations

There are some limitations to this study. Study participants were purposively recruited to participate in the study. This allowed the researcher to interview suitable participants who provided valuable information to answer the research questions. There could be bias as the researcher may have made subjective assumptions about what he heard them say during the interviews due to the similarities in COVID-19 experiences. However, with reflexive engagement, I hope to have reduced these limitations. International graduate students in other departments may have different COVID-19 experiences from those at the nursing department of the U15 University. As all participants were registered students of the graduate nursing program at one university, the study findings may not be applicable to other graduate students in different programs. Moreover, eight participants in this study was small to uncover a variety of opinions and may not reach saturation internationally; findings may not be applicable internationally. Limitations of the literature review were: English language only articles were searched, and the limited timeline of the search from March 2020 to October 2020. The limited timeframe of data collection could affect the quality of the data as newer studies have been published after this period.

5.7 Recommendations from the Study

Some issues or concerns have been raised based on the study findings. The following are some recommendations to support international graduate nursing students in the event of another pandemic:

- The College of Nursing, and the university should have supportive measures in place such as mentorship programs to assist international students that require more support during crisis and difficult moments of their programs.

- Given the role that international students played to prevent the collapse of the health care system during the first phase of the pandemic, there is need for reciprocity by the Government to support their thriving while taking their studies such as extended health coverage, and a route to gain employment in the healthcare system after completion of their studies.
- The federal government and the universities need to amend policies regarding international students tuition such as waiving tuition fees during public health crises and removing international students differential fees. This is particularly relevant given the financial circumstances participants encountered during COVID-19 crisis.
- There is a need to strengthen and resource existing student associations/groups such as the Graduate Student Association, International Student's Club, India Student's Association, African Black Association, and other ethnic groups. With the right connection and social networking associations members will be able to respond to and support one another in unforeseen crises.

5.8 Future Research

The following are potential future research questions based on findings from this study:

- What changes in the post-pandemic era are needed to support international graduate nursing students to succeed in their programs?
- How can the university mitigate the “loss of international student community on campus” in the event of a pandemic as COVID-19?
- What moral and ethical obligations do universities have to support international students in crises situations?

- In what ways did the federal government exploit the vulnerability of international students during the COVID-19 pandemic?

5.9 How the COVID-19 Pandemic has Evolved since the Data Collection in 2021

This thesis project was undertaken within the first year of the COVID-19 pandemic, with major public health measures already instituted across Canada. This was a unique and critical time for international students in Canada who were far away from home, and who may not have previously experienced any form of public health crisis away from home. Since then, there have been major changes that have taken place regarding understanding of the virus and treatment therapies. This work ought to be read in light of the events that happened at the time the study was completed. Nevertheless, the relevance of this research regardless of the timing remains:

To recap the timeline of the pandemic after COVID-19 was declared a global pandemic in March 2020 (WHO, 2020b), public health measures came into force with educational institutions migrating to remote learning by mid-March of 2020. In December 2020, the first vaccine campaigns were just starting underway in high-income countries, leading a lot to hope that life would soon get back to normal. The virus has been changing right from the beginning, with different waves and variants of the pandemic.

During the early part of 2021, the alpha variant caused a big wave of cases in Europe, North America, and much of the world. In April 2021, India was hit by delta overwhelming hospitals and outcompeting other variants. With the high transmissible rate of the Delta, it spread worldwide, causing a significant wave of cases in North America and Europe, and the rest of the world. This led to countries tightening their public health measures to control the virus.

At the time of data collection for this study in April 2021, the world was fighting the Delta variant, with public health measures still in effect. Though participants for this study worked as care aides in long-term care settings, not many of them had been fully vaccinated against the COVID-19 virus when the data was collected. Some had taken the first dose of COVID vaccines awaiting the second, whereas a few were still yet to decide getting inoculated or not. However, the student researcher was fully vaccinated before the start of data collection, as the facility he worked was able to secure the vaccines for its workers early enough. My continued followups on participants led to the discovery that one of them contracted the COVID-19 virus from a roommate; she, however, recovered from the infection.

In the summer of 2021, the Canadian government eased its mandatory two-week quarantine requirement instituted for international travellers, for fully vaccinated travellers entering the country. International students who were vaccinated at the time could travel home to see their loved ones, though their return was not guaranteed due to the ever-changing public health guidelines. However, with the new and more transmissible Omicron variant emerging in November 2021, the dramatic surge in cases led to the reintroduction of public health measures and travel restrictions. The federal government warned against non-essential travel in the fall of 2021 and events leading to the Christmas festivities due to the surge in cases of the new Omicron variant, with public health measures reintroduced across provinces in Canada in efforts to contain the virus.

By winter of 2022, most Canadians had received their booster or third dose of the vaccine. Cases of COVID-19, due to the Omicron variant finally peaked by the end of January, and public health measures began to be relaxed. However, there is every reason to anticipate new variants yet could be on the horizon. The Delta and Omicron variants are now happening in parallel, with

Delta remaining high even as Omicron spreads. It appears that we will see a massive global wave of COVID-19 in 2022, and there is every reason to anticipate more dangerous variants yet after the current ones.

5.10 Conclusion

The public health measures aimed at reducing the spread of the virus had some negative impact on the wellbeing of study participants. While at the same time, resilience was built during the pandemic. Financial challenges had been identified as a significant issue for international graduate nursing students who were relying on working on campus to support themselves. Social isolation was another contributing factor to their wellbeing due to the travel restrictions that impeded them to be with their families, while worry and fear for their families abroad were commonly presented among the students.

Unique to the international graduate nursing students was the loss of their international community on campus, which led to develop physical changes (e.g., changes in eating and sleep patterns which could be positive symptoms of depressive disorder), and other symptoms of mental health disorders. Though international graduate nursing students devised ways of managing the impact of the pandemic on their wellbeing, some students sought professional support to manage difficult mental health concerns. They employed coping mechanisms such as talking to their loved ones, friends, and faculty. Despite the impact on their wellbeing, they were resilient and continued their studies. Given that international graduate students already faced several barriers in foreign countries before the pandemic, it is crucial that universities take swift action to update their mental health services and supports to meet the evolving student needs in future crises.

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Appendices

Appendix A: Information /Invitation Letter

Hello Colleagues,

I am Solomon Asayah, a Master of Nursing student of the University of Saskatchewan. As part of my master's thesis, I am carrying out a study about international graduate nursing students' experiences with, and response to COVID-19 pandemic and the public health measures. This letter serves to inform you and invite all international graduate nursing students to participate in this study. Participation is voluntary, and there are no consequences if a participant refuses to participate in this study. Your role as a participant, if you consent to participate, means that you will agree to a one-on-one WebEx interview lasting an hour or one and a half hours with the student researcher. Demographic questions will be asked as part of each interview. These questions will be asked at the start of each interview and audio recorded. You will be asked questions related to your overall experiences and how you responded to the pandemic and the public health measures. You can choose not to respond to any question if a question is uncomfortable to you for any reason. Please be aware that this research project has been approved on ethical grounds by the ethics review board, and operational approval granted by research and graduate studies of the university. For confidentiality and privacy issues any questions regarding your rights as a participant may be addressed to the committee through the Research Ethics Office on request. The data obtained from you will be used solely to explore your experience and response to the COVID-19 pandemic and the public health measures.

I sincerely express in advance my appreciation for your time in this study. Findings may inform educational institutions of what health interventions are needed to assist vulnerable groups, including international students, in unforeseen crises. The study findings will be

published in recommended journals and in a report made available to the University of Saskatchewan.

For more information about this study, please contact:

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Appendix B: Demographic Questionnaires

Kindly respond to the following items:

The study is to determine international graduate nursing students' experience with, and response to the COVID-19 pandemic and the public health measures. Be assured that the information provided would be treated with confidentiality. Feel free to ask for clarification if you have any challenges.

Date: _____ Code no: _____

1. Level/ Program of study: Course base Masters Thesis base Masters Ph.D. Post Doc
2. Age (In Years): 21-30 31-40 41-50 51-60
3. Sex: Male Female other
4. Religion: Christian Islam Other
5. Hobbies/Interests outside of school
6. Marital Status: Single Married Separated Divorced Co-habitation
7. No of children if any: One Two Three Four and Above
8. No of dependents: One Two Three Four and more
9. Country/Continent of origin:
10. Residential: University hostel Off-campus accommodation
11. Living with family in Canada: Yes No
12. Any relatives already in Canada: Yes No
13. Part-time job: Yes No
14. Full-time job: Yes No

15. Support from Family; financial or otherwise: Yes No

16. How long have you been in Canada? _____

Appendix C: Interview Questions

The purpose of this study is to international graduate nursing students' experience with, and response to the COVID-19 pandemic and the public health measures. I will overview our discussion for today; if any questions are not clear to you, feel free to ask me for clarification. At any point in time, you feel exhausted and want to take a break, you are free to do so, and if there is any question you are not comfortable answering, you are very free not to answer. Remember, participation is entirely voluntary. Thank you for agreeing to participate in this study.

Experience of COVID-19 Pandemic and public health measures (coping, fears etc.)

1. Would you tell me about your experience as an international student during the COVID-19 pandemic?
2. What are the effects of COVID-19 pandemic and the public health measures on your education/program in general?
3. Has COVID-19 and the public health measures affected your study plans as an international student? If yes, could you explain?
4. How did COVID-19 pandemic and the public health measures impact your socioeconomic status?
5. Did you get laid off from work? If yes, how did that affect you?
6. Was your financial status affected as a result of COVID-19 pandemic? i.e., couldn't meet your daily expenditure?
7. What are your main concerns/fears about the impact of the COVID-19 pandemic and the public health measures?
8. How did those concerns/fears affect your overall well-being?

9. How did the COVID-19 pandemic and the public health measures impact your wellbeing? (anxiety, mood)
10. What were your main coping strategies (to maintain wellbeing)?
11. Did you lose interest in previously cherished activities?
12. Did you lose appetite or increase eating at a point in time during the pandemic?
13. Did you have difficulty sleeping?

Support (resources, financial, recommendations for future)

14. Did you seek support for any mental health challenges?
15. If yes, what kind of help (e.g., seeing a Doctor, therapist, or social support from friends and families)?
16. If no, what were the reasons for not seeking help?
17. What services were made available to you to support you through the pandemic from your nursing department and the university at large?
18. If yes, explain how the assistance helped you to cope with the COVID-19 pandemic.
19. Social networks (friends and families) aid you during this crisis?
20. If yes, what type of assistance was provided?
21. What support or assistance should the nursing department and the university provide to international students during crises such as COVID-19 pandemic to support their wellbeing?
22. It has been months since the first wave started, and a lot of changes have happened in terms of what we know about the virus transmission, and how to protect oneself from the virus.
23. How has the second wave of COVID-19 affected you compared to the first wave?

24. How has your coping mechanism changed from the first wave to the second wave?

25. Do you have any questions or recommendations to add to our discussion today to improve international students' wellbeing during this COVID-19 pandemic and future crisis?

Thank you!

Appendix D: Ethics Approval Certificate

The study was approved by the Research Ethics Board (REB) at a university in the Prairie Provinces on March 25, 2021. The certificate is not included here to protect the confidentiality of the study participants.

Appendix E: Operational Approval

Operational approval for the study was granted by Research and Graduate Studies on March 31, 2021. The certificate is not included here to protect the confidentiality of the study participants.