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Keeping the Course: Nursing Student Motivation During a Pandemic

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KEEPING THE COURSE:
NURSING STUDENT MOTIVATION DURING A PANDEMIC

by

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of Old Dominion University in Partial Fulfillment of the
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Approved by:

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ABSTRACT

KEEPING THE COURSE: NURSING STUDENT MOTIVATION DURING A PANDEMIC

Travis William Storey
Old Dominion University, 2021
Director: Dr. Michael Kosloski

Nurses have always been at the frontline of any disaster or health crisis to hit the country, yet, as the United States battled the coronavirus pandemic, the nation saw its nursing shortage worsen. The emotional and physical toll faced by frontline nurses often became unbearable, leading to a skyrocketing of occupational and facility turnover. Concern grew that the pandemic would have an impact on nursing students as well, particularly on the supply of new graduate nurses. Yet, even in the face of such hazardous working conditions, nursing students persisted in their academic studies. The purpose of this quantitative non-experimental study was to examine how the motivational sources and characteristics of students enrolled in a 4-year nursing program in the Hampton Roads area of Virginia related to their persistence in their field of study during the COVID-19 pandemic. Nursing students ($n = 37$) were surveyed using a 45-item questionnaire primarily based on the Motivation Sources Inventory (MSI) and the Fear of COVID-19 Scale (FCS). The questionnaire measured the key sources of motivation for the participants, their fear of COVID-19, and select demographic characteristics. The results of the study found no correlation between Fear of COVID and educational institution turnover ($r = 0.110, p = 0.74$), as well as no correlation between Fear of COVID and future occupational turnover intention ($r = 0.075, p = 0.67$). Additionally, while internal-self-concept was the highest ranked source of motivation, no relationship was found between it and nursing students' plan to persist in their educational field of study ($r = -0.076, p = 0.33$).

DEDICATION

This work is dedicated to Regina, Greyson, and Killian. Through multiple deployments, trials, and hardships, you three have been my heart, soul, and strength.

SFC Ryan J. Savard, USA
February 27, 1983 – October 13, 2012
De Oppresso Liber
Gone, but not forgotten.

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I would like to thank all my advisors, professors, fellow students, Navy leadership, and the entirety of the Hospital Corpsman rating. Without your support, sacrifices, and guidance, making it to this point would never have happened. A special thank you to Dr. Kosloski for fielding my countless phone calls and emails as I worked on this project as I am sure it was exhausting. Thank you Dr. Jones, Dr. Reed, and Dr. Kosloski for your positivity and support in all my classes, as you made the science of education and training evolve into a passion.

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CHAPTER I

INTRODUCTION

In November 2019, the novel coronavirus (COVID-19) emerged from the Wuhan Province in China, and within four months, the World Health Organization (WHO) had designated the viral infection a global pandemic (WHO, 2020). As of February 9, 2021, 106,125,682 cases had been confirmed globally, resulting in 2,320,497 deaths; in the United States alone there had been 26,746,377 cases with 459,993 deaths (WHO, 2021). In addition to limiting travel, shuttering businesses, and decimating economies around the world, the coronavirus pandemic quickly brought about an overwhelming strain on medical supplies, staff, and treatment facilities. While all healthcare workers had been vital in overcoming the challenges presented by COVID-19, almost no other profession had felt the strain as much as nursing staff. Since the beginning of the COVID-19 pandemic, nurses had been on the frontline of caring for patients, playing a significant role in all healthcare operations. A mainstay in any disaster or medical emergency, nurses had been central to the suppression of the outbreak, and they would be the pillar of post-COVID-19 healthcare systems.

To fulfill this role as the backbone of healthcare, however, it was vital for nurses to maintain their emotional and mental health (Catton, 2020; Mo et al., 2020), an increasingly difficult task in the face of often overwhelming working conditions. In a report released by the International Council of Nurses (ICN), the direct impact on nursing was readily apparent by how health care systems focused their response to the COVID-19 pandemic (ICN, 2020). Medical treatment facilities decided on increasing the capacity and capabilities of intensive care units (ICUs), leading to longer working hours, increased patient loads, changes to rotating shift patterns, and the introduction of stringent COVID-19 treatment protocols. Nurses from non-

critical specialties, such as internal medicine and surgery units, as well as nurses in administrative positions, were cross-trained and utilized in the supplementation of ICU nursing staff. To reduce the transmission of COVID-19, the presence of family at the bedside was limited, often leaving the nursing staff to be the sole source of comfort for a patient in the time of their death (Alharbi et al., 2020). Moreover, supply issues with personal protective equipment (PPE) often led to nurses caring for patients without the proper level of protection. COVID-19 had drastically affected the psychological and mental health of nurses, as they struggled with caring for their patients, while facing the fear of being infected with COVID, or unknowingly infecting others. As vast amounts of literature have shown a considerable association between the COVID-19 outbreak and adverse mental health issues in nurses, such as depression, anxiety, and burnout (Mo et al.; Nemati et al., 2020; Wu et al., 2020), the future of nursing came more into question.

Nurses were fulfilling their duties under a siege brought on by the COVID-19 pandemic, and with an increasing occurrence of both mental health issues and occupational turnover (Labrague & de Los Santos, 2020a), there was an understandable concern that the supply of new graduate nurses would fail to meet the demand. Prior to the pandemic, there was already a lack of nurses, with reports estimating that as of September 2019, there was a shortage of approximately 1 million nurses in the United States, and that by 2030, there would still be a shortage of over 510,000 nurses (Juraschek et al., 2019; Zhang et al., 2017). In addition, the American Association of Colleges for Nursing (AACN) noted that in 2019, entry-level 4-year Baccalaureate of Science in Nursing programs (BSN) only saw a 5.1% increase in enrollment; not enough to keep pace with the growing demand for nurses (AACN, 2020). Moreover, given that the risk of transmitting a disease in a healthcare setting was unavoidable, and as nursing

students had a direct link to the clinical setting, the fear of infection and transmission had become a reality for these students. In view of such hazardous work conditions that were continuously both physically and emotionally taxing to frontline nurses, did it change the mindset of those currently seeking to become a nurse?

Purpose of this Study

There were vast amounts of existing literature and research that examined the correlation between the fear of COVID-19 and its relation to frontline nurses' psychological distress, anxiety, and occupational turnover (Alharbi et al., 2020; Labrauge & de Los Santos, 2020a; Mo et al., 2020; Nemati et al., 2020), as well as studies that correlated nurses' motivation and their demographics (Abu Yahya, 2019). Additionally, there had been a substantial amount of qualitative research that had analyzed the impact of COVID-19 on nursing students' perceptions of studying, anxiety, and other academic concerns (Catton, 2020; Lovrić et al., 2020). However, the researcher found no studies that attempted to observe the relationship between a nursing student's source of motivation and their persistence in nursing school during the COVID-19 pandemic. Therefore, the purpose of this study was to examine how the motivational sources and characteristics of students enrolled in a 4-year nursing program in the Hampton Roads area of Virginia related to their persistence in their field of study during the COVID-19 pandemic.

Research Questions

1. What was the relationship between the source of motivation and nursing students' persistence in their program of study during the COVID-19 pandemic?
2. What was the relationship between demographic characteristics and nursing students' persistence in their program of study during the COVID-19 pandemic?

3. What was the relationship between the fear of COVID-19 and nursing students' persistence in their program of study during the COVID-19 pandemic?

Background and Significance

The AACN (2020) listed five factors that had played a role in the nursing shortage in the United States during 2020:

- A shortage of nursing school faculty is restricting nursing program enrollments.
- A significant segment of the nursing workforce is nearing retirement age.
- Changing demographics signal a need for more nurses to care for the aging population.
- Insufficient staffing is raising the stress level of nurses, impacting job satisfaction, and driving many nurses to leave the profession.
- High nurse retirement and turnover rates are affecting access to health care. (par. 3)

Due to this nursing shortage, the researcher felt it was important to understand what the sources of motivation were driving nursing students to persist in their program. In traditional 4-year BSN programs, nursing students habitually faced higher levels of stress due to a more strenuous course load, as well as required clinical rotations (Bartlett et al., 2016). This stress was now being more compounded by the additional health risks presented by the COVID-19 pandemic. Moreover, as noted above, frontline nurses were facing continuously daunting conditions that exhausted the emotional and mental wellbeing of even the most seasoned nurses. So why did so many nursing students persist in their studies when faced with this future? Motivation influences individuals to do something in a specific manner, and high levels of motivation ultimately affect student and employee satisfaction, performance, and productivity, as well as other factors impacting healthcare management (Abu Yahya et al., 2019). As such, it was important to identify the sources of nursing students' motivation so that teachers and healthcare employers could

better understand these drivers, and in turn, develop ways to foster and support them. Without this support, student motivation could diminish, possibly leading to an increase in nursing program attrition and an intensification of the nursing shortage gap.

Assumptions and Limitations

The researcher assumed participants would answer honestly and according to their true views and feelings. The researcher also assumed all participants at the time of this study were actively enrolled in a BSN program. Moreover, the researcher also assumed all participants had access to an internet connection. Finally, the researcher assumed all participants were aware of the existence of a global pandemic caused by COVID-19.

One of the key limitations of this study was the composition and size of the sample. The participants were limited to only two universities in Hampton Roads area of Virginia, resulting in a strong regional focus and constraining the ability to generalize the findings both nationally and globally. In relation to sample size, the sample population only included participants that responded to the survey and did not include the entire nursing program student bodies of each educational institution. Moreover, the research was limited by access to the participants due to COVID-19 social distancing protocols, which prevented the researcher from administering the survey instruments in-person. This forced the researcher to rely on nursing instructors to advance student participation in the study and advocate for participation.

Definitions

For the purpose of this study, “coronavirus,” “COVID-19,” and “the pandemic” refers to the SARS-CoV-2 strain belonging to the coronavirus family of viruses. Additionally, personal protective equipment includes N95 respirator face masks, non-sterile gloves, and disposable isolation gowns. The phrase “characteristics of students” described the demographic information

of participants such as gender, age, marital status, student status, job status, and year of study in respective nursing program. Finally, the term “Hampton Roads” refers to the cities of Norfolk, Portsmouth, Chesapeake, Virginia Beach, Hampton, Newport News, and Suffolk within the Southeast region of the Commonwealth of Virginia, United States of America.

Overview of Chapters

This research study will begin by providing a review of the existing literature in the areas of sources of motivation, fear of COVID-19, characteristics of third and fourth-year students enrolled in a 4-year BSN program, and persistence of third and fourth-year nursing students in their field of study. After establishing the existing relevant literature, the researcher will present a chapter detailing the sampling approach used in this study. This chapter will also describe the methods and instruments the researcher used to collect data in this study, as well as discuss the rationale for these selections. Following this, the researcher will review the data analysis, follow by a presentation of the findings. Finally, the researcher will draw conclusions on the findings and provide discussion on the study results.

CHAPTER II

REVIEW OF LITERATURE

Stressors Among Nursing Students

Understanding stress had been an important topic in education due to its ability to impede a student's learning and experiences; when stress became excessive or was perceived negatively, students could experience both physical and psychological impairment (Murphy & Archer, 1996). All students faced a multitude of stressors, including those from academic and external sources. Academic sources, such as assignments, class workload, relations with professors, fear of failing, and grades played a substantial role in producing stress in students, not to mention external stressors such as financial concerns and everyday issues that arose in life. In addition to these, nursing students were also faced with stressors uniquely found in the clinical setting. Most of the research reviewed pointed to these sources, such as patient suffering or death, lack of professional knowledge and skills, responding to clinical emergencies, and relations with clinical staff, as the primary stressors for nursing students (Eifried, 2003; Gibbons et al., 2009; Hamill, 1995; Pagana, 1988; Sheu et al., 2002; Thyer & Bazeley, 1993). Throughout prior research, nursing students often stated that the clinical experience was one of the most anxiety-producing aspects of the nursing program (Elliot 2002). The stress caused by clinical rotations generated a wide range of emotions, such as nervousness, depression, anxiety, fear, frustration, anger, hopelessness, loneliness, and feeling inferior (Shipton, 2002). However, while there was a considerable amount of literature that found that clinical rotations often provided the most sources of stress, some authors found that academic sources caused more stressors than clinical sources (Lindop, 1999; Tulley, 2004). Regardless of the source of stress, nursing students were

still routinely found to have experienced higher levels of stress compared to their non-nursing peers (Bartlett et al., 2016).

Even though a vast amount of literature found clinical rotations to be the primary source of stress for nursing students, a question remained. Does stress depend on the student's level of experience? Does a student's stress increase or decrease as they progress through their program of study? Findings within the literature have been mixed; Lindop (1999) found that stress increased directly with the training level, while Zupiria et al. (2007) found that stress decreased as the level of training increased. There may also be a cultural relationship between stress and level of experience. One longitudinal comparative study found that for nursing students from Wales, Albania, and Malta, there was not a statistically significant difference between stress total scores and the student year in nursing program (Burnard et al., 2008). However, in that same study, analysis of variance (ANOVA) revealed statistically significant differences in total stress scores by year of study for nursing students from Brunei.

Fear of COVID-19

In addition to the stressors that nursing students traditionally faced, they were now meeting challenges brought forth by the COVID-19 pandemic. Social and academic adjustments made to deal with COVID-19 within the community compounded these stressors (Lewnard & Lo, 2020), as did the changes forced on the delivery of nursing education (Hayter & Jackson, 2020). A rapid transformation in the provision of undergraduate nursing education took place, as traditional face-to-face teaching was replaced largely by online teaching (Cao et al., 2020). Yet, in-person clinical rotations remained, creating a direct link between nursing students and the dangers of the pandemic. Students were very aware of the risk of infection and transmission, and as found in studies of nursing students during previous epidemics, they were fearful of the

increased risks found in the clinical environment (Dewart et al., 2020; Wong et al., 2004).

Clinical absenteeism increased as many students claimed that they avoided going to the clinical setting because they feared the contagion (Al-Hazmi et al., 2018). However, at the same time, students also understood the importance of clinical education; it was the clinical environment that facilitated the students' attainment of professional knowledge: self-confidence, technical, psychomotor, interpersonal, and communication skills; professional responsibility; and autonomy in the clinical setting (Lovrić et al., 2015).

Copious amounts of literature had shown that during epidemics, nursing students often experienced fear and high levels of psychological distress (Al-Rabiaah et al., 2020; Khalid et al., 2016; Wong et al., 2004). This was natural though, as fear was a positive psychological, physiological, and behavioral condition that allowed students to cope with an adverse or unexpected situation (Steimer, 2002), in this case, a global pandemic. For example, the individual's fear reflected the seriousness with which the student approached the pandemic, and its possible impact on both the student and society, so the fear the student experienced was justified and expected. However, while natural and predictable, these "focal stress events," crisis situations caused by natural or technological disasters, still threatened the mental and/or physical integrity of individuals (Aldwin, 2009). A study of health profession students during the 2014 Middle East Respiratory Syndrome – Coronavirus (MERS-CoV) epidemic found that nursing students suffered from decreased psychomotor concentration and learning disabilities. Additionally, they avoided learning activities, which had negative implications for their academic achievement (Al-Rabiaah et al., 2020). This mix of stress and fear, while natural and anticipated in the face of the COVID-19 pandemic, still weighed on nursing students' ability to successfully complete their program of study.

The Impact of Motivation

In the most general of terms, motivation is the force that energizes individuals to accomplish various tasks or activities; a driver, either internal or external, that initiates, directs, and sustains one's ability to achieve the target goal (Abu Yahya et al, 2020). As motivation stimulates individuals to do things in a specific manner, it is important that nursing educators and healthcare leaders recognize, and use, the most appropriate drivers to motivate either the nursing student or frontline nurse in the most effective manner (Ryan & Deci, 2000). A nurse's productivity is directly related to their motivation level; a high level of motivation results in a high level of productivity, while a low level of motivation results in a low level of productivity (Ong & Noor, 2016); much as a nursing student's motivation is tied to their academic persistence. Realizing this, teachers and managers can design and utilize more effective strategies to motivate both nurses and nursing students, which in turn can lead to more opportunities for them to use their skills, expertise, and knowledge more effectively (Abu Yahya et al., 2020). Additionally, higher levels of motivation can enhance employee and student sincerity, punctuality, flexibility, and immediate response to different tasks (Khalaila, 2015). Even more so, the impact of motivation is not simply limited to performance; motivation can also decrease ethical problems, absenteeism, and stress (Abu Yahya et al., 2020). Higher levels of motivations have been found to be directly related to increased levels of physical and emotional health. This, in turn, led to an increase in creativity and commitment to organizational goals and objectives, as well as a decrease in occupational turnover (Gardner et al., 2011). As such, it is important to recognize and understand the different motivators and how they influence individuals.

Sources of Motivation

From 1924 to 1932, Elton Mayo conducted the *Hawthorne Experiments*, in which he noted that an individual could be motivated by a factor other than money or pay (Hsueh, 2002). Since that study, motivation had become a topic examined from many perspectives, notably needs based (Maslow, 1954; McClelland, 1961), intrinsic (Deci, 1975), psychosocial (Jung, 1971), self-concept-based (Brief & Aldag, 1980), developmental (Piaget, 1972), and expectancy (Vroom, 1964). While there were extensive discussions over the merits of these different perspectives, they had all fallen short of providing an integrative framework; a consolidated taxonomy that explained the sources of motivation in a way that allowed researchers to grasp a better understanding of what drives individual behaviors.

Through their work, Leonard et al. (1999) proposed an integrated model based on past research, dividing motivation into five sources: intrinsic, instrumental, internal and external self-concept-based, and goal internalization. If a person were motivated to perform certain kinds of work or engage in certain types of behavior for the satisfaction found in its completion, then *intrinsic* process motivation was taking place. In this source of motivation, the action itself acted as the incentive, as individuals enjoyed what they were doing. When an individual's actions were inspired by extrinsic tangible outcomes such as pay, promotions, benefits, etc., the driving force was *instrumental* motivation. In *external self-concept-based* motivation, the individual tended to be externally motivated and "directed by others;" they were seeking the affirmation of traits, competencies, and values they felt satisfied expectations of reference group members. They were motivated by trying to impress or make happy others in a group; first to gain acceptance, and after achieving that, to gain status. In *internal self-concept-based* motivation, the driving force for the individual was internally based and inner-directed. The individual set internal standards

of traits, competencies, and values that became the basis for the ideal self. The person was then motivated to engage in behaviors that reinforced these standards in an effort to achieve higher levels of competency. With *goal internalization*, behavior was motivated by an individual's internalization of a goal; the individual adopted attitudes and behaviors because the content was congruent with their personal value systems. An individual believed in "the cause," and as such, was motivated to work towards the goal of the collective. This nomenclature provided a much-needed framework for understanding individual behaviors and decision making (Leonard et al., 1999).

Nursing Student Motivators

Research based off this taxonomy and framework found that internal self-concept motivation was the predominant source of motivations for current nurses, followed by instrumental and goal internalization tying for second place (Abu Yahya et al., 2019). To date, however, no research had been found that had tied sources of motivation among current nursing students to their persistence in their program of study during a pandemic.

Even when faced with the reality of the high risks innate to the nursing profession, nursing students recognized the value and vital importance of nursing to fighting the COVID-19 pandemic. Confronted with the psychological pressures, the fear of contagion, the daily increase in the numbers of infected, and the nursing mortality rate, many nursing students felt they had made the right choice for their future profession. In multiple surveys, students showed a desire to return to work and clinical rotations, regardless the fear of COVID-19. Students realized that as nurses, they must be prepared for this, and similar crises. They understood they must have a unique knowledge base, abilities, and skills to respond appropriately to health care and human service needs (Lavin et al., 2017). Their views could be examined and elaborated using the

theoretical concept of professional identity, as well as humanistic nursing theories, whose roots were deeply grounded in humanism, existentialism, and phenomenology (Patterson & Zderad, 1976). Starting during their early years of study and continuing through to their clinical experiences and professional lives, nurses develop a unique identity. Yet, it was during the time in higher education that was most crucial, for that was when they developed the knowledge, skills, and abilities that made them a special breed of health care professionals (Johnson et al., 2012).

The literature showed that even when faced with stressors ranging from a heavy academic workload, to the unique challenges found in clinical rotations, such as dealing with mortality and high-pressure decision-making, nursing students rose to the challenges brought on by their distinct program of study (Bartlett et al., 2016). Recognizing the need to make a difference, nursing students, supported by strong motivational drivers, remain committed to their future occupation, even when faced with relentless emotional and physical hazards (Lavin et al., 2017). However, despite the considerable amount of literature and research on the above topics, none have been conducted to examine whether there is a relationship between nursing students' predominant source of motivation and their dedication to their field of study. Additionally, no studies have been completed to determine the relationship between a fear of COVID-19 and nursing students' intention to remain at their educational institution or continue into their future occupation as a nurse. In Chapter 3, the researcher will describe the methods used to implement this study.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine how the motivational sources and characteristics of students enrolled in a 4-year nursing program in the Hampton Roads area of Virginia related to their persistence in their field of study during the COVID-19 pandemic. The researcher attempted to explore this relationship by answering the following research questions:

1. What was the relationship between the source of motivation and nursing students' persistence in their program of study during the COVID-19 pandemic?
2. What was the relationship between demographic characteristics and nursing students' persistence in their program of study during the COVID-19 pandemic?
3. What was the relationship between the fear of COVID-19 and nursing students' persistence in their program of study during the COVID-19 pandemic?

Research Design

This was a non-experimental quantitative study to examine how motivational sources related to the fear of COVID-19 and turnover intention in 4-year nursing students. A cross-sectional survey research design was adopted in this study using two standardized scales and two researcher-designed questions.

Sample and Setting

This study was conducted in the Commonwealth of Virginia, a southeastern state in the United States of America. As of March 2021, there were 28 educational institutions offering a Baccalaureate in Nursing (BSN) degree in Virginia (Board of Nursing, n.d.), with 26 of these schools offering traditional 4-year programs and four offering accelerated BSN programs. This research study focused on students enrolled in a traditional 4-year BSN program at two public

universities in the Hampton Roads area of Virginia. Students pursuing their BSN degree at Old Dominion University and Norfolk State University were not considered “nursing students” until their junior year of study, and as such, only junior and senior-year students received an invitation to participate. To qualify for this study, participants had to (a) be currently enrolled in the traditional BSN program at Old Dominion University or Norfolk State University as either a full-time or part-time student, and (b) voluntarily consent to be in the study.

Variables

In the first research question, the dependent variables were the sources of motivation (intrinsic, instrumental, external-self-concept, internal-self-concept, and goal internalization), and how they related to both the educational institution turnover intention and future occupation turnover intention in nursing students. For the second research question, demographic characteristics (age, gender, marital status, student status, employment status, and year of study) served as the independent variables, and educational institution and future occupation turnover intention served as the dependent variables. In the third research question, the dependent variables were the fear of COVID-19, educational institution turnover intention, and future occupation turnover intention.

Instrumentation

The Motivation Sources Inventory (MSI) was used to determine nursing students’ source of motivation (Barbuto & Scholl, 1998). The MSI consisted of 30 statements answered by nursing students using a Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree). The 30 statements were divided into five categories, with six statements per category (see Appendix A). The motivation source categories were defined as follows: *intrinsic motivation* involved internal satisfaction resulting from work; *instrumental motivation* involved real gain or

reward for work; *external-self-concept motivation* originated from an internal wish to have the acceptance and satisfaction of others; *internal-self-concept motivation* came from an internal desire to fulfill personal expectations or values; and *goal internalization* originated from internal valuing of the content that is congruent with personal value (Leonard et al., 1999). A LISREL analysis of the 30 statements in the MSI resulted in an excellent goodness of fit (.92), as well as a high reliability for the subscales: Intrinsic Process ($\alpha = .92$); Instrumental ($\alpha = .83$); Self-Concept External ($\alpha = .85$); Self-Concept Internal ($\alpha = .90$); and Goal Internalization ($\alpha = .88$) (Barbuto & Scholl, 1998).

The Fear of COVID-19 Scale (FCS) was used to examine nursing students' apprehension about COVID-19 (Ahorsu et al., 2020). Using a 5-point Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree), this 7-item scale was answered by nursing students to measure their fear of COVID-19 (see Appendix B). This scale was the most widely utilized instrument to measure fear of COVID-19 and had been used by several researchers from different disciplines (Bakioglu et al., 2020; Gritsenko et al., 2020; Reznik et al., 2020). The composite score ranged from 7 to 35, with a higher score indicating a greater fear of COVID-19. Previous research reported excellent predictive validity and reliability ($\alpha = .86$) of the scale (Ahorsu et al.; Gritsenko et al.). Gaining permission to use this tool was not necessary as it was an open access instrument.

Two single-item measurements of turnover intention were used to assess future occupation and educational institution turnover intentions. Future occupation turnover intention was assessed with the item 'Given the current situation, I have considered leaving nursing as a future occupation.' Educational institution turnover intention was assessed with the item 'Given the current situation, I have considered leaving my educational institution.' Nursing students

rated each item on a Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree) (see Appendix C). The researcher deemed this scale appropriate as it was short, easy to use and understand, and had been validated in previous nursing studies (Labrague & de Los Santos, 2020b; Lavoie-Tremblay et al., 2016).

Finally, demographic characteristics, including gender, marital status, age, employment status, student status, and academic year, were gathered using a 6-item instrument (see Appendix C).

Data Collection

This study utilized a convenience sample. Data were collected using an online, self-administered questionnaire, and consent was obtained and followed (see Appendix D). Additionally, approval to survey nursing students was acquired from the respective dean or department head of the School of Nursing (SON) from the included educational institutions. The researcher provided a hyperlink for the questionnaire to the respective leadership for the participating SONs, along with a letter of invitation to participate in research, which the leadership emailed to all junior and senior-level nursing students. Additionally, SON leadership at both universities posted the questionnaire link and letter of invitation to their respective nursing discussion boards on the electronic learning management systems (LMS). Moreover, SON leadership requested instructors to mention the study and opportunities to participate to students during virtual and in-person classroom instruction periods. The researcher followed up with SON leadership at both participating universities once every two weeks over a 6-week period to request a follow-up email be sent to students to remind them of the study and encourage participation, albeit noting that participation was still voluntary. SON leadership at both universities obliged all follow-up requests to encourage participation.

To obtain the recommended sample size of 134 with a 95% confidence level, the researcher electronically distributed 205 questionnaires to potential participants. The results from the questionnaire were delivered directly, and solely, to the researcher. During the data collection period, the researcher maintained the following ethical principles: (a) participation in the study was voluntary; (b) participants were informed about the study objectives; (c) participants were informed of any risks associated with participation in the study; (d) participants were advised that filling out and submission of the questionnaire was considered consent; and (e) participants' identities would remain confidential, and anonymity would be assured by assigning each participant a code number instead of using personally identifiable information (PII).

Data Analysis

Microsoft Excel was used to organize and analyze the data that were gathered. Descriptive analysis (measures of central tendency and percentages) was generated to describe demographic characteristics of the participants (gender, age, marital status, employment status, and year of study). Descriptive analysis was also conducted to identify the most common source of motivation among nursing students. Independent *t*-tests were used to compare nursing student characteristics and Fear of Covid score, and Pearson's *r* was used to determine correlation between participants' Fear of Covid score and turnover intention (education institution and future occupation). The level of acceptable significance was set at $p < .05$.

CHAPTER IV

RESULTS

Response Rate

The results start with the demographic characteristics of the participants. 205 invitations for participation were sent out, with a respondent rate of 37 (18%). The majority of nursing students were unmarried ($n = 24$, 64.9%) and female ($n = 32$, 86.5%), between the ages of 20 and 24 (54.1%). Only a small portion of students identified as male ($n = 4$, 10.8%) or non-binary ($n = 1$, 2.7%). 16.2% ($n = 6$) of the students were between the ages of 25 and 29, 13.5% ($n = 5$) between 30 and 34, two (5.4%) were between the ages of 35 and 39, and two (5.4%) were over the age of 40; only two (5.4%) students were under the age of 20. Almost all participants were full-time students ($n = 36$, 97.3%) and a significant portion ($n = 25$, 67.6%) were not employed at the time of the study. Students at the junior-level of study ($n = 28$, 75.7%) were the majority of respondents. 27 (73%) participants attended ODU, while 10 (27%) attended NSU.

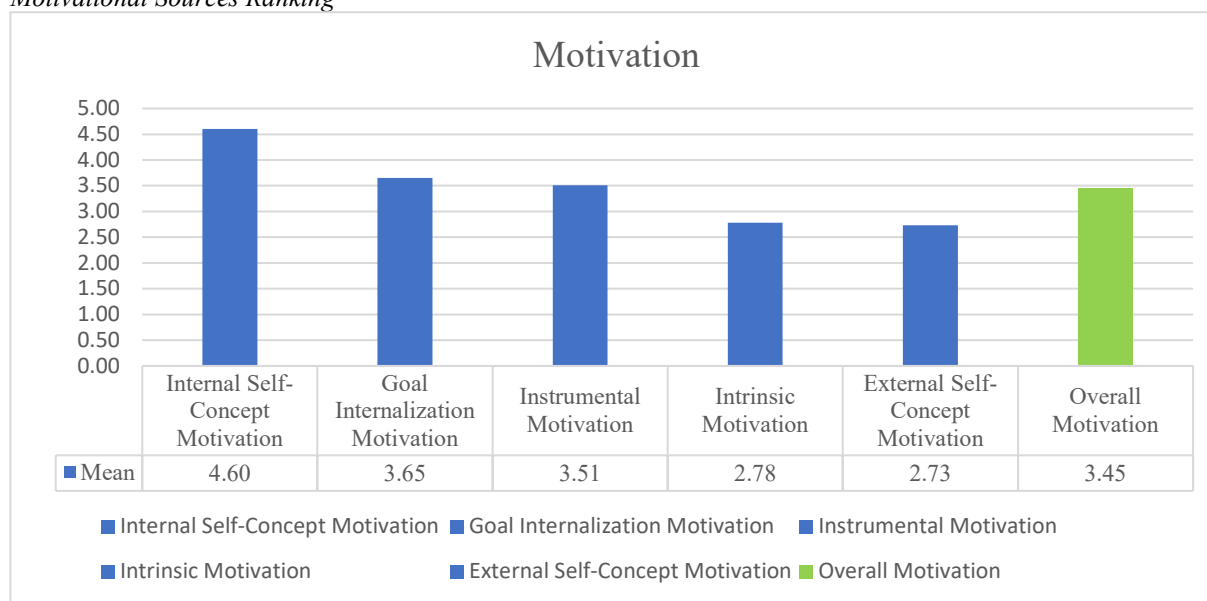
The composite mean score of the Fear of COVID scale was 14.08 (range = 7–35) with a standard deviation (*SD*) of 5.46. The composite scores for the future occupation and educational institution turnover intention measures were 1.78 (*SD* = 1.34) and 1.68 (*SD* = 1.20), respectively, indicating a low intention to leave. Table 1 provides a breakdown of mean scores by individual question on the Motivation Sources Inventory, while Figure 1 illustrates the ranking of the sources of motivation. Internal Self-Concept was the predominant source of motivation reported by students. Goal Internalization and Instrumental came in second and third, respectively, while Intrinsic came in fourth place. External Self-Concept was the least prominent source of motivation.

Table 1*Means and Standard Deviations for Motivation Sources Inventory (MSI), n = 37*

Question	<i>M</i>	<i>SD</i>
Intrinsic Motivation		
1. I only like to do things that are fun.	2.78	1.06
2. If I did not enjoy doing my job at work, I would leave.	2.78	1.16
3. I often put off work so that I can do something else that is more fun.	2.19	1.05
4. When choosing jobs I usually choose the one that sounds like the most fun.	2.86	1.00
5. The people I choose to spend my time with are the most fun to be with.	3.68	1.13
6. If choosing between two jobs, the most important criteria is 'which is more fun?'	2.41	1.09
Mean Intrinsic Motivation	2.78	0.66
Instrumental Motivation		
1. Job requirements dictate how much effort I exert during work.	2.73	1.22
2. A day's work for a day's pay.	3.46	1.14
3. I would work harder if I knew that my effort would lead to higher pay.	3.81	1.10
4. When choosing jobs I usually choose the one that pays the most.	3.51	1.07
5. At work, my favorite day of the week is 'payday.'	3.32	1.23
6. People should always keep their eyes and ears open for better job opportunities.	4.22	0.92
Mean Instrumental Motivation	3.51	0.54
External Self-Concept Motivation		
1. It is important to me that others approve of my behavior.	3.51	0.96
2. I often make decisions based on what others will think.	2.54	1.10
3. I work harder on a project if public recognition is attached to it.	2.54	1.07
4. If choosing jobs I want one that allows me to be recognized for successes.	2.76	1.21
5. Those people who make the most friends have lived the fullest lives.	2.19	1.15
6. I give my best effort when I know that it will be seen by the most influential people in an organization.	2.81	1.24
Mean External Self-Concept Motivation	2.73	0.77
Internal Self-Concept Motivation		
1. Decisions I make will reflect high standards that I have set for myself.	4.68	0.67
2. It is important that I work for a company that allows me to use my skills and talents.	4.62	0.55
3. I try to make sure that my decisions are consistent with my personal standards of behavior.	4.70	0.57
4. I consider myself a self-motivated person.	4.51	0.77
5. I like to do things which give me a sense of personal achievement.	4.70	0.62
6. I need to know that my skills and values are impacting organization's success.	4.38	0.76
Mean Internal Self-Concept Motivation	4.60	0.45
Goal Internalization Motivation		
1. I would not work for a company if I did not agree with its mission.	4.27	0.90
2. I have to believe in a cause before I will work hard at achieving its ends.	4.03	0.99
3. Unless I believe in the cause, I will not work hard.	2.78	1.08

Table 1*Means and Standard Deviations for Motivation Sources Inventory (MSI), n = 37, continued*

Question	<i>M</i>	<i>SD</i>
4. When choosing companies to work for, I look for one that supports my beliefs and values.	3.97	0.96
5. An organization's mission needs to be in agreement with my values for me to work hard.	3.27	1.17
6. If an organization is accomplishing missions that I agree with, it does not matter whether I was responsible for its success.	3.59	1.04
Mean Goal Internalization Motivation	3.65	0.67

Figure 1*Motivational Sources Ranking*

The Pearson's correlation results, as seen in Table 2, showed no correlation between Fear of COVID and educational institution turnover intention ($r = 0.110, p = 0.74$), as well as no correlation between Fear of COVID and future occupational turnover intention ($r = 0.075, p = 0.67$). Furthermore, the results showed no correlation between a participant's overall motivation

score and their educational institution turnover intention ($r = -0.072, p = 0.34$) or between overall motivation and future occupational turnover intention ($r = 0.097, p = 0.72$). Additionally, no significant relationship was found between a participant's motivational source and either their educational institutional or future occupational turnover intention. The researcher originally desired to compare the level of motivation to different demographic characteristics, but due to the low response rate, they were unable to perform valid statistical analysis.

Table 2

Correlation Matrix

Pearson's correlation		Ed. Inst. Turnover*	Fut. Occ. Turnover**
Fear of COVID	Pearson's r	0.110	0.075
	p-value	0.74	0.67
Intrinsic Motivation	Pearson's r	-0.131	-0.028
	p-value	0.22	0.43
Instrumental Motivation	Pearson's r	0.054	0.066
	p-value	0.62	0.65
External Self-Concept Motivation	Pearson's r	0.006	0.071
	p-value	0.51	0.66
Internal Self-Concept Motivation	Pearson's r	-0.076	0.037
	p-value	0.33	0.59
Goal Instrumentation Motivation	Pearson's r	-0.058	0.121
	p-value	0.37	0.76
Overall Motivation	Pearson's r	-0.072	0.097
	p-value	0.34	0.72

*Educational Institution Turnover

**Future Occupational Turnover

CHAPTER V

DISCUSSION

The aim of this study was to examine how motivational sources and demographic characteristics of students enrolled in a 4-year nursing program related to their persistence in their field of study during the COVID-19 pandemic. To the researcher's knowledge, this was the first time a study was undertaken to assess this relationship. This research was driven by three questions:

1. What was the relationship between the source of motivation and nursing students' persistence in their program of study during the COVID-19 pandemic?
2. What was the relationship between demographic characteristics and nursing students' persistence in their program of study during the COVID-19 pandemic?
3. What was the relationship between the fear of COVID-19 and nursing students' persistence in their program of study during the COVID-19 pandemic?

In investigating the first research question, while no previous studies were found measuring nursing students' motivation using the MSI, the findings from this study were consistent with previous studies that found internal self-concept as the predominant motivational source of working post-graduate nurses, with goal internalization as the second most predominant source (Abu Yahya et al., 2019; Ahmed et al., 2013). Individuals motivated by internal self-concept are usually self-directed, and they enjoy engaging in behaviors that lead to higher levels of skill, ability, and autonomy. Additionally, these individuals thrive on high environmental uncertainty, which helps build a strong decision authority (Tummers et al., 2006). It should be noted that intrinsic motivation, either working or undertaking a task for the satisfaction gained in its completion, was the second lowest contributor to nursing student

motivation. This may be due to the reality that the nursing profession requires a high level of dedication and self-sacrifice, and is less fun, attractive, and interesting compared to other jobs (Abu Yahya et al., 2019). Unlike previous studies, external-self-concept motivation was ranked the lowest source of motivation within nursing students (Abu Yahya et al., 2019; Ahmed et al., 2013). Yet, with the highest variance in overall source of motivation ($SD = .77$), this shows a wide range of feeling related to how nursing students are driven in the pursuit to please other. An important dynamic within the nursing profession is the desire to be a valued part of a healthcare team, and seeking social support is not uncommon among healthcare professionals (Gaki et al., 2013).

In this study, the researcher was unable to find a correlation between a nursing student's primary source of motivation and their intention to persist in their continuation of nursing school. Yet, in previous studies, nursing students that identified with primarily internal self-concept sources were more readily able to overcome external stressors, such as test anxiety, financial issues, or health concerns. These motivational sources were found to have a moderation effect between these stressors and academic achievement (Khalaila, 2014). That is, for students with a higher level of internal self-concept motivation, a greater level of external stressors did not decrease the student's overall achievement. This suggests that internal self-concept motivation may reduce the vulnerability of certain stressors, such as a fear of COVID-19, and thus have a moderating effect on the consideration to drop out of a program of study.

In examining the second research question, faced with a low response rate, they researcher was unable to run valid statistical analysis, and, therefore, unable to explore the relationship as desired in the second research question.

In exploring the third research question, the mean FCS score was 14.08 ($SD= 5.46$), and while no previous studies involving nursing students could be used for comparison, this score was lower than mean FCS score found in previous research with frontline nurses (19.92, $SD= 6.15$);(Labrague & de Los Santos, 2020a). As frontline nurses more frequently dealt directly with COVID-19 patients, their risk of contracting the virus was greater than nursing students partaking in a clinical rotation once or twice a week, which could explain a lower score for the students. Additionally, a majority of the supporting literature in this study was published in the early months of the COVID-19 pandemic when the pandemic was at its deadliest, and there were still many unknown facets to the disease. As data collection occurred in April and May of 2021, living with the pandemic may have become a part of everyday life, and the virus may not have been such an enigma. More so, a vaccination for the virus was also undergoing widespread distribution; these elements could possibly explain a lower FCS score for study participants. A SD of 5.46, while lower than previous studies, could possibly be contributed to a natural variance between individuals' reactions towards and personal fear of the coronavirus.

Albeit no correlation was found during this research between Fear of COVID and either educational institution or future occupational turnover intention, previous studies have linked a strong fear of COVID-19 with negative emotional states such as anxiety, depression, and stress in both non-nursing (Satici et al., 2020) and nursing professions (Labrague & de Los Santos, 2020a). These emotions directly affected nurses' job satisfaction and work performance, with a positive correlation being found between fear of COVID-19 and occupational turnover. As nursing students are only in the clinical setting for two or three days a week, they are provided a "mental break" from constant clinical stressors. Additionally, the specialties within nursing that were hardest hit by COVID-19-related stressors were the intensive care units (ICUs) and cardiac

care units (CCUs), on which nursing students traditionally only spend a total of one to two clinical rotation days (Labrague & de Los Santos, 2020a). This lack of continual exposure to COVID-19 within the clinical setting may explain why no relationship was found between fear of COVID-19 and future occupational turnover in nursing students.

Limitations

Caution should be maintained when interpreting and generalizing this study's findings in light of the limitations of the research, primarily the low response rate (18%) and small number of participants (37). Many factors contributed to the low response rate, with a key element being that data collection lasted from April 1, 2021 to May 15, 2021. These dates conflicted with final exams and pre-national licensure studies for potential participants, which added a demand on student schedules that may not have been able to have been met. As such, the results of this study may not be generalized to any population.

Conclusion and Recommendations

Nursing students often face more stressors than those faced by their non-nursing peers, yet, with the high level of internal self-concept motivation found within this study's participants, they appear to overcome stressors as they are driven by ways to improve their skills and abilities. This concept aligned with the findings of Khalaila (2014) who found that nursing students with high internal motivational drivers may feel that they can control their emotional and worry responses in stressful situations and are less susceptible to academic turnover. This is important for nursing educators to note, as more opportunities should be given to improve autonomy and challenge internal values. In addition, school administrators must understand the increased pressures nursing students face as they work on the frontline with COVID-19. Schools need to ensure nursing students have emotional and mental support services available and encourage

them to seek guidance and assistance as needed. Moreover, as nursing students also have a strong goal internalization source of motivation, clinical sites and future medical employers must be transparent with their mission and goals, highlighting how nurses play an integral part within the organization, and eliminating any negative connotations associated with the nursing profession.

The results of the study found no correlation between fear of COVID-19 and either future occupational or educational institution turnover intention, as well as no relationship between nursing students' predominant source of motivation and educational institution turnover. These results, however, failed to align with the earlier findings of Labrague and de Los Santos (2020a) who found nurses with increased fear of COVID-19 scores were more likely to suffer from occupational burnout, anxiety, and depression, ultimately leading to occupational turnover. Perhaps the reason for this was that nursing students only average one to two days a week of direct patient care during their clinical rotations, whereas professional nurses are working full-time under unrelenting stressful and hazardous conditions. Another possibility is that the small sample size in this study failed to accurately reflect the majority consensus. Faced with a low sample size, the researcher was unable to run statistical analysis on the gathered data and therefore the results of this study failed to address the second research question: "What was the relationship between demographic characteristics and nursing students' educational institution turnover intention?" These findings left room for improvement in future research on this topic. Based on the data collected from the participants of this study, the researcher would recommend the following:

1. Further research should be conducted with data collection starting at the beginning of the spring semester. Both public and private educational institutions should be included within future research.
2. Further research should be conducted using a new instrument of measurement specific to the research's needs. Instruments of measurement should use a 10-point Likert scale instead of a 5-point Likert scale, as this will provide more concise measurements and improved differentiation of results during statistical analysis.
3. Additional qualitative research should be conducted using interview questions or focus group to identify common variables related to turnover intention in nursing students.
4. Using the motivational sources results found in this study, nursing educators should develop and implement intervention programs designed to improve learning outcomes and decrease dropout rates among nursing students.
5. Clinical facilities and nursing educators should provide nursing students with appropriate emotional and academic support as needed, focusing on multidimensional motivational enhancement programs.

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APPENDIX A: Motivation Sources Inventory

Motivation Sources Inventory 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree)

Please select the number that best represents how you feel about each statement.

Section 1 - Intrinsic Process

1. I only like to do things that are fun.
2. If I did not enjoy doing my job at work, I would leave.
3. I often put off work so that I can do something else that is more fun.
4. When choosing jobs I usually choose the one that sounds like the most fun.
5. The people I choose to spend my time with are the most fun to be with.
6. If choosing between two jobs, the most important criteria is 'which is more fun?'

Section 2 - Instrumental

7. Job requirements dictate how much effort I exert during work.
8. A day's work for a day's pay.
9. I would work harder if I knew that my effort would lead to higher pay.
10. When choosing jobs I usually choose the one that pays the most.
11. At work, my favorite day of the week is 'payday.'
12. People should always keep their eyes and ears open for better job opportunities.

Section 3 - External Self-concept

13. It is important to me that others approve of my behavior.
14. I often make decisions based on what others will think.
15. I work harder on a project if public recognition is attached to it.
16. If choosing jobs I want one that allows me to be recognized for successes.
17. Those people who make the most friends have lived the fullest lives.

18. I give my best effort when I know that it will be seen by the most influential people in an organization.

Section 4 - Internal Self-concept

19. Decisions I make will reflect high standards that I have set for myself.

20. It is important that I work for a company that allows me to use my skills and talents.

21. I try to make sure that my decisions are consistent with my personal standards of behavior.

22. I consider myself a self-motivated person.

23. I like to do things which give me a sense of personal achievement.

24. I need to know that my skills and values are impacting organization's success.

Section 5 - Goal Internalization

25. I would not work for a company if I did not agree with its mission.

26. I have to believe in a cause before I will work hard at achieving its ends.

27. Unless I believe in the cause, I will not work hard.

28. When choosing companies to work for, I look for one that supports my beliefs and values.

29. An organization's mission needs to be in agreement with my values for me to work hard.

30. If an organization is accomplishing missions that I agree with, it does not matter whether I was responsible for its success.

APPENDIX B: Fear of COVID Scale

Fear of Coronavirus-19 Scale – 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree)

Please select the number that best represents how you feel about each statement.

1. I am most afraid of coronavirus-19.
2. It makes me uncomfortable to think about coronavirus-19.
3. My hands become clammy when I think about coronavirus-19.
4. I am afraid of losing my life because of coronavirus-19.
5. When watching news and stories about coronavirus-19 on social media, I become nervous or anxious.
6. I cannot sleep because I am worrying about getting coronavirus-19.
7. My heart races or palpitates when I think about getting coronavirus-19.

APPENDIX C: Turnover Intention and Demographic Questions

Turnover Intention – 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree)

Please select the number that best represents how you feel about each statement.

1. Given the current situation, I have considered leaving nursing as a future occupation.
2. Given the current situation, I have considered leaving my educational institution.

Demographics

3. What is your gender?
 - a. Male
 - b. Female
 - c. Non-Binary
 - d. Prefer not to say
4. What is your marital status?
 - a. Married
 - b. Unmarried
 - c. Divorced
 - d. Separated
 - e. Prefer not to say
5. What is your age?:
 - a. Under 20
 - b. 20-24
 - c. 25-29
 - d. 30-34

- e. 35-39
 - f. 40 and over
 - g. Prefer not to say
6. What is your student status:
- a. Full-time
 - b. Part-time
 - c. Prefer not to say
7. What is your employment status?
- a. Full-time
 - b. Part-time
 - c. Not currently employed
 - d. Prefer not to say
8. What year are you currently in your program of study?
- a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

APPENDIX D: Institutional Review Board Approval Letter



OFFICE OF THE VICE PRESIDENT FOR RESEARCH



Physical Address

4111 Monarch Way, Suite 203
Norfolk, Virginia 23508

Mailing Address

Office of Research
1 Old Dominion University
Norfolk, Virginia 23529
Phone(757) 683-3460
Fax(757) 683-5902

DATE: March 30, 2021

TO: Michael Kosloski, PhD

FROM: Old Dominion University Education Human Subjects Review Committee

PROJECT TITLE: [1734336-1] Keeping the course: Nursing student motivation during a pandemic.

REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: March 30, 2021

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this project. The Old Dominion University Education Human Subjects Review Committee has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Laura Chezan at (757) 683-7055 or lchezan@odu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Old Dominion University Education Human Subjects Review Committee's records.

APPENDIX E: Informed Consent Document

INFORMED CONSENT DOCUMENT

OLD DOMINION UNIVERSITY

PROJECT TITLE: Keeping the course: Nursing student motivation during a pandemic.

INTRODUCTION

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES. The title of this research project is Keeping the course: Nursing student motivation during a pandemic. The research will be conducted online via a questionnaire provided on Google Forms.

RESEARCHERS

Principal Investigator: Dr. Michael Kosloski, PhD, STEMPS Department, Old Dominion University

Investigator: Travis Storey, Graduate Student, Occupational and Technical Studies, Old Dominion University

DESCRIPTION OF RESEARCH STUDY

Several studies have been conducted looking into the correlation of the fear of coronavirus (COVID-19) and its relation to frontline nurses' psychological distress, anxiety, and occupational turnover, as well as studies that correlated nurses' motivation and their demographics. None of them have explained the relationship between a nursing student's source of motivation and their persistence in nursing school during the COVID-19 pandemic. Therefore, the purpose of this study is to examine how the motivational sources and characteristics of students enrolled in a four-year nursing program in the Hampton Roads area of Virginia relates to their persistence in their field of study during the COVID-19 pandemic.

If you decide to participate, then you will join a study involving research on how nursing students' motivation, fear of COVID-19, and personal demographics relate to their persistence in nursing school. You will be asked to provide insight into your primary sources of motivation, your fear of COVID-19, and your demographic information through the completion of a 45-item questionnaire. If you say YES, then your participation will last for approximately 10 to 15 minutes on an online questionnaire. Approximately 485 nursing students enrolled in a traditional 4-year Baccalaureate of Nursing program will be participating in this study.

EXCLUSIONARY CRITERIA

You must be a full-time or part-time student currently enrolled in a 4-year Bachelorette of Nursing program at Old Dominion University, Norfolk State University, or Hampton University to participate in this study.

RISKS AND BENEFITS

RISKS: If you decide to participate in this study, then you may face a risk of losing time that could be spent in a personal or professional manner or be subjected to undesirable feelings or thoughts of anxiety related to COVID-19. The researcher tried to reduce these risks by designing a questionnaire that limits the amount of time needed for a subject to participate. And, as with any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS: There are no foreseeable benefits to the subject by participating in this study.

COSTS AND PAYMENTS

The researchers are unable to give you any payment for participating in this study. However, if you would like to participate, the researchers are giving away five \$10.00 Starbucks gift cards. Winners will be selected at random from those who participate.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will give it to you.

CONFIDENTIALITY

The researchers will take reasonable steps to keep private information, such as questionnaire responses and email addresses, confidential. The researcher will remove identifiers from all identifiable private information collected, assigning subjects participant numbers instead of using personal identifiable information. The researcher will keep all data collected on an external hard drive in a locked safe for 5 years, after which, all data collected will be destroyed. The subject's information will not be used or distributed for future research studies even if identifiers are removed. The results of this study may be used in reports, presentations, and publications; but the researcher will not identify you. Of course, your records may be subpoenaed by court order or inspected by government bodies with oversight authority.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study -- at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled.

COMPENSATION FOR ILLNESS AND INJURY

If you say YES, then your consent in this document does not waive any of your legal rights. However, in the event of any physical or mental harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Michael Kosloski at 757-683-3314, Dr. Laura Chezan, the current IRB chair, at 757-683-7055 at Old Dominion University, or the Old Dominion University Office of Research at 757-683-3460 who will be glad to review the matter with you.

VOLUNTARY CONSENT

By typing your name in the box below, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

Researcher: Travis Storey (757-353-5696 or tstor003@odu.edu)

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Laura Chezan, the current IRB chair, at 757-683-7055, or the Old Dominion University Office of Research, at 757-683-3460.

And importantly, typing your name in the box below and submitting this questionnaire, you are telling the researcher YES, that you agree to participate in this study. Please keep a copy of the email for your records.

VITA

Travis William Storey

Education

- Bachelor of Science (May 2008) in Nursing, University of South Carolina, Columbia, South Carolina.

Professional Experience

- Officer in Charge, Naval Health Clinic Washington Naval Yard, Naval Health Clinic Quantico, Quantico, Virginia, September 2018 – July 2019.
- Assistant Officer in Charge, Bradley Branch Health Clinic, Naval Health Clinic Quantico, Quantico, Virginia, May 2016 – August 2018.
- Deputy Group Surgeon, 2D Marine Logistics Group, Camp Lejeune, North Carolina, September 2015 – April 2016.
- Shock Trauma Platoon Nurse, Combat Logistics Battalion 24, Camp Lejeune, North Carolina, May 2014 – August 2015.
- Division Officer, Orthopedics Clinic, Naval Hospital Pensacola, Pensacola, Florida December 2012 – April 2014.
- Forward Resuscitative Surgical Suite Nurse, Combined Joint Special Operations Task Force – Afghanistan, Kunduz, Afghanistan, March 2012 – November 2012.
- Post Anesthesia Care Unit Nurse, Naval Hospital Pensacola, Pensacola, Florida, August 2011 – February 2012.
- Charge Nurse, Post Anesthesia Care Unit and Internal Medicine Ward, Naval Medical Center Portsmouth, Portsmouth, Virginia, May 2008 – July 2011.