Student Navigator Program: Retention of First Semester Nursing Students

by

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ABSTRACT

Nursing school can be challenging for undergraduate students, largely because they do not know what to expect in terms of the demands of the rigorous academic program. Students who enter the program with unrealistic expectations of the demands, such as underestimated time needed for studying for exams or preparing for clinical and class time, as well as the emotional toll of time away from family and friends are often challenged with being adequately prepared for the day-to-day experience of nursing school. Once students have been in the program a few semesters, they begin to get the flow of the expectation as well as an understanding of how to manage their time. Unfortunately, if their adjustment period is not quick enough, they can academically or voluntarily withdraw due to the pressures of the demanding curriculum. In order to combat this phenomenon and give students a perspective that can assist them in their adjustment period, a Student Navigator Program (SNP) was implemented at a local community college. Data was collected from experimental and control groups using a mixed methods research design - comparing final grade percentage, performance on a standardized exam, and use of support services. The quantitative data suggest there is no statistical significance in participation in the SNP with the exception of a few select cohorts. The qualitative data suggest the SNP program is helpful at the beginning of the first semester of nursing school. Taken together, the data suggest the SNP can be helpful in the beginning of the semester for willing participants to assist with managing the unknown. Data from this study guides nursing programs as they aim to retain current nursing students through the first semester and progress through the program.

DEDICATION

This work is dedicated to my mom, Eva Marin. You unwavering belief in me has led to all moments in my life, especially this one.

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Special acknowledgments the Phoenix College Nursing department faculty, staff and most importantly the students. Thank you for letting me into your classrooms to further my knowledge of how to best support our nursing program.

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PREFACE

The success of Phoenix College nursing students is my primary goal as the administrator of Phoenix College's nursing program. I am the elected leader of the department, serving as the Department Chair for 13 faculty, three staff and over 280 nursing students. I work with both faculty and students on a regular basis to evaluate our program and determine how we can better serve the students of the program as well as meet community interests and needs in the nursing profession. I am actively engaged with all aspects of the program and the students are very familiar with my role in program improvement. This research project is an extension of the already established goal to improve learning and overall student success at PC Nursing.

Chapter 1

CONTEXT & PROBLEM OF PRACTICE

With a growing and aging population, there is an increasing need for Registered Nurses (RNs) in acute, sub-acute, long term and rehabilitation healthcare settings. According to the Bureau of Labor Statistics, there will be a need to replace 525,000 RNs due to occupation growth and impending retirements of the Baby Boomer generation by the year 2022 (American Association of Colleges of Nursing, 2014). To address this growing need, nursing programs across the country are increasingly providing education at the associate and baccalaureate degree levels, where entry-level registered nurses are prepared.

National Context

Although nursing programs are anxious to meet the need for more RNs, they experience challenges nation-wide. For example, 25% of applicants who qualified for nursing programs were denied placement in 2014 (National League for Nursing, 2014). The spaces that were available were consequently valuable and coveted by the select individuals who were lucky enough to secure that space. Unfortunately, not all students who begin are able to progress to program completion. Although nursing programs and the students they enroll work hard to keep nursing students in nursing programs, data for nursing students nationally reveal an 80% retention rate (National League for Nursing, 2007). Thus, nursing programs and students must adjust practices to retain students through program completion to ensure that those admitted students complete their program of study, become licensed, and work to fill the national shortage (Herrera & Blair, 2015).

A significant portion of the nursing workforce is trained at the associate degree level in community college systems. Approximately 60 % of the nation's currently practicing registered nurses were educated via associate degree programs, according to the American Association of Community Colleges (Hoover, 2009). According to the National League for Nursing (2016), 70% of enrolled nursing students are educated at the associate degree level. Community college nursing education programs are uniquely positioned to grow the nursing workforce at an exponential rate over university partners. And with this comes the opportunity to identify effective ways to retain nursing students in a rigorous academic program at the community college level.

Local Context

A large community college system in the Southwest is answering the call for more nursing programs to produce nursing graduates. The Maricopa County Community Colleges District (MCCCD) serves the 4.1 million residents of Maricopa County in Arizona with ten community colleges, two skills centers and numerous education centers, making it one of the largest community college systems in the country (United States Census Bureau, 2016). The system spans the wide breadth of Maricopa County, offering over 900 occupational programs, over 30 academic certificates and nine academic associate degrees (MCCCD, n.d). It is the largest provider for job training in Arizona serving over 200,000 students each year (MCCCD, n.d.). Specifically, MCCCD has eight individually accredited nursing programs enrolling over 1000 undergraduate nursing students annually. Phoenix College Nursing is one of these associate degree nursing programs and the focus of this action research project.

Phoenix College. Located in the heart of Phoenix, Arizona, Phoenix College (PC) is an inner-city community college and is the oldest college of the MCCCD. Established in 1920, PC has a long history of providing quality educational programs to the diverse residents of Maricopa County, mainly the downtown Phoenix area. PC is a comprehensive community college, offering a wide variety of academic associate degree programs, career and technical training, athletic programs and community general education (Phoenix College, n.d.). PC serves a vastly diverse student population with over 63% of students served of ethnic minority and a significant number of students being first generation college students (MCCCD, n.d). Forty-five percent of PC's student body is of Hispanic decent and PC is designated a Hispanic Serving Institution (HSI) (Phoenix College, 2016). Approximately 25% of the students served are considered full-time, while the remaining student population is either three quarter time, half time or less than half time in attendance (Phoenix College, 2016).

Phoenix College Nursing. The Phoenix College Nursing Department, hereafter referred to as PC Nursing, is one of the oldest nursing programs in Arizona (Phoenix College, n.d.). Each year, the PC Nursing program enrolls over 280 nursing students and approximately 120 Associate of Applied Science, Nursing graduates exit the program and are eligible candidates to sit for the National Council Licensure Examination for Registered Nurses (NCLEX-RN©). Upon successful licensure, these studens are able to enter the profession of nursing. The program has a long-standing history of offering quality nursing education and being dedicated to student success, with a 91.2% NCLEX-RN© pass rate for first time test takers, and an 89.4% employment rate for graduates (MaricopaNursing, 2016).

In any given academic year, 80 new cohort students are admitted every fall and spring semester. The demographics of the program student population is diverse with 83% of the students being female, 30 to 39 years being the average age range, and 64% of the students being of minority descent (Phoenix College, 2016). The nursing program is considered a full-time academic program requiring students to be in class, clinical, lab or simulation experiences anywhere from 20-30 hours per week.

Students are enrolled in block cohorts. The cohorts are named 'blocks' and progress in number from one (1) to four (4). Blocks one (B1) and Block two (B2) students are enrolled in their first-year of nursing school and Block three (B3) and Block four (B4) students are second-year students. Each cohort is enrolled in 9-credit nursing classes each semester, which are comprised of didactic, clinical, laboratory and simulation activities. In any given week of the semester, students attend hours of training both onsite in learning and simulation labs as well as training in local community healthcare agencies. On average, students are with their cohort members and faculty 20-30 hours per week, and this does not include study or preparation time required for course activities.

PC Nursing defines program success as progression from one course (block) to the next, completion of an Associate in Applied Science, Nursing degree, followed by successful completion of the NCLEX-RN© examination. There are many factors that influence the success of nursing students. Academic rigor, support from faculty, clinical learning opportunities, a cohort-based program, intrinsic and extrinsic motivation, and environmental factors all influence the success of students in a complex program.

Previous Research Cycles

Cycle Zero. The investigation into nursing student retention at PC Nursing student began with the desire to understand exactly what PC Nursing students were experiencing. Research began with an exploratory approach to understand the challenges students face. This first phase of research, Cycle Zero, a qualitative design was selected in order to more fully understand the students' perceptions of barriers to academic success, specifically focus group interviews. The participants were all students enrolled in the PC Nursing program. Institutional Review Board (IRB) approval was obtained from both Arizona State University and Phoenix College. A recruitment email was sent out through the learning management system, Canvas and all interested participants responded to the solicitation via email. Five participants responded and participated in the first cycle of research.

All five participants were in B3, the third semester, of the PC Nursing program. Four of the participants were female and one participant was male. One participant was repeating the third semester of the program due to academic failure. Three participants were Hispanic and two were White. All participants signed the consent form and agreed to be audio recorded for the focus group interviews. Questions asked of the focus group participants included "*How would you describe your academic (learning) experience at Phoenix College Nursing?"* and "*What factors do you think lead to academic success the Phoenix College nursing program?"* A copy of the interview protocol can be found in Appendix A.

The themes from focus group interviews revealed that nursing school is challenging for students entering the program, largely because students do not know what to expect in terms of the demands of the program. The data collected suggested that the

community at PC Nursing is an important part of academic success for students enrolled in the program. Students verbalize the need for connections to their peers as they attempt to navigate a program that is unlike any of their prior schooling experiences.

Cycle One. In Cycle Zero, the focus was to understand student perceptions of academic success and why academic success is difficult in a nursing program. In evaluating perceived barriers to academic success, an intervention was developed based the need for peer support and assistance navigating the PC Nursing program. Cycle One research was then to evaluate the effectiveness of the intervention developed, a Student Navigator Program (SNP).

The participants of the Cycle One study were B1 and B3 PC Nursing students. The B3 nursing students have completed their first year of the nursing program. Block1 nursing students are new to the PC Nursing program and at the time of the research, were only two months into their first semester. The SNP intervention involved pairing up first year students with B3 nursing students. It is important to note that none of the participants of Cycle One participated in Cycle Zero of this research project.

Cycle one research obtained IRB from both Arizona State University and Phoenix College. A recruitment email was sent out through Canvas and all interested participants responded to the solicitation via email. Twelve participants responded and participated in the second cycle of research.

The SNP intervention included the pairing of a B1 student with a B3 student. The process of pairing was based on time of response. As soon as a B1 student responded with participation request, that student was paired the next B3 student that responded with a participation request. Each dyad was emailed the contact information of their

partner. Included in the introduction email was a one-page document with instructions for how to begin the SNP. The dyads proceeded with their semester, making contact in their preferred methods and meeting when it was convenient for their schedules. The dyads had classes on the same days that semester, so it made it convenient to meet before or after class.

All 12 participants in Cycle One participated in focus group interviews. All participants were female and six of the participants were in Block 1 while the other six were in Block 3. Three participants were Hispanic, two were Black and seven were White. All participants signed the consent form and agreed to be audio recorded for the focus group interviews. Questions asked of the focus group participants included "*How would you describe your experience in the Student Navigator Program at Phoenix College Nursing?"* and "*How would you describe your preparedness for nursing school when you entered the nursing program at the beginning of the semester?"* and *"How would you describe your preparedness for the next few semesters of nursing school now, after participation in the Student Navigator Program?"* A copy of the interview protocol can be found in Appendix B.

The themes from the focus group interviews revealed that the SNP positively impacted students' adjustment to nursing school. The first semester students reported they appreciated having someone to ask for help who was not a faculty member and felt that having a peer assigned to them for this program gave them guidance when the stress was high, and they did not necessarily know what to do. The third semester students reported a similar positive experience. They stated they remembered to go back to the basics in order to be successful; the experience was helpful for them to institute some of

the strategies they were advocating as beneficial to first semester students. Both first and third semester students verbalized the need for the SNP to be continued with first and third semester students.

Problem of Practice

The PC Nursing program is demanding and intense for incoming students. Some students wait years to be accepted into a nursing program to fulfill their goal of becoming a nurse. The average wait time for a PC student who applies to the program is anywhere from four to six semesters. Every semester, 80 new nursing students are admitted to the program and when students are admitted, they are excited and eager to begin their studies.

Unfortunately, not all students complete the first semester and progress in the program and graduate from the four-semester program. PC Nursing tracks six semester graduation rates of those admitted and the last three rates are 62%, 76% and 69% for 2014, 2015 and 2016 respectively. That means of those entering the program for the most recent graduates, only 69% graduate the four-semester program in six semesters (MaricopaNursing, 2017).

PC Nursing also tracks first semester attrition of students entering fall and spring cohorts. For the past three semesters, the attrition rates have fluctuated. For the fall 2016, spring 2017 and fall 2017 semesters the attrition rate was 30%, 10% and 22% respectively (MaricopaNusing, 2017). While this is in alignment with national attrition rates, PC Nursing has identified there are variations in the types of failures. According to program data, students enrolled in the program fail academically or students withdraw voluntarily in their first semester of nursing school. *Academic failure* is defined as not

passing a course with a C or better and *voluntary withdraw* is defined as withdrawing from the program in the middle of the semester, for academic or personal reasons. The voluntary withdraws have been 7%, 5% and 2% respectively and academic failures have been 23%, 5% and 20% respectively (MaricopaNursing, 2017).

Students who enter the program with unrealistic expectations of the demands, such as underestimating the time needed for studying for exams or preparing for clinical and class time, as well as the emotional toll of time away from family and friends, are often challenged with being adequately prepared for the day-to-day experience of nursing school. Once students have been in the program a few semesters, they begin to get the flow of the expectation as well as an understanding of how to manage their time. Unfortunately, if their adjustment period is not quick enough, they can academically fail or voluntarily withdraw due to the pressures of the demanding curriculum.

Role of the Researcher

By default, the students viewed the researcher as an outsider, given the nature of the role. In actuality, the researcher was an insider collaborating with other insiders (Herr & Anderson, 2015). While not a full participant in the study, as Department Chair the researcher was in a unique insider position, observing current nursing students and how they adjusted to nursing school.

Significance of the Study

To assist PC Nursing students in adjustment to nursing school and increase the success and retention rates, the navigator program was developed. Results from the first two cycles of research suggest the SNP, which involved pairing a senior level student

with an incoming first year student, will assist with adjustment and acculturation into PC's nursing program.

A new concept for PC Nursing, the SNP created a welcoming entrance to nursing school. Past practice had been for students to navigate the program and the new and unique demands of the program alone. Students traditionally received an orientation, an introduction to the program, the faculty and the facilities, and then they were left to their own devices to progress from one semester to the next. The SNP was a shift from this process with the introduction of a peer navigator early in the program, providing an assisted entry into the nursing program with a peer partner as a dedicated resource. It is important to note that even before the SNP was implemented, the culture of the PC Nursing program was one of support and filled with helpful resources. Faculty and support staff firmly believed in supporting the student, being available to assist where needed and genuinely understanding the complex lives of today's student.

It was speculated that allowing the new nursing student to establish peer connections early and get assistance navigating the nursing program would lead to academic success and progression to the second semester of the program. This speculation was evaluated by looking at student progression in the program, performance on a standardized exam, use of support services and overall perception of participants in the program.

Research Questions

This research project was guided by four research questions. The four guiding research questions, null hypothesis and sub null hypothesis are outlined below and threaded throughout remaining chapters.

[RQ1] To what extent did participation in a SNP influence final grade percentage in first semester nursing students?

H_0: There is no difference in final grades of between students who participate in the SNP and students who do not participate in the SNP.

H_1: There is no difference in final grades of BNFP students who participate in the SNP and traditional students who participate in the SNP.

H_2: There is no difference in final grades of CEP students who participate in the SNP and traditional students who participate in the SNP.

[RQ2] To what extent does participation in a SNP influence performance on a standardized examination, HESI™?

H_3: There is no difference in student performance on the HESI™ examination between students who participate in the SNP and students who do not participate in the SNP.

H_4: There is no difference in HESI™ scores of BNFP students who participate in the SNP and traditional students who participate in the SNP.

H_5: There is no difference in HESI™ scores of CEP students who participate in the SNP and traditional students who participate in the SNP.

[RQ3] To what extent does student participation in the SNP influence the use of student support services at PC Nursing?

H_6: There is no difference in use of student services between students who participate in the SNP and students who do not participate in the SNP.

H_7: There is no difference in use of student services between BNFP students who participate in the SNP and students who do not participate in the SNP.

H_8: There is no difference in use of student services between CEP students who participate in the SNP and students who do not participate in the SNP.

[RQ4] What is the student perception of the SNP?

The primary focus of this mixed methods research study was to measure nursing student participation in a Student Navigator Program. Data from this study will guide nursing programs as they aim to retain current nursing students through their first semester.

Chapter 2

THEORETICAL PERSPECTIVES

Nursing student attrition research is ongoing in the field of nursing education. Researchers seek to understand what factors present barriers to nursing student success as well as what factors contribute to nursing student success. The intensive investigation into factors that affect nursing students illustrate there are high levels of anxiety and stress among nursing students, particularly in beginning nursing students (McGreggor, 2004; Giordana & Wedin, 2010). Nursing programs are challenged to find innovative and effective ways of reducing anxiety and stress in beginning nursing students to achieve the overarching goal of program completion and ultimate licensure. Furthermore, research has shown the reduction of stress and anxiety has been linked to increased student success in nursing programs (Gwele & Uys, 1998; Jones & Johnston, 1997; Marker, 2001).

Nursing students are faced with unique challenges as they begin a nursing program and early intervention with students in the first semester of the program is likely to increase success in nursing programs (Jeffreys, 2007; Stull, 2008). To more fully understand the challenges of undergraduate nursing students, a deep understanding of the Nursing Universal Retention and Success (NURS) model developed by Dr. Marianne Jeffreys (2013) is suggested.

Model of Nursing Universal Retention and Success

The NURS model was developed to better understand the undergraduate nursing student and the environmental factors that contribute to or hinder student success. Jeffreys (2004) developed an early model of nursing retention and success, the Nursing

Undergraduate Retention and Success model. She later expanded the model to be more broadly encompassing of the factors that influence nursing students worldwide, thus now referred to as Nursing Universal Retention and Success (NURS) (Jeffreys, 2013).

The original model is based off the acknowledgment that the retention of nursing students is a constellation of complex factors; attrition results from the interaction of these complex factors instead of one single cause (Jeffreys, 2007). Environmental factors such as financial status, family responsibility, living arrangements, financial and emotional support, employment hours, and transportation all influence academic success (Jeffreys, 2007). The model proposed that since ongoing retention of nursing students is based on the interaction of multiple factors, the social integration of nursing students into the profession could enhance a students' ability to cope with the environmental factors. Faculty advisement and helpfulness, encouragement by peers, peer-mentoring, and enrichment programs are at the center of success for undergraduate nursing students (Jeffreys, 2007).

More recently, Jeffreys (2013) expanded the model from an undergraduate emphasis to one that is globally applicable for the contemporary nursing student at all levels of nursing education. The Nursing Universal Retention and Success model is an organizing framework for which nursing educators can examine the multi-dimensional factors that influence student nurse retention by identifying at-risk students and by guiding teaching and learning strategies in both undergraduate and graduate degree programs (Jeffreys, 2015).

According to the NURS model, retention decisions of nursing programs and persistence of nursing students are based on the interaction of six variables. The first

variable is student profile characteristics, which includes students' age, gender, culture, ethnicity and first-generation status. The second variable is student affective factors, such as self-confidence in learning abilities, cultural values, and beliefs. The third variable includes academic factors such as study skills, attendance, and academic services. Environmental factors, defined as anything external to the academic process as proposed in the 2004 NURS model, comprise the fourth variable. Surrounding factors that are outside of the educational arena, such as world, national and local events, comprise the fifth variable. Finally, the sixth variable is professional integration into the educational environment and into the nursing profession (Jeffreys, 2015).

Jeffreys (2007; 2013) offers an operational framework from which to view the unique challenges posed to nursing students and was the basis for understanding the community college nursing student population specifically described in this study. The next section reviews research using the NURS model as a means of illustrating the challenges for nursing students and the need for an intervention that addresses some of these challenges.

Research Using NURS Model

Schrum (2014) conducted a study of over 168 undergraduate nursing students in an associate degree nursing program in the state of Maryland using the NURS model as the framework for a descriptive correlational study. Through the use of a retention specialist, nursing student retention was examined through the lens of personal, academic and environmental factors. The retention specialist was used to provide tutoring and mentoring services to students enrolled in an effort to retain enrolled nursing students. Focusing on the non-traditional student, Schrum (2014) sought to identify if hiring a

retention specialist led to improved student success outcomes, increased program retention rates and increased graduation rates. Analysis of the quantitative study revealed a higher proportion of students who utilized the retention specialist for tutoring, supplemental instruction and mentoring were retained in the nursing program (Schrum, 2014). Students who used a retention specialist showed statistical differences from those who did not in GPA, course completion and retention in the program. Shrum did not find statistical differences in environmental factors and the use of a retention specialist, however. Students who experienced environmental challenges utilized the retention specialist similarly to those who did not (Schrum, 2014).

Fontaine (2014) used NURS to research a Nevada community college struggling with low retention rates in an associate degree nursing program. The Northern Nevada Nursing Retention Program (NNNRP) was based on Jeffreys' Nursing Undergraduate Retention and Success (NURS) 2004 model. Participants (n=137) attended a comprehensive orientation, were assigned to a learning community, competed an individualized academic plan with an academic advisor, were paired with a community nurse for mentoring, participated in peer tutoring (novice and senior nursing students), and participated in career counseling. Program evaluations examined student satisfaction with individual services and the program as a whole and measured the correlation between NNNRP participation and degree completion, demographic variables and program degree completion (Fontaine, 2014). The NNNRP increased the six-semester retention rate from 61% to 71%. Overall, students were satisfied with the program services, rating it 3.02 on a 4-point Likert scale. Fontaine's study supported findings from

Jefferys' NURS model, that multiple, intertwined factors, not one single factor, impact student retention (Fontaine, 2014).

Strong (2014) identified restrictive and supportive factors contributing to persistence for nurses who return to school to further their academic and nursing leadership knowledge. The perceptions of nurses enrolled in a Registered Nurse (RN) to Bachelor of Science in Nursing (BSN) program offered by a community-based hospital were compared with nurses not enrolled. Environmental factors, personal academic factors, and friend support factors were statistically higher among enrolled nurses versus un-enrolled nurses. Strong (2014) suggested that development of curriculum aimed at addressing these factors was warranted and should be considered by nursing programs (Strong, 2014).

Dries (2014) examined nursing retention in an Associate Degree Nursing (ADN) program using Tinto's Longitudinal Model of Departure from Institutions of Higher Education, Jeffreys' model of Nurse Undergraduate Retention and Success, and findings from the Center for Community College Survey of Student Engagement (CCCSSE). The research conducted focused on students readmitted to an undergraduate program, looking at perceptions of those reentering as well as their academic records. The results of the survey identified five variables: environmental factors, institutional interactions, integration factors, college academic facilities, and support from family and friend (Dries, 2014). In the records review, Dries found a medium positive correlation in the grade of the first semester fundamentals course and program completion. Dries found a medium positive correlation in the grade of the first semester fundamentals course and program completion and that external environmental factors impacted persistence, even among

non-traditional students who return to complete the program after being academically dismissed.

Implications for this project

The six variables identified in the Nurse Universal Retention and Success Model (2013), posit the lives of nursing students are complex and complicated over and above the challenges the students face in the nursing program. This model provides a strong conceptual framework for viewing the complexity of nursing student life and how it can impact the retention of non-traditional students (Dries, 2014; Fontaine, 2014; Strong, 2014; Schrum, 2014). In order to understand undergraduate nursing students and their utilization of available retention services provided by a nursing program, Deci and Ryan's Self Determination Theory (1985; 2000) serves as the lens from which to view the PC Nursing student retention rate.

Self Determination Theory

Deci and Ryan's Self Determination Theory (SDT) is widely used in social science research to explain motivational factors in completing a task. SDT was developed in 1985 by Edward L. Deci and Richard M. Ryan and has been refined by the researchers and other scholars as the evolution of understanding human motivation has emerged. It provides a theoretical framework for understanding why students are vulnerable to forces impacting student retention (Weibell, 2011).

SDT focuses on the degree to which self-motivation and consequently self-determination influence behavior. There are three types of self-determined behaviors, internally motivated and extrinsically motivated behaviors, regulated by internalizations

and amotivation (Deci & Ryan, 2000). Figure 1 depicts the model of Self Determination Theory.

Amotivation. On the far-left side of the SDT continuum is amotivation. Amotivation is defined as the state of lacking intention to act (Deci & Ryan, 2000). According to Ryan (1995) amotivation is caused from not valuing an activity or not feeling competent enough to do it successfully. Absence of motivation or the lack of intentionality can also be caused by lack of control or incompetence (Guay, Ratelle, Roy & Litalien, 2010).

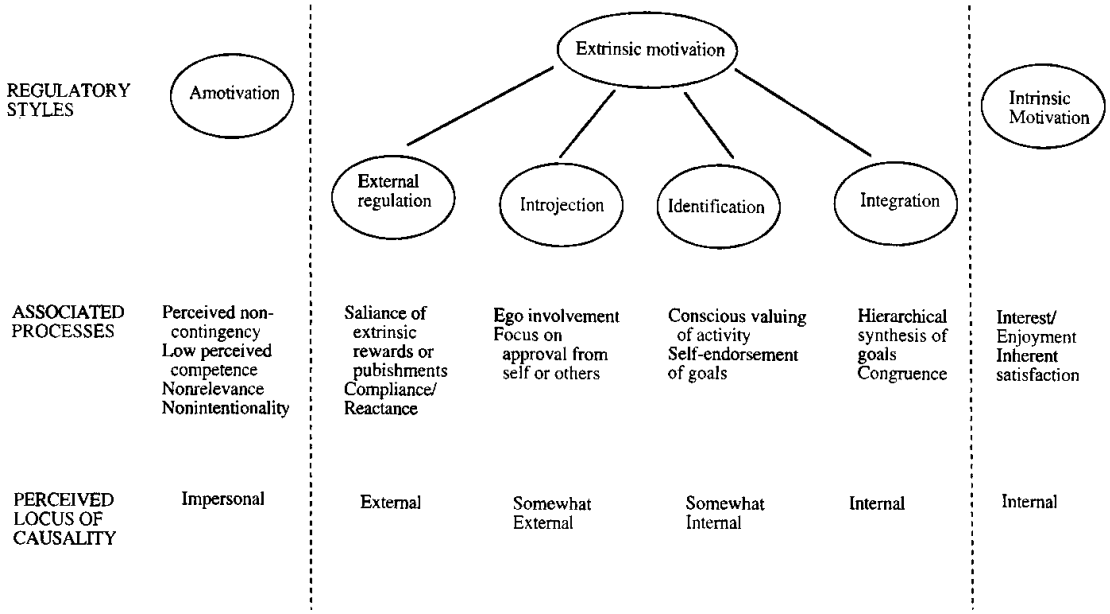

Figure 1. A Taxonomy of Human Motivation (Deci & Ryan, 2000)

Extrinsic Motivation. Deci and Ryan (2000) define extrinsic motivation as doing an activity in order to obtain a separable outcome. In other words, completing a task (such as homework or studying) to avoid a potential negative outcome or consequence (such as a bad grade or punishment). The learner is motivated to doing the task to achieve an outcome or avoid an outcome and not doing the task because it is

meaningful or because of the joy of doing it. Deci and Ryan (2000) are clear that extrinsic motivations are not all the same because there are underlying levels of self-determination. Extrinsically motivated behaviors can vary relative to their autonomy; the degree to which the individual engaged in the behavior has control. Furthermore, one can move along a continuum liberally depending on the degree of autonomy and how an individual perceives an activity to be personally satisfying (strong engagement) or forced upon them (passive compliance).

Varying self-regulations can shift a once external motivation to an intrinsic one through the process of internalization and integration. "Internalization is the process of taking in a value or regulation, and integration is the process by which individuals more fully transform the regulation into their own so that it will emanate from their sense of self" (Deci & Ryan, 2000, p. 60). Consequently, an extrinsically motivated behavior can shift to be intrinsically motivating through the process of identification, specifically to a personal value (Guay et al., 2010). When the identified regulations are congruent with an individual's personal values and needs, integration is complete and the individual moves on the spectrum of self-determination towards being intrinsically motivated.

Intrinsic Motivation. Conversely, Deci and Ryan (2000) define intrinsic motivation as doing an activity for the inherent benefit or satisfactions as opposed to a separable outcome. Intrinsically motivated individuals complete a task or activity because it is inherently interesting, challenging and desirable rather than because they are trying to avoid a potential negative outcome or consequence. "Intrinsic motivation is the most self-determined form of motivation and it occurs when a person engages in an activity for its own sake, for the pleasure and satisfaction derived from it" (Guay et al., 2010, p. 645).

Intrinsically motivated behaviors are said to be those where the reward is in the activity or task itself, and not an external reward. Specifically, these are the activities and actions that provide satisfaction to innate psychological needs (Deci & Ryan, 2000). Those behaviors that elicit feelings of self-worth or competence, imposed on oneself autonomously, are those that drive human behavior and lead to greater intrinsic motivation. Aiding in the explanation of intrinsic motivation, Deci and Ryan discuss Cognitive Evaluation Theory (CET), a subtheory of SDT (1985). "CET argues that interpersonal events and structures (e.g., rewards, communications, feedback) that conduce toward feelings of competence during action can enhance intrinsic motivation for that action because they allow satisfaction of the basic psychological need for competence" (Deci & Ryan, 2000, p. 58).

Deci and Ryan (2000) postulate that meeting three innate psychological needs, autonomy, competence, and relatedness, will enhance intrinsic motivation (Weibell, 2011). Autonomy refers to the individual having control over a situation, characterized by choice and acknowledgement of an individual's experience (Deci & Ryan, 2000). Competence refers to an individual's feeling or belief in the ability to complete a task. Positive feedback enhances feelings of competence and negative feedback does the opposite (Deci & Ryan, 2000). Relatedness deals with the belongingness and connectedness an individual feels with others and provides a sense of security that enables individual growth (Weibell, 2011).

There is a growing body of knowledge that demonstrates students who are intrinsically motivated are more likely to persist when faced with academic challenge (Walker, Greene & Mansell, 2006). Students who are intrinsically motivated are more

likely to persist and be more willing to try different strategies to achieve their goals (Lee, McInerney, Leim & Ortiga, 2010). In a correlational study conducted with Singaporean secondary school students, Lee et al. (2010) found that when a student's goal orientation aligned with their aspirations for the future, the student was more likely to maintain goal orientation and persevere to the end goal. Using the intrinsic and extrinsic framework to investigate the relationship, this study adds to the literature that SDT can be used in predicting achievement and achievement related behaviors.

Research Using Self Determination Theory

Walker, Greene and Mansell (2006) examined the relationships between motivation (intrinsic and extrinsic), academic identification, and self-efficacy and their relation to cognitive engagement. Cognitive engagement can be divided into meaningful and shallow processing. Meaningful processing involves integrating new material with previously learned material creating a more complex learning structure while shallow processing involves rote memorization and surface engagement with the material (Walker et al., 2006). The researchers surveyed 171 undergraduate university participants on academic motivation, self-efficacy, academic identification and cognitive engagement. Their findings, that self-efficacy and intrinsic motivation are positively correlated with high academic identification and meaningful cognitive engagement and that extrinsic motivation is positively correlated with shallow cognitive engagement, were consistent with the theoretical predictions of Deci and Ryan (2000), where intrinsic motivation leads to positive outcomes.

Walker et al. (2016) provides a central piece of research where intrinsic motivation is linked to meaningful cognitive engagement and positive academic

engagement. This is relevant when evaluating interventions to assist college students, particularly nursing students, with retention strategies. Focusing one's identification with the program, highlighting competence and autonomy feed the intrinsic motivation that is linked to meaningful learning and positive retention outcomes.

Nursing Research using Self Determination Theory

Heid (2014) examined the correlation between motivation and persistence in baccalaureate prepared undergraduate nursing students and found significant correlation between academic motivation, measured through a self-determination index and persistence in a nursing program. Heid (2014) looked at three types of motivation (intrinsic, extrinsic and amotivation) measured by an academic motivation scale administered to over one hundred ninety-five participants at a large Ohio university. Heid's (2014) work is significant for nurse educators who seek to understand motivation and its impact on persistence in a nursing program. These results are useful for identifying student characteristics for success in a nursing program.

Implications for this project

Peer mentoring programs in nursing education have been studied for many years and vary in components of the programs. Giordana and Wedin (2010) used explanatory research to uncover the effect of a peer mentoring in a bachelor's degree nursing program. The study was conducted using senior nursing students paired with first year nursing students in a clinical setting. The participants were enrolled in the study after the activity of jointly caring for clients and focus groups were conducted of both mentees and mentors. The mentees reported increase self-confidence, increased reassurance, less intimidation when being corrected and the feeling of "I can do this too" from the

experience (Giordana & Wedin, 2010). The mentors reported an increased level of self-confidence in teaching and modeling care and they also reported liking the opportunity for a leadership role. Overall, the mentorship program was reported as a positive and recommended future for study.

Li, Wang, Lin and Lee (2011) examined the perceptions of stress in the clinical setting related to the implementation of a mentoring program. Li et al. (2011) conducted a quasi-experimental design where they evaluated a pre and post-test of perceived stress using a valid and reliable Perceived Stress Scale as an instrument and compared a control group to an experimental group. The experimental group was the mentored group. While the results of the study revealed that there was no significant difference in stress scores between the two groups, the qualitative reports revealed that there are significant advantages and disadvantages to implementing peer-mentoring programs (Li, Wang, Lin, & Lee, 2011).

Anxiety and apprehension have been observed as a barrier for beginning nursing students and peer-mentoring has been shown to reduce these fears and produce a positive learning environment (Giordana & Wedin, 2011). Phoenix College nursing students have reported similar struggles as beginning nursing students. The anxiety of not knowing what lies ahead and not having a solid and realistic understanding of the expectations of the nursing program can lead to an increasingly stressful learning environment. The impact of early positive experiences stays in the minds of students, helping them even when they struggle later on in the program (Williams, 2010).

The proposed SNP intervention was completely new to PC Nursing and had never been attempted in the department. Pairing senior level students with incoming first year

students was the designed intervention based on themes from Cycle Zero and Cycle One research. The SNP modeled the patient navigator concept used in hospitals across the country today. "A patient navigator is a member of the healthcare team who helps patients "navigate" the healthcare system and get timely care." (Patient Navigator Training Collaborative, 2015). Patient navigators are used to guide a patient through a healthcare system or new disease process that is not always intuitive or easy to navigate. Providing just-in-time assistance and education is the basis of the model.

Concluding Thoughts

Higher education, in general, struggles to identify ways to retain students to complete degrees or certificates. Community colleges have similar challenges and associate degree nursing programs within those community colleges see these challenges every day. One avenue for exploration of the retention of nursing students is what motivates the student to learn (Rose, 2011). Motivation has been positively related to improve learning outcomes and overall increased student retention.

Perhaps even more important in nursing education, teaching and guiding is an everyday part of a nurse's role on the healthcare team. It is important that our nursing education programs begin this practice early in a nurse's career. A navigator program not only benefits new nursing students in their adjustment period into the nursing program, but it also benefits senior nursing students as they prepare to enter practice and experience maturation of the nursing role.

Chapter 3

METHODOLOGY

Focused on the transition into nursing school, the SNP utilized early peer connections to provide assistance navigating the nursing program and exposure to resources for academic success. The goal of the SNP is student success and program progression. A mixed methods study was designed to answer the following research questions:

[RQ1] To what extent does participation in a SNP influence final grade percentage in first semester nursing students?

[RQ2] To what extent does participation in a SNP influence performance on a standardized examination, HESI™?

[RQ3] To what extent does student participation in the SNP influence the use of student support services at PC Nursing?

[RQ4] What is the student perception of the SNP?

The following sections detail the study design including the research setting, participant selection, sampling techniques, and components of the SNP, including the instruments of measurement and data analysis plan.

Setting

The research was conducted in the Nursing Department at Phoenix College. The PC Nursing department offers an associate of applied science in nursing in an urban community college. In any given academic year, there are approximately 300 students enrolled in the program. Eighty nursing students are admitted each fall and spring

semester. Students are enrolled in block cohorts and progress from one semester through the next of a four (4)-semester program

<table>
<tr><td>General Education Prerequisites</td><td>BLOCK 1</td><td>BLOCK 2</td><td>BLOCK 3</td><td>BLOCK 4</td></tr>
<tr><td>MAT140, 141, or 142 College Math

3-5 Credits</td><td>NUR152</td><td>NUR172</td><td>NUR252</td><td>NUR283</td></tr>
<tr><td>BIO156/181
or 1 yr. HS BIO

Biology 201 0-4 Credits</td><td>Nursing Theory & Science I

9 Credits</td><td>Nursing Theory & Science II

9 Credits</td><td>Nursing Theory & Science III

9 Credits</td><td>Nursing Theory & Science IV

9 Credits</td></tr>
<tr><td>CHM130/130LL or 1 yr. HS CHM

Chemistry 0-4 Credits</td><td colspan="4">CO-REQUISITE COURSES</td></tr>
<tr><td rowspan="3">ENG 101 or 107 First Year Composition

3 Credits</td><td>BIO202 Human Anatomy & Physiology II (Pre-req to NUR172)

4 Credits</td><td>PSY101 Introduction to Psychology (Pre-req to NUR252)

3 Credits</td><td rowspan="2">BIO205 Microbiology (Pre-req to NUR283)

4 Credits</td><td>HUM---Humanities Elective

2 Credits</td></tr>
<tr><td></td><td>CRE101 Critical & Evaluative Reading

0-3 Credits</td><td>ENG102 or 108 First Year Composition

3 Credits</td></tr>
<tr><td>TOTAL 13 Credits</td><td>TOTAL 12-15 Credits</td><td>TOTAL 13 Credits</td><td>TOTAL 14 Credits</td></tr>
<tr><td>Prerequisite Credits = 10-20</td><td colspan="4">Total Nursing Core Credits = 36
General Education Co-requisite Credits = 16-19 Total Credits for AAS in Nursing Degree = 62-75</td></tr>
</table>

Figure 2. Program of Study, MaricopaNursing (MaricopaNursing, 2016).

In each block of the program, PC Nursing students take a nine (9)-credit semester of nursing course work, which are comprised of didactic, clinical, laboratory and simulation activities. In any given week of the semester, students attend hours of training both onsite in learning and simulation labs as well as training in local community healthcare agencies. On average, students are with their cohort members and faculty in class 20-23 hours per week.

Participants

The participants of this research study were nursing students in B1 and B3. The demographics of the students in B1 and B3 are similar to that of the overall program. PC Nursing has a student population that is diverse with 83% of the students being female, 30 to 39 years being the average age, and 64% of the students being of minority decent (Phoenix College, 2016).

PC Nursing has three cohorts of students in each block of the program and the blocks are not segregated by cohort. All teaching and course delivery is conducted to all 80 students (combined three cohorts) simultaneously. There are, however, additional courses or supports required by each cohort. Table 1 provides an explanation of the approximate size of the cohorts and defining characteristics of each cohort.

Table 1

PC Nursing Student Cohorts

	Traditional Cohort	Bilingual Nursing Fellowship Cohort	Concurrent Enrollment Program Cohort
Number of students enrolled each fall	20	30	30
Credits taken each fall semester	9	9	12-15
Defining cohort characteristics	General community college student	English & Spanish language proficient; takes Spanish medical terminology course	Met entrance requirements for university partner; attending programs concurrently

For this study, every effort was made to include at least 10 members from the Bilingual and Concurrent Enrollment cohorts. While the participants will be randomly selected, the large size of the cohort (80 students) and large numbers of Bilingual

students (approximately 30) and CEP students (approximately 40) enabled the researcher to ensure all cohorts and populations were represented in the study.

Block Three Nursing Students. Block three (B3) nursing students have completed their first year of the nursing program which is half of their nursing core curriculum courses, approximately 18 credits and 195 clinical contact hours of direct patient care. These students have navigated the program successfully, having passed each course with a 76% or greater on all proctored examinations. With attrition of the program through the first two semesters, there are approximately 70 students in B3 each semester.

Block One Nursing Students. Block one (B1) nursing students are new to the PC Nursing program. They have completed a series of prerequisite courses to enter the program but have little to no experience with direct patient care. A small percentage of students enter with some healthcare background, but it is important to note this is not a prerequisite of the program. The majority of students entering PC Nursing have no formal nursing education or healthcare background. Each fall and spring semester 80 students are admitted into B1.

Sampling

The sampling design included two parts. The first was the selection of B1 nursing students and the second was the selection of B3 navigators. The following paragraphs detail the sampling designs and processes utilized in the selection of participants for the SNP.

Block One Nursing Students. B1 students were selected using random sampling, which occurs when each sampling unit in a clearly defined population has an equal chance of being included in the sample (Teddlie & Yu, 2017). The desired sampling size

was 40 students in the experimental group, participating in the SNP, and 40 students in the control group, or not participating in the SNP.

Selection of the experimental group involved a table of random numbers. This design ensured each of the 80 students in B1 has an equal opportunity of being selected to participate in the SNP. Table 2 is the matrix that was used for the selection of participants in the experimental group. Each student was assigned a number from the admission list of incoming students listed alphabetically. Starting in the upper left-hand corner of the table, the first 40 students in the table were contacted for participation in the SNP.

Table 2

Random Number Table - Block One Participants (Stat Trek, 2018)

21	38	52	66	48	6	13	41	8	15
26	71	55	43	34	19	49	78	50	67
32	07	10	14	51	57	65	36	9	33
60	25	79	47	69	1	12	77	74	72
35	73	70	63	42	64	4	46	68	59
27	54	80	5	53	18	76	45	29	40
2	39	30	58	28	61	20	22	11	3
44	24	62	31	16	56	17	37	75	23

The solicitation of participants was through a formal invitation letter sent via the learning management system, Canvas. The first 40 students, shaded in green above, were contacted via email with a letter approved by ASU and Maricopa Institutional Review Boards (IRB) and asked to participate in the study.

Block Three Nursing Students. For the selection of B3 navigators, convenience sampling was utilized. Convenience sampling involves choosing samples that are both easily accessible and willing to participate in a study (Teddlie & Yu, 2007). Volunteer samples are one type of convenience sampling and the design that was utilized for B3

navigators. Solicitation was through a formal invitation letter sent via the learning management system, Canvas.

Pairing of Blocks One and Three Participants. After B1 and B3 student participants were identified, the pairing of first year with second year students was required. The dyads were paired using a second random numbers table. The experimental group participants in B1 were assigned a number using a list of names by alphabetical order. The student volunteers from B3 will be assigned a B1 student according to Table 3. For instance, the first volunteer was assigned student number 11, the second volunteer was assigned student number 21 and so on until all dyads were completed. Table 3 was the matrix used for pairing dyads.

Table 3

Random Numbers Table - Pairing of Block One and Three Students (Stat Trek, 2018)

11	21	2	10	7	40	5	24	23	18
19	38	15	36	27	29	33	38	32	26
1	37	20	25	39	4	34	31	14	3
12	30	8	17	9	22	25	13	16	6

Intervention

The SNP commenced once the dyads were identified. The SNP consisted of four main components: an orientation session, bi-weekly communication logging, an optional mid semester check-in and interviews with selected participants.

Orientation. Orientation sessions were mandatory for all participants, specific to B1 and B3 students. The orientation sessions covered an introduction to the SNP, roles of participants, role of the researcher, guidelines for participation, expectations for participation, weekly communication log and an opportunity for answering any questions.

The session for B3 navigators also included suggested topics for discussion and coaching suggestions. Contact information for each dyad was provided in session. If a student was unable to attend one of the orientation sessions, make up sessions were provided. Hard copy materials were given to all participants and can be found in Appendicies E and F.

Communication Logs. The SNP included a bi-weekly communication log, a form of journaling, that each participant completed. Every other week the researcher emailed a Google Form with three questions. The first question inquired about the contact between the dyad. In the form of a drop-down menu the options were "I connected with my SNP partner once, twice, or not at all the past two weeks." Question two asked about the discussion topics between the dyad in the form of a drop-down menu "we discussed testing, reviewed content, discussed time management, discussed school-life balance, other." Question three was open-ended, asking the participant to reflect on the SNP overall.

Mid-Semester Check In. The mid-semester check-in was another component of the SNP. The sessions were optional and an opportunity for participants to obtain clarification or assistance relating to the SNP. The agenda for the sessions were open and unstructured to allow for it to be student-driven based on the needs of the SNP.

Interviews. Semi-structured interviews were conducted with solicited participants to obtain additional data on the student perception of the SNP. The researcher desired three interviews with B1 students and three interviews with B3 navigators and to include participants from each of the three cohorts at PC Nursing: traditional, concurrent and bilingual. Interviews were conducted individually with each participant and audio recorded for data analysis.

Timeframe. The SNP was implemented over the 16-week semester during fall 2018. Identification of the participants and dyads was completed by the third week of the semester and orientation sessions were held before the SNP commenced. Dyads were asked to meet during the weeks following the orientation sessions and connect as needed thereafter via phone, text, email, or in person. In week 10, optional in-person sessions were hosted with the researcher for all participants as a mid-way check in. Toward the conclusion of the 16-week semester, participants were solicited to participate in interviews. Table 4 outlines the schedule for the semester-long intervention at PC Nursing in table format.

Table 4

Student Navigator Program Fall 2018 Schedule

Week (1-16 of a traditional semester)	**SNP Activity**	**Individual**
1-2	Soliciting participants; obtaining informed consent; pairing dyads	Researcher
2	Orientation sessions	Researcher & Participants
3-4	Initial meetings for dyads	Participants
4-9	Weekly SNP connections via text, phone, email or in person; bi-weekly communication log completion	Participants
10-11	Optional mid semester check-ins	Researcher & Participants
11-15	Weekly SNP connections via text, phone, email or in person; bi-weekly communication log completion	Participants
14-16	Interviews with six participants	Researcher & Participants

Instruments of Measurement

The instruments of measure for this research project were final grade percentage, performance on a standardized exam, use of support services, and end of program

interviews. Fidelity of implementation was measured by participation in communication logs. The following sections outline the instruments of measure.

Final Grade Percentage. Program progression was defined as a student progressing from one block to the next. In order for a student to progress, they must achieve 76% or greater on the cumulative proctored examinations. Proctored examinations are all tests, quizzed, skills testing and final examinations. All remaining course points were added in once it is determined that proctored examination points exceed 76% and then a final grade, A, B or C is awarded. Any student who does not achieve 76% does not progress in the program. The final grade percentage was one instrument of measure for this research. Using the learning management system, final grade percentages of NUR152, the fundamentals nursing course at PC Nursing B1, for both experimental and control groups were used for data analysis and analyzed to answer RQ1.

Performance on Standardized Exam. A benchmark used to evaluate student learning is the HESI™ block examination. As a nationally compared examination, Elsevier/HESI™ designated an expected level of achievement for students completing their first semester in the program. Administered at the end of the semester the desired range was a score at or above 850. This desired score correlates to NCLEX-RN© success predictions and is normed with nursing students across the country. The benchmark results for both experimental and control groups were used for data analysis and analyzed to answer RQ2.

Use of Support Services. Support services offered at PC Nursing include Peer Tutoring, Math Tutoring, and Open Lab support. The use of support services at PC

Nursing are tracked using in house tracking systems, Google Form sign in sheets, on an ongoing basis. Each time a student signs in to use the service it is captured and logged. For this study, the data from these tracking sheets was tallied and categorized according enrollment into the experimental or control group. This support service usage for both experimental and control groups was used for data analysis and analyzed to answer RQ3.

Perception of SNP. Student experience in the SNP was captured in two different ways, one with a bi-weekly communication log and the second by interviews with randomly selected participants. SNP participants throughout the fall 2018 semester submitted the bi-weekly communication logs. The open-ended text transcribed directly by all participants through a Google Form provided qualitative data for analysis related to the students' perception of the experience in the SNP. A sample Google Form of what participants were asked to complete can be found in Appendix C.

Participant interviews were conducted at the end of the semester with students chosen at random within each of the three cohorts at PC Nursing, traditional, concurrent enrollment and bilingual. The interview protocol can be found in Appendix D and was aimed at gaining a broader understanding of the student's experience in the SNP. The interview responses and communication logs were used for data analysis and to answer RQ4.

Data Analysis

Each of the units of measure was analyzed using either quantitative and qualitative data analysis techniques. The following sections outline the data analysis for each unit of measure.

Final Grade Percentage. Data taken from Canvas, all B1 students were categorized according to pass and not pass and inputted into SPSS-24. A simple *t*-test of students moving from B1 to B2 and a comparison of the experimental group to the control group was completed. "The *t* test is a useful technique for comparing mean values of two sets of numbers. The comparison will provide you with a statistic for evaluating whether the difference between two means is statistically significant" ("SPSS for Windows," 2012, p. 11). The confidence interval was set at 95% which means a *p* value less than or equal to 0.05 would be the criterion for statistical significance (Creswell, 2015).

Performance on Standardized Exam. Using data taken from Elsevier/HESI™ database, all B1 students were categorized according to above 850 and below 850 and inputted in to SPSS-24. A simple *t*-test of students Elsevier/HESI™ exam scores and a comparison of the experimental group to the control group was completed. The confidence interval was set at 95%.

Use of Support Services. Using data from log sheets for Tutoring and Open Lab, all B1 students were categorized according to use of tutoring and use of open lab. Actual numbers of use of each support service was tallied and placed into a spreadsheet. This information was placed in to SPSS-24 and a simple *t*-test was run comparing use of Tutoring and use of Open Lab by experimental group and control group. The confidence interval was set at 95%.

Perception of SNP. Responses from the bi-weekly Google Form were downloaded and transferred to a single spreadsheet for data analysis. The number of times a participant met with their respective navigator was tallied and categorized

according the following groups: met zero times, met once, met twice, or met three or more times. This information was placed in to SPSS-24 and descriptive statistics were computed to provide fidelity of implementation of the SNP.

The responses of topics discussed by participants and navigators were tallied and categorized according the following groups discussed testing, reviewed content, discussed time management, discussed school-life balance, and other. This information was placed in to SPSS-24 and descriptive statistics were computed.

The responses of the open-ended question, asking the participant to reflect on the SNP in their own words were populated into a spreadsheet for coding. Participant responses were coded using grounded theory approach. Grounded theory is a systematic way of analyzing data where theories are constructed grounded in the data themselves (Charmaz, 2006). This analysis enabled the emergence of themes and voices of the SNP to be captured to the fullest. To make sense of participants' experience, line-by-line coding was initially performed and then a more focused coding was adopted using descriptive, one word or short phrases. All of the data were coded and recoded twice before initial themes were developed. Once initial broad themes were developed, sorting and major categories were decided, and coding took place for a third time. From this final coding, general construction of theoretical logic was proposed.

The interviews conducted with participants in the SNP were audio recorded using a voice recorder and archived. Transcripts were created using a pay for service company, reviewed for accuracy and edited accordingly. After transcripts were deemed final and complete, they were coded using the same grounded theory approach as communication logs. The process of line-by-line, focus coding, and descriptive phrases was utilized for

the coding of the interview transcripts. Once initial broad themes were developed, sorting and major categories were decided, and coding took place for a third time. From this final coding, general construction of theoretical logic was proposed.

Threats to Validity

This mixed methods study was developed with the intent of measuring the effect of the SNP on first semester nursing students. This study was carefully thought out to create the most accurate measurement of the program on student success. There were, however, a few threats to validity, both internal and external to the study. The next paragraphs will discuss these threats and how the researcher accounted for them.

Maturation threat. "The maturation threat to internal validity comes about when certain events internal to the research subjects may be responsible for the differences on the dependent variable. These internal events consist of physiological or psychological development that occurs naturally through the course of time, or as the subject grows older, more coordinated, fatigued, bored, and the like" (Smith & Glass, 1987, p. 128).

As a student progresses in the PC Nursing program, their understanding of what it takes to be a successful nursing student takes form. The rate at which this occurs varies per student, but it does happen. Generally, after the first and second exams, students begin to seek out resources and guidance from instructors and their peers naturally. This natural process occurs over the 16-week semester and may lead to students progressing to the next block, improved performance on Elsevier/HESI™ scores and increased use of support systems. Awareness of this threat is important and was taken into account when analyzing the data of and drawing conclusions of the SNP influence.

Nonequivalence Threat. The PC Nursing program is diverse and has three cohorts of students that are mixed together, traditional nursing student, bilingual nursing program student, and concurrent enrollment nursing student. There are no designations made between these students and all students are inter-mixed for all classes, clinicals and other groups naturally occurring in the program. "The nonequivalence threat is any subject characteristic that makes the groups / compared unequal in any respect other than the treatment" (Smith & Glass, 1987, p. 130).

Because random number table selected the SNP group without regard to cohort, it was possible that one of the three cohorts of students may be over or under represented in the control and experimental groups. Each of these cohorts are different, in terms of the course work and support being provided to each student. Table 5 outlines a few of the defining characteristics of each cohort.

Table 5

Defining Characteristics of PC Nursing Cohorts

	Traditional Nursing Student	Bilingual Nursing Fellowship Program Student	Concurrent Enrollment Program Nursing Student
GPA	> 2.5	> 2.5	> 2.5 or >3.0* depending on partner university
Credits taken per semester	9	9	12-15
Support provided	All program resources available, none are mandatory	All resources available, grade tracking monitored by BNFP coordinator, retention meetings mandatory, support services required if proctored points below 76%	All program resources available from both PC Nursing and partner university

The cohort designations and requirements for that specific cohort can potentially influence progression in the program, improved performance on Elsevier/HESI™ scores and increased use of support systems. This is due to requirements of the cohort outside of the SNP. Awareness of this threat was important and taken into account when analyzing the data of and drawing conclusions of the SNP influence.

Experimenter Effect. This threat to validity occurs when the researcher is genuinely excited about the intervention and potential results and can influence the performance of the participants (Smith & Glass, 1987). This effect was possible in the study due to the unique positionality of the researcher in this project. As the director of the nursing program, there is a unique position of influence and power. Specific language was utilized in all recruitment materials and when soliciting participants in regard to informing participants of the researcher's role separate and apart from the program director role.

Mixed Methods Approach

Combining qualitative and quantitative methods in this study allowed for expanded knowledge, corroborated across different approaches. According to Johnson and Onwuegbuzie (2004) this "allows for greater confidence can be held in the singular conclusion; if the findings conflict then the researcher has greater knowledge and can modify interpretations and conclusions accordingly. In many cases the goal of mixing is not to search for corroboration but rather to expand one's understanding" (Johnson & Onwuegbuzie, 2004, p. 19). For this study, qualitative data analysis informed understanding of the quantitative metrics obtained. The qualitative component provided a deeper understanding of the student perspective when participating in the SNP. When

taken together and analyzed comprehensively, the data from this study informs nursing programs on the influence of the SNP on nursing student retention.

Concluding Thoughts

To evaluate the impact of a student navigator on the transition into nursing school by providing the new nursing student a resource to assist with academic success, a mixed method design was created. This methodology enabled triangulation of data gathered to draw conclusions on SNP implementation. Interpretation of the findings in the next chapters serves as a guide for nursing programs as they aim to retain current nursing students through their first semester of a program.

Chapter 4

DATA ANALYSIS AND RESULTS

Data collected on the implementation of the SNP included final grade percentage, performance on a standardized exam, use of support services, bi-weekly communication logs and participant interviews. The following sections describe variables, relationships between variables, and answers to the four research questions outlined for this study.

Description of the Sample

Participants were compared to a control group to evaluate the impact of the SNP on successful course completion of the first semester of a nursing program. In August 2018, 80 students entered the program at PC Nursing and each was assigned a number, starting with one (1), in order alphabetical by last name. Forty B1 participants whose assigned number identified on the random numbers table were solicited via email through the LMS system and invited to participate in the experimental group. Twenty-one students responded to the email and agreed to participate in the study.

Twenty students in B3 responded to the solicitation email requesting volunteers to participate as student navigators. Volunteers were assigned a number based on the order in which they responded to the call. Each B1 student was matched to a navigator according to the random numbers Table 3. Modifications in the use of the table were made as the number of B1 participants became known. If there was no B1 participant assigned to the random number, it was skipped, and the next available number was assigned. One additional modification was the assignment of a B3 navigator to two B1 participants because there was one more B1 participant than volunteered B3 navigators available.

Demographics of Sample

The twenty-one (*n*=21) B1 experimental group participants were all in their first semester of the nursing program at PC. None of the program participants had prior healthcare experience, meaning they were not formally certified in any area of healthcare or nursing. All had successfully completed prerequisite coursework to be successfully enrolled in the nursing program.

Twenty (*n*=20) B3 navigators were in their third semester of the nursing program at PC. All navigators had successfully completed prerequisite coursework as well as Blocks 1 and 2 of the nursing program.

Gender. The gender of study participants was consistent with the demographics of the nursing profession. Of the experimental group (*n*=21), 16 participants or 76.2% of the group were female and five participants or 23.8% of the experimental group were male. Of the B3 navigators (*n*=20), 17 participants or 85% of the participants were female and three participants or 15% of the participants were male.

Concurrent Enrollment Program. Concurrently enrolled students are those who are taking a full load of core nursing courses at PC nursing and concurrently taking Bachelor of Science in Nursing courses at a partnering university. CEP students take anywhere from 12 to 15 credits per semester. The experimental group (*n*=21) consisted of eight (8) concurrently enrolled students or 36.4% of the experimental group. This can be compared to the percentage in the control group (*n*=55), which is 32.1% of the students in the control group.

The B3 navigators (*n*=20) consisted of 15 concurrently enrolled students or 75% of the navigators. The remaining 25% of the navigators were enrolled in traditional MaricopaNursing coursework.

Bilingual Nursing Fellowship Program (BNFP). Bilingual Nursing Fellows are those students who enter into PC Nursing through an alternate pathway. These students are cohorted from the beginning of their prerequisite courses and take all prerequisite courses at a sister college, with their learning community and with the educational support of BNFP retention meetings and advising. Admission requirements to the PC Nursing program are identical and there is no difference in students with the exception of the ability to speak Spanish. The experimental group (*n*=21) consisted of 16 BNFP students or 76.1% of the experimental group. This can be compared to the percentage in the control group (*n*=55), which is 32.1% of the students in the control group.

The B3 navigators (*n*=20) consisted of five (5) BNFP students or 25% of the navigators. Of the five (5) BNFP navigators, four (4) or 80% were also concurrently enrolled nursing students, meaning they were BNFP and CEP navigators.

Final Grade Percentage

Students in PC Nursing must obtain cumulative score of 76% on all proctored examinations to progress to the next block in the program. Of the 80 students enrolled in B1 at the beginning of this study in the fall 2018 semester, four (4) students in the control group withdrew before the end of the 16-week term. These students are categorized as not-pass, voluntary. The final grade percentage results of the experimental group (*n*=21) and the control group (*n*=55) were compared. Table 6 shows the distribution of the final

grade percentage results for the fall 2018 B1 students. Students in the SNP had a slightly higher mean final grade percentage than those in the control group.

Table 6

SNP Final Grade Percentage Frequencies

Group	Mean	Median	Standard Deviation
Experimental Group (n=21)	83.95%	85%	5.427
Control Group (n =55)	82.5%	85%	7.490

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for RQ1 was:

H0: There is no difference in final grades between students who participate in the SNP and students who do not participate in the SNP.

The values t (74) = -.764, p = .447, suggest the difference was not significant, and the null hypothesis is accepted.

Bilingual Nursing Fellowship Program. The experimental group sample included 16 students in the BNFP cohort, which was 72.7% of the study sample. To more fully understand the BNFP cohort students in the experimental group, the final grade percentages of the BNFP students in the SNP were analyzed. Table 7 shows the data distribution of these results for the fall 2018 B1 BNFP and traditional students in the

SNP. BNFP students in the SNP had a slightly higher mean final grade score than the traditional students in the SNP.

Table 7

BNFP SNP Final Grade Percentage Frequencies

Group	Mean	Standard Deviation
BNFP SNP (n=16)	85%	5.138
Traditional SNP (n =5)	80.6%	5.459

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for the BNFP cohort was:

H1: There is no difference in final grades of BNFP students who participate in the SNP and traditional students who participate in the SNP.

The values $t(19) = 1.649$, $p = .116$, suggest the difference was not significant, and the null hypothesis is accepted.

Concurrent Enrollment Program. The experimental group sample included eight (8) students in the CEP cohort, which is 36.4% of the study sample. To more fully understand the CEP cohort students in the experimental group, final grade percentages of the CEP students in the SNP were analyzed. Table 8 shows the data distribution of the final grade results for the fall 2018 B1 CEP and traditional students in the SNP. CEP students in the SNP had a slightly higher mean final grade percentage score than the traditional students in the SNP.

Table 8

CEP SNP Final Grade Percentage Frequencies

Group	Mean	Standard Deviation
CEP SNP (n=8)	87.88%	3.091
Traditional SNP (n =13)	81.54%	5.190

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for the CEP cohort was:

H2: There is no difference in final grades of CEP students who participate in the SNP and traditional students who participate in the SNP.

The values $t(19) = -3.112$, $p = .006$, suggest the difference was significant, and the null hypothesis is rejected.

Performance on Standardized HESI™ Examination

All students in PC Nursing must take a Block HESI™ Exam. As a nationally compared examination, Elsevier/HESI™ designated an expected level of achievement for students completing their first semester in the program. The desired range is a score at or above 850, which correlates to NCLEX-RN© success predictions. The HESI™ scores were compared for the 76 students remaining in the cohort at the end of term, using information from the Elsevier/HESI™ database. Table 9 shows the distribution of the HESI™ scores for the fall 2018 B1 students. Students in the SNP had a slightly lower mean HESI™ score than those in the control group.

Table 9

SNP HESI™ Score Frequencies (passing score 850)

Group	Mean	Median	Standard Deviation
Experimental Group (*n*=21)	877.71	886.00	160.68
Control Group (*n* =55)	889.84	884.00	153.80

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for RQ2 was:

H3: There is no difference in student performance on the HESI™ examination between students who participate in the SNP and students who do not participate in the SNP.

The values $t(74) = .304$, $p = .762$, suggest the difference was not significant, and the null hypothesis was accepted.

Bilingual Nursing Fellowship Program. To more fully understand the 16 BNFP cohort students in the SNP, the mean HESI™ scores of the BNFP students were analyzed. Table 10 shows the data distribution of the HESI™ Scores for the fall 2018 B1 BNFP and traditional students in the SNP. Students in the BNFP SNP had a higher mean HESI™ score than the traditional students in the SNP.

Table 10

BNFP SNP HESI™ Score Frequencies (passing score 850)

Group	Mean	Standard Deviation

BNFP SNP (n=16)	934.94	36.273
Traditional SNP (n =5)	726.60	50.391

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for the BNFP cohort was:

H4: There is no difference in HESI™ scores of BNFP students who participate in the SNP and traditional students who participate in the SNP.

The values $t(19) = 2.787$, $p = .012$, suggest the difference was significant, and the null hypothesis is rejected.

Concurrent Enrollment Program. To more fully understand the eight CEP cohort students in the SNP, the mean HESI™ scores of the CEP students were analyzed. Table 11 shows the data distribution of the HESI™ Scores for the fall 2018 B1 CEP and traditional students in the SNP. Students in the CEP SNP had higher mean HESI™ scores than the traditional students in the SNP.

Table 11

CEP SNP HESI™ Score Frequencies (passing score 850)

Group	Mean	Standard Deviation
CEP SNP (n=8)	967.50	50.701
Traditional CEP (n =13)	822.46	41.470

An independent-samples *t*-test was conducted to evaluate if these differences were statistically significant. The null hypothesis for the CEP cohort was:

H5: There is no difference in HESI™ scores of CEP students who participate in the SNP and traditional students who participate in the SNP.

The values $t(19) = -2.191$, $p = .041$, suggest the difference was significant, and the null hypothesis is rejected.

Use of Support Services

The use of student support services provided at PC Nursing is encouraged of all students in the program. Support services offered at PC Nursing include peer tutoring, math tutoring, and Open Lab. For the purposes of this study, math tutoring and peer tutoring were lumped into one category of tutoring. Open Lab was tracked and reported separately from Tutoring. Using information from the department Google Tacking sheets, the number of times students used Tutoring and Open Lab was analyzed. Students in the SNP had a lower mean use of tutoring services frequency than those in the control group. And students in the SNP had a slightly higher mean use of Open Lab frequency than those in the control group. Tables 12 and 13 show the distribution of the use of support services for the fall 2018 B1 students. The null hypothesis for RQ3 was:

H6: There is no difference in use of student services between students who participate in the SNP and students who do not participate in the SNP.

Table 12

SNP Use of Support Services (Tutoring)

Group	Mean	Median	Standard Deviation

Experimental Group (*n*=21)	4.9	2	5.069
Control Group (*n* =55)	5.49	5	5.496

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(74) = .780$, $p = .483$, suggests the difference was not significant, and the null hypothesis was accepted.

Table 13

SNP Use of Support Services (Open Lab)

Group	Mean	Median	Standard Deviation
Experimental Group (*n*=21)	2.24	2	1.97
Control Group (*n* =55)	2.22	2	1.98

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(74) = -.039$, $p = .969$, suggests the difference was not significant, and the null hypothesis was accepted.

Bilingual Nursing Program. To more fully understand the BNFP cohort students and the use of support services, the number of times BNFP used Tutoring and Open Lab was analyzed. Tables 14 and 15 show the data distribution of the use of support services, for Tutoring and Open Lab, for the fall 2018 B1 BNFP and traditional students in the SNP. Students in the BNFP SNP had a lower mean use of tutoring services frequency than traditional students in the SNP. And they also had a lower mean use of Open Lab frequency than traditional students in the SNP. The null hypothesis for students in the BNFP cohort is:

H7: There is no difference in use of student services between BNFP students who participate in the SNP and traditional students who participate in the SNP.

Table 14

BNFP SNP Use of Support Services (Tutoring)

Group	Mean	Standard Deviation
BNFP SNP (n=16)	4.06	1.149
Traditional SNP (n =5)	7.60	2.731

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(19) = -1.394$, $p = .179$, suggests the difference was not significant, and the null hypothesis was accepted.

Table 15

BNFP SNP Use of Support Services (Open Lab)

Group	Mean	Standard Deviation
BNFP SNP (n=16)	2.19	2.007
Traditional SNP (n =5)	2.40	2.074

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(19) = -.205$, $p = .840$, suggest the difference was not significant, and the null hypothesis was accepted.

Concurrent Enrollment Program. To more fully understand the CEP cohort students and the use of support services, the number of times CEP students used Tutoring and Open Lab was analyzed. Tables 16 and 17 show the data distribution of the use of support services, for Tutoring and Open Lab, for the fall 2018 B1 CEP and traditional students in the SNP. Students in the CEP SNP had a higher mean use of tutoring services frequency than traditional students in the SNP. And CEP students in the SNP had a slightly higher use of Open Lab frequency than traditional students in the SNP. The null hypothesis for students in the BNFP cohort is:

H_8: There is no difference in use of student services between CEP students who participate in the SNP and students who do not participate in the SNP.

Table 16

CEP SNP Use of Support Services (Tutoring)

Group	Mean	Standard Deviation
CEP SNP (*n*=8)	5.25	5.203
Traditional SNP (*n* =13)	4.69	5.186

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(19) = -.239$, $p = .814$, suggest the difference was not significant, and the null hypothesis was accepted.

Table 17

CEP SNP Use of Support Services (Open Lab)

Group	Mean	Standard Deviation
CEP SNP (*n*=8)	2.75	1.753
Traditional SNP (*n* =13)	1.92	2.1

An independent-samples *t*-test was conducted to determine if these differences were statistically significant.

The values $t(19) = -.930$, $p = .364$, suggest the difference was not significant, and the null hypothesis was accepted.

Bi-Weekly Communication Log

As a part of participating in the SNP, students completed a bi-weekly communication log. The communication log was a form of journaling and each participant had the opportunity to participate throughout the SNP. Every other week the researcher emailed a link to a Google Form with three questions. Question one was about the contact between the dyad. Question two was about the discussion topics between the dyad. And question three was open-ended, asking the participant to reflect on the SNP overall.

Electronic communications were sent to both B1 and B3 students on September 19th October 3rd, October 25th and November 11th. During the months of September, October and November, 76 communication logs were captured in the Google Form. Of the 76 communication log entries, 55.7% or 42 logs were completed by B1 students in the SNP and 44.3% or 34 logs were completed by B3 navigators. The following sections describe the contents of the communication log entries.

Contact Between Dyads. To gather data regarding how often participants of the SNP met during the course of a two-week period, one of the questions was "How many times did you connect with your SNP partner the last two weeks?" Participants selected responses in the form of a drop-down menu and had the options of "*I did not connect with my SNP partner, I connected with my SNP partner once, I connected with my SNP partner twice*" or "*I connected with my SNP partner three or more times.*" Twenty-two entries, 28.9%, indicated participants met once over the course of a two-week period. Eighteen entries, 23.7%, indicated participants met twice over the course of a two-week period. Twelve entries, 15.8%, indicated participants met three or more times over the

course of a two-week period. And 24 entries, 31.6% indicated participants met no times over a two-week period.

Discussion Topics Between Dyads. To gather data regarding the topics discussed during SNP meetings one of the questions was "When connecting with your SNP partner, which topics did you discuss (select all that apply)?" Participants selected responses in the form of a drop-down menu and had the options of "*we discussed testing strategy, we reviewed B1 content, we discussed time management strategies*" and "*we discussed school-life balance.*"

Test taking strategy was discussed most frequently, 39.5% of the time, then school-life balance was discussed 11.8% of the time and Block 1 content and time management strategies were discussed only 7.9% of the time. Thirty-two percent of the time the dyads did not select from any of the above categories and discussed something different or did not converse at all.

SNP Reflections. The final question on the bi-weekly communication log was an open-ended question where students were asked "briefly describe your thoughts on your participation in the SNP." Participants were unlimited in characters and able to provide their narrative reflections in their own words. The data did not need to be transcribed, it was verbatim from SNP participants as they typed their own responses each time the communication log was completed. The data was placed into an Excel spreadsheet, sorted by B1 participant and B3 navigator responses on a separate sheet within the same document. The spreadsheet was organized into five columns: actual transcript, relevant excerpt, code phrases, codes and emerging themes.

The first step was placing the actual transcript in column A of the spreadsheet. The transcripts were read and reviewed three times and then a relevant excerpt was determined and placed into column B. At this time line by line in-vivo coding was completed. The coding was completed once, reviewed and then completed a second time for comparison. Following the line by line coding of transcribed responses, using a Grounded Theory approach, code phrases, codes and emerging themes were developed based on participant responses.

Block 1 Code Phrases, Codes and Emerging Themes. Thirty-one code phrases were developed from the B1 response log. These code phrases were then transitioned into codes based on the content of the code phrase. Seventeen codes were used to code the communication logs. The codes were: peer connections, resource, busy schedule, burdensome, helpful, advice, support, first weeks, adjusted, cheerleader, stress management, time, help to ask, no benefit, tapers off and improved grades. From the codes developed in a grounded theory approach, the following five themes emerged from Block 1 participants.

Peer connections can benefit adjustment to nursing school. Block 1 participants found having a student navigator that had been through the beginning of a nursing program and successfully transitioned into nursing school, was beneficial and provided helpful advice. "*Having someone to talk to that has already gone through block 1 and providing personal experiences has been extremely helpful!"* commented one B1 participant. Another participant commented on how peer connections assisted in adjusting to nursing school "*students benefit from the SNP simply because it opens up another resource that is not an instructor and adds one-on-one time. It makes school feel*

smaller." The peer connections were valuable in the format of study tips, note taking tips and overall adjustment to entering a nursing program. "*I think it was a good experience having someone at a higher level to help me out with some my areas of struggles. My partner was very helpful in giving me tips on what to focus on in the exams*." And participants expressed appreciation for the insight into the challenges of nursing school as a *"good platform to connect with the other students, who has gone through the path of same feelings, problems and questions. Their tips and experience are really helpful in some area of studies and time management.*"

Peer support helps with stress and anxiety. Adjusting to nursing school can be stressful and full of unknowns. Block 1 participants expressed the helpfulness of the SNP in this process of adjustment. One participant described it as having "*the opportunity to open up a connection outside of block 1 who has successfully completed what you are facing."* The ability to connect with someone who has been through the experience and successfully transitioned into the nursing program can alleviate the stress associated with that transition. Another participant expressed it as, "*very helpful to know we can seek help and have someone in block 3 give us advice to be successful in nursing school."* While adjustment to nursing school is a challenge, the content and expectation of being a B1 student is also stressful. A participant wrote, "*having a mentor/guidance is always helpful in stressful situations."* And the assistance provided assisted with the stressful environment. *"I found it helpful and altogether insightful. I don't know if it changed my ability to succeed or not, but it definitely helped me cope with the stress and anxiety of it all."*

New nursing students need guidance on how to use peer connections. While B1 participants expressed appreciation for the student navigator peer connection, there was also the expression of not knowing how to fully utilize the resource. "*I liked it as an introduction to the program, but at this point I'm not sure what to ask/talk about"* wrote one B1 student. Another participant framed it as "*as a block 1 student, I barely have my head above water, let alone time to organize and plan when my block 3 student will meet/speak with me."* Participants did note the challenge of scheduling time to connect and "*has been helpful but somewhat hard to keep up with because of busy schedule."* And B1 participants noted the feeling of being burdensome associated with reaching out. *"I felt like I might have been more of a burden, so I stopped contacting my partner."* It was also expressed as being torn between asking for the help and feeling burdensome. One participant stated, "*I felt it was helpful, but I didn't want to distract the block 3 student too often though."* And another expressed "*I think this is helpful to a certain extent, but I feel like my partner might be too busy, so I feel like I don't want to bother her."* Additional guidance on how to utilize a resource, such as a student navigator, could combat this phenomenon.

Peer encouragement important. Participants expressed the need for encouragement as they progressed through the first semester of nursing school. One participant stated, "*I was looking for was really mental support. I'm someone who isn't very self-confident and second guess herself and was looking for someone to cheer me on."* Another student expressed it as "*Having someone there to cheer you on and push you is helpful when they have already been through it!"* The encouragement that can come from a peer, particularly a student navigator, can create a sense of community for

students when they need it. *"It creates an additional sense of belonging for students, it can be overwhelming in block 1."* The assistance and sense of belonging can come in various formats and contribute to success in the nursing program. One student stated "*I have made a few other connections with students and have a support system within my program so I am feeling confident about my studies.*"

SNP not beneficial towards the end of a semester. Participants communicated the challenge of keeping the connection going as the semester progressed. One participant described it as tapering off now that he has the hang of nursing school. *"For the first couple of weeks they were very helpful, and they still are a good source for information. Now that it is later in the semester, I feel like I found a rhythm that works for me and I don't need to ask them that many questions anymore."* Another student attributed the reduced contact as being overwhelmed with studies as the reason for reduced contact. "*I feel since it's getting closer to the end of the semester, I find myself swamped with homework and studying, that I forget to reach out to my partner."* While other students attributed to not needing the connection as much as in the beginning of nursing school. One student stated she "*enjoyed beginnings but didn't utilize connection as the semester progressed*." And another student stated, *"helped at first, slowly tapered off as its really up to you to take the classes."*

Block 3 Code Phrases, Codes and Emerging Themes. Nineteen code phrases were developed from the B3 response log. These code phrases were then transitioned into codes based on the content of the code phrase. Eleven codes were used to code the communication logs. The codes were: encouragement, support, resource, peer connection, shared experience, not demanding, personal growth, willing participant, not

beneficial, disconnect and tapers off. From the codes developed in a grounded theory approach, the following four themes emerged from Block 3 participants.

Navigators feel helpful and encouraging to new nursing students. The B3 navigators appreciated the opportunity to help a fellow nursing student in a way they could relate to. "*Always feels good to be able to help someone out, I remember being in block 1 and being so scared. Love just being able to interact and being able to help out (even if it's just a study tip or words of advice).*" Another student wrote, *"I think it is going well. I have reached out to my block 1 student and offered my help and support. I have also shared study tips and test strategies that helped me throughout nursing school. I also try to be encouraging and positive because I think block 1 is hard because you are adjusting to a new way of learning."* The encouragement and positivity can be about balancing all that goes along with nursing school and also the more advanced way of thinking that can be a shock to students. "*I encouraged her to over study and reinforced that her first exam score might have not been her best test score but that she can learn from the questions she got wrong."* Learning how to take feedback and grow as a student nurse is a big part of the nursing school journey and that navigation is learned. "*I believe this is a great opportunity for block 1 to find reassurance during a difficult adjustment period to nursing school*."

Being a student navigator is not time consuming or demanding and can be helpful for advanced students. Navigator participants did not find participation in the program overly demanding*."* One student reflected on how she anticipated it would take more of her time but actually did not. *"It does not take much of my time to answer her questions. I thought it would take up more of my time."* And another participant wrote, *"so far so*

good, my SNP student seems to be doing well and has minimal questions for this week." The personal reflection process the student navigator was able to do was an additional and unexpected finding. A navigator reflected, "*participation has not been demanding, I think this program has a great potential to help block 1 students feel supported, and also helps advanced students gain perspective on personal growth from block 1 until now."* Another student wrote, *"I like that the block 1 student doesn't feel alone, and it gives me perspective on how much I have grown."*

Navigators can be an unused resource. Many of the B3 navigators were eager to be utilized as a support for the incoming nursing students. Unfortunately, several of the B3 navigators felt they were underutilized as this resource. This was expressed buy one of the participants in stating *"I was very excited to be a part of this, but I don't think my person needs me very much."* Another student wrote, "*It is a great idea. Too bad I am not being used as much."* One participant framed it as a question of being asked to reach out to the B3 student. He wrote, *"my student isn't asking for help, don't know if they are being pushed to talk to their navigator."* B3 navigators felt as though they had little to no contact with their assigned B1 student. "*This does not seem to be an effective mentor ship; the block one student did not reach out to me or respond to my emails prompting for feedback on what support she needed"* responded one student and anther wrote "*I haven't heard from my partner this week."* There was no expectation for B1 students to reach out to their navigators, but it was evident the B3 navigator felt like this could be a helpful resource if it was used. One student stated it as *"it's a great program if resources are used."* And another student framed it as, "*my SNP partner stopped reaching out to me. It seems as though my block 1 SNP is only responsive if I am the one reaching out. I*

would have enjoyed being a better mentor and provide more insight, however, I did not want to be the driving force for this interaction."

SNP not beneficial towards the end of the semester. As with B1 participants, the B3 navigators felt as though the SNP was most beneficial in the beginning of the semester, rather than the latter half of the semester. One student responded. *"I feel like this late in the semester it's not very helpful. Better for this to start before the block 1 rep begins program. The first few weeks are when it could be very beneficial to a new student."* Another student wrote, *"there wasn't very much participation this last week, but I have reached out."* This was also reflective in communication log responses towards the end of the semester where participants responded with *"I don't feel like I have been very helpful"* and *"the block 1 student I am paired with does not seem interested in seeking help. I have stated my desire and availability to help as she needs with no response."* In addition, the response of *"I don't feel like it has been effective"* is consistent with that of the B1 participants the later months in the semester.

SNP Interviews

In the original design of this research study, the desire was for six interview participants, three from B1 and three from B3. The desire was also to have one interview come from the CEP, BNFP and traditional cohorts in each of the B1 and B3 interview sets. The solicitation for interview participants was made through an email via the learning management system. Two call outs for participants were made over a three-week timespan. Only four participants responded to the solicitation, two from B1 and two from B3. Each of the participants in the interview portion of this study were scheduled for an interview at a time convenient for them, generally after their lecture class.

The two B1 interview participants were CEP students, one was concurrently enrolled at Ottawa University and the other was concurrently enrolled at Grand Canyon University. Neither of the B1 interview participants were a part of the BNFP program.

The two B3 interview participants were CEP students, both enrolled at Arizona State University. Both of the interview participants were also enrolled in the BNFP program.

Consent for each interview participant was obtained in addition to experimental group study participation. Each interview lasted approximately 25-35 minutes. The interviews took place in the researcher's office at PC Nursing and all interviews were audio recorded. Following interview completion, the audio recording was electronically sent to a paid transcription service. All interview transcripts were reviewed for accuracy and compared to audio recording in two rounds of reviewing.

Transcripts were placed into an Excel spreadsheet, sorted by interview question. One sheet of the Excel spreadsheet housed B1 participant transcripts and a second sheet housed B3 navigator transcripts. The spreadsheet was organized into five columns: actual transcript, relevant excerpt, code phrases, codes and emerging themes. The next step was placing the actual transcript in column A of the spreadsheet. The transcripts were read and reviewed three times and then a relevant excerpt was determined and placed into column B. At this time line by line in-vivo coding was completed. The coding was completed once, reviewed and then completed a second time for comparison. Following the line by line coding of transcribed responses, using a Grounded Theory approach, code phrases, codes and emerging themes were developed based on participant responses.

Block 1 Code Phrases, Codes and Emerging Themes. Twenty-three code phrases were developed from the B1 transcript log. These code phrases were then transitioned into codes based on the content of the code phrase. Ten codes were used to code the communication logs. The codes were: organization, resource, communication, availability, exams, perspective, guidance, first weeks, volunteer and adjusted. From the codes developed in a grounded theory approach, the following three themes emerged from Block 1 participants.

SNP was a positive experience. Both B1 interview participants found participating in the SNP a positive experience. One participant described it as, *"Think it was a…it was a great experience for me and like, uh, there were a lot of things that I didn't know while beginning the semester, like organization, I didn't know how to organize my notes…. a lot of organization which helped and came from the higher students; the next level. And I appreciate that."* The other participant reflected on it as, *"So, yeah, overall positive. I liked that it pairs you up with someone that's already experienced and has already gone through what you've gone through my particular experience."* It was helpful to have someone to help navigate the first weeks of nursing school. One participant stated tests were the biggest unknown. He described it as a resource to navigate that unknown. *"I was able to ask my SNP that stuff and whether it was the answer I wanted to hear, not wanting to hear whatever it was, it was still on and he was very open about it. Um, so specifically for me, I utilized him for, um, like how did you prepare for tests? What did you do wrong? What did you, what could you have changed? Um, like when you were a block one student, um, even though, you know, things may have changed."* It also was a positive experience to a B1 student to have a B3

check in on them every now and again. One student stated, *"they were as nice as they could possibly be. At least I thought. And then the fact that they're checking on us really nice."*

Scheduled meeting times would have improved the SNP. Although B1 students found the SNP experience overall positive, there were areas for an improved experience. When asked what can be improved in the SNP, one participant stated, *"Oh, maybe, um, yeah maybe time. I mean, meeting time or somehow. Yeah. So maybe some scheduled meeting times. Yeah. So set meetings like that. They're helpful because we are new. We had just block one we don't even know left from my rights."* Instead of having to find the time to get this beneficial resource, having the structure for this meeting to occur more naturally was suggested. *"I wish like we would have met you. Do you know how we did that? Established where you're like, okay, so now you're in the SNP and we were there that we should have just met there. That way we just knew each other instead of like awkwardly having to meet randomly between like a class period or something. That way it just breaks the ice. Like, hey, this is your block three or like block one, this is your person."* Furthermore, guidance on how to best utilize the SNP partner could be beneficial for new to nursing students. One participant suggested, "*I know you kept it open, which I thought was a good thing, but maybe since the block one students, like we rely on our faculty and our, um, leaders so much, we're so reliant on you guys to guide us that maybe the block one students could use a little bit more guidance on how to utilize this person. But if you could just give us like a little guidance."*

First weeks of nursing school are overwhelming and require adjustment. Block 1 interview participants were asked to reflect on how they felt at the beginning of the

nursing program. One student used the following words to describe how she felt *"the beginning…it was horrible. At first…first two weeks actually my schedule was like horrible. I was like, there was the time I thought like… will I be able to make it, will I be able to do this? I…I actually I sat down, and I had to reflect like am I on the right track?"* Another interview participant described the first weeks as overwhelming. "*So, I think it's overwhelming to see everything. Yeah. And especially if they are first week, there is something I did in a first week, there was a lot of material to give us on that first week that was too much to handle. Like the orientation, I mean not even the orientation, it was the work load for that first week"* And the first weeks were not only overwhelming in terms of content and workload but knowing even where to begin with studying and preparing. One interview participant described it as, *"overwhelming, lost on lots of chapters to read. Don't know how to organize through material. Um, don't know how I'm going to be tested, don't know how to prepare for a test. And, um, kind of a lot of, mostly that it seems like that's a lot of it. I don't think we were like necessarily like lost in like the time shuffle or anything, but everything was just so new. Um, and then after the first couple of exams that kinda got better as far as like what to look for and how to study."* This suggests that while the content can be challenging, entrance to nursing school requires adjustment.

Block 3 Code Phrases, Codes and Emerging Themes. Sixteen code phrases were developed from the B3 navigator transcript log. These code phrases were then transitioned into codes based on the content of the code phrase. Nine codes were used to code the communication logs. The codes were: resource, unused, early connection, willing participants, manage the unknown, adjustment, support, shared experience,

available. From the codes developed in a grounded theory approach, the following three themes emerged from Block 3 navigators.

More experienced students can be a valuable resource. Block 3 navigators have the unique experience of having navigated the program successfully. One interview participant described it as "*I described it as like this, here's this big giant slippery ball of stuff. And it took me awhile to figure out how it was going to grip it and where I was going to hold on to it and how I was going to, you know, manage it. Um, and I studied my butt off for the first couple test cycles and then after that I was like, oh, and I figured out, you know, I don't need to go a PhD dissertation on every little thing."* The ability to share the sometimes hard-learned knowledge can be a valuable resource for incoming Block 1 students. The practical words of wisdom do not always have to be about nursing content, it can be about how to manage yourself. *"It's really been just a continuation of personal development kind of trajectory that we've been on. It's about managing your stuff. Manage your calendar, manage the expectation. Sometimes good enough is good enough and it's not a reflection of you as a human being, it's just a reflection of your performance on that part of your being a human being."* It is also insightful advice on how to handle the stress of performance in nursing school. *"Show up, do what's in front of you to do and this is my motto in life. Show up, do what's in front of you to do. Don't panic. Like literally learn to calm the physiological fear response. Don't panic. You can't do this if you panic. So I don't know. Maybe that would be useful things for people."*

SNP navigators can be an unused resource by nursing students. *"I expected a lot more out of it. Um, but, uh, I reached out to my, uh, block one person. I think we only interacted like twice, so that was it. I was kind of shocked that she didn't reach out any*

more than, I mean, if I was in block one and I had someone in block three, I would have been picking their brain and for anything. Hey, you know, do you have any advice on this or that or, but that was it." The second interview participant had a similar experience with her paired B1 student. *"I was paired with two student and they both asked what do we need to know? What can you tell us? What do you, what kind of tips and tricks do you have? So I sent back, you know, a detailed response, basically telling what had been useful for me and um, you know, specific ideas of things to use, like which resources were most helpful to me and um, and then just left it open if they needed to contact me. Well, that was the only communication we had. So apparently they were good."*

With revision, the SNP can provide guidance for students in the transition to nursing school. Block 3 navigators had ideas as to how the SNP could be adapted to be a more meaningful experience and showcase the resource to B1 students. One student suggested, "*so maybe have it set up so they could some, we could somehow make contact before the semester starts or during that first week. I think a lot for my, from my perspective, a lot of really what I needed help with was managing the anxiety visa vi the unknown. Um, because once I got the material, I was like, oh, okay. But it was just that unknown thing." "have a meet and greet or something before the semester even starts. Like I don't know, maybe during or right after orientation. I dunno. Some something convenient for everybody. And I liked what you did as far as like not making it obligatory. I'm making it, you know, making the introduction and then not allowing it to develop organically."* Another suggestion was made to have students volunteer to be in the program versus random assignment to the SNP group. *"I think it all is all dependent on how much people want to participate. So, and I know like this is like was random and you*

know, maybe people didn't really want to do it or I don't even know why. But maybe having people who would be more like willing to participate would probably have better outcomes." And if there was a way to make it less formal, there may be better participation. One interview participant suggested, *"I don't even know if there's a way to do it even more casual. Okay, we're having pizza and tea, coffee, whatever. Come and talk to like people who've been through this"*

Summary of Data

The quantitative data suggest that, for the B1 cohort in its entirety, there was no statistical difference between mean final grade percentage score, mean HESI™ test score and mean use of support services from those who participate in the SNP and those who did not. Statistical differences are present, however, when data from students in the BNFP and CEP are compared.

With the confidence interval set at 95%, there was a statistical difference between the mean final grade scores and HESI™ scores of SNP students in the CEP and traditional cohorts. There was also a statistical difference between the mean HESI™ scores of SNP students in the BNFP and traditional cohorts. Students in the CEP and BNFP who also participated in the experimental group had slightly higher means in the areas of final grade percentage and HESI™ scores.

The qualitative data suggest the SNP was helpful for those who utilized the program by contacting their navigator and initiating conversation. It was most useful in the beginning of the semester, with suggestions from participants to modify the program to begin before the semester started. Participants reported the SNP assisted with alleviation of stress and anxiety with starting the program and managing the unknown.

The data suggests the SNP can be most important to the success of a student towards the beginning of a term and may not be used as much as the semester comes to an end, most participants reported they had figured it out by the end of the semester. The qualitative data also suggest that scheduled meeting times and more guided structure on how to best utilize the SNP and the respective navigator can improve the program and add to the resources for all students.

Taken together, the quantitative and qualitative data suggest the SNP can be helpful in the beginning of a semester for willing participants to assist with managing the unknown. While there is no statistical significance for the entire B1 cohort in final grade percentage, increased HESI™ scores or use of support services, the SNP provides a statistically significant benefit for BNFP and CEP students.

Chapter 5

CONCLUSIONS AND DISCUSSION

The data suggest the SNP can be helpful to PC Nursing students but there are, however, lessons learned from the implementation of the program. Study findings can be looked at closer in relation to the population of nursing students at PC Nursing and explore future iterations of a navigator program. The data also suggest implications for nursing student retention and programs centered around peer connections. This is linked closely with the theoretical frameworks and literature review conducted.

Student Navigator Program at PC Nursing

The results of the study found the SNP to be helpful to many students at a particular time in the first semester of nursing school, at the beginning of the semester, and that it was beneficial for stress management and managing the unknown. The study found that not all students found it useful and helpful, some students opted not to participate or reported they did not know how to take advantage of the resource provided. The study also found there to be no statistical difference in students who pass B1, HESI™ score or use of support services between students in the experimental group and those in the control group. The null hypothesis for the instruments of measure, passing B1, HESI™ score and use of support services, was that there would be no difference between the groups. All null hypotheses were accepted with the exception of two areas for the CEP and BNFP groups.

The PC Nursing Student. The PC Nursing student demographics discussed in Chapters 1 and 3 offer important information as to why the results of the study may have turned out as they did. The PC Nursing students are students who have been through a

series of prerequisite course work and admission tests. There is a certain GPA required depending on program track and students wait an average of three to four semesters before being accepted into the program (MaricopaNursing, 2016). The fact that students take approximately 12 to 20 credits in prerequisite courses and another 16-20 credits of co-requisite courses while they await program admission suggests the student are pretty good students by the time they enter the PC Nursing program. They have persevered through rigorous course work, obtained decent grades to satisfy progression towards program admission and have learned the skills required to be a successful college student. They have learned how to study, they have learned how to time-manage, and they have learned the necessary baseline knowledge to enter a nursing program.

The results of Cycle Zero research suggest that nursing school is challenging for students entering the program, largely because students do not know what to expect in terms of the demands of the program. Even if they have been successful in courses leading up to entering the program, it is still a challenge to come into the program. This triangulates the data from the research study when admitted students seek the guidance and navigation assistance, find it helpful when starting the program, but do not necessarily pass the course more frequently or have a higher score on the HESI™ exam or use support services more frequently. They are already smart, determined and successful students. They are ready for the academic rigor of a nursing program, but they can benefit from assistance as they enter into a program to manage and alleviate the stress and anxiety of entering a program – largely due to the unknown.

The CEP Nursing Student. The cohorts in the PC Nursing program, as discussed in Chapter 3, Table 5, are different than the traditional nursing student. The CEP student,

depending on the university partner has a higher GPA requirement than that of MaricopaNursing. They also take additional pre-requisite course work to satisfy the BSN degree requirement. And perhaps the most differentiating part of the CEP is the admission process. CEP students are chosen for the cohort based on a rubric score taking into account performance on admission tests, GPA and prior degrees. Students with only the highest of rubric scores are admitted while others are invited to keep applying. This highly competitive program entry can contribute to why the CEP students have higher mean final grade and HESI™ scores in the quantitative data results. The rigorous selection process of the CEP students suggest academically inclined student will do well on these instruments simply by the nature of their being in the CEP program to begin with. And yet with this academic inclination, these students found the SNP helpful and beneficial in starting nursing school. Both SNP interviews were CEP students and reported using the navigator to manage the unknown and for study and test taking tips.

The BNFP Nursing Student. Likewise, the BNFP program is different than the traditional nursing student. While the program entry requirements are similar to the traditional entry requirements, the students in the BNFP take additional co-requisite course work and have built in supports beginning with pre-requisite course work and stretching through the end of the nursing program. The students are in learning communities, or cohorts, on entry to the BNFP where they take pre-requisite course work together while attending retention meetings with a dedicated support staff. The peer connections are started early and transferred to the nursing program as they enter nursing courses as a learning community, or cohort, now mixed with traditional and CEP students. After entry to the nursing program, they continue to attend retention meetings

aimed at study tips, resources and familial support. The students in the BNFP are a unique cohort and in the fall 2018 found that students who participated in the SNP and in the BNFP had slightly higher mean HESI ™scores than those in the traditional program.

Lessons Learned in the Implementation of the SNP

Implementation of the SNP in the fall 2018 semester was modeled on research results in Cycles Zero and One of pilot research. Student focus groups in Cycle One suggested a less structured program was best because students could use it as they saw fit and molded into what worked for them. Based on the Cycle One research results, the SNP program for this research study was implemented very similarly. The orientation session was provided to all students and the guidance was limited to Appendix E. The researcher was available to participants for guidance but use of that was minimal. Qualitative research results suggest modifications of this program could benefit SNP program success and overall program use.

Orientation and Introduction. Orientation sessions for this research project were held twice at the beginning of the fall semester, one for B1 students and one for B3 navigators. Information in the sessions were similar, but the researcher intentionally held sessions apart so navigators and participants could each learn roles but also ask questions specific to that role. The dyads where then sent off to make contact with their navigator or B1 student via email after completing the orientation session.

Participants in the research study suggested the orientation session be held together with an opportunity for in person meeting. The suggestion was made that it was awkward to meet via email and set up a time to meet. They would have much preferred to be introduced in a common, less formal setting. Participants suggested at a time

convenient for both to host a social mixer where the relationship could be developed more naturally. Upon reflection of the orientation sessions, the questions asked and specification to role in the SNP would have been beneficial for both groups to hear about one other. It seems important to have a comfortable introduction for dyads and a more solid understanding of their partner's role in the SNP.

Set Meeting Times. Organic development of meeting preferences, via email, text or in person were left open to each dyad. Students were encouraged to meet as often as necessary or desired in the orientation sessions, but no minimum number of meetings nor set time was identified forgetting together. The unstructured meetings were intended to provide more flexibility for student schedule, student need and overall a non-burdensome program.

Participants suggested allocating set meeting times, carved out in a schedule convenient for both parties, that one could take advantage of rather than have to schedule intentionally. If the navigator and B1 student did not have any need for meeting or did not want to meet, they simply would not. But the option was always time carved out for last minute questions, necessary debrief before or after an exam, or as a shoulder to lean on. B1 participants reported feeling like they were bothering the B3 navigator so these meeting times would help with this feeling of intrusiveness. While the B3 navigators reported not feeling burdened, having the set time could lend itself to more organic conversation rather than intentionally setting aside time that may feel insignificant or unimportant to call a navigator to meet. Considering this penciled in time can enhance the SNP for both the navigator and the entering nursing student.

Researcher Guidance. During the orientation session for B1 students, the researcher provided a handout, Appendix E, detailing the outline of the program and possible topics to bring up with the assigned navigator. The researcher intentionally left the topics to general suggestions to allow for organic growth of a navigator-student relationship that fit the needs of the B1 student.

Participants reported needing guidance from the researcher in the areas of what to seek assistance for. They reported knowing they needed help, but not quite sure how to ask for it and not entirely clear on what exactly was needed. Participants requested more guidance from the researcher as the semester unfolded, providing guiding prompts about what would be beneficial to ask a navigator. This makes sense if one considers the B1 students are new to nursing school – they simply may not know what to ask. Not only can the navigators, as senior students, close the gap between the known and unknown but so can the researcher (Dennison, 2010). Providing a set of guiding questions, rather than topics alone, timed specifically for the unfolding challenges in the first few weeks and months of nursing school can assist the new to nursing student with seeking the appropriate and helpful guidance. More nuanced questions, specific to the strategies and skills required to be a successful nursing student can enhance the SNP.

Next Iteration of the SNP. Implementing the SNP, version 2.0, would include taking the above suggestions of combined navigator and B1 student orientations sessions, in-person introductions, set meeting times and additional guidance for how to seek and utilize this resource. An additional lesson learned is starting the program earlier, perhaps as early as the summer or end of fall term – before the student starts the official nursing coursework. Participants suggested the anticipation of beginning nursing school and not

knowing what you don't know was a challenge. As a cohort-based program, the student names are known well in advance of the first NUR course. Placements are made in March/April for an August start and October/November for a January start. There is significant time to pair B1 students and connect them with navigators before the semester begins. This earlier connection could assist with preparation for the first NUR course and nursing school altogether.

Another suggestion for future iterations is stating a clearer purpose of the SNP as a resource. It does not absolutely need to be taken advantage of if it is not helpful. The SNP is not a magic ticket to success in nursing school. It is entirely up to the B1 student to utilize, with the modifications listed above to assist with the challenges, to learn how to be a nursing student. One interview participant characterized it as another layer of what makes PC Nursing unique in terms of the support systems provided. It is not a magic tool or a definite key to success, but it is one that can provide guidance and support if it helps manage the stress and anxiety of beginning nursing school. Articulating this to participants could engage participation at another level, for development as a nursing student rather than a way to pass Block 1.

Theoretical Perspectives and the SNP

The SNP was implemented with the NURS model as the organizing framework and the Self Determination Theory as the lens from which to view. The work of other researchers shaped the program developed. The next sections of this chapter review that research and link to the results of this current research study.

The NURS Model. The Nursing Universal Retention and Success (NURS) model by Dr. Marianne Jeffreys is an organizing framework this study used for evidenced-based

support to implement the SNP. Specifically, it was used to examine the multi-dimensional factors that influence student nurse retention and guiding teaching and learning strategies (Jeffreys, 2015). According to the NURS model, retention and persistence of nursing students are based on the interaction of six variables. The variables are student profile characteristics such as students' age, gender, culture, ethnicity and first-generation status, student affective factors such as self-confidence in learning abilities, cultural values, and beliefs, academic factors such as study skills, attendance, and academic services, environmental factors, surrounding factors, and professional integration into the educational environment and into the nursing profession (Jeffreys, 2015).

The results of this study support the research of others utilizing the NURS model to understand student nurse retention. Fontaine (2014) supported Jefferys' NURS model, that multiple, intertwined factors, not one single factor, impact student retention. In her study with Nevada Community College students going through a comprehensive orientation and supportive program as they began nursing school. Additional researchers identified contributing factors to nursing school success had peer connection components. Strong (2014) found environmental factors, personal academic factors, and friend support factors were statistically higher among those successful in the program versus those who left the program. And Dries (2014) found environmental factors, institutional interactions, integration factors, college academic facilities, and support from family and friend positively correlated with fundamental course completion.

The SNP research study supports Jeffreys' NURS model when looking at the varied qualitative and quantitative results. The researcher identified that participation in

the SNP does not guarantee success in B1. Today's nursing student is complex, with multiple factors impacting success and retention in a nursing program. The SNP supports the idea that there is not one single factor that will yield nursing student success or retention in a program. It is a combination of multiple supports, that address each of the variables outlined in the NURS model, that can assist with retention of nursing students. The SNP provides one component to be helpful to students entering a program but it should be transparent this is not the magic key to success. It will take management of all other factors outlined in the NURS model to lead to success in a nursing program.

Self Determination Theory. Self Determination Theory (SDT) focuses on the degree to which self-motivation and consequently self-determination influence behavior. There are three types of self-determined behaviors, internally motivated and extrinsically motivated behaviors, regulated by internalizations, and amotivation (Deci & Ryan, 2000). The researcher used this as a theoretical framework for understanding why students are vulnerable to forces impacting student retention (Weibell, 2011). Walker, Greene, and Mansell (2006) found that self-efficacy and intrinsic motivation are positively correlated with high academic identification and meaningful cognitive engagement and that extrinsic motivation is positively correlated with shallow cognitive engagement. And Heid (2014) found significant correlation between academic motivation, measured through a self-determination index and persistence in a nursing program.

These prior research findings corroborate the findings in the SNP research. The implementation of the SNP centered around the message to Block 1 students that this navigator is a resource that will assist your adjustment into nursing school. Students were left to their own devices to participate and engage on a superficial "tell me to how to pass

the test" or meaningful "help me learn how to be a nursing student" way. The superficial engagement, while not inherently flawed, was largely externally motivated. The students were informed they needed to obtain 76% on proctored examinations in order to progress in the program. The pressure of this had many fall 2018 students grasping at available resources to give them tips and tools to pass the block. The engagement was not for the intrinsic "I want to do this because it brings me joy to be a more effective nursing student" motivation but rather to do what it takes to move on and become a nurse. This level of engagement can explain why participation in the program did not lead to a differentiated mean score in the quantitative instruments of measure. Students were going through the motions of learning how to be a better nursing student because they want to pass the course, not because it is intrinsically motivated, where it brings them joy to be the best nursing student. Once students reach the level of being intrinsically motivated, the results of implementation of the SNP may differ.

One area of interest in the study is the Block 3 navigator responses in the communication log and participation interviews. Block 3 navigators overwhelmingly reported an interest and inherent satisfaction with participating in the SNP as a navigator. Recalling that participation in the SNP for B3 navigators was voluntary, students were presented with the details of the program and participation was solicited, 24 students volunteered. There was no incentive offered to be a part of the SNP. While no particular research question was established to seek out this finding, the theme of gaining inherent satisfaction in being a navigator for a new nursing student demonstrates the growth and maturation of the B3 nursing student. Transitioning to intrinsic motivation for the profession, demonstrated by wanting to help others in their learning community, could be

attributed to academic and professional identification. The B3 navigators are experiencing maturation of nursing identity.

Limitations and Recommendations

The findings of this research study should be interpreted with an understanding of the limitations. The first limitation is the research design. The format may have impacted the results of this study. The communication log was a strong data gathering tool, it presented rich qualitative data of the lived experience in the SNP. The limitation to this rich data is there was no way to discern how often a single participant was logging. There was no personal identifier so the researcher could not determine how many times a student was submitting logs, once every two weeks, every four weeks or not at all. Based on the number of logs, the researcher was left to estimate how many times a participant logged. A recommendation for future study is to have a personal identifying number, such as the first three letters of your mother's name and the last 3 digits of your phone number. The idea would be to remain confidential in responses but find a way to link week to week data. This research design change would not only enhance fidelity of implementation but also give a more holistic view of participation throughout the semester by participant.

A second limitation to the study was triangulating cohort data between all instruments of measure was inconsistent. For quantitative data and for interview data cohort specification was included but it was not included in communication log data. The communication log entry form had no space for cohort identification so there was no way to discern cohort in the communication log responses. Students were asked what block they were in on the log entry form, but not whether they were traditional, BNFP or CEP

students. This was discovered when many of the findings in the quantitative and interview data were linked to cohort identification and triangulation of all three data segments was difficult.

A recommendation for future study is to obtain a bit more identifying information on the log and with the use of the personal identifier mentioned above, the data from all three segments could be triangulated. The results suggested for whom the SNP could be most effective; in this case, the SNFP and CEP students. Their results, however, were compared to traditional students in the SNP cohort, not to the entire fall 2018 cohort due to limitations in data collection. Future research should explore the comparison of these cohorted groups who participated in the SNP with those cohorted groups who did not participate in the SNP.

Implications for Nursing Education

Nursing educators are not unique from other educators in that they continually seek to find solutions to increase student success. The uniqueness of nursing education rests in the competitive entry, academically challenging and high-stakes cohort-based program success rate. Nursing school is different. Nursing school is incredibly challenging, not only academically but also personally. Students have to learn how to be nursing students to succeed in the rigorous academic program. This is evident when attrition rates for program success are upwards of 20% (National League for Nursing, 2007).

Given these challenges, it could be easy to say, “nursing is not for everyone” and accept that students will have to repeat courses and perhaps drop out of the program altogether. Or that admission requirements should be made harder to make sure the right

student enters the program and is guaranteed for success. On the other hand, nursing educators could see there are significant opportunities to increase student success with this unique competitive entry, academically challenging high stakes program. An example of this is viewing it as altering the program supports for the student rather than altering the student for the program.

Changing the conditions nursing students present to nursing programs is not a modifiable risk factor. The students come with the environmental factors that they do. This is the beauty of today's college student. But there are modifiable factors that can be implemented within the program. Jeffreys (2007) posits ongoing retention of nursing students is based on the interaction of multiple factors and that the social integration of nursing students into the profession could enhance a students' ability to cope with the environmental factors. Faculty advisement and helpfulness, encouragement by peers, peer-mentoring, and enrichment programs are at the center of success for undergraduate nursing students (Jeffreys, 2007).

The SNP is one way to address environmental factors for which there is no control. Adding a layer of support for students who are under incredible pressure to succeed, both internally and externally, can be a resource to manage stress and anxiety. While the SNP is one way to increase support, it is important to remember there are a multitude of support programs to be considered to reduce stress and anxiety for nursing students. And the reduction of stress and anxiety has been linked to increased student success in nursing programs (Gwele & Uys, 1998; Jones & Johnston, 1997; Marker, 2001). Nursing programs are encouraged to keep this thought at the forefront of all that is considered in program support modification. It should be noted that the researcher is

encouraging program support modification, not program modification. The standards of nursing education are solid and evidence-based. Reducing the rigor of the program is not an option for the safety of the public and the profession. What is an option, is increasing and modifying the supports wrapped around a student to give the best chance for success.

Concluding Thoughts

Today's college student is unique. Students are faced with the challenges of working, raising a family, assisting with elder parents, balancing financial burdens and other nuances one can only imagine. Nursing students are no different. They face the same challenges and they struggle with the same barriers to success. There is no silver bullet for success in nursing school. There are no magic numbers to enter into a database program to determine of a student will be successful or not. Nursing students are, however, unique in the fact that they are in a cohort-based program that lends itself to a multitude of support systems. Nursing program administrators and faculty are the keepers of implementing innovative ways to utilize the nature of the cohort program to increase success for those enrolled. Each are called upon to continue to implement and revise support programs as new information is discovered. Peer connections early on in a program can reduce stress and anxiety in nursing students. The SNP is one way to add support for nursing students.

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APPENDIX A

CYCLE ZERO INTERVIEW PROTOCOL

Interview Protocol

Directions: This focus group discussion will last approximately 60 minutes. Time will be provided for each participant to answer all of the questions. There may be follow-up questions asked.

To be read to participants:
Hello, I am Salina Bednarek. I am a graduate student at ASU and this research study is part of my doctoral work. I am also the Chair of the Nursing Department. As the Chair of the Department it is my responsibility to field possible student issues. Please do not mention any specific names or identifying information of faculty or students. No action will be taken by me on what is shared in this focus group and if any student issues are brought up in the study I will refer to the Dean of Industry & Public Service.

Focus Group Questions:

1. What does academic success look like for Phoenix College nursing students?
2. What factors do you think lead to academic success the Phoenix College nursing program?
3. How would you describe your academic (learning) experience at Phoenix College Nursing?
   Possible follow-up questions:
   a. If positive, what specific factors do you think contribute to this success? Why do you think you have been successful?
   b. If negative, what specific factors do you think contribute to this difficulty? Why do you think you have not been successful?
4. Do you experience academic difficulties? Please explain. Can you please give a specific example?
   Possible follow-up questions:
   a. If yes, what factors do you think make academic success difficult to achieve?
   b. If no, what factors do you think make academic success possible to achieve?
5. What are your academic goals?
   Follow-up question:
   a. What factors impact your ability to reach your goals?

APPENDIX B

CYCLE ONE INTERVIEW PROTOCOL

Interview Protocol

Directions: This focus group discussion will last approximately 60 minutes. Time will be provided for each participant to answer all of the questions. There may be follow-up questions asked.

To be read to participants:
Hello, I am Salina Bednarek. I am a graduate student at ASU and this research study is part of my doctoral work. I am also the Chair of the Nursing Department. As the Chair of the Department it is my responsibility to field possible student issues. Please do not mention any specific names or identifying information of faculty or students. No action will be taken by me on what is shared in this focus group and if any student issues are brought up in the study I will refer to the Dean of Industry & Public Service.

Focus Group Questions:

1. How would you describe your experience in the Student Navigator Program at Phoenix College Nursing?
2. Were there components of the Student Navigator Program improved your learning experience at Phoenix College Nursing?
3. Were there components of the Student Navigator Program that you felt did not help your learning experience at Phoenix College Nursing?
4. How would you describe your preparedness for nursing school when you entered the nursing program at the beginning of the semester?
5. How would you describe your preparedness for the next few semesters of nursing school now, after participation in the Student Navigator Program?
6. Are there any additional resources or programs that you would like to share that you feel would help nursing students as they progress through the nursing program at Phoenix College?

APPENDIX C

SAMPLE GOOGLE FORM FOR SNP PARTICIPANTS

Title: Bi-Weekly SNP Communication Log

Directions: Thank you for participating in the Student Navigator Program at PC Nursing. Take a moment to reflect on your experience in the program the last two weeks and answer each of the following questions. There are no right or wrong answers.

Q1. How many times did you connect with your SNP partner in the last two weeks?

I connected with my SNP partner once
I connected with my SNP partner twice
I connected with my SNP partner three or more times
I did not connect with my SNP partner

Q2. When connecting with your SNP partner, what topics did you discuss (select all that apply)?

We discussed testing strategy
We reviewed Block 1 content
We discussed time management strategies
We discussed school life balance
Other:_____

Q3. Describe your thoughts on your participation in the SNP.

_____
_____
_____
_____
_____
_____

APPENDIX D

DISSERTATION INTERVIEW PROTOCOL

Interview Protocol

Directions: This interview will last approximately 60 minutes. There are list of questions that will be asked and there may be follow-up questions asked.

To be read to participants:
Hello, I am Salina Bednarek. I am a graduate student at ASU and this research study is part of my doctoral work. I am also the Chair of the Nursing Department. As the Chair of the Department it is my responsibility to field possible student issues. Please do not mention any specific names or identifying information of faculty or students. No action will be taken by me on what is shared in this focus group and if any student issues are brought up in the study I will refer to the Dean of Industry & Public Service.

Interview Questions:

1. Describe your experience in the SNP this semester.
    a. What specific parts of the SNP worked well?
    b. What specific parts of the SNP could have been improved?
2. Tell me about your orientation to the SNP.
    a. Is there anything you wish would have been discussed at the beginning of the program to improve your experience?
3. Tell me about experience in Block 1 this semester.
    a. Tell me about how you felt at the beginning of Block 1.
    b. Tell me about how you felt at the end of Block 1.
    c. Do you think the SNP influenced how you feel about Block 1?
4. Describe your experience with your SNP partner.
5. Do you think the SNP should be continued at PC Nursing?
    a. If so, what would you keep in the program?
    b. What would you change?

APPENDIX E

WHAT TO EXPECT – BLOCK 1

Student Navigator Program

Thank you for participating in the Student Navigator Program. This is a new program so it will be evolving as we (me and you) progress through the semester. That is my way of saying suggestions are welcomed!

You have been paired with your Block 3 student. Please take a moment to make contact with your partner sometime in the next week. The first contact should be made through Canvas in the SNO course. You can search their name in the email function of Canvas.

Following that initial contact, communications can be email, text, or in person, whichever you and your partner agree upon. Take a moment to think now about what you would be comfortable with now. Mondays will be good times to meet in person since both Block 1 & Block 3 are on campus.

You may have already thought about some items you would like to discuss with the senior student you have been paired with, and that is great! If not, take some time to think about what might help you as you transition into nursing school. Some suggested topics are listed below:

- Adjusting to the nursing program at PC
- Work/life/school balance
- Communications & meetings with PC Nursing faculty
- Getting involved in SNO
- Study skills and test taking strategies
- Guided study/reading large amounts of reading
- Thinking like a nurse

Thank you again for participating! Please reach out and me know if you have any questions, I have listed my contact information below.

Professor Bednarek
602/532-8601
salina.bednarek@phoenixcollege.edu

APPENDIX F

WHAT TO EXPECT – BLOCK 3

Student Navigator Program

Thank you for participating in the Student Navigator Program. This is a new program so it will be evolving as we (me and you) progress through the semester. That is my way of saying suggestions are welcomed!

You have been paired with your Block 1 student. Please take a moment to make contact with your partner sometime in the next week. The first contact should be made through Canvas in the SNO course. You can search their name in the email function of Canvas.

Following that initial contact, communications can be email, text, or in person, whichever you and your partner agree upon. Take a moment to think now about what you would be comfortable with now. Mondays will be good times to meet in person since both Block 1 & Block 3 are on campus.

Since you are the senior student, it may be that you want to have some topics of discussions lined up for your Block 1 student. Some suggested topics are listed below:

- Adjusting to the nursing program at PC
- Work/life/school balance
- Communications & meetings with PC Nursing faculty
- Getting involved in SNO
- Study skills and test taking strategies
- Guided study/reading large amounts of reading
- Thinking like a nurse

It may also be the case that your Block 1 student knows what they need and will not be afraid to direct the mentoring. This is okay too.

Thank you again for participating! Please reach out and me know if you have any questions, I have listed my contact information below.

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