



# Strengthening internal resources to promote resilience among prelicensure nursing students

Vickie Hughes<sup>a,\*</sup>, Sophia Cologer<sup>b</sup>, Sandy Swoboda<sup>a</sup>, Cynda Rushton<sup>a</sup>

<sup>a</sup> Johns Hopkins University School of Nursing, Baltimore, MD, USA

<sup>b</sup> University of Maryland Medical Center, Baltimore, MD, USA

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## ABSTRACT

Resilience is a complex construct that is not universally defined, but reflects the ability of a person, community, or system to positively adapt to adversity in a way that promotes growth and well-being. Developing resilient nurses is a promising strategy to reduce nurse burnout and improving retention. The purpose of this paper is to review selected literature, synthesize, and interpret the findings that point toward promising practices that educators can employ to support student resilience. Four prominent prelicensure nursing student internal protective factors associated with resilience and derived from the literature include self-efficacy, optimism, emotional intelligence, and self-stewardship/self-care. Interventions to promote nursing student resilience is not well developed, however, there are promising evidence to inform concepts and interventions to guide the development, skills, practices, and strategies for nurse educators. Educational strategies to enhance student nurse internal protective factors include reflection, positive reframing, problem-based learning, and mindfulness. Specific examples of each educational modality applied to prelicensure student nurse resilience are provided. Integrative strategies to support and cultivate internal protective factors to strengthen student resilience are paramount to nursing education and clinical nursing practice.

## Introduction

The Bureau of Labor Statistics projects that the United States will need an additional 203,700 Registered Nurses (RNs) each year through 2026 to meet the needs of the aging Baby Boomer population and to replace retiring nurses (Bureau of Labor Statistics [BLS], 2020). In addition, the changing landscape of the pandemic is increasing the patient burden and potential staff burnout (Tan et al., 2020). Prelicensure nursing programs are tasked with meeting this demand through increasing program enrollments and lowering attrition rates and preparing graduates to work in a post-pandemic era.

Prelicensure nursing programs in the United States include associate degree programs, four-year bachelor's degree programs, accelerated bachelors and direct entry master's in nursing programs for students with a bachelor's degree in another discipline. In the United States, prelicensure nursing student attrition rates vary widely from 3% to 30% (Doggrell & Schaffer, 2016). A myriad of factors accounts for these attrition rates such as low self-efficacy, curriculum design, clinical placements, a lack of student support services (Chan et al., 2019), and a lack of strategies to promote and build resilience (Van Hoek et al.,

2019). A call to action by the American Association of Colleges of Nursing (AACN) encourages schools to promote and build a wellness culture as part of the curriculum and organization. This includes evidence-based interventions to build skills in resilience and well-being (AACN, 2020). The recently released The Essentials: Core Competencies of Professional Nursing Education include a requirement for resilience in nursing education as found in Domain 10: Personal, Professional, and Leadership Development. "Participation in activities and self-reflection that fosters personal self-health, resilience, and well-being; contributes to life-long learning; and supports the acquisition of nursing expertise and the assertion of leadership" (AACN, 2021, p. 58).

## What is resilience?

Simply stated, resilience reflects the ability of a person, community, or system to healthfully adapt to challenges, stress, adversity or trauma; to potentially learn from it. Resilience encompasses application in biologic, psychological, social, trauma, family environments, moral/ethical domains, but is not universally defined or applied (Aburn et al., 2016). Resilience exists on a continuum (Bonanno, 2013). Resilience involves

\* Corresponding author at: Johns Hopkins University School of Nursing, 525 Wolfe Street, Baltimore, MD 21205, USA.

E-mail address: [vhughes@jhu.edu](mailto:vhughes@jhu.edu) (V. Hughes).

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the capacity to “maintain its core purpose and integrity in the face of dramatically changed circumstances” (Zolli & Healy, 2012, p. 7). Resilience can best be understood by Dr. Catherine Panter-Brick as “a process to harness resources in order to sustain well-being” (Southwick et al., 2014). Resilience is viewed as a trait, process or outcome that depends on the specified context (Reyes et al., 2015). Attributes of resilience include social support, rebounding, coping or adapting, self-determination and positive outlook (Calderia & Timmins, 2016). The resilience lens shifts the focus of attention from vulnerabilities toward efforts to enhance strength or capacity (Southwick et al., 2014). Several dimensions or types of resilience include: physical, emotional, social, moral, and psychological resilience. Different dimensions of resilience may manifest during response to adversity (Southwick et al., 2014). Table 1 includes illustrative examples.

Szanton and Gill (2010) state that individuals have an innate resilient potential and describe it as a social ecological model that conveys the interdependence of human biology (cellular, physiological and individual factors) with expanding spheres of interaction with family, community, and society influencing resilience (Szanton & Gill, 2010). Since resilience is so complex and found in individuals and throughout systems, the social ecological model is used to help narrow the focus for nurse educators to address student nurse resilience.

This paper will focus on educator strategies in the interpersonal domain of the social ecological model to foster individual-level (nursing students) resilience development. We will review selected literature, synthesize, and interpret the findings that point toward promising practices educators can employ to support student resilience.

**Why we need to focus on promoting prelicensure student nurse resilience?**

In an integrative review of resilience in nursing education, Reyes et al. (2015) found three main themes: 1) resilience is important in nursing education; 2) resilience is conceptualized as either a trait or process; and 3) resilience is related to protective factors or resources. From the perspective of a process, resilience can be a developmental progression with new vulnerabilities and strengths that emerge in response to changing life circumstances (Luthar, 2006). A central objective in resilience is to identify and enhance protective factors or resources that might modify some of the negative effects of adverse life circumstances (Luthar, 2006).

Prelicensure nursing student resilience demonstrated positive association with well-being (He et al., 2018), emotional intelligence (Hurley et al., 2020), self-efficacy (Walsh et al., 2020), and lower attrition rates (Van Hoek et al., 2019). Investigators discovered an inverse significant relationship between prelicensure nursing student resilience and academic intention to leave (Van Hoek et al., 2019) and moral distress (Krautscheid et al., 2020).

Despite research supporting the importance of nursing student

resilience, Cochran et al. (2020) found limited resources related to coping skills, self-care, well-being, and resilience training in the curricula of accredited nursing schools within the United States. Only 14 (9%) of the 155 nursing schools reviewed included formal undergraduate resilience training in mindfulness, resilience, self-care, or well-being as part of a course (Cochran et al., 2020). An opportunity exists to develop and incorporate preventive strategies to mitigate some of the risk factors for distress and burnout into prelicensure nursing curriculum, promoting resilience and better prepare nurses for entry into clinical practice.

**Is there a theoretical model for teaching resilience to prelicensure nursing students?**

Stephens (2013) developed a nursing student resilience model whereby resilience results from a process of strengthening protective factors or resources to improve coping, adaptive abilities, and cumulative successes when facing perceived adversity or stress (Stephens, 2013). Examples of protective resources identified by Stephens (2013) include positive emotions, flexibility, competence, social support, self-efficacy, faith, hope, connectedness, self-knowledge, effective coping, having a sense of humor, knowledge of health behaviors and risks, and perseverance. These resources build on an individual's inherent resilient potential and their unique needs and capacities. Nurse educators are ideally positioned to provide educational interventions designed to enhance student protective factors or resources. As nursing students learn to identify and enhance their protective resources through personal growth, effective coping, positive adaptation, physical and mental health, self-esteem, and a sense of well-being, they will build resilience practices during their training and in the practice setting (Stephens, 2013). Furthermore, an integrative review of 14 qualitative and quantitative studies indicated a positive relationship between resilience, performance, and professional experience in undergraduate nursing students (Cleary et al., 2018).

Stephens's (2013) model provided the framework for identifying in the literature resilience-building resources and strategies to enhance individual resources in nursing students. The antecedent for resilience is the student nurse perception of a threat or adverse situation (Stephens, 2013). Strengthening internal protective resources underpin the nurse educator strategies to promote prelicensure student nurse resilience. Resilience is a dynamic, contextual process that can be developed in the academic lives of nursing students (Reyes et al., 2015). Incorporating resilience into the nursing curriculum is imperative to support students' coping with challenges and creates formal forums for students to learn how to thrive in their academic and clinical practice environments (Reyes et al., 2015).

**Synthesis and interpretation of literature**

Nurse Interventions to promote nursing student resilience is not well developed, however, there are promising evidence informed concepts and interventions to guide the development, skills, practices, and strategies for nurse educators. Four prominent nursing student internal protective factors associated with resilience are: self-efficacy, optimism, emotional intelligence, and self-stewardship/self-care (Table 2).

*Self-efficacy*

Self-efficacy is a key characteristic of resilience (Walsh et al., 2020). Self-efficacy is the perception of personal competence and is the most significant predictor of all motivational constructs (Walsh et al., 2020). For prelicensure nursing students, one dimension of self-efficacy involves the belief that one can reach a goal (Gou et al., 2019), however, self-efficacy goes beyond goal attainment. It is a realistic confidence that one has the skills and tools to meet adversity in a way that does not cause harm to self or others. The concept of self-efficacy within the literature

**Table 1**  
Selected aspects of resilience.

| Aspects of resilience   | Sources                      |
|---|------------------------------|
| Physical resilience is “a characteristic at the whole person level which determines an individual's ability to resist functional decline or recover physical health following a stressor” | Whitson et al., 2016, p. 493 |
| Emotional resilience centers on the emotional demands of patient and family centered care and the Interprofessional team.   | Delgado et al., 2017         |
| Social Resilience “includes safety, civic connection involving acceptance as well as authentic and responsive engagement”   | Bolzan & Gale, 2011, p. 512  |
| Moral resilience is “the capacity of an individual to sustain or restore integrity in response to moral adversity”.   | Holtz et al., 2018, p. 68    |
| Psychological resilience involves the creation of meaning in life through painful situations  | Bartone, 2006                |

**Table 2**  
Internal protective resources associate with student nurse resilience.

| Internal protective resources | Definition  | References  |
|-------------------------------|---|---|
| Self-efficacy                 | “People’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave.”  | Bandura & Ramachaudran, 1994, p. 2                              |
| Optimism                      | Optimistic people expect to have positive outcome, even when things are hard. “Optimism also confers benefits on what people do and what people are able to achieve in times of adversity”  | Scheier & Carver, 1993, p. 202                                  |
| Emotional intelligence        | Emotional intelligence includes the below four domains:<br><br>Self-awareness: the ability to know oneself, desires, motivations, and feelings.<br>Self-management: the ability to manage actions, thoughts, and feelings in flexible ways to obtain desired results. Self-regulation is a part of self-management.<br>Social awareness: the ability to read situations appropriately by accurately noticing the emotions of others.<br>Relationship management, also known as friendliness with a purpose, can be used to influence others to make good decisions. This domain identifies areas of conflict and steps to move others into positive interactions. | Goleman et al., 2002  |
| Self-stewardship & self-care  | Self-stewardship, an attribute of moral resilience, is defined as “giving sufficient attention to one’s well-being while acknowledging ones’ needs and limitations.”<br>Self-care is “the ability of individuals, families and communities to promote health, prevent disease, maintain health, and cope with illness and disability with or without the support of a healthcare provider”.   | Holtz et al., 2018, e491<br><br>World Health Organization, n.d. |

most often relates to Bandura’s Social Cognitive Model (Walsh et al., 2020). In this model, three factors influence self-efficacy: behaviors, environment, and personal/cognitive factors. Self-efficacy development in nursing students demonstrated a positive relationship with academic performance, clinical skills, and ability to overcome challenges (Walsh et al., 2020).

*Optimism*

A growing amount of research supports the health-protective effects of positive emotions on cardiovascular, neuroendocrine, and immune functioning (Horowitz, 2009). Luthans and Youssef-Morgan (2017) describes the integration of hope, optimism, efficacy, and resilience into the concept of psychological capital. Psychological capital contributes to the positive appraisal of circumstances and increase for success based on motivation and perseverance (Luthans & Youssef-Morgan, 2017). A positive outlook (Calderia & Timmins, 2016), optimism (Grafton et al., 2010), humor (Grafton et al., 2010), and hope (Barrott, 2018) are all attributes of resilient nurses. Although slightly different, each concept points to an orientation that reflects possibility. A positive orientation toward the future is a protective resource associated with resilience for

prelicensure nursing students.

*Emotional intelligence*

Emotional intelligence is the ability of an individual to process emotional experiences and emotions to guide thinking and behavior (Mayer & Salovey, 1997). “Self-regulation refers to those processes, internal and/or transactional, that enable an individual to guide his/her goal-directed activities over time and across changing circumstances (contexts). Regulation implies modulation of thought, affect, behavior or attention via deliberate or automatic use of specific mechanisms and support metaskills” (Karoly, 1993, p. 25).

Nursing students face emotional situations in both didactic and clinical experiences throughout the curriculum. Skills to enhance interactions with others and enable the student to process and interact in the clinical setting are essential components of nursing practice (Harrison & Fopma-Loy, 2010). Emotional intelligence mitigates some of the distress experienced by student nurses responding to adverse events (Hurley et al., 2020). As an antecedent of resilience (Magnano et al., 2016), emotional intelligence is a core capability and desired outcome of prelicensure nursing education (Foster et al., 2015).

*Self-stewardship/self-care*

The term self-care is generally used to convey actions one takes to promote one’s health and well-being. The World Health Organization (n.d.) defines self-care as “the ability of individuals, families and communities to promote health, prevent disease, maintain health, and cope with illness and disability with or without the support of a healthcare provider”. For many nurses, and students alike, the idea of allocating time and attention to personal well-being is met with self judgement and resistance. Self-stewardship, an attribute of moral resilience offers a positive reframing to invite nurses to see themselves as worthy of investment and supports them to embrace their professional obligations to sustain themselves in the profession. It is aligned with the nurse’s ethical obligation to invest in their own wellbeing and integrity to fulfill their professional commitments (ANA, 2015). Self-awareness and self-care for one’s well-being are essential for the development of self-stewardship.

Self-care practices fluctuate throughout nursing training and without educational interventions in this area, self-care practices wane over time. In a pilot study of 118 prelicensure nursing students over three years without any self-care intervention, the self-care mean composite scores decreased each year as nurses progressed through program (Ashcraft & Gatto, 2018). This suggests that they must be practiced intentionally and repetitively throughout the nursing program to sustain their impact.

**Strategies**

Integrative strategies to support and cultivate internal protective factors to strengthen student resilience are paramount to nursing education especially in the post pandemic era. Liang et al. (2019) developed a resilience enhancement project on participatory research with 28 Taiwanese nursing students that included reflection, ongoing planning, and action. Participatory research was the method chosen due to the cooperative and iterative process to facilitate a learning environment that connects theory and practice with action and reflection. The resilience enhancement workshops addressed four topics related to self-efficacy: building self-confidence, building academic and psychological competency, developing coping strategies, and positive thinking (Liang et al., 2019). The positive thinking content included information and strategies related to mindset humor, and spiritual support. The research project itself was the change agent for the student resilience. The program increased student nurse confidence, competency, and constructive resilience. Resilience improved through nursing knowledge and practicing positive thinking and behavior (Liang et al., 2019).

Waddell et al. (2015) conducted a randomized control trial study examining the impact of a career-planning curriculum on baccalaureate student nurses' career resilience. The authors built upon the concept development from several previous studies to define career resilience as the ability to respond successfully to challenges, adversity, and stress (Waddell et al., 2015). Ongoing reflection was key to the student development of self-efficacy and resilience (Waddell et al., 2015). Students in the career planning intervention group reported higher career resilience based on higher career decision-making self-efficacy than the control group at the end of the program (Waddell et al., 2015).

Reflection

The use of self-reflection as an educational strategy can increase self-awareness, foster optimism, promote personal growth, and improve emotional intelligence. Student nurses reported an increase in self-awareness and self-reflection when practicing self-care strategies and coping skills (Snyder, 2020). Self-reflection enabled students to identify when they felt stressed, as well as recognize the positive effects of self-care on mental, emotional, and physical state (Snyder, 2020). Developing these skills as nursing students may create the foundation for applying them when they enter practice.

Ongoing student reflection and enhanced internal resources can improve nursing students' ability to respond to career challenges (Waddell et al., 2015). According to Finley (2018), reflection is often the foundation of resilience. Reflection is a structured process leading to critical self-evaluation of core beliefs, assumptions, attitudes, behaviors, skills, and knowledge (Finley, 2018). To be effective, reflection must be deliberate, sincere, and honest (Finley, 2018). Student reflection may be facilitated in many ways such as questions posed during routing debriefings of clinical experiences (He et al., 2018), student journaling assignments (Harrison & Fopma-Loy, 2010), and group discussions (Stacey et al., 2017). Self-reflective journaling, debriefing, and peer-support are activities that promoted self-efficacy for prelicensure nursing students during clinical experiences (George et al., 2020).

Reflective journals are "written documents that students create as they think about various concepts, events or interactions over a period of time for the purposes of gaining insight into self-awareness and learning" (Thorpe, 2004, p. 328). A key to an effective reflection is to structure the prompts in a way that promotes learning. Highly structured reflective prompts aimed to guide more coherent understanding of the domain lead to better metacognitive reflection or awareness of how one thinks (Alt & Raichel, 2020). Reflective journaling using strategic prompts is an effective teaching strategy to promote emotional competence in prelicensure nursing students (Harrison & Fopma-Loy, 2010). Harrison and Fopma-Loy (2010) provide specific examples of journal prompts used to grow emotional intelligence competencies. An example of a structured journal entry used by the author to enhance student self-awareness, guide metacognitive reflection related to topic, and promote learning with prelicensure nursing students is provided in Table 3.

Positive reframing

Some of the most successful faculty strategies to foster resilience are to encourage student inquiry and insight on adversity and conflict, provide supportive feedback to help students identify and to build upon successes, and guide students to reframe challenges to opportunities (Thomas & Revell, 2016). Reframing can create a shift in student perception, promote a more positive orientation, improve positive coping (He et al., 2018) and demonstrate effectiveness in building prelicensure nursing student resilience (Amsrud et al., 2019; Mathad et al., 2017; Stacey et al., 2017; Thomas & Revell, 2016).

Positive reframing can occur when the faculty or other students ask questions to encourage the exploration of other perspectives, ideas, and solutions. It is important for the students to spend some time exploring different ideas, strategies, and perspectives to avoid creating a

**Table 3**  
Example of journal entry prompts to enhance emotional intelligence.

| Instructions: Please complete the Emotional Intelligence (EI) assessment created by Weisinger (2000). Please review your assessment results and reflect on your assessment as you complete the journal entries below.                                     |  |
|---|--|
| Journal prompt  | Rationale  |
| Practice gratitude: What is something that you are grateful for today in your life?   | Sets the tone for the journal entry by focusing on what one has verses what is missing in one's life (scarcity thinking). Acts of gratitude have been shown to promote optimism and a positive outlook. A positive outlook may also promote a better learning experience. Starting with individual strengths helps to keep the positive orientation with focus on what one has versus what one is missing. The inquiry encourages the student to think about and bring new information or insights to awareness. |
| Inquiry: What are your strengths (top rated or highest scored elements on the assessment) identified in the assessment related to emotional intelligence?   | Fosters learning by connecting the assessment to reflection on current views about self and past experiences. The goal is to encourage more self-awareness and think about potential areas for growth/change.  |
| Insights: What did you learn from the assessment related to strengths and areas for improvement? Provide an example of how this area of strength or opportunity for growth has been manifested during a past experience.                                  | Encourages the student to focus on solutions and opportunities related to insights from the EI assessment. The requirement for an evidence-based source promotes the student seeking and learning about resources to help promote growth and change.   |
| Implement: Based on the EI assessment, what are some specific strategies for enhancing an area of emotional intelligence strength or improving an identified opportunity for growth? Please include reference for the evidence-based approach you choose. | Encourages the student to examine how future experiences could be different than today. The purpose of this prompt is to promote vision and hope for the future.   |
| Impact: How would implementing the identified emotional intelligence enhancing approach found in the literature positively impact your leadership and teamwork?   |  |

"groupthink" mentality. Groupthink is when a group's desire for harmony or conformity results in an irrational or dysfunctional decision-making outcome (Janis, 1982). When groups are going down an unhealthy path, there is a need to disrupt the groupthink to allow for other possibilities. Reframing presents the issue, view, or problem from a different perspective which can expand the possibilities and solutions for collaborative outcomes. Student curiosity fosters higher learning. One strategy used by the author to combat groupthink is to assign a person in the group to present "the other" perspective to ensure that the team considers a wide range of options and information to promote more critical thought and problem solving.

Solution-oriented learning is an example of a positive reframing strategy used with prelicensure nursing students (Jenkins & Germaine, 2018). Solution-focused approaches are goal-oriented, structure interventions designed to help students to build upon their existing strengths while working toward desired outcomes (Jenkins & Germaine, 2018). Solution-oriented learning is derived from Solution-Focused Therapy (SFT) developed by Shazer and Berg in the late 1970s. "Solution-focused therapy is about constructing solutions, not solving problems" (Miller & de Shazer, 2000, p. 15). SFT focuses on motivating, achieving, and sustaining desired behavior change through a future-oriented, possibility promoting approach exploring how the person's life would be different without the problem. The language shifts from talking about emotions as problems to solution-focused language of optimism and self-confidence focusing on strengths and achievements (Miller & de Shazer, 2000). Discussion about what is already working, exploring a preferred future, and ways to build upon past successes further promotes optimism. These practices can be applied to nursing student education. Student nurses learned to give and receive constructive criticism, recognize each other's signs of stress, and adjust their supportive responses in small groups promoting effective teamwork when the solution-oriented learning approach was applied



(Jenkins & Germaine, 2018). An important aspect of the student-centered solution-oriented learning model is to generate optimism through person-centered communication skills and based on Rogerian values (Jenkins & Germaine, 2018).

One strategy utilized by the author is to administer the Strengths-Finder assessment (Rath, 2008). The students discover their top 5 strengths and then develop a matrix that includes the top 5 strengths of their teammates. The team is instructed to utilize the strengths matrix to assign tasks based on individual strengths to maximize performance on the case study assignments. The case studies are designed to have multiple acceptable solutions. The grading focus is on demonstrating critical thought and good judgement in proposed solutions.

Broadening perspectives (Reyes et al., 2015) is another cognitive reframing strategy to expand and enrich student understanding of adversity in a way that promotes a positive outlook. The student may generalize their experience as not being unique but instead normalize and validate similar experiences for other students (Reyes et al., 2015). As with solution-based learning, the broadening strategy can involve envisioning a bright picture of self in the future as a motivation (Reyes et al., 2015). Broadening strategies may be useful to help promote a sense of hope and optimism for the future. Some examples of faculty prompts for discussion include:

- What are some issues that are common for all college students?
- What are some concerns that are common to all nursing students?
- What are some of the hardest parts of being a nursing student?
- What can you accomplish as a team if you all pull together?

#### Problem-based learning

Problem-based learning, a strategy to improve student self-efficacy, utilizing small group activities to help learners acquire knowledge, skills and attitudes resulting from the process of working toward the understanding or solving of a problem based on the earlier work of Barrows and Tablyn (Gandhi & Dass, 2019). Students explore both theory and practice-focused knowledge during investigation of the scope of problem and to propose innovative solutions (Gandhi & Dass, 2019). During a study of 90 undergraduate nursing students using problem-based learning, nursing students who enjoyed and adapted to the method had high coping self-efficacy scores (Gou et al., 2019). The difference between the student perception of self-efficacy and the student's self-efficacy behaviors is the measurement of coping self-efficacy (Gou et al., 2019). In addition, this study indicated that student self-efficacy may positively impact professional leadership behaviors as demonstrated by 31% of participants with moderate coping self-efficacy scores increased their leadership and professional qualities through problem-based learning (Gou et al., 2019).

#### Mindfulness

Mindfulness is the state or practice of being aware of what is happening in the present moment, in ones' thoughts and emotions, without judgement of that awareness. It is a skill that has been shown to enhance self-awareness and self-regulation (Vago & David, 2012). Mindfulness practices include various types of meditation (e.g. breath, body scan, loving-kindness, self-compassion), body awareness and movement (e.g. yoga, Tai chi), or other practices to calm the nervous system and mind to focus on the present. Mindfulness is not "mind control" but rather a way of taming the mind's distractions to be able to perceive people, situations, or circumstances clearly and authentically and to respond with agency and self-efficacy rather than reaction. Mindfulness practices aim to develop awareness of one's somatic, emotional, and thought patterns to focus attention and build new neuro pathways for self-regulation and awareness of ones' present state of being and experience. These practices enhance well-being, health, quality of life, coping and reduce stress and anxiety.

A significant positive relationship exists between resilience, social support, and mindfulness with psychological well-being (He et al., 2018). An integrated review that included several small studies of mindfulness meditation practices in nursing students, reported meditation to be effective in reducing stress, anxiety, depression, burnout and in improving sense of well-being and empathy (van der Riet et al., 2018).

Curriculum content on coping strategies and mindfulness training are important to promote resilience in undergraduate nurses (Lopez et al., 2018). Mindfulness skills enable a number of key elements in the internal resources model, such as self-awareness and positive orientation, but fits best under the protective resource of self-regulation. Mindfulness-Based Stress Reduction (MBSR), applied in a variety of settings, demonstrated effectiveness in physiologic, psychologic, and social benefits. An 8-week class of MBSR in a small sample of baccalaureate nursing students showed a greater sense of well-being, improved coping skill and improved empathy with patients (Beddoe & Murphy, 2004).

Snyder (2020) provided instruction on guided meditation, breathing exercises, gratitude list, positive affirmations, and journaling as strategies, to help 149 undergraduate nursing students enrolled in a psychiatric-mental health course, develop new coping skills and self-care behaviors. Many of the nursing students commented that self-care activities incorporated into the class demonstrated that the instructor cared for students (Snyder, 2020). Incorporation of self-care practices has the potential to improve self-reflection, reduce student burnout, and reduce attrition rates (Snyder, 2020).

Mindfulness practices can be integrated into existing courses. Chase-Cantarini and Christiaens (2019) introduced a 10-minute mindfulness moment meditation at the beginning of a health promotions course to improve nursing student awareness of the present moment. Students reported improved satisfaction and learning engagement after the intervention and requested more throughout the curriculum. Instead of creating additional courses, these practices can regularly be added at the beginning of a course, prior to an exam or whenever the course content is evocative or the energy of the students in the class becomes dysregulated. Instituting a simple breath practice can help students to become aware of their experience and develop skills to shift from distraction, dispersed or divided attention to focus in the moment. These skills can be particularly important when students are learning psychomotor or communication skills or are in high stress situations.

Several studies published in the literature on curriculum interventions promote self-care practices in pre-licensed nursing students (Snyder, 2020; Nervins & Sherman, 2016; Ashcraft & Gatto, 2018; Drew et al., 2016). Curriculum content for the self-care interventions with prelicensure nursing students focused on stress management, journaling, gratitude, guided meditation, alcohol use, exercise, nutrition, and diet. However, very few of the self-care curriculum intervention findings were statistically significant. This dearth of evidence-based interventions suggests that there is an opportunity to prioritize this content, design interventions and evaluate their impact (Table 4).

#### Future directions

"Building positive relationships, maintaining positivity, developing emotional insight, creating work-life balance, and reflecting on successes and challenges are effective strategies for resilience building" (AACN, 2021, p. 72). Resilience is an important dimension of prelicensure nursing education to support well-being throughout training and to mitigate attrition. Without these skills, nursing students are at risk for the detrimental effects of burnout, work disengagement and leaving the profession after graduation. Strategies to promote resilience should be threaded across all levels of the curriculum to coincide with AACN's resolution to promote nurse well-being and resilience.

A selected review of the literature shows the need to change the focus from knowledge-based activities to develop practical, experiential skills to foster and develop resilience behaviors throughout the curriculum.

**Table 4**  
Educational strategies to strengthen individual protective factors.

| Educational modality   | Internal protective factors   | Faculty strategies   | Example  |
|------------------------|---|--|--|
| Reflection             | Optimism, self-efficacy, emotional intelligence, self-stewardship/self-care | Faculty develops appropriate question prompts for: Journaling clinical simulation debriefings, & team building activities  | The Reina Trust Building Model can be used to facilitate a teambuilding activity (Reina & Reina, 2015). Students identify two trust building behaviors they want to improve during the next week. This strategy also helps to improve the relationship management aspect of emotional intelligence through demonstration of trust building behaviors.  |
| Reframing              | Optimism, self-efficacy, emotional intelligence, self-stewardship/self-care | Faculty sets expectation that learning is a rehearsal involving growth and not performance. This sets the tone for optimism and a focus on solution-based learning.<br>Validation<br>Acknowledge accomplishments & successes thought positive feedback related to assignments. These strategies promote self-efficacy. | Create a discussion board to inquire how nurse self-care behaviors are associated with patient safety.<br>Ask students to share “value of an error” stories. It can be a personal story of growth or about an error/mistake that resulted in a medical advancement.  |
| Problem-based learning | Optimism, self-efficacy, emotional intelligence, self-stewardship/self-care | Empowerment: Increase student awareness of resources.<br>Incorporate evidence-based content: Stress management, emotional intelligence, mindfulness, crucial conversations, and self-care practices.   | Small group assignment, in Leadership in Professional Nursing course, utilizing a complex case study that involves dysfunctional behavior, moral/ethical issues, miscommunication, and patient safety concerns. The team identifies nurse leader strategies to promote effective teams, teamwork, and positive patient outcomes.<br>Use a scenario regarding an inappropriate patient handoff to generate small group discussion on strategies to promote dialogue based on crucial conversations framework in leadership class. |
| Mindfulness            | Emotional Intelligence, self-stewardship/self-care, self-efficacy           | Faculty discuss the neuroscience of mindfulness and apply it to common student situations involving stress, conflict, or uncertainty.  | Use a grounding practice such as 3 deep breaths at the beginning of class to help students focus on the here and now and to notice their current state without judgement.  |

While there are some promising directions for building resilience in prelicensure nursing students, more rigorous studies are needed. Furthermore, competency-based tools for measuring student nurse resilience should be further developed and available for educators to advance the prelicensure students' resilience body of knowledge.

## Conclusion

Nursing faculty are well positioned to incorporate teaching and learning strategies for resilience to provide the building blocks for self-care practices of the next generation of nurses. Incorporating some of the interpersonal level evidence-based resilience-building strategies uncovered within the literature into prelicensure nursing curriculum will help nursing education move from a “crisis intervention” to a “culture of resilience and well-being” as advocated by the AACN (2020) resolution. Prelicensure nursing education is the best place to start a nursing culture shift and to equip resilient nurses with the skills and abilities to thrive within the complex healthcare environment. Without a healthy nursing work force the sustainability of the healthcare enterprise is in peril. The National Academies has called for systemic reforms within learning environments to create environments where students and faculty can thrive and flourish (National Academies of Sciences, Engineering, and Medicine, 2019). Building resilience enhancing prelicensure curricula, dramatically lowering attrition rates, and better preparing resilient graduates to work in a post-pandemic era is an excellent place to start addressing nurse burnout and retention issues.

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