ORGANIZATIONAL STRATEGIES TO PROMOTE NURSE RESILIENCE IN THE ACUTE

CARE HOSPITAL INPATIENT SETTING: AN INTEGRATIVE REVIEW

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Marcia DePolo

Liberty University

Lynchburg, VA

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Abstract

Nurses practicing in acute care hospital environments are exposed to constant stressors from a variety of sources. Workplace stress can lead to unhealthy coping behaviors, illness, and burnout, with intent to leave the organization or the nursing profession altogether. Resilience-building strategies can be employed to foster coping, improve nurse wellbeing, increase job satisfaction, promote retention, and enhance quality patient outcomes. This integrative review provides a synthesis of scholarly publications on nursing resilience from January 2014 through October 2020. Themes to promote nursing resilience occurred at three levels: personal or individual, unit or group, and organizational. This paper will provide a summary of resilience-building concepts at these three levels, an overview of integrative review methodology, and recommendations for further research on nursing resilience.

Keywords: resilience, resiliency, nurse, nursing, hospital, strategies, organizational

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List of Abbreviations

CINAHL: Cumulative Index of Nursing and Allied Health Literature

CISD: Critical Incident Stress Debriefing

CITI: Collaborative Institutional Training Initiative

HSWERM: Health Service Workplace Environmental Resilience Model

IRB: Institutional Review Board

RB: Resilience-Building

WET: Written exposure therapy

SECTION ONE: FORMULATING THE REVIEW QUESTION

Resilience has been described as the ability to bounce back from adverse events, stress, frustration, or misfortune without experiencing negative sequelae. The word resilience originates from the Latin word *resiliens*, meaning elastic, pliant or having recoil properties (*Online Etymology Dictionary*, 2020). Resilience is further described as a dynamic process reflective of personal attributes and the ability to cope, influenced by group culture, and organizational constructs. The 1824 definition of resilience appeared in Webster's Dictionary as the "ability of a stressed body to recover from or adjust easily to misfortune and change" (Scoloveno, 2016). Resilience theory has been studied since the 1800s in many healthcare disciplines to include psychiatry, human development, epidemiology, medicine, social sciences, and nursing. Nurses working in high acuity environments can bolster resilience by participating in life-long learning, building social support, developing new skills, and embracing reflective practice. These are examples of resilience as non-static personal attributes, which may increase an individual's resilience capabilities over time.

Nurses practicing in high stress environments are exposed to distress in others, frequent change, conflict, inflexible scheduling, shift work, regulatory demands, moral dilemmas, time constraints, critical decision-making, heavy workloads, and more. These factors, including lack of recognition and want of appreciation by others can lead to burnout, with intent to leave an organization or the nursing profession altogether (Albieri et al., 2017; Park et al., 2018). Nursing retention is one of the primary measures utilized in determining the overall fiscal standings of healthcare organizations. Fortunately, some factors contributing to nursing turnover are modifiable, and consideration can be given to evidence-based industry initiatives to retain nursing staff. Signs and symptoms of stress such as anxiety, inability to relax, fatigue,

frustration, irritability, sleep disturbances, impatience, critical outlook, lack of interest in social activities, and gastrointestinal disturbances may go unrecognized by the nurse until there is a cumulative effect (Albieri et al., 2017). Unrelenting stress can manifest negatively in the physical and psychological realm, and in some instances may lead to unhealthy coping behaviors.

The literature supports nursing clinical ladders, academic partnerships, shared governance, standardized onboarding, socialization for newly hired staff, dedicated unit personnel to serve as mentors, wellness activities, flexible scheduling, job sharing, rounding, and 1:1 touch points with managers. A palpable commitment to nursing from a leadership standpoint can serve to retain nurses in the workforce past the new graduate phase. According to Brown et al. (2018) the nursing shortage will reach up to 400,000 by the year 2025. When organizations demonstrate value for nurses, this may translate to an increase in professionalism, confidence, engagement, retention, and favorable patient outcomes. The Joint Commission (2019) has identified nurse resiliency as a priority topic to improve patient outcomes and offset the effects of burnout. Organizations have a duty to develop strategies to promote resilience and improve the working environment in order to decrease the physical and emotional toll of nursing work.

Defining Concepts

Resilience has been defined as an individual characteristic, and the ability to cope with adversity. The internal and external environments affect the nurse's ability to provide holistic patient-centered care in the acute-care setting. The external work environment for the nurse extends from individual patient encounters, to the team, and to the organization. Repeated exposure to the suffering of others can lead to emotional exhaustion, and in some cases distancing or desensitization to patients who suffer in the future (Mooney et al., 2017). Each nurse is a holistic being, and it may be challenging to set aside internal thoughts and personal

concerns while at work; however, in order to provide patient-centered care, the nurse is called upon to focus on the patient. The ability to adapt may change in real time depending upon the circumstances in the physical and emotional environment; however, a resilient nurse can utilize learned experiences to respond when faced with similar future situations.

The Individual Nurse

Throughout a nursing career nurses will experience work-related stress, difficult challenges, and bear witness to unfortunate life events. Although adversity, experiential learning, and reflection can enhance resiliency, outcomes and reactions of the individual nurse are dependent upon personal attributes and protective factors. Individual or personal attributes include a willingness to develop new skills, openness to learning, self-efficacy, optimism, self-confidence, self-care, strength identification, critical decision-making abilities, and cultivating a sense of purpose (Brown, 2018; Degrande et al., 2018; Low et al., 2019; Mills et al., 2017; Pulley & Wakefield, 2015; Wei et al., 2018). Self-knowledge, self-awareness, and self-understanding are key resilient nurse characteristics, along with self-confidence, self-discipline, self-reliance, and positive self-esteem (Badu et al., 2020; Barratt, 2018; Cooper et al., 2020; Hart et al., 2014; Mealer et al., 2016; Shin et al., 2018; Yilmaz, 2017; See Table 4). A healthy work-life balance, positive relationships, and a pro-social attitude are mentioned as positive attributes reflective of resilience. Resilience supporting traits in the emotional realm are referred to as stamina, toughness, intelligence and insight (Badu et al., 2020; Barratt, 2018; Cooper et al., 2020; Hart et al., Shin et al., 2018; Yilmaz, 2017). Faith and spiritual support are mentioned as specific concepts by two authors, although these practices could fall within the concepts of social support and positive relationships (Mealer et al, 2016; Yilmaz, 2017).

Nurses with the ability to adapt, flex, problem-solve, and carry on are more likely to be resilient (Al-Barmawi et al., 2019). Reflection and cognitive reframing build resilience over time as nurses incorporate experience from previous situations and apply lessons learned in future encounters (Hart et al., 2014; Mealer et al., 2016; Shin et al, 2018; Yilmaz, 2017). Reflective practice promotes experiential learning and can enhance nursing practice and the ability to cope in future situations (Bolg et al., 2020). A healthy balance must be maintained in order for nurses to reflect, but not obsess over events of the day. Letting go after a brief reflection is a healthy way to transition to home where the nurse can revitalize (Summit Consulting, 2020). Resilience is a dynamic state, which can be enhanced over time through skill-based learning, knowledge enhancement, self-discovery, professional development and more (American Psychological Association, 2020; Delgado et al., 2017). In 2017, the American Nurses Association found many organizations operate under the assumption that the psychological consequences of caring work are solely the concern of the healthcare professional (DePolo, 2020). However, there are a myriad of strategies that organizations can employ to protect against the negative effects of stress in order to promote wellbeing and nurse resilience (Brown & Abuatiq, 2020).

The Nursing Team

Group dynamics to promote resilience include teamwork, debriefing after events, shift huddles, recognition, dedicated preceptors, and early support for struggling peers (Ang et al., 2018; Bass et al., 2016; Boehm et al., 2017; Kumat-Thoma et al., 2017). A dedicated structure to welcome new staff members, and a zero-tolerance for bullying is important to a cohesive unit culture (Alshehry et al, 2019). Group activities, education on resilience, and a healthy work environment have proven to be beneficial for nursing staff. Team building, social support, and adopting a work buddy are mentioned as strategies to promote resilience in the workplace

(Degrande et al., 2018; Grabbe et al., 2019; Im et al., 2016; Kester & Wei, 2018; Kumat-Thoma et al., 2017; Low et al., 2019).

The Joint Commission and the National Quality Forum recommend healthcare institutions promote resilience, in part, through addressing the needs of those exposed to adverse events (Edress et al., 2016). Facilities are developing peer-to-peer support programs such as the Resilience in Stressful Events (RISE) program out of John Hopkins University in Baltimore, Maryland (Edrees et al., 2016), the for-You program out of the University of Missouri Health System (Harrison & Wu, 2017), the You Matter program out of Nationwide Children's Hospital in Columbus, Ohio (Merandi et al., 2017), the Employee Spiritual Care Program out of Loma Linda University Health (McMillan, 2016), and the Peer-to-Peer support program out of the Maine Medical Center in Portland, Maine (Chapman & Knight, 2017). These programs support nurses exposed to high-stress events that result in an emotional burden, such as compromised patient safety, adverse incidents, poor patient outcomes, errors, loss, personal injury, and exposure to trauma through the experiences of another (Ash et al., 2019; Harrison & Wu, 2017). Early critical incident stress debriefing (CISD) can help derail the psychological effects related to an adverse event that may affect the personal and professional life of the nurse and nursing teams.

Promoting resilience through support programs can positively impact patient outcomes (Babanataj et al., 2018; Barasa et al., 2018; Concilio et al., 2019; Joyce et al., 2017; Vanhove et al., 2015). Resilience training for nurses and other healthcare professionals can take the form of in-person classes, online modules, simulation, or computer-based training. The long-term benefits of resilience training programs have not been shown; however, favorable outcomes have been seen through program post-evaluation with a modest effect (Ahmadi et al., 2019; Ell-Shafei

et al., 2018; Henshall et al., 2020; Vanhove et al., 2015). A team lavender response for staff members who are in need of timely, personalized opportunities to discuss feelings related to an event was proposed by Barden and Giammarinaro (2019). The Team Lavender organization realizes healthcare professionals are human, empathetic, emotional beings who are subject to hurt and grief deserving of support in times of stress or crisis.

The Organization

Resilience at an organizational level is the ability for the system to respond to challenges while continuing to meet objectives (Barasa et al., 2018). The organizational concepts to promote resilience include leadership support, resilience training, professional development, meaningful use of technology, celebration of successes, the parsing out of change initiatives, provision of workload resources, structured onboarding, and more. Leadership and organizational efforts to promote resilience include building trust through words, presence, and actions (Ang et al., 2018; Brown et al., 2018; Guo et al., 2018; Imani et al., 2018; Yu et al., 2019). The *Standards for Establishing and Sustaining Healthy Work Environments* (AACN, 2005; 2016), can be utilized as an organizational guideline to improve the workplace environment. Concepts identified in the standards include: (a) appropriate staffing, (b) meaningful recognition, (c) skilled communication, (d) effective decision-making, (e) true collaborations, and (f) authentic leadership. There are multiple outcome measures for fostering resilience in the work environment; however, organizational assessments may solely occur through annual nursing satisfaction surveys. It may be difficult to prove causality between interventions to bolster nursing resilience and patient experience and outcomes of care; however, nursing resilience is linked to decreased turnover, and retention is linked to quality patient outcomes (Manomenidis et al., 2019).

In 2017, the American Nurses Association noted that many organizations operate with the assumption that psychological consequences of caring work are the concern of the healthcare professional (Kelly et al., 2019). Organizations must continuously demonstrate value for nurses as a vital human resource in the provision of care. Strategies to promote resilience were identified as facilitating social connections, developing a positive, nurturing environment, motivating nurses by identifying individual strengths, supporting teamwork, promoting self-care, and encouraging mindful practice (Wei et al., 2018). Just as the individual nurse can practice mindfulness, organizational mindfulness is a necessity as well. Organizations should offer wellness programs for nurses that foster resiliency and include education on stress reduction. Reflection on successes, opportunities, and challenges is beneficial and should be followed through with transparent messages to the nursing teams (Cao & Chen, 2019; Cline, 2015). Organizations must provide adequate staffing and appropriate resources in order for nurses to practice successfully (Kowalski et al., 2019). There is a need for strategies to promote wellbeing at the individual, unit, and organizational levels, as improving resilience can decrease turnover intention (Ahmadi, et al., 2019; Ja, & Soo-Kyoung, 2019; Rees et al., 2019). A novice organization might be able to respond to everyday adversity and return to normal operations, while a proactive, resilient organization develops contingency plans and focuses on processes, human assets, and possible risks to safety.

Staff burnout and turnover are a reflection of poorly designed systems strained by a need for more resources, time, and energy. The *IHI Framework for Improving Joy in Work* (Bernard, 2019; Perlo et al., 2017) provide guidance for healthcare organizations desirous of combating high turnover and low morale. Four steps for leaders in the framework are to: a) ask staff what matters to them b) identify unique impediments to joy in work in the local context, c) commit to

a systems approach to making joy in work a shared responsibility at all levels of the

organization, and d) use improvement science to test approaches to improving joy in work in the

organization. Leadership visibility, open communication, appropriate staffing, workplace safety,

and participation in decision-making are important to nurses. Appreciative inquiry and active

listening can build trust, improve flexibility around team member needs, foster a teamwork

mindset, and elicit opportunities for improvement from the nursing staff.

Defining Variables

Internal and external factors contribute to, and impact nursing resilience. Examining

these variables can lead to an understanding of resilience from different perspectives and in turn

contribute to effective resilience-building strategies.

Physiological

Physiologically, the body responds to acute and chronic stress as a means to remain safe.

Cortisol and adrenalin are released in response to stress, increasing the heart rate, blood pressure,

and respiratory rate, which enables the body to fight or take flight. Nurses are exposed to stress

through work on a daily basis and may experience a steady state of heightened cortisol release.

Chronic stress and elevated cortisol levels are associated with cardiovascular disease, diabetes,

immune system dysfunction, anxiety, sleep disorders, burnout, and more (Albieri et al., 2017).

Psychological

Healthy coping mechanisms can serve as a protective buffer to stressful events and be a

means to promote resilience. Nurses may engage in emotional distancing from patients and their

suffering in order to avoid absorbing the emotional sequelae of caring for the sick. Humor,

mindfulness, mental preparation for the day, self-care practices, and visualization are methods

that might be used to promote coping in the acute-care environment. Self-awareness is beneficial

as a means to recognize, acknowledge, and intentionally respond to stress in a healthy manner (Ang et al., 2018).

Sociocultural

Nurses can actively build relationships with colleagues in order to foster a social support system in the work environment. Professional growth can be augmented by developing a coaching role for preceptors and mentors. Cohesive nursing teams identify goals and participate in activities that build camaraderie and promote trust. In the event of a patient safety breach, open, respectful communication can lead to increased team resilience and the ability to promote quality patient outcomes (Cao & Chen, 2019; Barratt, 2018).

Developmental

Nurses can take advantage of opportunities to increase knowledge and enhance skills as a means to build effectiveness in the work environment. Organizations can support nurses with professional development by providing leadership education, resilience training, and advancement opportunities through tuition reimbursement, clinical ladder programs and nurse residency programs. The individual nurse is responsible for being a competent caregiver, and as such must take ownership of personal development in order to ensure quality patient outcomes (Mealer et al., 2017; Shin et al., 2018).

Spiritual

The spiritual component of nursing encompasses the intangible dimension of the patient, the nurse, and the environment. The Christian worldview refers to nursing as a ministry of compassionate care to relieve suffering and promote health through God's grace (Shelly & Miller, 2006). Beliefs, values, hopes, dreams, and aspirations are integrated into the holistic makeup of a nurse. Attending to the spirit promotes a state of health and builds the capacity for

authentic, interpersonal connections with others. The spirit of the nurse can be nurtured when the mission, vision, and values of an organization align with those of the nurse.

Rationale for Conducting the Review

Nursing turnover and job satisfaction overlap in meaning and inform the intent to remain in the workplace. Healthcare organizations face challenges in recruiting and retaining nurses. Turnover occurs when nurses leave the organization, and retention efforts are at the opposite end of the phenomenon, employed to retain nursing staff. The national nursing turnover rate is 17.2%, and in Virginia turnover rates as high as 19.5% have been reported (Nursing Solutions Inc., 2019; Roney & Acri, 2018). High nursing turnover rates correlate with poor patient outcomes, an increase in errors, and a decrease in patient-centered care. According to The Joint Commission (2019), in a national survey of 2,000 nurses, 15.6% reported feelings of burnout. A stable nursing workforce increases teamwork and productivity and can have a positive impact on patient outcomes. Nurses desire a voice in decision-making, autonomy, appropriate staffing, and safety in the workplace. Nursing turnover has been linked to workplace stress, emotional exhaustion, lack of autonomy in practice, poor social support, conflict, short staffing, increased workloads, change fatigue, and more. Although a healthy reason for turnover, retiring baby boomers are leaving the workforce in increasing numbers and a gap has thus formed in regards to expertise, knowledge, and the culture within the organization. The cost of replacing a registered nurse is purported to be up to $88,000 and this may not include costs incurred by recruitment efforts inclusive of the interview and hiring process. Cost is incurred during new hire orientation and there is an anticipated loss of productivity due to the need for temporary nursing personnel to fill positions (Nursing Solutions Inc., 2019). An increase in turnover may be difficult to detect

until a crisis level is realized, and reversing the trend may prove to be insurmountable. Efforts to build nursing resilience may help stem the tide of nursing turnover.

In this historical time of the coronavirus pandemic, daily resources to promote resilience can be found in professional journals and on professional websites. One recent example may be found on the Sigma Theta Tau website encouraging nurses to *Infuse Joy* by increasing awareness of emotions, seeking balance and purpose, and encouraging co-creation or a system's approach to fostering resilience (Riccardi, 2020). There are professional organization peer support groups such as the one led by the American Association of Critical Care Nurses, and on demand webinars like *"How to Survive the Pandemic with an Unbroken Spirit: Actions to take Right now to Stay Strong and Focused"* (American Nurses Association, 2020). The resiliency model by Richardson (2002), demonstrates the individual response after a stressful event where responses include further growth, increased resilience, return to homeostasis, or experiences of loss and dysfunction. Protective factors bolster resilience and can be developed at the individual, group, or organizational level.

Nurses must be encouraged to participate in self-care and to attend to each other with the same compassion provided to members of the community (Warshawski et al., 2018). Caring behaviors toward each other can have a positive influence on working relationships, retention, and the negative effects of stress. A cohesive social network within unit teams can influence the nurses' ability to be resilient, which impacts workplace outcomes in a favorable manner. The *Health Service Workplace Environmental Resilience Model* (HSWERM) by Cusack et al., (2016) links supportive environmental strategies to the nurse and the workplace in professional, practice, and personal domains (see Figure 2). Caring is challenging work in which repeated exposure to the suffering of others can translate into negative sequelae for caregivers. This

phenomenon is known as compassion fatigue. All team members must commit to a zero tolerance for incivility in the work environment thus improving health, wellbeing, relationships, and outcomes not only for employees, but for patients and the organization as well.

Purpose and/or Review Question

The purpose of this integrative review is to systematically evaluate the literature in order to identify and consolidate resilience-building strategies that can be implemented within high acuity hospital environments. Opportunities to build resilience exist at the individual, unit, and organizational levels. Identified strategies to improve the health and wellbeing of the nursing staff from each level may benefit the individual nurse, the team, the organization, and in turn improve patient outcomes. Evidence-based findings may then be disseminated at leadership and unit level meetings in order to facilitate incorporating concepts into culture. While personal attributes contribute to resiliency, there are social and organizational influencing factors as well. Focusing solely on individual factors may lead to blaming the individual when resilience is lacking. A holistic view of an acute care organization encompasses the individuals, the teams, and the entire system. Professional healthcare organizations with accrediting capacity support programs that foster nurse resilience. The Joint Commission (2019) has identified nurse resiliency as a priority topic to improve patient outcomes and offset the effects of burnout. The Institute for Healthcare Improvement believes it is imperative to restore joy to the healthcare workforce, and to design organizations for reliability and resilience (Perlo et al., 2017). The guiding questions for this integrative review are:

1. In the acute-care hospital setting, what organizational processes and structures have proven effective in supporting nurse resilience?

2. In the acute-care hospital setting, what are the attributes exhibited by resilient nurses?

Hospital high-acuity inpatient environments expose nursing staff to stressful events, such as the witnessing of the distress in others, conflict with colleagues, constant change, inflexible schedules, and poor work-life balance. Resilient nurses are able to adapt and recover from stress without significant personal harm and may find more satisfaction on the job as evidenced by lower levels of burnout and turnover. In order to prevent fallout from stressful circumstances, organizations can partner with nurses and implement measures to build resiliency and foster nurse retention. Nurses attempting to cope with constant stress within the healthcare environment may participate in unhealthy behaviors such as smoking, drug use, or an over-indulgence in alcohol. On the job trends related to unhealthy behavior may be observed as poor work performance, absenteeism, decreased punctuality, work injuries, and eventually an increase in nursing turnover (Chesak et al., 2019). Poor patient care quality and a decrease in optimal patient outcomes can result when nursing staff do not have the ability to cope with stress in a healthy manner.

Inclusion Criteria

An integrative review addresses a broad question and a literature search will likely result in a large amount of information to be screened. Toronto and Remington (2020) suggested presenting explicit inclusion criteria: (a) the type of literature, (b) the phenomenon of study, (c) population characteristics, (d) publication language, (e) time period covered, and (f) the setting. This integrative review explored nurse resiliency as a personal attribute, unit culture, and organizational construct within the hospital setting. Peer-reviewed, full-text articles published in English between January 2014 and October 2020 were included. A narrow timeframe was chosen due to the abundance of articles in the literature on nursing resilience. The rationale for this time period was to obtain literature representative of the contemporary complexities of

nursing care in the acute care hospital setting, with consideration given to advancements in technology. Search terms include *resilience, resiliency, nurse, nursing, hospital, strategies,* and *organizational.*

Exclusion Criteria

Articles were excluded when the content was specific to non-nursing disciplines, referenced explicit patient groups or diseases, pertained to family members as caregivers, incorporated non-hospital settings, or when student nurses were the sole focus of the research. Consultation with a librarian took place to provide guidance on search terms and relevant databases. According to Toronto and Remington (2020) librarians are invaluable to reviewers due to organizational skills and the ability to support rigor during a comprehensive review.

Conceptual Framework

The detailed framework of an integrative review serves to maintain rigor in inquiry. It is important to present clear documentation of a search strategy in order to add clarity, and to allow others to replicate the same search. An integrative review allows for different types of literature with diverse methodologies to be included in the project. Database searches, gray literature, policy statements, conference proceedings, theoretical models, and dissertations are some examples for possible inclusion in an integrative review (Toronto & Remington, 2020). Varied perspectives can serve to define a more holistic understanding of concepts such as resilience. The Preferred Reporting Items for Systematic Reviews and Meta-Anlaysis (PRISMA) decision diagram was utilized for this project on nursing resilience (see Figure 1). The Level of Evidence Pyramid to Answer PICOT Intervention Questions was utilized to critique the literature and define the strength of evidence (Melnyk, 2016). In order to present a solid, organized review, the methodology described by Whittemore and Knafl (2005) was employed.

SECTION TWO: COMPREHENSIVE AND SYSTEMATIC SEARCH

Search Organization Reporting Strategies

An integrative review must be conducted with rigor in order to identify reliable and valuable literature relevant to the review purpose. Search strategies must be defined in advance along with decisions to include or exclude theoretical articles, unpublished papers such as dissertations, white papers, or government documents, works of lesser quality, and information from organizational websites (Toronto & Remington, 2020). Diligence in focusing on the clinical question assists in eliminating variables unrelated to the specific topic or interest. A comprehensive literature search is an iterative process, complete when subject saturation is reached and key concepts can be identified. Consultation with a librarian was beneficial in regards to choosing databases applicable to the integrative review topic (Toronto & Remington, 2020). Databases unfamiliar to the reviewer may provide depth and relevance to the topic at hand. It is imperative to remain organized, to save relevant articles, and to define the type of literature utilized in the review.

A literature search was conducted via the Cumulative Index to Nursing and Allied Health (CINAHL), PsychINFO, and the Proquest Nursing and Allied Health databases. CINAHL is a comprehensive database for nursing research inclusive of journal articles, book chapters, standards, and conference proceedings under the EBSCOhost platform (Toronto & Remington, 2020). The Proquest Nursing and Allied Health database includes content from nursing journals and literature from related disciplines, dissertations, and multiple publishers. PsychINFO is a repository for publications related to psychology, behavioral, and social sciences. Multiple disciplines are represented in articles, book chapters, and dissertations under Ovid, Proquest, EBSOCOhost, and the American Psychological Association (Toronto & Remington, 2020).

Terminology

The 1824 definition of resilience appeared in Webster's Dictionary as the "ability of a stressed body to recover from or adjust easily to misfortune and change" Scoloveno (2016). Resilience has been described as a protective factor, a skill, and a developmental or adaptive process (Yilmaz, 2017), and an individual's innate energy or motivating life force (Grafton et al., 2010). Resilient nurses contribute to a stable workforce and improved patient outcomes.

Gracia-Gracia and Olivan-Blazquez (2017) defined mindfulness as a focused state of mind to events happening in the moment. Mindfulness interventions for nurses have resulted in increased ability to cope with stress, decreased emotional exhaustion, diminished anxiety, increased self-confidence, improved satisfaction, and a spiritual connection.

PRISMA Statement

The PRISMA 27-item checklist is a reporting guideline used for systematic reviews and meta-analyses. The PRISMA diagram supports the author by identifying the steps taken during the literature review process. Schematic representation with PRISMA includes the names and types of databases, the number of records reviewed, and the identification of eligible articles for final consideration in a study. Others wishing to replicate an identical search should be able to do so, as article exclusion reasons will be identified in the PRISMA process (Tam, et al., 2017). The PRISMA statement for this integrative review is found in Figure 1.

Melnyk's Levels of Evidence

The Level of Evidence Pyramid to Answer PICOT Intervention Questions is utilized to define the strength of evidence presented in the literature (Melnyk, 2016). Levels of evidence are categorized hierarchically where a systematic review or meta-analysis is at the highest level, or Level I. An opinion or consensus of experts or authorities is the lowest level of evidence on the

pyramid, or Level VII (Melnyk, 2016; see Table 1). Each article on resilience was evaluated to identify whether a quantitative or qualitative study was conducted, and then ranked to determine the level of evidence. According to Melnyk (2016) the level of evidence and the quality of evidence should guide the decision to act and change nursing practice. Valid studies are as close to the truth as possible; reliable studies imply others will arrive at the same results; and applicability means the findings can be utilized across similar populations.

Literature Search Results

A literature search conducted with the strategies above revealed 52 applicable articles, professional organization guidelines, and reports. Types of studies utilized in this integrative review are varied, and this is the beauty of an integrative review (see Table 6). Whittemore and Knafl (2005) recommended a comprehensive, broad search strategy to uncover the most relevant literature possible, thus avoiding bias. Integrative reviews are best performed by exploring multiple electronic databases, hand-searching books and journals, utilizing article reference lists, including professional organization guidelines, and exploring gray literature such as unpublished works. Melnyk's Level of Evidence Pyramid identifies systematic and meta-analysis at the highest level of evidence; however, this does not mean studies at a lower level are without merit. A chart including types and frequency of studies utilized in this integrative review are listed in Table 5.

SECTION THREE: MANAGING THE COLLECTED DATA

Methodology

An integrative review allows for inclusion of information from different types of data sources and qualitative, quantitative, or mixed method approaches (Whittemore & Knafl, 2005). Although a rigorous method of inquiry, an integrative review casts a wide net in order to expand

the knowledge base and fully integrate evidence in order to impact nursing practice. The integrative review is guided by a five-stage process defined by Whittemore and Knafl (2005) and Hopia et al. (2016): (a) problem identification with a clearly defined question and purpose, (b) a literature search that incorporates a comprehensive search strategy, (c) data evaluation focusing on methodological quality, (d) data analysis including data reduction, display, comparison, and conclusions; and lastly (e) presentation with a synthesis of findings and implications for practice. Hopia et al. (2016) recommended that nurse researchers consider incorporating integrative review findings as a strategy to build evidence from empirical and theoretical perspectives. Librarian support for this project was obtained through Liberty University in regards to database selection and search terms.

Information Sources

A literature search conducted with the strategies noted previously resulted in 973 articles overall. Information was obtained from peer-reviewed articles, reference lists within these articles, professional association reports, and one dissertation. Databases utilized were CINAHL, PsychInfo, and Proquest. This integrative review included six qualitative studies, three of which were of a descriptive nature, and three were studies in phenomena. Five studies were randomized controlled trials, and eight were of a cross sectional design. A mixed-method study occurred in four instances and 11 studies were quantitative. Eight integrative reviews, five systematic reviews, and one scoping review are included in this literature review. In order to capture a variety of resilience-bundle (RB) interventions, each article was reviewed for novel ideas. Common themes that emerged from the literature search included mindfulness and mental preparation strategies, stress management, multidisciplinary collaboration, career development, wellness groups, peer support, resilience training, organizational initiatives, and reflective

practice. Concepts from each article in the literature were assigned to categories based on personal, group, and organizational constructs and are reflected in Table 3.

Data Collection

An integrative review addresses a broad question, and a literature search will likely result in a large amount of information to be screened. Toronto and Remington (2020) suggested presenting explicit inclusion criteria: (a) the type of literature, (b) the phenomenon of study, (c) population characteristics, (d) publication language, (e) time period covered, and (f) the setting. This integrative review explored nurse resiliency as a personal attribute, unit culture, and organizational construct within the hospital setting. Peer-reviewed, full-text articles published in English between January 2014 and October 2020 were included. A narrow timeframe was chosen due to the abundance of articles in the literature on nursing resilience. The rationale for this time period was to obtain literature representative of the contemporary complexities of nursing care in the acute care hospital setting, with consideration given to advancements in technology. Search terms include resilience, resiliency, nurse, nursing, hospital, organizational and strategies.

Data Evaluation

The final sample for this integrative review was comprised of a diverse sampling of empirical, theoretical, and methodological literature. Toronto and Remington (2020) stated this approach allows for a more holistic understanding of a phenomenon. Empirical literature included both quantitative and qualitative studies, case studies, and cross-sectional methods. Theoretical review includes the Health Service Workplace Environmental Resilience Model by Cusack et al., (2016); (see Figure 2). Abstracts, where available, were screened for topic relevance.

Data Analysis Stage

Data analysis involves categorizing data, observing for patterns, ordering, and summarizing in order to formulate a research conclusion (Whittemore & Knafl, 2005). No evidence exists on how to best complete an integrative review and despite the lack of formalized rigor, integrative reviews are widely published in professional nursing journals (Toronto & Remington, 2020; Hopia et al., 2016). Methods for data analysis must be precise in order to provide clarity and replication; however, manual coding is acceptable (Toronto & Remington, 2020). Articles for this integrative review were assessed for resilience-building strategies and concepts were categorized into personal, unit, or organizational level themes. A thematic approach to data analysis was frequently used. Citations and documentation for each relevant article can be located in the literature matrix/evidence table (see Table 5).

Data reduction. The constant comparison method for data analysis begins with data reduction, which allowed this reviewer to organize information, consolidate ideas, and refine and narrow the focus of the review (Toronto & Remington, 2020). Data reduction assisted the reviewer with categorizing information by significance, author, type of publication, nature of research, evidence quality, limitations, and usefulness in the clinical setting. Resilience has been a topic of interest by many healthcare disciplines, resulting in a vast amount of data. Broad categories were condensed to smaller groups or concepts. Defining exact search terms and criteria for inclusion and exclusion early in the review process assisted with streamlining the selection of articles/sources to include in the integrative review.

Data display. Compiling data into a data display is beneficial in order to convey findings to the reader. Data displays simplify information and provide a visual representation of concepts, relationships, or patterns (Toronto & Remington, 2020; Whittemore & Knafl, 2005). The

consolidated resilience-building strategies have been placed into a table separating personal, group, and organizational concepts (see Table 3). The literature matrix is located in Table 5.

Data comparison. The data comparison phase of analysis allowed this reviewer to explore information for patterns, themes, and relationships, which were then categorized into groups (Toronto & Remington, 2020; Whittemore & Knafl, 2005). Data comparison is an iterative process, and the reviewer must be patient and diligent in order to complete the analysis.

Conclusion drawing and verification. The final phase of data analysis involves synthesis of information. Concepts from each subgroup are assessed for similarities and differences, with consolidation of ideas culminating into a conclusive review. During the conclusion phase it may become evident that information gaps exist, and this may motivate the reviewer to conduct future integrative reviews. In regards to resilience-building strategies, this reviewer would like to explore organizational barriers, as the work environment has a major influence on nurse wellbeing.

SECTION FOUR: QUALITY APPRAISAL

Sources of Bias

There are methodological limitations to the studies in this integrative review. One limitation is having a single person complete the review process, which can introduce bias into the study. It is conceivable that other reviewers might consider literature on the nursing student population as an important component of an integrative review on resilience. The studies in this integrative review took place in seven different countries, which provides for cultural diversity, but may limit the generalizability of the review. Aside from theoretical references, the timeframe for the integrative review was restricted to the past six years with the intent of exploring recent concepts, and this may have excluded relevant historical information on the topic. The gender

majority in nursing is female, and the participants in most studies were of female gender. This excludes the male perspective on nursing and resilience. Sample sizes ranged from eight to 1,338 participants. A small sample size can limit findings in such way as to preclude conclusions and applicability to practice. Large sample sizes may lead to overestimation of the importance of findings.

Internal Validity

A scientific method to review results of studies serves to confirm findings (Toronto & Remington, 2020). Melnyk's Level of Evidence assists in literature evaluation with a hierarchy based on the type of study. Although randomized control trials are at the top of the evidence pyramid, many nursing concerns are addressed at the lower end of the hierarchy by case, cohort, or descriptive studies. For this integrative review on nursing resilience, gray literature (thesis, dissertations, or government documents) provided applicable information (Toronto & Remington, 2020). It was the decision of this project reviewer to include gray literature as there are few randomized control trials on nursing resilience.

Appraisal Tools

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) was utilized as an established guideline for reporting search results. The PRISMA flow diagram is available in Figure 1 as a visual representation of literature included in the final review. Nursing resilience is a current focus in the literature; therefore, the dates for this integrative review were restricted to the past six years in order to reflect current practice and organizational initiatives. A literature matrix was utilized to evaluate each article for the author name(s), article title, study purpose, sample characteristics, methods, study results, level of evidence, study limitations, and evidence to support change.

Applicability of Results

According to Toronto and Remington (2020), a matrix supports the credibility of review findings. It is important to follow the same critical appraisal of the literature in order to guarantee rigor and consistency. Research on nursing resilience tends toward qualitative analysis, which focuses on behavior, feelings, beliefs, attitudes, and experiences in order to make sense of phenomena. There are a myriad of variables at play when examining nurse resilience, including individual characteristics (internal factors) and the environment (external factors). Although it may prove difficult to conclude that each intervention will lead to an identical outcome, strategies to promote nursing resilience have been identified.

Reporting Guidelines

The PRISMA flow diagram was utilized to report findings reflective of the total number of articles reviewed on nursing resilience. Articles were analyzed for relevance at this step and were either excluded or included in the final review. Utilizing the PRISMA flow diagram will assist others to follow the same steps as this reviewer in order to reach the same conclusions. Presenting information in tables, figures, and graphs can provide succinctness and clarity when data would be cumbersome in text.

<div align="center">

SECTION FIVE: DATA ANALYSIS AND SYNTHESIS

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Data Analysis Methods

This stage of the integrative review is dedicated to comparing and categorizing data from multiple sources (Toronto & Remington, 2020). A literature matrix was utilized to compare studies on nursing resilience in the acute care hospital setting, with a focus on identifying strategies to promote resilience at the personal, group, and organizational levels. All articles

included in the review were evaluated for type of study, sample characteristics, level of evidence, results, limitations, and applicability to practice.

Descriptive Results

The literature search from January 2014 - October 2020 revealed 973 articles on nursing and strategies to promote resilience. A six-year timeframe was selected for this integrative review due to the plethora of articles found in a wider historical search. Resilience in nursing is a prevalent topic in the literature, and knowledge continues to expand on a daily basis in light of the current coronavirus pandemic. Individuals, groups, and organizations are faced with financial concerns and are challenged to meet basic needs such as acquiring healthcare equipment in order to guarantee safety. The literature search for this integrative review provided evidence that resilience-building strategies are important to individual nurses, nursing units, and organizations. Resilience strategies promote professional growth, strengthen relationships, increase job satisfaction and can help to reduce nurse burnout. A stable nursing workforce has been shown to translate into quality patient outcomes.

Synthesis

Three themes emerged from the literature in reference to resilience as an individual or personal attribute, a group dynamic or peer relationship within operating units, or an organizational construct (Boehm et al., 2017; Degrande et al., 2018; Kester & Wei, 2018) Further insight into resilience was provided by Manomenidis et al. (2019) as there is an internal perspective such as an individual's emotional intelligence, and an external viewpoint such as social networks and the work environment. There is a significant association between resilience and the professional quality of life (Ang, et al., 2018; Brown, et al., 2018; & Magtibay et al., 2017). Stacey and Cook (2019) conducted a systematic scoping review (Level I), and results indicated efforts to promote

resilience are more effective with a multilevel approach. Perry et al. (2017) echoed favor with resilience efforts at all levels, (personal, group, and organization) in an expert opinion piece (Level VII), and recommended focusing on sustainability efforts. Randomized control trials (Level II) supported peer group activities (Im et al., 2016), and mindfulness (Grabbe et al., 2019; Lin et al., 2018; & Slatyer et al., 2017; Steinberg et al., 2016). Resilience training was supported by Kester and Wei, 2018; Magtibay et al., 2017; and Perry et al., 2017.

Case-control, cohort studies (Level IV) mentioned an increase in coping skills fosters resilience and nurse wellbeing, which positively impacts the quality of patient care (Manomenidis et al., 2019; McNeil et al., 2019; Mills et al., 2017). Written exposure therapy (WET) was identified as an effective mindfulness practice by Mealer et al. (2017) and was supported by Liang et al. (2019). The majority of articles were systematic reviews of the literature inclusive of qualitative or descriptive studies. On Melnyk's Level of Evidence Pyramid these are categorized as Level V or VI. (See Table 1).

Question One: In the acute-care hospital setting, what organizational processes and structures have proven effective in supporting nurse resilience?

Organizations can foster nurse resilience by ensuring a healthy work environment and by showing a genuine interest in the wellbeing of the nursing staff (Badu et al., 2020; Barasa et al., 2020; Garcia et al., 2017; Tonkin et al., 2018). Nurses desire autonomy and participation in decision-making, and as such organizations should seek input directly from the nursing staff. The National Academy of Medicine (2020), cited asking nurses "What matters most to you?" as an important element to success, especially when improvements can be made. Resilience-building training and peer-support teams may have a favorable impact on nursing resilience; however, sustainability and long-lasting effects from such programs remain to be seen (Magtibay et al.,

2017; Perry et al., 2017; Vanhove et al., 2015). Opportunities for professional development in the form of educational offerings or clinical ladder advancement have proven to promote resilience. Change is ever-present in the healthcare arena and parsing out change initiatives can provide nurses with time to adjust to new policies and workplace processes. Resources for workload include flexible scheduling, and thoughtful recruitment of individuals with ideas commiserate to the mission, vision, and values of the organization. Nurses appreciate meaningful recognition, helpful technology, and tangible consideration for wellness by leaders. A transparent organization can bolster resilience and build trust by sharing information, even if the news is not promising. Organizations should have processes in place to help nurses exposed to high-risk situations such as medication errors, unexpected patient decline, violence in the workplace, or emotionally distressing events (Chapman & Knight, 2017; Merandi et al., 2017).). This support can take the form of employee assistance programs or peer-support programs.

Question Two: In the acute-care hospital setting, what are the attributes exhibited by resilient nurses?

Attributes of resilient nurses in the emotional realm are mentioned frequently in the literature as emotional toughness (Hart et al., 2014; & Shin et al., 2018), emotional intelligence (Badu et al., 2020; Cooper et al., 2020), emotional stamina (Barratt, 2018), and emotional insight (Yilmaz, 2017). Mindfulness, or being present in the moment with the ability to command calm through controlled deep breathing and meditation is a characteristic of resilient nurses (Grabbe et al., 2019; Lin et al., 2018; Low et al., 2019; Mealer et al., 2017). Resilient nursing traits include optimism, a sense-of-humor, patience, a willingness to learn, flexibility, a pro-social attitude, and positive thinking (Hart et al., 2014; Imani et al., 2018; Shin et al., 2018). Aspects of resilience originating from within the nurse are reflected as a strong sense of self (Barratt, 2018), self-

reliance (Badu et al., 2020), self-care (Cooper et al., 2020), self-efficacy (Cooper et al., 2020; Hart et al., 2014; Shin et al., 2018; Yilmaz, 2017), self-discipline, self-understanding, self-compassion, self-esteem, and self-confidence (Gracia-Gracia & Olivan-Blazquez, 2017; Mealer et al., 2016; Yilmaz, 2017). The pursuit of knowledge and professional development can improve work performance for nurses, which in turn fosters resilience through increased cognitive abilities and confidence. These views support the notion of resilience as developmental constructs and individual internal qualities of the nurse.

Ethical Considerations

Human subjects must be protected from negative consequences related to all types of research activities, evidence-based practice projects, and quality improvement initiatives. To that end, the federal government requires completion of ethics and compliance training whether or not federal funding is sought.

Collaborative Institutional Training Initiative

Liberty University requires completion of Collaborative Institutional Training Initiative (CITI) training as defined in 45 CFR 46. CITI program training includes PowerPoint presentations, didactic information, case studies, and section assessments (Atkins et al., 2020). Any existing conflict of interest should be disclosed when presenting written or verbal material. See Figure 3 for the CITI training certificate.

Institutional Review Board

The Institutional Review Board (IRB) evaluates research involving human or animal participants, regardless of funding sources (DiGiacinto, 2019). The three levels of IRB approval are exempt, expedited, and full review. The IRB will assess participant risk for the principles of beneficence, justice, and respect for persons. This integrative review did not involve human or

animal subjects. Approval for this integrative review on nursing resilience was sought through Liberty University. See Figure 4 for Liberty University IRB Approval.

SECTION SIX: DISCUSSION

Resilience building strategies are paramount to strengthening the personal response to stress. Common themes that emerged from the literature search included individual attributes and habits such as reflective practice, mindfulness, mental preparation strategies, wellness activities, and maintenance of work-life balance. At the organizational level it is important to provide open dialogue, appropriate work resources, career development, wellness programs, resilience training, and opportunities to participate in decision-making.

Implications for Practice

A healthy, supportive work environment is important in fostering the retention of nursing staff. At the personal level, nurses can be encouraged to participate in self-care. This includes taking allotted time off from work, exercising, eating healthy foods, and finding a pastime to alleviate stress. In order to promote resilience at the unit level, the nursing team can define the ideal culture of support and teamwork. Dedicated time to talk about teamwork can be built into unit practice committees. The American Association of Critical Care Nurses supports assessment and development of healthy work environments and offers templates for use. Nurses on a resilient unit should be flexible with making assignments, support meal breaks, and offer ongoing education to improve practice. Welcoming and socializing new nurses to the unit can help facilitate resiliency from the start. At the organizational level retention rates, absenteeism, and nursing errors can be monitored. Collecting data on these indicators can help point to an unhealthy environment early on. Operationalizing resilience-building strategies may be influenced by organizational readiness for change and thus present a challenge for project

leaders. The Institute for Healthcare Improvement supports efforts to promote joy in the workplace. Focusing on one initiative at a time may be helpful. Departments with a specialty contribution can work on resilience building simultaneously in order to provide a unique perspective related to expertise. Communication with staff should occur regularly via various means with consistent messaging as the goal. Wellness programs and information on the physical and emotional signs of distress have proven beneficial for nursing staff.

Implications for Research

Implications for further research include formatting a causal relationship between resilient units and organizations to nursing retention rates and improved patient outcomes. A question remains as to the best way to assess resilience at the three levels of interventions. Is there a superior, validated, reliable scale suitable for use across nursing specialties and areas of practice? According to Yu et al., (2019), a consistent instrument to measure resilience is needed, although the most prominent tool utilized is the 2003 Connor-Davidson Resilience Scale. Vanhove et al. (2015) advocated for a clear definition of resilience-building efforts in the future. Should there be a required nursing self-assessment at intervals such that preventative interventions can take place before individual stress accumulates beyond coping abilities? What are the best practices to promote and ensure resilience during a steady state versus a crisis state? Further studies to better understand the relationship between resilience and turnover for healthcare organizations are needed.

Doctor of Nursing Practice Essentials

Conducting an integrative review supports scholarship inherent to the Doctor of Nursing Practice (DNP) degree. The use of sound integrative review methodology provides consistency and value to findings. According to the American Association of Colleges of Nursing (2018),

DNP scholarship includes the utilization and integration of knowledge from nursing and additional professional disciplines to improve nursing practice. DNP Essential I is realized in this integrative review, as inquiry included exploration of resilience as a concept from the social and psychological sciences. An integrative review methodology by Whittemore and Knafl (2005) was followed and supported with current day guidance by Hopia et al. (2016) and Toronto and Remington (2020).

Resilience building strategies can be employed at the micro, meso, and macro levels in order to improve outcomes for individual nurses, nurses working on inpatient unit teams, and organizations at large. Advocating for health care improvement through policy development and collaboration at the individual and system level supports scholarship in DNP Essentials II, V, and VI. Efforts to bolster resilience can foster nurse retention, and maintenance of a stable nursing workforce has been translated to improved patient outcomes in the acute care setting. According to Toronto and Remington (2020), "The goal of an integrative review (IR) is the development of a holistic understanding of the topic of interest by presenting the state of the science and theoretical and practical consequences of review findings" (p. 72).

Dissemination

A holistic view of an acute care organization encompasses the individuals, the teams, and the entire system. Acquiring knowledge is central to science in nursing; however, nurses prepared at the DNP level must be committed to sharing information through collaboration. Dissemination of information is the final phase of the integrative review and can occur through meetings, publications, or poster or podium presentations. The ability to use technology is a vital skill for the DNP prepared nurse, and dissemination of information can be supported by

contemporary technology use. Consideration may be given to news media, professional webinars, virtual meetings, social media, and lobbying via Internet platforms.

The current world health threats imposed by the coronavirus have led to enhanced use of technology in order to maintain healthcare communication despite social distancing. Strategies from this integrative review on nursing resilience will be incorporated into the nurse residency program seminars on self-care. The use of virtual meeting technology will be utilized to support graduate nurses enrolled in the residency program during transition to practice. As a DNP prepared nurse with an interest in nursing resilience, this reviewer can mentor the newly graduate nurse in order to promote the use of evidence-based practice. At the local level this reviewer can attend unit-based practice meetings to share information and lead teams to incorporate resilience strategies at the organizational level. These actions support DNP Essential IV. Please see Table 2 for a listing of the eight DNP Essentials and the associated construct.

Summary

The acute-care hospital environment is complex, and nurses are faced with physical, emotional, and cognitive challenges on a daily basis. The ability to understand organizational change initiatives, incorporate new information, and adapt work processes add to the environmental stress felt by nurses. It is beneficial for organizations to show appreciation for the human element in caregiving, as resilience is not dependent solely upon the individual characteristics of the nurse. Interventions are needed to promote resilience, which can offset nursing burnout, facilitate nurse retention efforts, and foster positive patient outcomes. Efforts to bolster resilience can be employed at the personal, group, and organizational level. A focus on caring practices for self and for others at all levels supports a healthy work environment. While

self-care activities and colleague support can bolster resilience, backing from the organization is

key to building nurse resilience.

References

Ahmadi, B., Mosadeghrad, A. M., & Karami, B. (2019). Effectiveness of resilience education on

quality of working life among nursing personnel: A randomized controlled study. *Payesh*

Health Monitor, 18(3). 279-289. ISSN: 1680-7626.

Al-Barmawi, M. A., Subih, M., Salameh, O., Sayyah, N. S. Y., Shoqirat, N., & Jebbeh, R. A-A.

E. A. J. (2019). Coping strategies as moderating factors to compassion fatigue among

critical care nurses. *Brain and Behavior, 9*(4). https//doi.org/10.1002/brb3.1264

Albieri, D. J. S., Melanda, F. N., Mesas, A. E., Gonzalez, A. D., Flavia, L. G., & Maffei, d-A. S.

(2017). Physical, psychological, and occupational consequences of job burnout: A

A systematic review of prospective studies. *PLoS One 12*(10). e0185781.

https://doi.org/10.1371/journal.pone.0185781

Alshehry, A. S., Alquwez, N., Almazan, J., Namis, I. M., Moreno-Lacalle, R. C., & Cruz, J. P.

(2019). Workplace incivility and its influence on professional quality of life among

nurses from multicultural background: A cross-sectional study. *Journal of Clinical*

Nursing, 28(13-14), 2553-2564. https://doi.org/10.1111/jocn.14840

American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for*

advanced nursing practice. American Association of Colleges of Nursing.

American Association of Colleges of Nursing. (2018). *Doctor of nursing practice (DNP)*

toolkit. https://www.aacnnursing.org/DNP/Tool-Kit

American Association of Critical Care Nurses. (2016). *AACN Standards for Establishing and*

Sustaining Healthy Work Environments: A Journey to Excellence. (2nd ed.).

https://www.aacn.org/~/media/aacn-website/nursing-excellence/standards/hwestandards.pdf

American Nurses Association. (2020). How to survive the pandemic with an unbroken spirit:

Actions to take right now to stay strong and focused. [Webinar]. American Nurses

Association Covid-19 Webinar Series. https://www.nursingworld.org

American Psychological Association. (2020). *Building your resilience.*

https://www.apa.org/topics/resilience

Ang, S. Y., Hemsworth, D., Uthaman, T., Ayre, T. C., Mordiffi, S. Z., Ang, E., & Lopez, V.

(2018). Understanding the influence of resilience on psychological outcomes -

Comparing results from acute care nurses in Canada and Singapore. *Applied Nursing*

Research, 43, 105-113. https://doi.org/10.1016/j.apnr.2018.07.007

Ang, S. Y., Uthaman, T., Ayre, T. C., Lim, S. H., & Lopez, V. (2018). A photo voice study on

nurses' perceptions and experience of resiliency. *Journal of Nursing Management, 27,*

414-422. doi:10.1111/jonm.12702

Ash, M., Harrison, T., Pinto, M., DiClemente, R., & Negi, L. T. (2019). A model for cognitively-

based compassion training: Theoretical underpinnings and proposed mechanisms. *Social*

Theory & Health, 1-25. https://doi.org/10.1057/s41285-019-00124-x

Atkins, H. E., Campoli, M., Havens, T. R., Abraham, S. P., & Gillum, D. (2018). *Research ethics*

and compliance training. https://about.citiprogram.org/en/homepage/

Babanataj, R., Mazdarani, S., Hesamzadeh, A., Gorji, M. H., & Cherati, J. Y. (2019). Resilience

   training effects on occupational stress and resilience of critical care nurses. *International*

   Journal of Nursing Practice, 25(1), e12697. doi: 10.1111/ijn.12697

Badu, E., O'Brien, A. P., Mitchell, R., Rubin, M., James, C., McNeil, K., Nguyen, K., &

   Giles, M. (2020). Workplace stress and resilience in the Australian nursing workforce: A

   comprehensive integrative review. *International Journal of Mental Health Nursing 29,*

   5-34. doi: 10.1111/inm.12662

Barasa, E., Mbau, R., & Gilson, L. What is resilience and how can it be nurtured? A systematic

   review of empirical literature on organizational resilience. *International Journal of*

   Health Policy and Management, 7(6), 491-503. doi: 10.15171/ijhpm.2018.06

Barden, A., & Giammarinaro, N. (2019). Resiliency and humanism with Team Lavender.

   Nursing Management, 50(2), 6-8. doi: 10.1097/01.NUMA.0000550454.91825.1f.

Barratt, C. (2018). Developing resilience: The role of nurses, healthcare teams and organisations.

   Nursing Standard, 33(7), 43.

   http://dx.doi.org.ezproxy.liberty.edu/10.7748/ns.2018.e11231

Bass, J., Walters, C., Toohill, J., & Sidebotham, M. (2016). Promoting retention, enabling

   success: Discovering the potential of student support circles. *Nurse Education in*

   Practice, 20, 109-116. https://doi.org/10.1016/j.nepr.2016.07.002

Bernard, N. (2019). Resilience and professional joy: A toolkit for nurse leaders. *Nurse Leader,*

    17(1), 43-48. https://doi.org/10.1016/j.mnl.2018.09.007

Boehm, L., Collins, R., & Duffy, B. (2017). How to foster joy, resilience and well-being as an

    antidote to clinician burnout. *On-line Journal of Nursing Informatics, 21*(2).

    http://ezproxy.liberty.edu/login?url=https://search.proquest.com/docview/1984790424?ac

    countid=12085

Bolg, J. R, Dwyer, P. A, Doherty, D. P, Pignataro, S. J., & Renaud, A. M. (2020). The impact of

    critical reflective inquiry education on experienced nurses' insights into practice. *Journal*

    for Nurses in Professional Development. 36(2), 68-73.

    doi: 10.1097/NND.0000000000000606

Brown, R., & Abuatiq, A. (2020). Resilience as a strategy to survive organizational change.

    Nursing Management, 51(2), 16-21. https://pubmed.ncbi.nlm.nih.gov/31990857/

Brown, R., Wey, H., & Foland, K. (2018). The relationship among change fatigue, resilience,

    and job satisfaction of hospital staff nurses. *Journal of Nursing Scholarship, 50*(3),

    https://doi-org.ezproxy.liberty.edu/10.1111/jnu.12373

Brown, S. (2018). The impact of resiliency on nurse burnout: An integrative literature review.

    MedSurg Nursing, 27(6), 349-378. https://search-ebscohost.com.ezproxy.

    liberty.edu/login.aspx?direct=tru&db=rzh&AN=133645959&site=ehost-live&scope=site

Brown, S., Whichello, R., & Price, S. (2018). The impact of resiliency on nurse burnout: An

    integrative literature review. *Medsurg Nursing, 27*(6), 349.

http://ezproxy.liberty.edu/login?url=https://search-proquest-com.ezproxy.liberty.edu/

docview/2159928351?accountid=12085

Cao, X., & Chen, L. (2019). Relationships among social support, empathy, resilience and work

engagement in haemodialysis nurses. *International Nursing Review, 66*(3), 366-373.

ISSN: 0020-8132.

Chapman, J., & Knight, L. (2017). Enhancing a culture of safety: Peer-to-peer support to

improve health & wellbeing of nurses. [PowerPoint slides].

https://www.omne.org/wp-content/uploads/2-17/04/Chapma-and-Knight.pdf

Chesak, S. S., Cutshall, S. M., Bowe, C. L., Montanari, K. M., & Bhagra, A. (2019). Stress

management interventions for nurses. *Journal of Holistic Nursing, 37*(3), 288-295.

doi: 10.1177/0898010119842693

Cline, S. (2015). Nurse leader resilience. *Nursing Administration Quarterly, 39*(2), 117-112.

ISSN: 0363-9568

Concillo, L., Joan, S. L., Oermann, M. H., Kronk, R., & Schreiber, J. B. (2019). Newly

licensed nurse resiliency and interventions to promote resiliency in the first year of hire:

An integrative review. *The Journal of Continuing Education in Nursing, 50*(4), 153-161.

http://dx.doi.org.ezproxy.liberty.edu/10.3928/00220124-20190319-05

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The

Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18,* 76-82.

doi: 10.1002/da.10113

Cooper, A. L., Brown, J. A., Rees, C. S., & Leslie, G. D. (2020). Nurse resilience: A concept

analysis. *International Journal of Mental Health Nursing, 29*(4), 553-575.

https://doi-org.ezproxy.liberty.edu/10.1111/inm.12721

Cusack, L., Smith, M., Hegney, E., Rees, C. S., Breen, L. J., Witt, R. R.,… Cheung, K. (2016).

Exploring environmental factors in nursing workplaces that promote psychological

resilience: Constructing a unified theoretical model. *Frontiers in Psychology.* 7:600

doi: 10.3389/fpsyg.2016.00600

Degrande, H., Liu, F., Greene, P., & Stankus, J. (2018). The experiences of new graduate nurses

hired and retained in adult intensive care units. *Intensive and Critical Care Nursing, 49,*

72-78. https://doi.org/10.1016/j.iccn.2018.08.005

Delgado, C., Upton, D., Ranse, K., Furness, T., & Foster, K. (2017). Nurses' resilience and the

emotional labour of nursing work: An integrative review of empirical literature.

International Journal of Nursing Studies, 70, 71-88.

https://doi.org/10.1016/j.ijnurstu.2017.02.008

DePolo, M. (2020). *Evidence-based practice: Model, framework, and theory.* [Unpublished

Manuscript]. Liberty University.

DiGiacinto, D. (2019). The importance of the Internal Review Board for approving proposed

research. *Journal of Diagnostic Medical Sonography.*

https://doi-org.ezproxy.liberty.edu/10.1177/8756479318817220

Edrees, H., Connors, C., Paine, L., Norvell, M., Taylor, H., & Wu, A. W. (2016). Implementing

the RISE second victim support programme at the Johns Hopkins hospital: A case study.

BMJ Open, 6(9).

El-Shafei, D. A., Abdelsalam, A. E., Hammam, R. A. M., & Elgohary, H. (2018). Professional

quality of life, wellness education, and coping strategies among emergency physicians.

Environmental Science and Pollution Research, 25(9), 9040-9050.

https://doi-org.ezproxy.liberty.edu/10.1007/s11356-018-1240-y

Gao, T., & Gurd, B. (2019). Hospital size: Chart. *BMC Health Services Research, 19*(1), 6.

https://doi-org.ezproxy.liberty.edu/10.1186/s12913-019-3907-6

Garcia, A. B., Rocha, F. L. R., Pissinati, P. de S. C., Marziale, M. H. P., Camelo, S. H. H., &

Haddad, M. do C. F. L. (2017). The effects of organizational culture on nurses'

perceptions of their work. *British Journal of Nursing, 26*(14), 806-812.

doi: 10.12968/bjon.2017.26.14.806

Grabbe, L., Higgins, M. K., Baird, M., Craven, P. A., & Fratello, S. S. (2019). The Community

Resiliency Model® to promote nurse well-being. *Nursing Outlook,*

https://doi.org/10.1016/j.outlook.2019.11.002

Gracia-Gracia, P., & Olivan-Blazquez, B. (2017). Burnout and mindfulness self-compassion in

nurses of intensive care units: Cross-sectional study. *Holistic Nursing Practice, 31*(4),

225-233. doi: 10.1097/HNP.0000000000000215

Grafton, E., Gillespie, B., & Henderson, S. (2010). Resilience: The power within. *Oncology Nursing Forum, 37*(6), doi: 10.1188/10.ONF.698-705

Guo, Y-F., Luo, Y-H, Lam, L., Cross, W., Plummer, V., & Zhang, J-P. (2017). Burnout and its association with resilience in nurses: A cross-sectional study. *Journal of Clinical Nursing, 27*(1-2), 441-449. https://doi-org.ezproxy.liberty.edu/10.1111/jocn.13952

Harrison, R., & Wu, A. (2017). Critical incident stress debriefing after adverse patient safety events. *American Journal of Managed Care, 23*(5), 310-312. https://www.ajmc.com/view/critical-incident-stress-debriefing-after-adverse-patient-safety-events

Hart, P. L., Brannan, J. D., & DeChesnay, M. (2014). Resilience in nurses: An integrative review. *Journal of Nursing Management, 22,* 720-734.

Henshall, C., Davey, Z., & Jackson, D. (2020). The implementation and evaluation of a resilience enhancement programme for nurses working in the forensic setting. *International Journal of Mental Health Nursing / Early View.* https://doi-org.ezproxy.liberty.esu/10.1111/inm.12689

Hopia, H., Latvala, E., & Liimatainen, L. (2016). Reviewing the methodology of an integrative review. *Scandanavian Journal of Caring Sciences, 30*(4), 662-669. https://doi.org/10.1111/scs.12327

Im, S. B., Cho, M-K., Kim, S. Y., & Heo, M. L. (2016). The huddling programme: Effects on empowerment organizational commitment and ego-resilience in clinical nurses – A randomized trial. *Journal of Clinical Nursing, 25*(9-10), 1377-1387.

https://doi-org.ezproxy.liberty.edu/10.1111/jocn.13228

Imani, B., Kermanshahi, S. M. K., Vanaki, Z., Lili, A. K. (2018). Hospital nurses' lived

experiences of intelligent resilience: A phenomenological study. *Journal of Clinical*

Nursing, 27, 2031-2040. doi: 10.1111/jocn.14310

Ja, K. K., & Soo-Kyoung, L. (2019). Influence of resilience and job embeddedness on turnover

intention in general hospital nurses. *Journal of Korean Academy of Nursing*

Administration, 25(4), 362-372. ISSN 1225-9330

Joyce, S., Shand, R., Tighe, J., Laurent, S. J., Bryant, R. A., & Harvey, S. G. (2018). Road to

resilience: A systematic review and meta-analysis of resilience training programmes and

interventions. *BMJ Open, 14;8*(6): e017858.

http://dx.doi.org.ezproxy.liberty.edu/10.1136/bmjopen-2017-017858

Kelly, L. A., Gee, P. M., Weston, M. J., & Ryan, H. A. (2019). Rethinking resilience. *Nurse*

Leader, 17(5), 461-464.

https://www.nurseleader.com/article/S1541-4612(18)30394-X/fulltext

Kester, K., & Wei, H. (2018). Building nurse resilience. *Nursing Management, 49*(6), 42-45.

doi:10.1097/01.NUMA0000533768.28005.36

Kowalski, M. O., Basile, C., Cole, D. A., McClure, D. E., & Weaver, S. H. (2019). What do

nurses need to practice effectively in the hospital environment? An integrative review

with implications for nurse leaders. *Worldviews on Evidence-Based Nursing, 17*(1),

60-70. https://doi-org.ezproxy.liberty.edu/10.1111.wvn.12401

Kumat-Thoma, E., Ganger, M., Peterson, K., & Channel, L. (2017). Reducing annual hospital

    and registered nurse staff-turnover-A 10-element onboarding program intervention. *Sage*

    Open Nursing. https://doi.org/10.1177/2377960817697712

Liang, H-F., Wu, K-M., Hung, C. C., Wang, Y-H., & Peng, N-H. (2019). Resilience

    enhancement among student nurses during clinical practices: A participatory action

    research study.

    Nurse Education Today, 75, 22-27. https://doi.org/10/1016/j.nedt.2019.01.004

Lin, L, He, G., Yan, J., Gu, C., & Xie, J. (2018). The effects of a modified mindfulness-based

    stress reduction program for nurses: A randomized controlled trial. *Sage Journals.*

    https://doi-org.ezproxy.liberty.edu/10.1177/2165079918801633

Low, R., King, S., & Foster-Boucher, C. (2019). Learning to bounce back: A scoping review

    about resiliency education. *Journal of Nursing Education, 58*(6), 321-329.

    https://doi-org.ezproxy.liberty.edu/10.3928/01484834-20190521-02

Magtibay, D. L., Chesak, S. S., Coughlin, K., & Sood, A. (2017). Decreasing stress and burnout

    in nurses. Efficacy of blended learning with stress management and resilience training

    program. *The Journal of Nursing Administration, 47*(7/8), 391-395.

    doi:10.1097/NNA0000000000000501

Manomenidis, G., Panagopoulou, E., & Montgomery, A. (2019). Resilience in nursing: The

    role of internal and external factors. *Journal of Nursing management, 27*(1), 172-178.

    https://doi-org.ezproxy.liberty.edu/10/10.1111/jonm.12662

McMillan, K. (2016). Employee spiritual care: Supporting those who care for others. *Journal of Christian Nursing, 33*(2), 98-101. https://doi.org/10.1097/CNJ.0000000000000258

McNeil, N., Bartram, T., Cregan, C., Ellis, J., & Cooke, F. L. (2019). Caring for aged people: The influence of personal resilience and workplace climate on 'doing good' and 'feeling good." *Wiley: Journal of Advanced Nursing, 75*(7), 1450-1461. doi: 10.1111/jan.13935

Mealer, M., Hodapp, R., Conrad, D., Dimidjian, S., Rothbaum, B., & Moss, M. (2017). Designing a resilience program for critical care nurses. *AACN Advanced Critical Care, 28*(4), 359-365. doi:10.4037/aacnacc2017252

http://dx.doi.org.ezproxy.liberty.edu/10.1136/bmjopen-2017-017858

Mealer, M., Schmiege, S. J., & Meek, P. (2016). The Connor-Davidson Resilience Scale in critical care nurses: A psychometric analysis. *Journal of Nursing Measurement, 24*(1), 28-39. doi:10.1891/1061-3749.24.1.28

Melnyk, B. M. (2016). Level of evidence plus critical appraisal of its quality yields confidence to implement evidence-based practice changes. *Worldviews on Evidence-based Nursing, 13*(5), 337-339. https://doi-org.ezproxy.liberty.edu/10.1111/wvn.12181

Merandi, J., Liao, N., Lewe, D., Morvay, S., Stewart, B., Catt, C., & Scott, S. (2017). Deployment of a second victim peer support program: A replication study. *Pediatric Quality and Safety, 2*(4), p e031 doi: 10.1097/pq9.0000000000000031

Mills, J., Woods, C., Harrison, H., Chamberlain-Salaun, & Spencer, B. (2017). Retention of early

career registered nurses: The influence of self-concept, practice environment and

resilience in the first five years post-graduation. *Journal of Research in Nursing.*

https://doi-org.exproxy.liberty.edu/10.1177/1744987117709515

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for

systematic reviews and meta-analyses: The PRISMA statement. PLoS Med. 2009 Jul

21;6(7):e1000097.doi:10.1371/journal.pmed.1000097.Epub2009 Jul 21.

PMID: 19621072; PMCID

Mooney, C., Fetter, K., Gross, B., Rinehart, C., Lynch, C., & Rogers, F. (2017). A preliminary

analysis of compassion satisfaction and compassion fatigue with considerations for

nursing unit specialization and demographic factors. *Journal of Trauma Nursing, 24*(3),

158-163. http://dx.doi.org.ezproxy.liberty.edu/10.1097/JTN.0000000000000284

National Academy of Medicine. (2020). *Valid and reliable survey instruments to measure*

burnout, well-being, and other work-related dimensions.

https://nam.edu/valid-reliable-survey-instruments

National Academy of Medicine. (2020). *Resources to support the health and well-being of c*

clinicians during the Covid-19 outbreak. https://nam.edu/initiatives/clinician-resilience-

and-well-being/clinician-well-being-resources-during-covid-19/

Nursing Solutions Inc. (2019). *2019 NSI national health care retention & RN staffing report.*

https://www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_R

etention_Report.pdf

Online Etymology Dictionary. (2020). Resilience (n.)

https://www.etymonline.com/word/resilience

Park, S., Choi, M., & Kim. S. (2018). Validation of the resilience scale for nurses. (RSN).

Archives of Psychiatric Nursing, 33(4), 434-439.

https://doi.org/10.1016/j.apnu.2018.12.004

Perlo, J., Balik, B., Swensen, S., Kabcenell, A., Landsman, J., & Feeley, D. (2017). *IHI*

Framework for Improving Joy in Work. IHI White Paper. Cambridge, Massachusetts:

Institute for Healthcare Improvement. [Available at ihi.org].

Perry, L., Nicholls, R., Duffield, C., & Gallagher, R. (2017). Building expert agreement on the

importance and feasibility of workplace health promotion interventions for nurses and

midwives: A modified Delphi consultation. *Journal of Advanced Nursing, 73*(11), 2587-

2599. https://doi-org.ezproxy.liberty.edu/10.1111/jan.13345

Pulley, M. L., & Wakefield, M. (2015). *For the practicing nurse manager: Building resiliency –*

How to thrive in times of change. Silver Spring, MD: American Nurses Association.

Rees, C. S., Eley, R., Osseiran-Moisson, R., Francis, K., Cusack, L., Heritage, B, & Hegney, D.

Individual and environmental determinants of burnout among nurses. *Journal of Health*

Services Research and Policy, 24(3), 191-200. ISSN: 1355-8196

Ricciardi, R. (2020). *Infuse joy.* [Video]. YouTube.

https://www.youtube.com/watch?v=5bRl9g-kAo4

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical*

    Psychology, 58(3), 307-321. https://onlinelibrary.wiley.com/doi/abs/10.1002/jclp.10020

Roney, L. N., & Acri, M. C. (2018). The cost of caring: An exploration of compassion fatigue,

    compassion satisfaction and job satisfaction in pediatric nurses. *Journal of Pediatric*

    Nursing, 40, 74-80. https://doi.org/10.1016/j.pedn.2018.01.016

Scoloveno, R. (2016). A concept analysis of the phenomenon of resilience. *Journal of Nursing &*

    Care, 5(4), doi: 10.4172/2167-1168.1000353

Shelly, J. A., & Miller, A. B. (2006). *Called to care: A Christian worldview for nursing.*

    (2nd ed.). InterVarsity Press.

Shin, H. S., Kim, J. H., & Ji, E. S. (2018). Clinical nurses' resilience skills for surviving in a

    hospital setting: A Q-methodology study. *Asian Nursing Research, 12*(3), 175-181.

    doi: 10.1016/j.anr.2018.06.003

Slatyer, S., Craigie, M., Heritage, B., Davis, S., & Rees, C. (2017). Evaluating the effectiveness

    of a brief mindful self-care and resiliency (MSCR) intervention for nurses: A controlled

    trial. *Mindfulness, 9*(2), 534-546. https://doi-org.ezproxy.liberty.edu/10.1007/s12671-

    017-0795-x

Stacey, G., & Cook, G. (2019). A scoping review exploring how the conceptualization of

    resilience in nursing influences interventions aimed at increasing resilience. *International*

    Practice Development Journal, 9(1), Article 9. https://doi.org/10.19043/ipdj.91.009

Steinberg, B. A., Klatt, M., & Duchemin, A-M. (2016). Feasibility of a mindfulness-based

    intervention for surgical intensive care unit personnel. *American Journal of Critical Care,*

    26(1), 10-18. https://doi.org/10.4037/ajcc2017444

Summit Consulting. (2020). *Going home checklist.* Summiteducation.ca/going-home-checklist/

Tam, W. W. S., Lo, K. K. H., & Khalechelvam, P. (2017). Endorsement of PRISMA statement

    and quality of systematic reviews and meta-analyses published in nursing journals: A

    cross-sectional study. *BMJ Open, 7*(2), e013905.

    https://pubmed.ncbi.nlm.nih.gov/28174224/

The Connor-Davidson Resilience Scale. (2020).

    http://www.connordavidson-resiliencescale.com/contact.php

The Joint Commission. (2019). Preventing nursing burnout. *Hospital Employee Health, 38*(9),

    http://ezproxy.liberty.edu/docview/2271731108?accountid=12085

Tonkin, K., Malinen, S., Naswall, K., & Kuntz, J. C. (2018). Building employee resilience

    through wellbeing in organizations. *Human Resource Development Quarterly, 29*(2),

    https://doi.org/10.1002/hrdq.21306

Toronto, C. E., Remington, R. (2020). *A step-by-step guide to conducting an integrative review.*

    Springer.

Vanhove, A. J., Herian, M. N., Perez, A. L. U., Harms, P. D., & Lester, P. B. (2015). Can

    resilience be developed at work? A meta-analytic review of resilience-building

    programme effectiveness. *Journal of Occupational and Organizational Psychology,*

89(2), 278-307. https://bpspsychub.onlinelibrary.wiley.com/doi/abs/10.1111/joop.12123

Warshawski, S., Itzhaki, M., & Barnoy, S. (2018). The associations between peer caring

behaviors and social support to nurse students' caring perceptions. *Nurse Education in*

Practice, 31, 88-94. https://doi.org/10.1016/j.nepr.2018.05.009

Wei, H., Roberts, P., Strickler, J., & Webb-Corbett, R. (2018). Nurse leader's strategies to foster

nurse resilience. *Journal of Nursing Management, 27,* 681-687. doi: 10.111/jonm.12736

Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of*

Advanced Nursing, 52(5), 546-553. https://doi.org/10.1111/j.1365-2648.2005.03621.x

Yilmaz, E. B. (2017). Resilience as a strategy for struggling against challenges related to the

nursing profession. *Chinese Nursing Research, 4*, 9-13.

https://dx.doi.org/10.1016/j.cnre.2017.03.004

Yu, F., Raphael, D., Mackay, L., Smith, M., & King, A. (2019). Personal and work-related

factors associated with nurse resilience: A systematic review. *International*

Journal of Nursing Studies, 93, 129-140. https://doi.org/10.1016/j.ijnurstu.2019.02

Table 1: Melnyk's Level of Evidence

Level of Evidence	Type of Evidence	Definition
I	Systematic review/meta-analysis	A synthesis of evidence from all relevant RCTs and other studies.
II	Randomized Controlled Trial (RCT)	An experiment in which participants are randomized to a treatment or control group.
III	Controlled Trial without Randomization	An experiment in which subjects are non-randomly assigned to a treatment or control group.
IV	Case-control or Cohort Study	Case-control study: A comparison of subjects with a condition (case) with those who don't have the condition (control) to determine characteristics that might predict the condition. Cohort study: Observation of a group called a cohort to determine the development of an outcomes such as a disease.
V	Systematic review of qualitative or descriptive studies	A synthesis of evidence from qualitative or descriptive studies to answer a clinical question.
VI	Qualitative or descriptive study	Qualitative study: Data gathered through interviews and other in-depth explorations to understand experiences and phenomena: The why and how decisions are made. Descriptive study: Provides background information on the what, why, and when of a topic of interest.
VII	Opinion or consensus	Authoritative opinion of an expert or expert committee.

(Melnyk, 2016; Gao & Gurd, 2019).

Table 2: The Essentials of Doctoral Education for Advanced Nursing Practice

DNP Essential	Foundational Outcome Competencies
I	Scientific Underpinnings for Practice
II	Organizational and Systems Leadership for Quality Improvement and Systems Thinking
III	Clinical Scholarship and Analytical Methods for Evidence-Based Practice
IV	Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
V	Health Care Policy for Advocacy in Health Care
VI	Interprofessional Collaboration and Population Health for Improving Patient and Population Health Outcomes
VII	Clinical Prevention and Population Health for Improving the Nation's Health
VII	Advanced Nursing Practice

(American Association of Colleges of Nursing. October, 2006).

Table 3: Resilience-building Strategies

Individual / Personal	Group	Organization
Art/Coloring	Build relationships	Animal Assisted Care
Define personal sense of purpose	Cultivate positivity	Art work reflective of nature
Develop cultural awareness	Celebrate success	Clinical ladders
End of shift rituals to separate work life from home life	Debrief after events	Committee participation
	Dedicated quiet time	Crisis Intervention Teams
Establishing boundaries	Humor	Employee Assistance Programs
Exercise	Intervene early for struggling peers	Ethics experts
Family/Friend support		Flexible scheduling options
Good nutrition	Mentors/buddy support	Include staff in decision-making
Gratitude practices	Network chat group	Meaningful recognition
Humor	Offer Breaks to peers	Parse out change initiatives
Identifying stress triggers	Peer coaching	Professional development
Journaling	Peer group activities	Provide quiet spaces for staff
Leisure activities	Prayer support	Recruit resilient individuals
Meditation	Reach out to new peers	Resilience Training
Mental preparation for work	Restorative workshops	Resources for workload
Mindfulness practices	Sharing data	Stress Education
Music	Shift huddles	Structured onboarding
Prayer support	Social connections	Support diversity
Puzzles	Storytelling	Technology
Reach out to connect	Support circles	Transition to practice programs
Self-reflection	Support diversity	Transparency
Sleep	Unit-based committees	Visibility and rounding
Social connections	Yoga	Wellness Groups
Walk outside on breaks		Work empowerment
Written Exposure Therapy (WET)		1:1 Touch points with leaders

Table 4: Attributes of Resilient Nurses

Author	Barratt (2018)	Badu et al. (2020)	Cooper et al. (2020)	Hart et al. (2014)	Mealer et al. 2016)	Shin et al. (2018)	Yilmaz (2017)
Identified Attribute	Curiosity Emotional stamina Flexibility Intelligence Level-headedness Problem solving ability Resource-fullness Strong sense of self	Emotional intelligence Interest in nursing Organi-zation of work Passion Positive thinking Self-reliance Work-life balance	Adaptability Commitment Competence Coping mechanisms Critical thinking Determination Emotional intelligence Empathy Hope Intelligence Optimism Positive self-image Purpose Realism Self-care Self-efficacy Social support Work-life balance	Cognitive reframing Coping Emotional toughening Grounding connections Growth High expectancy Hope Humor Interest in nursing Personal control Positive relationship Prosocial attitude Realistic worldview Self-efficacy Work-life balance	Cognitive Flexibility Coping processes Promote new knowledge Self-understanding Social networks Spiritual factor	Composure Emotional toughness Improve skills Knowledge seeking Peer support Reflection Relationship oriented Self-efficacy Self-help groups Social support Stabilize emotions Values align with organization Work-life balance	Adaptability Altruism Carrying on Cognitive ability Comfort with aloneness Coping ability Creativity Emotional insight Empathy Enduring values Faith Flexibility Hobbies Humor Insight into roles Optimism Physical health Positive identity Positive relationships Problem solving Self-confidence, efficacy and esteem, Sense of purpose in life

Table 5: Literature Matrix

Article Title Article Authors	Study Purpose	Sample Characteristic Demographics	Methods	Study Results	Level of Evidence (Melnyk)	Study Limitations	Evidence useful to support change?
Ang et al. Hemsworth, (2018). Understanding the influence of resilience on psychological outcomes - Comparing results from acute care nurses in Canada and Singapore. *Applied Nursing Research, 43,* 105-113. https://doi.org/ 10.1016/j.apnr .2018.07.007	To evaluate a theoretical model of the impact of resilience on burnout, secondary traumatic stress, and compassion satisfaction.	Singapore: 1338 Nurses from 2 academic medical centers with a minimum of diploma qualification. 93% female, equally married/single and around 40 years of age Canada: All part time and full time nurses at the North Bay Regional Health Center geared toward nurses enrolled at NBRHC in Ontario with 303 respondents. 86.5% female,	Participants notified via internal email. Survey administered online. Reminders were sent out two weeks post commencement. Studies approved by both IRBs. Connor-Davison Resilience Scale.	There is significant association between resilience and professional quality of life. A resilience based approach with help reduce nurse burnout and secondary traumatic stress while caring for patients and thus reduce turnover.	Cross sectional survey design with a population-based approach. Level VI	Use of cross-sectional surveys. Causality cannot be determined No longitudinal data.	Resilience knowledge is the key in informing the design and implement-tation of resilience-building strategies that may include professional development and strengthening of inter-personal skills. Leaders can ensure transition to practice programs and preceptor support.

		69% married, average age of 41, average working time of 16 years.						
Ang et al. (2018). A photo voice study on nurses' perceptions and experience of resiliency. *Journal of Nursing Management, 27,* 414-422. doi:10.1111/jonm.12702	To explore the meaning of resilience to nurses and their perceived resilience enhancing factors.	Eight nurses from an academic center in Singapore (focus group interviews)	The study adopted a descriptive qualitative design using Photo voice.	Four themes were generated: 1. Resilience is performing nursing duties despite adversity 2. Resilience is a dynamic process that develops over time. 3. Religion and faith help build resilience. 4. Support of others in important in overcoming work-related stress.	Level VI	Small sample size and is limited to the perceptions of nurses from one academic center. Limited generaliz-ability.	Building nurses' resilience is significant to improve and sustain healthy and effective functioning of nurses in the current health care system. Leaders should cultivate a healthy work environment and support diversity through realizing the importance of faith in the workplace
Ash et al. (2019). A model for cognitively-	To provide a conceptual model that explains how	N/A	Report	Review of CBCT module content – including	Level VII	Review of model with call for future research	Behavior change: Self-regulation, stress

based compassion training: theoretical underpinnings and proposed mechanisms. *Social Theory & Health,* 1-25. https://doi.org/10.1057/s41285-019-00124-x	the components of Cognitively-Based Compassion Training (CBCT) promotes resilience, compassion, and well-being.			skills and outcomes. Modules 1-III formulated to enhance individual resilience Little research exists on how and why practices are effective		Model does not consider individual features and contexts relevant to the participant such as demographics, health, psychological functioning, prior exposure to contemplative practices.	reactivity, stress resilience, and interpersonal and social processes.
Babanataj et al., (2018). Resilience training: Effects on occupational stress and resilience of critical care nurses.	To determine the effect of training for resilience on the intensive care unit nurses' occupational stress and resilience level.	30 nurses who were selected from seven critical care units of an educational hospital in Sari City, Iran	Quasi-experimental with pretest posttest approach	Effectiveness of resilience training were confirmed in this group	Level 4	Convenience sample Lack of a control group	Sessions included 1. concept of resilience, 2. understanding internal supportive factors, 3. understanding external supportive factors, 4 & 5. understanding ways to develop

							resilience
Badu et al., (2020). Workplace stress and resilience in the Australian nursing workforce: A comprehensive integrative review.	To identify and synthesize evidence on workplace stress and resilience in the Australian nursing workforce.	41 papers	Whittemore and Knafl (2005). Simultaneous inclusion of diverse methodologies (experimental and nonexperimental research) with varied perspectives to understand phenomenon of concern	406 papers with 86 duplicate records eliminated. 41 papers included in final synthesis where 40 met the criteria for high methodological quality assessment. One paper had medium quality. Need interventions that are sustainable	Level 5	Search words, language, scope, geographical setting, publication period	Organizing work as a mindful strategy (detach from highly charged emotional situations to reflect, learn and move on) Individual = self-reliance, positive thinking, emotional intelligence, passion and interest in nursing, work-life balance, and organization of work. Organization: leadership, role modeling, mentorship, support services, professional development, collegial

							networks, work based educational interventions, resilience promotion programs, mindfulness self-care.
Barasa et al., (2018). What is resilience and how can it be nurtured? A systematic review of empirical literature on organizational resilience.	To synthesize evidence of organizational resilience	34 papers met inclusion criteria and were analyzed by thematic review	PubMed, Econlit, EBSCOHOST Google and Google Scholar	A common theme is the recognition of resilience as an emergent property of complex adaptive systems. A function of planning for and preparing for future crisis, adapting to chronic stress, and acute shocks	Level 1	Two papers addressed the resilience of healthcare systems on chronic, everyday challenges. Majority of papers focused on acute, catastrophic shocks to the system.	Availability of resources (material, financial, human, technological) Communications, Training of staff through scenarios, Bottom up decision making, transparency, shared vision, trust, empowerment, motivation, creative climate, rewards for innovation, tolerance for failure, staff

							wellbeing,
Barden & Giammarinaro (2019). Resiliency and humanism with team lavender. (Barden &	To discuss an interdisciplinary professional group supportive of staff exposed to crisis, stress, and/or trauma	Team lavender supports staff members exposed to devastating maternity episodes. T.L. members are from social work, medicine, nursing, chaplaincy, employee assistance programs.	Report	Healthcare professionals are human, emotional beings, who grieve, mourn, hurt, and empathize deeply.	Level 6	None listed	Support staff in times of crisis and stress. Form a Team Lavender: rapid response to provide timely and personalized emotional, spiritual, and physical support; discuss feelings; and explore and enhance individual coping mechanisms. Supported team members provide exceptional patient care.
(Barratt, 2018) Developing resilience: The role of nurses, healthcare teams and	To improve nurses' understand-ing of the concept of resilience	Literature Review	Articles with double blind peer review	Stress risk assessment at intervals, teamwork, leadership training,	Literature review Level 5	None listed	Individual attributes: curiosity, self-confidence, resourcefulnes s, self-

organizations.	and outline strategies to improve resilience for self and others			career counseling, psychotherapy, take issue seriously, training of management staff, staff empowerment. Leadership diplomacy, honesty, staffing resources, decision-making, staff cohesiveness, learning and development			discipline, flexibility, level-headedness, problem solving ability, emotional stamina, intelligence, strong sense of self.
Boehm et al. (2017). How to foster joy, resilience and well-being as an antidote to clinician burnout. *On-line Journal of Nursing Informatics.21* (2), htto://ezproxy.	To explore trends and best practices that promote resilience	151 healthcare leaders and frontline staff in hospitals, clinics and health systems in the United States and Canada.	An invitation only online survey and in-depth interviews with 35 select health system executives, academics, and thought leaders.	The top factors contributing to burnout are a sense of change fatigue with too many priorities to juggle, administrative demands, technology burdens, and	Level VI	Invitation only survey No demographics identified Survey questions not attached.	Technology support to align document-tation with important care. Job-skill matching, Promote culture of safety, quality, empathy, and respect. Peer-

liberty.edu/log in?url=https:// search.proque st.com/docvie w/198479042 4?accountid=1 2085				clinical work without adequate staffing and support			coaching. One health system conducts weekly random surveys of staff. Collaborate with I.T. to streamline document- tation for nursing staff.
(Brown, & Abuatiq, 2020). Resilience as a strategy to survive organizational change.	To provide information about the concept of resilience and how resilience training for nurses can help protect against the negative effects of stress resulting from organization al change.	Adapted from a doctoral dissertation	Literature Review	Resilience training can have a positive effect in the workplace. Negative effects of change are mistrust of employer, more likely to leave, increase in burnout	Level 7	Adapted from a doctoral dissertation	Resilience training can improve resilience. reduce stress and promote well being

| Brown, S. (2018). The Impact of Resiliency on Nurse Burnout: An Integrative Literature Review. *MED SURG Nursing*, *27*(6), 349–378. https://search-ebscohost-com.ezproxy.liberty.edu/login.aspx?direct=true&db=rzh&AN=133645959&site=ehost-live&scope=site | To identify causes of nurse burnout, character-istics of nurses with high resiliency, and strategies to increase resiliency in nurses. The following questions were used to guide the review: • What factors contribute to nurse burnout? • Is there a relationship between nurse burnout and resiliency? • What character-istics are present in nurses with high | Nurses at different levels of education including students – Mostly female or not gender identified Ethnicity not identified in 10 studies | Electronic database search CINAHL, PsychINFO, Health-source resiliency, burnout, stress, nursing, turnover, and nurse resiliency. 2012-2107 | One characteristic, presence d'espirit, is described as possessing flexible, creative thinking. Resetting and optimism also were identified through interviews as resiliency concepts among nurses. Problem solving and critical thinking were identified as assisting with the management of stress. Identifying common characteristics among highly | Level V | Methodologic al issues were identified related to diversity of participants, sample size, and research setting. Without consistent methodology researchers cannot generalize results to other populations or settings. Study design also was identified as a limiting factor. Several studies used cross-sectional designs, which limit identification of causality because a control group was not used. The small sample | Sense of hope and meaning Workload Work environment Moral distress Rushton and co-authors (2015) found high resiliency in nurses to be correlated with personality traits of optimism, self-efficacy, hope, and flexibility. MBSR training effective |

				resilient nurses can help leaders		sizes and
resiliency? • What strategies can nurses implement to increase their resiliency? • What strategies - programs can organization al leaders implement to increase resiliency among nurses?				choose nurse candidates for highly stressful positions. Mindfulness-based stress reduction (MBSR) training, emotional distancing, conflict training, and event trigger exercises were found to have a positive impact on resiliency		specific research settings in several studies also prevent general-ization of results.
Brown et al. (2018). The relationship among change fatigue, resilience, and job satisfaction of hospital staff	To examine the relationship between change fatigue, resilience and job satisfaction	4,000 randomly selected RNs identified by the Midwestern state board of nursing Acute Care RNs	A descriptive correlational design Multiple regression model	Job satisfaction = a statistically significant negative association with change fatigue and a positive	Level VI	Differences in response across population Characteristics make the study population	Organization change can result in stress, decreased job satisfaction, change fatigue, and increased

				association with resilience		less representative	turnover
nurses. *Journal of Nursing Scholarship, 50*(3), https://doi-org.ezproxy.liberty.edu/10.1111/jnu.12373	among novice and seasoned hospital staff nurses.	Final population 521 full and part time nurses with different levels of nursing education Mostly female	Change Fatigue Scale Connor-Davidson Resilience Scale McCloskey/Mueller Satisfaction Scale QuestionPro SPSS file			Temporal relationship cannot be determined Potential for unmeasured confounding variables / potential bias cannot be ruled out	Magnet organizations have nurses with higher job satisfaction promote autonomy, accountability, and greater control over practice environment
(Chapman & Knight, 2017). Enhancing a culture of safety: Peer-to-peer support to improve health & wellbeing. PowerPoint	Describe second victim syndrome and effects on patient safety and caregiver stress. Describe how to develop and implement a peer support program.	Maine Medical Center: 637 Bed tertiary care teaching hospital with a Level 1 Trauma Program.	Report (Included for this student's interest) Authors mentioned the National Academy of Medicine: *Action Collaborative on Clinician Well-Being and Resilience*	Stigma, licensing fears, shame, blame, isolation, are common responses to adverse events.	Report	Evaluation is not conducted due to confidentiality Need a consistent method for staff members seeking peer support.	In program development include signs and symptoms, reactions, importance of listening, freedom of staff to reach out for help, background, successes and opportunities.

	Identify the benefits of a peer support program.						
(Concilio et al., 2019).

Newly licensed nurse resiliency and interventions to promote resilience in the first year of hire: An integrative review. | To summarize synthesize NLN resiliency and interventions used to promote NLN resiliency in the first year of hire. | Integrative review

16 articles: Qualitative 8

Quantitative 5

Mixed method 3 | Integrative review | Resilience interventions discussed.

Impact of resilience interventions.

Consequences with lack of resilience | Level 5 | Primarily surveys.

Various practice settings.

Capacity to build not included.

Not a direct measure of resilience. | Decreased resilience threatens patient safety.

Support builds engagement, confidence, and team building. |
| (Cooper et al., 2020).

Nurse resilience: A concept analysis | To systematic-ally analyze resilience as it relates to nurses and establish a working definition of nurse resilience | 69 papers met the search criteria for inclusion | Concept analysis (Walker and Avant, 2011) In order to fully understand resilience, all uses must be considered including exploring literature outside of the discipline to avoid bias. | Social support, self-efficacy, work-life balance, self-care, humor, optimism, realism, intelligence, commitment, purpose, spirituality, hope, control, competence, reflection, positivity, | Level 5 | None listed | Organizations can influence resilience and wellbeing of employees. Employee assistance programs, flexible work arrangements, reward and benefit systems, development programs, work-life |

				adaptability, emotional intelligence, empathy, positive self-image, coping mechanisms, critical thinking, determination, Personal resilience has been identified as a key protective attribute in dealing with adverse situations			balance practices
Degrande et al. (2018). The experiences of new graduate nurses hired and retained in adult intensive care units. *Intensive and Critical Care Nursing, 49,* 72-78. https://doi.org/ 10.1016/j.iccn .2018.08.005	To explore the experiences of nurses who were hired into adult intensive care as a new graduate and survived their transition from novice to	Participants across Texas from nurses who were hired into adult ICU full time as new graduates with BSN degree and were retained to start their 3rd year of practice. Average age 33.82 years. Ten Anglo-	Qualitative hermeneutic phenomen-ology design. Interviews were audio recorded and transcribed verbatim into a researcher reflexive journal. A unique code was assigned.	The overall meaning of the experience of having become competent in adult ICU is coming to terms with being comfortable with being uncomfortable Themes included	Qualitative hemeneutic phenomen-ology design. Level VI	The sample size was small with a homogenous sample in regard to race and education.	Nurses are better able to deal with stressors of work when they engage in diversional activities and means of healthy coping after shifts. Socializing team support, and partnerships

				confidence, uncertainty, gaining experiences, forever learning, intuition, and intuitive knowing, difficult and stressful, courage and assertiveness, and the team and support persons.			were important. Nursing leaders can provide support, promote team building, self-care, and healthy work environment
competent, starting the third year of practice.		American and one Asian India: all spoke English					
Delgado et al. (2017). Nurses' resilience and the emotional labour of nursing work: An integrative review of empirical literature. *International Journal of Nursing Studies, 70,* 71-88. https://doi.org/ 10.1016/j.ijnur	To investigate the state of knowledge on resilience in the context of emotional labour in nursing.	27 peer-reviewed quantitative and qualitative articles Studies: Four quantitative 22 qualitative One mixed	Integrative literature review (Whitte-more and Knafl) Constant compar-ative method	Building resilience through personal and pro-fessional develop-ment and education can increase the capacity to deal with workplace stress. Nurses' well being, job perfor-mance, and quality of care delivery can suffer without	Level V: Evidence from systematic reviews of descripttive and quali-tative studies.	The review was limited to articles in the past ten years, written in the English Language. Some studies may have been missed.	Resilience is a significant intervention that can build nurses' resources and address the effects of emotional dissonance in nursing work. Definition of resilience as an innate energy and motivating life force that results from

stu.2017.02.008				adequate support.			nurses developing their bio-psycho-social-spiritual well-being
(Edrees et al., 2016). Implementing the RISE second victim support programme at the Johns Hopkins hospital: A case study.	To describe the development of RISE and evaluate its initial feasibility and subsequent implementation. Development recruitment and training peer responders, pilot launch in the department of pediatrics, and hospital wide implementation.	Employees from a 1075 licensed bed, urban, academic medical center. 2/3 of respondents reported experiencing emotional distress following an unanticipated adverse event with more than ½ reaching out to a peer or colleague for support.	Mixed methods study (Encounters, staff surveys, and evaluations by RISE peer responders)	Two tier peer call system. Increase awareness via website, promotional videos, screen savers, and presentations. Responders felt training enriched their interaction with callers. Existing resource Medically induced trauma support services (MITSS) Toolkit for building a clinician and staff support program and the ForYou	Level 4	No systematic follow up of caller outcomes Relatively small sample sizes with some missing data Confidentiality of callers versus the desire to evaluate the outcomes. Data collection tools not previously validated	Organizations often fail to recognize the impact of adverse events on healthcare providers who can suffer emotional distress and second victims of the same incidents that harm patients. The Joint Commission and the National Quality Forum recommend healthcare institutions recognize second victim's needs

				program: U, of Missouri.			
Garcia et al., (2017). The effects of organizational culture on nurses' perceptions of their work.	To analyze the relationship between the organizational culture and feelings of pleasure and suffering among working nursing professionals.	214 nursing staff over 3 months Professional Characteri-zation, Assessment of Organizational Culture, and the Scale of Pleasure and Suffering at Work Predominately female	Cross sectional correlational descriptive study: quantitative approach	Lack of professional recognition work hours, work overload, poor conditions related to material or human resources, contact with patients' pain and suffering	Cross sectional correlational survey Level 5	Not discussed in the article. 26 nurses and 188 nursing auxiliaries and nursing technicians. Exact definitions unclear.	Working conditions and workload have a relationship to the quality of care Theory of Psychodynamics at Work Team spirit, Value of individual wellbeing, Rewards, Promote interpersonal relationships, Autonomy, Leadership, Decision-making, Organizational freedom
Grabbe et al. (2019). The Community Resiliency Model® to promote nurse well-being.	To test the effectiveness of a 3-hour Community Resiliency Model® (CRM)	196 Registered nurses in two urban tertiary-care hospitals Randomized into the CRM	To determine if the CRM group would demonstrate improvement in well-being and resiliency,	40 CRM members and 37 education group members Moderate-to-large-effect	Randomized Control Trial Level II	196 of 1,600 eligible nurses participated in the study, and 77 attended the class.	Shared The Resilient Zone Model from the Trauma Resource Institute

Nursing Outlook, https://doi.org/10.1016/j.outlook.2019.11.002	training, a novel set of sensory awareness techniques to improve emotional balance.	intervention group and attended a 3-hour Nurse Wellness and Well-Being class –or- the education control group Evaluation post intervention, at 1 week, 3 months and 1 year	secondary traumatic stress, burnout, and physical symptoms. WHO-5 Well-being index Connor-Davidson Resilience Scale Secondary Traumatic Stress Scale Copenhagen Burnout Inventory Somatic Symptom Scale 8	sized were demonstrated in the CRM group for well-being, resiliency, secondary traumatic stress, and physical symptoms. CRM participants used self-stabilization techniques during stressful events at work		Several participants did not show to class or cancelled. Study dependent upon self report Biologic measures not included One possible confounding variable between groups	Journaling, prayer, support groups, yoga, self-reflection, meditation, gratitude, sleep, good nutrition, exercise, social connections can help individual nurses build resilience. Parallel concerns for physicians
Guo et al. (2017). Burnout and	To investigate the	Convenience sample of 1,061 nurses from six	A cross-sectional survey design.	At the adminis-trative level,	Level VI: Evidence from a single	Causal relationship cannot be	Adaptable and effective interventions

its association with resilience in nurses: A cross-sectional study. *Journal of Clinical Nursing, 27*(1-2), https://doi-org.ezproxy.liberty.edu/10.1111/jocn.13952	prevalence and extent of burnout on nurses and its association with personal resilience.	separate three-level hospitals. Self-reported questionnaires.		establish an effective management system To cultivate a healthy workplace and adopt positive attitudes and harmonious relation-ships.	descriptive or qualitative study	established. Convenience sample and single province limits general-izability	for improving resilience are needed to relieve nurses' burnout and reduce workplace stress.
(Hart et al., 2014). Resilience in nurses: An integrative review.	To describe nursing research that has been conducted to understand the phenomenon of resilience in nurses.	Integrative Review (1990-2011) Key words resilient, resiliency, resilience, and nurse	Methodological review (Whittemore and Knafl)	Challenging workplaces, psychological emptiness, diminishing inner balance and a sense of dissonance.	Level 5	Some studies did not provide detailed information about sample sizes. Majority of participants were female and Caucasian. Only two studies reported ethnicity/race. Variety of practice settings, research questions and hypotheses	Hope, self-efficacy, coping, cognitive reframing, toughening up, grounding connections, work-life balance and reconciliation, prosocial attitude, high expectancy, positive relationships, sense of humor, realistic world view, personal control and growth.

(Hartmann et al., 2019). Resilience in the workplace: A multilevel review and synthesis.	To conduct a critical review of research on resilience in the workplace at the individual and team level.	83 Studies included in the review	Systematic review of empirical literature	Individual and team resilience are interdependent and can influence each other. Positive emotions can spread throughout a team. The individual can influence the team	Level 1	Excluded literature other than empirical. Related constructs excluded such as hardiness. Causal inferences cannot be proven.	Resilience efforts can be fostered at the individual and team level in the workplace.
Henshall et al. (2020). The implementa-tion and evaluation of a resilience enhancement programme for nurses working in the forensic setting. *International Journal of Mental Health Nursing / Early View.* https://doi-org.ezproxy.liberty.esu/10.1	Implement and evaluate a work-based resilience enhancement intervention for forensic nurses	29 nurses Non-agency Ability to attend the majority of sessions Registered with Nursing and Midwifery Council	Mixed methods design (survey, interview, case study) Descriptive statistics Pre-Post Intervention	Levels of resilience were significantly higher post programme with increase in self-awareness, confidence, and personal relationships	Level VI	Study was conducted in a forensic setting. Most of the sample was female. Quantitative single item evaluation of resilience in the study and not part of a validated measure.	Resilience enhancement programmes can increase nurses' levels of resilience and long-term impact may improve retention. Personal resilience can be strengthened. Include emotional

111/inm.12689							intelligence and spirituality Example of Resilience Programme is. in the article. (McDonald et al., 2019)
Im et al. (2016). The huddling programme: Effects on empowerment organizational commitment and ego-resilience in clinical nurses – a randomized trial. *Journal of Clinical Nursing, 25*(9-10), https://doi-org.ezproxy.liberty.edu/10.1111/jocn.13228	To study the effects of an empower-ment program as a means to foster support within peer groups in order to improve retention	49 clinical nurses working at two general hospitals with more than 500 beds.	Randomized Control Trial Pre-test Post-test Experimental group / Control group design	The huddling program positively increased nurses' perceptions of organi-zational commitment and empowerment	Level II	Hospitals were in Korea with high RN turnover. A convenience sample. Nurses all relatively young. Short-term effectiveness was studied.	Could be a useful strategy for improving retention of clinical nurses Peer group activities offer help as a stress coping intervention

Imani et al. (2018). Hospital nurses' lived experiences of intelligent resilience: A phenomenological study. *Journal of Clinical Nursing, 27,* 2031-2040. doi: 10.1111/jocn.14310	To explore hospital nurses' lived experiences of intelligent resilience	Ten hospital nurses working in Iran via purposeful sampling. Six male and four female working in different departments. Ages 34-52 and experience 11-28 years. Six with BSN, four with MSN	Semi-structured interviews in participant preferred time and place 45-90 minutes. Translation was word-by-word.	Four main themes and eight subthemes emerged. Patience and wisdom; Situational self-control; Appealing to religiosity; and Reverence	Level VI	Limited to a particular group and might not be generalizable.	Leaders can develop criteria to recruit resilient nurses and to develop programs for promoting hospital nurse resilience.
(Joyce et al., 2017). Road to resilience: A systematic review and meta-analysis of resilience training programmes and interventions.	To synthesize the available evidence on interventions designed to improve individual resilience.	11 RCTs were included in the final meta-analysis out of 437 citations Categories: Cognitive behavioral therapy, mindfulness based interventions, or mixed interventions.	Electronic databases to identify controlled trials or randomized controlled trials (RCTs) examining the efficacy of interventions aimed at improving psychological resilience.	Moderate positive effect of resilience interventions with subgroup analysis suggesting CBT based, mindfulness, and mixed interventions were effective and appear to have a positive	Level 1	Relatively small sample sizes across the RCTs. Over a third did not provide adequate data for inclusion in the main meta-analysis. None of the studies investigated the impact of	Reasonable to consider providing resilience training for nurses. Self-report resilience scales can predict mental health concerns in those with regular exposure to

		Two researchers Downs and Black Checklist	Poole effects sizes were calculated using the random-effects model of meta-analysis	impact on individual resilience.			adverse situations following the intervention. Did not publish a protocol outlining full search. English language.	trauma or distress.
Kester, K., & Wei, H. (2018) Building nurse resilience. *Nursing Management, 49*(6), 42-45. doi:10.1097/01.NUMA0000533768.28005.36	Summarizes the findings of nine studies about common contributing factors to nurses' dissatisfaction at work and strategies for nurse leaders to boost nurse resilience.	Articles 2015-2017 in PubMed	Online literature review: primarily PubMed	Combining formal education, social support, and meaningful recognition is an achievable strategy that promotes the well-being of nurses in the patient care environment. Implementing one intervention at a time and engaging staff in the planning, rollout, and	Level V	None listed – Literature review	Three strategies for building nurse resilience consistently emerged: formal education programs, social support, and meaningful recognition. In addition, participating in self-care, fostering relationships, and establishing boundaries help support

				maintenance of the interventions can provide a sense of camaraderie, teamwork, trust, and ownership, which, in turn, can positively influence the work environment.			nurse leader resilience, which, in turn, allows leaders to foster opportunities for nurses' well-being. Building strong relationships is a key factor in caring and building resilience.
Kumat-Thoma et al. (2017). Reducing annual hospital and registered nurse staff-turnover-A 10-element onboarding program intervention. *Sage Open Nursing*. https://doi.org/10.1177/2377 96081769771	To evaluate elements of nursing turnover and implement industry best practices.	187 bed community hospital turnover rates for hospital staff	Evidence-based turnover analysis Descriptive statistics Internal performance improvement Review literature, exit interview data, turnover statistics and exemplars in	Out of 61 departments 16 experienced decreased turnover, 39= no change, 16= decreased turnover A reduction in hospital staff turnover by 6.3% (2013). ER -42.2%,	Level VI	One facility	3rd party vendor exit interviews Structured onboarding 30-60-90 day meetings with leaders Unit buddy during orientation Clinical

2			the healthcare industry	Progressive Care -26.6%, Med. Oncology - 23% Lowered new hire nurse turnover however 1-4 year turnover climbed			Ladder Standardized 10 element onboarding program
Liang et al. (2019). Resilience enhancement among student nurses during clinical practices: A participatory action research study. *Nurse Education Today, 75*, 22-27. https://doi.org/10/1016/j.nedt.2019.01.004	To develop and implement a resilience enhancement (RE)-based project for Taiwanese nursing students	28 nursing students during their last clinical experience, aged 22 to 24. Practicum site on the ward (20), ICU (5), and O.R. (3).	Participatory Action Research approach. Group discussion, individual interview, and reflective diaries. Six workshops Once per week	Self-exploration, increasing nursing knowledge and skills, and purposeful positive thinking build resilience	Level IV: Evidence from well-designed case-control and cohort studies.	Participants restricted to last practicum timeframe. One regional teaching hospital. Transfer-ability of findings may be limited.	Resilience is a dynamic process. Incorporate resilience into education. (reflection, simulation, debriefing) Humor is one helpful characteristic

| Lin et al. (2018). The effects of a modified mindfulness-based stress reduction program for nurses: A randomized controlled trial. *Sage Journals.* https://doi-org.ezproxy.liberty.edu/10.1177/2165079918801633 | To evaluate the effects of a modified mindfulness-based (MBSR) program on levels of stress, affect, job satisfaction and resilience among nurses in general hospitals | 110 nurses randomly assigned to intervention and control group

Employed full time | A modified 8-week MBSR program evaluated at baseline, post-intervention and 3 months

Randomized Control Design

Perceived Stress Scale

Positive and Negative Affect Schedule

Connor-Davidson Resilience Scale

McCloskey-Mueller Satisfaction Scale | Intervention group showed decreases in stress and negative affect and increases in positive affect and resilience

MBSR is the most widely known mindfulness practice

Effective sample size ended up at 90

46 control and 44 intervention | Level II | Convenience sampling

Relatively small sample size

Self-reported questionnaires | A network Chat group through WeChat (Tencent Inc.) was set up on mobile phones to share PPT slides and audio presentations of guided exercises.

A shorter term mindfulness intervention can be effective |

| Low et al. (2019). Learning to Bounce Back: A Scoping Review About Resiliency Education. *Journal of Nursing Education*, 58(6), 321–329. https://doi-org.ezproxy.liberty.edu/10.3928/01484834-20190521-02 | To identify educational strategies to develop resilience in undergrad-uate health science students and to examine the application of these strategies to undergraduate nursing education | Electronic literature search 2005-2018.

English language

Peer reviewed articles

Academic journals

Resiliency – nursing-social work-teacher-health profession | The five-stage approach from Arksey and O'Malley was used as the methodological framework. Resources were evaluated thematically to identify key strategies and interventions.

Scoping literature review | Six key themes related to strategies and approaches to resiliency education were identified from the review: (a) Reflective Practice; (b) Storytelling; (c) Peer Support and Mentoring; (d) Professional Support and Mentoring; (e) Mindfulness and Meditation Practice; and (f) Enhancing Self-Knowledge and Personal Competencies. | Level V | Sample sizes are small – Infancy of resilience strategies | The intraper-sonal character-istics of a resilient individual include a disposition of control, altruism, responsive-ness, self-confidence, and positivity. The environmental influences include peer and social support, as well as a sense of belonging |

Magtibay et al. (2017). Decreasing stress and burnout in nurses: Efficacy of blended learning with stress management and resilience training program. *The Journal of Nursing Administration, 47*(7/8), 391-395. doi:10.1097/NNA.0000000000000501	To test the efficacy of SMART among transplant nurses and nurse leaders	50 nurses self-selected female 92% age range 24-63, 28 in direct pt. care and 18 leadership with other as 8 46 full time, 4 part time	Quasi-experimental 1-group baseline to post-intervention

Participants chose the format that met their learning styles and goals; Web-based, independent reading, facilitated discussions End points of mindfulness, resilience, anxiety, stress, happiness, and burnout were measured at baseline, post intervention, and 3-month follow-up to examine within-group differences. | Findings showed statistically significant, clinically meaningful decreases in anxiety, stress, and burnout and increases in resilience, happiness, and mindfulness. | Level III | No control group – highly motivated group self selected | Blended learning allows nurses to control their learning environment and seems to be a feasible strategy for resiliency training such as SMART. It allows access for nurses who typically are unable to participate in traditional, on-site programs. |

Manomenidis et al. (2019). Resilience in nursing: The role of internal and external factors. *Journal of Nursing Management, 27*(1), 172-178. https://doi-org.ezproxy.liberty.edu/10.1111/jonm.12662	The objective was to examine and compare the impact of individual characteris-tics, external factors and coping strategies on nurses' resilience.	1,012 Greek nurses working in eight hospitals in northern Greece. All departments – 1 year of experience – permanent status voluntary anonymous questionnaires	Descriptive cross-sectional study was conducted. This study used the "Mental Preparation Strategies Scale" to assess the mental preparation strategies employed by nurses before the beginning of their shift.	Educational level, anxiety, use of mental preparation strategies were the main predictors of nurse's resilience. Resilient nurses were better educated, had lower anxiety and used more mental preparation strategies before shift. Areas of work life model (workload, control, fairness, rewards, values, and community)	Level IV	Cross sectional design limits generalizability Unequal male to female participants Not a longitudinal study – does resiliency change over time	Physiologic factors to decrease sympathetic response, Protective factors: coping strategies, leisure activities internal factors: emotions + self-efficacy external factors: social network, clinical setting) demo-graphic years of experience
McNeil et al. (2019). Caring	Examine the impact of	Care workers in 20 Australian	A cross-sectional	Quality of care is	Level IV	Single source	Improving the resilience of

for aged people: The influence of personal resilience and workplace climate on 'doing good' and 'feeling good." *Wiley: Journal of Advanced Nursing, 75*(7), 1450-1461. doi: 10.1111/jan.1 3935	personal resilience on the well-being of care workers and how perceptions of the quality of care and the organization al social climate influence this relationship	aged care facilities with 194 useable responses	regression design	important as an outcome variable particularly in a supportive climate where high personal resilience positively influences quality of care		data collection

Facilities owned by a common corporate entity

Only one level of analysis = the care worker in aged care facilities.

Cross sectional (one point in time data) | nurses increases the ability to cope with increasing demands in the workplace.

2 studies suggest the quality of patient care is positively associated with caregiver well-being |
| (Mealer et al., 2016).

The Connor-Davidson Resilience Scale in critical care nurses: A psychometric analysis. | To investigate the factor structure of the Connor-Davidson Resilience Scale in critical care nurses, using exploratory factor | 744 critical care nurses across the United States | Exploratory factor analysis and confirmatory factor analysis | Trait, capacity, or outcome?

Coping processes that can result in the promotion of knowledge, self-understanding, and strengthening | Level 4 | Potentially important factors of resilience were not included in the model such as faith, social support, and self-care. Cross-sectional may | Social networks, cognitive flexibility, moral beliefs, developing active coping skills, finding resilient role models, spiritual factor |

	analysis and confirmatory factor analysis across the United States. (personal competence, perseverance, and leadership)			of resilient qualities		be limited to participant feelings at the time. Generalizability due to differences in culture, educational level and professional experience (not addressed)	
Mealer et al. (2017). Designing a resilience program for critical care nurses. *AACN Advanced Critical Care, 28*(4), 359-365. doi: 10.4037/aacnacc2017252	To gain data on a mindfulness-based cognitive therapy resilience intervention for intensive care units nurses to see if the intervention program would be feasible and acceptable.	33 RNs holding membership in the American Association of Critical Care Nurses, in 11 focus groups divided into two groups (highly resilient versus met diagnostic criteria for PTSD) 29 were white 1 African-American	Qualitative study with focus-group interviews	Institutions that wish to design a resilience program for intensive care unit nurses to reduce burnout syndrome need to understand the barriers and concerns relevant to their local nurses.	Level VI: Evidence from a single descript-tive or qualitative study	Participants were not asked if they had previous resilience coping skills. Participants self selected and results may not be generalizable. Demographics were not collected.	Utilize the same instructors per program. Relate didactic information to the local context. Utilization of mindfulness-based cognitive therapy and (WET) written exposure therapy (WET may build resilience and

		2 were Hispanic 1 unidentified					reduce psychological stress.
(Merandi et al., 2017). Deployment of a second victim peer support program: A replication study.	To support staff members at high risk for the second victim phenomena	10,000 employees Training in 4 hour sessions twice a month Trained supporters over 500 Clinicians supported in the first 2 years: 382 Go live was unit by unit	Identify a core steering team. Identify an executive sponsor. Develop unit-based teams. Develop team marketing and branding. Educate and train peer supporters, Track data to ensure effective-ness	Timeline in the article 2012 – first evaluation in 2016 3 Tiers of support. Algorithm for activation 24/7, email, hotline, direct contact. Over 300 peer supporters trained – 232 peer and 21 documented group encounters. 62% in the E.D. and 8% in the PICU 30% inpatient units Nurses with the highest encounters	Implementing a proven program to support staff – no randomization.	None listed. Opportunities to include all disciplines and improve documentation of encounters in order to quantify results	High risk situations include patient death, emotional stress, trauma, cardiac arrest, child abuse, medication error. Death of a colleague and unexpected patient demise also listed. Key to have administration, multidisciplinary, legal, and peers involved
Mills et al. (2017).	This study was	183 RNs responded and	A cross-sectional	Resilience develops over	Level IV	The limitation	Self-concept (years 1,2,4),

Retention of early career registered nurses: The influence of self-concept, practice environment and resilience in the first five years post-graduation. *Journal of Research in Nursing,* https://doi-org.ezproxy.liberty.edu/10.1177/1744987117709515	undertaken in collaboration with a northern Queensland Hospital and Health Service (HHS) to investigate factors related to RN attrition in the first 5 years after graduation. Data collection was undertaken between March and June of 2015.	started the questionnaire, of which 22 were excluded because date of graduation was prior to 2010, giving a response rate of 44%.	design for the study. The strength of using a cross-sectional approach is that all data are collected at one point in time to provide a snapshot of groups,	time and is a combination of personal traits and coping skills that regulates an individual's resistance to stress and one's ability to positively adjust to adversity		of a cross-sectional approach is that this method can only provide a 'snapshot' in time and is unable to measure or portray patterns over an extended period. It is unknown how each cohort of post-graduates would have responded in the years prior to the survey or in the years thereafter.	practice environment (Years 2, 3) and resilience as factors influencing nurse retention (years 2,3,4) career development to enhance leadership, confidence, competence. Encourage participation on committees.
(National Academy of Medicine, 2020).	To identify clear strategies both as	Report	Report (Included for this student's interest)	Value clinicians. Communicate best practices.	Report	None	For each individual: Meet basic needs, take

Strategies to support the health and well-being of clinicians during the Covid-19 outbreak.	health care leaders and individual clinicians to help sustain the well-being of clinicians amidst the Covid-19 outbreak.			Monitor and promote clinician well-being. Provide a supportive and blame-free work culture. Enable cooperation and collaboration. Provide a central access point for updated information. Ensure clinicians are not required to return to work during dire situations (health), Provide resources.			breaks, stay connected, respect differences, stay updated, perform self-check-ins, honor your service.
Park et al. (2018). Validation of the resilience scale for nurses. (RSN). *Archives of Psychiatric*	To verify the validity and reliability of the resilience scale for nurses	339 nurses working at 2 hospitals in South Korea in 2016.	27 preliminary items extracted from previous research Explanatory	Resilience scale for nurses showed CEA supported the four-factor structure or patterns:	Level III	Study in 2 Korean hospitals Nurses self-selected	The RSN could be useful in planning programs to promote resilience by identifying

			factor analysis and confirmatory factor analysis	Philosophical 0.922 Relational 0.808 Dispositional 0.845 Situational 0.839		All participants were female	job-related factors relevant to nursing. Factor pattern matrix within the article.
Nursing, 33(4), 434-439. https://doi.org/10.1016/j.apnu.2018.12.004							
Perry et al. (2017). Building expert agreement on the importance and feasibility of workplace health promotion interventions for nurses and midwives: A modified Delphi consultation. *Journal of Advanced Nursing, 73*(11), 2587-2599. Retrieved	To determine the relative importance and feasibility of workplace health promotion interventions to promote and support the health of the Australian nursing and midwifery workforce.	Purposively selected 11 expert panelists discussed, rated and provided feedback two rounds of an electronic questionnaire about the relative importance and feasibility of 46 workplace health promotion interventions and processes. 34 workplace health promotion and 12 workplace health	Modified Delphi design. Two rounds of an electronic questionnaire about the relative importance and feasibility of 46 workplace health promotion interventions and processes	Most health promotion interventions are short lived and address individual factors, not environ-mental factors. The World Health Organization supports efforts to retain the existing workforce.	Level VII: Evidence from the opinion of authorities and/or reports of expert commit-tees.	One complex stem question combining capacity and capability. Selection of expert panelists may have biased opinions. Some organizations might have been missed.	Mental health strategies were prioritized. Healthy eating, physical activity, stress management, and resilience training were highly ranked. Employee wellness groups and inter-sectoral collaboration important as well.

		promotion processes.					
(Shin et al., 2018). Clinical nurses' resilience skills for surviving in a hospital setting: A Q-methodology study.	To identify the types of resilience skills of clinical nurses for surviving in a hospital setting.	32 nurses sorted 38 selected Q statements which were plotted on a normal distribution 9-point scale.	The subjective perspectives on the resilience of clinical nurses were analyzed using the PC-QUANAL program.	4 Points of view or discrete types: *Reality-harmonic *Own will *Professional-oriented *Relation-oriented	Level 4	Small sample size. Generalizability, Setting was university metropolitan where conditions are better than small or medium sized hospitals.	Harmony: stabilize emotions, work-life balance, time off, emotional toughness, positive and healthy organizational culture. Own will: work-life balance, self-efficacy, educational programs to strengthen self-control, responsibility for the organization. Professionalism: composure, vision and values for the organization, improve skills

							and knowledge, participate in design and evaluation of the organizational vision, set individual goals. Relation oriented: communicatio n, helping, social support, reflection with peers, mentorship, self-help groups.
Singh et al. (2019). Occupational stress facing nurse academics- A mixed-methods systematic review. *Journal of Clinical Nursing,*	To better understand occupational stress faced by nurse academics.	16 studies 11 quantitative 5 qualitative	Mixed methods systematic review by the design of the Joanna Briggs Institute	Academic faculty do experience occupational stress including burnout. Work-life balance, workload issues,	Level V	Papers limited to English language and full text. Only peer-reviewed empirical investigations were accepted. Generaliz-	Most literature focuses on the graduate nurse transitioning into practice. More research is needed across the nurse life span. Mentors for novice nurse

https://doi-org.ezproxy.liberty.edu/10.1111/jocn.15150				burnout, resilience, age, entrepreneurial role, resources, support, and change adaptation are various factors.		ability of the findings to other academic sectors might be limited.	academics, resilience training, reduce bullying, professional development, resources for workloads, greater work empowerment
Slatyer et al. (2017). Evaluating the effectiveness of a brief mindful self-care and resiliency (MSCR) intervention for nurses: A controlled trial. *Mindfulness, 9*(2), 534-546. https://doi-org.ezproxy.liberty.edu/10.1007/s12671-017-0795-x	To trial the effectiveness of a brief mindful self-care and resiliency intervention for nurses working in an Australian tertiary hospital with 608 beds	91 nurses with 65 in the intervention group and 26 in the control group A one day workshop followed by three mindfulness practice sessions Compassion Fatigue Resilience = 5 antibodies	Tools utilized: ProQol 5, DASS 21 Connor Davidson Resilience Scale General Self-Efficacy Scale Self-Compassion Scale short form	The intervention group had significant reduction in burnout and depressed mood upon completion of the MSCR which persisted at the six-month mark. Improvements were seen in compassion satisfaction, self-compassion and subjective quality of life for nurses in	Randomized Control Trial Level II	Convenience sampling in a single setting. One quarter of participants did not indicate gender. Post test between group models estimates were underpowered suggesting the risk of type II error may have been inflated	Rees et al (2015) proposed a model of workforce resilience which identifies individual psychological factors considered to play a major role in overall resilience – One of these is mindfulness Mindfulness can reduce stress, negative

		Mindfulness aims: review allowing/letting be, auto-pilot, staying present, thoughts as thoughts,	The WHO (five) well being index	the intervention.			mood, and symptoms of burnout, and detach from negative experiences
Stacey, G., & Cook, G. (2019). A scoping review exploring how the conceptualizat ion of resilience in nursing influences interventions aimed at increasing resilience. *International Practice Development Journal, 9*(1), https://doi.org/ 10.19043/ipdj. 91.009	To conduct a scoping review exploring how conceptual-izations of resilience influence educational interventions designed to increase resilience in nurses and nursing students	Nurses, student nurses – resilience based education compared to no exposure Outcomes increased resilience, distress tolerance, emotional intelligence, professional quality of life, retention. Empirical articles or evaluation studies	Systematic scoping review	Interventions and evaluations should adopt a multilevel approach in order to develop and maintain resilience that embraces instability, and enables significant restructuring and capacity for renewal.	Level 1	Lack of acknow-ledgment 1. Definitions relate more to materials than people. 2. The complex healthcare environment healthcare providers have to navigate	1. Mindful-ness as described by MBSR mindful-ness based stress reduction 2. didactic information on stress 3. group restorative supervision workshops, storytelling, reflection 4. community practice and critical dialogue

Steinberg et al. (2016). Feasibility of a mindfulness-based intervention for surgical intensive care unit personnel. *American Journal of Critical Care, 26*(1), 10-18. Retrieved from https://doi.org/10.4037/ajcc2017444	Evaluate the feasibility of a workplace intervention for increasing resilience to stress	Mostly female 32RNs Surgical ICU Mean age 39.8 Mean years of service 10.8 Those involved in yoga, mindfulness, or exercise on a regular basis were excluded	Participants randomly assigned to an intervention or control group 1 hour per week x 8 weeks with mindful-ness based intervention meditation mild yoga and music	97% overall retention rate Work satisfaction in-creased in the intervention group No change: control group Utrecht work engagement scale	Level II	Small pilot study (44 bed SICU in a level 1 trauma center)	Participants felt recognizing stress was important
(Tonkin et al., 2018). Building employee resilience through wellbeing in organizations.	To investigate the effect of a wellbeing intervention on two forms of individual resilience: employees' stress coping ability (personal) and resilient workplace behaviors (employee	209 employees completed a survey and 145 participants took part in a workplace wellbeing intervention for one month followed by a repeat survey	Pre-Post Survey Design	The need for resilient employees has never been more crucial for organizational success. Five ways to wellbeing contribute to resilience	Level 4	Most contact with participants was through email. Short timeline between pre and post intervention assessment Limited sample size A true control group was not used.	There is an immediate need to provide guidance to organizations in the practical and cost-effective ways to develop psychological resources that benefit employees and the

							organization. Use of the Wellbeing Game (Mental Health Foundation of New Zealand). Weekly walking groups (Be Active) opportunities to volunteer (Give) Collaboration (connect) Professional development (Keep learning)
(Vanhove et al., 2015). Can resilience be developed at work? A meta-analytic review of resilience building programme effectiveness.	To summarize the effectiveness of resilience building programmes implemented in organizational contexts. Examine the extent to	42 independent samples across 37 studies.	Meta-analysis	Resilience building programmes have had a statistically significant, albeit modest, effect across health and performance criteria. As effective as primary	Level 1	No set criteria for clearly determining what constitutes a resilience building effort. Possible publication bias. Only broad conclusions	Resilience-building programs can be effective, however must be sustainable overtime.

	which a series of potential moderating character-istics contribute to programme effectiveness. Assess the extent resilience building programmes have on performance, wellbeing, preventing psychologica l deficits among employees			prevention techniques but not more than			can be drawn.
Wei et al. (2018). Nurse leader's strategies to foster nurse resilience. *Journal of Nursing Management, 27,* 681-687. doi: 10.111/jonm.1	To identify nurse leaders' strategies to cultivate nurse resilience	Twenty nurse leaders from the east coast of the United States working full time recruited by email. Charge RNs, nurse managers, and nurse executives.	Information included demographic form and face-to-face in-depth interview (45-75 minutes) Analytical framework by Colaizzi	Seven resilience building strategies were identified; Facilitating social connections, promoting positivity, capitalizing	Qualitative Descriptive Level VI	Small sample size	Strategies to foster resilience by nurse leaders can combat burnout by helping nurses shift their focus, cultivate positivity, connect with

2736			(1978).	on nurses' strengths, nurturing nurses' growth, encouraging nurses' self-care, fostering mindfulness practice and conveying altruism			others, practice being in the moment, and improving physical health.
(Yilmaz, 2017). Resilience as a strategy for struggling against challenges related to the nursing profession.	To describe the concept of resilience, explain character-istics with which it is related, and outline interventions to increase nursing resilience,	This is a review article.	Not defined. 45 references	With a focus on attributes: positive relationships, coping ability, flexibility, self-esteem, self-efficacy, sense of humor, purpose in life, sense of carrying on, enduring values, optimism, emotional insight, problem solving, positive identity,	Review article	None listed	Work-based education, computer-based education, awareness-based training, 12-week training programs, Stress management and resiliency training (SMART program), mentorship models, intervention models. Orientation

				altruism, comfort with aloneness, faith, cognitive ability, adaptability, creativity, empathy, insight into roles, self - confidence, hobbies, physical health				programs, clinical supervision, supportive environment.
Yu et al. (2019). Personal and work-related factors associated with nurse resilience: A systematic review. *International Journal of Nursing Studies, 93* 129-140. https://doi.org/ 10.1016/j.ijnu rstu.2019.02.0	To identify the associate personal and work-related factors of nurse resilience.	38 articles were reviewed. Authors used different resilience scales. Negative and Positive influencing factors were examined. 18,705 nurses.	Narrative synthesis: Articles were included if 1. Nurses who provided direct care 2. Healthcare settings 3. Resilience as associated individual factors 4. Quantitative methods 5. Study quality was ranked as good or fair – Limited to	No consistent instrument to measure resilience.	Systematic review – reported per systematic review and meta-analyses protocol Level V	Some studies did not provide details (age, setting, resilience mean levels) Limited ability to generalize to other clinical areas. Multiple instruments to measure resilience. Restricted study to English	Job resources can act as buffers to attenuate the influence of job demands.(26 of the studies). Negative factors: stress, burnout, fatigue, anxiety, depression, PTSD. bullying. Positive factors: job

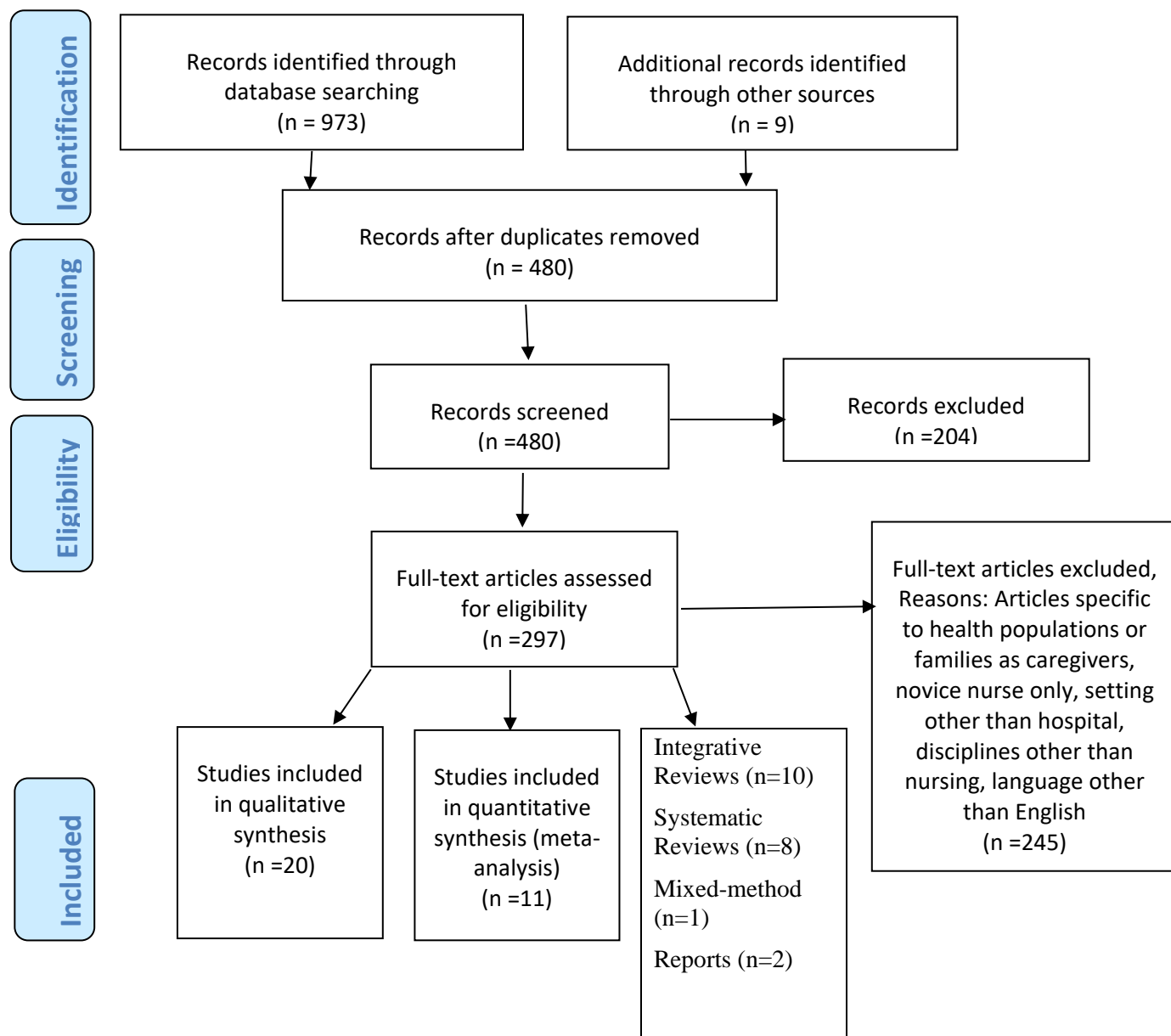| 14			electronic data bases			language	satisfaction, coping skills, social support, self-efficacy, job retention, and general well-being. Leaders can provide training, career progression, choice of hours, colleague support, performance feedback, schedule flexibility. Audiotape clinical scenarios.

Table 6: Study Types

Frequency	Type of Study
One	Modified Delphi Study: (Perry et al., 201 Case-Control Cohort Study: (Liang, et al., 2019) Dissertation: (Brown and Abuatiq, 2020)
Two	Scoping Review: (Low et al., 2019; & Stacey and Cook, 2019) Meta-Analysis: (Joyce et al., 2018; & Vanhove et al., 2015). Replication Studies: (Merandi et al., 2017; & Park et al., (2018)
Three	Quasi-Experimental Studies: (Babanataj et al., 2019; Magtibay et al., 2017; & Tonkin et al., 2018) Qualitative Descriptive Studies: (Ang et al., 2018; Mealer et al., 2017; & Wei et al., 2018) Qualitative Study of Phenomenology: (Degrande, et al., 2018; Imani et al., 2018; & Mealer et al., 2017)
Four	Mixed-method Studies: (Edress et al., 2016; Henshall et al., 2020; Kumat-Thoma et al., 2017; & Shin et al., 2018) Reports: (Ash et al., 2019; Barden and Giammarinaro, 2019; Chapman and Knight, 2017; & National Academy of Medicine, 2020)
Five	Systematic Review: (Barasa et al., 2018; Cooper et al., 2020; Hartmann et al., 2019; Singh et al., 2019; & Yu et al., 2019) Randomized Controlled Trial: (Grabbe et al., 2019; Im et al., 2016; Lin et al., 2018; Slatyer et al., 2017; & Steinberg et al., 2016)
Eight	Cross Sectional Survey: (Ang et al., 2018; Boehm et al., 2017; Brown et al., 2018; Garcia et al., 2017; Guo et al., 2017; Manomenidis et al., 2019; McNeil et al., 2019; & Mills et al., 2017) Integrative Review: (Badu et al., 2020; Barratt, 2018; Brown, 2018; Concilio et al., 2019; Delgado et al., 2017; Hart et al., 2014; Kester and Wei, 2018; & Yilmaz, 2017)

Figure 1: PRISMA

PRISMA 2009 Flow Diagram

Identification

Records identified through database searching
(n = 973)

Additional records identified through other sources
(n = 9)

Screening

Records after duplicates removed
(n = 480)

Records screened
(n =480)

Records excluded
(n =204)

Eligibility

Full-text articles assessed for eligibility
(n =297)

Full-text articles excluded, Reasons: Articles specific to health populations or families as caregivers, novice nurse only, setting other than hospital, disciplines other than nursing, language other than English
(n =245)

Included

Studies included in qualitative synthesis
(n =20)

Studies included in quantitative synthesis (meta-analysis)
(n =11)

Integrative Reviews (n=10)

Systematic Reviews (n=8)

Mixed-method (n=1)

Reports (n=2)
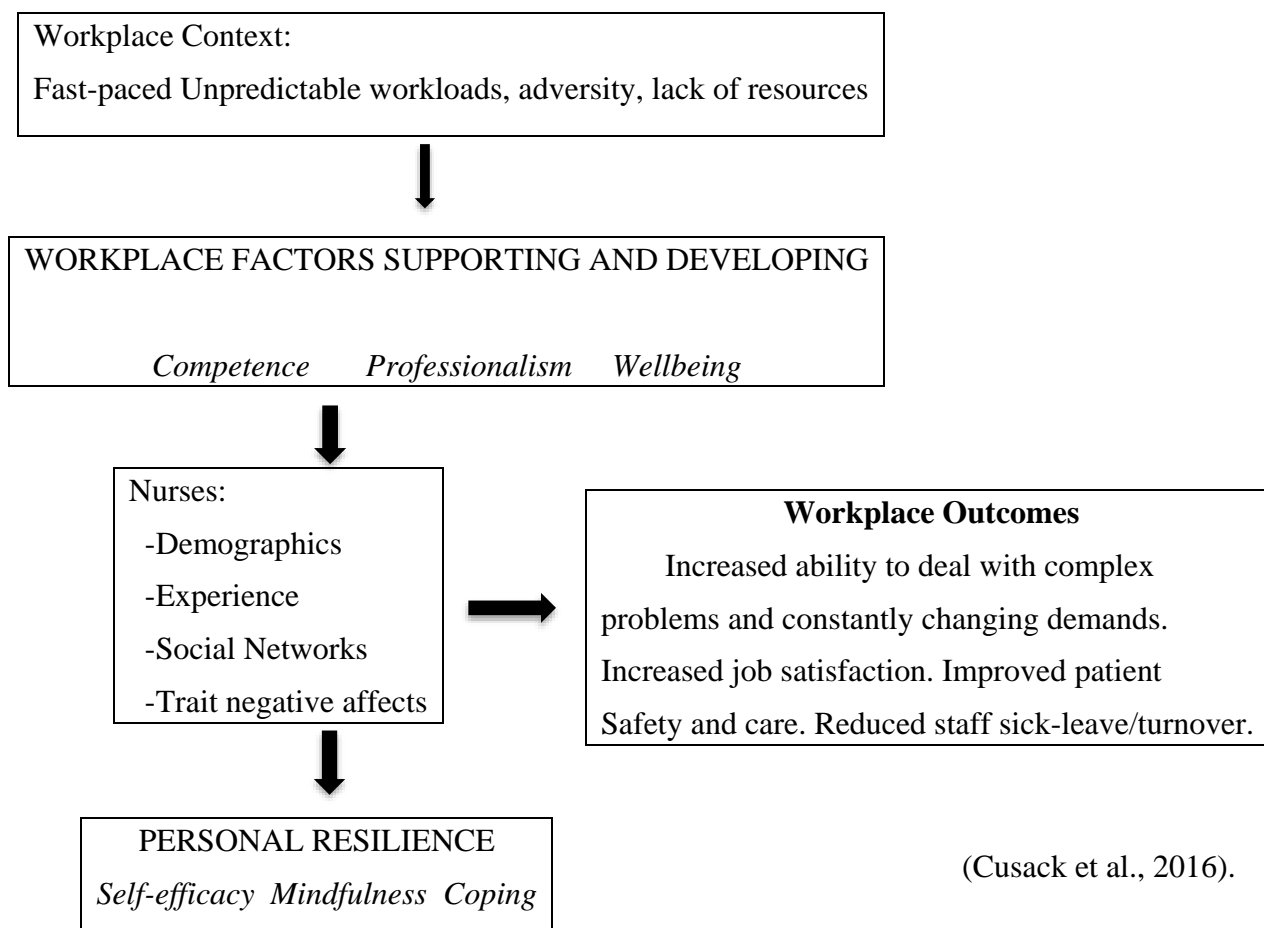
From: Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G.: The PRISMA Group (2009).
Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement.
PLoS Med 6(7): e100097. doi:10.1371/journal.pubmed1000097

Fig

ure 2: Health Service Workplace Environmental Resilience Model

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┌─────────────────────────────────────────────────────┐
│ Workplace Context:                                  │
│                                                     │
│ Fast-paced Unpredictable workloads, adversity,      │
│ lack of resources                                   │
└─────────────────────────────────────────────────────┘
                        ↓
┌─────────────────────────────────────────────────────┐
│ WORKPLACE FACTORS SUPPORTING AND DEVELOPING         │
│                                                     │
│   Competence     Professionalism     Wellbeing      │
└─────────────────────────────────────────────────────┘
                        ↓
┌──────────────────────┐
│ Nurses:              │            ┌──────────────────────────────────────┐
│  -Demographics       │            │        Workplace Outcomes            │
│  -Experience         │    →       │  Increased ability to deal with      │
│  -Social Networks    │            │  complex problems and constantly     │
│  -Trait negative     │            │  changing demands.                   │
│   affects            │            │  Increased job satisfaction.         │
└──────────────────────┘            │  Improved patient Safety and care.   │
                        ↓           │  Reduced staff sick-leave/turnover.  │
┌──────────────────────┐            └──────────────────────────────────────┘
│  PERSONAL RESILIENCE │
│ Self-efficacy        │                        (Cusack et al., 2016).
│ Mindfulness  Coping  │
└──────────────────────┘
```

"The HSWERM incorporates strategies for support and development across professional practice, and personal domain within the workplace context, linking to the nurse, and then impacting on personal resilience and workplace outcomes."

Figure 3: IRB Approval

From: irb@liberty.edu <irb@liberty.edu>
Sent: Monday, August 17, 2020 2:34 PM
To: Goodrich, Cindy (Nursing) <cgoodrich@liberty.edu>; Depolo, Marcia <mdepolo@liberty.edu>

Subject: IRB-FY19-20-484 - Initial: Initial - Non-Human Subjects Research
August 17, 2020

Marcia Depolo
Cynthia Goodrich

Re: IRB Application - IRB-FY19-20-484 Organizational Strategies to Promote Nurse Resilience in the Acute Care Hospital Inpatient Setting: An Integrative Review

Dear Marcia Depolo, Cynthia Goodrich:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study does not classify as human subjects research because:

(1) it will not involve the collection of identifiable, private information.

Please note that this decision only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.
Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Figure 4: CITI Training Certificate

Liberty University Records (ID 2446) Marcia DePolo

Social & Behavioral Research - Basic/Refresher - Social & Behavioral Researchers (ID 60489)

Basic Course	34956075	80%	**92%**	22-Jan-2020	24-Jan-2020	23-Jan-2023	View	View-Print-Share

Social and Behavioral Responsible Conduct of Research (ID 60501)

RCR	34956076	80%	**100%**	21-Jan-2020	22-Jan-2020	21-Jan-2024	View	View-Print-Share

CITI Conflicts of Interest - Conflicts of Interest (ID 62554)

Stage 1	34956077	80%	**90%**	20-Jan-2020	20-Jan-2020	19-Jan-2024	View	View-Print-Share

Essentials of Research Administration (ID 186247)

Basic Course	34956079	80%	**92%**	21-Jan-2020	21-Jan-2020	20-Jan-2023	View	View-Print-Share