

Nursing Education Research Conference 2018 (NERC18)

Effects of Mindfulness Training on Perceived Level of Stress and Performance-Related Attributes in BSN Students

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A critical issue that continues to impact nursing students is the stress that develops during their academic program. Stress in nursing education has been reported over several decades (Ratanasiripong, Park, Ratanasiripong, & Kathalae, 2015). The stress that students experience during their curriculum negatively impacts their performance-related attributes, resulting in poor attention and concentration (Capp & Williams, 2012) and decreased memory and problem-solving abilities (Spadaro & Hunker, 2016). Mindfulness practice may offer a unique way to manage stress (Ratanasiripong et al., 2015), improve academic performance (Spadaro & Hunker, 2016; van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2015), and ultimately mitigate stress, burnout, and attrition in professional practicing nurses (Dwyer & Hunter Revell, 2015; Newsome, Waldo, & Gruska, 2012; Smith, 2014).

The literature is replete with evidence that suggests nursing students are subjected to stressors beyond typical college stressors (Chernomas & Shapiro, 2013). Nursing students encounter stressful clinical experiences as they confront death and dying patients (Ek et al., 2014), communicate with professionals and patients (Alzayyat & Al-Gamal, 2014), and use preprofessional judgment in high-pressured environments. Academic challenges are related to the comprehension and application of extensive nursing knowledge and skills. The knowledge required for effective, safe health care increases exponentially every year (Bordoloi & Islam, 2012) and students must learn within a limited academic period. Role strain and role conflict (Higginson, 2006) arise as a majority of nursing students are female but gender bias also occurs and male nursing students face their own unique stressors as they enculturate into the profession (Chan et al., 2014; MacWilliams, Schmidt, & Bleich, 2013).

Stress does not cease once the nursing student graduates and passes the NCLEX-RN. As the novice nurse enters professional nursing practice, he or she is faced with overwhelming clinical responsibilities, continuing education requirements, professional incivility, and challenging work schedules that may lead to attrition and burnout (Beck & Gable, 2012; Clark, Nguyen, & Barbosa-Leiker, 2014; Hickerson, Taylor, & Terhaar, 2016; Oyeleye & Hanson, 2013; Rushton, Batcheller, Schroeder, & Donohue, 2015). It is clear that nursing students require an effective way to manage stress during their academic program that has the potential to enhance their professional nursing practice.

This preliminary study utilized a pretest-posttest true experimental design to examine the differences in perceived level of stress and performance-related attributes in baccalaureate nursing students who received mindfulness training and those who did not. A small ($N = 12$) convenience sample of junior nursing students about to enter their first clinical experience participated in the study across 16 weeks. The experimental group received mindfulness training for 8 weeks while the control group met in study sessions for 8 weeks. Both groups completed pre- and posttest evaluations using two reliable and validated instruments (Derogatis, 1984; Weinstein & Palmer, 2002). Cumming's (2014) Exploratory Software for Confidence Intervals (ESCI) was utilized to calculate point estimates (i.e., group means) and confidence intervals.

The Derogatis Stress Profile (DSP; Derogatis, 1984) was used to examine students' perceived stress levels. The DSP is a 77-item, self-report inventory originating from interactional stress theory that proposes stress is comprised of three interactional components: environmental events, personality mediators, and emotional responses. It also measures subjective stress to provide an estimate of the respondent's conscious awareness of his or her stress level. The Learning and Study Strategies Inventory (LASSI; Weinstein & Palmer, 2002) was used to examine students' performance-related attributes. The LASSI is an instrument that assesses respondents' study strategies relating to three

components of skill, will, and self-regulation. This self-report inventory is a 10-scale, 80-item assessment of respondents' awareness about and use of learning and study strategies that focuses on covert and overt thoughts, behaviors, attitudes, and beliefs.

The findings of this preliminary study supported previous recommendations for the use of mindfulness as a method to decrease nursing students' perceived levels of stress. The results of the posttest DSP suggested that the students who received mindfulness training demonstrated lowered mean stress scores than students who did not receive such training, with noteworthy corresponding reductions in subjective and total stress scores. However, this study also showed the potential for mindfulness to improve individual performance-related attributes. Mindfulness practice has emerged as a method to reduce stress across many educational settings but has not yet been fully investigated as a method to influence academic performance. The results of the posttest LASSI suggested that although both groups improved their study habits, the students who received mindfulness training exhibited a greater strengthening in the performance-related attributes of concentration, selecting main ideas, time management, study aids, and test strategies.

As exhibited by the results of this study, mindfulness training should be offered as an integral supportive resource in any nursing curriculum. Higher education settings are presently experiencing a transformation in the student population as more students who have disabilities are included in educational programs (Cortiella & Horowitz, 2014). The Americans With Disabilities Act of 1990 requires nursing programs to include students with learning disabilities (Betz, Smith, & Bui, 2012). Educational settings have developed student success programs to accommodate or assist learners (Marks & McCulloh, 2016; Neal-Boylan & Smith, 2016) and mindfulness should be integrated into these programs. Mindfulness has been utilized to improve concentration (Singleton et al., 2014), time management (McCloskey, 2015), and anxiety, mood problems, and social skills in adolescents with learning disabilities (Beauchemin, Hutchins, & Patterson, 2008; Haydicky, Wiener, Badali, Milligan, & Ducharme, 2012).

Mindfulness has emerged as an innovative approach to stress management in educational settings but there is a paucity of literature that has examined its use related to academic performance. Much of the historical and recent literature on mindfulness in nursing education has focused on altering stress, depression, anxiety, empathy, and burnout in students. The few studies to date that have examined the use of mindfulness to affect academic performance in nursing students have suggested the practice improves attention selection, concentration and focus, accuracy, and clarity of thought (Spadaro & Hunker, 2016; van der Riet et al., 2015). The results of this preliminary study provide additional evidence that adds to the growing body of literature related to the use of mindfulness training, stress, and performance-related attributes.

Mindfulness training is needed to help nursing students successfully complete their curriculum and has implications for professional nursing practice. By decreasing stress levels while studying, students may be able to focus on their learning and integrate knowledge more effectively. Nursing students who manage negative emotions and develop improved academic skills have a greater potential to successfully pass the NCLEX-RN, which could mitigate the current nursing shortage (National League for Nursing, 2014) and prevent professional burnout (Horner, Piercy, Eure, & Woodard, 2014). Mindfully-practicing nurses could impact clinical safety to help reduce the incidence of medical errors and improve patient satisfaction (Brady, O'Connor, Burgermeister, & Hanson, 2012; Hallman, O'Connor, Hasenau, & Brady, 2014; Horner et al., 2014; Mumber, 2014; Smith, 2014). Mindfulness training could be shared with patients, families, and colleagues as a health promotion strategy to improve levels of stress in relation to chronic/acute diseases and professional stressors (Bryer, Cherkis, & Raman, 2013; Hensel & Laux, 2014; Williams, Simmons, & Tanabe, 2015). Further exploration utilizing larger samples is needed to determine if mindfulness training can be effective for modifying other nursing students' levels of perceived stress and performance-related attributes.

Title:

Effects of Mindfulness Training on Perceived Level of Stress and Performance-Related Attributes in BSN Students

Keywords:

Mindfulness, Perceived level of stress and Performance-related attributes

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Abstract Summary:

Stress in nursing education has been reported over several decades, which affects academic performance in students. This preliminary study used mindfulness training as an approach to decrease perceived levels of stress and improve individual academic performance indicators in junior BSN students.

Content Outline:

Introduction – A critical issue that continues to impact nursing students is the stress that develops during their academic program. Stress in nursing education has been reported over several decades, which can

negatively impact academic performance in students. Mindfulness practice may offer a way to manage stress and improve academic performance.

1. Nursing students experience stress during their curriculum, which negatively impacts their performance-related attributes, resulting in poor attention and concentration and decreased memory and problem solving abilities.
2. Mindfulness practice may offer a unique way to manage stress, improve academic performance, and ultimately mitigate stress, attrition, and burn out in professional practicing nurses.

Body – This preliminary mindfulness study suggested that mindfulness training can decrease nursing students' perceived stress levels as well as improve individual performance-related attributes such as concentration, selecting main ideas, time management, study aids, and test strategies.

Main point #1: Nursing students are subjected to stressors beyond typical college stressors.

Supporting point #1: Nursing students encounter stressful clinical experiences, intense academic demands, role strain, role conflict, and gender bias.

- a) In clinical experiences, nursing students confront death and dying patients, communicate with professionals and patients/families, and use preprofessional judgment in high-pressured environments.
- b) Academic challenges are related to the comprehension and application of extensive nursing knowledge and skills as the knowledge required for effective, safe health care increases exponentially every year.
- c) Role strain and role conflict arise as a majority of nursing students are female but gender bias also occurs and male nursing students face their own unique stressors as they enculturate into the profession.

Supporting point #2: Nursing students face persistent stress as they enter professional nursing practice.

- a) Novice nurses face overwhelming clinical responsibilities, continuing education requirements, professional incivility, and challenging work schedules that may lead to attrition and burnout.
- b) Nursing students require an effective way to manage stress during their academic program that has the potential to enhance their professional nursing practice.

Main point #2: A pretest-posttest control group true experimental design was used to examine the differences in perceived level of stress and performance-related attributes in baccalaureate nursing students who received mindfulness training and those who did not.

Supporting point #1: This preliminary study utilized a small ($N = 12$) convenience sample of junior BSN students about to enter their first clinical experiences. Two reliable and validated instruments were used to collect data. Exploratory Software for Confidence Intervals was utilized to calculate point estimates and confidence intervals.

- a) The Derogatis Stress Profile (DSP) is a 77-item, self-report inventory originating from interactional stress theory that proposes stress is comprised of three interactional components: environmental events, personality mediators, and emotional responses.
 1. It also measures subjective stress to provide an estimate of the respondent's conscious awareness of his or her stress level.

b) The Learning and Study Strategies Inventory (LASSI) is an instrument that assesses respondents' study strategies relating to three components of skill, will, and self-regulation.

1. This self-report inventory is a 10-scale, 80-item assessment of respondents' awareness about and use of learning and study strategies that focuses on covert and over thoughts, behaviors, attitudes, and beliefs.

Supporting point #2: Findings of this preliminary study supported previous recommendations for the use of mindfulness as a method to decrease nursing students' perceived levels of stress. However, this study also showed the potential for mindfulness to improve individual performance-related attributes. Mindfulness practice has emerged as a method to reduce stress across many educational settings but has not yet been fully investigated as a method to influence academic performance.

a) The results of the posttest DSP suggested that the students who received mindfulness training demonstrated lowered mean stress scores than students who did not receive such training, with noteworthy corresponding reductions in subjective and total stress scores.

b) The results of the posttest LASSI suggested that although both groups improved their study habits, the students who received mindfulness training exhibited a greater strengthening in the performance-related attributes of concentration, selecting main ideas, time management, study aids, and test strategies.

Main point #3: Mindfulness training should be offered as an integral supportive resource in any nursing curriculum.

Supporting point #1: Higher education settings are presently experiencing a transformation in the student population as more students who have disabilities are included in educational programs.

a) The Americans With Disabilities Act of 1990 requires nursing programs to include students with learning disabilities.

b) Educational settings have developed student success programs to accommodate or assist learners and mindfulness should be integrated into these programs as it has been utilized to improve concentration, time management, and anxiety, mood problems, and social skills in adolescents with learning disabilities.

Supporting point #2: Mindfulness has emerged as an innovative approach to stress management in educational settings but there is a paucity of literature that has examined its use related to academic performance.

a) Much of the historical and recent literature on the use of mindfulness in nursing students has focused on altering stress, depression, anxiety, empathy, and burnout in students.

b) The few studies to date that have examined the use of mindfulness to affect academic performance in nursing students have suggested the practice improves attention selection, concentration and focus, accuracy, and clarity of thought.

Conclusion – Mindfulness training is needed to help nursing students successfully complete their curriculum and has implications for professional nursing practice.

1. By decreasing stress levels while studying, students may be able to focus on their learning and integrate knowledge more effectively.

2. Nursing students who manage negative emotions and develop improved academic skills have a greater potential to successfully pass the NCLEX-RN, which could mitigate the current nursing shortage and prevent professional burnout.
3. Mindfully-practicing nurses could impact clinical safety to help to reduce the incidence of medical errors and improve patient satisfaction.
4. Mindfulness training could be shared with patients, families, and colleagues as a health promotion strategy to improve levels of stress in relation to chronic/acute diseases and professional stressors.
5. Further exploration utilizing larger samples is needed to determine if mindfulness training can be effective for modifying other nursing students' levels of perceived stress and performance-related attributes.

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Author Summary: Dr. Denise Foster has 30 years' experience in clinical and educational settings. She has worked with nursing students at the diploma, associates, and baccalaureate levels. She has taught in classrooms, clinical, lab, hybrid, and online. Her interest in student stress and academic performance began when she worked closely with students while teaching a pathophysiology course. She recently investigated the use of mindfulness to decrease perceived levels of stress and improve academic performance in BSN students.