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Maggie Lynch

La Salle University, [lynchm23@lasalle.edu](mailto:lynchm23@lasalle.edu)

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**Title of Doctor of Nursing Practice Project:**

**Development of a Resilience Program to Combat Burnout in Nursing Practice**

**Author:** **Maggie Lynch**

**Approved by:** **Mindy L. Tait, PhD, MBA, CRNP, FNP-BC**  
DNP Team Chair

**Jesse Wool, PhD, MBE, RN, CCRN**  
DNP Team Member

**DATE:** **July 14, 2023**



Submitted in partial fulfillment of the requirements for the Degree of Doctor of Nursing Practice.

**Development of a Resilience Program to Combat Burnout in Nursing Practice**

A Doctor of Nursing Project Presented to the Faculty of the School of Health Sciences La Salle

University

In Fulfillment of the Requirements for the Degree Doctor of Nursing Practice

By

Maggie D. Lynch, MN, NPD-BC

July 14, 2023

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**Maggie Lynch**

**July 26, 2023**

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## **Abstract**

Burnout has been identified as a national health crisis, with implications for the retention and health of critical healthcare workers. Acknowledging the innate stressors of providing healthcare it is the responsibility of leaders in the industry to mitigate burnout to sustain the workforce critical to healthcare in the United States. Understanding resilience and how to foster it in nurses will contribute to burnout prevention and consequently improve the quality of health care provided Americans. Resilience training has been identified as a valuable approach to retention of the workforce. This scholarly project developed a resilience training program for newly licensed registered nurses (NLRN) to promote awareness of self-care behaviors and healthy responses to counteract stress and promote a culture of safety. The program teaching plan's content was evaluated by a panel of experts to establish individual and scale level validity. The program was introduced into the curriculum of an existing Nurse Residency Program seminar and training was completed by twenty-five participants. Using the Connor-Davidson Resilience Scale, a statistically significant difference in reported resilience was evident after participation in resilience training. Introduction of resilience training in a nurse residency program positively impacts resilience development with potential to promote burnout prevention.

*Key Words: Burnout, Nurse, Newly Licensed Nurse, Resilience*

## **Development of a Resilience Program to Combat Burnout in Nursing Practice**

Burnout is described as an occupational syndrome characterized by a high degree of emotional exhaustion and depersonalization complicated by a low sense of personal accomplishment at work (Department of Health and Human Services [DHHS], 2022). Given the physical, emotional, and intellectual demands of nursing practice, nursing professionals are at risk and the implications for healthcare delivery are significant. In 2019, the National Academy of Medicine called attention to “crisis levels” of burnout, with 35-54% of nurses and physicians reporting symptoms. Conditions resulting from the pandemic beginning in 2020 have only highlighted these risks and accentuated the sense of urgency for a call to action.

In a recent advisory (2022), the Surgeon General of the United States put forth a call to build a thriving healthcare workforce and address conditions contributing to burnout, citing the many detrimental effects on patient care and safety as well as the financial burden when burnout contributes to turnover. These effects are in direct conflict with the recent focus of healthcare organizations (HCO) pursuing the journey to become high reliability organizations (HRO).

Weick and Sutcliffe (2007) describe high reliability organizations (HRO) as those that are high risk, dynamic, turbulent, and potentially hazardous. Despite these characteristics they operate nearly error free. In health care institutions, this translates to a system that relentlessly pursues error prevention while operating in high-risk, emergent conditions. The Joint Commission (TJC) promotes a framework for HRO development based in three domains. First, the leaders must embrace the goal of zero harm; second, the organization must support a culture in which staff is supported to speak up regarding vulnerabilities to the goal of zero harm; and

finally, all staff must be actively involved in robust process improvement. That process improvement must be directed at all aspects of care, including the environment of care delivery and the condition of the care providers.

## **Background**

As a healthcare organization (HCO), Virtua Health embraces the model of high reliability as an obvious alignment with their mission to “help you be well, get well, and stay well” (Virtua Health, 2020, para. 1). Their vision is to “demonstrate compassion and high reliability by delivering the highest quality, accessible, and coordinated care to our community as your trusted choice for personalized health care and wellness (Virtua Health, 2020, para. 3). Virtua’s mission and vision are supported by six guiding principles: to be patient and consumer centric; practice open communication; lead with purpose; support continuous learning and innovation; promote inclusive teamwork; and care with accountability. While patient outcomes are a priority of the health system Virtua recognizes that the system can only be as healthy as its individuals and recently initiated the “We Thrive” program recognizing well-being as a priority that encompasses the whole person to create an environment that promotes work-life meaning, connection and joy. The program provides resources to foster each colleague’s health journey.

As stated in the Surgeon General’s Advisory (2022) burnout requires attention on many levels. From a nursing process perspective, there is not a direct cause and effect that triggers a plan to mediate burnout. There are many factors that contribute to burnout, but the most basic explanation lies in the individual’s response to the stressors that are innate in their roles. Nursing demands intellectual, emotional, physical, and spiritual strength daily. Meeting the needs of patients and families in crisis while navigating interprofessional collaboration is taxing and has implications for the health of the nurse and patient outcomes. Nursing environmental factors



such as staffing ratios, patient acuity and support resources can mediate or intensify the individual stress experience. The approach to burnout prevention must be multi-faceted with systems-oriented, organizational-level solutions. First, organizations are responsible to address stressors that can be mediated by promoting safe environments supported by appropriate staffing, accessible resources, and operational support. Organizations are also responsible to focus on the individual workers: promoting development of tools to manage stress in a productive way that contributes to work-life meaning and joy. Resilience has been identified as a crucial characteristic contributing to the meaning of work-life.

Virtua Health was not immune to the “great resignation” experienced in many industries post-Covid and the impact on the experience distribution of the nursing staff has been significant. As the baby boomer generation and nurses with experience leave the profession that void is being filled with novice nurses. The responsibility for the care of high acuity patients is not met with the same skill mix seen in the past, contributing to the risks involved in dynamic healthcare delivery. As a community health system, Virtua has not typically experienced turnover to the extent that other systems see. Single digit turnover rates have doubled or tripled in some areas since 2020. With that, the influx of inexperienced staff has disrupted the balance of experience distribution throughout the health system. To meet growing demands in 2021 Virtua welcomed 748 registered nurses into the system. Only one-third of these nurses joined as employees with experience; one-third came on as agency contractors to support the staff; and one-third were Newly Licensed Registered Nurses (NLRN). Considering the experience of burnout and the mission to retain NLRN as they develop professionally, attention to the health and welfare of this group is critical.

## **Problem Statement**

Burnout is a threat to the safe delivery of healthcare. Empowerment of nurses in the healthcare system to practice strategies to prevent burnout demonstrates the embodiment of a safety culture. Resilience enables individuals to mediate the factors contributing to burnout. Promoting resilience building strategies will strengthen the individual nurse's response to the experience of stress.

## **Purpose**

This DNP Scholarly Project promoted NLRN resilience as they began their nursing career in the Virtua Health system and created a resilience training program to support nurses in the promotion of a civil, safe, culture for healthcare delivery.

## **Project Question**

In NLRN practicing nursing in acute care settings of a community-based health system, does participation in a resilience training program increase reported resilience?

H<sub>0</sub>: There will be no difference in mean pretest and posttest resilience scores of NLRN participating in resilience training.

H<sub>A</sub>: Mean posttest resilience scores will be different from mean pretest resilience scores of NLRN participating in resilience training.

## **Conceptual Definitions**

Central to this project is the NLRN, a recent graduate of a nursing program hired into their first position as a licensed RN. The term Nurse Resident is synonymous with NLRN as Nurse Residency programs are designed to provide a year of programmed support for the new nurse to transition from academia to professional practice. In the acute care setting at Virtua

Health these nurses can be graduates of hospital-based degree, associate degree and Baccalaureate Degree programs and can begin their career in any acute care setting in the system including Medical-Surgical, Critical Care, Emergency Department, Surgical Services, Maternal-Child, or Behavioral Health settings.

Burnout is defined by Mudallal (2017) to be an occupational syndrome defined by a decline in physical, emotional, and psychological energy resulting from work related stress that leads to cynicism and feelings of low self-efficacy. Burnout is characterized by high emotional exhaustion, high depersonalization, and low personal accomplishment. For healthcare workers to remain effective burnout must be prevented and the contributing factors must be managed. Resilience is defined by the American Psychological Society as “the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional and behavioral flexibility and adjustment to external and internal demands” (2022). To combat the development of exhaustion, depersonalization, and personal defeat an educational program to develop resilience was facilitated. Approaches to development of resilience traits were investigated for facilitation of the educational program.

## **Review of Literature**

### **Systematized Review**

The PICO question for this DNP project is stated: In Newly Licensed Registered Nurses (NLRN) does participation in an educational program including resilience building strategies affect resilience?

## **Search Strategies**

Using this PICO question, the search of the literature began July 21, 2022, with resources available through the Virtua Health, Health Sciences Library with access to CINAHL, PubMed, Med-Line, EBM Reviews and Nursing databases. Keyword search terms included: nurse, nurse resident, newly licensed registered nurse with the Boolean term “or.” Keyword search terms were added with the Boolean operator “and”: resilience; burnout or compassion fatigue; prevent\* or combat or address. To garner the most current references, the date range was set for 2017-2022. 5,707 results were initially identified. The restrictions of English language and full text were applied, limiting available options to 196. Duplications were removed producing 98 titles for review. After reviewing titles, 40 abstracts were reviewed and 8 were reserved for further evaluation. Inclusion criteria was limited to resilience building strategies for nurses and interventions for the prevention of burnout or compassion fatigue in nursing. Appendix A captures the search process.

Results included integrated reviews, quantitative descriptive studies, and case reports. Findings were narrowed to conceptual representations and studies representing work from 2017 to present with special attention to studies investigating resilience training and other factors that mediate burnout. References were fully examined utilizing the Johns Hopkins Evidence Appraisal Tool. This tool rates evidence as Level I through V, with I being an experimental study ranging to Level V being expert opinion. The evidence is further assessed by quality grade A through C evaluating the efficacy of the work and its usefulness for application. Appendix B represents the summary of the appraised materials.

## Search Results

### Appraised Literature

Zai et al. (2021) sought to analyze the effect of resilience training in nurses. Following a comprehensive literature search, screening 1533 records, the researchers evaluated 30 articles and included 13 in their analysis. In this meta-analysis they included studies that involved a resilience training program for nurses, evaluated resilience or related outcomes, and reported the outcomes in a quantitative form. Standardized mean differences between pre-post intervention resilience scores were generated based on the reports of thirteen studies that included 576 nurses participating in various forms of resilience training. The researchers included only studies that involved resilience training for nurses which reported quantitative outcomes. Studies involving healthcare workers other than nurses and studies that reported non-quantifiable results were excluded. This meta-analysis found that resilience training improved resilience and reduced stress, anxiety, depression, and burnout.

The analysis provides an overview of approaches to resilience training and the positive effects training has in various settings. The large sample size of registered nurses in various settings is a strength of this study. This study was limited by the inconsistent designs, contents of the training tools under study, and the use of different tools to measure resilience. Use of the standardized mean scores was a significant limitation of this study with an inability to quantify the actual differences in scores. Results do not support generalizability but support the positive effects of resilience training and the need for further investigation into best approaches for training.

Welden et al., (2021) offer a descriptive study of self-perception and degree of resilience comparing a study group to the general population. The authors obtained a convenience sample

utilizing recruitment through email of participating hospital sources. Participants were surveyed using the Connor-Davidson Resilience Scale (CD-RISC;  $\alpha = .89$ ) for reported resilience and the Patient-Reported Outcome Measurement Information System Global Health short form (PROMIS;  $\alpha = 0.81-0.89$ ), to assess self-perceived health status. Eight Midwestern hospitals generated a significant sample of 859 nurses who completed the study.

Utilizing a t-test and linear regression the authors found that when compared with the general population (United States), nurses reported a significantly lower degree of resilience and worse physical health, while their perceived mental health status was not significantly different. Results of the Pearson correlation analysis demonstrated that self-perceived mental ( $r=0.3796$ ,  $p<.001$ ) and physical health ( $r=0.6076$ ,  $p<.0001$ ) was strongly associated with the degree of resilience. These results support consideration of the experience of self-care strategies and resilience promotion through the nursing continuum. It must be noted, however, that this cross-sectional study may not infer causal relationships. Bias should also be considered as a limiting factor while only 20.1% of those invited participated in the study.

Anderson et al., (2021) performed a quasi-experimental cross sectional, longitudinal repeated measures survey design, introducing on the job tools for stress reduction. Rather than offering resilience training, this study investigated the use of portable, accessible tools to decrease stress and increase resilience during work hours. Toolkits with instructions for six activity options were available on demand. Staff resilience measurements using the Connor-Davidson Resilience Scale-10 (CD-RISC 10) were obtained at baseline, at ten points over a 4-6-week period, and at study conclusion.

Results of the surveys showed resilience increased significantly at four-weeks and continued at three months ( $p <.02$ ). Self-reported stress levels decreased over the three-month

study period and more importantly, nurses chose to continue using the interventions. The study contributes to the option of resilience enhancing activities rather than the structure of formal training. Limitations to consider are the small non-random sample size in a single site setting.

Sampson, Melnyk and Hoying (2019) provided the strongest evidence under review with their single site randomized control trial demonstrating that cognitive behavior training had a positive impact on anxiety, depression, lifestyle beliefs and lifestyle behaviors of NLRN. Participants in a nurse residency program were randomly assigned to study or control groups. Implementing the MINDBODYSTRONG program with a control group showed moderate to large positive effects on mental health variables and healthy lifestyle beliefs and behaviors, promoting the characteristics critical to resilience. Utilizing a MANOVA the control group measured statistically significant improved perceived stress ( $P=.022$ ), lower anxiety scores ( $P=.002$ ) and lower depressive symptoms ( $P=.004$ ) immediately after the program and three months following completion. Another MANOVA was conducted to determine positive change in healthy lifestyle changes over time with a significant difference in control group scores ( $P=.001$ ). Job satisfaction was not significantly different between the control and intervention group at the three-month follow-up (Cohen  $d = 0.35$ ). This study supports the teaching of cognitive behavioral skills to strengthen the ability of NLRN to manage stress and engage in healthy lifestyle behaviors contributing to resilience.

Tabakakis et al., (2019) investigated the impact of bullying and practice environment in shaping resilience. The researchers performed a cross-sectional study among a sample 480 nurses accessed from a random selection of 5000 nurses pulled from the register of over 40,000 nurses in New Zealand. Utilizing self-reporting mechanisms, the researchers investigated the relationship between resilience, practice environment and bullying. Resilience was measured with the Connor-

Davidson Resilience 10 Scale (CD-RICS 10;  $\alpha=0.88$ ), practice environment was measured with the Practice Environment Scale of the Nursing Work Index (PES-NWI;  $\alpha = 0.94$ ) and bullying was represented through use of the Negative Acts Questionnaire-Revised (NAQ-R;  $\alpha = .93$ ).

The researchers found resilience to be positively correlated with positive practice environment scores and negatively correlated with bullying; statistical significance ( $p<.0.001$  and  $p= 0.002$ ) with decreasing resilience scores as workplace conflict increased. This large sample contributes significantly to the body of work. Use of tools consistent with other studies is appreciated, but cultural differences in the practice arenas in other countries should be considered. While individual characteristics impact resiliency, the external forces of the work environment cannot be ignored. The individual development of resilience traits must be enhanced by workplace resources, role models and social support.

### **Related Literature**

Calling the American people's attention to health worker burnout as an urgent public health issue, the U.S. Surgeon General, Vivek Murthy, M.D., emphasizes the urgency with which health care leaders must address the health and wellness of the healthcare workforce (DHHS, 2022). Stating that the health of the country depends on the health of the workforce this call-to-action outlines responsibilities of healthcare agencies, governments, academics institutions and the community at large to address the vulnerabilities in our system, beginning with a focus on the individuals. Addressing burnout requires a multi-faceted approach. Fostering resilience is one element deserving attention to help individuals help themselves.



Perkins (2021) explains the importance and urgency of promoting resiliency in healthcare today. With increasing demands on the industry, preventing burnout and promoting retention among the ranks is imperative. Individuals demonstrating resilience are better prepared to address the challenging landscape and remain in the workforce promoting safe practices. She further explains the internal and external forces influencing resilience and calls upon the profession to support those forces. Some individuals innately possess the internal characteristics that foster resilience (optimism, sense of purpose, faith/beliefs, sense of self, empathy, insight, hope, self-efficacy, coping skills, flexibility, adaptability, emotional intelligence) and have the external structures of social networks and support, role models and workplace resources. Targeting the gaps in those characteristics and structures is the focus of resilience promotion programs for the newly licensed nurses in our workforce.

### **Search Summary**

There is a sense of urgency to identify interventions that promote resilience and combat compassion fatigue or burnout in nursing professionals. Different approaches are found in the literature: creative arts therapy, peer support network, social media campaigns and educational interventions. Commonly used tools to measure resilience are the Connor-Davidson Resilience Scale, Casey-Fink Graduate Nurse Experience Survey, Perceived Stress Scale, and the Maslach Burnout Inventory Scale. There is consistent reporting that interventions aimed at resilience show improved scores on the scales indicating resilience and some associations with decrease in burnout. Few studies utilized the same approach to resilience education and training although consistent themes of self-awareness, self-care, and stress management are included in most programs. Little consideration has been reported in the reviewed programs, to incorporation of emotional intelligence training. Resilience is dependent on both internal and external factors as

Perkins (2021) described. In the absence of external foci management, the nurse must rely solely on internal forces. Littlejohn (2012) explains that those with EI can understand emotions quickly and respond with mindfulness in times of stress. Consideration should be given to including EI training in any programs aimed at resilience training. This literature search contributed to the foundation of the DNP scholarly project to develop an educational program aimed at NLRN for the purpose of resilience development.

### **Conceptual Framework**

The Relationship Based Care Model (Koloroutis, 2013) serves as the conceptual model for this project. Relationship Based Care (RBC) is comprised of three crucial relationships: care provider relationship with patient and families; care provider relationship with self; and care provider relationship with colleagues. Care provider's relationship with self will inform development of resilience training for NLRN. This relationship is fundamental to maintenance of individual optimal health supporting empathy for the experience of others which is critical to the practice of nursing. RBC expands the foundation of this relationship to identify self-knowing and self-care emphasizing that emotional reactions affect the capacity for caregiving and teamwork while the management of personal needs and values balance the demands of the job with physical and emotional well-being.

### **Method**

#### **Design**

This DNP Scholarly Project utilized a pre-experimental quantitative design to address the question: Does participation in resilience education and training affect the resilience of NLRN working in acute care in a community healthcare system? The dependent variable was identified

as RN reporting of resilience utilizing a validated resilience scale before and after participation in training. The independent variable was participation in the evidence-based resilience training program.

### **Sample**

This project utilized a convenience sample of NLRN hired into positions in acute care settings in a community healthcare system in southern New Jersey comprised of five hospitals. The target sample size for this project was 20, based on the average number of newly licensed nurses hired on a monthly basis. The participants were recruited from those enrolled in the Nurse Residency Program upon hire, and this sample was expected to experience resilience training on the same schedule. To be included in the nurse residency program individuals must be graduates of an accredited school of nursing including hospital-based diploma programs, associate degree programs and Baccalaureate Degree programs; and must hold an RN license in the state of New Jersey. Individuals with previous RN experience were excluded.

### **Setting**

The program took place within the Nurse Residency Program (NRP) curriculum serving NLRN in a five-hospital community healthcare system. The NLRN represent all aspects of acute care. The NRP consists of four-hour seminars held monthly throughout the first twelve months following orientation, each seminar focusing on a different topic of professional development. The seminars are designed to facilitate transition from academia to professional practice with a focus on critical thinking development and clinical reflection.

### **Ethical Considerations**

Approval for this project was obtained from the Virtua Nursing Research Council (Appendix C) and the LaSalle University IRB (Appendix D). It was agreed that the project was

evidence-based quality improvement and did not qualify as human subjects' research. This DNP scholarly project, including an educational program demonstrated limited risk to participants. The benefit of participation is enhanced understanding of the risk of burnout in healthcare workers and development of resilience techniques to prevent burnout. Risk of intrusion into individual psyche was present as personal experiences and individual coping mechanisms were shared to inform discussions. This risk was mediated by ground rules of participation to create a safe space for reflection, foster peer support and maintain confidentiality of participants. Pressure to participate in the program due to the nature of inclusion in the Nurse Residency Program was addressed with full disclosure of the goals, expectations and transparency related to data collection. All NLRN were introduced to the Nurse Residency Program and expected to participate. The addition of resilience training to the curriculum was supported by nursing leadership and as such all NLRN were offered the education. Participants were invited to complete pre- and post- surveys. Survey completion was voluntary. Participants were informed that the results would be utilized to evaluate the program for effectiveness of resilience development and results would be shared for purposes of this academic project. Survey responses were anonymous, and results remain on a secure electronic network. Unique identifiers were self-assigned by participants for the purpose of data analysis pre-and post-intervention. The committee chair has appropriate access to information necessary for review.

## **Instrumentation**

### **Program Development**

This project first required development of the educational program and then evaluation of the effectiveness of that program. The review of literature revealed several interventions that impacted resilience by introducing tools in the work setting to address specific situations and

stress management techniques. One program, MINDBODYSTRONG (Sampson, 2019) incorporated a more comprehensive program aimed at cognitive behavior therapy, that required a recurring commitment from participants over eight weeks and significant investment of resources from the agency. In planning, consideration was first given to the concerns identified by previous NLRN participating in the Virtua Nurse Residency Program. To target the identified needs of the Virtua Health NLRN a program was designed to integrate into the existing curriculum of the Virtua Nurse Residency Program, minimizing the demand on resources for implementation.

The teaching plan was developed after extensive review of the literature, identifying the internal and external characteristics of resilience and strategies for individual development. The importance of burnout prevention, including an understanding of known stressors and progression through reality shock sets the foundation for the teaching plan. The plan builds on these concepts, introducing approaches that foster each of the internal and external characteristics identified as contributing to resilience. The *Teaching Plan for Resilience Development Training to Prevent Burnout in Newly Licensed Registered Nurses* is included in Appendix E.

To assess the effectiveness of the program, permission to utilize the Connor-Davidson Resilience Scale (CD-RISC)<sup>®</sup> was obtained (Davidson, 2022, Appendix F). This measure is a self-rated assessment of stress coping ability. The scale was developed based on concepts of hardiness, adaptation, and stress endurance and validated in diverse samples. Initial factor analyses identified five factors: 1) notion of personal competence, high standards and tenacity, 2) trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, 3) positive acceptance of change, and secure relationships, 4) control, and 5) spiritual influences.

The scale provides quantitative data to observe the effects of the resilience training program. The CD-RISC has been found to have external-internal consistency ( $\alpha = 0.89$ ), test-retest reliability (intraclass correlation coefficient = 0.87) and positive correlation with multiple related measures (Campbell-Sills, L., & Stein M., 2007) .

### **Procedures for Data Collection**

In development of the resilience training program, validity of the educational content was established by subject matter experts. Content validity demonstrates the extent to which the content encompasses the phenomenon of interest (Tappen, 2011). This is established when expert reviewers rate the extent to which a dimension is represented in the teaching plan and the relevance of each component to the program objective. Content validity was pursued utilizing methodology proposed by Yusuf (2019).

The content validation form was prepared including the following conceptual definitions: Nurse Residency Program, Burnout, Resilience, and Evidence-based Teaching Plan. The sixteen elements included in the teaching plan were listed, with instructions to rate the relevance of each using the scale provided: a 4-item Likert scale rating not relevant (1), somewhat relevant (2), quite relevant (3), or highly relevant (4). Content evaluation of the teaching plan was also prepared. Elements of the teaching plan were listed, with directions to acknowledge the inclusion (1= vital part present) or absence (0= vital part missing) of the critical topics identified. The experts were also asked to provide general comments to improve the content. (Sample communication and tools used for content validation are available in Appendices F, G, and H)

Due to the nature of the teaching plan content, the interprofessional panel of reviewers identified drew from various disciplines. The intended panel was comprised of three faculty from separate academic partners with expertise in the academic preparation of NLRN; a Director

of Wellness from the Virtua Health Human Resources team; a Virtua Health Program Manager for Talent and Organizational Effectiveness; a PhD candidate with expertise in moral distress; three Virtua Health nursing professional development specialists with expertise in program and curriculum development; and two Virtua Nurse Residency Program facilitators representing insight into the NLRN experience. The panel of experts were contacted by email, inviting them to contribute their expertise to the content validation of the Resilience Training Program Teaching Plan. The validation forms were attached to the email with directions for completion and return. Of the eleven experts participating, one did not complete the tool.

Once approval was obtained, the teaching plan was introduced into the Nurse Residency Program curriculum. Nurses participating in the Virtua Health Nurse Residency Program were invited to participate. As a pre-test, the CD-RISC was administered by Survey Monkey, allowing anonymity for the participants. Computers were available at the outset of the resilience training session, and participants could also use their personal electronic devices. Time was allotted to complete the pre-test. Following the intervention, the participants had time allotted to complete the immediate post-test. Demographic information was gathered through the same survey technique. Appendix J offers examples of the tools utilized to introduce and engage the participants in survey completion.

### **Data Analysis**

Content validation of the teaching plan was established. Analysis of the validation tools was based on the ten completed tools, utilizing the method put forth by Yusef (2019). Based on the ratings of the Likert scales, each item, and its individual content validity index (I-CVI) were calculated. The I-CVI represents the proportion of content experts giving the item a rating of “quite” or “highly” relevant and is calculated by adding these scores and dividing by the number

of reviewers. The I-CVI scores ranged from 0.8-1.0. The S-CVI, or scale-level content validity is the average of the I-CVI scores for all items on the scale, showing the average of proportion relevance judged by the experts involved. For a panel of ten experts, Ayre and Scally (2014) define an acceptable CVI as 0.8. The S-CVI for content validity of the teaching plan indicates satisfactory content validity. Content evaluation was determined by the same method with I-CVI ranging from 0.8-1.0 and S-CVI measured 0.9, supporting adequate representation of the content. (See Appendix K)

To address the question: “In NLRN practicing in a community hospital setting does participation in an education program including resilience building strategies affect resilience development?” the focus of interest was change in resilience scores. Pre/post test data was pulled from Survey Monkey into SPSS<sup>TM</sup> for analysis. Demographic data (Appendix L, Table 1) was analyzed using descriptive statistics including gender, age, practice location, level of education, and employment status (full/part time). Pre/post resilience scores were analyzed using a two-tailed paired t-test to determine significance between the mean scores of the baseline and post intervention measurements. Appendix L, Table 2 represents this data.

## **Results**

Following content validation of the program by subject matter experts, twenty-seven NLRN participated in the Resilience Training Program; twenty-five self-identified as female and two as male. The age range was reported from 20-54 with the most frequently occurring (mode) being between 20 and 34, and the mean being 32.5 years of age. Time in practice ranged from three to 24 months with a mean of eight months and the mode, sixteen of the twenty-seven having less than six months of experience. 82% of the participants work in a full-time status with five participants in a part-time position. 67% are BSN; 26% AD; 4% Accelerated BSN; and 4%



diploma prepared. Four of the five hospital divisions were represented in the sample: 41% Virtua Our Lady of Lourdes; 37% Virtua Voorhees; 15% Virtua Marlton; and 7% from Virtua Mount Holly. Medical-Surgical units were highly represented with 74% (20 participants), 19% from Progressive Care Units (5); and 4% from Labor and Delivery and Surgical Services respectively (1 each). Two participants completed the pre-test and training but did not complete the post test. Twenty-five participants completed all components of the program and defined the data sample.

Assumptions for use of the paired t-test were met. Equal variance is demonstrated by two measures of the dependent variable (pretest and posttest) for each of the twenty-five NLRN sampled. The data are of ratio measurement (score on a 40-point scale). The data were distributed normally. Overall, the posttest resilience scores were higher by an average of 1.7 points. Supporting the focus of interest, a change in resilience scores was demonstrated following the resilience training program. There was a significant difference in resilience scores between pre-test (M=26.4, SD=4.8) and post-test (M=28.2, SD=5.3);  $t(24)=3.24$ ,  $p(.003)=2.06$ .

## **Discussion**

The National Academies of Sciences, Engineering and Medicine (2021) emphasize the importance of professional well-being and call for action against clinical burnout. It is acknowledged that the responsibility for this well-being requires a multi-faceted approach employing individual nurses themselves, and the systems that support them to foster burnout prevention. Few studies were found reporting the effectiveness of resilience training on burnout prevention. The most effective of those found, MINDBODYSTRONG (Sampson et.al, 2020) is a time intensive program requiring eight weekly sessions. Similar to this scholarly project, the content fosters self-care and stress management skills. Taylor (2019) suggests that primary,

secondary, and tertiary level interventions are needed to fully address the prevention, screening, and treatment of burnout.

The purpose of this quality improvement project was to promote NLRN resilience as they began their nursing career in the acute care settings of the Virtua Health system. To that end, this project leader analyzed relevant literature to identify critical elements of an evidence-based teaching plan. The teaching plan was then validated by subject matter experts, utilizing methodology proposed by Yusef to establish item and scale level validity. The teaching plan was then integrated into the curriculum of the Virtua Nurse Residency Program. To evaluate the effectiveness of the Resilience Training Program, 25 NLRN completed the CD-RISC prior to training and immediately following. Statistical analysis of the mean scores shows significant differences in self-reported resilience following the educational intervention, rejecting the null hypothesis that education would not affect resilience.

This DNP scholarly project implemented a primary level intervention to prevent burnout by drawing attention to and promoting resiliency characteristics. Content of the teaching plan was drawn from sources studying resilience traits and characteristics that promote burnout prevention. The teaching plan incorporates focused strategies to develop the internal characteristics of emotional intelligence, self-regulation, self-care, mental agility, and optimism as well as strategies to capitalize on resources in the practice and professional environments. As a primary level intervention, this project demonstrates statistically significant effectiveness of resilience training for NLRN and can be used as a model for further program development with other nursing populations to support retention initiatives.

### **Major Findings**

Nurse Residency Programs have become regarded as a viable tool to assist NLRN with

the transition to professional practice. The Vizient/AACN program, which Virtua Health has integrated, offers a curriculum incorporating stress management. Significant work has also been done with the Healthy Work Environment model of the American Association of Critical Care Nurses setting the standard for external forces in the practice setting that also contribute to resilience and retention in nursing. Inclusion of this resilience training in the Nurse Residency curriculum introduces the NLRN to the individual characteristics of resilience and introduces the external forces that contribute to both resilience and an HWE.

The Future of Nursing 2020-2030 devotes a chapter to the health and well-being of nurses, including a call for action against clinical burnout. It is acknowledged that the responsibility for this well-being requires a multi-faceted approach employing individual nurses themselves, and the systems that support them to foster burnout prevention and promote retention. Regarding the distribution of practice experience at the bedside, resources must focus on preparing the least experienced to manage the demands of practice. Developing resilience will foster the coping strategies and critical thinking skills necessary for success. Few studies were found to report the effectiveness of specific resilience training. The most effective, MINDBODYSTRONG (Sampson et al, 2020) is a time intensive program. Like this current project, the focus is at the primary level. Development of secondary and tertiary level interventions are needed to fully address the prevention, screening, and treatment of burnout.

This DNP Scholarly Project promoted NLRN resilience as they began their nursing career in the Virtua Health system, creating a resilience training program to support nurses in the promotion of a civil, safe culture for healthcare delivery. In NLRN practicing nursing in acute care settings of a community-based health system, participation in a resilience training program increased reported resilience. The results of this scholarly project include the content analysis of

a teaching plan for resilience training and the impact of that training on NLRN. Rooted in the conceptual model of Relationship Based Care, this project informs the critical development of resilience in NLRN for the prevention of burnout. A panel of ten subject matter experts validated the content for the teaching plan delivered to NLRN. The training's effectiveness was measured by the CD-RISC, a validated tool with documented test-retest reliability. The resulting analysis supports a statistically significant improvement in resilience scores after participation in the program.

### **Limitations**

The impact of this project is limited by the relatively small sample of NLRN participants. Planning for further implementation would garner more data to evaluate effectiveness and identify modifications of the teaching plan. The posttest results reflect an improvement in reported resilience immediately following the training. This indicates that education can inform resilience development, however, long term effects would have the most impact on burnout prevention. Repeated measurements at set time intervals are needed to monitor long term effects of this education. Consideration of secondary level initiatives incorporating burnout screening would also evaluate the effectiveness of resilience training in the prevention of burnout. While the initial results indicate that education can inform resilience development, longitudinal studies to assess for negative correlation of resilience and burnout are needed.

This comprehensive training, including sixteen items in the education plan may require more of a commitment than agencies can invest. While the content was validated by subject matter experts, content validation by participants may inform the critical elements to include in future education. For implementation outside of the Virtua Health system, content of the

education would require minor modifications to ensure that the external resources available to support resilience development align with the practice environment.

### **Implications for Practice**

As stated in the Surgeon General's Advisory (2022) burnout is a significant threat to a thriving healthcare workforce. Conditions contributing to burnout impart detrimental effects on patient care and safety and contribute significant financial burden when burnout translates to turnover. The sources of burnout are well understood. Mechanisms to mediate burnout need to be reliable and accessible. Resilience has been identified as one such mechanism, but strategies to address resilience development are less clearly defined.

This project demonstrates the effectiveness of resilience training with a sample of NLRN and supports its continuation within the established structure of the Nurse Residency Program. The burden of burnout in nursing and its impact on the future of healthcare cannot be ignored. While resilience can contribute to burnout prevention, this training must be considered as one element of many needed to promote a culture of safety for nursing practice.

The responsibility for nursing well-being is multi-faceted and lies with the nurse and supporting structures. Organizations are responsible to focus on the individual workers, promoting development of tools to manage stress in a productive way that contributes to work-life meaning and joy. Further evaluation of the effectiveness of this resilience training should be demonstrated with repeated measurements of resilience with CD-RISC completion at six and twelve months after training. To evaluate the impact of the training, measurement of burnout in this sample should be considered at the same intervals. Resilience training, such as this project, must include self-care skills and tools to implement change in the environment of care, mediating the external forces that contribute to burnout.

The approach to burnout prevention must be multi-faceted with systems-oriented, organizational-level solutions. First, organizations are responsible to address stressors that can be mediated by promoting safe environments supported by appropriate staffing, accessible resources, and operational support. Responsibility for the secondary and tertiary level interventions lies with the healthcare system to incorporate burnout screening and treatment options in employee wellness programs. Leadership at all levels should be trained to monitor and identify indications of burnout among staff and equipped to direct employees to appropriate resources.

This DNP scholarly project implemented a primary level intervention to prevent burnout by drawing attention to and promoting resiliency characteristics. Content of the teaching plan was drawn from sources studying resilience traits and characteristics that promote burnout prevention. The teaching plan incorporates focused strategies to develop the internal characteristics of emotional intelligence, self-regulation, self-care, mental agility, and optimism as well as strategies to capitalize on resources in the practice and professional environments. The content of the teaching plan was validated by a panel of subject matter experts. As a primary level intervention, this project demonstrates statistically significant effectiveness of resilience training for NLRN and can be used as a model for further program development and implementation in other nursing populations to support burnout prevention and retention initiatives.

Results of this scholarly project will be submitted to the LaSalle University Digital Commons. Results of this scholarly project will be shared with the Virtua community through the Virtua Operational Nurse Executive Council and the Nurse Residency Steering Committee to inform ongoing evaluation and planning the residency program content. The project will also be

shared with the Virtua Health nursing community through the Virtua Doctoral Nursing Forum. With potential impact beyond the scope of NLRN, abstract submission for the Virtua Health Innovations in Care Conference has been completed. Results of this project will be offered to the New Jersey Collaborating Center for Nursing in conjunction with the Nurse Residency Collaborative for consideration by participating healthcare agencies throughout the state of New Jersey. Opportunities for further dissemination are being investigated with consideration of the Journal of Med-Surg Nursing, Journal of Nursing Professional Development, and abstract submission to the Sigma 2024 Conference “Creating Health Work Environments.”.

### **Conclusion**

Burnout is a threat to the safe delivery of healthcare. Empowerment of nurses in the healthcare system to practice strategies to prevent burnout demonstrates the embodiment of a safety culture. Resilience enables individuals to mediate the factors contributing to burnout. This DNP Scholarly Project put forth a program to strengthen the individual nurse’s resilience, empowering them to mediate internal and external forces to promote a sustainable professional environment.

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**Appendix A**  
Search Process Review of Literature

N=98					
Database	Total Articles	Articles Remaining After Title Review	Articles Remaining After Abstract Review	Articles Retrieved and Examined	Articles that fit Inclusion Criteria
Cochrane Library	9	0	0	0	0
Joanna Briggs Institute EBP Database	0				0
CINAHL	0				0
Medline	21	1	0		0
PubMed	2	2	2	2	2
HAPI	0				
TRIP	0				
ProQuest Dissertations & Theses Global	0				
Ovid Healthstar	30	30	6	6	3
Ovid Emcare	17	7	0	0	0
Ovid Nursing Database	19	0	0	0	0

## Appendix B

### Review of Literature Matrix Systematized Review

Database # Article First Author, Year (full citation in References)	Purpose of Study  Major Variables (IV, DV) or Phenomenon	Theory or Conceptual Framework	Design	Measurement Major Variables (Instrument)	Data Analysis (Name of Statistics, descriptive, Inferential and Results)	Findings	Evidence Level of Research & Quality Johns Hopkins Nursing Evidence- Based Practice
Ovid Healthstar #1 Zhai (2021)	Meta-analysis of standardized mean differences between pre/post intervention scores to analyze the effect (DV)of resilience training (IV) in nurses		Quasi-experimental Cross sectional, longitudinal Survey	Generalized weighted overall standard mean differences DerSimon-Liard method New-Castle-Ottawa Scale for the quality Assessment of Cohort Studies Cochrane Risk of Bias Assessment Tool for RCT	Standard Mean Differences in pre/post scores of resilience analyzed with T-test	Participants in resilience training programs of several types experience decreased stress, anxiety, depression and burnout and increased resilience	III-B

Ovid Healthstar #2 Tabakakis, 2019	Investigate the impact of workplace factors on psychological resilience in RN		Cross sectional survey	Self- reporting: CD-RISC-10 (Psychological resilience); PES-NWI (practice environment); NAQ-R (workplace bullying)	ANOVA	Resilience characteristics are moderated by practice environment and bullying.	II-B
Ovid Healthstar #3 Sampson, 2019	Evaluate effects of the MIND BODY STRONG for Healthcare Professionals Program on stress, anxiety, depressive symptoms, healthy lifestyle behaviors, and job satisfaction on NLRNs	Cognitive Behavior Therapy	Single Site Cluster randomized control trial	Perceived Stress Scale; Generalized Anxiety Disorder Scale; Personal Health Questionnaire (depression); Healthy Lifestyle Beliefs Scale; Healthy Lifestyle Behaviors Scale; Job Satisfaction Scale	Repeated Measures ANOVA (change over time in stress, anxiety, depressive symptoms, healthy lifestyle behaviors and job satisfaction); MANOVA (change in lifestyle beliefs; Cohen d (effect sizes) and Pearson r (correlations	Cognitive Behavior Training had a positive effect on anxiety, depression, lifestyle beliefs and lifestyle behaviors.	I B

					between variables)		
Pub Med #1 Anderson, 2021	Replicate research of a previous pilot study; to determine effectiveness of interventions on nurse resilience		Quasi-experimental Cross sectional, longitudinal Survey	CD-RISC Scale-10 measured resilience at baseline, timed intervals, and study conclusion	t-test	On the job tools for stress reduction improved resiliency scores	II B
Pub Med #2 Welden, 2021	To identify the degree of resilience and self-perceived physical and mental health in practicing nurses		Quasi-experimental survey compared study group to general population	CD-RISC and PROMIS Global Health	t-test compared study group to general population; linear regression was used to identify factors related to resilience	Self-perceived physical and mental health was strongly associated with degree of resilience	II B

**Appendix C**  
Virtua Nursing Research Council Support



February 10, 2023

Dear Ms. Lynch,

This letter is to inform you that you have organizational support from Virtua to conduct your project entitled “Development of a Resilience Program to Combat Burnout in Nursing Practice,” at Virtua. As the Nurse Scientist and Chair of the Nursing Research Council, I have the authority to approve projects at Virtua. I have reviewed the purpose, aims, and methods of your proposal, and I find that your quality improvement project is congruent with Virtua’s goals and mission. Thank you for the opportunity to review your proposed project. As a quality improvement project, it has been determined that this project is not research and does not require IRB review at Virtua Health. You may use observational data as no identifying information will be shared outside of the organization. Participation in the observations will be voluntary. You have permission to collect, analyze, and report findings provided that participants will not be identified, and results will be reported in the aggregate. You are required to report any substantive changes to the council for review. Virtua reserves the right to withdraw participation in the project if circumstances deem appropriate.

Sincerely,

A handwritten signature in black ink that reads "Amy Glasofer".

Amy Glasofer, PhD, DrNP, RN, NE-BC  
Nurse Scientist  
Virtua Health, Clinical Learning Team [aglasofer@virtua.org](mailto:aglasofer@virtua.org)



**Appendix D**  
LaSalle University IRB Approval



**FWA #000023562**  
1900 W. Olney Avenue, Philadelphia, PA 19141  
E-mail: [IRB@lasalle.edu](mailto:IRB@lasalle.edu)

**IRB NUMBER: 23-02-011-2.24-IAA**

*(Reference this # on all future correspondence to the IRB)*

*Name of Investigator:*        **Mindy Tait, Maggie Lynch**

*Address of Investigator:*    **Department of Nursing**

*Protocol Title:*                **Development of a Resilience Program to Combat Burnout in  
Nursing Practice**

---

This is to certify that the above-referenced protocol, which does propose research activities involving human participants, was reviewed in accordance with La Salle University Institutional Review Board (IRB) guidelines for the protection for human participants.

**PROTOCOL INFORMATION:**

Application Type:                **Initial Review**  
Review Category:                **Exemption determination**  
Protocol Action & Date:        **Determined to be exempt from regulations under 45 CFR  
46.101(b)(2)** Protocol Expiration Date:    **N.A.**

---

The IRB reviewed and approved your research protocol, *with the following provisions:*

1. For the purpose of IRB electronic archives, **you are required to e-mail the final version of this protocol with ALL required documents (including the original protocol and decision letter) as a single PDF to mazzones2@lasalle.edu;** title the file as follows (no spaces):
  - o **23-02-011-2.24\_IAA\_ARCHIVE\_Tait\_Lynch**

2. Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB in writing using the **Amendment Request Form**. You must receive IRB approval prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the participants.
3. Investigators are required to report within 5 business days to the IRB any injuries or other unanticipated or adverse events or problems involving risks or harms to human research participants or others that are discovered during the course of the research. Use the **Unanticipated Event Report Form**.
4. When you complete or discontinue the project, you must submit the **IRB Closure Report Form**.

*Susan Borkowski*

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**Susan Borkowski, PhD IRB Chair**

*IRB Action Letter Revised 3/8/17*

## Appendix E

### Teaching Plan for Resilience Development Training to Prevent Burnout in Newly Licensed Registered Nurses

Purpose: Resilience development training will promote awareness of work-related stressors, and self-care behaviors that promote resilience development and promote a culture of safety.

Goal: Training will result in increased resilience.

Teacher/Facilitator: Maggie Lynch

After Completion of the program NLRN will:

Behavioral Objective	Content Outline	Method of Instruction	Time Allotted in Minutes	Resources/Media	Method of Evaluation
<b>Identify Present Status</b>	Resilience Baseline Models of transition: <b>Reality Shock</b> - honeymoon, shock, recovery, resolution. (Kramer, 1974)	Interactive Lecture	30	<b>Resilience Self-Assessment PowerPoint<sup>R</sup></b> <b>Gallery Walk: self-identify stage of Reality Shock</b>	Pre/Post Test
<b>Recognize Compassion Fatigue and Burnout</b>	<b>Compassion Fatigue:</b> Mudallal, R., Othman, W, & Al Hassan, N. (2017). Loss of compassion for others; Loss of empathy  <b>Burnout:</b> Department of Health and Human Services (2022). Energy decline; Emotional exhaustion; Depersonalization; Cynicism; Decreased sense of personal accomplishment	Interactive Lecture	5	<b>PowerPoint<sup>R</sup></b>	Pre/Post Test
<b>Define Resilience</b>	<b>Resilience:</b> (APA, 2022) Process of adapting to difficult experiences with flexibility and adjustment to demands.	Interactive Lecture	5	<b>PowerPoint<sup>R</sup></b>	Pre/Post Test
<b>Identify Stressors</b>	<b>Common Stressors in Nursing</b> (Vizient, 2023)	Interactive Lecture	15	<b>PowerPoint<sup>R</sup></b> <b>Gallery Walk: identify personal stressors.</b> <b>“Survive to Thrive” plan.</b>	Pre/Post Test

	<ul style="list-style-type: none"> <li>• Identification of stressors in nursing practice by participants</li> <li>• Participants identify personal triggers</li> </ul>				
<b>Identify Resilience Characteristics</b>	<p><b>Characteristics of Resilience</b> (University of PA Positive Psychology Program, 2022)</p> <ul style="list-style-type: none"> <li>• Internal: Self-Awareness &amp; Emotional Intelligence; Self-Regulation &amp; Self-Care; Mental Agility/Problem Solving Adapt to Change; Optimism</li> <li>• External: Positive Practice Environment; Connection; Role Models; Resources</li> </ul>	Interactive Lecture	5	<b>PowerPoint<sup>R</sup></b>	Pre/Post Test
<b>Develop Resilience Characteristics (Internal)</b>	<p><b>Self-Awareness &amp; Emotional Intelligence: Ability</b> to perceive, use, understand, manage, and handle emotions; handle interpersonal relationships empathetically.</p> <ul style="list-style-type: none"> <li>• Identify common emotions experienced at work.</li> <li>• Identify reactions to emotions.</li> </ul> <p><b>Self-Regulation &amp; Self Care</b></p> <ul style="list-style-type: none"> <li>• Requires Physical and Emotional Care</li> </ul> <p><b>Problem Solving:</b></p> <ul style="list-style-type: none"> <li>• Define the Problem; ID what is known; Visualize Success; Breakdown into smaller elements; Identify Resources</li> </ul>	Interactive Lecture	60	<p><b>PowerPoint<sup>R</sup></b></p> <p><b>Mindfulness Video and Debrief</b></p> <p><b>Survive to Thrive Self-Care Plan</b></p> <p><b>Resources for Resolution Support: Clinical Resources Chain of Command, EBP, Shared Governance</b></p>	Pre/Post Test

	<p><b>Adapt to Change:</b></p> <ul style="list-style-type: none"> <li>• Change is inevitable. Identify the why and the how.</li> </ul> <p><b>Optimism:</b> Survival instinct wires humans for negativity. Optimism takes practice.</p> <ul style="list-style-type: none"> <li>• Practice Gratitude</li> <li>• Savor the Positive</li> <li>• Rediscover Awe</li> </ul>			<p><b>Time Management Activity</b></p> <p><b>Optimism Reflection (choose one)</b></p> <ul style="list-style-type: none"> <li>• <b>Thank you note.</b></li> <li>• <b>3 Good Things journal</b></li> <li>• <b>Choose inspirational photo</b></li> </ul>	
<b>BREAK</b>			10		
<b>Develop Resilience Characteristics (External)</b>	<p><b>Positive Practice Environment:</b></p> <ul style="list-style-type: none"> <li>• Skilled Communication, True Collaboration, Effective Decision Making, Appropriate Staffing, Meaningful Recognition, Authentic Leadership.</li> </ul> <p><b>Connections:</b></p> <ul style="list-style-type: none"> <li>• Personal and Professional</li> </ul> <p><b>Role Models:</b></p> <ul style="list-style-type: none"> <li>• Identify traits. Initiate relationship</li> </ul> <p><b>Resources:</b></p> <ul style="list-style-type: none"> <li>• What is available to expand resilience or support?</li> </ul>	Interactive Lecture	50	<p><b>PowerPoint<sup>R</sup></b></p> <p><b>Small Group Activity to ID to identify PPE in action.</b></p> <p><b>Virtua Shared Governance Model</b></p> <p><b>Group Activity</b></p> <p><b>Mentor Recruitment Template</b></p> <p><b>Website Resources:</b> Virtua, WE Thrive; ANA; NJSNA; Financial Planning</p>	Pre/Post Test
<b>Apply Resilience Traits</b>	<p><b>Which traits address identified stressors?</b></p> <ul style="list-style-type: none"> <li>• Revisit identified stressors and align with applicable characteristic development intention.</li> </ul>	Interactive Lecture	30	<b>Gallery Walk</b>	Pre/Post Test
<b>Demonstrate Improved Resilience</b>	<b>Complete self-assessment</b>	Resilience Inventory	15	<b>Survey link</b>	Pre/Post Test

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# Appendix F

## CD-RISC Approval

**From:** [Jonathan Davidson, M.D.](#)  
**To:** [Lynch, Maggie](#)  
**Subject:** [EXTERNAL] Re: CD-RISC application  
**Date:** Saturday, January 28, 2023 12:06:59 PM  
**Attachments:** [aCD-RISC-10\\_01-01-20\\_F\\_CR.pdf](#)  
[aRISC Manual 010123\\_F.pdf](#)  
[Scoring the CD-RISC.pdf](#)

**\*\*WARNING\*\*** This email did **NOT** originate from inside Virtua.  
Please **STOP** and **ANALYZE** before opening attachments, clicking on links, or providing any information.

**This Message Is From an External Sender**  
This message came from outside your organization.

[Report Suspicious](#)

Hello Maggie:

Thank you for your reply and payment. Please find attached the RISC-10 and other related documents.

Wishing you all the best,

Jonathan Davidson

---

**From:** Lynch, Maggie <[mdlynch@Virtua.org](mailto:mdlynch@Virtua.org)>  
**Sent:** Tuesday, January 17, 2023 9:08 AM  
**To:** Jonathan Davidson, M.D. <[jonathan.davidson@duke.edu](mailto:jonathan.davidson@duke.edu)>  
**Subject:** RE: CD-RISC application

This message was sent securely using Zix®

Jonathan,  
Thanks for the quick response. I don't see a user agreement attached, only my application.  
Thanks,  
Maggie

---

**From:** Jonathan Davidson, M.D. <[jonathan.davidson@duke.edu](mailto:jonathan.davidson@duke.edu)>  
**Sent:** Monday, January 16, 2023 7:33 PM  
**To:** Lynch, Maggie <[mdlynch@Virtua.org](mailto:mdlynch@Virtua.org)>  
**Subject:** [EXTERNAL] Re: CD-RISC application

**\*\*WARNING\*\*** This email did **NOT** originate from inside Virtua.  
Please **STOP** and **ANALYZE** before opening attachments, clicking on links, or providing any information.



## Appendix G

### Content Expert Invitation



Dear Colleagues:

You are invited to participate in a Doctor of Nursing Practice Project of Maggie Lynch as an expert in the preparation of newly licensed registered nurses (NLRN). I am asking you to judge the content to be included in a teaching plan that structures resilience training for NLRN transitioning into practice in the acute care setting. The teaching plan is not complete without your expert review: *Draft Teaching Plan for Resilience Training to Prevent Burnout in Newly Licensed Registered Nurses*. The teaching plan is based on content analysis of the literature on this topic; however, I need your help to judge the content of the teaching plan.

You have been identified as an expert in this area. Your expertise will help me create a better teaching plan and presentation. I have included two forms for you to review. The important definitions framing the study are included on the forms. I am also including the draft teaching plan. Your name will not be mentioned in the project, only the nature of your expertise. Please indicate your responses by highlighting your answers. You may also want to add comments to the form if you think the content needs revisions or additions. Please complete your review within 2 weeks. Please save the completed form in a Microsoft Word file and then attach the file to an email message. Please add your initials to the document label. The email address is [lynchm23@lasalle.edu](mailto:lynchm23@lasalle.edu). Your initials will be removed from the data file.

If you are able to support this evaluation, please return the Content Validity and Content Evaluation responses on or before May 5, 2023. If you are not able to meet this deadline, please let me know at your earliest convenience.

Thank you for your support,

Maggie Lynch, MN, NPD-BC

## Appendix H

### Expert Analysis Components Overall

<b>Evaluation by Experts on Draft of Evidence-Based Teaching Plan</b>				
<b>Expert Validity Check</b>				
<p>Content Experts: Please critique parts of the draft of the teaching plan.</p> <ul style="list-style-type: none"> <li>• Please read each section and rank the sections using the scale provided.</li> <li>• Kindly comment on additions, deletions, and revisions as you evaluate each section.</li> <li>• Use yellow highlighting to select the number on the scale, save the document, and email to xxxx@lasalle.edu</li> </ul> <p>Thank you very much.</p>				%
1. Teaching Plan promotes NLRN knowledge of work-related stress and impact on professional practice.	0 = vital part missing	1 = vital part present	Comment	
2. Teaching plan promotes NLRN knowledge of compassion fatigue	0 = vital part missing	1 = vital part present	Comment	
3. Teaching plan promotes NLRN knowledge of burnout	0 = vital part missing	1 = vital part present	Comment	
4. Teaching plan promotes NLRN self-assessment of personal stress	0 = vital part missing	1 = vital part present	Comment	
5. Teaching plan promotes NLRN knowledge of resilience characteristics	0 = vital part missing	1 = vital part present	Comment	

6. Teaching plan promotes NLRN knowledge of resilience building strategies	0 = vital part missing	1 = vital part present	Comment	
7. Teaching plan promotes NLRN knowledge of resources available to support resilience building strategies	0 = vital part missing	1 = vital part present	Comment	
8. Evidence-based literature cited informed the content of the Teaching Plan	0 = vital part missing	1 = vital part present	Comment	
9. The Teaching Plan's content offered to NLRN is based on key priorities	0 = vital part missing	1 = vital part present	Comment	
10. Teaching Plan resources are described and match content of the Teaching Plan	0 = vital part missing	1 = vital part present	Comment	
11. Teaching Plan is ethically appropriate for NLRN professional development	0 = vital part missing	1 = vital part present	Comment	
12. Teaching Plan is feasible for time allocated within Nurse Residency Program	0 = vital part missing	1 = vital part present	Comment	

## Appendix I

### Expert Content Validity Form or Survey

#### **DRAFT: Resilience Training for Nurse Residents to Prevent Burnout**

#### **Expert Content Validity Form**

**Directions to the Content Experts:**

Please validate the content of the teaching plan draft of *Stress Management, Resilience and Professional Role Development for Nurse Residents*

**Conceptual Definitions:**

- **Nurse Residency Program: Professional** development program to support new graduate nurses as they successfully transition to competent professionals. Incorporates a series of seminars throughout the initial year of practice to promote effective decision making, develop clinical leadership, incorporate evidence- based practice, strengthen commitment to nursing profession and formulate a professional development plan. (AACN, 2023)
- **Burnout:** an occupational syndrome defined by a decline in physical, emotional, and psychological energy resulting from work related stress that leads to cynicism and feelings of low self-efficacy (Mudallal, 2017)
- **Resilience:** the process and outcome of successfully adapting to difficult or challenging life experiences through mental, emotional, and behavioral flexibility and adjustment to external and internal demands. (APA, 2022)
- An **evidence-based teaching plan** uses current evidence to structure an educational session to increase knowledge of strategies to promote demonstration of resilience.

Content	<p>Content Experts: Please critique elements of the teaching plan draft.</p> <ul style="list-style-type: none"> <li>• Please reach each section and rank the relevance for topic inclusion using the scale provided.</li> <li>• Kindly comment on additions, deletions, and revisions as you evaluate each section.</li> <li>• Use yellow highlighting to select the value on the scale, save the document and email to <a href="mailto:lynchm23@lasall.edu">lynchm23@lasall.edu</a></li> </ul> <p>Thank you for your support.</p>				
1. Reality Shock: Phases of Nursing Indoctrination	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:

2. Compassion Fatigue: signs and symptoms	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
3. Burnout: signs and symptoms	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
4. Resilience: What it is and is not	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
5. Characteristics of Resilience: Internal and External	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
6. Emotional Intelligence development	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
7. Optimism development	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
8. Self-Care: Physical, Emotional, Intellectual, Spiritual Survive to Thrive Plan	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
9. Problem Solving Strategies	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
10. Responding to Change: Time Management, Manage the expected, Plan for the unexpected	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
11. Optimize a Positive Practice Environment: identify elements and strategies for best practices	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:

12. Social Networks Development: Personal Professional	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
13. Establish Role Models: Identify Build Relationships	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 highly relevant	Comment:
14. Identify work-related stressors and approach for management	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
15. Identify personal stressors and approach for management	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:
16. Develop Well-being Plan	1 = not relevant	2 = somewhat relevant	3 = quite relevant	4 = highly relevant	Comment:

## Appendix J

### Expert Content Validity

<b>DRAFT: Resilience Training for Nurse Residents to Prevent Burnout</b>		
<b>Expert Content Validity (N=10)</b>		
Resilience Training Content Components	S-CVI/Ave= .96	Validity Met/Not Met
	4-Point Scale	Content Component
	I-CVI	Accepted/Revised/Rejected
1. Reality Shock: Phases of Nursing Indoctrination	<b>1.0</b>	<b>Accepted</b>
2. Compassion Fatigue: signs and symptoms	<b>1.0</b>	<b>Accepted</b>
3. Burnout: signs and symptoms	<b>1.0</b>	<b>Accepted</b>
4. Resilience: What it is and is not	<b>0.9</b>	<b>Accepted</b>
5. Characteristics of Resilience: Internal and External	<b>1.0</b>	<b>Accepted</b>
6. Emotional Intelligence development	<b>0.9</b>	<b>Accepted</b>
7. Optimism development	<b>0.9</b>	<b>Accepted</b>
8. Self-Care: Physical, Emotional, Intellectual, Spiritual Survive to Thrive Plan	<b>1.0</b>	<b>Accepted</b>
9. Problem Solving Strategies	<b>1.0</b>	<b>Accepted</b>
10. Responding to Change: Time Management, Manage the expected/unexpected	<b>0.8</b>	<b>Accepted</b>
11. Optimize a Positive Practice Environment: identify elements and strategies for best practices	<b>0.9</b>	<b>Accepted</b>

12. Social Networks Development: Personal/Professional	<b>1.0</b>	<b>Accepted</b>
13. Establish Role Models: Identify/Build Relationships	<b>1.0</b>	<b>Accepted</b>
14. Identify work-related stressors and approach for management	<b>1.0</b>	<b>Accepted</b>
15. Identify personal stressors and approach for management	<b>1.0</b>	<b>Accepted</b>
16. Develop Well-being Plan	<b>1.0</b>	<b>Accepted</b>



## Appendix K

### Participant Pre/Post Test



#### Development of a Resilience Program to Combat Burnout in Nursing Practice Participant Introduction and Directions

As a participant in the **Virtua Nurse Residency Program**, we are providing this Resilience-Training Program to promote awareness and self-efficacy to manage the stress inherent in nursing practice.

As a project for my Doctorate in Nursing Practice, I am gathering data to determine the efficacy of this program. I invite you to complete the pre and post surveys associated with this training program to assess your own growth and to contribute to my database. Completion of these surveys is strictly voluntary.

All facets of this program will be kept confidential, and the results of the survey will be securely stored to maintain anonymity. Individual results will not be shared. Data extracted from the pre/post surveys will provide a demographic summary of the participants and average scores of the assessment tool.

We will be utilizing the Connor Davidson Resilience Inventory Scale (CD-RISC), a validated tool designed as a self-rating scale measuring resilience. The purpose of these measurements is to assess if participation in this activity affects a change in the resilience measurement. Results are not an indication of success or failure but intended to build awareness of strengths and areas for development. Further information regarding the CD-RISC can be provided upon request.

#### Directions:

The CD-RISC is designed as a self-rating scale. For the pre-survey, please respond to each statement with reference to the previous month, understanding that if a particular situation has not arisen in this time, then the response should be determined by how you would anticipate reacting. Response to each question is not required but your participation is greatly appreciated.

#### [Resilience Training Pretest](#)



## Development of a Resilience Program to Combat Burnout in Nursing Practice Participant Introduction and Directions

As a participant in the Virtua Nurse Residency Program, we are providing this Resilience-Training Program to promote awareness and self-efficacy to manage the stress inherent in nursing practice.

As a project for my Doctorate in Nursing Practice, I am gathering data to determine the efficacy of this program. I invite you to complete the pre and post surveys associated with this training program to assess your own growth and to contribute to my database. Completion of these surveys is strictly voluntary.

All facets of this program will be kept confidential, and the results of the survey will be securely stored to maintain anonymity. Individual results will not be shared. Data extracted from the pre/post surveys will provide a demographic summary of the participants and average scores of the assessment tool.

We will be utilizing the Connor Davidson Resilience Inventory Scale (CD-RISC), a validated tool designed as a self-rating scale measuring resilience. The purpose of these measurements is to assess if participation in this activity affects a change in the resilience measurement. Results are not an indication of success or failure but intended to build awareness of strengths and areas for development. Further information regarding the CD-RISC can be provided upon request.

### Directions:

The CD-RISC is designed as a self-rating scale. For the post-survey please respond to the same statements considering the knowledge gained through training and your anticipated future reaction. Response to each question is not required but your participation is greatly appreciated.

### [Resilience Training Post-Test](#)



### Resilience Training Pre-Test

Thank you for participating in our survey. Your responses are valuable to us.

1. Create your unique identifier combining your pets name with your date of birth in any sequence that you may remember for future reference.

2. Please respond to each statement with reference to the previous month, understanding that if a particular situation has not arisen in this time, then the response should be determined by how you would anticipate reacting.

	not true at all	rarely true	sometimes true	often true	true nearly all of the time
I am able to adapt when changes occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can deal with whatever comes my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see the humorous side of things when I am faced with problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having to cope with stress can make me stronger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to bounce back after illness, injury, or other hardships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can achieve my goals, even if there are obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under pressure, I stay focused and think clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not easily discouraged by failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think of myself as a strong person when dealing with life's challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Gender: How do you identify?

- Man
- Non-binary
- Woman
- Prefer to self-describe, below

Self-describe:

4. What is your age?

- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64

5. How many months have you practiced as an RN?

- 0-3 months
- 4-6 months
- 7-9 months
- 10-12 months
- 13-15 months
- 16-18 months
- 19-24 months
- more than 24 months

6. Which of the following categories best describes your employment status?

- Working full-time
- Working part-time
- Working per diem

7. What is your level of nursing education?

- Hospital Diploma Program
- Associates Degree (ADN)
- Bachelor's (BSN)
- Accelerated BSN
- Other

8. In which division do you work?

- Virtua Marlton
- Virtua Voorhees
- Virtua OLOL
- Virtua Willingboro
- Virtua Mount Holly (Memorial)

9. What is your clinical specialty area?

- Med-Surg
- Emergency Department
- Critical Care
- PCU
- Pediatrics
- MCH
- Surgical Services
- Behavioral Health
- Rehab

Resilience Training Post-Test

**Thank you for participating in our survey. Your responses will guide us in development of future professional development programs.**

1. Enter the unique identifier you created combining your pets (favorite person/mascot) name with your date of birth in any sequence. (Ex: Phanatic0721)

2. Please respond to each statement with reference to upcoming events, anticipating particular situations, and responding as you anticipate reacting based on what you've learned.

	not true at all	rarely true	sometimes true	often true	true nearly all of the time
I am able to adapt when changes occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can deal with whatever comes my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see the humorous side of things when I am faced with problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having to cope with stress can make me stronger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to bounce back after illness, injury, or other hardships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can achieve my goals, even if there are obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under pressure, I stay focused and think clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not easily discouraged by failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think of myself as a strong person when dealing with life's challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Appendix L**  
Resilience Data

Table L1  
Descriptive Statistics  
N=25

Characteristics		Participants		
Gender		n	%	Mean(SD)
	Male	2	8.0	
	Female	23	92.0	
<b>Age</b>				32(8.49)
<b>Months in Practice</b>				8 (5.55)
<b>Employment Status</b>				
	Full Time	20	80.0	
	Part Time	5	20.0	
<b>Level of Education</b>				
	AD	5	20.0	
	BSN	18	72.0	
	ABSN	1	4.0	
	Other	1	4.0	
<b>Division</b>				
	Marlton	4	16	
	Mount Holly	2	8.0	
	OLOL	9	36.0	
	Voorhees	10	40.0	
	Willingboro	0	0	
<b>Specialty</b>				
	Med-Surg	20	80.0	
	PCU	3	12.0	
	SS	1	4.0	
	L&D	1	4.0	

Table L2

NLRN Resilience Scores Paired Samples Statistics

N=25

	Mean	N	Std. Deviation	Std. Error Mean
Resilience Score Pretest	26.400	25	4.88194	.97639
Resilience Score Posttest	28.1600	25	5.32823	1.06565

Paired Differences								Significance
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Two-sided p
Diff in Resilience Scores	-1.76	2.71232	.54246	-2.87959	-.64041	-3.244	24	.003