

Resilience Across the Continuum in the Development of Nursing Experience

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Abstract

This study considers the concept of resiliency among nursing students, and how it is affected by a number of factors. Being an important aspect of one's character in order to survive a demanding career of nursing, it is essential that resiliency is present and strengthened throughout an undergraduate career. This study contains a literature review: the literature review examines seventeen published articles gathered through databases, including CINAHL, PubMed and ProQuest, that illustrate and discuss results from research conducted through various platforms exploring the development of resilience in nursing students, nurses and nurse managers. While the articles have differing definitions of resilience, it can be gathered that resiliency in nursing is the ability and essential function to adapt and prosper in the face of adversity in a stressful environment as it is in nursing.

This paper examines the several articles as well as a survey demonstrating the Connor-Davidson Resilience Scale, the report and discussion of the survey's results, as well as implications for the future of nursing. This descriptive survey was administered to baccalaureate junior and senior nursing students, and the total number of respondents was 103. Of interest in the findings was that senior nursing students were more resilient than junior nursing students and that female nursing students were more resilient than nursing students of other genders. This paper aims to suggest the importance of resilience development and understanding beginning in nursing school, and the continuity throughout one's nursing experience.

Resilience Across the Continuum in the Development of Nursing Experience:

Introduction

Resilience has been researched across many disciplines and in many settings. While there are many interpretations and adaptations of the definition of resilience, essentially it is an individual's ability to move forward despite overcoming challenges, adversities, setbacks and unfortunate circumstances. In healthcare, resilience is essential as the career field is overwhelming due to the wide range of situations its employees encounter. In the pre-licensure phase, nursing students are faced with rigorous course loads, trying clinical experiences and high expectations placed on them as they attempt to assimilate into the healthcare world. Practicing nurses witness first-hand death and the process of dying, drug addictions and withdrawals, dismal family dynamics, abuse of children and elderly, and other social issues that can be traumatic to the nurses. These issues are also shared by nurse managers, who often face additional stress with budgeting, scheduling and intrapersonal staff issues. These situations have lasting impacts on the nurses, and the nurse's ability to cope with these circumstances is what will make the individual successful in the career of nursing. Just like any profession, nurses are individuals that come from varying backgrounds. These patients and their conditions affect every nurse differently, based on the nurse's own life experiences. How each individual reacts to each situation is what sets them apart, and speaks to their personal level of resiliency.

Resilience Across the Continuum in the Development of Nursing Experience:

Literature Review

The concept of resiliency can be broken down by factors that contribute to its development. A study performed in 2011 by Koen, Eeden & Wissing examined the extensiveness of resilience in nurses. In this study, the researchers established that resilience and well-being must be established as a nurse in order to feel satisfied by one's job and find meaning in daily tasks. This study also discussed that with resilience comes enhanced productivity. According to Koen, Eeden & Wissing (2011), this study developed subfactors responsible for resiliency, including hope, coping skills, self-efficacy, and prosperous personal and mental health. When discussing coping, the authors included the concept of constructive coping, claiming it to be characteristic of people with skills of resilience. Constructive coping occurs as a response to chaotic or disadvantageous situations, and results in a positive outcome for all parties involved. The authors continue with self-efficacy, explaining that this term comprises self-empowerment and believing in one's abilities to manage themselves and their responsibilities that seem staggering. The combination of these two separate constructs, coping and self-efficacy, is combined in this study to define the idea of a nurse believing that they have competent behaviors and strategies to handle stress and adversity at work.

Further, the research introduces optimism as another factor for resilience, explaining that optimism allows nurses to positively adjust to situations in their daily experiences. Hope is then introduced, referring to the act of positively accepting challenges for the lesson that they can become mindful of their actions and their attitudes' impact on those actions. Lastly,

mental health is referenced in its relation to nurse's resilience, illustrating that nurses with skills of resilience will have stronger mental health. All of these markers of resiliency are measured on individual scales and questionnaires. While all of these factors of resiliency improve one's mental strength, self-efficacy, coping, stress management, and hope are the largest predictors of resilience in professional nurses (Koen, van Eeden & Wissing, 2011).

Nursing students undergo significant stress while in school, due to the demands of the curriculum and all it entails. Specifically, the clinical workload, sometimes unreceptive clinical staff, death and other dismal social issues, and anxiety about making mistakes in the clinical setting are prominent factors that can cause exponential stress to the student (Reyes, Andrusyszyn, Iwasiw, Forchuk & Babenko-Mould, 2015). Just as students undergo significant stress in nursing school, faculty and clinical instructors also experience pressure. These pressures include maintaining expertise ranging from educational to clinical, being knowledgeable of new and updating technology related to curriculum, competition between faculty or instructors, role overload and conflicts in their personal lives (Reyes et. al, 2015). These stressors can leave nursing faculty and clinical instructors feeling undervalued and overwhelmed. Maintaining strong skills for resiliency can counteract the emotional exhaustion they may feel, by being better equipped to handle these multiple adversities.

Incorporating the skills and development of resiliency into the nursing curriculum can improve outcomes to both nursing students and faculty. Suggested strategies of resilience training for the nursing curriculum include the utilization of three categories: support, education, and reflection (Thomas & Asselin, 2018). Support can range from family, friends and peers to faculty and colleagues. Receiving positive encouragement from

parents, specifically mothers, has been shown to have significant outcome on a nursing student's perception of their own resilience. Support is especially helpful in the clinical field, for situations when students need extra assistance, are seeking guidance, or would appreciate reassurance. Although the students will often turn to faculty in these situations, it is not in the faculty's best interest to simply give them the answer. Rather, encouraging the student to have confidence that they are strong, knowledgeable, and capable is more effective in instilling strength in the students, and helping each of them develop their resilience (Thomas & Asselin, 2018). If the faculty cannot reach the student or their attempts prove unsuccessful, knowing that each nursing student will have built a strong social support system within their peers that also helps them develop resiliency is an element that the faculty can then utilize and encourage the student to take advantage of.

The study reviewed in this publication did not provide significant relevance to its research into the education piece of the curriculum on resilience training, although it did identify working subjects on tools of resilience-- including empowering oneself, managing conflict, and working in a team-- into a curriculum in smaller durations of time was more effective than working these subjects into a curriculum over an extended period of time, for example over the length of two semesters. As for the third category, reflection entails journaling after classes, clinicals, and overwhelming situations. Reflection encourages nursing students to process all the emotions they feel while they are learning essential skills and to muse on mistakes they might have made during clinical. Reflection journals are also a great way to observe personal growth over a duration of time. These different suggestions

allow for faculty & students to have a stronger relationship with one another, through the faculty valuing the importance of students' resilience (Froneman, et. al, 2016).

A tool similar to reflection that can be used for developing resilience is mindfulness. While mindfulness is often perceived as similar to optimism, these concepts are not one and the same. Mindfulness is awareness of one's self, and it's use in developing resilience in nursing is significant. Saletnik (2018) studied nursing resilience, and has cited daily actions of mindfulness as effective in building resilience, as they further encourage coping, adaptability, and stress management skills (Saletnik, 2018). Some strategies to practice mindfulness include disconnecting from screens or cell phones, allowing one to feel all their emotions, meditating, taking a walk outside, and being attentive to one's breathing pattern. These activities and the practice of mindfulness encourage emotional balance, and with this newly developed balance, nurses and nursing students can be more effective at each task or responsibility at hand (Saletnik, 2018). With the clear mind that the practice of mindfulness can induce, a nurse's mental health can significantly improve, which contributes further to the development of their personal resilience. Mindfulness is a skill that can be easily incorporated into a nursing curriculum, and with the right supporting resources, could significantly improve nursing students' and faculty member's personal resilience.

While there are many means of measuring resilience, a tool titled the Connor-Davidson Resilience Scale has proven to be extremely effective. Originally created in order to evaluate another aspect of post-traumatic stress disorder, the Connor-Davidson Resilience Scale has expanded and it's uses have varied greatly. This tool has measured a variety of populations, including the general population of the United States, primary care

patients and people with generalized anxiety (Connor & Davidson, 2003). They created this tool in order to quantify the characteristic, and to find areas of resilience that can be altered and improved with certain actions (Connor & Davidson, 2003).

A large population affected by lack of resilience in nursing are new graduate nurses. While the importance of having resiliency in one's nursing career has been evidenced by the research already discussed, there is significant proof that new graduate nurses are often underprepared to enter the clinical setting. Due to the concept of nursing burnout, professionals become physically, emotionally, and mentally drained from their current situation and eventually this overwhelming negative feeling leads them to have extreme dissatisfaction with their current job, which further leads them to switch positions (Arrogante & Aparicio-Zaldivar, 2017). In nursing burnout, experienced nurses often leave the bedside for a different kind of specialty in nursing. Burnout is one of the many reasons why facilities have had a very recent and striking decline in nurses with experience (Hodges, Keeley & Troyan 2008). Specifically in the new graduate nurse population, the percentage of new nurses leaving their first job within the first year has increased significantly, now at approximately 60% (Hodges et. al, 2008). Nurses that have recently graduated from baccalaureate programs lack the confidence and the resilience necessary to cope with the realities of floor nursing due to the lack of coping and reality training during nursing school (Hodges, Keeley & Grier, 2005). Additionally, not all nursing students experience clinicals in settings outside of the hospital. While some curriculums incorporate an extensive variety of clinical sites into their practical aspect of the curriculum, others have only hospital unit-based exposure to the nursing students. This lack of exposure is fully hindered if there is

no career planning incorporated into the practicum by the faculty. If a student feels uncomfortable in a hospital setting due to the lack of desire to work in one, they should be prepared with other options in nursing, including public health nursing, school health nursing, and primary care office nursing. In order to develop resilience that will continue throughout an entire career, early planning and development is essential during school (Waddell, Spalding, Canizares, Navarro, Connell, Jancar & Victor, 2015). This further emphasizes the need for resilience training and incorporation into nursing curricula.

Nursing leadership affects resiliency of nursing staff and themselves as leaders. The American Nurses Association's efforts in creating healthier nurses through better self-awareness and self-care supports this notion of nurse managers and nurse leaders empowering their staffs wholistically and individually through their "Healthy Nurse, Healthy Nation" campaign (O'Flaherty, 2018). This campaign suggests that nurses need to be the best versions of themselves in order to best care for others, and includes many ways to support nurses in taking the steps to bettering themselves.

Deirdre O'Flaherty (2018) supports that the basis of a well-functioning workplace begins with proper communication and purposeful actions. These can be and should be exemplified in the nurse leader's own actions and interactions with staff and patients alike on the unit. This can be shown by being more intentional in recognizing positive actions of nurses, being more purposeful in respecting people's personal balances between life and work, and by being more supportive and open for the staff to approach about difficult subjects. All of these actions lead to staff feeling more appreciated and valued. These feelings of appreciation will alleviate moral distress of potential conflicts or discomforts in

the workplace, and will therefore lead to increased resilience among the staff (O'Flaherty, 2018). Hospitals typically spend a lot of time and effort focusing on how to better care for patients, and nurse managers and administrators alike should focus more attention to better caring for the nurses. O'Flaherty (2018) continues to explain that a highly involved, motivated, and empowering nurse manager is essential for conquering unit-wide goals, establishing cohesiveness within staff, and overall providing a better experience for every nurse. All of these factor into creating more resilience among each individual and in the nursing role (O'Flaherty, 2018). By constantly implementing their actions that promote resilience, nurse leaders promote greater career satisfaction, more unit-wide engagement, and ultimately superior rates of retention, as the nurses feel valued and more inclined to stay due to the support that promotes resilience (O'Flaherty, 2018).

When nurse leadership participate in the actions that promote engagement & ultimately resilience in their nurses, there are many other positive outcomes that inadvertently result. With a staff full of nurses who feel supported by management, and valued by administration, there will be better team communication. In fact, Terry Zysk (2018) reports that an atmosphere of nursing resilience in a hospital or on a unit is reliant on strengthened communication. Zysk (2018) exemplifies a strong correlation between nursing burnout and resilience. Increasing resilience within a nursing staff greatly decreases nursing burnout. Once factors that escalate and contribute to nursing burnout are recognized and rehabilitated, resilience can be developed. Nursing burnout is not just due to the long hours and often thankless work, but it's due to a combination of emotional and physical labor (Zysk, 2018). Addressing nursing burnout and in turn increasing nurse resilience will help

hospitals financially because the effects of nursing burnout are costly to a hospital (Zysk, 2018). The researcher reports on the relevancy of nursing burnout, stating that approximately 70% of all nurses have been the victims of nursing burnout at some point in their career, and almost 50% of nurses have deliberated a career change (Zysk, 2018). According to the Advisory Board Nursing Executive Center, “Rebuild the Foundation for a Resilient Workforce”, burnout results in more nurses calling out of work or being absent from their position, costing approximately \$1685 per nurse each year; it results in greater rates of hospital-acquired infections, including the common catheter attributed urinary tract infections (CAUTIs); and it results in higher rates of nursing turnover, costing a hospital or organization approximately \$90,000 for each nurse who leaves their institution (Zysk, 2018). Establishing regiments and training programs focused on increasing nurse resilience would be a financially sound decision for administrators in the hospital.

Throughout their professional careers, nurses will come across situations that will challenge them, and having resiliency will allow them to conquer these instances. It is not just the new graduate nurses who need the extra support in developing resilience in their career, but many different kinds of nurses, varying in specialties and years as a professional. Early career nurses, defined as registered nurses for less than three years, need extra support in the beginning of their career beyond their first year as is typical with orientation or preceptorship (Wang, Zhang, Tao, Bowers & Brown, 2018). Those in their first three years of nursing find the most prominent factor that defers them from success is a lack of social support (Wang et al., 2018). It has been shown that the transition from student to new graduate nurse to early career nurse is stress-producing, as there are many different feelings

experienced throughout transitioning roles. Particularly, feelings of anxiety and loneliness (Wang et al., 2018). During this transition, support at work is essential, and can impact the path of the nurse's future career by illustrating the way a work environment will be (Wang et al., 2018). A study of 747 early career nurses supported that learning ways to increase one's resilience in their personal life and in the workplace positively affects an early nurse's development, and thus reducing nursing turnover (Wang et al., 2018).

Throughout different areas of nursing, resiliency is equally important. For example, a study completed with psychiatric nurses exemplified a positive correlation between mental health and resilience (Dehvan, Kamangar, Baiezeedy, Roshani & Ghanei-Gheshlagh, 2018). This is especially useful in the field of psychiatric nursing, working with vulnerable populations with altered mental states or mental disorders, and needing the capabilities to persevere despite stressful and potentially dangerous situations. (Dehvan et al., 2018). Being confident in one's skills to handle adversities on a daily basis is essential for a specialty of nursing as often unpredictable in psychiatric nursing.

Another instance of a specialty requiring high levels of resiliency is medical-surgical nursing. In a study completed in 2017, medical-surgical nurses with resilience were able to provide more consistent support and care to their wide range of patients with a variety of different conditions (de Souza Maia, de Souza, Corrêa Sória & Bertoldi da Costa, 2017). Resiliency in medical-surgical nursing also contributes to the ability to encounter and include families of patient members in the plan of care, and to be able to focus on the patient more holistically than being entirely disease-focused (deSouza et al., 2017).

Resilience has proven to be essential for nurses throughout their careers, whether they are still in nursing school, new graduate nurses, early career nurses, or nurse leaders. While nurses come from rigorous programs that are comprised of academic preparedness and success, these programs are lacking an essential piece of curriculum that will last with the graduate long after the completion of the program, and hospitals lack the environments that promote empowerment and conduciveness of resilience. Resilience needs to be taught and reinforced throughout nursing school, new graduate nurse orientation programs, and over time in a nurse's career.

Resilience Across the Continuum in the Development of Nursing Experience:

Methodology

Since the literature has established that resilience is a measurable construct, this purpose of this descriptive study is to investigate levels of resiliency with junior and senior baccalaureate nursing students at Ramapo College of New Jersey. This project was completed as a senior honors thesis and runs alongside a similar study run by the Northern New Jersey Evidence Based Research Consortium on resilience in nurses and nurse managers at local hospitals. This project received Institutional Review Board approval on March 8th, 2019 through Ramapo College's Institutional Review Board. The survey items, along with demographic items were uploaded to Qualtrics and a link to the survey was created. The survey was distributed via email to the senior and junior nursing students at Ramapo College. All potential survey respondents received an initial invitation to the survey, and a follow-up invitation to the survey after two days. The survey was emailed on

Wednesday, March 13th, 2019 and closed on Wednesday, March 20th, 2019, giving survey respondents one week to complete the survey.

Participation in this survey was strictly voluntary, and participants agreed to their voluntary participation by virtually signing an informed consent document at the beginning of the survey. The informed consent was written as follows:

“The purpose of this survey is to gather information to identify the level of resiliency of junior and senior nursing students at Ramapo College. The survey should not take more than five minutes to complete, and can be completed independently and online. Participants will be asked a series of questions related to life experiences, coping measures, and other measurements of resiliency, and are asked to answer these questions honestly and to the best of their ability.

This survey gives participants an opportunity to reflect on their past life experiences & struggles, and examine how they’ve reacted to them, both negatively and positively. We understand self-reflection can be overwhelming, and encourage any participant that may be overwhelmed talk to a trained professional at the Counseling Center at Ramapo if they feel that would help.

Participants’ answers to this survey are anonymous and no names will be disclosed. Should any student have any questions about this research or this survey, please reach out to Amy Aroune at aaroune@ramapo.edu or the faculty sponsor for this research, Dr. Cristina Perez.

Participation in this study is voluntary, and refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled. The subject may

discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. Completion of the survey implies that consent is given to participate.”

This informed consent was placed at the beginning of the Qualtrics survey, followed by two options for students to choose from: “By selecting this choice, I agree to the above statement and give consent to have my answers used in this survey” and “By selecting this choice, I do not agree to the above statement and do not give consent to have my answers used in this survey”. If students did not agree to the informed consent and chose the second response indicating so, the survey automatically ended. Otherwise, once the students agreed to the informed consent, the questions concerning demographics began.

In order to gain an accurate understanding of the survey participants, there were three questions concerning the relative demographics of each individual. The questions in this category were:

1. Which of the following choices best describes your class year in the nursing program?
 - a. Junior
 - b. Senior
2. Which of the following choices best describes your gender?
 - a. Male
 - b. Female
 - c. Other/Prefer Not to Say
3. Which of the following choices best describes your age?

- a. 19-21 years old
- b. 22-24 years old
- c. 25 years old or older

Following the questions related to demographics, the questions included all the questions from the 25-piece Connor-Davidson Resilience Scale (Connor & Davidson, 2003). This scale was obtained legally, with payment for its use in this study, and its authors granted permission for it to be used in the full extent for the purpose of this research. The 25 questions were to be answered by all participants based on their agreement with the statements as they applied in the month prior to answering that survey. If inapplicable, the participants were instructed to answer according to how they think they would have felt or acted. The 25 questions/statements from the Connor-Davidson Resilience Scale are as follows:

1. I am able to adapt when changes occur.
2. I have at least one close and secure relationship that helps me when I am stressed.
3. When there are no clear solutions to my problems, sometimes fate or God can help.
4. I can deal with whatever comes my way.
5. Past successes give me confidence in dealing with new challenges and difficulties.
6. I try to see the humorous side of things when I am faced with problems.
7. Having to cope with stress can make me stronger.
8. I tend to bounce back after illness, injury, or other hardships.
9. Good or bad, I believe that most things happen for a reason.
10. I give my best effort no matter what the outcome may be.

11. I believe I can achieve my goals, even if there are obstacles.
12. Even when things look hopeless, I don't give up.
13. During times of stress/crisis, I know where to turn to for help.
14. Under pressure, I stay focused and think clearly.
15. I prefer to take the lead in solving problems rather than letting others make all the decisions.
16. I am not easily discouraged by failure.
17. I think of myself as a strong person when dealing with life's challenges and difficulties.
18. I can make unpopular or difficult decisions that affect other people, if it is necessary.
19. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.
20. In dealing with life's problems, sometimes you have to act on a hunch without knowing why.
21. I have a strong sense of purpose in life.
22. I feel in control of my life.
23. I like challenges.
24. I work to attain my goals no matter what roadblocks I encounter along the way.
25. I take pride in my achievements.

All of these questions had the response choices of a.) not true at all; b.) rarely true; c.) sometimes true; d.) often true; e.) true nearly all of the time. The choice of a.) not true at all constitutes zero points towards the CD-RISC score; the choice of b.) rarely true constitutes one point towards the score; the choice of c.) sometimes true constitutes two points towards

the score; the choice of d.) often true constitutes three points towards the score; and the choice of e.) true nearly all of the time constitutes four points towards the score. After answering all of the questions in the Connor-Davidson Resilience Scale portion of the survey, the individual's score of resilience can be totaled by adding up the amounts of point awarded to each question. Each individual's score can range from 0-100, with higher scores indicating greater indications of resiliency (Connor & Davidson, 2003).

Resilience Across the Continuum in the Development of Nursing Experience: Analysis & Discussion

The survey reached 112 participants in total, although 15 of those individuals had incomplete surveys. The total number of participants that completed the survey accurately was 97 respondents. Out of the 97 survey respondents, 85 were female, 10 were male, and 2 chose the option of "other/prefer not to specify" regarding their gender. Out of the 97 survey respondents, 57 were senior nursing students at Ramapo College, while 40 were junior nursing students at Ramapo College. Regarding age, 58 survey respondents were between 19 and 21 years old; 33 survey respondents were between 22 and 24 years old; and 6 survey respondents were 25 years or older. The current junior class of nursing students at Ramapo College has approximately 120 students and the current senior class of nursing students at Ramapo College has approximately 90 students. When including the total number of survey respondents, regardless of if their survey was filled out to completion, the survey reached more than 50% of the targeted population (approximately 105 students). When using the most accurate number of survey respondents, 97, the survey reached just under 50% of the

targeted population, approximately 46% of the junior and senior nursing student population at Ramapo College.

Each survey respondents' answers were calculated according to the Manual of the Connor-Davidson Resilience Scale, awarding zero points for each answer selection of "not true at all", one point for the answer selection of "rarely true", two points for the answer selection "sometimes true", three points for the answer selection "often true", and four points for the answer selection "true nearly all of the time" (Connor & Davidson, 2003) to calculate each individual's score of resilience according to this scale. Overall, the average resilience score of all survey respondents, the junior and senior nursing students of all genders at Ramapo College, was 73.15. The lowest resilience score reported in this survey was 43, while the highest resilience score reported in this survey was 96.

By class year, the average resilience scale of all senior nursing students at Ramapo College was 75.23, while the average resilience scale of all junior nursing students at Ramapo College was 70.18. By gender, the average resilience scale of all female nursing students at Ramapo College was 73.61, while the average resilience scale of all male nursing students at Ramapo College was 69.83. Additionally, the average resilience scale of all nursing students at Ramapo College that identified as "other/not specified" was 67.5. Broken down even further, the average resilience score of female junior nursing students was 71.82, while the average resilience score of female senior nursing students was 74.75. The average resilience score of male junior nursing students was 60.4, while the average resilience score of male senior nursing students was 80.2. Tables depicting this data are below:

Resilience Scores Based on Class Year

Average Resilience Score Juniors	70.18
Average Resilience Score Seniors	75.23

Resilience Scores Based on Gender

Average Resilience Score Female	73.61
Average Resilience Score Male	69.83
Average Resilience Score "Other"	67.5

Resilience Scores Based on Class Year & Gender

Average Resilience Score Male Juniors	60.4
Average Resilience Score Male Seniors	80.2
Average Resilience Score Female Juniors	71.82
Average Resilience Score Female Seniors	74.75
Average Resilience Score "Other" Juniors	67.5

When examining the resilience scores by the age range, the average resilience score of all survey respondents between the ages of 19 and 21 was 71.66. The average resilience score of all survey respondents between the ages of 22 and 24 was 76.03. The average resilience score of all survey respondents 25 years or older was 71.67. Furthermore, the average resilience score of all females between the ages of 19 and 21 was 71.81, while the average resilience score of all males between the ages of 19 and 21 was 71. Additionally, the resilience score of those who identified as "other/not specified" between the ages of 19 and

21 was 65. The average resilience score of all females between the ages of 22 and 24 was 76.5, while the average resilience score of all males between the ages of 22 and 24 was 73.4. The average resilience score of all females 25 years of age or older was 79, while the average resilience score of all males 25 years of age or older was 61.5. Additionally, the resilience score of those who identified as “other/not specified” 25 years of age or older was 70. Tables depicting this information are below:

Resilience Scores Based on Age

Average Resilience Score Ages 19-21	71.66
Average Resilience Score Ages 22-24	76.03
Average Resilience Score Ages 25 +	71.67

Resilience Scores Based on Gender & Age

Average Resilience Score Females 19-21	71.81
Average Resilience Score Males 19-21	71
Average Resilience Score “Other” 19-21	65
Average Resilience Score Females 22-24	76.5
Average Resilience Score Males 22-24	73.4
Average Resilience Score Females 25 +	79
Average Resilience Score Males 25 +	61.5
Average Resilience Score “Other” 25 +	70

Examining the class year and age range together, the average resilience score of juniors between the ages of 19 and 21 was 68.73, while the average resilience score of

seniors between the ages of 19 and 21 was 74.03. The average resilience score of juniors between the ages of 22 and 24 was 73.75, while the average resilience score of seniors between the ages of 22 and 24 was 76.76. The average resilience score of juniors 25 years of age or older was 71.67, while the average resilience score of seniors 25 years of age or older could not be calculated, as there were no survey respondents that were seniors and 25 years of age or older. A table depicting this data is below:

Resilience Scores Based on Class Year & Age

Average Resilience Score Juniors 19-21	68.73
Average Resilience Score Seniors 19-21	74.03
Average Resilience Score Juniors 22-24	73.75
Average Resilience Score Seniors 22-24	76.76
Average Resilience Score Juniors 25 +	71.67

Considering all three factors of class year, age range, and gender, the average resilience score of junior females between the ages of 19 and 21 was 69.43, while the average resilience score of senior females in the same age range was 73.58. The average resilience score of junior males between the ages of 19 and 21 was 62.5, while the average resilience score of senior males in the same age range was 88. The average resilience score of juniors who identified as “other” between the age range of 19 and 21 was 65. The average resilience score of junior females between the ages of 22 and 24 was 76.57, while the average resilience score of senior females between the ages of 22 and 24 was 76.48. The average resilience score of junior males between the ages of 22 and 24 was 54, while the

average resilience score of senior males between the ages of 22 and 24 was 78.25. The average resilience score of junior females 25 years of age or older was 79, while the average resilience score of junior males 25 years of age or older was 61.5. The average resilience score of juniors who identified as “other” 25 years of age or older was 70. A table depicting this information is below:

Resilience Scores Based on Class Year, Gender & Age

Average Resilience Score Junior Females 19-21	69.43
Average Resilience Score Senior Females 19-21	73.58
Average Resilience Score Junior Males 19-21	62.5
Average Resilience Score Junior Other 19-21	65
Average Resilience Score Senior Males 19-21	88
Average Resilience Score Junior Females 22-24	76.57
Average Resilience Score Senior Females 22-24	76.48
Average Resilience Score Junior Males 22-24	54
Average Resilience Score Senior Males 22-24	78.25
Average Resilience Score Junior Females 25 +	79
Average Resilience Score Junior Males 25 +	61.5
Average Resilience Score Other 25 +	70

Although all of this data presented is very pertinent to this study, the main points to draw attention to include the following: the overall average score of resilience from this study was 73.15. Additionally, this study indicates that overall, senior nursing students at Ramapo College have greater levels of resilience than junior nursing students at Ramapo

College. This study also implies that females in the nursing program at Ramapo College have greater levels of resilience than males and students identifying with another gender in the nursing program at Ramapo College. Lastly, this study implies that students between the ages of 22 and 24 in the nursing program at Ramapo College have greater resilience than nursing students of any other age ranges in the program at Ramapo College.

According to the Connor-Davidson Resilience Scale Manual, the general population of the United States of America has a mean score of resilience of 80.7 (Connor & Davidson, 2003). There have been many reports using the Connor-Davidson Resilience Scale, specifically looking at students. While there have been a wide variety of age groups of these studies, there are a number of studies that also focused on college-aged students. A study performed in Australia in 2008 examining Australian young adults and undergraduate college students used the same 25-question Connor-Davidson Resilience Scale and reported a mean score of 68.3 (Connor & Davidson, 2003). Additionally, a study performed in Arizona, USA in 2010 studied college students, totalling 856 and averaging 18.6 in age, reported a mean score of resilience to be 72.9 (Connor & Davidson, 2003). Another study conducted in Australia in 2010 surveyed 401 university students, with the average age of 23.6, and reported an average score of resilience to be 69.1 (Connor & Davidson, 2003). The most similar study to the study conducted at Ramapo College is one performed in 2012 on 70 nursing students, with a report of an average score of resilience of 74.9 (Connor & Davidson, 2003).

Since the overall average score of resilience from this study was 73.15, that indicates our students have greater levels of resilience when compared with some similar studies

performed using the same scale, while in other instances, our students have lower levels of resilience than other groups in similar situations. Although our average score of resilience is below the general population's mean score of resilience, there are many factors that can explain this difference. Additionally, our average score of resilience is less than seven points away from the general population's average, which is ultimately not far off.

As with many studies, there are limitations to this study. These include the short window of time participants had to respond to the survey, as it only was live for one week. Another limitation to the study was missing questions relating to demographics. Since we focused only on nursing students at Ramapo College in order to have more narrow and precise results to report on, we did not ask as many questions that could have been asked regarding other factors that the Connor-Davidson Resilience Scale has been effective in evaluating the correlations to. These include psychiatric disorders, mental health status, homelessness/poverty level, economic status, exposure to trauma, existence of medical problems, stress levels, coping abilities, overall health status (Connor & Davidson, 2003).

Additionally, the survey created only included three questions of demographics, including age range, class year, and gender. The survey could have included additional questions, such as status of housing as a student (i.e. residential or commuter student), current employment status (healthcare or non-healthcare related), academic success (i.e. GPA, course grades), race and ethnicity, history of medical issues, among others. Although the three demographics questions allowed for a wider report of differences in levels of resilience among these different populations, there could have been more factors identified

that led to either a positive or negative correlation in resilience if there had been additional questions asked related to demographics.

Furthermore, participation in this study was voluntary and the report is entirely self-reported, and both of these aspects can be interpreted as limitations to the study. Seeing the study reached just beneath 50% of the total targeted population proves the limitation of the study, as does the total number of participants that completed the survey being less than 100. Having 97 participants, although it is nearly 50% of the targeted population, is a weak sample size and creates difficulty in being able to draw assumptions from this study to relate to a greater population.

Another limitation to study is human error. The Qualtrics system generated a report on all of the responses, but the student researcher calculated each individual's responses according to the Connor-Davidson Resilience Scale scoring system to identify each respondent's score of resilience. Although this was completed electronically with formulas in Google Sheets, there is room for error as the student researcher is human.

Resilience Across the Continuum in the Development of Nursing Experience:

Implications for the Future of Nursing & Conclusion

Resilience is essential to the career of nursing, and as students learning how to be the best healthcare providers they can be, it is also essential to have and to strengthen a nursing student's level of resilience. As this study shows, the overall score of resilience for all junior and senior nursing students at Ramapo College falls right beneath the Connor-Davidson Resilience Scale standard for the general population. This calls for action to be taken for

these students at Ramapo College, to increase the resilience of each individual student. As discussed earlier, tools like mindfulness and coping skills can be incorporated into curriculum, to bring awareness to the need for creating this foundation so important to each student's future career. Additionally, an idea that the student researcher and faculty sponsor have been working with the Northern New Jersey Evidence Based Research Consortium in creating the development of a resiliency toolbox, to increase each participant's level of resilience. This study will work as a foundation of research for the current state of resilience in undergraduate nursing students, and similar studies will be conducted with new graduate nurses, nurse leaders and managers, as well as nurse administrators to explore the need for a toolbox once in the career as well. This study identified that there is indeed a lack of resilience in many nursing students at Ramapo College, and further action must be taken to improve each individual's ability to maintain and strengthen their resilience as they continue through the nursing curriculum at Ramapo College, and their career beyond this campus.

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