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### Mindfulness Meditation for Nursing Students

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Mindfulness Meditation for Nursing Students

A Paper Submitted in Partial Fulfillment of the Requirements for

Nurs 5382

In the School of Nursing

The University of Texas at Tyler

by

Christine Cho

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## Mindfulness Meditation

### **Executive Summary**

Nurse burnout and a national nursing shortage are prevalent issues in healthcare today. As nurse burnout is linked to work-related anxiety and stress, it is prudent to instill stress-reduction behaviors in nursing students before they enter the workforce. Unfortunately, more than 10% of nursing students suffer from moderate to severe anxiety (Chen, Yang, Wang, & Zhang, 2013). Without resilience and effective stress management, nursing students will not be prepared to “handle the rigor and challenges of our rewarding profession” (Smith & Yang, 2017, p. 94).

Mindfulness-based stress reduction (MBSR) is a practice that was created by Jon Kabat-Zinn in 1979 and has since been used in the medical community as a complement therapy for various diagnoses including anxiety, asthma, cancer, chronic illness, fatigue, gastrointestinal distress, heart disease, and many other diseases (Center for Mindfulness in Medicine, Health Care, and Society, 2017). MBSR is an eight-week evidence-based program that instills mindfulness in participants through meditation and yoga. It has also shown promise as an effective means of managing stress and anxiety as well as developing resilience in nursing students (Bazarko, Cate, Azocar, & Kreitzer, 2013). When nursing students practice mindfulness, “they may be better able to reach out to distressed clients and respond with concern, without suffering emotional contagion” (Beddoe & Murphy, 2004, p. 310-311).

This change project is based off of Jon Kabat-Zinn’s MBSR program. The purpose of the project is similar to that of Green and Prunier’s (2013) eight-week mindfulness program: to “introduce mindfulness to nursing students in order to prepare them to deliver quality, effective, and safe nursing care with compassion in a nonjudgmental manner and to promote

professionalism, teamwork, self-awareness, and critical thinking” (Green & Prunier, 2013, p. 31). Ideally, this intervention would be implemented face-to-face in a nursing course, such as Mental Health Nursing, in either the clinical setting or classroom setting.

This change project was offered to students in a Populations Health course and Wellness and Wellbeing course and carried out over the course of eight-weeks through the learning management system, Canvas. The mindfulness program consists of a weekly meditation practice, topic readings, discussions, and optional supplemental material. The themes for the weekly topics are: Orientation, Being Fully Present, Responding Mindfully Without Judgment, Communication, Teamwork, Compassion, Balanced Life, and Closure (see Appendix F). The weekly reading materials are adapted from Constance M. Green, RN’s mindfulness program for nursing students and have been used with her permission. Meditations were practiced from the free meditation course, “Learn How to Meditate in Seven Days” in the free phone application, Insight Timer. Alternatively, if this program is able to be implemented face-to-face, 10-minute meditations from Jon Kabat-Zinn’s *Guided Mindfulness Meditation CD* (Series 2) can be used. Lastly, pre- and post- measurements of stress, anxiety, and mindfulness in the participants were to be collected.

Implementation of a stress-reducing intervention in a nursing program requires time commitment and compliance to be effective. Unfortunately, compliance in this particular implementation was lacking and participants did not finish the program. Despite this outcome, the proposed mindfulness program is less intensive than a traditional MBSR course and the use of mindfulness will help “prepare beginner health practitioners to be reflective, empathetic, and patient centered in their practice” (McConville et al., 2017, p. 27).

## Rationale

### Clinical Issue

While stress is a major concern for all college students as they navigate through academic, social, and personal challenges, there are a unique set of stressors specific to undergraduate nursing students (Oman, Shapiro, Thoresen, Plante, & Flinders, 2008). In addition, nursing students are known to report higher levels of stress than students in other health professions or student populations (Beddoe & Murphy, 2004, p. 305; Smith & Yang, 2017). This is because they not only bear the stresses of the occupation such as “working with dying patients, insecurity of clinical competence, fear of making mistakes, and interpersonal conflicts with patients and staff” (Smith & Yang, 2017, p. 90-91), but also the stresses of “mainstream academic students, such as fear of failure, lack of free time, long hours of study and inadequacy of college response to students’ needs” (Kanji, White, & Ernst, 2006). Turner and McCarthy (2017) suggest the high levels of stress could be related to the strain of concurrent study in both didactic and clinical settings at the undergraduate level. In addition, for mature age students, this strain is coupled with “the demands associated with caring for family and children” (van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2014, p. 47).

**Why the problem is important to nursing practice.** Excessive stress levels in nursing students have numerous detrimental effects such as physical and mental health problems, adverse effects on academic performance and learning, and an increased risk of suicidal ideation and hopelessness (Beddoe & Murphy, 2004; Oman et al., 2008; Smith & Yang, 2017). Persistent high stress negatively impacts personal and professional performance (Guillaumie, Boiral, & Champagne, 2016). “Happiness, resilience, and mindfulness are essential for good mental health [and for students] to achieve their educational and professional goals and objectives” (Benada &

Chowdhry, 2017, p. 105). In addition, the experience of stress in nursing students may influence their future career decisions and also have an impact on attrition from both nurse education training programs and the nursing profession (Smith & Yang, 2017). Nursing students need to learn how to manage stress in the early stages of higher education in order “to be well prepared to cope with their future work stress, to decrease professional burnout, and to improve care for their future patients” (Chen et al., 2013, p. 1167).

**Why current practice needs to be changed.** Stress is a disease of the 20<sup>th</sup> century and as healthcare continues to rapidly advance and evolve, there will only be additional new stressors for those in the nursing profession (Smith & Yang, 2017; Turner & McCarthy, 2017). Nursing students need to learn how to manage stress early in their professional education as they will be entering stressful and anxiety-provoking work environments in which many of their patients will also be experiencing similar negative emotions (Chen et al., 2013; Song & Lindquist, 2015). Kang, Choi, and Ryu (2008) found that unrelieved stress by student nurses, “can be internalized and negatively influence the health of the nursing students themselves, holistic patient care, and professionalism in nursing; these can then become obstacles to optimal learning and nursing performance” (p. 538). McConville, McAleer, and Hahne (2017) discuss the concept that “situations are not inherently stressful, it is the student’s perception of stress and...regulation of their emotions, the development of effective coping strategies, and resilience, which determines the degree of stress experienced” (p. 26-27). Smith and Yang (2017) add to the discussion that “rather than placing the focus on removal of the stressful features of nursing programmes,...more attention could be given to the development of resilience through a more positive learning experience for the student” (p. 94).

### **Internal Evidence**

The nursing students that participated in this program were female and enrolled in a Population Health course. Reasons for participation included a diagnosis of severe generalized anxiety disorder, struggles with time management and resultant anxiety, and an interest in meditation. Pre-assessment surveys of stress, anxiety, and mindfulness reflected that the participants were experiencing moderate levels of stress, moderate to extreme levels of anxiety, and low levels of mindfulness at the start of the program (see Appendix A).

### **Literature Synthesis**

The literature presents favorable evidence on the use of MBSR in nursing students. Some studies suggested that the use of a mindfulness meditation program reduced anxiety symptoms and decreased blood pressure in nursing students (Chen et al., 2017; Kanji et al., 2006). Beddoe and Murphy (2004) had similar findings and also discovered that mindfulness decreased “tendencies to take on others’ negative emotions” (p. 310). At the completion of Yamada and Victor’s (2012) research study, 81% of the students self-reported that mindfulness practices had positive effects on their learning. Additionally, a qualitative descriptive study found that “the positive impact of mindfulness [extended] beyond the individual to their intimate relationships, wider social networks, and clinical work” (van der Riet et al., 2014, p. 48). A common theme throughout the studies was the emphasis on identifying effective stress management strategies “to ensure optimum learning and retention during training and to prepare students for a successful transition to the work environment” (Turner & McCarthy, 2017, p. 22).

Spadaro and Hunker (2016) not only found that MBSR successfully decreased stress at the end of the program, they also found that low stress levels were retained at 24 weeks and that there may be a correlation between time spent practicing mindfulness and the amount of stress



reduction obtained. Kang et al. (2008) reported that MBSR was an effective intervention to decrease stress and anxiety in nursing students. Similarly, Song and Lindquist (2015) found that a MBSR program had beneficial “effects on depression, anxiety, stress, and mindfulness of Korean nursing students” (p. 90). In Jain, Shapiro, Swanick, Roesch, Mills, and Schwartz’s (2007) randomized controlled trial comparing MBSR with solely relaxation training, they found that “mindfulness meditation may be specific in its ability to reduce distractive and ruminative thoughts and behaviors, and this ability may provide a unique mechanism by which mindfulness meditation reduces stress” (p. 11). McConville et al.’s (2017) systematic review summarized that “higher levels of mindfulness are associated with lower levels of depression, anxiety, and stress and can facilitate...lower stress perception, more adaptive coping strategy use, and an ability to see a situation more clearly and respond more effectively” (p. 27). Guillaumie, Boiral, and Champagne’s (2017) mixed-methods systematic review concluded that mindfulness significantly improved the mental health of nurses and reduced anxiety and depression, as well as improved the well-being of individuals and improved performance at work. O’Driscoll, Byrne, Gillicuddy, Lambert, & Sahn’s (2017) systematic review reported benefits regarding “participants’ stress, mood, and mindfulness levels, as well as anxiety, well-being, self-compassion, and coping abilities” (p. 860).

### **Stakeholders**

The stakeholders of this project are nursing students, nursing faculty, nurses, hospitals, and patients. Nursing students experiencing stress and anxiety will benefit from a consistent practice of mindfulness. Nursing faculty are impacted by this mindfulness program as it will need to be offered in their courses. Collaboration with faculty and encouraging a “buy-in” mindset is essential to a successful program. In addition, nursing students become better learners

when stress and anxiety are minimized. Nurses are important stakeholders because nurses on any unit work best as a team and in an environment in which nurses feel that they can rely on each other for support. If a foundation of nonreactive response is not established prior to the newly graduated nurse entering a fast-paced and high-stress work environment, the entire nursing team will suffer the consequences. Hospitals are impacted by this mindfulness program as they are the stakeholders that pay the cost of high attrition rates and the nursing shortage. Finally, patients are a significant stakeholder for this project. Patients will receive better care from mindful, self-aware, and empathetic nurses.

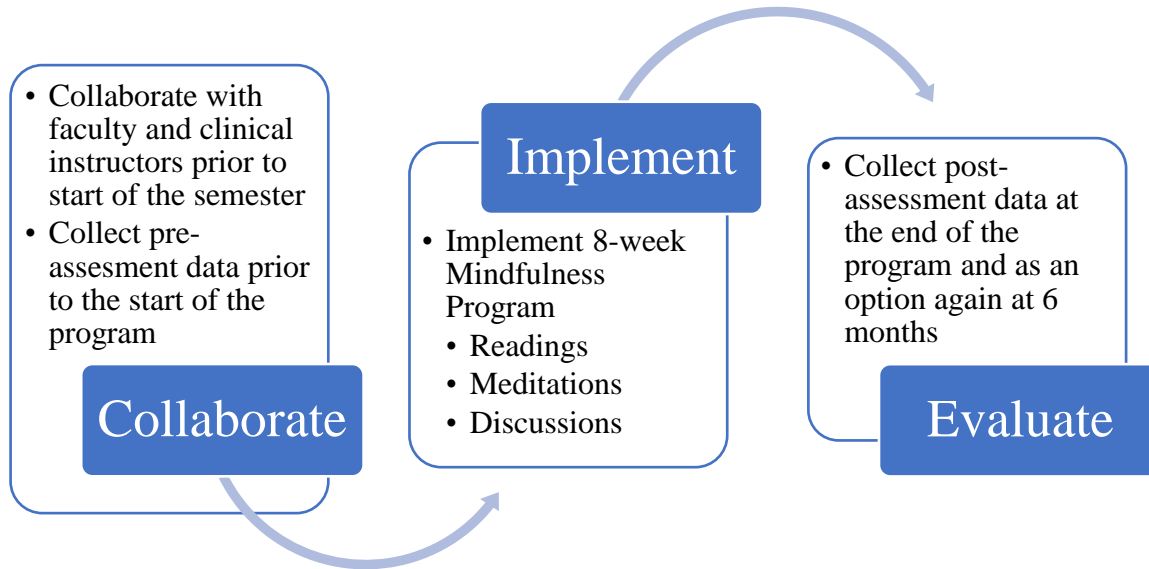
### **Planned Evaluation**

Evaluation of this mindfulness program will be conducted through comparison of pre- and post-assessments of anxiety, stress, and mindfulness. The following surveys will be used to measure these three variables: Burn Anxiety Inventory (BAI), Perceived Stress Scale (PSS-10), and Mindfulness Attention Awareness Scale (MAAS) (see Appendix B, C, and D). If the mindfulness program is conducted face-to-face, printed surveys can be distributed and collected during class time or clinical hours at the start and end of the program. If the mindfulness program is implemented virtually, students can complete surveys online through a questionnaire/data collecting software such as Google Forms (free) or SurveyMonkey (paid subscription). Once completed, the program implementer will need to translate survey results according to the surveys' respective keys and document the results accordingly. At the end of the program, the data will be evaluated to determine whether stress and anxiety levels decreased and mindfulness levels increased in program participants.

## Timetable/Flowchart

### Detailed Timetable

1. Collaborate with faculty and clinical instructors to orient them to the Mindfulness Program as well as disseminate program details and encourage participation to nursing students.
  - a. Reach out to faculty prior to the start of the school semester/quarter in which the program will be implemented.
2. This course can be offered to nursing students in the didactic or clinical portion of courses such as Mental Health, Population Health, or a Foundations course. The program is most relevant for students taking a Mental Health course.
3. Divide the program materials (meditations, readings, and discussions) into 8 weeks.
4. Collect pre-assessment data of participants using the PSS-10, BAI, and MAAS.
5. Implement the program over 8 weeks (see Appendix F)
  - a. Weekly topic readings
  - b. Weekly Insight Timer or Jon Kabat-Zinn meditations
  - c. Weekly discussion boards or face-to-face group discussions
6. Be available to students for any questions, concerns, or technical difficulties.
7. Collect post-assessment data of participants using the PSS-10, BAI, and MAAS.
8. *Optional.* Collect post-assessment data of participants again at six months using the PSS-10, BAI, and MAAS to evaluate long-term effects of the Mindfulness Program.

**Flowchart****Data Collection Methods**

If the program is implemented face-to-face, the pre- and post- assessments (BAI, PSS-10, and MAAS) should be printed and completed in person at the first and last session of the program. A learning management system such as Canvas should be utilized for discussion boards, topic readings, and assignment submissions (see Appendix F). If the program is implemented entirely online, for example in distance learning, the pre- and post- assessments can be submitted virtually by the participants. To assess whether benefits of the mindfulness program last beyond the program dates, post-assessments can be collected again six months after completion of the program.

Learning management systems such as Canvas have the ability to monitor the time of “last activity” and “total activity” spent on the interface through the instructor view. This feature

can be utilized to evaluate participation and compliance with the mindfulness program. In addition, a mid-program (4 weeks) “check-in” email can be sent to the participants to facilitate open communication and an opportunity to answer any questions or concerns.

### **Cost/Benefit Discussion**

A detrimental effect of extreme stress levels in nursing students is burnout, high attrition, and the loss of potential nurses. Attrition rates in the nursing profession are the highest among newly graduated nurses, which negatively impacts patient care and hospital costs (Turner & McCarthy, 2017). Nursing students that make it through nursing school but do not have beneficial coping mechanisms are at high risk of burnout once they enter demanding and fast-paced work environments. Nurse burnout feeds the nursing shortage and continues the cycle of loss of high-quality nurses. Hospitals invest a lot of money in newly graduated nurses through on-boarding, orientation, and preceptorship. This investment is lost with every new nurse lost to burnout and unresolved stress.

Mindfulness in nursing students, the next generation of our workforce, not only benefits the future nurse, but also patients. Nursing students that practice mindfulness and learn how to manage stress develop into high-functioning nurses that deliver high quality, safe, and nonjudgmental patient care. In contrast, a lack of mindfulness in patient care leads to poor patient outcomes, which can be very costly for an institution. Low-quality patient care translates into longer length of stays, high readmission rates and resultant loss of reimbursement, and less efficient patient care. A culture of mindfulness benefits patients and patient outcomes, the entire patient care team, and ultimately the institution.

### **Overall Discussions/Results**

A couple of the main barriers faced in implementing this project were recruitment and attrition. Unfortunately, the participants did not complete the program and post-assessment data was unable to be collected and compared to pre-assessment data. It is possible that students did not prioritize this program as it was voluntary and the workload from other nursing classes were more demanding. Loss of participation could have also been due to the uncertainties, burdens, and hardships of the current COVID-19 pandemic, which may have taken precedence over studies altogether. Looking forward, persistence and patience is key to improve recruitment strategies and compliance of participants in future implementation of mindfulness training for nursing students. Especially during this time of healthcare crisis, in which many of our nurses are falling ill, our patients have higher acuity levels, and the healthcare system itself is stressed, a practice of mindfulness is needed now more than ever.

### **Recommendations**

In order to address the issues of poor recruitment and loss of compliance, education on the benefits of mindfulness and stress-reduction should be distributed to both nursing students and nursing faculty to encourage active participation in the course as well as faculty buy-in of the program. To encourage student compliance, a grade for *completion only* could be employed so that students can stay on top of the course without feeling the pressures of being graded for content submitted. Alternatively, incentives for participation such as extra credit or clinical hours for completing the mindfulness course can be provided for the nursing students.

To sustain the practice of mindfulness in nursing students, widespread dissemination of the benefits of mindfulness in nursing students is crucial. For example, presentations in

evidence-based practice conferences for nursing students and faculty or nursing education conferences would be influential. In addition, collaborating with nursing faculty to encourage staff buy-in and ownership of the program will ensure that a mindfulness component is sustained in future courses and years of the nursing program.

It would be beneficial to explore the long-term impacts of mindfulness on performance and well-being at work (Guillaumie et al., 2017). Collecting data six months after implementation of the mindfulness program would help in evaluating stress and anxiety levels as well as whether a practice of mindfulness was maintained. It would be interesting to follow nursing students that completed the mindfulness program into their nursing career as new graduate nurses and assess how they are coping in their new work environments.

### **Conclusion**

Anxiety in nursing students is an epidemic of unmanaged stress that will only worsen if nursing academia does not incorporate support in the nursing curriculum (Wills & Kelly, 2017). MBSR has proven to have positive results for nursing students and can be performed within a quarter or semester at a college or university. Mindfulness meditation can be taught through a MBSR program and facilitated over the course of eight weeks for a class of nursing students. Prior to implementation, potential barriers such as noncompliance and time commitment should be considered. In addition, McConville et al. (2017) comment that students cannot be forced to engage or be mindful. However, with a successful teaching of mindfulness meditation, nursing students will experience decreased stress and anxiety, have an enhanced ability to maintain mindfulness in pressing and stressful situations, and lastly, the risk of nursing burnout as well as the attrition rate of newly graduated nurses will subside.

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## Appendix A: Internal Evidence

*Table 1. Internal Evidence: Pre- and Post- Assessments*

	Pre-assessment	Post-assessment
BAI	(A) 55 (extreme) (B) 30 (moderate)	UTA*
PSS-10	(A) 17 (moderate) (B) 23 (moderate)	UTA*
MAAS	(A) 3.733 (low) (B) 3.33 (low)	UTA*

*Note.* BAI = Burn Anxiety Inventory; MAAS = Mindfulness Attention Awareness Scale; PSS-10 = Perceived Stress Scale; UTA = Unable to assess. (A) – Participant A (female, 19 years old), (B) – Participant B (female, 19 years old)

\*Participants did not complete the post-assessment surveys.

Appendix B: Burns Anxiety Inventory (BAI)

**THE BURNS ANXIETY INVENTORY**

Place a check mark in the box to the right of each category to indicate how much this type of feeling has bothered you in the past several days.

<b>Category I: Anxious Feelings</b>	<b>0 Not at all</b>	<b>1 Somewhat</b>	<b>2 Moderately</b>	<b>3 A Lot</b>
1. Anxiety, nervousness, worry or fear				
2. Feeling that things around you are strange or unreal				
3. Feeling detached from all or part of your body				
4. Sudden unexpected panic spells				
5. Apprehension or a sense of impending doom				
6. Feeling tense, stressed, “uptight” or on edge				
<b>Category II: Anxious Thoughts</b>	<b>0 Not at all</b>	<b>1 Somewhat</b>	<b>2 Moderately</b>	<b>3 A Lot</b>
7. Difficulty concentrating				
8. Racing thoughts				
9. Frightening thoughts				
10. Feeling that you’re on the verge of losing control				
11. Fears of cracking up or going crazy				
12. Fears of fainting or passing out				
13. Fears of physical illnesses or heart attacks or dying				
14. Concerns about looking foolish or inadequate				
15. Fears of being alone, isolated, or abandoned				
16. Fears of criticism or disapproval				
17. Fears that something terrible is about to happen				

**\*Copyright 1984 by David D. Burns, M.D., from Ten Days to Self-Esteem, copyright 1994.**

<b>Category III: Physical Symptoms</b>	<b>0 Not at all</b>	<b>1 Somewhat</b>	<b>2 Moderately</b>	<b>3 A lot</b>
18. Skipping, racing or pounding of the heart (palpitations)				
19. Pain, pressure, or tightness in chest				
20. Tingling or numbness of toes and fingers				
21. Butterflies or discomfort in the stomach				
22. Constipation or diarrhea				
23. Restlessness or jumpiness				
24. Tight, tense muscles				
25. Sweating not brought on by heat				
26. A lump in the throat				
27. Trembling or shaking				
28. Rubbery or “jelly” legs				
29. Feeling dizzy, lightheaded or off balance				
30. Choking or smothering sensations or difficulty breathing				
31. Headaches or pains in the neck or back				
32. Hot flashes or cold chills				
33. Feeling tired, weak, or easily exhausted				
Total score on items 1-33				

**SCORING KEY FOR THE BURNS ANXIETY INVENTORY**

<b>TOTAL SCORE</b>	<b>DEGREE OF ANXIETY</b>
0-4	Minimal or no anxiety
5-10	Borderline anxiety
11-20	Mild anxiety
21-30	Moderate anxiety
31-50	Severe anxiety
51-99	Extreme anxiety or panic

## Appendix C: Perceived Stress Scale (PSS-10)

**PERCEIVED STRESS SCALE****Sheldon Cohen**

The *Perceived Stress Scale* (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way.

**Evidence for Validity:** Higher PSS scores were associated with (for example):

- failure to quit smoking
- failure among diabetics to control blood sugar levels
- greater vulnerability to stressful life-event-elicited depressive symptoms
- more colds

**Health status relationship to PSS:** Cohen et al. (1988) show correlations with PSS and: Stress Measures, Self- Reported Health and Health Services Measures, Health Behavior Measures, Smoking Status, Help Seeking Behavior.

**Temporal Nature:** Because levels of appraised stress should be influenced by daily hassles, major events, and changes in coping resources, predictive validity of the PSS is expected to fall off rapidly after four to eight weeks.

**Scoring:** PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. A short 4 item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scale.

**Norm Groups:** L. Harris Poll gathered information on 2,387 respondents in the U.S.

**Norm Table for the PSS 10 item inventory**

<b>Category</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>
<b>Gender</b>			
Male	926	12.1	5.9
Female	1406	13.7	6.6
<b>Age</b>			
18-29	645	14.2	6.2
30-44	750	13.0	6.2
45-54	285	12.6	6.1

55-64	282	11.9	6.9
65 & older	296	12.0	6.3
<b>Race</b>			
white	1924	12.8	6.2
Hispanic	98	14.0	6.9
black	176	14.7	7.2
other minority	50	14.1	5.0

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**Perceived Stress Scale**

The questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

Name \_\_\_\_\_ Date \_\_\_\_\_

Age \_\_\_\_\_ Gender (*Circle*):    **M**   **F**        Other \_\_\_\_\_

**0 = Never    1 = Almost Never    2 = Sometimes    3 = Fairly Often    4 = Very Often**

- |  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly?.....                  | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? .....     | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 3. In the last month, how often have you felt nervous and “stressed”? .....  | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems? .....         | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 5. In the last month, how often have you felt that things were going your way?.....  | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? .....       | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 7. In the last month, how often have you been able to control irritations in your life?.....                               | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 8. In the last month, how often have you felt that you were on top of things?..  | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 9. In the last month, how often have you been angered because of things that were outside of your control?.....            | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? ..... | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |

Please feel free to use the *Perceived Stress Scale* for your research.

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**References**

The PSS Scale is reprinted with permission of the American Sociological Association, from Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 386-396.

Cohen, S. and Williamson, G. Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) *The Social Psychology of Health*. Newbury Park, CA: Sage, 1988.

Appendix D: Mindfulness Attention Awareness Scale (MAAS)

**Mindful Attention Awareness Scale**

**Description:**

The MAAS is a 15-item scale designed to assess a core characteristic of dispositional mindfulness, namely, open or receptive awareness of and attention to what is taking place in the present. The scale shows strong psychometric properties and has been validated with college, community, and cancer patient samples. Correlational, quasi-experimental, and laboratory studies have shown that the MAAS taps a unique quality of consciousness that is related to, and predictive of, a variety of self-regulation and well-being constructs. The measure takes 10 minutes or less to complete.

**Day-to-Day Experiences**

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

	1	2	3	4	5	6
	Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never
I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5	6
I break or spill things because of carelessness, not paying attention, or thinking of something else...	1	2	3	4	5	6
I find it difficult to stay focused on what's happening in the present...	1	2	3	4	5	6
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way...	1	2	3	4	5	6
I tend not to notice feelings of physical tension or discomfort until they really grab my attention...	1	2	3	4	5	6
I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6

It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6
I rush through activities without being really attentive to them.	1	2	3	4	5	6
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	1	2	3	4	5	6
I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6
I drive places on "automatic pilot" and then wonder why I went there.	1	2	3	4	5	6
I find myself preoccupied with the future or the past.	1	2	3	4	5	6
I find myself doing things without paying attention.	1	2	3	4	5	6
I snack without being aware that I'm eating.	1	2	3	4	5	6

**Scoring information:**

To score the scale, simply compute a mean of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

**Reference:**

Brown, K.W. & Ryan, R.M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822-848.

Appendix E: Synthesis/Outcome Table

Table 2. Synthesis Table: Effects of Mindfulness Meditation on Nursing Students

	A	B	C	D	E	F	G	H	I	J	K	L
Anxiety	↓ a	↓ a	↓ a	↓ a	NE	NE	NE	NE	↓ a	↓ a	NE	NE
Depression	--	↓ a	--	NE	NE	NE	NE	NE	↓ a	↓ a	↓ a	NE
HR	--	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SBP	↓ a	NE	NE	NE	NE	NE	NE	NE	↓ a	NE	NE	NE
DBP	--	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Stress	NE	↓ a	↓ a	↓ a	NE	↓ a	NE	↓ a	↓ a	NE	↓ a	↓ b
Mindfulness	NE	↑ a	NE	NE	NE	↑ a	↑ a	↑ a	NE	NE	↑ a	↑ b
Burnout	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Cognition	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Self-compassion	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	--
Rumination	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Empathy	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Alerting	NE	NE	NE	NE	NE	--	NE	NE	NE	NE	NE	NE
Orienting	NE	NE	NE	NE	NE	--	NE	NE	NE	NE	NE	NE
Executive Attn	NE	NE	NE	NE	NE	↑ a	NE	NE	NE	NE	NE	NE
EDM	NE	NE	NE	NE	NE	NE	↑ ad	NE	NE	NE	NE	NE
Mental Distress	NE	NE	NE	NE	NE	NE	NE	↓ a	NE	NE	NE	NE
Self-efficacy	NE	NE	NE	NE	NE	NE	NE	↑ a	--	NE	NE	NE

Note. A = Chen et al. (2012); B = Song & Lindquist (2014); C = Spadaro & Hunker (2016); D = Ratanasiripong et al. (2015); E = van der Riet et al. (2014); F = Burger & Lockhart (2017); G = Sanko et al. (2016); H = Kar et al. (2015); I = Li et al. (2017); J = Guillaumie et al. (2017); K = O’Driscoll et al. (2017); L = Koren (2017)

<sup>a</sup> statistically significant findings; <sup>b</sup> not statistically significant findings; <sup>c</sup> 2 out of 4 dimensions of empathy; <sup>d</sup> 2 out of 4 schemas of EDM

Attn = attention; DBP = diastolic blood pressure; EDM = ethical decision making; HR = heart rate; NE = not evaluated; SBP = systolic blood pressure. ↑ indicates increase; ↓ indicates decrease; -- indicates no change

Appendix F: Course Calendar

Course Calendar: Mindfulness for the Future Registered Nurse

<b>MOD</b>	<b>DATE</b>	<b>TOPIC</b>	<b>ASSIGNMENTS</b>	<b>DUE DATE</b>
1	Feb 10	<b>Orientation</b> -Introduction -Review calendar -Download Insight Timer	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 1</li> <li>• Week 1 Discussion Board</li> </ul>	February 16, 2020
2	Feb 17	<b>Being Fully Present</b> -Attention and the Brain -Being Fully Present -Body Scan -Joshua Bell	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 2</li> <li>• Week 2 Discussion Board</li> </ul>	February 23, 2020
3	Feb 24	<b>Responding Mindfully Without Judgment</b> -Responding Mindfully Without Judgment -Stress: Responding vs. Reacting -Turning Toward Difficult Emotions or Physical Pain	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 3</li> <li>• Week 3 Discussion Board</li> </ul>	March 1, 2020
4	Mar 2	<b>Communication</b> -Mindfulness and Communication -Mindful Communication in the Healthcare Setting	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 4</li> <li>• Week 4 Discussion Board</li> </ul>	March 8, 2020
5	Mar 9	<b>Teamwork</b> -Difficult Emotions -Lovingkindness	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 5</li> <li>• Week 5 Discussion Board</li> </ul>	March 15, 2020
6	Mar 16	<b>Compassion</b> -Mindfulness and Compassion -Compassion in the Healthcare Setting	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 6</li> <li>• Week 6 Discussion Board</li> </ul>	March 22, 2020
7	Mar 23	<b>Balanced Life</b> -Balanced Life -Power of Vulnerability TED Talk	<ul style="list-style-type: none"> <li>• Insight Timer: Lesson 7</li> <li>• Week 7 Discussion Board</li> </ul>	March 29, 2020

8	Mar 30	<b>Closure</b> -Cultivating Mindfulness	<ul style="list-style-type: none"> <li>• Insight Timer: Any meditation of your choosing</li> <li>• Week 8 Discussion Board</li> </ul>	April 5
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