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# How Undergraduate Nursing Students Cope with Stress during the COVID-19 Pandemic: An Interpretive Description

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UNIVERSITY OF CALGARY

How Undergraduate Nursing Students Cope with Stress during the COVID-19 Pandemic:

An Interpretive Description

by

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A THESIS

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## **Abstract**

Stress is a critical issue globally in undergraduate nursing education with studies showing stress among undergraduate nursing students as a decades-old concern. The COVID-19 pandemic is a new stressor which has created changes and disruptions in undergraduate nursing educational programs. The purpose of this qualitative, Interpretive Description research study was to gain an understanding of the lived experiences of undergraduate nursing students during the exceptional context of the COVID-19 including their perceptions of stress and their identified coping strategies to manage stress amid their nursing program. Lazarus and Folkman's (1984) Transactional Model of Stress and Coping was used as the theoretical foundation to guide this study. The setting for this study was the Faculty of Nursing at the University of Calgary, in Calgary, Alberta, Canada. Convenience and purposive sampling were used with voluntary participation from the undergraduate nursing students. Semi-structured, individual interviews were conducted to gather participant data. All data was transcribed verbatim, analyzed for themes, and reported in aggregate form. The perception of a stressor is unique to each individual, however, broad categories of stressors were found to be common amongst nursing students, along with new stressors associated with the COVID-19 pandemic. The findings indicated that the participants exhibited a common characteristic of strong personal motivation with a focused desire to succeed in the nursing program.

*Keywords:* stress, coping, COVID-19, pandemic, undergraduate nursing education, undergraduate nursing students

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## **Dedication**

This thesis is dedicated to my little family.

My husband, Mike, who gave me space throughout my long hours of studying.

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## Table of Contents

Abstract.....	ii
Acknowledgements.....	iii
Dedication.....	iv
Table of Contents.....	v
List of Tables.....	viii
List of Appendices.....	ix
List of Abbreviations.....	x
Chapter 1: Introduction.....	1
Background.....	1
History of the Term <i>Stress</i> .....	1
Stress in Nursing Education.....	2
Mental Health Survey.....	4
Problem Statement.....	6
The COVID-19 Pandemic as a New Stressor.....	8
My Research Study.....	9
Research Purpose.....	10
Research Question.....	11
Theoretical Framework.....	11
Definitions of Key Concepts.....	12
Stress.....	12
Coping.....	12
Cognitive Appraisal.....	12
Significance of this Research Study.....	12
Chapter 2: Literature Review.....	14
Article Characteristics.....	15
Stress.....	15
Clinical Stressors.....	16
Academic Stressors.....	18
External Stressors.....	18
Levels of Stress.....	18
Coping.....	19
Coping versus Resilience.....	21
Discussion.....	23
Conclusion.....	25
Additional Notation.....	26
Chapter 3: Study Methodology and Design.....	27
Qualitative Research.....	27
Interpretive Description Design.....	27
My Research Plan.....	30
Timeline.....	31

Sampling.....	31
Risks and Benefits.....	32
Considerations.....	33
Recruitment.....	33
Data Collection.....	34
Data Analysis.....	36
Ethical Considerations.....	39
Evaluation Criteria.....	40
Epistemological Integrity.....	40
Representative Credibility.....	41
Analytic Logic.....	42
Interpretive Authority.....	42
Chapter Summary.....	43
Chapter 4: Study Findings.....	45
Demographics.....	45
Context for Interviews.....	47
Findings.....	48
Theme I: Self-Efficacy.....	50
Goal-Oriented.....	50
Motivation.....	54
Theme II: Self-Awareness.....	56
Self-Reflection.....	57
Awareness of Self-Care Needs.....	61
Empathy.....	63
Theme III: Social Supports.....	64
Peer Support.....	64
Family and Friends Support.....	67
Theme IV: Faculty and Campus Support.....	68
Faculty Support.....	69
Instructor Support.....	70
Mental Health Support.....	73
Summary of Findings.....	75
Chapter 5: Discussion.....	76
Comparison of Study Findings with Literature Review.....	76
Stress, Cognitive Appraisal, Coping.....	79
Coping Strategies.....	80
Self-Efficacy.....	83
Self-Awareness and Self-Care.....	85
Social Supports.....	87
Faculty and Campus Supports.....	88
Implications for Practice.....	90
Limitations of My Study.....	93
Conclusion.....	94

References.....98



**List of Tables**

Table 1: Participant Demographics.....	46
Table 2: Perceived Stressors .....	48

## List of Appendices

Appendix A: Interview Guide.....	106
Appendix B: PRISMA (2009) Flow Diagram .....	107
Appendix C: Proposed Timeline.....	108
Appendix D: Recruitment Poster .....	109
Appendix E: Invitation & Information Letter .....	110
Appendix F: Consent .....	113
Appendix G: Demographic Questionnaire.....	121
Appendix H: CHREB Certification .....	122

**List of Abbreviations**

CHREB	University of Calgary Conjoint Health Research Board
ID	Interpretive Description
U of C	University of Calgary
(P)	Participant
RN	Registered Nurse

## **Chapter 1: Introduction**

Stress is a critical issue globally for undergraduate nursing students. Stress in nursing education has been documented in the literature as far back as the 1930's, with reports of high levels of stress in undergraduate nursing programs (Sawatzky, 1998; Torrop, 1939; Turner & McCarthy, 2017; Wolf et al., 2015). Research has shown that, if left unrecognized and unmanaged, stress and the length of exposure to stressors have the potential to cause devastating impacts on nursing students' academic learning, clinical performance, and on their social health and well-being (Bhurtun et al., 2019; Clark et al., 2014; Gurková & Zeleníková, 2018; Yamashita et al., 2012; Zhao et al., 2015). Coping strategies play a crucial role in managing stressors and can change the students' subjective cognition of the stressor and effectively improve the students' ability to manage the stressor (Chan et al., 2009; Sikander & Aziz, 2012; Zhao et al., 2015).

As this research study was carried out during unprecedented times, the purpose of this study was to gain a deeper understanding of the lived experiences of a cohort of undergraduate nursing students during the exceptional context of the COVID-19. An understanding of nursing students' lived experiences through their educational program and an insight into their perceived stressors, through the COVID-19 pandemic, could guide educational institutions and nursing educators to implement supportive interventions which will promote nursing students to thrive and face challenges as they study through the rigorous nursing education program.

### **Background**

#### **History of the Term *Stress***

The term *stress* has been studied since the 14th century, and described as “hardship, straits, adversity, or affliction” (Lazarus & Folkman, 1984, p. 2). The term stress was first used

in the physical sciences, including physics, “to refer to the interaction between a force and the resistance to counter that force” (Tan & Yip, 2018, p. 170). Hans Selye (1907-1982), a physician, was known as the father of stress research, and was the first to study stress in the biological sciences. Selye’s work considered stress as being the underlying, nonspecific signs and symptoms of illness that leads to the physiological defenses formed by the body towards any form of harmful physical or psychological threats. Selye’s biological view of stress sparked further interest in the physiology of stress, across disciplines, and formed the basis for numerous research studies that followed (Lazarus & Folkman, 1984; Sawatzky, 1998; Tan & Yip, 2018). Richard Lazarus (1922-2002), a cognitive psychologist, researched stress from a psychology perspective and introduced the concept that stress has a personal meaning, which explained individual differences in response to stress in similar situations; furthermore, Lazarus is known for his concept of stress appraisal and his work on coping (Sawatzky, 1998). Lazarus and Folkman (1984) further defined stress as, “a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (p. 19).

### **Stress in Nursing Education**

Stress in nursing education has been documented in the literature as far back as the 1930’s. Torrop (1939) conducted a research study on stress in nursing education, which involved 278 nursing students from 10 schools of nursing in the United States. The nursing students identified stressors including: supervisor-student interactions, unit staff nurse-student interactions, physician interactions, and caring for patients; health problems such as constant fatigue; mental health problems, such as depression; curriculum stressors, such as a heavy schedule of studies and ward experience; time management and insufficient time for study;

social problems, such as lack of free time; financial worries. Although times have changed and the approach to nursing education has changed from nursing boarding schools to hospital-based schools of nursing, to university-based nursing education, the stressors that were identified in Torrop's (1939) research study, parallel the stressors that are identified in recent research studies. Research studies have identified common stressors within the nursing student population for decades, yet the issue of stress in undergraduate nursing education has been overlooked and understudied for as long.

Stress is commonly experienced by students in all undergraduate education programs; however, researchers have found that undergraduate nursing students have reported feeling higher levels of stress and experiencing more physical and psychological symptoms than students in other undergraduate level educational programs (Al-Gamal et al., 2018; Jimenez et al., 2010; Labrague et al., 2017; Reeve et al., 2013). The undergraduate nursing curriculum usually includes a theoretical course component alongside a clinical experience, and therefore, nursing students experience the intensity of the theoretical classes and the clinical experience concurrently. While undergraduate nursing students and general undergraduate students experience similar stressors, such as long hours of study, fear of failure, and lack of free time, undergraduate nursing students also spend time in the laboratory and in the clinical setting, which may exert more emotional demands on them (Al-Gamal et al., 2018; Bhurtun et al., 2019; Chernomas & Shapiro, 2013; Gibbons, 2010; Gibbons et al., 2011; Labrague et al., 2017; Turner & McCarthy, 2016; Wolf et al., 2015).

Stress can induce either positive or negative symptoms in students depending upon how stressors are perceived. If a stressor is perceived as positive, it leads to eustress, which can be beneficial in the educational process. Eustress can positively enhance students' performance and

productivity by acting as a motivator to influence academic performance, to increase student's creativity and inspiration, to empower students to achieve their goals, and to boost student's mental health and wellbeing (Bhurtun et al., 2019; Clark et al., 2014; Jimenez et al., 2010; Labrague et al., 2018; Wolf et al., 2015). Zhao et al. (2015) asserted that most human successes are created during stressful conditions. Contrarily, if a stressor is perceived as negative, or a threat to well-being, it leads to distress, which can be harmful in the educational process. Distress can reduce students' performance and productivity because it can have detrimental cognitive, emotional, physiological, and behavioural impacts on nursing students (Clark et al., 2014; Gibbons et al., 2011; McCarthy et al., 2018; Sikander & Aziz, 2012; Wolf et al., 2015; Yamashita et al., 2012).

### **Mental Health Survey**

Educational institutions are recognizing the importance of student mental health as shown by the widespread use of the American College Health Association (ACHA) National College Health Assessment (NCHA) survey. The ACHA-NCHA II is a nationally recognized research survey, organized by the ACHA that collects precise data about students' health habits, behaviours, and perceptions on prevalent health topics (ACHA-NCHA, 2020).

The National College Health Assessment was conducted across the University of Calgary (U of C), in 2016, including a subset of nursing students. The results indicated that (94%) of nursing students described their health as good, very good, or excellent. The survey indicated that the biggest perceived contributor to poor academic performance in nursing students was stress. A comparison of nursing students to non-nursing students showed that (50%) of nursing students versus (41%) of non-nursing students showed stress as a factor that negatively affected academic performance (NCHA, 2016, Nursing Subsample, U of C).

Bartlett et al. (2016) conducted a quantitative research study of two samples of undergraduate college students from a mid-sized university in the southwestern United States, which compared experiences of stress and levels of stress between a group of undergraduate nursing students and a group of general population undergraduate students. The study utilized the NCHA-II assessment instrument. The survey was completed by the study participants and then collected and sent to be analyzed at the ACHA's data analysis centre. The study hypothesized that nursing students would report higher experiences of stress and higher levels of stress than general undergraduate students. A five-point Likert scale of, 1(*no stress*) to 5(*tremendous stress*), and a nonparametric test, to compare outcomes between two independent groups, was utilized to score the experiences of stress between the two student populations. The results indicated that nursing students reported higher levels of stress than did the general student population. The general student population's results showed a normal skew of (6.9%) between experiencing no stress and experiencing tremendous stress. The results from the nursing students showed an abnormal left skew with (52.3%) reporting above-average stress and (17.6%) reporting tremendous stress. A comparison of the two student populations indicated that (6.9%) of the general undergraduate students reported no stress, while none of the nursing students reported no stress; (6.9%) of the general undergraduate students reported tremendous stress, while (17.6%) of the nursing students reported tremendous stress.

Unmanaged stress can further lead to psychological symptoms, such as anxiety and depression. The NCHA (2016) U of C survey indicated that (32%) of nursing students versus (29%) of non-nursing students experienced anxiety; (24%) of nursing students versus (19%) of non-nursing students experienced depression. Bartlett et al's. (2016) study reported that nursing students experienced significantly more anxiety, and stress-related issues and illness, such as



migraine headaches and upper respiratory infections. These effects can decrease students' learning including clinical and academic performance; furthermore, these effects, if not properly addressed, can lead to more serious problems of burnout, attrition from the nursing education program, and in extreme cases, suicide (Al-Gamal et al., 2018; Bhurtun et al., 2019; Tully, 2004; Yamashita et al., 2012).

### **Problem Statement**

Nursing is a high stress occupation. The comparative study by Bartlett et al. (2016) showed that nurses are consistently reporting higher stress levels than other health care professionals. Educating nursing students to prepare for the demands of a nursing career requires a rigorous academic and clinical training program and a high level of commitment from the students. However, perceived stressors within the undergraduate nursing program can become overwhelming and challenge the students' mental health, academic learning, and clinical performance, which may further affect the direction of the nursing student's future career, including leaving the nursing profession.

New nurse attrition is a significant issue internationally contributing to a global nursing shortage. Nursing organizations from around the world are collecting data pertaining to new nurse attrition and reporting rates ranging from 4.5% to 61% of new nurses leaving the profession within their first one to two years of practice (Chachula et al., 2015; Rhéaume et al., 2011). Canadian data between 2005 to 2008, reported a mean of 13% of young nurses leaving the profession (Chachula et al., 2015). The Canadian Nurses Association (CNA) is developing solutions to curb the nursing shortage in Canada yet, they predict a nursing shortage of almost 60,000 full-time equivalent (FTE) nurses by the year 2022. These statistics warn of the critical

magnitude of the issue of new nurse attrition, yet in spite of the statistical data, little research has been conducted to explore why new nurses are leaving the nursing profession.

The transition from the educational environment to the workplace environment can be challenging for new graduate nurses as they adjust to their new employment role. New nurses face stressors, such as fear of making mistakes, adjusting to interactions between nursing staff and physicians, and a feeling of lack of support in the workplace, which parallel stressors from their educational environment. This suggests that there may be a correlation between nursing educational preparation and new nurse attrition. Chachula et al. (2015) noted that, “participants were found to be in a process of *letting go* of nursing that commenced as students and continued as they entered practice as registered nurses” (p. 912). The paucity of research in stress and coping in undergraduate nursing education, until the past two decades, and the lack of research on the issue of new nurse attrition gives rise to valuable research opportunities. As such, attrition illuminates the crucial need for an understanding of the lived experiences of undergraduate nursing students for educational institutions and nursing educators to support undergraduate nursing students to enhance their ability to cope through stressors in the nursing program.

More recently, the global COVID-19 pandemic has compounded stress becoming a new stressor facing nursing students in 2020-2021. While educators may appreciate that nursing students experience stress as part of their undergraduate nursing education, they may not appreciate the extent and impact of stress and the associated psychological distress on students’ mental health and well-being. Nursing students’ performance directly affects their fitness to practice and the delivery of safe patient care (Bartlett et al., 2016; Chernomas & Shapiro, 2013; Gibbons et al., 2011). Reeve et al. (2013) assert that, “Nursing programs need to recognize sources of stress and demands on students and make programmatic changes to reduce students’

distress and enhance learning” (p. 423). With a deeper understanding of the lived experiences of undergraduate nursing students, educational institutions and nursing educators are in an ideal position to support and enhance nursing students’ ability to cope with their stressors throughout their educational program.

### **The COVID-19 Pandemic as a New Stressor**

Coronaviruses (CoV) are a large family of viruses, including the Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) which cause respiratory illness ranging from common colds to severe pneumonias. The novel COVID-19 is a newly discovered coronavirus that has not been previously identified in humans. COVID-19 is an infectious disease that is spread from person to person primarily via droplets of saliva or via nasal discharge produced when an infected person speaks, coughs or sneezes. (Alberta Health Services (AHS), 2020; Centre for Disease Control (CDC), 2020; Government of Canada, 2020; United Nations, 2020; World Health Organization (WHO), 2020). As a newly discovered coronavirus, initially there were no vaccines or specific known treatments for COVID-19, however, vaccines have since been developed and treatment ranges from home isolation to various levels of hospital treatments.

A major global pandemic was acknowledged when, on January 30, 2020, the World Health Organization (WHO) declared the novel coronavirus COVID-19 outbreak to be an International Public Health Emergency (World Health Organization (WHO), 2020). The sudden appearance of the COVID-19 pandemic made its mark in history as it swept around the globe causing worldwide societal pandemonium and global socio-economic disruption. Virologists scrambled to study its characteristics, and public health officials outlined strict behavioural recommendations, such as diligent hand hygiene, the wearing of a mask or face covering, social

distancing, and self-isolation, in a desperate attempt to halt the spread of this new virus. The ripple effects of this frightening pandemic resulted in the limiting or eliminating of mass gatherings, and the closure of public spaces such as libraries, shopping malls, places of worship, and educational institutions.

For undergraduate nursing students, the impact was felt as educational institutions followed public health recommendations and shifted from on-campus academic classes to a remote online learning environment and cancelled clinical experiences at various periods during the pandemic. The University of Calgary president and nursing faculty dean sent out mass emails to students inviting them to attend town hall meetings to keep updated and informed about changes in curriculum due to the COVID-19 pandemic. Current information regarding COVID-19 was posted on the <sup>1</sup>University of Calgary COVID-19 Dashboard website. Nevertheless, students were left feeling uncertain about how the COVID-19 pandemic would impact their nursing education and how it could further impact and mark their future nursing career. The unprecedented impact of COVID-19 has positioned this study, of stress and coping strategies among undergraduate nursing students, as urgent and historically specific based on the significantly enhanced experience of coping under extraordinary conditions.

### **My Research Study**

The inspiration for me to undertake this study stemmed from my own experience as a practicing registered nurse when I worked on a hospital nursing unit where nursing students came for their clinical practicum. I interacted with a range of students from those that were experiencing their first hospital-based clinical practicums, to those experiencing their final practicum before graduation. I frequently accepted a nursing student to work a buddy shift with

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<sup>1</sup> <https://www.ucalgary.ca/risk/emergency-management/covid-19-response/covid-19-dashboard>

me and although they were enthusiastic about the clinical experience, I noticed that they were often quite stressed. In my personal interactions with the nursing students, I learned about the various, perceived stressors in the nursing program, mostly associated with it being a rigorous program. The most common stressor in the clinical experience was their need to complete a checklist of hands-on tasks and skills to satisfy the requirements of the clinical practicum, which created fear of not meeting all expectations. I would review the checklist together with the student to prioritize which experiences were needed, and which experiences were available, depending on my patient assignment, for best learning while working through the checklist of expectations. I would further strive to search out beneficial clinical experiences, depending on patient assignments on the unit, which would also help them gain specific experiences that they required. From these encounters with the nursing students, I became intrigued with pursuing a research study focusing on the concept of stress and coping in undergraduate nursing students.

### **Research Purpose**

This research study was developed to explore meaning of the lived experiences of undergraduate nursing students during the COVID-19 pandemic, therefore, I chose a qualitative, Interpretive Description (ID) methodology to guide this study. Participants included a cohort of third to fourth year undergraduate nursing students in the faculty of nursing at the University of Calgary, in Calgary, Alberta, Canada. A goal of this study is to contribute evidence-based knowledge into nursing education to promote a supportive learning environment for undergraduate nursing students.

While stress is a known and documented component of undergraduate nursing education, this study was not focused on eliminating stress or controlling stress, but rather the purpose of this research study was to gain an understanding of undergraduate nursing students' perceptions

of stress and what coping strategies they utilized to manage stress as they studied during the novel COVID-19 pandemic. Undergraduate nursing students are being educated to work the front lines as the future nursing workforce, yet their educational experience will likely be forever marked by the effects of the novel COVID-19 pandemic. As such, this pandemic has opened an opportunity to conduct this research study in unprecedented times and in uncharted territory.

### **Research Question**

My research question is: *What factors affect stress and coping in a group of undergraduate nursing students during the COVID-19 pandemic?* Secondary questions were developed and used as the interview guide (Appendix A) to prompt further conversations during the participant interviews for this research study.

### **Theoretical Framework**

The theoretical basis, used to guide my research, was the Lazarus and Folkman (1984) Transactional Model of stress and coping. This model considers how individuals cope when faced with a perceived stressor. It is based on the premise that a person and the environment are in a, “dynamic, mutually reciprocal, bidirectional relationship” (Lazarus & Folkman, 1984, p. 293); therefore, stress is not the environment nor is it the person, but it is the person-environment interaction. Stress is further presented as having personal meaning which is dependent on the subjective cognitive appraisal of the situation that is perceived to be a threat to one’s well-being. This model asserts that coping is a learned behaviour that is acquired through a strength-based mix of previous experience and the cognitive appraisal of a new situation. In effective coping, the individual is then able determine appropriate strategies to manage stress. The major concepts of this model include stress, coping, and cognitive appraisal within the person-environment relationship, which will be discussed in further detail in chapter two.

## **Definitions of Key Concepts**

### **Stress.**

Stress is defined as, “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1984, p. 19).

### **Coping.**

Coping is defined as, “the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate” (Lazarus & Folkman, 1984, p. 19).

### **Cognitive Appraisal.**

Cognitive appraisal is defined as the “process of categorizing an encounter, and its various facets, with respect to its significance for wellbeing” (Lazarus & Folkman, 1984, p. 31).

## **Significance of this Research Study**

Effective coping strategies are crucial for nursing students to successfully manage the host of stressors that they encounter in order to maximize academic learning and clinical performance, as well as maintain their social health and well-being (Chan et al., 2009; Clark et al., 2014; Reeve et al., 2013). For this study, it is important to clarify that coping is not understood as an attempt to control stress, but rather effective coping is a method in which to respond to a stressor and manage stress. Lazarus and Folkman (1984) state, “coping should not be equated to mastery over the environment” (p. 140). Nursing students cannot avoid stressors, however, the effectiveness of the chosen coping strategy to manage stressors will reflect the impact of the stressor on the students’ educational performance, as well as, on their health and well-being (Gurková & Zeleníková, 2018; Zhao et al., 2015). Given the long-term perspective of

helping students to deal with stress, this is important because it entails the acceptance of stress as part of nursing work and adopting practices to work with it rather than try to control it which will only lead to burnout.

Cognitive appraisal of a stressful encounter determines the perceived intensity of a stressor, which then determines the choice of a coping strategy. Nursing students are each unique individuals who bring their own life experiences with them as they enter into nursing education, therefore, each individual will uniquely appraise a stressor which will determine the choice of a coping strategy. Wolf et al. (2015) asserts that, although there may be common stressors amongst a group of individuals, each individual's unique appraisal of a stressor may be perceived differently within the group, thus, each individual within a group is affected differently by similar stressors. The choice of coping strategies is influenced by a variety of factors, such as the individual's cognitive appraisal of the perceived stressor, the individual's personality, and previous coping strategies that have been used (Jimenez et al., 2009; Reeve, 2013). According to Lo (2002), individuals develop habitual coping strategies for managing stressors which can also influence their reaction to a stressor.

Due to the paucity of research studies that have been completed on this issue of stress and coping in undergraduate nursing students, it is essential that studies be undertaken in order to gain an understanding of their lived experiences, especially during a pandemic. This research study was timely in being conducted in unprecedented times, under novel circumstances where undergraduate nursing students were caught mid-semester during a historic time of heightened global stress due to the COVID-19 pandemic. Participants' perception of stress, before and during the pandemic, were captured in interviews.



## Chapter 2: Literature Review

This chapter contains the literature review of existing studies that have been conducted on stress and coping in the undergraduate nursing student population. The aim of this literature review was to explore and critically analyze research studies to gain an understanding of stressors associated with nursing education and the coping strategies utilized by nursing students. The intention was also to discover what is known in the literature about this issue, what is not well understood, and what gaps are present in the research on this topic.

This literature review was undertaken using the search databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline (Ovid) and PsychInfo. The search terms used were a combination of, *cope* or *coping*, *stress*, *stressors* or *psychological stress*, *nursing student* or *student nurse*, *baccalaureate* or *undergraduate*. A search of the databases yielded a total of ( $N = 902$ ) articles. The web-based software, Covidence was used to streamline this literature review from the databases, remove duplicate articles ( $n = 268$ ), and create a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (2009) Flowsheet (Appendix B), (Moher et al., (2009).

Article abstracts were first read and screened, followed by a full article reading to screen for the final selection of articles that would be appropriate for my research study. The inclusion criteria were: articles that included the focus of both stress and coping in undergraduate nursing students, articles written in the English language, and articles that had been peer-reviewed. The exclusion criteria were: articles that focused on students other than undergraduate nursing students, articles written in a language other than English, and non-peer reviewed articles. Fifteen articles were selected for this literature review. The selected articles range in dates from 2002 to 2019.

## **Article Characteristics**

Of the 15 articles that were selected for this literature review, 12 were research studies, two were integrative reviews, and one was a systematic review. Among the research studies, a quantitative design was most commonly used: eight of the research studies used a quantitative cross-sectional design, two used a longitudinal, mixed-method design, and two used a mixed-methods design. None of the studies used an exclusively qualitative design. There was a variety of measurement tools used throughout the research study articles with the Perceived Stress Scale (PSS) and the Coping Behaviour Inventory (CBI) being the most popular, used in five of the study articles. Journal articles were retrieved from around the globe: Australia, Canada, China, Hong Kong, Finland, Greece, Ireland, Japan, Pakistan, the Philippines, Saudi Arabia, Slovak Republic, and the United States of America (USA). The study sites varied throughout the articles, from seven being single site studies and five being multi-site studies. The sample sizes throughout the selected articles varied from ( $N = 35$ ) to ( $N = 1324$ ).

## **Stress**

The findings from my literature review, regarding stressors, were organized based on Lazarus and Folkman's (1984) definition of stress; "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). My analysis of the reviewed articles identified three major, common sources of stress: the clinical experience, academic stressors, and external stressors. Some articles simply identified and listed the common stressors while other articles ranked the common stressors in order from most common to least common, however, the ranked order was not consistent throughout the studies.

## **Clinical Stressors**

The articles in this literature review analyzed various student nursing populations globally. While a few of the articles identified the academic component as the main stressor, most of the articles identified the clinical experience as the main stressor for nursing students (Al-Gamal et al., 2018; Chan et al., 2009; Chernomas & Shapiro, 2013; Jimenez et al., 2010; Labrague et al., 2018; McCarthy et al., 2018; Wolf et al., 2015).

The clinical experience is an essential component of nursing education which provides nursing students with the opportunity to apply academic learning to clinical skills, to demonstrate physical competency, and to utilize critical thinking skills while under the supervision of a clinical nursing instructor and nursing staff. The clinical experience can have a significant effect on nursing students' basic nursing education and begin to mold their future habits for clinical practice; however, the clinical experience is often cited as the main site of stress. Perceived stressors that contributed to student's stress are: lack of professional knowledge and skills, inexperience with nursing procedures and lack of hands-on experience when performing clinical procedures or dealing with a complex clinical situation. Several of the studies indicated that the stress of caring for patients, fear of making a mistake and causing harm, inexperience in knowing how to communicate with patients or knowing how to meet patient needs, or being unfamiliar with medical terminology or patient's history, diagnosis, or treatments. Furthermore, stressors that caused feelings of being unprepared for practice included a change of patient condition and dealing with patient pain and suffering, or death and dying. Senior practicum students were described as being particularly stressed as they neared the end of their clinical experiences and were experiencing feelings of incompetency to begin nursing practice (Al-Gamal et al., 2018; Chan et al., 2009; Chernomas & Shapiro, 2013; Tully, 2004).

Several studies identified that interactions with the clinical instructor were a source of stress for nursing students in the clinical experience (Bhurtun et al., 2019; Chan et al., 2009; Chernomas & Shapiro, 2013). Clinical instructors are the first point of contact for students in their clinical practice rotations and they can play a critical role in assisting students to use their academic learning knowledge and develop clinical decision-making skills, problem solving skills, and clinical reasoning to influence and encourage nursing students to progress from dependent to independent practitioners; however, the relationship with the instructor was reported as a clinical stressor. Students reported feeling lack of guidance when experiencing a discrepancy between academic theory and clinical practice. Students experienced increased stress and feelings of not being able to meet clinical expectations, fear of making a mistake and fear of failure when having the perception of the clinical instructor having unrealistic expectations about students' performance in the clinical experience. Students also felt stress when being evaluated or observed and having feelings that the instructor is not evaluating them fairly or evaluating them in comparison to other nursing students.

Interactions with nursing staff and other professional staff was also identified as a stressor in clinical experience (Chan et al., 2009; Chernomas & Shapiro, 2013; Gibbons et al., 2011; Tully, 2004, Wolf et al., 2015). Each clinical practicum environment is new and different, and continually changing clinical environments can be a stressor in itself. Students need some time to settle into a new ward, become familiar with the ward facilities and procedures, and to develop a working relationship with a new clinical advisor and the nursing ward staff. Unfortunately, nursing ward staff are often a contributor to nursing students' stress due to the nursing staff's attitude toward students, a lack of empathy or an unwillingness to help. This can contribute to students feeling as if they are not part of the ward team, and cause students to

experience a fear of not knowing how to discuss a patient's care with the nursing staff or the medical staff.

### **Academic Stressors**

While fewer articles from the literature review identified the academic component as the main stressor for undergraduate nursing students, an Australian case study done by Lo (2002) found that, "81.2% of students found the nursing studies to be the most stressful during their nursing programme" (p. 122). Stress from heavy workload and assignments were indicated as major stressors. Students fear of poor marks in the academic component may cause fear of failure or fear of not being able to meet expectations when getting into the clinical experience (Chan et al., 2009; Chernomas & Shapiro, 2013; Sawatzky, 1998).

### **External Stressors**

Stressors of daily life, such as the need to work a job, due to financial necessity, or family responsibilities can contribute to stress in undergraduate nursing education as students juggle each responsibility vying for their attention (Clark et al., 2014; Labrague et al., 2018). Two articles identified nursing students' peers as a stressor. Perceived stressors in the form of competition from peers included inability to get along with peers, or clinical instructors evaluating performance by comparison of peers (Chan et al., 2009).

### **Levels of Stress**

Levels of stress were studied in several of the articles examining the differences in levels between junior and senior nursing students, or the differences in the study year of the nursing educational program. Two studies showed that senior nursing students are found to have lower levels of stress and lower stress perceptions than that of junior nursing students (Al-Gamal et al., 2018; Labrague et al., 2018). Two other studies indicated that there are increasing levels of stress

as students progress through the nursing education program and found the level of clinical experience significantly contributes to students' perceptions of stress towards instructors and nursing staff, and assignment workload (Gurková & Zeleníková, 2018; Tully, 2004). In contrast, Wolf et al. (2015) stated that, "no general consensus exists as to which year of the program is most stressful for nursing students" (p. 202).

### **Coping**

Lazarus and Folkman (1984) define coping as, "the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate" (p. 19). Stress is not categorized as either good or bad, rather, each individual appraises to what degree that a stressor is taxing their personal well-being or exceeding their resources; therefore, coping is the cognitive appraisal of a situation, followed by the behavioural efforts, or coping strategies chosen to be utilized to manage the stressor (Jimenez et al., 2009; Turner & McCarthy, 2017).

There are two levels of appraisal in coping: primary and secondary. The primary appraisal is the initial encounter of a situation in which the individual perceives a stressor as positive and beneficial, or negative, harmful, or a threat. If the primary appraisal is perceived as negative, harmful or a threat, the secondary level of appraisal then takes place by evaluating coping strategies that may be utilized to manage the perceived stressor. Coping strategies chosen are unique to each individual and are dependent upon factors such as, personality traits and life experiences (Gibbons, 2010; Lazarus & Folkman, 1984; Reeve et al., 2013; Zhao et al., 2015).

Coping can be divided into two categories: problem-based and emotion-based (Bhurtun et al., 2019; Gibbons, 2010; Lazarus & Folkman, 1984). Problem-based coping strategies may be directed towards changing the environment while emotion-based coping strategies may be

directed inward toward changing the meaning of the event (Lo, 2002). Coping is an individual's cognitive assessment towards a stressor and the behavioural effort to manage a stressor and to balance the mental state; therefore, the level of appraisal will determine the level of stress which will then determine the individual's coping strategy (Sikander & Aziz, 2012; Zhao et al., 2015).

Problem-focused coping strategies involve behaviours and actions directed toward resolving the main cause of the problem (Bhurtun et al., 2019; Chernomas & Shapiro, 2013; Clark et al., 2014; Wolf et al., 2015). Problem solving strategies involve working through stress by a positive means such as utilizing organization and planning skills to manage workloads, exercising, and seeking emotional support or seeking spiritual guidance. These behaviours and actions are examples of managing or resolving the problem between the person and the environment. Problem solving coping strategies are considered to be positive coping strategies and are associated with lower levels of stress.

Emotion-focused coping strategies involve regulating the emotional response to the problem. Strategies such as, avoidance or avoiding the problem, alcohol, or drug use to manage the problem, transference, such as overeating or undereating, disengagement, apathy, or procrastination are examples of managing or altering the problem with emotion focused strategies (Bhurtun et al., 2019; Chernomas & Shapiro, 2013; Clark et al., 2014; Gibbons, 2010). When emotion-based coping strategies are used, an individual may initially succeed in lowering emotional stress, but in the process, will fail to address the stressor. Emotion-based coping strategies can impair health by impeding adaptive health and illness related behaviours, are associated with emotional exhaustion and anxiety, and are a strong predictor of adverse psychological well-being. Emotion-focused coping strategies are associated with ineffective coping strategies and are associated with moderate to high levels of stress.

The three review articles in this literature review, all found that nursing students are more likely to use problem-based coping strategies than emotion-based coping strategies when stressed, and the most common coping behaviour is problem-solving (Bhurtun et al., 2019; Labrague et al., 2017; McCarthy et al., 2018). Nursing students utilize various coping strategies depending on their cognitive assessment towards a stressor, however, coping strategies do not necessarily fit into either problem-based or emotion-based categories. For example, two studies from China found that transference is the most frequently used coping strategy for nursing students (Chan et al., 2009; Zhao et al., 2015). Transference in these studies involves behaviours such as relaxing, taking a nap, watching TV or a movie, overeating or undereating, or exercising. Behaviours such as relaxing or exercising can be a means of managing or altering the problem with the environment by indulging in activities that perhaps rejuvenate the person to tackle the stressor. Alternatively, behaviours such as emotional eating or watching a movie or TV can be similar to avoidance, which may lower emotional stress, but will not address the stressor.

### **Coping versus Resilience**

The focus of my research study is stress in undergraduate nursing students, and I have chosen to use the term coping to examine how nursing students manage their stress. However, the word *resilience* is also a term that is commonly used when examining how individuals manage their stress. Coping and resilience are terms that are increasingly becoming used interchangeably and are used as if synonymous to one other (Van der Hallen et al., 2020). Therefore, a discussion is warranted to define the terms coping and resilience, examine their distinct characteristics, and analyze their commonalities and differences.

The term resilience has been studied within psychology to understand human functioning in stressful situations and has attempted to understand why some individuals withstand or even



thrive on life stressors. Studies on resilience have increased tremendously over time and have expanded into environment settings such as business organizations, education, communities, and sports performance, thus, there is not an agreed upon definition across disciplines. The word resilience originates from the Latin verb, “resilire”, meaning, “to leap back” (Fletcher & Sarkar, 2013; Windle, 2011). Van der Hallen et al. (2020) define resilience as, “the ability to bounce back from negative emotional experiences and flexibly adapt to the changing demands of stressful experiences” (p. 480). With comparison to the word coping, Lazarus and Folkman (1984) define coping as, “the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate” (p. 19). Initially, these two definitions appear to be synonymous to one another, however, a closer examination of the definitions display distinctions in the definitions: Lazarus and Folkman’s (1984) definition of coping refers to coping as, “the process through which the individual manages the demands of the person-environment relationship” (p. 19); Van der Hallen et al. (2020) refers to resilience as, “the ability to bounce back..., and the flexibly to adapt ...” (p. 480).

Although it is beyond the scope of this discussion to examine in-depth arguments of resilience that occur between researchers and scholars, it can be stated that resilience and coping are two distinct concepts yet have an interdependent overlap with each other in managing stress. “Resilience *influences* how an event is appraised, whereas coping refers to the strategies employed *following* the appraisal of a stressful encounter” (Fletcher & Sarkar, 2013, p. 16). It has been suggested that resilience can be considered the conceptual bridge between coping and the development of coping abilities (Leipold & Greve, 2009; Van der Hallen et al., 2020).

It has been proposed that resilience could be conceptualized as a constellation of the fit between individual resources, the social conditions and the stressor or challenge versus coping that could be conceptualized as a process in which individuals manage the stressor or challenge (Fletcher, & Sarkar, 2013; Van der Hallen et al., 2020). Individual resources are considered via personality characteristics or traits, or trait constellations which refer to the tendency of an individual to respond flexibly versus rigidly to a stressor. Examples of personality traits or constellations are: “an easy temperament, good self-esteem, and planning skills, along with a supportive environment” (Fletcher & Sarkar, 2013, p. 12); personality dispositions of hardiness which include, “commitment, control and challenge” (Leipold & Greve, 2009, p. 41); a “sense of coherence, defined as a feeling of confidence that demands are comprehensible, manageable, and meaningful” (Leipold & Greve, 2009, p. 41).

### **Discussion**

All the research articles chosen for my literature review were dated between 2002 to 2019 which shows that there has been little research on stress and coping in undergraduate nursing students until the past two decades. This literature review found that stress in undergraduate nursing students is an issue globally. While articles from around the globe were included in this literature review, Europe and the United States dominated the research contributions of the issue of stress and coping in undergraduate nursing students (Chernomas & Shapiro, 2013). Chan (2009) identified that stress has been studied in western populations but there is limited research among the Chinese population. Chan’s (2009) study, of Hong Kong baccalaureate nursing students, asserted that it is the first of study of its kind. Few Canadian articles were found on this subject with only one meeting the inclusion criteria for my study.

The research articles, included in this literature review, showed that the quantitative cross-sectional design was most commonly used. The cross-sectional design captures a single point in time during the whole educational program, however, perceived stressors will change over the course of the program due to the transitional nature of nursing education. Two of the research articles, included in this literature review, used a longitudinal, mixed-methods design which would be effective in following changes in perceived stressors and coping strategies over a period of time. Two of the research articles used a mixed-methods design which included a qualitative component, using open-ended questions, which would allow students to make comments about their lived experience and would capture the students' feelings and experience with stress and coping strategies. None of the research articles included in this literature review, used an exclusively qualitative methodology design.

The strengths of this literature review were the range in sample sizes, the multi-site studies, the inclusion of research articles from around the globe, and the measurement tools that were used in the studies. The sample sizes in the articles ranged from ( $N = 35$ ) to ( $N = 1324$ ); larger sample sizes increase the power and generalizability of the study. Five of the studies were multi-site studies which would also increase the generalizability of the study by contributing a diversity of data across educational institutions. The measurement tools that were used in these quantitative studies were structured and validated tools, however these tools may be limited in capturing the in-depth understanding of the lived experience of stress and coping in the undergraduate nursing student population. Future research may aim to establish or refine measurement tools focusing on undergraduate nursing students perceived stressors and their utilization of coping strategies.

## Conclusion

The aim of this literature review was to explore and critically analyze research studies to gain an understanding of what is known about the issue of stress and coping in undergraduate nursing students, what is not well understood, and what gaps are present in the research. Research articles, from around the globe, agree that stress is a critical issue in undergraduate nursing education. Studies identified a commonality of major stressors as being the clinical experience, academic stressors, and external stressors, although these major stressors were not ranked in order of most or least stressful. Levels of stress experienced by undergraduate nursing students was examined in several research articles considering differences between years of study or differences between junior and senior level nursing students. There was no consensus reached regarding levels of stress throughout nursing programs, rather it was found to be the nursing students' perception of stressors throughout the program. The literature review showed that nursing students utilized various coping strategies depending on their cognitive assessment of a stressor, with the most common coping strategy utilized identified as being problem-solving.

The literature review showed a paucity of research on the issue of stress and coping in undergraduate nursing students until the last two decades. Although it was agreed upon throughout the literature that stress is a critical factor in undergraduate nursing education, there is an imbalance of the amount of research studies that has been completed throughout regions around the world. While research studies from Europe and the United States dominate the literature, one study from China claimed to be the first of its kind. The literature review found few Canadian research articles on this critical issue, with only one article which met the inclusion criteria for my study. As a Canadian nurse researcher, my aspiration is to contribute to Canadian research with my research study on stress and coping in undergraduate nursing students.

### **Additional Notation**

I completed my initial literature review in February 2020, before the COVID-19 pandemic appeared in the Winter 2020 semester. My research study already intended to focus on stress and coping in undergraduate nursing students, however, with the appearance of the COVID-19 pandemic, I took the opportunity to shift the focus of my research topic to stress and coping in undergraduate nursing students during the COVID-19 pandemic. In April 2020, I reran the literature review using the same search terms, *cope* or *coping*, *stress*, *stressors* or *psychological stress*, *nursing student* or *student nurse*, *baccalaureate* or *undergraduate*, that I used in the original literature review but added the additional search terms, *pandemic* or *disease outbreak* or *epidemic*. Using the same search databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline (Ovid) and PsychInfo, that I had used in the original literature review, I searched using a combination of all the search terms.

The second search did not yield any new articles for stress and coping in undergraduate nursing students during any pandemic. The search found a few articles which focused on the impact of the Severe Acute Respiratory Syndrome (SARS) outbreak on health care workers, such as physicians, nurses, and respiratory therapists, but no articles were found that focused on stress and coping in undergraduate nursing students during a pandemic.

### **Chapter 3: Study Methodology and Design**

This chapter presents the research methodology and design, the research plan, and the ethical considerations for this study. The purpose of this study was to gain an understanding of the lived experiences of the undergraduate nursing students during their educational journey, therefore, in accordance with this purpose, I chose a qualitative research approach using the Interpretive Description (ID) methodology for my research study.

#### **Qualitative Research**

“Qualitative research typically seeks to generate empirical knowledge about human phenomena for which depth and contextual understanding would be useful and for which measurement is inappropriate, premature, or potentially misleading” (Thorne, 2016, p. 44). Qualitative research focuses on understanding the human lived experience by adopting a person-centred and holistic perspective. Qualitative research does not aim to achieve generalizability but aims to provide an understanding of lived experience through studying of cases (Holloway & Galvin, 2017; Polit & Beck, 2017). As this research study was carried out during unprecedented times, the purpose of this study was to gain a deeper understanding of the lived experiences of a cohort of undergraduate nursing students during the exceptional context of the COVID-19 pandemic.

#### **Interpretive Description Design**

Interpretive Description (ID) design is an alternative and relatively new qualitative methodology which was developed by nursing scholars as a research methodology for knowledge building around complex clinical questions that arise in the applied health sciences, such as nursing. The goal of the ID methodology is to create practice-relevant knowledge by selectively using techniques from traditional qualitative social science methodologies including

phenomenology, ethnography, and grounded theory. The appeal of the ID design is that it is a non-categorical method of research that does not rigidly prescribe traditional methods of qualitative research which offers nursing researchers the flexibility and creativity to design studies which draw upon principles in nursing's epistemology. However, the ID design has been criticized for its borrowing from traditional qualitative methodologies, raising accusations of blurring of distinction between traditional qualitative methodologies, or "method slurring" (Thorne et al., 2004, p. 3). The ID methodology was further criticized for being "intellectually sloppy" (Thorne et al., 2016, p. 453) research due to its lack of methodological grounding (Thorne, 2016; Thorne et al., 2004; Thorne et al., 1997).

Thorne (2016) argued that an alternative qualitative methodology was necessary in nursing research due to noting of a trend in which nursing researchers would adapt a research question to meet the mandate of a traditional qualitative research methodology. This research approach often led to superficial research results which fit the mandate of the chosen methodology but did not meet the principles of nursing's epistemological mandate, and thus, did not answer questions or produce results that would advance nursing theory, nursing knowledge, or nursing practice (Thorne, 2016; Thorne, Kirkham, & O'Flynn-Magee, 2004). Traditional qualitative methodologies include phenomenology, which is grounded in the discipline of philosophy; ethnography, which is grounded in the discipline of anthropology; and grounded theory, which is grounded in the discipline of sociology. These methodologies stem from research traditions that were designed to address theoretical and empirical problems of the social sciences versus the practical problems and concerns of applied disciplines such as the nursing profession (Polit & Beck, 2017; Thorne, 2016; Thorne et al., 2004; Thorne, Kirkham, & MacDonald-Emes, 1997). ID was developed in response to a need for an alternative method for

nursing researchers to be able to do qualitative research that could generate understandings within the complex discipline of nursing. “Nursing disciplinary epistemology orients its scholars towards favouring knowledge that can be put to use rather than being of primarily theoretical interest” (Thorne et al., 2016, p. 455).

Interpretive Description is based on naturalistic inquiry, which acknowledges the constructed and contextual elements of human experience and allows for shared realities. Thorne (2016) states, “ID studies are conducted in as naturalistic a context as possible in a manner that is respectful of the comfort and ethical rights of all participants” (p. 83). Three key axioms of naturalistic inquiry provide the philosophical underpinnings of the ID research design. First, reality is complex because it is formed from the subjective and experiential encounters of individuals, therefore reality involves multiple constructed realities, and thus, can only be studied holistically. Second, the inquirer and the “object” of inquiry interact to influence one another, therefore the knower, the participant, and the known, the researcher, are interactive and inseparable; the subjective and experiential knowledge contributed by the participant and the researcher can generate socially constructed understandings of human experiences. Third, no single a priori theory could encompass the multiple realities that may be encountered, and therefore, theory must emerge from the data (Thorne, 2016; Thorne et al., 2004).

Interpretive Description is based on inductive reasoning, which builds from specific observations toward broader generalizations about patterns or theoretical constructs. Using the ID methodology researchers seek understandings of clinical or disciplinary phenomena that illuminate characteristics, patterns, and structure in some theoretically useful manner. Findings are driven by the researcher who must comprehend data, synthesize meanings, theorize relationships, and re-contextualize data into findings (Thorne, 2016).



As a practicing and experienced registered nurse (RN), and the researcher of this study, the choice to utilize ID as the methodological design made logical sense as the most fitting approach to obtain the most detailed and thorough understanding of the lived experiences of undergraduate nursing students participating in my study, and to obtain in-depth data for the purpose of this study. The ID methodology was selected to address the research question and allow for description and interpretation of the student nurse's lived experience during their nursing educational journey and to generate findings that are applicable to undergraduate nursing education. Furthermore, the findings of this study "would extend beyond mere description and into the domain of the 'so what' that drives all applied disciplines" (Thorne, 2016, p. 36).

### **My Research Plan**

The setting for this study was the Faculty of Nursing at the University of Calgary, which at the time of data collection was operating using remote communication wherever possible. The inclusion criteria for participants were undergraduate nursing students in years three and four of the undergraduate nursing program, where students were in academic theory courses as well as in clinical practicum experiences. These students would have experienced the switch in academia to remote classroom learning and would have experienced the disruption and uncertainty of their clinical experience in the Winter semester of 2020, due to the COVID-19 pandemic. The exclusion criteria were the undergraduate nursing students in the first and second years of the nursing curriculum. Undergraduate nursing students in the first year of the nursing curriculum are completing their mandatory non-nursing theory and elective courses and did not have any clinical placements. These students would have been completing their electives during the Winter 2020 semester and would not have been in clinical experience, therefore, would not have experienced clinical disruption due to the COVID-19 pandemic.

The plan for my research study was to conduct a one-time individual interview with each participant. The choice of individual interviews was decided based on the premise that participants may feel more comfortable speaking openly in an individual setting which may produce greater depth of data. The anticipated time for the interviews was 30 - 60 minutes and the expected time commitment for participation was approximately one hour during the course of the Fall 2020 semester.

### **Timeline**

The timeline for this study was 2020 to 2021 (Appendix C). The targeted implementation of the participant interviews was the Fall semester of 2020. Most of the participants requested interviews during the November 2020 reading week due to the busyness of the coursework during the semester. All interviews were completed by the end of November 2020. Once all interviews were completed, data analysis began and the writing of the thesis occurred over the Winter, Spring, and Summer semesters of 2021.

### **Sampling**

The sampling for this research study was convenience and purposive sampling. Convenience sampling involves recruiting participants that are most conveniently available for both the research study and the researcher (Holloway & Galvin, 2017; Polit & Beck, 2017). As the setting of this study is the faculty of nursing at the University of Calgary, the participants were recruited from this setting. Purposive sampling involves recruiting selected participants that will most benefit the study because they hold experiences that will contribute to an understanding of the phenomenon being researched (Polit & Beck, 2017; Thorne, 2016). The recruitment of these participants was based on the participant inclusion and exclusion criteria for this research study.

The sample size in qualitative research, using the ID design, can be conducted on any sample size, large or small. Generally, qualitative research studies consist of smaller sample sizes which can be studied in depth to enable a detailed way of capturing the meaning of the experiences of the participants (Holloway & Galvin, 2017; Polit & Beck, 2017; Thorne, 2016). Considerations for deciding sample size include such factors as, the scope of the research question, the informational needs of the phenomenon being studied, the sensitivity of the phenomenon being studied, and the quality of the participants. Therefore, the researcher must attempt to gauge the sample size in relation to the level of knowledge that the study is aiming to achieve. During a discussion with my supervisor and my supervisory committee, regarding sample size, it was decided that a target sample size of eight to ten participants would suffice for my research study.

### **Risks and Benefits**

There were no obvious risks to participating in this study. I assumed that participants who chose to volunteer for a research study, wanted to share their experiences. While it was possible that distressing feelings might have arisen during an interview when talking about stressors, there were no instances of participants becoming distressed during the interviews. As an experienced Telehealth triage registered nurse, I was prepared (if needed) to provide support and direct a participant to appropriate support; furthermore, a detailed explanation of risks was outlined in the Consent form (Appendix F) that each participant signed before the interview.

There were no direct benefits from participating in this study, other than a \$10. coffee-shop gift card that I offered each participant as a token of my appreciation for volunteering for this study. An indirect and longer-term benefit may be that this study will generate evidence-based knowledge about nursing students' stressors, which may be used as a basis to educate

nursing faculty and staff and to create a supportive environment for undergraduate nursing students.

### **Considerations**

A consideration in the planning of the research study was whether students would be back on campus in the Fall 2020 semester, or if the pandemic recommendations of social distancing would still be active. The COVID-19 guidelines and restrictions were still in effect for social distancing during the Fall 2020 semester, therefore the participant interviews were held via Zoom. I obtained Zoom privileges via the University of Calgary to facilitate holding the participant interview sessions.

### **Recruitment**

Recruitment was done via three methods: an email invitation and information letter sent out via the faculty of nursing student list server; a short five- to ten-minute presentation, given by myself, at the beginning of some of the academic classes; and an eye-catching participant recruitment poster (Appendix D) posted on the faculty sponsored Facebook page. The third and fourth-year nursing students were sent an email invitation to participate in this research study that included an information letter with details about the study and the expectations of participation (Appendix E). All interested respondents were then sent a consent form (Appendix F), and the demographic questionnaire (Appendix G). Potential participants had time to ask questions before signing the consent and completing the demographic questionnaire. Consent forms were signed and the demographic questionnaires were completed, by each participant and collected back to myself, before moving forward to conduct the individual interviews.

I contacted course instructors via email to request permission to present a short five to ten-minute presentation of my study at the beginning of their classes. The short presentation gave

me the opportunity to introduce myself and the research study and allowed the nursing students to visually see me and put a face to the researcher's name. This tactic was to gently nudge the nursing students' memory of the invitation and information letter, and the recruitment research poster that was posted on the social media Facebook page, and to spark an interest to volunteer to participate in the study.

Social media is a popular and an effective method of communication. I contacted the coordinator of the faculty sponsored social media network and arranged to have the participant recruitment poster (Appendix D) posted on the social media Facebook page. The participant recruitment poster referred students back to the email invitation that had been emailed out.

Once I received the Certification of Institutional Ethics Approval from the Conjoint Health Research Ethics Board (CHREB) at the University of Calgary (Appendix H), I was able to begin recruitment. The targeted recruitment number of students was eight to ten; a total of ten student were successfully recruited. Two students acknowledged that they had seen my recruitment poster on the social media Facebook page and contacted me to volunteer to participate. One participant contacted me after receiving the invitation and information letter, but I found that most students were recruited after I had given the short five to ten-minute presentation, at the beginning of their classes.

### **Data Collection**

Data for this research study was collected through semi-structured interviews. After a discussion with my supervisor and my supervisory committee, I decided to use individual rather than group interviews to allow participants to verbalize thoughts and feelings that they may not be comfortable to share in a group discussion. Ten interviews were completed with a duration of 40-60 minutes each.

Semi-structured interviews are a commonly used interview approach in qualitative research. A feature of the semi-structured interview approach is the flexibility for both the researcher and the participants, which allows the researchers to gain rich data from the participants. Open-ended questions are utilized to provide the participants leeway to answer questions spontaneously, reflect on ideas and describe their experiences from their own perspective, as well as lead the direction of the conversation during an interview (Holloway & Galvin, 2017; Polit & Beck, 2017). I prepared an interview guide with questions to keep the interview conversation pertinent to the topic of the study, and consistent in all the interviews. However, not all of the questions from the interview guide were asked during each interview session, and the questions were not necessarily asked in the same sequence for each interview. Along with the interview guide, I also kept the participant's demographic questionnaire handy during the interview to refer to or clarify any comments they had written.

The interviews were held throughout the Fall semester of 2020. A face-to-face, in person approach would have been preferred for my interviews, and although the COVID-19 social distancing guidelines did not allow face-to-face sessions in an interview room, Zoom interviews still enabled remote face-to-face contact. The face-to-face approach allowed me to observe the participants throughout the interview and clarify questions or responses, or probe for additional information or pursue a part of the conversation in further detail. I made some field notes on my observations of the participant and my perceptions of the emotional tone of the interview which were written at the beginning of each transcribed interview.

At the beginning of each interview, I began by thanking the participant for volunteering to take part in the study and expressed appreciation for their time. I continued by informing each participant that the interview would be recorded, and I paused to get an accepting nod of

approval from each participant. I then explained that I would be listening to the interviews and transcribing them myself, and I further explained how confidentiality would be maintained. I then talked about my interest in the issue of stress and coping in undergraduate nursing students in an attempt to create a calming atmosphere in which to facilitate a conversation for the interview.

My focus for the interviews was to encourage the participants to talk about their lived experiences, so that I could gain an in-depth understanding. I was mindful to create a calm and respectful atmosphere for the participants to encourage open conversation. I recalled the axiom of naturalistic ID studies in which, the inquirer and the topic of inquiry interact to influence one another, and therefore are interactive and inseparable, so I shared one of my own experiences with the participants; when I was in my last required master's course, in the Winter semester 2020, I had been scheduled to give a presentation to my class, however, due to the sudden COVID-19 distancing restrictions, the presentation was to be done remotely, and I had one week to learn Zoom. Sharing my own experience, allowed the participants to relate to me as a fellow student that had also experienced the educational disruptions due to the COVID-19 pandemic restrictions. This encouraged a reciprocal conversation instead of me, the researcher, asking the questions and the participants answering questions, which appeared to be effective as most of the participants appeared to open up and talk.

### **Data Analysis**

According to Thorne (2016), data analysis is “unquestionably the most painfully difficult and yet the most essential element in what constitutes a credible ID study” (p. 155). Data analysis is often associated with the coding of data, however, coding must be used with caution, especially as a novice researcher, because over-zealous and rigid coding can become confusing

and overwhelming, and not generate new information (Thorne, 2016; Thorne et al., 2004). A strategy used with ID is to group bits of data with similar properties into broad categories, and then compare and contrast with groupings that have different properties to analyze properties from a range of viewpoints. Some data can be grouped into more than one group. It is the analytical breadth that is more useful than detailed coding which permits groups of data to be examined, compared, and contrasted for a range of alternatives (Thorne, 2016; Thorne et al., 2004).

Data analysis in qualitative research is an iterative process; meaning that the data analysis is non-linear and the researcher moves back and forth from data collection to data analysis repeatedly revisiting the data (Holloway & Galvin, 2017). Using this approach, data collection and data analysis can occur concurrently, therefore data analysis may begin as the interviews are being transcribed and before all the data collection had been completed (Polit & Beck, 2017). Transcribing the interviews verbatim started immediately after the completion of each interview. Although Thorne (2016) describes data analysis as ‘painfully difficult’ (p. 155), I found that transcribing the interviews myself was an enormous advantage to become very familiar with the content of the interviews and then be able to dig down to build new and relevant meaning from the raw data. I agree with Holloway and Galvin’s (2017) statement that, “the fullest and richest data can be gained from transcribing verbatim” (p. 288). Field notes containing the researchers’ personal journaling of ideas about the research study, and observations of the participants during the interviews, became part of the data analysis research documentation.

Transcribing began immediately after each interview, and therefore, so did data analysis through the close attention that I needed to give to the recorded interviews. However, I refrained from amalgamating data for an interval of at least two weeks, which allowed a two-week time



frame for participants to withdraw from my study and request to have their interview data withdrawn if they chose to do so. After the two-week timeframe from an interview, data could no longer be withdrawn because of the impossibility of removing the influence of any one piece of data which would have been analyzed and already been amalgamated with other interview data. None of the participants contacted me to withdraw their interview, therefore the data analysis included all ten participants. All data was collected, combined, and analyzed as a whole, and was reported in aggregate form.

Interpretive Description is based on inductive reasoning; therefore, the data analysis process must follow an inductive approach which involves working with the data until new understandings, explanations, or concepts are generated. Rigid coding is often practiced in deductive data analysis which suggests that by coding data, the researcher knows what this bit of information entails and what other pieces of information may be similar or contrasting. Inductive data analysis involves analyzing the data without any preconceptions and asking in-depth questions about why bits of information appeared in the data, what it may mean, what may be learned from it, and how it relates to existing disciplinary knowledge. The researcher is encouraged to go beyond simply reading transcripts and field notes but to become immersed in the data and engage in the data using a tactile approach such as making marginal notes, highlighting, and writing reflective notes of common themes and emerging ideas. As common themes and ideas emerge, they can be interpreted, through inductive reasoning, within the context of the research question and aim of the study. As themes and ideas emerge, and are interpreted, they become new understandings, explanations, or concepts that will become the research findings (Thorne, 2016; Thorne et al., 2004; Thorne et al., 1997).

### **Ethical Considerations**

This research study involves undergraduate nursing students, with a potential vulnerability that participation in the study could affect their academic evaluation. However, I was not involved in any teaching capacity where I could influence the students' progress through the program, and the names of the students were not shared with my supervisor. This study was approved by the University of Calgary Conjoint Health Research Board (CHREB) and received faculty of nursing departmental approval to involve undergraduate nursing students as participants. As the researcher for this study, I hold the Certification of Completion of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS 2: Core), as of 19 October 2018 (Appendix H). In the event of a participant becoming distressed during an interview, when talking about perceived stressors, I would have been able to draw upon my clinical skills and experience as a telehealth triage registered nurse to be a support or direct a participant to appropriate support if needed.

Confidentiality and anonymity was guaranteed by the use of a simple numbering system. Each participant was randomly assigned a number as they returned their signed consent form and their demographic questionnaire back to me. The interviews were not conducted in the order of the participant number assigned, therefore, there was no correlation between the participant numbers assigned and the date that the interviews were done. For example, (P1) was not necessarily the first interview that was done, or (P6) was not necessarily the sixth interview to be done. Throughout the interviews, no names were mentioned and when transcribing the interviews, anything that I said was referred to as 'Interviewer' and anything that the participant said was referred to as (P#). This was explained to each participant at the beginning of the Zoom meeting. The researcher did maintain a confidential key of the participants, the random numbers

assigned to each participant, and the order in which the interviews were done. The signed and returned consent forms and demographic questionnaires were sent to my supervisor, via OneNote, and the transcribed interviews were sent to my supervisor via email. The consents, demographic questionnaires, and interview transcriptions will be held in a locked cabinet within my supervisor's locked office for five years before being destroyed. All of the researcher's files are stored as encrypted files on a password-protected laptop.

I had intention to utilize a transcription software device, such as NVivo or Otter, which was stated in the CHREB application. The NVivo transcription device is available through the University of Calgary, and is therefore, viewed as reputable by CHREB, and the Otter transcription software device has a feature to transcribe Zoom meetings. However, I found that these software devices transcribed numerous inaccuracies, so I listened to the recordings of the interviews and transcribed them myself.

### **Evaluation Criteria**

Thorne (2016) outlines four principles to ensure rigour and credibility in qualitative research, which are accepted across the qualitative research spectrum, and which “form the basis for articulating evaluation standards in interpretive description” (p. 235): Epistemological Integrity, Representative Credibility, Analytic Logic and Interpretive Authority.

#### **Epistemological Integrity**

Thorne (2016) states, “all qualitative research is expected to demonstrate *epistemological integrity*, in the sense that there is a defensible line of reasoning from the assumptions made about the nature of knowledge through to the methodological rules by which decisions about the research process are explained” (p. 233). Therefore, to ensure credibility of the study findings, the researcher must demonstrate an appreciation for the epistemological position surrounding the

research question and create decisional strategies that respect those positions. The research question must be consistent with the epistemological approach, and the interpretative strategies must flow logically from the research question through to the findings of the research study, in order to describe both the study topic of interest and to produce compatible study results related to the study topic and the research question.

The research question for my study is, *‘What factors affect stress and coping in a group of undergraduate nursing students during the COVID-19 pandemic?’* My research question is consistent with using an Interpretive Description methodology. The research question in an ID study describes the research study topic of interest, and then analysis of the study, using patterns and themes to interpret the findings of the study. Analysis of the data is done by grouping comments into themes, patterns, and relationships to interpret the study data into findings. ID methodology uses an inductive reasoning approach when analyzing social patterns of behaviour, therefore, during the analysis of my study data, I focused on understanding what coping strategies were utilized by undergraduate nursing students to cope with their perceived stressors throughout their educational journey during the COVID-19 pandemic.

### **Representative Credibility**

Thorne (2016) describes representative credibility as, “the theoretical claims they purport to make are consistent with the manner in which the phenomenon under study was sampled” (p. 234). The phenomenon of interest for this study was stress and coping in undergraduate nursing students. The study participants were a cohort of undergraduate nursing students that were actively enrolled in the nursing educational program in the faculty of nursing at the University of Calgary; therefore, the sample is representative of the phenomenon under study.

### **Analytic Logic**

Thorne (2016) states, “*analytic logic* makes explicit the reasoning of the researcher from the inevitable forestructure through to the interpretations and knowledge claims made on the basis of what was learned in the research” (p. 234). Analytic logic requires a visible audit trail which provides evidence of the inductive reasoning pathway used by the researcher, which could be used by an outside researcher to follow the reasoning pathway. For my study, I have transcribed the participant interviews, written field notes about the interviews, drawn tables to provide visuals of demographics, participant’s perceived stressors and coping strategies, and written groupings of comments and themes as a roadmap of my inductive reasoning for the findings of my research study.

### **Interpretive Authority**

Simply stated, interpretive authority assures that the researcher’s interpretation of the analysis of the research data, is not merely biased. Polit and Beck (2017) assert that bias can distort study results which undermine the validity of the study and affect the quality of evidence of the study; for example, a researcher’s subjectivity may distort inferences in the data to findings that are in line with their own experiences or expectations. Thorne (2016) acknowledges that all knowledge is perspectival, however, a qualitative study must demonstrate *interpretive authority*, which is, “assurance that a researcher’s interpretations are trustworthy, that they fairly illustrate or reveal some truth external to his or her own bias or experience” (p. 235). My study was guided by a theoretical framework which provided direction to read and interpret the data. I made a concerted effort to keep my bias in check by my making comments on the transcribed interviews, making comparative notes to find themes, and discussing these findings with my supervisor and my supervisory committee members to gain perspectives aside from my own.

## Chapter Summary

This chapter presented an overview of my research study's methodology and discussed the rationale for choosing a qualitative approach using the Interpretive Description (ID) design. A qualitative approach, which focuses on understanding the human lived experience by adopting a person-centred and holistic perspective, was deemed to be most appropriate to meet the purpose of my study. The ID methodology was an appropriate choice for this study due to its non-categorical, naturalistic characteristics which proved to be an effective choice for exploring nursing student experience of stress in the context of their lives during the COVID-19 pandemic. Furthermore, based on the three axioms of the ID methodology, the interviews promoted an interactive conversation between research and participant versus a question-and-answer interview. An interactive conversation enabled shared realities between research and participant and allowed for a participant led conversation which uncovered rich data about the student experience.

My research plan was presented which included the inclusion and exclusion criteria for participants, the timeline, and the sampling approach. The risks and benefits of participation in my study were outlined with a referral to further details found in the consent form (Appendix F) that each participant would sign before participating in my study. Due to the COVID-19 restrictions and guidelines, consideration was taken as to whether interviews would be done in person or via zoom, based on whether students would be on-campus or taking classes remotely. Recruitment methods were listed with a referral to view the recruitment poster (Appendix D). Data collection and data analysis was then discussed in keeping with the research methodology approach and design that were chosen for my study.

The ethical considerations for my research study were presented with a discussion of the study approval by the University of Calgary Conjoint Health Research Board (CHREB) and the faculty of nursing departmental approval to involve undergraduate nursing student participants. Participant confidentiality and anonymity was outlined with an explanation given about how it would be guaranteed and maintained. Finally, the four principles of evaluation criteria, which closely guided my research study, were listed: epistemological integrity, representative credibility, analytic logic, and interpretive authority. These principles are accepted across the qualitative research spectrum, and also form the basis for evaluation standards in the Interpretive Description methodology.

## **Chapter 4: Study Findings**

This chapter presents the findings of my study which I formulated from the analysis and interpretation of data from the individual participant interviews with undergraduate nursing students. The purpose of this study was to gain an understanding of these undergraduate nursing students' perceptions of stress and what coping strategies they utilized to manage stress as they studied during the novel COVID-19 pandemic. A qualitative approach was utilized, and data was collected from participant interviews and the demographic questionnaires. After transcribing each interview myself, I then read and reviewed the interviews, and identified significant phrases, or words, which led to basic categories or themes.

The layout of this chapter includes a description of the demographics, an outline of perceived stressors, and the findings from the data analysis. The findings are organized into four main themes: Self-Efficacy, Self-Awareness, Social Supports, and Faculty and Campus Supports. These themes reflect the researcher's insight and interpretation of the data that was extracted from the participant interviews of the phenomenon of perceived stressors and the coping strategies utilized by this cohort of undergraduate nursing students.

### **Demographics**

A demographic questionnaire (Appendix G) was completed by all participants. There was a wide range of age categories, amongst the participants, with seven being in the 20 to 24 years of age category or under 20 years of age, and three being between 30 and 44 years of age. There were eight females and two males that volunteered to participate. For highest level of education, seven out of the ten participants held a high school diploma, one held a post-secondary technology diploma, and two held a bachelor's degree, with one of these two participants, also holding graduate level master's degree. All the participants were in term five of the



undergraduate nursing program at the time of the interviews. All of the participants were now into their hospital based clinical experiences despite the COVID-19 pandemic.

Table one outlines the demographic characteristics of the participants.

Table 1

*Participant Demographics*

Demographic Categories	Number of Participants
<b>Age:</b>	
< 20	2
20 – 24	5
25 – 29	0
30 – 34	1
35 – 39	1
40 – 44	1
45 +	0
<b>Identified Gender:</b>	
Female	8
Male	2
<b>Highest level of Education:</b>	
High School Diploma	7
Other	3
<b>Year of Nursing program in Fall 2020 Semester</b>	
Year 3	10
Year 4	0

### **Context for Interviews**

The participants were in the Winter 2020 semester when, on March 17, 2020, the province of Alberta declared a public health emergency due to the COVID-19 pandemic. Public health guidelines and restrictions were immediately put in place. In compliance with the guidelines and restrictions, the University of Calgary went into lock-down, with faculty working remotely from home, and the students receiving their academic class instruction remotely from home. Adjustments were made to the academic classes in order for the students to complete the Winter 2020 semester and obtain their academic credits, however, the clinical experiences were discontinued until the Fall 2020 semester.

Consideration must be made for the variance in course programs amongst the participants, as the COVID-19 restrictions and guidelines would have affected these two groups of students' program progression differently. As noted in the demographic questionnaire, the level of education varied amongst the participants, thus, there are two routes, at different paces, through the same curriculum. The three participants, with the postsecondary degrees, were enrolled in the 24-month course program as degree-holder students; their schedule included a Spring 2020 clinical practicum experience. The seven participants, with the high school diploma, were enrolled in the full four-year program as direct entry students; their schedule of courses did not involve a Spring 2020 clinical practicum experience.

Participant interviews were held during the Fall 2020 semester. This semester is known as term five of the curriculum, which is the semester when the students begin hospital-based clinical practicums for the first time. This term is also the beginning of year three which is known as the heaviest and hardest year of the program, and which involves a heavy academic workload learning pathophysiology and nursing interventions. The academic curriculum was still

followed during the Fall 2020 semester with the classroom teaching by distance delivery still in effect. The clinical experiences and on campus practical labs resumed after being cancelled in the Winter 2020 semester but with the looming uncertainty of a second wave of the pandemic which could potentially cause another cancellation of the clinical experiences.

### Findings

The findings of my study emerged from the analysis of data from the participant interviews and from data collected in the demographic questionnaire. Question four, from the demographic questionnaire, was a focused question to identify the participants' main source of stress. It was not included in Table 1 due to the complexities of the responses, however, it gave a quick overview of points of stress which I was able to explore more fully, and individually, in the interviews. This question asked, "during the course of your undergraduate nursing educational journey, what do you perceive is the source of most of your stress?"; the choice of answers were: Academic, Clinical, Adjustments to curriculum related to the COVID-19 pandemic, and Other.

Table two outlines the participant's perceived stressors.

Table 2

#### *Perceived Stressors*

Participant (P)	Perceived Stressor (Chosen answer in Question 4)	Comments written on the questionnaire
P1	Other	balancing studies/clinical with raising supporting a family (heightened in COVID times)
P2	Academic studies Clinical experience	
P3	Academic studies	
P4	Academic studies (anxiety invoking)	Comment made beside question 4 (they stress differently)

		Comment beside clinical experience (emotional) Comment beside Adjustments (Scary)
P5	Academic studies	
P6	Adjustments to curriculum r/t COVID-19 pandemic	
P7	Academic studies	
P8	Academic studies	
P9	Adjustments to curriculum r/t COVID-19 pandemic	
P10	Other:	All of the above

Participant responses ranged from checking off one option to checking off all options, with some participants also adding comments beside the responses. The most common stressor identified by the participants was the academics. None of the students chose clinical only as a factor that caused the most stress, however, one participant chose both academic and clinical together. Two of the participants chose adjustments to the curriculum due to COVID-19 as causing the most stress. Two participants chose Other, and one wrote a comment, balancing studies/clinical with raising supporting a family (heightened in COVID times), and the other commented, all of the above. Further information was gained during the participants interviews.

The participant interviews were all conducted via Zoom meetings due to the COVID-19 distancing restrictions. There were a few issues with Zoom with one participant having difficulty connecting into the meeting and Zoom disconnecting during two participant interviews; however, everyone did successfully connect, or reconnect into Zoom and all the meetings were completed. The participant interviews considered the student's journey, beginning with the decision to enter the nursing program, through to present day, and further speculated on how

COVID-19 may have marked their education and their future nursing career. While reading and reviewing the interviews, I took an inquisitive approach and asked questions such as, “What is the data telling me?, What is it I want to know? What is the dialectical relationship between what the data is telling me and what I want to know?” (Thorne, 2016, p. 177). Asking these questions while analyzing the interviews helped transform the data to expose patterns of meaning that provided an integrative understanding of the participant’s experience, and further, provided the findings of my study.

Four themes emerged from the analysis of the participant interviews: Self-Efficacy, Self-Awareness, Social Support, and Faculty and Campus Support. These themes reflect the researcher’s insight and interpretation of the phenomenon of stress and coping in undergraduate nursing students during the COVID-19 pandemic. The interpreted and written findings of this study will include verbatim quotes from the interview transcripts which will be identified by participant number (P#) and written in an italicized font.

### **Theme I: Self-Efficacy**

The participants demonstrated a belief in self, a sense of meaning toward their studies, in knowing why they enrolled in the nursing program and where they were going with it, and a focused desire to succeed in their studies. Each participant talked about their circumstances that influenced their choice of a nursing career, and they all verbalized that their final decision to enroll in nursing education was their own. Within Theme I, two subthemes were identified: goal-orientated and motivation.

#### **Goal-Oriented**

The seven direct-entry participants had made their decision to enter into the nursing program when they were still in high school. Some of the participants were influenced by nurses

as role models, others by the experience of a family member with health-related issues, and one, by a personal experience within the healthcare system.

One participant recounted a personal story of having two professional parents as role models and decided upon a nursing career as the being best fit. Furthermore, this participant spoke of having a tentative trajectory planned to become an emergency nurse:

*(P7): It was either nursing or engineering for me; my father is an emerg nurse, and my mom is an engineer. I got accepted into both, and nursing just seems to fit my personality, much more so than engineering; I'm hoping to start in cardiac or respiratory, and then make my way to emerg and maybe, work a couple years with my father.*

Several of the participants had nurses that were role models that influenced their decision to pursue a nursing career. One participant had an interest in the sciences, and after having a job shadow experience with a nurse, when still in high school, the decision to enroll in nursing was made:

*(P10): I think it was biology that drew me into kind of the medical field, like learning about the body, then I job shadowed a nurse when I was in Grade 11; I realized that is something that I really wanted to do.*

One participant chose a nursing career after caring for a family member with health-related issues:

*(P2): In grade 12, I chose to go into nursing; I've always wanted to do something health related; after taking care of a family with a child with disabilities, I thought that would be a good segue into learning about nursing and how to care for like, everyone with like, other disorders.*

Another participant had an interest in pursuing a career in the healthcare field, but choose

nursing after going through an experience of being in the hospital environment with a family member that was sick, and seeing the role of nurses in healthcare and in patient care:

*(P9): So, I knew I wanted to be in the healthcare field, I thought about paramedic; My mom was sick when I was in high school. I kind of grew up in the hospital, learning about it through a patient perspective, seeing the difference that, especially the nurses made for her stay there. So, it kind of drove me towards more patient care. Paramedic, you're in and out, finding the patient, dropping them off, but as a nurse, you kind of get to work with them, and build relationships. I like that aspect; So, that's where I kind of got started; I'm so glad it ended that way.*

One participant chose to pursue a career in nursing due a personal health-related experience which included a substantial amount time spent in the hospital environment. The experience of nurses as role models that cared for her, as well as a family member that was a nurse role model, solidified the decision to enroll in nursing education.

*(P6): I was born at 23 weeks. I did spend a long time in the hospital when I was growing up as a kid; I would love to give back to that; I think I could add a unique perspective to what it looks like on the other side, and the impact that it has on families; I have a family who's very immersed in the medical industry; I had an experience job shadowing my uncle, and it kind of just changed everything for me; It made me totally passionate, and it's kind of just driven me to want to be a nurse.*

Another participant was influenced to take nursing education due to the experience of a family member who had been misdiagnosed in a for-profit health care system in another country:

*(P3): Well, for me, family was a big factor, like, grandparents, and like lots of loved ones who had healthcare issues; I am from India, getting proper health care is pretty hard*

*when it's run like a business. They will misdiagnose you on purpose, you will be told to get a specific surgery, just so they can get money out of you, which had happened to my grandpa, but he never got the surgery cuz he didn't believe them. So that's why I chose nursing because it not only helps me, but it also helps my family.*

The participants shared their stories that influenced their decisions to enrol in the nursing education program. They commented that nursing is the right choice for them. Several of the participants talked about their personal experiences, as a vulnerable patient, which may have served to help them cope in their learning in clinical practicums, when caring for patients and family members. One participant shared a personal experience and insight into the different types of health care systems in the world which may have served as a building block of experience in clinical practicums when dealing with multi-cultural patients that may be new to the Canadian health care system.

The degree-holder participants were also goal-orientated towards their nursing studies, after already obtaining a post-secondary education.

One participant went into nursing due to self-fulfilling needs in which the first career did not meet:

*(P1): I entered communications, and I worked for 10 years; But there was always something missing for me; I just never felt truly fulfilled by the work; I have many friends that are nurses that said, you would be a phenomenal nurse, you need to go into nursing; so, I thought, okay, and, I just applied and was like, that's it, I'm doing it; So, here I am, and I really feel like I'm in the right position.*

Another participant was continuing educational studies towards a career in nursing after already obtaining a Bachelor and Master's degree in Kinesiology:



*(P4): I went into kinesiology, like, from out of high school, I wanted to go into medicine; I tried to go to med school after grad studies,,, I could be a nurse. So, for now, I'm quite happy with it actually feels like I'm doing what I want to be doing.*

One participant holds a post-secondary certificate in what is compared to as an equivalent healthcare focus, however, this participant was attracted to a nursing career due to nursing giving opportunity for having more critical thinking skills and having a higher level of knowledge:

*(P5): So, I'm a registered veterinary technologist, which is kind of like the animal equivalent of a nurse; nursing is a higher level of knowledge that you need, and like, there's a lot more autonomy; as an RVT, it's a bit more technical, and a little less critical thinking, although there is, like, critical thinking involved. I worked for five years; I'm very curious person, and I yeah, I kind of saw this other world I was interested in.*

These three participants have multi-disciplinary backgrounds which could serve as a basis of knowledge to build their nursing education upon. These participants demonstrated ambition, motivation, and commitment by returning to take nursing education, furthermore, they demonstrated a cohesive sense of why they enrolled in nursing education. Their previous educational experience may have been helpful for them in choosing effective coping strategies to manage perceived stressors that they encounter through their nursing educational studies.

### **Motivation**

All the participants verbalized that the disruptions of the clinical experience due to the COVID-19 restrictions and guidelines were a stressor. The clinical experiences were cancelled during March of the Winter 2020 semester. The timing of the cancellation of the clinical experiences affected the students differently, whether they were in the direct entry stream or the degree-holder stream of the program. The degree-holder students had a scheduled practicum

component in the spring 2020, which was not in the direct entry students schedule; however, all the participants said that they would be starting hospital-based clinical experiences in the Fall 2020 semester, and they expressed concerns about missing the hands-on experience before going into the hospital-based practicum. When faced with this stressor, five of the participants coped by taking the initiative to get a job working as a health care aide to gain hands-on experience during the disruption of the clinical experience.

*(P3): Over the summer, I did work as a healthcare aide, so, whatever we did in clinicals, at that time, it's the exact same application of the knowledge and the skills; that was a personal choice on my behalf. We weren't told that we needed to work as a healthcare aide.*

*(P5): Because of COVID, there was a huge demand for health care aides, so, I got a job as a health care aide pretty much right away. I worked through the end of spring and the summer. So, I think because we weren't doing much, we were just starting to do assessments and things like that, I think I got all the experience I would have gotten through working, so I'm lucky.*

*(P6): I did start working as a healthcare aide once the height of the pandemic came down; that was definitely through my own initiative. It did help. I didn't necessarily feel like I was at a disadvantage because I had missed clinical hours.*

One participant was from a small rural town and went to live back home during the COVID-19 restrictions, and while there, worked as a health-care aide:

*(P9): Yeah, spring and summer. When I went home, I worked there as a health care aide, so, I did have a little bit of experience in long-term care over the summer that kind of*

*helped re-establish the information that I was kind of getting and kind of helped me readjust, I guess, coming back here.*

One participant had already been volunteering at a long-term care centre and further was motivated to take the initiative to get a job at that facility as a health-care aide during the cancellation of the clinical practicum.

*(P10): I started a clinical experience at the Bethany Care Center in Cochrane, in the long-term care facility. I was super excited about it, because I volunteered there for two years before that, so, I was really familiar with everyone; two weeks later the clinical experience was disrupted and cancelled. I was super disappointed, because I didn't feel that I had the opportunity to practice a lot. I ended up getting a job there as a healthcare aide in the summer, which was fantastic.*

These participants all verbalized that by getting a job as a health-care aide, they gained valuable hands-on experience which they felt that helped them prepare for moving into the hospital-based clinical practicum in the Fall 2020 semester. They all demonstrated enthusiasm when telling their story about taking the job as a health care aide and commented that it was their own decision to do so. They described the experience as fantastic or being lucky. One said that she pretty much got hands-on experience that she would have got in a clinical experience by working as a health care aide.

## **Theme II: Self-Awareness**

All the participants in my study demonstrated an awareness of their own self-care needs and were able to reflect upon their own personal habits and feelings and utilize effective coping strategies to become successful in their educational program. Some participants utilized empathy as a coping strategy during the chaos and uncertainty of the COVID-19 restrictions by realizing

that everyone was affected by this pandemic. Within Theme II, three subthemes were identified: Self-Reflection, Awareness of Self-Care Needs, and Empathy.

### **Self-Reflection**

Many of the participants utilized self-reflection as a way to promote an understanding of a stressor from more than one perspective which further allowed them to gain a self-awareness of their own habits or feelings. This in turn gave them space to make a decision about what they could reasonably change or choose as an effective coping strategy to manage the stressor.

Two of the participants said they perceived the transition from high school to post-secondary education as stressful. They used self-reflection as a coping strategy to assess their study habits, and adopt new and effective study methods to adjust to post-secondary education:

*(P9): I think that first year really taught me a lot about balance, trying to juggle the courses and manage my own workload. Whereas instead of being assigned homework, it's, no, you have to study at your own pace at your own time, and figure out what works, best for you.*

*(P10): Yeah, it was more challenging because you go to class, and you're expected to have reviewed a bit to know what they're about to talk about in the class, which I didn't fully understand at first. Then once I started to get used to it, I started to understand like, the university dynamic more, then I got it.*

Two participants reflected upon their own style of learning, and in realizing that the traditional educational method of textbook readings was ineffective for their learning, they found alternative ways of studying by using resources as learning tools to master the course content which were much more congruent to their ways of studying and which were less stressful to them:

*(P1): Well, I'm figuring out how. I will be honest, I don't read the textbooks, I can't, I don't have time to sit down read 10 chapters in a traditional textbook. I'm a podcaster, I am YouTuber; I'm an auditory and visual learner. I am constantly on the go, so, when I'm driving, when I'm cooking, when I'm walking the dogs, I am listening to podcasts about medical topics.*

*(P3): So, it's having to figure out a new way to understand things, a new study mechanism and all; I don't do all the readings, because personally, I find I am more, I learn better when I listen; I try to find videos, like Registered Nurse RN.com; that's like more of my go to, to try and understand some concepts, something like that.*

Two participants further talked about reflecting on their study habits and coping with the academic workload by utilizing library resources that were taught in the academic classes:

*(P1): I like to use the nursing Reference Center a lot, because they have those little quick lessons and the evidence-based care sheets for all topics. When we did our research section, in term four, they showed it to us; they have all the evidence-based care sheets; it's considered the highest level of research based on the taxonomy; they are succinct, they are short, one or two pager; so, I print those off, and go through them, and write notes on them when we're in class; that's how I study.*

*(P8): Like, last semester, we had a person from the library, I think that she is the nursing librarian; Dr. Alix Hayden; she talked to us about how to find credible sources on the internet; I use like, quizlets, just to quiz myself; people would make them, and you can access other people's quizzes and then quiz yourself.*

One participant used self-reflection as a self-awareness of feelings when faced with stressful situations in the clinical experiences by drawing upon previous work experience to

choose a coping strategy to manage some stressful situation that were encountered in the clinical practicum:

*(P4): I worked as a firefighter the better part of the last 10 years, so kind of emergency sort of stuff. From working on fire, I've had extremely stressful situations there, like you know, accidents and that kind of stuff, and so, I kind of know how PTSD works and how it echoes in your brain; images or situations or, you know, these intrusive thoughts; I have felt that in clinical already.*

The most common stressor identified amongst the participants was the imbalance of the academic curriculum which made the third year the heaviest year; furthermore, the academic classes moving to online remote delivery exacerbated that stressor. Several of the participants verbalized their expectations of the nursing program and expressed concerns that the looming uncertainties of the COVID-19 pandemic was affecting their education and furthermore, leading to a standard of education that may not prepare them as competently as it should, which will ultimately mark their future nursing career.

*(P6): For me, I definitely think my learning is enhanced when I receive in person teaching; am able to follow along better with that; Online is not how I love to learn and how I'm able to best apply my knowledge necessarily. So, I think all those factors definitely are going to impact my going into year four, and my future career.*

*(P7): Yeah, it does worry me that everything is online now. I'm glad that we have our clinical placements, but at any time that can be taken away from us, if there's an outbreak on the unit; I know with some of my peers, that has happened to them, and because of that they're doing care plans online for like, four to eight hours during the days that were supposed to be clinical practice, and there's no way a care plan over zoom is*

*supplementing, or completely at all, equal to an actual day on your unit. So, I believe the future nurses, these next two, three years here, are not what they could be.*

However, one participant self-reflected on going through nursing education during the COVID-19 pandemic and expressed the viewpoint that experiencing the COVID-19 pandemic concurrently while taking a nursing education may be an advantage to the future career:

*(P2): I think it's actually, like maybe helped a bit, because now I know what a pandemic feels like. As I've gone through one, being, like wearing the masks in the hospital and everything. I'm a bit more like cautious and everything, I know about hand washing, I make sure to clean all my equipment, and just be a bit more safe.*

One participant talked about being very self-aware of a tendency to become stressed, so copes by taking one day at a time, and not thinking too far ahead: *(P8): I can think about it sometimes, but I try to like, think about what's happening now, because otherwise I'll get stressed out.*

One participant self-reflected on experiencing stressful feelings in anticipation of beginning the hospital-based clinical practicum, so coped by accepting these feelings as being normal and okay.

*(P10): It definitely was very challenging. I was very uncomfortable going in the hospital for the first time. But then once I pushed myself and accepted the fact that I am going to feel uncomfortable, and that's okay, I did a lot better. I think my experience, working over the summer definitely helped me feel more comfortable with the little things like patient care, and like communication.*

One participant self-reflected on uncomfortable feelings that were caused by a tense situation when in a clinical practicum. This participant coped by putting the situation into

perspective, realizing that the COVID-19 pandemic has caused a lot of fear, and therefore did not internalize the uncomfortable situation as being targeted directly at the students:

*(P1): We're often in rooms together assisting one another in clinicals, in a closer proximity, but with our masks on; this one time, the unit manager came in and yelled at two students; was very angry at them. And it's because there's a heightened sense of fear.*

### **Awareness of Self-Care Needs**

Several of the participants identified that physical exercise is necessary in their life routine:

*(P4): Usually, I'm like an active kind of guy, so, that's how I de-stress; like I go running, I exercise I do, you know, those kinds of outlets.*

*(P5): I would say probably getting outside for breaks. I think exercise is my main coping strategy. Yeah, I'm a big runner; I run with my dog or we walk; I live close to a really nice walking area, so we go out for a walk.*

*(P6): I've always been really into sports, so, I joined intramural teams; Yeah, that is exactly what I like to do.*

*(P7): I think that I've looked to other avenues of my life to deal with it. I used to work out quite a bit before quarantine, like, used to compete in bodybuilding shows; Okay, so then I focus my attention on, I guess, physical aspirations, you could say.*

One participant talked about going to the gym, but also doing activities such as crafts:

*(P8): I go to the gym; I try to just like, take time, and do like crafts. I've noticed recently, I'm really into building things, and making things, like; I would rather like make something that I can hold then, like draw a picture; well, I started knitting a blanket at the*



*beginning of quarantine and it's still going; My roommate and I just started to make popsicle stick houses; And I like to go out in nature and do stuff.*

One participant recognized that sleep is very important, so therefore, balances study time and sleep time:

*(P1): I am in my 40s and sleep is mandatory, I will sacrifice studying for sleep. In my first degree I forced myself I forced myself to stay up all hours of the night to study, but I really wasn't retaining anything. What is the point of reading a textbook at 2 in the morning when I'm bagged and not retaining information, so I may as well get some sleep.*

One participant utilized organization of time to coordinate a timetable of the clinical experiences and the academic classes:

*(P2): the clinicals could be at night, and getting there, that's part of the stress, and also waking up the next day for like a morning lecture, that's stressful; we have to keep up with the workload; we have to do care plans every week, we have to do anecdotal notes, and then sometimes have to do some modules for the skills; that added with actual, normal, like theory classes with the academia classes.*

*Note:* A clarification of P2's comment about the night shift, the students in term three do evening shifts (3PM to 11PM) in their clinical experiences, not the overnight shift.

Many of the participants organizing their time to balance life activities with studying and adjusted their life schedules accordingly to plan time to take a break from studying and rejuvenate self.

Two participants talked about organizations of time by setting aside time to focus on self and take a break from studying:

*(P9): I do set aside a couple days on the weekend just to focus on myself, and relaxing, and kind of just not worrying about things. I guess, I do like to get out of the house just because sitting in here for six hours, for classes on Thursdays, is very difficult.*

*(P10): I was just trying to take a day a week where I don't do any schoolwork, and just like, watch TV or hang out with friends, and just take a break; I would always take Friday's off, so, after class, I just wouldn't do anything, which I have maintained doing, and it's really helped.*

## **Empathy**

Some of the participants utilized empathy as a coping strategy when the COVID-19 pandemic arrived and caused chaos and uncertainty to an already rigorous program. This demonstrates an awareness of self along with an awareness towards others by realizing that everyone is being affected by the pandemic, including the faculty and the instructors, which may buffer the impact of the stress caused by the pandemic:

*(P1): Kudos to them; Can you imagine being them? Trying to guide 100 and some students; some of them are parents as well; I saw it in their faces. I'm empathetic for the teachers in the faculty; they were just overwhelmed, and they were trying so hard; I just felt like, they're doing the best that they can; You know, we can't forget that these are humans too, with their own lives, and their own stressors, and children too.*

*(P6): While everyone goes to adjusting to working at home, I know a lot of my profs also, are moms with young kids, so suddenly, they are a full-time professor, and a full-time teacher to their young children, so, they just got doubled their workload; they definitely explained that to us and tried their hardest not to make it affect us.*

*(P7): I believe what happened was, everything paused, either a week or two weeks, and then they got back to us, and they said, 'Look, this is a completely new frontier for all of us, but this is what we're going to do, and this is how we're going to do it'. And yeah, we just were scheduled into zoom meetings, and then slowly introduced to it through our instructors. Everyone adapted to do the best that they could. I have no complaints about that, I understand what's going on, and how much pressure this also puts on the instructors and staff, so, I think they did the best job that they could have, I appreciate the promptness; I appreciate what they did, and I think they did the best job that they could have, on such short notice.*

One participant observed that the disruptions of the pandemic were a concern and a stressor that is weighing on the minds of the professors:

*(P6): It's been interesting; we're in a time right now, where there's a lot of mixed messages. I had a prof start her lecture last week with a very foreboding tone, and just seemed very concerned about what our future would hold, as far as our ability to continue to practice in a clinical setting these next few months. I know there's definitely a lot of uncertainty.*

### **Theme III: Social Support**

The participants reported reaching out to social supports to help enhance their ability to cope when faced with stressors in their nursing program. Within Theme III, two subthemes were identified: peer support, and family and friends support.

#### **Peer Support**

Peer support was a coping strategy that many of the participants identified as being a very effective coping strategy. The first-year curriculum for the direct-entry students is comprised of

the foundational and electives classes. Some of the participants verbalized that a perceived stressor was transitioning from high school into post-secondary education due to the environment of the large class sizes in first year, and the new and foreign academic subject matter. The agglomerate of students from various faculties, such as Kinesiology and Pre-Medicine, made some of the participants feel alienated from faculty of nursing which was also a stressor. Two participants described their experiences, and both expressed finding other nursing students to form a peer support was a very helpful coping strategy:

*(P6): It depended on the course; I remember struggling a little bit in anthropology; I definitely felt alone. I remember in the first year, I felt like I was so far out of the nursing faculty, like I was a stranger, like, I shouldn't be there because I wasn't taking anything, that at least at the time, I could see was a part of nursing; So, I remember there were certain classes that I would always, like, try to gravitate towards other nursing students, and we'd form a bond that way, and that was really neat.*

*(P10): Year one, I found was really difficult; For me, it was more difficult, putting myself out there to meet new people, because I'm really shy at first. But then I met like quite a few girls in nursing, and we're still friends today, which I think helped me a lot; For me, it was more challenging just because I knew I was in nursing, but I wasn't taking the nursing courses; Yeah, it helps having like friends in nursing, in first year.*

One participant realized a personal need to socialize, so joined a study group which meets once weekly, remotely via zoom, and joined a first-year nursing club.

*(P6): I'm an extroverted social butterfly; I joined a group called the Year One Nursing Council and I became a member of that. That was really helpful for me, because it just introduced me to other nurses, and helped me feel like I was creating activities to make*

*first year students feel like they're actually a part of something; so, it definitely helped in a lot of ways; I joined a study group that meets remotely on Monday evenings.*

Many of the participants verbalized that the academic classes moving to remote delivery was a huge perceived stressor. One participant coped with this perceived stressor by becoming roommates with another nursing student for support when the academic classes went online:

*(P10): When it first happened, I really struggled, but now, I live with a girl in nursing as well, and that has really helped because we've like, been able to talk about things and work through concepts together.*

One participant moved to Calgary from out of province and wanted to meet people, so choose to live in the university student residence in order to meet other nursing students:

*(P8): Yeah, I wanted to live on rez, cuz I'm like, I didn't have any friends here, and I figured that was probably the best way to meet people.*

One participant was from a small rural town and had attended a private school that had very small classes. Moving to Calgary from a small rural town to attend the University of Calgary was a social adjustment:

*(P9): I think just hard, because I graduated from eight people in my class. So, going from eight to 400 students, where you barely know anyone's name was really difficult; But I think being on campus in residence first year, and kind of involved with a bunch of people who are going through the same thing as you, made it a lot easier of a transition, and I had my sister there with me too, So, it was a little bit more familiar.*

Within this cohort of undergraduate nursing students there is a subgroup of students with commonalities; one being that some of the students in the nursing program are also parents.

Participant one (P1) wanted to take part in my study to raise a voice for the subgroup of students in the nursing program that are also parents.

*(P1): I just was hoping that I could share a parent perspective as well, because you know, our cohort has a lot of parents actually; I was surprised by how many parents were in my class. So, I can think of probably 10 to 15 students off the top of my head right now in my cohort of 100 that are parents; that's a big percentage. It's like 10%.*

This subgroup of nursing students, that are also parents, congregated together to support each other:

*(P1): Yeah, absolutely, I have a tribe of students, like that's part of the other way that I cope, is I've got a group of ladies that I've built relationships with, and they're my tribe, and we work together to support each other and work together.*

There is a range of age groups noted within the participants that volunteered for my study, yet peer support was created across the age groups:

*(P1): I am older than most of my classmates, and so I have a lot of connections with some of the younger girls who kind of called me their mom, you know, like 'you are my nurse mom', you are helping guide me through this program, and a lot of them struggle.*

### **Family and Friends Support**

Many of the participants verbalized that family and friends are a tremendous support in managing perceived stressors. Several of the participants indicated that they live with family and drew upon family support as a coping strategy to manage perceived stressors.

One participant talked about having a routine of exercising at the gym and liked to go out and socialize with friends, however once the COVID-19 pandemic restrictions came into effect, the gym was closed, so time was spent at home with family:

*(P2): Well, I like sports and like the gym, so, I try to set time to work out; then, like going out sometimes on the weekends with friends, and go to a movie or like, just to get like, a drink or something like bubble tea; This year is a little bit trickier with working out since you have to you have to schedule in a workout and that doesn't always work with my schedule; so, the gym stopped, and then, no one was going outside at this time, either, so, I really just stayed home with family, and watched a lot of shows.*

Another participant utilized family support as a coping strategy by talking things through with a parent:

*(P3): Yeah, for me, I am more of a talker, like I like to talk. So, I would either go up to my friends or my mom, if I had a frustrating day, and I would just rant it out. I would be angry in that moment, or I would just be really, really stressed, or I might even cry, but then it would be done with it.*

Another participant drew upon family support, as a coping strategy, by living with a family member during the first year of the nursing program:

*(P9): I was on campus in residence first year, and I had my sister there with me too, So, it was a little bit more familiar; she is attending the U of C as well; that does help to have a family member with you as well.*

#### **Theme IV: Faculty and Campus Support**

The participants verbalized that the faculty was supportive by offering information sessions to keep everyone updated during the changes due to the pandemic. The participants acknowledged that mostly the instructors were supportive during the curriculum changes due to the COVID-19 restrictions. The participants all verbalized an awareness of the on-campus mental health supports, such as the Wellness Centre, and verbalized their preference as to what

type of support they would seek when faced with stressors. Within Theme IV, three subthemes were identified: Faculty Support, Instructor Support, and Mental Health Support.

### **Faculty Support**

During the interviews, I asked the participants if the way in which the faculty managed the changes to the curriculum when the restrictions of the COVID-19 came into effect was a stressor. All the participants indicated that the faculty was very supportive by keeping the students informed as to changes that were being made in accordance with the COVID-19 restrictions. The students indicated that they were sent e-mails about curriculum changes and were invited to attend town hall meetings that were being presented by the dean and the president of the university:

*(P1): So, I thought that the university was pretty good because they really warned us probably a good month before we got shut down, that there was a potential. I think that the dean, and the leadership team was seeing what was happening, because starting in January, I think the instructors were really being advised to start to consider what will you do with your class if we move online? So, I think that they really did have a have a sense of how to transition.*

*(P3): I did feel that they were pretty supportive; They tried to be as organized as they could possibly be, because they are getting information like on a daily basis, and some changes occurred so suddenly; so, they were trying to stay on top, to keep us informed as well.*

One participant verbalized drawing upon faculty support as a coping strategy by having faith that adjustments will be made to the nursing program for a successful completion of study, during the COVID-19 pandemic.



*(P1): I really put my faith in the faculty, and I think that they will get us there. I believe that wholeheartedly, otherwise, I wouldn't still be here. If I thought that it was gonna come out a less competent nurse, between the faculty, AHS, and the regulatory bodies, being into this, with how to get these students through here, I would defer, but I truly believe that they'll get us there. It might require some additional stuff, but yeah.*

### **Instructor Support**

Many of the participants expressed that the academic classes going remote was a huge stressor. Several of the participants verbalized feeling distanced from the academic instructors even though they acknowledged that the instructors made an effort to reach out to the students.

As an example, one participant stated that the academic instructors made an attempt at connecting with the students once the classes went to remote: *(P6): So, I think they had tried to make more connections and create a more community atmosphere using zoom break out rooms, but that just didn't seem to work.*

Another participant described the academic instructors as being supportive by 'reaching out' to the students when the classes went online:

*(P8): For classes, they sent an email out, the school sent out emails, and like, everything is online now, it's on Zoom, like so, get a zoom account. And then our profs reached out to us, like, not individually, but like our profs reached out to the class for each class, and then labs were the same, our lab instructors would like reach out to us.*

Unfortunately, two of the participants told of a stressor caused by one of the academic Instructors who provided minimal instruction:

*(P6): For one of our courses, our prof did inform us that she was only required to teach us 60% of the course, and she had already done that, so she just ended it; So yeah, I*

*definitely remember feeling shaken by that; I just had a lot of questions, what's the other 40%? is there anything that we need to know? why do you only have to teach us 60%?, (P8): One thing our last year, the prof only taught us 60% of the material, so, we didn't get the last 40% because the online. So, we didn't have a midterm or a final for that. So, we didn't get the full course which stressed me out because then I thought they were going to add that on to this year, which is already insane.*

Many of the participants expressed a deep appreciation towards their clinical instructors for the support and guidance that they received.

One participant commented that having the clinical groups was a support when obtaining information about the changes and disruptions that were happening due to the COVID-19:

*(P9): I think having our individual clinical groups, kind of made it more personal, and just a few of us, kind of made it easier to talk to them; they would give us information rather than just having U of C emails come through, and that was kind of easier than having one mass one sent out to the whole student body.*

One participant reached out to the clinical instructor as a coping strategy for support before starting the clinical experience:

*(P8): At the beginning of the semester, I was really, really anxious about clinical, and I messaged my clinical instructor, and I was like, look, I'm freaking out, please help. So, she called me and was really nice about it, and she said, like, we're not going to put you in any situations that is going to cause you harm or where you could cause harm to the patient. So, that helped, and that was nice.*

One participant describes the supportive environment that enhanced the learning experience in the clinical environment:

*(P7): Well, I just want to say how thankful I am to all the clinical placement instructors. They have been so amazing, and they do have your back. They are the ones that guide you through placements, they listen to your needs, your complaints, and they are the ones teaching you the real hands-on skills and applying the theory that you learned from class to your clinical practice. I can't stress it enough, how thankful I am for them.*

One participant expressed gratitude and described the clinical instructor as being supportive and being 'neutral' during a debriefing after an incident in which a patient collapsed on the unit during a clinical experience:

*(P4): Yeah, well, I appreciated my instructor on the guy who collapsed on me. He came and saw me and then it felt like I was on the stand a little bit for trial, which I think is great, because he was neutral about his intention, so, he just asked me the facts; After getting the facts, so he gave me that reassurance; so supportive that way.*

One participant insinuated that the small clinical groups were a supportive environment during the clinical rotation experience: *(P7): The most support came from our actual instructors for a clinical; that's where you're in a smaller group, you're in a group of eight, and there is one instructor to your group of eight.*

In general, participants described the clinical instructors as supportive people who they can connect with on a person-to-person level and even continue having a rapport. As an example:

*(P7): I think, if anything, I gain anything, from this program. It is the support that I got from those instructors, because I have loved every single one of them, they have been amazing; whatever they're doing to find these instructors is right; I have had amazing instructors, all of which I still talk to, I ask them for references and whatnot, because they, I want to say, they are the true instructors of this program.*

## Mental Health Support

The participants all demonstrated an awareness of what type of mental health support that they felt would be most effective in meeting their own personal needs when faced with a stressor. Several of the participants verbalized that they were aware of the support programs both within the faculty of nursing and on the University of Calgary campus, such as mindfulness, meditation, or yoga, although none of the participants had actually reported utilizing any of these programs.

Three of the participants verbalized that they felt that it is necessary to separate accessing mental health services between the nursing faculty and a separate facility, like the wellness centre:

*(P4): I know that the faculty has resources. They have mindfulness zoom sessions. I know they say you can come and talk to us whenever you want, but in my opinion, and with counseling, I think you're better off going third party and confidential. I would not feel as comfortable using the resources at school for mental health because there isn't that patient confidentiality and separation issue.*

*(P7): I think I would go to the Wellness Centre as opposed to going to speak within nursing. Just because within nursing, it seems like there's this certain stance that everyone will take with students and no, I'm not for it.*

*(P9): I think that if I were to seek help and support, that's more the direction I would go in, is to the Wellness Center. Not that I don't find the faculty helpful, but it's just kind of separating clinical and actual, like school and my lectures, and the people that I know, well, and in the faculty, kind of go outside of it, that's what I would find most helpful.*

One participant verbalized a preference that when stressed, talking things through is more effective than doing a relaxation activity such as yoga:

*(P10): I think if I were really stressed, I'd probably go to the Wellness Center, and go to like, a counsellor or something, just someone to talk to, because I think for me, when I'm really overwhelmed, or I have just a lot going on, I want to talk about it, as opposed to like, doing yoga or something. I feel like that helps me a lot more to talk things through.*

Two of the participants indicated that they had an awareness that the faculty of nursing is getting a therapy dog. Both participants stated that a pet therapy coping strategy would be something that they would be interested in partaking in and may be helpful to them during stressful times:

*(P2): If it was through the faculty, and we can meet in person for like the dog. I know that there is, we have the dog now; That would be nice. But I feel like online meetings are not as fun; I think I would prefer face to face.*

*(P8): They got a therapy dog last semester; I heard about it, but then none of us ever met it. A chance to hang out with the dog or if they had like, pet therapy, because I like I know a lot of people really find that calms them down. I think that would have helped.*

Two participants talked about utilizing the university on-campus Wellness Centre as a coping strategy to manage stressors that they were having. Both participants described the Wellness Centre as being helpful and as being a positive experience:

*(P4): I used it last year. So, I went and talked to someone and he was great. I did get really good help, and yeah, it did work out.*

*(P5): I did talk to someone from the Wellness Center, in the summer, when I was having a lot of stress, and they were really excellent; I think it's very accessible.*

### **Summary of Findings**

The findings from this chapter were analyzed via the rich data collected through 10 participant interviews which reflect the researcher's insight and interpretation of the phenomenon of stress and coping in undergraduate nursing students during the COVID-19 pandemic. The findings indicated that this group of participants demonstrated a belief in self and a sense of meaning toward their studies which was then exhibited by a common characteristic of strong personal commitment and motivation towards a focused desire to succeed in the nursing program. Findings further indicated that this cohort drew upon social supports and faculty and campus supports to manage their perceived stressors. These participants chose effective coping strategies to manage their perceived stressors and adjusted their coping strategies to manage stressors that arose during the COVID-19 restrictions.

An intriguing finding from my study was that of the participants exhibiting enthusiasm and willingness to participate in my study. The participants generously shared personal experiences which influenced their decision to enroll in nursing education and pursue a nursing career. Several of the participants verbalized that a study exploring stress and coping in undergraduate nursing education is very relevant and they wanted to participate to have a say and be heard through my study. This reinforces that stress is an issue in undergraduate nursing education that weighs on the minds of the nursing students which further indicates that the students are receptive to supportive interventions available to them to manage their perceived stressors throughout their nursing education. This behaviour also indicates that this cohort of students are willing to participate in my study which may lead to the faculty and nursing instructors becoming more aware and understanding of the extent of student stressors, which in turn, may lead to the implementation of further supportive interventions.

## **Chapter 5: Discussion**

In this chapter, I discuss the findings from my research study in conjunction with existing literature. This study aimed to provide an understanding of undergraduate nursing students' lived experiences through their nursing educational journey, learn of their perceived stressors and gain knowledge about what coping strategies they utilize as they study through their undergraduate nursing education during the novel COVID-19 pandemic. Interpretive Description (ID) methodology was developed for nursing research to build upon a basis of existing knowledge; therefore, some key findings from this research study will be expanded upon, in combination with existing literature, to advance the knowledge base in a comprehensive manner to create evidence-based knowledge, and to explain the findings of my study more fully.

### **Comparison of Study Findings with Literature Review**

Although stress in undergraduate nursing education is a decades old issue, the literature review for this study clearly shows a paucity of research on this issue until the past two decades. In the literature review I noted that research studies on this topic have been almost exclusively done using a quantitative methodology. While a few studies utilized a mixed-methods approach which included an open-ended question for students to input comments, none of the studies used an exclusively qualitative methodology. This study is an exclusively qualitative research study and was timely in being conducted during the unprecedented times and novel circumstances of the COVID-19 pandemic.

The findings of my study showed some differences with the findings from the literature review. Most articles in the literature review asserted the clinical experience as being the major stressor for nursing students (Bhurton et al., 2019; Chernomas & Shapiro, 2013; Chan et al., 2009; Gurková & Zeleníková, 2018; Jimenez et al., 2009; Labrague et al., 2018; Labrague et al.,

2017; McCarthy et al., 2018; Tully, 2004; Wolf et al., 2015; Zhao et al., 2015). The results of my study found the academics as being the major stressor for the participants. Two articles from the literature review indicated that the academics are the major stressor for nursing students (Al-Gamal et al., 2018; Sikander & Aziz, 2012). None of the participants from my study identified the clinical experience only as being the major stressor. One participant verbalized that it was the combination of the academics and the clinical experiences that could be stressful, such as having an evening shift clinical experience and then having an early morning academic class the next morning. Most of the participants identified the disruption and cancellation of the clinical experiences, due to the COVID-19 restrictions, as a major stressor which caused concern that they were missing hands-on experience with patients and would not be adequately prepared for the hospital-based clinical experiences.

A key unique finding from my study was that of the interaction with the clinical instructors. Several studies within the literature review identified that interactions with the clinical instructor were a source of stress for nursing students (Bhurton et al., 2019; Chernomas & Shapiro, 2013; Chan et al., 2009; Labrague et al., 2018; Labrague et al., 2017; Gurková & Zeleníková, 2018; Wolf et al., 2015). However, many of the participants from my study held the clinical instructors in high regard and expressed a deep appreciation for their knowledge, expertise, and support in the clinical experiences. Due to the COVID-19 restrictions and guidelines, the clinical instructor became the only face to face faculty contact that the students were experiencing. Furthermore, the clinical experience included small group interactions with other students within the clinical group, which offered face to face interaction with other students. Some of the participants commented that they kept up with current pandemic updates or changes in curriculum from the clinical instructor when attending their clinical experiences.



Perhaps, the differences in the findings, between the literature review and my study, was related to the COVID-19 restrictions and guidelines, which changed the dynamics of the clinical experience and therefore, the participants appreciated the clinical experience and the clinical instructors in a different context than what was experienced in the study findings from the literature review.

The findings of my study were congruent with the literature review in regards to the academic stressors. The literature review and the findings of this study both found academic as stressors due to the heavy academic workload and assignments (Chernomas & Shapiro, 2013; Clark et al., 2014; Jimenez et al., 2010; Labrague et al., 2018; Labrague et al., 2017; Sikander & Aziz, 2012; Yamashita et al., 2012). The participants in my study specifically identified the imbalance of the curriculum, which made the third year the hardest and heaviest academic year, as a major stressor. The imbalance of the curriculum is a feature of the University of Calgary undergraduate nursing program, which is currently being reviewed and is in the process of being revised. My study showed that the academic stressors were exacerbated by the academic classes moving remote to online delivery due to the COVID-19 pandemic public health restrictions, which caused stressors such as, difficulty concentrating on a three-hour class while staring at a screen, and lack of interaction with peers and instructors.

The findings of my study are congruent with two external stressors found in the literature review, which were family responsibilities and finances. Two articles from the literature review identified family responsibilities and expectations as being an added stressor to student's educational studies (Chernomas & Shirapo, 2013; Reeve et al., 2013). One of the participants in my study wanted to join in my study and speak for herself, as well as speak on behalf of some of the other nursing students that were also parents. One article in the literature review indicated

that finances were a personal source of stress as some students had to work to support themselves (Chernomas & Shapiro, 2013); however, none of the participants from my study indicated that they needed to hold a job to finance their educational tuition and expenses. Five of the participants verbalized that they took a job working as a health care aide, when their clinical practicums were cancelled, but did so to gain confidence with hands-on experience in preparation for the hospital environment clinical practicum and to alleviate the stress of missed clinical experience due to COVID, not due to financial necessity.

My study findings showed that it is apparent that the participants found the nursing program stressful, and that the restrictions of the COVID-19 pandemic, exacerbated or created new stressors. However, based on the participants appraisal of perceived stressors, they demonstrated commitment toward their studies and exhibited effective coping strategies to manage their educational stressors. The study findings indicate that the students utilized available resources to cope with their academic stressors, and drew upon social supports, family supports, and faculty supports to cope with their stressors.

### **Stress, Cognitive Appraisal, Coping**

The Lazarus and Folkman (1984) theoretical framework proved to be very useful in understanding how cognitive appraisal plays an influential role when nursing students appraise a person-environment encounter as stressful and then decide upon a coping strategy to utilize. This theoretical framework is also useful in understanding that coping does not just randomly happen in an effort to manage a stressor, but that there is a purposeful process that students go through from the time of encountering a situation, to appraising the situation as a stressor, to choosing the coping strategy that is utilized to manage the perceived stressor. Lazarus and Folkman (1984) state, "Coping is determined by cognitive appraisal" (p. 157).

Cognitive appraisal consists of primary and secondary appraisal. Primary appraisal is the initial encounter of a situation in which the individual appraises as positive or beneficial, or appraises as negative, harmful, or a threat. If the situation is appraised as harmful or a threat, the individual then perceives the encounter as a stressor. The individual then uses secondary appraisal to evaluate coping strategies that may be utilized to manage the perceived stressor. The individual will then choose to utilize either a problem-focused coping strategy directed toward resolving the main cause of the stressor or will choose an emotion-focused coping strategy to regulate the emotional response to the perceived stressor.

I noticed evidence of this process when I was analyzing the data from the participant interviews. The participants identified a stressor, then utilized cognitive appraisal to choose an effective coping strategy. In the four themes of coping strategies that I identified, the participants drew upon two internal coping strategies; self-efficacy and self-awareness, and drew upon two external coping strategies; social supports, and faculty and campus supports, to manage stressors.

### **Coping Strategies**

Lazarus and Folkman (1984) define coping as, “the constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141). Therefore, “Coping is the process through which the individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate” (Lazarus & Folkman, 1984, p. 19). Described another way, Turner & McCarthy (2017) state, “Coping involves cognitive and behavioural efforts to manage a troubled person-environment relationship” (p. 22). While this study is considering stress and coping in undergraduate nursing education, the COVID-19

pandemic generated an enormous, troubled person-environment relationship which demanded the need to find new coping strategies to manage stressors.

Coping can be divided into two categories: problem-based, which may be directed towards changing the environment, and emotion-based, which may be directed toward changing the meaning of the event (Bhurtun et al., 2019; Gibbons, 2010; Lazarus & Folkman, 1984; Lo, 2002). Problem-focused coping strategies are considered to be positive coping strategies and are associated with lower levels of stress, whereas emotion-focused coping strategies are associated with ineffective coping strategies and are associated with moderate to high levels of stress. Studies throughout the literature emphasize that nursing students are more likely to use problem-based coping strategies than emotion-based coping strategies (Al-Gamal et al., 2018; Bhurtun et al., 2019; Labrague et al., 2017).

The findings of my study showed that most of the participants used problem-focused coping strategies, however, the two coping categories, problem-based and emotion-based, must be considered as loosely defined rather than rigid categories. Lazarus and Folkman's (1984) theory considers the relationship between problem-based and emotion-based coping functions, by stating, "emotion- and problem-focused coping often occur concurrently", and, "theoretically, problem- and emotion-based coping can both facilitate and impede each other in the coping process" (p. 155). Considering this overlap, each strategy must be considered in context of the stressful situation in which the coping strategy was chosen and used.

An example of this overlap in problem or emotion-based coping strategies in my study is when two of the participants talked about using crying as a coping strategy. Crying would be categorized as an emotion-focused coping strategy, however, both of the participants indicated that once they used this emotion-based coping strategy of crying, they felt better and were then

able to return to focus on their studies. Stress cannot be avoided in the undergraduate nursing educational program; therefore, nursing students cognitively appraise a stressor and implement a coping strategy to improve their ability to manage stressors, and reduce negative emotions associated with stressful situations (Sikander & Aziz, 2012).

Consideration must be given to recognize that perceived stressors and coping strategies also have a cultural influence. In the literature review, I found journal articles from around the globe, which contributed a rich diversity of data. Nursing students around the globe share much in common, however, each country has its unique culture, and cultural norms and values systems which may dictate how an individual reacts to stress and may determine the coping strategy that is deemed appropriate (Jimenez et al., 2009; Labrague et al., 2018). An example from my study interviews is that of a participant who identified as being from India. This participant told of a stressful situation, while still living in India, in which a grandparent had been misdiagnosed on purpose, due to that health care system being run as a for-profit business. This participant further talked about enrolling in the University of Calgary undergraduate nursing education program to become qualified for a career in nursing but also to gain an understanding of the Canadian universal health care system and gain knowledge about health issues and appropriate treatments to better care for her grandparents and other family members,.

The findings of my research study indicated that the undergraduate nursing students faced perceived stressors as they moved through their educational program. It was also evident that these participants utilized cognitive appraisal to choose a coping strategy to manage their perceived stressors. The participants demonstrated self-efficacy and self-awareness which helped them cope and manage stressors that they faced throughout their program, but also helped them

focus to succeed in their nursing education program; furthermore, they drew upon social supports and faculty supports to manage their perceived stressors.

### **Self-Efficacy**

Self-efficacy is an individual's belief in their ability to perform at a level to succeed in a given situation (Rowbotham & Owen, 2015; Zhao et al., 2015). Rowbotham and Owen (2015) further dissect the word self-efficacy as meaning, "self is the identity of the person", and "efficacy as the power to produce an effect" (p. 561). Self-efficacy influences an individual's cognitive ability to perceive a challenging situation or a perceived stressor, as a task that can be managed, which furthermore, will strengthen the individual's commitment to obtain their goal (Rowbotham & Owen, 2015; Gibbons, 2010; Zhao et al., 2015). Research studies have asserted that self-efficacy enhances nursing students' coping abilities, and nursing students with a high sense of self-efficacy are much more likely to achieve their academic goals (Gibbons et al., 2011; Labrague et al., 2017).

Along with self-efficacy, the participants demonstrated a frame of meaning in terms of why they chose nursing and their goal toward a nursing career. They emanated a sense of congruence between person and environment when talking about their choice to enroll in nursing education in their interviews. A belief in self and a strong sense of meaning is important and could help the students tolerate and cope with situations that they may dislike in the program and could help them choose effective coping strategies to manage stressors that arise during their program; furthermore, may help them cope with the COVID-19 restrictions due to their larger frame of reference and meaning.

The importance of the concept of meaning is supported by the seminal works of Viktor Frankl (1905 – 1997). The basis of Frankl's theory is that individuals are motivated by a "will to

meaning” (Mortell, 2020, p. 39). Frankl is best known for his classical book, *Man’s Search for Meaning*, in which his theory of Logotherapy, a meaning-centred psychotherapy, is outlined. Frankl asserts that the search for meaning is a primary motivating factor in humans that is unique to each individual and must be fulfilled by each individual, which then achieves a significance of one’s own will to meaning (Frankl, 1946/1992; Mortell, 2020). Once an individual is able to find meaning and significance to circumstances, it has been shown that an individual will adjust better to adversity, and the sense of meaning and significance can help alleviate harmful effects of outside circumstances (Mortell, 2020). Based on Frankl’s theory of meaning, the participants in my study emanated a sense of meaning toward their choice of study which helped them in adjusting to the disruptive outside circumstance of the COVID-19 pandemic by choosing and utilizing effective coping strategies.

The participants were goal-orientated towards success in their educational journey. “Goal-setting is a method that can help individuals discover meaning in their lives” (Mortell, 2020, p. 41). The participants demonstrated commitment towards their nursing education, as shown by the way that they balanced studies and life demands in order to sustain their performance to do well in the program. An outstanding example is with one participant who is pursuing nursing as a second career, is an older student, and is a parent, yet was very resourceful with learning strategies and carefully planned studies and parental commitments to obtain success in the nursing program. According to Lazarus and Folkman (1984), commitment is indicative of what is important to a person and what has meaning to a person which provides the basis of choices that people are prepared to make to achieve a desired goal. Furthermore, commitment has a motivational quality which promotes direction and persistence towards achievement of the desired goal.

The participants in my study demonstrated motivation even by volunteering for my study and taking the time to participate. Another good example of motivation is when five of the participants took the initiative to go out and get a job working as a health-care aide to gain hands-on experience when their clinical practicums were cancelled due to the COVID-19 restrictions.

Several of the participants showed empathy towards their instructors and a sense of shared social solidarity when the pandemic first appeared, however, I would be curious to know if empathy lasts over time as studies move forward, and pandemic fatigue sets in. My study was completed in a single time frame, so it would be interesting to see the findings of a future study regarding the persistence of empathy.

### **Self-Awareness and Self-Care**

Self-awareness encompasses many elements which determine an understanding of how one's own habits and actions can affect success. Habits such as, listening to feelings in your body which provides an awareness that something is off, or provides an awareness that there is a self-care need to be fulfilled. Actions such as, knowing when you need a break and taking a break, and realizing that there is a balance needed between life and studies. These elements promote dealing with stressors in an effective manner which is most efficacious for self.

Self-reflection is a very effective basis for finding coping strategies in the context that self-reflection promotes the realization that a coping strategy is needed. Reflection is the process of purposefully thinking about a perceived stressor in order to understand the situation and appraise emotions surrounding the situation. Once a conceptual perspective of the situation is gained, a positive analysis of the situation then allows a person to modify behaviours and integrate effective methods to manage the perceived stressor (Bagheri et al., 2019; Donovan,



2007). However, self-reflection may be considered to be a precondition that contributes to the realization that a coping strategy is needed. Reflection by itself is not helpful unless it leads to behavioural change. An overall evaluation of the participants in my study suggests that self-reflection was utilized by some of the participants when faced with certain stressors, but in other instances effective coping strategies were generated by their motivation and goal orientation, without self-reflection. In these instances, the participants could then have been utilizing well established coping strategies that they already had as part of their routine.

Many of the participants in this study emphasized the importance of self-care to cope with the stressors that they faced throughout their nursing educational studies. Self-care is an important coping strategy in managing stress; “Viewing oneself positively can also be regarded as a very important psychological resource for coping” (Lazarus & Folkman, 1984, p. 159). The participants reported various coping strategies to manage stress, such as balancing their life and study routine by setting aside time to engage in other activities. For instance, one participant takes a day on the weekend to relax or do something other than studying; another participant is undertaking a project of knitting a blanket; one participant verbalized that sleep was important, so adjusts study, life activities and sleep.

Many of the participants verbalized that physical exercise, such as, participating in intermural sports, competitive sports, or exercising at a gym, is an important component in their life routine. During the COVID-19 restrictions, exercising at a gym or participating in intermural sports was not feasible, so many of the participants adjusted their exercise routines by biking, running outside, or walking their dog a nearby park. According to the World Health Organization (WHO) (2010) regular participation in physical activity is shown to play a major role in health promotion and reduces the risk of numerous health issues. The importance of physical activity is

of such utmost importance that in the publication, *The Global Recommendations on Physical Activity for Health* (2010), the WHO has outlined scientifically informed global recommendations for physical activity, across all age groups, as a core element of public health promotion. A study by Meng and D'Arcy (2013) found the benefits of physical activity are an effective preventative intervention to manage mental health issues. Meng and D'Arcy (2013) further claim that physical inactivity is a significant risk factor for mental health issues. Physical exercise is an effective coping strategy utilized by several of the participants to manage stressors throughout their nursing program.

### **Social Supports**

Many of the participants identified social supports as being an important coping strategy as they moved forward through their nursing education. Studies have shown that social supports can aid in reducing or buffering stressors and have a direct positive association with health promotion and healthy lifestyle choices (Chernomas & Shapiro, 2013; Lo, 2002; Reeve et al., 2013). According to Gibbons et al. (2011) having supports available was a stronger predictor of well-being than the type of coping strategy utilized.

Several participants verbalized that peer nursing student support was an excellent coping strategy to adjust to post-secondary education. For example, some of the participants expressed that first year was stressful and socially isolating due to the large class sizes and the agglomerate of students from various faculties, so they gravitated towards other nursing students for social peer support. Other participants verbalized that the stress of the rigorous academic course content was exacerbated when the courses moved to online delivery, so one participant coped by becoming a roommate with a peer nursing student to support each other and work through academic concepts successfully. Many of the participants verbalized that they could talk with

nursing student peers and vent frustrations amongst each other because they were going through the mutual experience of nursing education and could relate to one another. Several participants verbalized that nursing peer friendships were formed and still exist today.

Several participants identified that talking with family members was an effective coping strategy. This finding is supported by research studies that indicated that most students have family or a significant other, as their main support system, that this is an important source of emotional support (Gibbons et al., 2011; Lo, 2002). Many of the participants in my study indicated that they lived with family or family members; one participant stated that she lives with her sister, who was also attending university, which provided a familiar support. Many of the participants acknowledged family members may not necessarily understand the stressors that are faced in nursing education but provide support by listening, giving emotional support and encouragement, which is found to be a supporting coping strategy to manage stress.

### **Faculty and Campus Supports**

Support from faculty and instructors is very important for students in managing stress. The participants in my study all verbalized that the way the faculty handled the curriculum changes due to the COVID-19 restrictions was not an added stressor. The participants indicated that they received emails with updated information regarding the ongoing changes in curriculum that were being made in compliance with the COVID-19 restrictions. The participants further indicated that they were invited to attend interactive town hall meetings, that were presented by the president of the university and the dean, to keep updated on any new information about the pandemic and plans that were being made in accordance with the unfolding of new information.

A perceived mutual trust between faculty and students is also very important in managing stress. When students perceive a mutual trust, they are more motivated, and they learn more

effectively (Reeve, 2013). Several of the participants indicated that some of the academic instructors made an attempt to reach out to the students when the academic classes went online in an attempt to make the transition to online as conducive to learning as possible.

Many of the participants from my study verbalized a deep respect and appreciation towards their clinical instructors. The clinical experience is a crucial component of the undergraduate nursing education program which offers the students the opportunity to integrate academic theoretical knowledge into the clinical practice setting, in a hands-on environment, to develop nursing skills. The clinical instructors are experienced registered nurses that bring relevant and current clinical nursing expertise into the student's clinical practicum experience. The clinical instructor has an important influence on nursing students' education which can influence the student's sense of self-efficacy. Self-efficacy is a multidimensional, dispositional attribute that affects the cognitive processes of students and is influenced by experience (Gibbons, 2010; Rowbotham & Owen, 2015); therefore, a positive clinical experience, promoted by the clinical instructor, is imperative to contributing to students' success.

A clinical instructor oversees a group of eight to ten students for the length of the clinical placement experience. This creates a small group dynamic which makes that whole clinical experience more personal. Furthermore, with the academic classes being delivered remotely due to the COVID-19 distancing restrictions, the clinical instructor became the only face to face contact with faculty members that the students were experiencing. Some of the participants indicated that they were able to keep updated on curriculum adjustments, due to the COVID-19 restrictions, through their clinical group discussions. One study indicates that the small group dynamic is an effective approach in nursing education because students are able to apply their

skills, collaborate with student peers, and participate in their small group discussions (Wong, 2018).

Interestingly, the clinical instructors are in a unique position within the hierarchy of the University of Calgary faculty. The clinical instructors are employed by the University of Calgary to teach the hospital clinical experience, and they take part in lab teaching on campus. Some work one sessional contract, while others return to work many consecutive contracts, and some are employed as full-time instructors. While the clinical instructors may be the least integrated group of faculty members from the perspective of faculty hierarchy, from the perspective of students in the study, they are the face of the faculty and the crucial instructors of the faculty.

### **Implications for Practice**

The findings of this study provide insight into several implications for practice. The cohort of participants that volunteered for my study were goal oriented and exhibited a common characteristic of strong personal motivation towards success in their nursing education studies. These participants also demonstrated a sense of meaning toward their studies in knowing why they enrolled in the nursing program and where they were going with it. The study findings indicated that these participants drew upon social supports and faculty and campus supports to manage their perceived stressors. The study showed that this cohort of participants utilized effective coping strategies, both problem-based and emotion-based, to manage their perceived stressors. The study found that this cohort of participants utilized primary and secondary appraisal of a perceived stressor which guided their choice of a coping strategy; furthermore, the participants adjusted their coping strategies accordingly when faced with the COVID-19 pandemic guidelines and restrictions.

The study findings indicated that the most common stressor identified by the participants was the academics, with the imbalance of the curriculum making the third year the heaviest and hardest year. Although it has been acknowledged that the imbalance of the curriculum is a unique feature of the University of Calgary program, and is currently being revised, several participants utilized alternative library resources and creative methods of study, such as nursing websites and podcasts, to manage the heavy academic workload. This may be an excellent opportunity for the academic instructors to consider shifting from the traditional teaching style of assigning copious chapters of textbook readings, to integrating alternative methods of teaching and learning to be supportive of student learning needs through the rigorous nursing program.

The study found that the participants held the clinical instructors in high regard for their expertise and support and they were viewed by the participants as the face of the faculty and the crucial instructors of the faculty. The clinical practicums are an essential component of the nursing education program and the clinical instructors hold a key role in this aspect of the student's learning. As students move through the clinical practicum experiences, they face stressors such as adjusting to new nursing unit environments and dealing with new nursing unit staff, physicians, and patients. As well as their clinical expertise, the clinical instructors can be very supportive when students initially enter a new nursing unit environment by discussing perceived stressors with the students and making students aware of the focus of a new clinical environment and the potential stressors in a specific clinical area. The findings also showed that the participants valued the small group dynamics and the more personal interactions of the clinical groups. The clinical instructors can take advantage of the small group dynamics by having discussions and reflecting about experiences at the end of each clinical practicum shift.

The findings of my study indicated that although none of the students utilized the faculty resources such as yoga, meditation, or mindfulness sessions, several of the participants utilized the on-campus Wellness Centre and reported it to be very helpful. Two of the participants verbalized that they had heard about the therapy dog that was being trained for mental health support in the faculty of nursing and stated that they would be interested in utilizing pet therapy when faced with stressors. These examples support the fact that stress is a critical issue in undergraduate nursing education and indicates that students are receptive to accessing and utilizing various supportive resources when they are experiencing stressors. This may present an opportunity for future research to examine the benefits of incorporating stress management conversations and making supportive stress reduction interventions known to nursing students in years one and two, when they are in the early stages of their studies.

Nursing is a high stress occupation and educating nursing students to prepare for the demands of a nursing career requires a rigorous academic and clinical training program, along with a high level of commitment from the students. The findings of this study have shown that the participants have demonstrated self-efficacy and commitment towards their nursing studies. This study also illuminated the fact that new nurse attrition is a significant issue internationally contributing to a global nursing shortage, which is possibly due to the high levels of stress during the undergraduate nursing education program, leading to burn-out. For the success of the nursing students and the success of the nursing profession, the issue of stress in undergraduate nursing education can no longer be overlooked. Educational institutions and nursing educators are in an ideal position to support nursing students' mental health and well being by offering various coping interventions and it is imperative that educational institutions and nursing instructors be supportive of nursing students. Furthermore, the benefits of support at the undergraduate nursing

education level may extend to new nurse success when transitioning from student nurse to registered nurse and then faced with the challenges within the nursing profession.

### **Limitations of My Study**

There are several limitations to be considered in my research study. This study was a single site study in which the participants were recruited from a cohort of undergraduate nursing students at the University of Calgary. Multi-site research studies would contribute a diversity of data across educational institutions which may have strengthened, or challenged, the findings from my study. Furthermore, studies from other educational institutions may identify common trends or differences across different nursing programs.

The participant interviews were held during the Fall 2020 semester therefore, this study captured a moment in time during the COVID-19 pandemic. Longitudinal studies may help to illuminate how stressors and coping strategies may change or evolve over the length of a pandemic. The sample size for my study was small, which is typical in qualitative studies, however, perhaps a larger sample size would have contributed more in-depth data for the study.

This study used voluntary participation and convenience sampling. The participants that volunteered for my study were all from year three of the program which is known to be the most challenging year of the curriculum. It was evident that the participants that volunteered for my study were highly motivated and committed to their program of study, therefore, it makes sense that they would volunteer to participate in a study. However, the experiences of the cohort that volunteered to participate may be quite different from the experiences of students that did not volunteer to participate, so perhaps the group of participants that volunteered for my study may not be fully representative of all the students in the undergraduate nursing program. A challenge for a future research study may be to reach students that are struggling in the program and could



benefit from supports; for example, those students that are conflicted about their choice of choosing a nursing educational program, or exhibit weaker coping-strategies, or have limited social networks.

As a novice researcher, my inexperience in developing my research study, conducting the research interviews, analyzing, and interpreting the data, and writing the research study thesis could be considered a limitation. Conversations and discussions with my supervisor and my supervisory committee were vital in guiding me through completing my research study.

### **Conclusion**

The purpose of this qualitative, Interpretive Description research study was to gain an understanding of undergraduate nursing students' perceptions of stress and what coping strategies they utilized to manage stress as they studied during the COVID-19 pandemic. The inspiration for me to undertake this study stemmed from my own experience as a practicing registered nurse when working on units where nursing students came to gain their clinical experiences. From these experiences of working buddy shifts with nursing students, and all the different encounters with the nursing students, I became concerned about the topic of stress and coping with undergraduate nursing students, and I became intrigued with pursuing a Master of Nursing level research study focusing on this issue.

Stress is inevitable in undergraduate nursing education and coping strategies play a crucial role in managing stressors, however as clarified earlier, coping is not understood as an attempt to eliminate stress or to control stress, but rather effective coping is a method in which to respond to a stressor and manage stress. Certain levels of stress, if perceived as positive, can serve to be an inspiration and a motivating factor to empower nursing students to achieve their educational goals, and can boost students' mental health and well-being. Contrarily, stress that is

perceived as negative, and high levels and lengthy exposures to stress, that are left unrecognized or unmanaged, has the potential to cause devastating impacts on nursing students' academic learning, clinical performance, as well as, on their mental health and well-being. An intriguing feature that came through in this study was the coping strategies that many of these participants already had upon entering the nursing program, which were not strategies taught during the program. When faced with stressors during their nursing program and during the COVID-19 restrictions, many participants described using coping strategies they had already acquired, presumably through a strength-based mix of previous experience and learned behaviours in their family environment.

Lazarus and Folkman's (1984) Transactional Model of Stress and Coping proved to be a very effective theoretical basis for my study. I found this model to be very user friendly and it provided clear definitions of stress, coping and cognitive appraisal. This theory defines stress as the relationship between the person and the environment, which is congruent with my study of undergraduate nursing students' stress in relation to the nursing education environment. Coping strategies play a crucial role in managing stressors, and effective coping strategies improves the ability to manage stressors. The participants demonstrated primary and secondary appraisal when faced with perceived stressors and when choosing an effective coping strategy to manage perceived stressors, including choosing effective coping strategies to adjust to stressors during the COVID-19 restrictions. It was interesting to find that the participants predominately utilized problem-based coping strategies to manage stressors, which is supported by the literature as being the more effective strategy for managing stressors, versus emotional-based strategies. However, examples of emotion-based strategies were also noted which were found to be effective when facing certain stressors.

This research study was conducted in unprecedented times and by doing a qualitative study I was able to capture the unique experience of those students whose program was first disrupted by the COVID-19 pandemic. I had the opportunity and privilege to interview and spend time talking with 10 undergraduate nursing students who were studying in the University of Calgary nursing program. I found the Interpretive Description methodology to be a very helpful and an effective guide for interviewing which enabled meaningful and interactive conversations with the participants. In reflecting back over the interviews, I was amazed at this exceptional cohort of nursing students that were studying through the rigorous undergraduate nursing program during the time of the COVID-19 pandemic. I was very appreciative of each one of the participants who saw the relevance of this study and who took time out of their busy schedules to volunteer and share personal feelings and experiences during their interviews which contributed to rich data for the findings of my study.

The results of this research study emphasize that this understudied issue, of stress and coping in undergraduate nursing students, requires attention and offers numerous opportunities for future research studies. Evidence based knowledge can then be extracted from research studies to better understand nursing students' perceived stressors and to create supportive interventions. Further studies may also uncover how a pandemic marks the undergraduate nursing students' education and their future career. The findings of my study provide an opportunity for faculty and instructors to learn from the students' lived experiences and to gain a better understanding and appreciation of the extent that stressors affect the students' mental health and well-being and effect the students' academic success. With this insight, supportive interventions can be created to promote undergraduate nursing students' success through their studies, especially through the unprecedented times of the COVID-19 pandemic.

In undertaking this research study, I gained an appreciation of the stressors that the nursing students face during their nursing educational program plus the added stressors due to the COVID-19 pandemic. I further realized that although these participants were goal-oriented, highly motivated and committed to success in their nursing program, stress is an issue that weighs heavily on their minds. Supportive interventions are necessary both for the nursing students' success and for the success of the nursing profession. Nursing students must also be supported to realize the importance of caring for themselves and effectively managing perceived stressors before they can successfully be able to move forward into a career of caring for others. Furthermore, new graduate nurses should be looking forward to their nursing career with stamina and enthusiasm, not contemplating leaving the nursing profession due to struggling to recover from overwhelming stress and burnout from their educational journey towards completing a baccalaureate nursing degree.

## References

- Alberta Health Services (AHS). (2020). *Novel Coronavirus (COVID-19)*. Retrieved from [Albertahealthservices.ca/COVID](https://albertahealthservices.ca/COVID)
- Al-Gamal, E., Alhosain, A., & Alsunaye, K. (2018). Stress and coping strategies among Saudi nursing students during clinical education. *Perspectives in Psychiatric Care, 54*(2), 198-205. doi.org.ezproxy.lib.ucalgary.ca/10.1111/ppc.12223
- American College Health Association. American College Health Association-National College Health Assessment (ACHA-NCHA). [https://www.acha.org/NCHA/NCHA\\_Home](https://www.acha.org/NCHA/NCHA_Home)
- American College Health Association. American College Health Association-National College Health Assessment II: Canadian Reference Group Executive Summary Spring 2016. Hanover, MD: American College Health Association; 2016. Retrieved from <https://www.acha.org/documents/ncha/NCHA-II%20SPRING%202016%20CANADIAN%20REFERENCE%20GROUP%20DATA%20REPORT.pdf>
- American College Health Association. American College Health Association-National College Health Assessment II: University of Calgary Executive Summary Spring 2016. Hanover, MD: American College Health Association; 2016.
- Bagheri, M., Taleghani, F., Abazari, P., & Yousefy, A. (2019). Triggers for reflection in undergraduate nursing education: A qualitative descriptive study. *Nurse Education Today, 75*, 35-40. doi: 10.1016/j.nedt.2018.12.013
- Bartlett, M. L., Taylor, H., & Nelson, J. D. (2016). Comparison of mental health characteristics and stress between baccalaureate nursing students and non-nursing students. *Journal of Nursing Education, 55*(2), 87-90.

doi.org.ezproxy.lib.ucalgary.ca/10.3928/01484834-20160114-05

- Bhurtun, H. D., Azimirad, M., Saaranen, T., & Turunen, H. (2019). Stress and coping among nursing students during clinical training: An integrative review. *Journal of Nursing Education, 58*(5), 266-276. doi.org.ezproxy.lib.ucalgary.ca/10.3928/01484834-20190422-04
- Canadian Nurses Association (CNA) (2013). *Tested solutions for eliminating Canada's registered nurse shortage*. Retrieved from [https://www.cna-aiic.ca/-/media/cna/page-content/pdf-en/rn\\_highlights\\_e.pdf](https://www.cna-aiic.ca/-/media/cna/page-content/pdf-en/rn_highlights_e.pdf)
- Centre for Disease Control and Prevention (CDC). (2020). *Coronavirus (COVID-19)*. Retrieved from <https://www.cdc.gov/COVID19>
- Chachula, K. M., Myrick, F., & Yonge, O. (2015). Letting go: How newly graduated registered nurses in Western Canada decide to exit the nursing profession. *Nurse Education Today, 35*(7), 912-918. doi.org.ezproxy.lib.ucalgary.ca/10.1016/j.nedt.2015.02.024
- Chan, C. K. L., So, W. K. W., & Fong, D. Y. T. (2009). Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. *Journal of Professional Nursing, 25*(5), 307-313. doi.org.ezproxy.lib.ucalgary.ca/10.1016/j.profnurs.2009.01.018
- Chernomas, W. M., & Shapiro, C. (2013). Stress, depression, and anxiety among undergraduate nursing students. *International Journal of Nursing Education Scholarship, 10*(1), 255-266. doi.org.ezproxy.lib.ucalgary.ca/10.1515/ijnes-2012-0032
- Clark, C. M., Nguyen, D. T., & Barbosa-Leiker, C. (2014). Student perceptions of stress, coping, relationships, and academic civility: A longitudinal study. *Nurse Educator, 39*(4), 170-174. doi.org.ezproxy.lib.ucalgary.ca/10.1097/NME.0000000000000049

- Donovan, M. O. (2007). Implementing reflection: Insights from pre-registration mental health students. *Nurse Education Today*, 27(6), 610-616. doi: 10.1016/j.nedt.2006.09.001
- Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist*, 18(1), 12-23.  
doi: 10.1027/1016-9040/a000124
- Frankl, V. E. (1992). *Man's search for meaning: An introduction to logotherapy* (4th ed.). Boston: Beacon Press
- Gibbons, C. (2010). Stress, coping and burn-out in nursing students. *International Journal of Nursing Studies*, 47(10), 1299-1309.  
doi.org.ezproxy.lib.ucalgary.ca/10.1016/j.ijnurstu.2010.02.015
- Gibbons, C., Dempster, M. & Moutray, M. (2011). Stress, coping and satisfaction in nursing Students. *Journal of Advanced Nursing*, 67(3), 621-632.  
doi.org.ezproxy.lib.ucalgary.ca/10.1111/j.1365-2648.2010.05495.x
- Gibbons, C., Dempster, M. & Moutray, M. (2008). Stress and eustress in nursing students. *Journal of Advanced Nursing*, 61(3), 282-290.  
doi-org.ezproxy.lib.ucalgary.ca/10.1111/j.1365-2648.2007.04497.x
- Government of Canada. (2020). *Coronavirus Disease (COVID-19)*. Retrieved from <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>
- Gurková, E., & Zeleníková, R. (2018). Nursing students' perceived stress, coping strategies, health and supervisory approaches in clinical practice: A Slovak and Czech perspective. *Nurse Education Today*, 65, 4-10. doi: 10.1016/j.nedt.2018.02.023

- Holloway, I., & Galvin, K. (2017). *Qualitative research in nursing and healthcare* (4th ed.). West Sussex, UK: Wiley & Sons.
- Jimenez, C., Navia-Osorio, P. M., & Diaz, C. V. (2010). Stress and health in novice and experienced nursing students. *Journal of Advanced Nursing*, *66*(2), 442-455.  
doi: 10.1111/j.1365-2648.2009.05183.x
- Labrague, L. J., McEnroe-Petitte, D. M., Gloe, D., Thomas, L., Papathanasiou, I. V., & Tsaras, K. (2017). A literature review on stress and coping strategies in nursing students. *Journal of Mental Health*, *26*(5), 471-480. doi: 10.1080/09638237.2016.1244721
- Labrague, L. J., McEnroe-Petitte, D. M., Papathanasiou, I. V., Edet, O., Tsaras, K., Leocadio, M. C., ... Velacaria, P. I. T. (2018). Stress and coping strategies among nursing students: An international study. *Journal of Mental Health*, *27*(5), 402-408.  
doi: 10.1080/09638237.2017.1417552
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Leipold, B., & Greve, W. (2009). Resilience: A conceptual bridge between coping and development. *European Psychologist*, *14*(1), 40-50. doi: 10.1027/1016-9040.14.1.40
- Lo, R. (2002). A longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students: An Australian case study. *Journal of Advanced Nursing*, *39*(2), 119-126. doi: 10.1046/j.1365-2648.2000.02251.x
- McCarthy, B., Trace, A., O'Donovan, M., Brady-Nevin, C., Murphy, M., O'Shea, M., & O'Regan, P. (2018). Nursing and midwifery students' stress and coping during their undergraduate education programmes: An integrative review. *Nurse Education Today*, *61*, 197-209. doi: 10.1016/j.nedt.2017.11.029



- Meng, X., & D'Arcy, C. (2013). The projected effect of increasing physical activity on reducing the prevalence of common mental disorders among Canadian men and women: A national population-based community study. *Preventive Medicine, 56*(1), 59-63. doi: 10.1016/j.ypmed.2012.11.014
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Public Library of Science (PLOS) Medicine*. doi.org/10.1371/journal.pmed.1000097
- Mortell, S. (2020). Logotherapy to mitigate the harmful psychological effects of current events: A tool for nurses. *Journal of Psychosocial Nursing & Mental Health Services, 58*(4), 38-42. doi: 10.3928/02793695-20200127-01
- Polit, D. F., & Beck, C. T. (2017). *Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Philadelphia, PA: Wolters Kluwer.
- Reeve, K. L., Shumaker, C. J., Yearwood, E. L., Crowell, N. A., & Riley, J. B. (2013). Perceived stress and social support in undergraduate nursing students' educational experiences. *Nurse Education Today, 33*(4), 419-424. doi: 10.1016/j.nedt.2012.11.009
- Rhéaume, A., Clément, L., & LeBel, N. (2011). Understanding intention to leave amongst new graduate Canadian nurses: A repeated cross sectional survey. *International Journal of Nursing Studies, 48*(4), 490-500. doi: 10.1016/j.ijnurstu.2010.08.005
- Rowbotham, M., & Owen, R. M. (2015). The effect of clinical nursing instructors on student self-efficacy. *Nurse Education in Practice, 15*(6), 561-566. doi.org/10.1016/j.nepr.2015.09.008
- Sawatzky, J. V. (1998). Understanding nursing students' stress: a proposed framework. *Nurse Education Today, 18*(2), 108-115. doi.org/10.1016/S0260-6917(98)80014-2

- Sikander, S., & Aziz, F. (2012). Stressors and coping strategies among baccalaureate nursing students at Shifa College of Nursing Islamabad, Pakistan. *International Journal of Nursing Education*, 4(2), 193-197. Retrieved from <http://web.b.ebscohost.com.ezproxy.lib.ucalgary.ca/ehost/pdfviewer/pdfviewer?vid=15&sid=59a977bb-53c8-4f48-b85c-2f83bb0b5ba4%40sessionmgr102>
- Tan, S.Y., & Yip, A. (2018). Hans Selye (1907-1982): Founder of the stress theory. *Singapore Medical Journal*, 59(4), 170-171. doi: 10.11622/smedj.2018043
- Thorne, S. (2016). *Interpretive description: Qualitative research for applied practice* (2nd ed.). New York, NY: Routledge.
- Thorne, S., Kirkham, S. R., & MacDonald-Emes, J. (1997). Interpretive description: A noncategorical qualitative alternative for developing nursing knowledge. *Research in Nursing & Health*, 20(2), 169-177. doi-org.ezproxy.lib.ucalgary.ca/10.1002/(SICI)1098-240X(199704)20:2<169::AID-NUR9>3.0.CO;2-I
- Thorne, S., Kirkham, S. R., & O'Flynn-Magee, K. (2004). The analytic challenge in Interpretive Description. *International Journal of Qualitative Methods*, 3(1), 1-11. doi.org/10.1177/160940690400300101
- Thorne, S., Stephens, J., & Truant, T. (2016). Building qualitative study design using nursing's disciplinary epistemology. *Journal of Advanced Nursing* 72(2), 45-460. doi: 10.1111/jan.12822
- Torrop, H. (1939). Guidance programs in schools of nursing. *AJN, American Journal of Nursing*, 39(2), 176-185. Retrieved from <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=ovfta&NEWS=N&AN=00000446-193902000-00020>.

- Tully, A. (2004). Stress, sources of stress and ways of coping among psychiatric nursing students. *Journal of Psychiatric & Mental Health Nursing*, 11(1), 43-47.  
doi: 10.1111/j.1365-2850.2004.00682.x
- Turner, K., & McCarthy, V. L. (2017). Stress and anxiety among nursing students: A review of intervention strategies in literature between 2009 and 2015. *Nurse Education in Practice*, 22, 21-29. doi.org/10.1016/j.nepr.2016.11.002
- United Nations. (2020). *Coronavirus Disease (COVID-19)*. Retrieved from <https://www.un.org/coronavirus>
- Van der Hallen, R., Jongerling, J., & Godor, B. P. (2020). Coping and resilience in adults: A cross-sectional network analysis. *Anxiety, Stress, & Coping*, 33(5), 479-496.  
doi: 10.1080/10615806.2020.1772969
- Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology*, 21(2), 152-169. doi:10.1017/S0959259810000420
- Wolf, L., Stidham, A. W., & Ross, R. (2015). Predictors of stress and coping strategies of US accelerated vs. generic baccalaureate nursing students: An embedded mixed methods study. *Nurse Education Today*, 35(1), 201-205. doi: 10.1016/j.nedt.2014.07.005
- Wong, F. M. F. (2018). A phenomenological research study: Perspectives of student learning through small group work between undergraduate nursing students and educators. *Nurse Education Today*, 68, 153-158. doi.org/10.1016/j.nedt.2018.06.013
- World Health Organization (WHO). (2020). *Coronavirus*. Retrieved from <https://www.who.int/health-topics/coronavirus>
- World Health Organization (WHO). (2010). *Global recommendations on physical activity for health*. Retrieved from

[https://apps.who.int/iris/bitstream/handle/10665/44399/9789241599979\\_eng.pdf;jsessionid=D5D90D1BE4840ADB07DEF0084B9E7979?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/44399/9789241599979_eng.pdf;jsessionid=D5D90D1BE4840ADB07DEF0084B9E7979?sequence=1)

Yamashita, K., Saito, M., & Takao, T. (2012). Stress and coping styles in Japanese nursing students. *International Journal of Nursing Practice*, 18(5), 489-496.

doi: 10.1111/j.1440-172X.2012.02056.x

Zhao, F., Lei, X., He, W., Gu, Y., & Li, D. (2015). The study of perceived stress, coping strategy and self-efficacy of Chinese undergraduate nursing students in clinical practice.

*International Journal of Nursing Practice*, 21, 401-409. doi: 10.1111/ijn.12273

## Appendix A

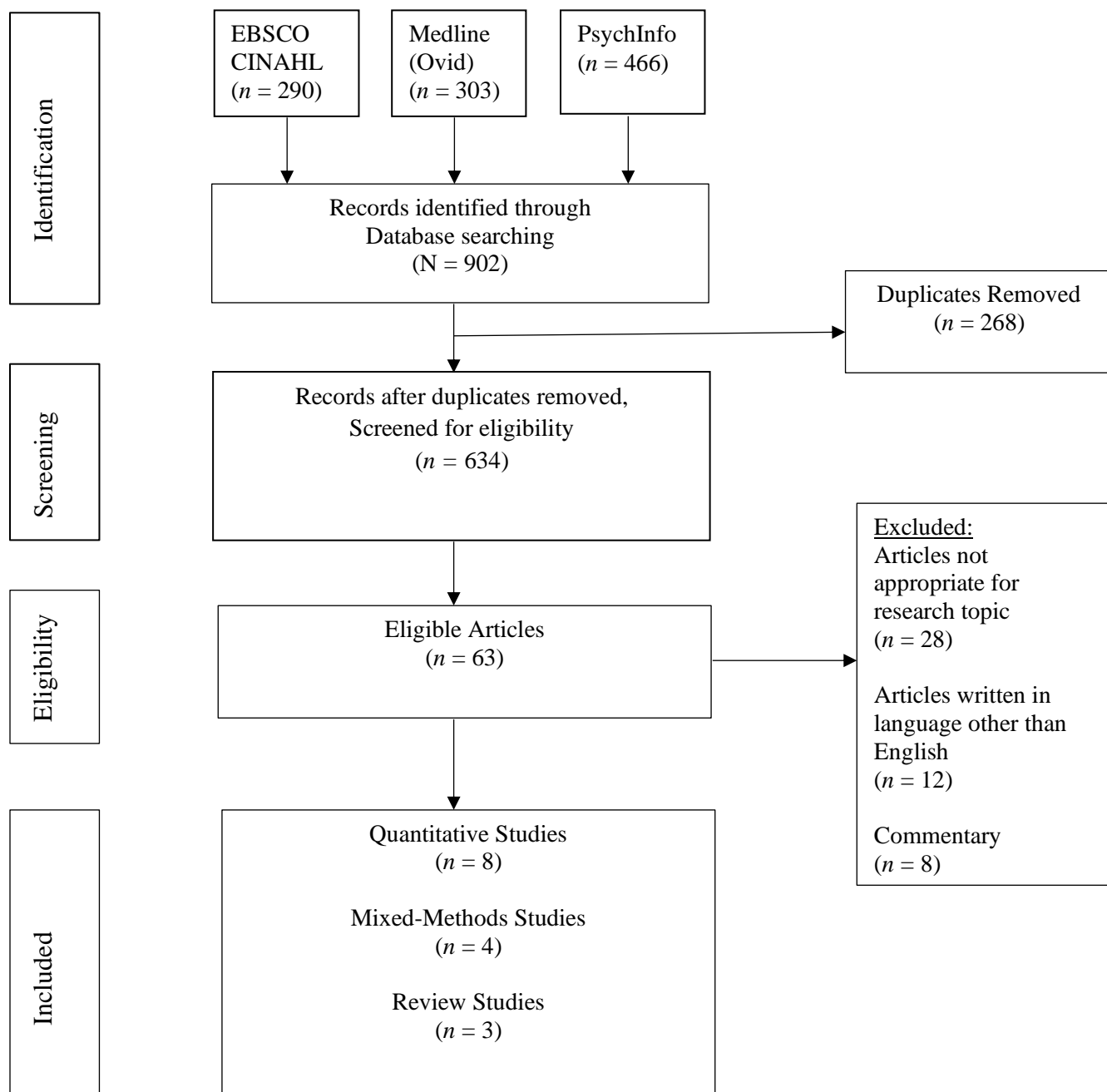
### Interview Guide

Research question: *What factors affect stress and coping in a group of undergraduate nursing students during the COVID-19 pandemic?*

- What stressors were you already experiencing in your educational program before the COVID-19 pandemic?
  - What coping strategies were you utilizing?
- What was your experience when the COVID-19 pandemic changes and disruptions occurred?
  - What coping strategies did you utilize then?
- What supportive interventions from the faculty of nursing would you perceive to be beneficial in the undergraduate nursing educational curriculum?
- How were you made aware of the changes in your academic classes and your clinical experiences due to the pandemic?
  - Did you feel that the faculty of nursing was personally supportive during these changes?
- In what way do you feel that the COVID-19 pandemic has marked the future of your;
  - nursing education
  - your nursing career?

## Appendix B

<sup>2</sup>Prisma (2009) Flow Diagram



<sup>2</sup> Adapted from: Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi.org/10.1371/journal.pmed.1000097

## Appendix C

### Proposed Timeline

	2020 May	Aug.	Sept.	Oct.	Nov.	Dec.	2021 Jan.	Feb	Mar.	April	May
Submit to Ethics											
Preparation for the Study											
Recruitment											
E-mail Invite, Information, & Consent											
Collect Consent forms											
Participant Interviews											
Data Collection											
Data Analysis											
Prepare report & write Thesis											
Present Final Thesis											
Knowledge Translation											

## Appendix D

### Recruitment Poster



# *Research Study*

## Stress and Coping

## In Undergraduate Nursing Students

## During the

## Covid-19 Pandemic

The purpose of this research study is to gain an understanding of the stressors and coping strategies utilized by undergraduate nursing students during the COVID-19 pandemic.

### Eligibility

Students entering into the third-year or fourth-year of the undergraduate nursing program in the Fall 2020 Semester.

(Please refer to the email invitation and information letter)

### Interested? Or Questions?

Contact researcher: Glennis Park RN MN Student UCalgary  
at [glennis.park@ucalgary.ca](mailto:glennis.park@ucalgary.ca)



## Appendix E

### Invitation and Information Letter



#### INVITATION & INFORMATION LETTER

My name is Glennis Park and I am a Master of Nursing Student at the University of Calgary. This letter is an invitation for you to participate in the study entitled, *How Undergraduate Nursing Students Cope with Stress during the COVID-19 Pandemic*. This study is based on the research question, *What factors affect stress and coping in a group of undergraduate nursing students during the COVID-19 pandemic?* The purpose of this study is to research and gain an understanding of how undergraduate nursing students cope with the stress of their nursing education during the COVID-19 pandemic.

This letter provides you with information about the study to ensure that you understand the purpose of this research study, and the nature of your involvement in the study, in order for you determine whether you wish to participate in the study and sign the informed consent. This study is being conducted as a thesis project in partial fulfillment of the requirements for a Master of Nursing Degree. This proposal has been approved by the ethics committee at the University of Calgary. This study is being conducted under the direction of Dr. Graham McCaffrey and a thesis committee.

#### **Eligibility to Participate**

You are eligible to participate if you are in year three or four of the undergraduate nursing program in the Fall semester of 2020.

#### **Expectations of Participants**

The expectation of the participant is to become involved in an individual interview, of approximately 30 to 60 minutes, with myself, the researcher, during the Fall semester of 2020. The expected time commitment for participation in this study is approximately up to one hour over the course of the Fall 2020 semester.

With consideration of the public health recommendations, should the social distancing recommendations be lifted and classes are back on the university campus, the participant interviews will be held in a reserved private research room on campus; however, if the public health recommendations of social distancing are still active, the participant interviews will be held remotely via Zoom. Consideration will also be made for participant preference if an interview over Zoom is preferred, and more convenient, than a face-to-face interview.

### **Risks and Benefits**

There are no known risks to participating in this study. However, a consideration of participating in this study could be that stressful feelings may escalate during an interview discussion, about the disruptions due to the COVID-19 pandemic, which could cause an overwhelming mental health crisis in a participant. Should this happen, participants may leave the interview discussion at any time and may leave the study at any time. Participants are then encouraged to seek support from services, such as the Student Wellness Centre on the University of Calgary campus, reach out to a medical support service of choice, your family physician, or phone the Calgary Distress Centre 24-hour Crisis Line at 403-266 HELP (4357).

The benefits of participating in this study is the contribution of knowledge of the lived experience of how undergraduate nursing students cope with the stress of their educational program during the COVID-19 pandemic. The longer-term benefits could be the creation and

integration of a supportive stress reduction program for undergraduate nursing students within the faculty of nursing at the University of Calgary.

No monies will be paid for participation in this research study, however, a \$10. coffee gift card will be given to participants that volunteer.

Your participation in the study is absolutely voluntary and you may leave the study at any time if you feel the need to do so.

Thank you for your consideration to participate in this research study

Any questions, please contact me at [glennis.park@ucalgary.ca](mailto:glennis.park@ucalgary.ca)

Glennis Park RN MN Student UCalgary

## Appendix F

### Consent



#### UNIVERSITY OF CALGARY

#### CONSENT TO PARTICIPATE IN RESEARCH

**TITLE:** How Undergraduate Nursing Students Cope with Stress during the COVID-19 Pandemic

**SPONSOR:** Faculty of Nursing, University of Calgary

**INVESTIGATORS** Glennis Park, Master of Nursing Student, Graham McCaffrey, PhD, Associate Professor, Faculty of Nursing

Contact telephone number: (403) 710-3822 (Glennis Park)

#### **INTRODUCTION:**

Dr. Graham McCaffrey, and associates from the Faculty of Nursing at the University of Calgary are conducting a research study.

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Take the time to read this carefully and to understand any accompanying information. You will receive a copy of this form for your records.

You were identified as a possible participant in this study because you are an undergraduate nursing student in year three or four, in the faculty of nursing at the University of Calgary. Your participation in this research study is voluntary.

## WHY IS THIS STUDY BEING DONE?

Stress is a critical issue for undergraduate nursing students. The novel COVID-19 pandemic has caused changes and disruptions in the undergraduate nursing students' already stressful educational program.

The purpose of this research study is to gain an understanding of undergraduate nursing students' perceptions of stress and what coping strategies they are utilizing to manage stress as they study during the novel COVID-19 pandemic.

## HOW MANY PEOPLE WILL TAKE PART IN THIS STUDY?

About ten people will take part in this study through the University of Calgary.

## WHAT WILL HAPPEN IF I TAKE PART IN THIS STUDY?

If you volunteer to participate in this study, the researcher will ask you to do the following:

- The expectation of the participant is to take part in an individual interview, of approximately 30 to 60 minutes, with myself, the student researcher, during the Fall semester of 2020.

- The interviews will be a semi-structured discussion about your experiences of stress and coping in your undergraduate nursing education and what changes you may have found with the COVID-19 pandemic.
- Due to the COVID-19 recommendations of social distancing, the interviews will be held over Zoom. The interviews will be recorded and transcribed verbatim.
- Confidentiality and anonymity will be guaranteed with the use of pseudonyms on the transcribed interviews. The results of this study will be presented in aggregate form.

## HOW LONG WILL I BE IN THIS STUDY?

This research study will be done during the Fall 2020 semester.

- You will participate in this study for one individual interview.
- Your participation in this study will require about 30 to 60 minutes of your time during the Fall 2020 semester

## ARE THERE ANY POTENTIAL RISKS OR DISCOMFORTS THAT I CAN EXPECT FROM THIS STUDY?

- There are no known risks to participating in this study. However, there is the possibility that during participation in the interview discussion, and when talking about the educational disruptions caused by the COVID-19 pandemic, distressing feelings may arise.

## ARE THERE ANY POTENTIAL BENEFITS IF I PARTICIPATE?

- There will be no direct benefit to you from participating in this study. However, this study may help the researchers learn more about the lived experience of how undergraduate nursing students cope with the stress of their educational program during the COVID-19 pandemic.
- The longer-term benefits of participating in this study would be the education of the faculty and staff at the University of Calgary to understand students' stresses, and this information could lead to the creation and integration of a supportive stress reduction program for undergraduate nursing students within the Faculty of Nursing.

## WHAT OTHER CHOICES DO I HAVE IF I CHOOSE NOT TO PARTICIPATE?

Participation in this research study is absolutely voluntary. You are free to choose not to participate in the study. If you decide not to take part in this study, there will be no penalty to you and no consequences for your educational experiences.

## CAN I STOP BEING IN THE STUDY?

Yes. You can decide to stop at any time. Tell the researchers if you are thinking about stopping or decide to stop. Your participation in the study is absolutely voluntary and you may leave the study at any time if you feel the need to do so.

## WITHDRAWAL OF STUDY DATA

Your interview data may be withdrawn from the study within 2 weeks after your interview, at your request. This is the timeframe that interviews will be held prior to beginning data analysis; however, once data analysis has started, data cannot be withdrawn because of the impossibility of removing the influence of any one piece of data in this kind of research.

## WILL I BE PAID FOR PARTICIPATING, OR DO I HAVE TO PAY FOR ANYTHING?

- There are no expenses to participate in this research study.
- No monies will be paid for participation in this research study however, a \$10.00 coffee gift card will be given to participants.

## WILL INFORMATION ABOUT ME AND MY PARTICIPATION BE KEPT CONFIDENTIAL?

The researchers will do their best to make sure that your private information is kept confidential. Information about you will be handled as confidentially as possible, but there is always the potential for an unintended breach of privacy. The research team will handle data according to the Data Management Plan as outlined below:



- Confidentiality and anonymity will be guaranteed by the use of pseudonyms rather than the participants' names on the demographic questionnaires and the interview transcripts.
- Research data and records will be maintained in a secure location at the University of Calgary. Only authorized individuals will have access to it.
- Returned consent forms will be held in a locked cabinet within a locked research investigator's office.
- All research data and records will be stored as encrypted files on a password protected laptop computer.
- No identifiable information about you will be kept with the research data. The results of this research study will be presented in aggregate form.

## HOW LONG WILL INFORMATION FROM THE STUDY BE KEPT?

- The researchers intend to keep the research data and records until the research is published and/or presented.
- The researchers intend to keep the research data and records for approximately five years, and then the data will be destroyed by the principle investigator, Dr. Graham McCaffrey. All study data, which includes consent forms, paper copies of documents, and digital files, will be destroyed according to the University of Calgary policy.
- Any future use of this research data is required to undergo review by a Research Ethics Board.

## RESEARCHER CONFLICTS OF INTERESTS

There are no known conflicts of interest for this research study.

## WHOM MAY I CONTACT IF I HAVE QUESTIONS ABOUT THIS STUDY?

The Research Team:

You may contact Glennis Park, at [glennis.park@ucalgary.ca](mailto:glennis.park@ucalgary.ca), with any questions or concerns about the research or your participation in this study.

Conjoint Health Research Ethics Board (CHREB):

If you have any questions concerning your rights as a possible participant in this research, please contact the Chair, Conjoint Health Research Ethics Board, University of Calgary at 403-220-7990.

## HOW CAN I FIND OUT ABOUT THE STUDY RESULTS?

- The results of this study could be made available to you upon request to the researcher.
- The intention of the researcher is to publish the findings of this research study in a nursing journal, therefore, a link to publication may be provided to you.

## WHAT ARE MY RIGHTS IF I TAKE PART IN THIS STUDY?

Taking part in this study is your choice. You can choose whether or not you want to participate.

Whatever decision you make, there will be no penalty to you.

- You have a right to have all of your questions answered before deciding whether to take part.

- Your decision will not affect your educational experience.
- If you decide to take part, you may leave the study at any time.

## HOW DO I INDICATE MY AGREEMENT TO PARTICIPATE?

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to take part in the study. In no way does this waive your legal rights nor release the investigators or involved institutions from their legal and professional responsibilities.

## SIGNATURE OF STUDY PARTICIPANT

---

Name of Participant

---

Signature of Participant

---

Date

## Appendix G

### Demographic Questionnaire

1.) What is your age?

- < 20
- 20 – 24
- 25 – 29
- 30 – 34
- 35 – 39
- 40 – 44
- 45 +

2.) What is your identified gender?

- Female
- Male
- Other \_\_\_\_\_

3.) What is your highest level of education?

- High School Diploma
- Other \_\_\_\_\_

4.) During the course of your undergraduate nursing educational journey, what do you perceive is the source of most of your stress?

- Academic Studies
- Clinical Experience
- Adjustments to curriculum related to the COVID-19 Pandemic
- Other \_\_\_\_\_

5.) What year of the nursing program are you entering in the Fall 2020 semester?

- Year 3
- Year 4

**Appendix H**  
**CHREB Certification**



Conjoint Health Research Ethics Board

Research Services  
Office 2500 University  
Drive, NW Calgary AB  
T2N 1N4 Telephone:  
(403) 220-2297  
[chreb@ucalgary.ca](mailto:chreb@ucalgary.ca)

CERTIFICATION OF INSTITUTIONAL ETHICS APPROVAL

The Conjoint Health Research Ethics Board (CHREB), University of Calgary has reviewed and approved the following research protocol:

Ethics ID: REB20-0996

Principal Investigator: Graham McCaffrey

Co-Investigator(s):

Student Co-Investigator(s): Glennis Park

Study Title: How Undergraduate Nursing Students Cope with  
Stress during the COVID-19 Pandemic

Sponsor:

**Effective:** 15-Jul-2020

**Expires:** 14-Jul-2021

**The following documents have been approved for use:**

- Recruitment Poster
- Invitation and Information Letter, Revised clean version, July 8, 2020
- Consent to Participate in Research, 1.2, July 10, 2020
- Interview Guide

- How Undergraduate Nursing Students Cope with Stress during the COVID-19 Pandemic: A Research Proposal , Revised clean version, July 9, 2020
- Appendix G: Demographics, Revised version, July 9, 2020
- Budget, Clean revised version, July 8, 2020

The CHREB is constituted and operates in accordance with the current version of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS); International Conference on Harmonization E6: Good Clinical Practice Guidelines (ICH-GCP); Part C, Division 5 of the Food and Drug regulations, Part 4 of the Natural Health Product Regulations and the Medical Device Regulations of Health Canada; Alberta's Health Information Act, RSA 2000 cH-5; and US Federal Regulations 45 CFR part 46, 21 CFR part 50 and 56.

You and your co-investigators are not members of the CHREB and did not participate in review or voting on this study.