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Resilience Training for Healthcare Professionals: A Literature Review

Michelle Dictor

A doctoral project completed in partial fulfillment of the requirements for the degree of Master’s Science—Nursing, Family Nurse Practitioner at the Valley Foundation School of Nursing, San José State University

May 2023
### Project Team Members

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<th>Name</th>
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<tr>
<td>Ruth K. Rosenblum DNP, RN, PNP-BC, CN</td>
<td>Associate Professor, San José State University</td>
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</table>

Master’s Project Advisor

Title and Affiliation
Resilience Training for Healthcare Professionals: A Literature Review

Michelle Dictor, RN, BSN

Family Nurse Practitioner Program

The Valley Foundation School of Nursing

San José State University

May 6th, 2023
Abstract

*Purpose:* An exploration of various resilience training programs to determine if there is a significant impact on the psychological resilience of health care professionals.

*Method:* An electronic systematic review using San Jose State University’s OneSearch database search engine was completed. The review contains published research articles between 2011-2022. Nine published articles were reviewed and used for this systematic review.

*Results:* There is limited data related to resilience training and resources in accredited nursing programs. Resilience training programs are both a feasible and acceptable way of building psychological resilience among interdisciplinary health care professionals.

*Conclusion:* Mindfulness-based resilience training programs can be feasibly implemented and build psychological resilience among interdisciplinary health care professionals throughout the career span. These programs should be implemented beginning with nursing program curricula and throughout the career by being integrated within established programs or staff meetings. Successful implementation of these programs has the potential to significantly strengthen psychological resilience and improve the quality of life of health care professionals, their patients, and communities.

*Keywords:* Resilience training, psychological resilience, nursing student, novice nurse
Resilience Training for Healthcare Professionals: A Literature Review

Background

The COVID-19 pandemic has illuminated the urgency of addressing the national nursing shortage in the United States. According to the U.S. Bureau of Labor Statistics (2022) in there are nine registered nurses (RNs) per 100,000 of the population in the United States. While many factors contribute to the national nursing shortage such as an aging workforce and one third of the nursing profession leaving due to burnout, the focus of this paper will be on the potential impact of resilience training among interdisciplinary health care professionals (Shah et al., 2021). The present nursing shortage has influenced healthcare leadership throughout the United States to implement resilience training programs to strengthen psychological resilience and improve retention. Exploration of the distinctive styles of resilience training programs and their impact on psychological resilience in student nurses, nurses, and other health care professionals may provide best-practice guidelines for future resilience training programs. First, it is important to define psychological resilience, introduce the model of individual workforce resilience, and explore the correlation of the psychological variables involved.

Individual Workforce Resilience

Psychological resilience is a multi-factorial phenomenon which describes the capability of one to overcome adversity. Rees et. al (2015) sought to develop a theory-based workforce model of psychological resilience to better understand the importance of psychological resilience as it relates to mental health outcomes. The individual workforce resilience model explores the psychological variables of psychological resilience including neuroticism, mindfulness, self-efficacy, and coping. Neuroticism is a personality trait which makes one more susceptible to strong negative feelings such as anxiety, depression, anger, and guilt (Rees et. al, 2015). Lu et al.
(2014) studied 289 undergraduate students in Northwestern China and found a negative relationship between psychological resilience and neuroticism and found resilience to influence neuroticism. This finding demonstrates a possible psychological target for intervention. Another psychological variable is mindfulness, which is the ability to view an experience from an objective perspective as opposed to a myopic, emotion driven perspective (Rees et. al, 2015). Thompson et al. (2011) found that mindfulness fostered psychological resilience suggesting that mindfulness-based interventions could be a successful approach to strengthen resilience (Thompson et. al, 2011). Thirdly, self-efficacy describes the ability one believes they must complete a task. A cross-cultural study of college students in the United States and Taiwan found a positive correlation between self-efficacy and psychological resilience, irrespective of cultural differences (Li & Nishikawa, 2012). Given the cultural diversity of the healthcare workforce of the United States, it is important to note that self-efficacy and resilience can be strengthened regardless of cultural differences. Coping is the final psychological variable of the individual work resilience model. Coping is the ability of one to adjust to adversity by use of strategies such as support groups, venting, planning, etc. (Rees et. al, 2015). Like self-efficacy, coping has also been found to be positively correlated to psychological resilience (Li & Nishikawa, 2012). This individual workforce resilience model offers specificities of the individualized psychological attributes that can contribute to psychological resilience. Knowledge and understanding of these attributes will aid in analysis of the efficacy of the contrasting resilience training programs to be reviewed.

**Gap and Knowledge Needed**

Mental health, wellbeing, and psychological resilience in nurses should be considered continually throughout the career path. The Covid-19 pandemic magnified the importance of
addressing mental health. In response, the *Dr. Lorna Breen Health Care Provider Protection Act* (HR 1667) was passed into legislation in February of 2022. This bill was created in honor of Dr. Lorna Breen, an emergency room physician who worked in New York during the peak of the COVID-19 pandemic and who completed suicide on April 26, 2020. This bill will establish grants for health care professionals, including students, to aid in providing evidence-based support, education, and training. The primary goals are to both improve the well-being of healthcare professionals and prevent burnout (Dr. Lorna Breen Heroes' Foundation, 2022). As this implementation is new as of 2022, it will be interesting to witness the evolvement of mental health related interventions and their effect on the well-being of health care professionals.

Continued literature reviews and long-term research will be critical in developing best practice guidelines to support health care professionals throughout their careers. Based on the literature available, this review will delve into studies that evaluate whether resilience training programs have an impact on psychological resilience in healthcare professionals.

**Methods**

**Study Purpose & Design**

An integrative review of the literature to explore various resilience training programs and determine if there is a significant impact on the psychological resilience of health care providers.

**Search Strategy**

An electronic systematic review using San Jose State University’s OneSearch database search engine was completed. Databases used in the systematic review included but were not limited to: CINAHL, Gale Academic, ScienceDirect, and Wiley Online Library. Key search terms included were “resilience training” AND “student nurs*” with a date range of 2011-2022 in English.
Inclusion & Exclusion Criteria

Relevant quasi-experimental, mixed methods, repeated measures, cross-sectional, and correlational study designs will be reviewed. Articles included focused on the psychological impact of resilience training among nursing students, new graduate RNs, bedside RNs, and interdisciplinary healthcare providers in the United States, Ireland, and Canada. Exclusion criteria included studies done before 2011 and studies that did not include nurses as part of the healthcare professional population.

Data Extraction and Analysis

Each study was reviewed, and details were extracted on: population, setting, study design, sample size, description of intervention, and outcomes. Narrative synthesis was used to describe the results.

Quality Appraisal

The Hierarchy of Evidence for Intervention Studies was used to designate the level of evidence for each study based on the study’s design. The studies were rated from level I-VII. (Fineout-Overholt et. al, 2019). See Table 1

Results

With inclusion and exclusion requirements considered, 67 articles were identified and screened yielding 9 eligible articles for review. (See Figure 1)

Population and Setting

Seven of the nine studies were conducted in the United States, one in Ireland, and one in Canada. Three of the nine studies focused on BSN students, two bedside Registered Nurses, two interdisciplinary healthcare providers, one new graduate RNs, and one study analyzed nursing schools.
Study Design and Sample Size

Across the nine studies, sample sizes ranged from 13-166. The research study designs ranged from 33% Quasi-experimental, 11% repeated-measures, 33% mixed-methods, 11% cross-sectional, to 11% correlational.

Resiliency and the Baccalaureate Nursing Student

Four of the nine articles included data related to resilience and the baccalaureate prepared nursing (BSN) student. The results of the studies revealed minimal prevalence of resiliency-related resources for nursing students in the United States. (Cochran, 2020; Pines, 2011; Stoliker, 2021; Taylor, 2012). Cochran et al. (2020) analyzed data from 155 accredited nursing programs across 39 states of the United States and found that zero of the 155 schools screened their students for burnout and only 9% implemented resilience training as part of the formal curriculum. The limited prevalence of resilience-related resources in nursing schools yields limited interventional data regarding resilience training and nursing students. However, a correlation between psychological components and resiliency in nursing students has been studied. Pines et al. (2011) examined the relationship between empowerment and stress resiliency in 166 BSN nursing students. Empowerment is the psychological component that allows an individual to fulfill aspirations and resilience is the capability to overcome adversity (Brancato, 2006, as cited in Pines et al., 2011). The study results presented a positive correlation between empowerment and stress resilience, suggesting that empowered nursing students have stronger stress resilience which might increase nurse retention (Pines et al., 2011) Similarly, Taylor & Reyes (2012) examined the correlation between self-efficacy, resilience, and test score performance in 136 BSN students. Self-efficacy is the belief a person has the capability to take action in their life (Bandura, 1994, as cited in Taylor & Reyes, 2011). This study did not include
any intervention and found no significant changes to self-efficacy, resilience, or test scores throughout one semester of nursing school. Comparatively, Stoliker et al. (2021) implemented an online resilience training program during a baccalaureate nursing program and found a significant improvement of resilience. These results reinforce the theory that resilience can be learned and provides an opportunity for future nursing programs and curricula (Cochran, 2020; Stoliker, 2021).

**Resilience Training Programs: Feasibility and Acceptability**

Four articles explored the feasibility and acceptability of resilience training programs by measuring attendance and acceptance rates of participants across variable delivery styles and models (Chesak, 2020; Colgan, 2016; Kinser, 2016; Magtibay, 2017). Chesak et al. (2020) aimed to determine the feasibility of an integrated resilience training in a nine-month pilot residency program. This study implemented eight monthly sessions and assessed feasibility based upon participation rates in the sessions. Of the 27 nurse residents, participation rates were high at 100% attendance in the first session and 93-100% in follow up sessions. A prior study which provided the same intervention but was not integrated into the residency program had significantly less participation rates, 16% compared to 93%. Researchers posit this significant difference may be related to the integration into an established program, reducing scheduling conflict (Chesak et al., 2020). Correspondingly, Colgan et al. (2019) yielded high levels of participation and acceptability with a resilience training program that was integrated into weekly staff meetings. 31 healthcare personnel were to participate in at least 5 out of the 8 weekly sessions to be qualified as “completers” of the program. All 31 participants were deemed “completers” with a 100% participation rate. Additionally, participants completed online surveys which found that 100% of participants would both recommend the course to a colleague and
attend future sessions (Colgan et al., 2019). Another approach to resilience training integration incorporated concepts of self-enrollment and participant learning preferences (Kinser, 2016; Magtibay, 2017). Magtibay et al. (2017) used a blended learning style which allowed for participants to choose between web-based, independent reading, or in-person facilitated discussions. 50 nurses participated in this study and were to complete surveys in weeks eight, 12, and 24. Participation results were high at week eight at 90% but dropped off by week 24 to 66% participation (Magtibay et al., 2017). Similarly, Kinser et al. (2016) implemented an eight week, in person intervention in which participants voluntarily self-enrolled. Of the 49 participants only 27, or 55%, of participants completed the required surveys for data analysis (Kinser et al., 2016). The training programs integrated into established programs yielded higher participation compared to those programs that utilized a voluntary and individualized learning preference approach.

**Resilience Training Style: Mindfulness-based Training**

Three of the nine articles studied the relationship between mindfulness-based training programs and psychological variables related to resilience among interdisciplinary health care professionals (Colgan, 2019; Delaney, 2018; Kinser, 2016). These eight week in-person programs were led by mental health professionals who provided a variety of mindfulness curriculums (Colgan, 2019; Delaney, 2018; Kinser, 2016). The weekly programs spent between 60 and 150 minutes per session utilizing both formal and informal mindfulness activities. Formal activity examples include mindful breathing, yoga, body scan, and meditation; while informal practices incorporate mindfulness in daily life and “on the job” e.g., completing a body scan prior to entering a patient’s room (Colgan, 2019; Delaney, 2018; Kinser, 2016). Delaney (2018) One study created a curriculum that primarily focused on the concept of self-compassion with a
secondary emphasis on mindfulness. Self-compassion is described as the ability to approach personal adversity with love and kindness. Delaney (2018) theorized that by increasing self-compassion one would also increase stress resilience. Although post-intervention data revealed an increase in self-compassion, mindfulness, and resilience, there was a stronger positive association between mindfulness and resilience versus self-compassion and resilience (Delaney, 2018). Two studies by Colgan et al. (2019) and Kinser et al. (2016) implemented mindfulness curriculums with an emphasis on interdisciplinary team building grounded in the theory that a strong sense of team and community can improve resilience (Colgan, 2019; Kinser, 2016). Qualitative data from both studies revealed that participants appreciated the integration of other health care professionals and valued the team cohesion approach (Colgan, 2019; Kinser, 2016). Enhancement of self-awareness, self-compassion, mindfulness, team cohesion, and resilience were prevalent in all three studies following the eight-week mindfulness-based curriculums (Colgan, 2019; Delaney, 2018; Kinser, 2016).

**Discussion**

Resilience training programs can be a successful tool to strengthen psychological resilience among interdisciplinary healthcare professionals from students to experts. Exploration of the prevalence, feasibility and acceptability, and the role of mindfulness within resilience training will be discussed below.

**Prevalence**

The minimal prevalence of resilience training in accredited nursing schools throughout the United States highlights an opportunity for intervention among this vulnerable population. Rooted in the theory that psychological aspects of resilience can be learned, nurse educators could feel confident in incorporating resilience-based curricula (Cochran et al., 2020). To further
specify the curricula, educators could focus content on self-efficacy and empowerment in the nursing student. Evidence has shown that nursing students who receive resilience training had higher levels of resilience compared to those students who did not receive training, showcasing the potential impact of this intervention (Stoliker, 2021; Taylor, 2012). Providing resilience training early in the career will allow for more time to build the essential skills of self-efficacy and empowerment so that students are better prepared as they transition into their professional roles. Next, it is imperative to discuss what makes a program both feasible and acceptable to ensure the success of integrating resilience training programs for healthcare professionals.

Feasibility and Acceptability

According to a national survey of nurses in the United States, “convenience” was the most key factor when choosing to participate in a training program (Magtibay & Chesak, 2017). Consistent with the evidence, resilience training programs that are integrated into an already existing program are both feasible and acceptable as evidenced by increased participation rates. Comparatively, the blended learning implementation style did not yield strong participation rates. Perhaps, if blended learning was attached to an already established program there would be even greater participation, feasibility, and acceptability. Next, a discussion on the theory of mindfulness-based training and resilience.

Mindfulness-based training and Team Cohesion

A training program that includes both concepts of mindfulness and team building exercises can have a positive impact on health care professionals. The theory of mindfulness-based training has been shown to be effective at building psychological resilience in as little as eight weeks (Colgan, 2019; Delaney, 2018; Kinser, 2016). Compared to self-compassion, mindfulness is more strongly associated with resilience and should be the primary approach for
resilience training (Delaney, 2018). Another significant finding was the positive correlation between team cohesion and resilience. Team cohesion is a fundamental component in resilience training programs and should be considered when implementing these programs (Colgan et al., 2019). Participants shared appreciation for the interdisciplinary approach and reported stronger interpersonal relationships with coworkers and a sense of community suggesting an additional benefit of this approach (Colgan, 2019; Kinser, 2016).

**Limitations and Gaps**

Research was limited by small sample sizes and lack of longitudinal studies. Minimal prevalence of resilience related resources for nursing students led to minimal evidence of resilience training programs in nursing schools. Future research needs to include larger sample sizes as well as longitudinal studies to determine the long-term impact of resilience training programs.

**Conclusions and Practice Implications**

Mindfulness-based resilience training programs can be feasibly and effectively implemented. They build psychological resilience among interdisciplinary health care professionals throughout their career span. These programs can be implemented beginning with nursing program curricula and throughout the career, integrated within established programs or standing meetings. Interdisciplinary members should be included, if possible, to strengthen team cohesion and sense of community which further builds resilience. Successful implementation of these programs has the potential to significantly improve the quality of life of health care professionals, their patients, and their communities.
References


RESILIENCE TRAINING FOR HEALTHCARE WORKERS


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### Table 1.

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<th>Authors</th>
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<th>Independent Variables</th>
<th>Study Design</th>
<th>Sample Size</th>
<th>Sampling Method</th>
<th>Data Collection</th>
<th>Findings</th>
<th>Quality</th>
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<tr>
<td>Chesak et. al</td>
<td>2021</td>
<td>USA</td>
<td>Feasibility Between-group differences in stress, anxiety, resilience, and mindfulness, adherence</td>
<td>SMART program</td>
<td>Two-group quasi-experimental</td>
<td>23 nurses (intervention group), 28 nurses (comparison group)</td>
<td>Convenience</td>
<td>Self-report, Psychometric instrument scales, questionnaire</td>
<td>Feasibility and success of SMART on stress, mindfulness, and resilience</td>
<td>III</td>
</tr>
<tr>
<td>Cochrans et. al</td>
<td>2020</td>
<td>USA</td>
<td>Prevalence and availability of resilience resources and curricula in nursing schools for nursing students</td>
<td>Analysis of college/university websites and course catalogs or nursing schools, availability of resilience resources (fitness center, wellness center, etc.)</td>
<td>Descriptive</td>
<td>155 nursing schools accredited by the Commission on Collegiate Nursing Education (CCNE)</td>
<td>Simple random</td>
<td>Data collected via coding sheet from public websites and course catalogs.</td>
<td>9% (n=14) offered formal resilience curricula and no nursing schools screened students for burnout syndrome (BOS).</td>
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<tr>
<td>Colgan et. al</td>
<td>2019</td>
<td>USA</td>
<td>Feasibility and acceptability</td>
<td>8-week Mindfulness-based Wellness and Resilience (MBWR) intervention</td>
<td>Mixed methods, naturalistic</td>
<td>36 employees at the medical center conducting primary care</td>
<td>Convenience</td>
<td>Self-report, Instruments: Brief resilience scale, the Five Facet Mindfulness Questionnaire, and Self-compassion scale</td>
<td>MBWR may be feasible and acceptable method to integrate mindfulness and resilience employees in primary care.</td>
<td>II</td>
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<tr>
<td>Delaney</td>
<td>2018</td>
<td>UK</td>
<td>Compassion fatigue and resilience in nurses</td>
<td>8-week Mindful Self-Compassion (MSC) training intervention</td>
<td>Mixed methods</td>
<td>13 nurses working at a university hospital</td>
<td>Convenience</td>
<td>Self-report, Instruments: Neff 26-item self-compassion scale, Freiburg</td>
<td>Preliminary empirical evidence in support of benefit of MSC training for nurses.</td>
<td>VI</td>
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<td>Kinser et. al</td>
<td>2016</td>
<td>USA</td>
<td>Feasibility, acceptability, and preliminary effects in stress, anxiety, and burnout.</td>
<td>8-week mindfulness curriculum</td>
<td>Within-group repeated measures</td>
<td>Mindfulness inventory, ProQOL Version 5, Connor-Davidson Resilience Scale-25 item</td>
<td>Preliminary support of feasibility, acceptability, and effects of an 8-week mindfulness and mindful movement course for HCPs and trainees.</td>
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<td>Magtibay et. al</td>
<td>2017</td>
<td>USA</td>
<td>Mindfulness, resilience, anxiety, stress, happiness, and burnout among nurses.</td>
<td>SMART program, blended learning style (web-based, independent reading, facilitated discussions)</td>
<td>1-group quasi-experimental</td>
<td>Self-report, 6 measurement tools: Subjective happiness scale, perceived stress scale, generalized anxiety scale, Copenhagen burnout inventory.</td>
<td>Statistically significant decreases in anxiety, stress, and burnout and increases in resilience, happiness, and mindfulness</td>
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<td>Pines et. al</td>
<td>2012</td>
<td>USA</td>
<td>Stress resiliency, psychological empowerment</td>
<td>Conflict management styles</td>
<td>Correlational</td>
<td>Data collected in Spring Semester 2010, research-designed demographic inventory, Conflict mode instrument, Stress resiliency profile, and psychological empowerment instrument</td>
<td>Empowerment significantly correlated with stress resiliency and students were less likely to use competing or collaborating strategies to manage conflict.</td>
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<td>Stoliker et. al</td>
<td>2022</td>
<td>CA</td>
<td>Psychological resilience, anxiety, and depression of nursing students</td>
<td>Self-paced online resilience training program</td>
<td>Repeated measures</td>
<td>Self-report, Instruments: Resilience scale for Adults, Generalized Anxiety Disorder 7-item, PHQ-9, Coping Strategies</td>
<td>Self-paced online resilience training program can help promote personal resilience among nursing students.</td>
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<td>Taylor &amp; Reyes 2012</td>
<td>USA</td>
<td>Self-efficacy and resilience</td>
<td>One semester of nursing study in baccalaureate program</td>
<td>Quasi-experimental</td>
<td>136 nursing students (baccalaureate)</td>
<td>Convenience</td>
<td>Self-report, Instruments: Resilience scale, General Self-efficacy scale</td>
<td>No significant differences between early and end of semester on the resilience scale</td>
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Figure 1.

Records identified from*: Databases (n = 67)

Records screened (n = 67)

Reports sought for retrieval (n = 9)

Reports assessed for eligibility (n = 9)

Studies included in review (n = 9)

Records excluded**: (n = 58)

Reports not retrieved (n = 0)

Reports excluded: 0