

2023

## Thirty-Second Mindful Body Scan Meditation for Bedside Nurses

Shruti Balwalli-Udyawer  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Alternative and Complementary Medicine Commons](#), [Nursing Commons](#), and the [Psychiatric and Mental Health Commons](#)

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Nursing

This is to certify that the doctoral study by

Shruti Balwalli-Udyawer

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

## Review Committee

Dr. Carolyn Sipes, Committee Chairperson, Nursing Faculty

Dr. Ruth Politi, Committee Member, Nursing Faculty

Dr. Corinne Wheeler, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost

Sue Subocz, Ph.D.

Abstract

Thirty-Second Mindful Body Scan Meditation for Bedside Nurses

by

Shruti Balwalli-Udyawer

MSN, Walden University, 2016

BSN, Felician University, 2010

ADN, Charles E. Gregory School of Nursing, 2007

Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

May 2023

## Abstract

Compassion fatigue, or secondary traumatic stress, is a state of physical and mental exhaustion caused by an inability to cope with the everyday environment that reduces the ability of the nurse to provide high-quality health care to a patient. The purpose of this staff education project, guided by Selye's general adaptation syndrome, was a 6-week, 30-second mindfulness exercise program to promote stress reduction for cardiac step-down and medical-surgical nurses. In this quantitative, pre- and posttest study, the Perceived Stress Scale was completed by a sample of 24 nurses who met the inclusion criteria. The practice focused whether educating nurses about a 30-second mindful body scan meditation practice reduce their stress in the workplace. The findings of the paired samples *t*-test results were statistically significant,  $t(24) = 2.36$ ,  $p = .029$ . A challenge faced in the project was the inability to recruit the full minimum sample indicated by G\*Power of 34 due to many issues including the COVID-19 pandemic. Statisticians recommended to bootstrap the data for the paired sample *t* test and not repeat the study many times, which could take years. The resulting mean increase (2.83) and significance ( $p = .029$ ) indicated the intervention reduced stress, and the bootstrapped data ( $p = .025$ ) indicated significance in reducing perceived stress using the 30-second stress-relieving technique. The findings of this project should be disseminated to hospital administration and health care workers to promote the technique, which may result in a significant reduction of perceived stress, thus supporting positive social change.

Thirty-Second Mindful Body Scan Meditation for Bedside Nurses

by

Shruti Balwalli-Udyawer

MSN, Walden University, 2016

BSN, Felician University, 2010

ADN, Charles E. Gregory School of Nursing, 2007

Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

[May] 2023

## Dedication

To my mom who is a retired nurse with over 60 years of service and who also believes in and practices integrative medicine. Who made me understand the full realm of healing on this planet. Who, decades after her Master's in Nursing education, went to Massage Therapy school, opened a clinic, and started the integrative medicine department with her dear doctor friend at the hospital. Spending those years with you I learned something new every day, I cherish those times. At the hospital is where my mom and doc taught me, what it means to be a healer in health care professions. To my dad whose motto is "work is worship" and who taught me the concept of Yoga at a young age, and "where there is a will there is a way," there are no words to describe my gratitude. To my Godparents who taught me the concepts of meditation throughout my life, whose positive energy is exactly the energy you want surrounding and guiding you. To all of the SwamiJi's and to GuruDev whose entire beings we cannot even fathom though they shine their light upon this world, I bow to you. To my husband, who supported me through this journey, I can't thank you enough.

## Acknowledgment

To Dr. Carolyn Sipes who guided, understood, and kept faith in me throughout this project and throughout the COVID-19 pandemic. Dr. Sipes, her laugh and positive attitude is contagious, she is an excellent mentor, teacher, and inspiration. Also, a big thank you to Dr. Barbara Barrett who made me understand this complex process in laymen's terms and guided me out of the darkness. To Dr. Diane Whitehead who advocated for me at the right times. To my clinical instructor, Lori Colineri, DNP, whose upbeat attitude spreads to all who come in contact with her. To Dr. Bridgette Malchow, my student advisor in the earlier days of my project completion who would call me every week to encourage, push, and lead by example as she was also getting her doctorate at that time. Also, to everyone who guided me on my journey.

This project, an acclamation of my learning and understanding of the meaning of YOGA and the time most people have in their busy days that they might just take 30 seconds or even a piece of the 30 seconds to remember that they are made up of cells and everything is energy.

## Table of Contents

List of Tables .....	iii
Section 1: Introduction.....	1
Problem Statement .....	2
Purpose Statement.....	3
Nature of the Doctoral Project .....	4
Significance.....	4
Summary .....	5
Section 2: Background and Context .....	7
Introduction.....	7
Concepts, Models, and Theories .....	7
Definitions.....	9
Relevance to Nursing Practice .....	9
Local Background and Context .....	11
Role of the DNP Student.....	12
Role of the Project Team .....	13
Summary .....	13
Section 3: Collection and Analysis of Evidence.....	14
Introduction.....	14
Practice-Focused Question.....	14
Sources of Evidence.....	15
Participants.....	16



Analysis and Synthesis .....	19
Summary .....	20
Section 4: Findings and Recommendations .....	21
Introduction.....	21
Findings and Implications.....	22
Contribution of the Doctoral Project Team .....	24
Strengths and Limitations of the Project.....	24
Summary .....	25
Section 5: Dissemination Plan .....	27
Analysis of Self.....	27
Recommendations.....	28
Summary .....	28
References.....	30
Appendix A: Perceived Stress Scale.....	36
Appendix B: Permission for Use of the Perceived Stress Scale .....	37
Appendix C: 30-Second Mindful Body Scan Meditation.....	38
Appendix D: YouTube Video.....	39

## List of Tables

Table 1. Descriptive Statistics.....	22
Table 2. Paired Sample $t$ Test Showing Paired Differences.....	23
Table 3. Bootstrap for Paired Sample $t$ Test.....	24

## Section 1: Introduction

Compassion fatigue (CF), or secondary traumatic stress (STS), is a state of physical and mental exhaustion caused by an individual's inability to cope with their everyday environment (Cocker & Joss, 2016). For the purposes of this staff education project, I used CF and STS interchangeably. STS can occur when a health care worker is involved in repetitive patient care (Mottaghi et al., 2020). The problem is that a nurse who works in direct patient care is vulnerable to developing symptoms of CF (Henson, 2020). STS encompasses a broad spectrum of psychological and physical illnesses that include stress (McKinless, 2020). According to Karcioğlu et al. (2018), pain is subjective and should not be dismissed, as is stress, which is a perceived or real experience (Keyzer`-Dekker et al., 2014).

The focus of this project was a 30-second mindfulness exercise to promote stress reduction for bedside cardiac step, medical surgical nurses, and upper management. Body scan meditation is an exercise that uses breath awareness to connect the mind and body (Lindayani et al., 2020). The mindful body scan meditation (MBSM) intervention takes 30 seconds to complete. This MBSM respects the nurses lack of free time during their work shift and factors in time management (Leis & Anderson, 2020). In a presentation, staff were educated about a 30-second MBSM program, which could be performed by nurses at the beginning and/or end of a nursing shift. This program could decrease or eliminate a nurse's stress and enhance their ability to care for patients, which could result in improved patient care. If stress is allowed to accumulate and left untreated, it could build up as STS and result in psychological issues (Henson, 2020). For this project, I used

the Perceived Stress Scale (PSS; see Appendix A), a validated tool, to assess staff stress levels (see Cohen et al., 1994). The PSS was given to participants before learning the MBSM and after the education program was learned to assist with reducing or eliminating the perceived stress level of nurses.

With this doctor of nursing practice (DNP) staff education project, I aimed to educate nurses on how to use the 30-second MBSM practice to reduce symptoms of stress or perceived stress to decrease CF and other debilitating physical and psychological symptoms. Mattioli (2018) suggested that if nurses learn simple mindfulness techniques, they can protect themselves from stress and other STS symptoms. This DNP project supports Walden University's mission to promote healthy communities with education and proactive positive social change by learning to reduce stress in small amounts of time.

### **Problem Statement**

The practice problem was that CF is a barrier in nursing and accounts for increased stress among nurses, which reduces their ability to provide high-quality health care to a patient (see Sharp, 2018). At the project site, stress has been identified as a pervasive issue due to reduced staffing that results from increased callouts. Stress among nurses has also been magnified during the COVID-19 pandemic. Reduced staffing has led to increased workloads for onsite nurses, which results in increased stress (Gordon et al., 2021). The focus of this doctoral project was to reduce stress with a nonpharmaceutical MBSM technique. Many mindfulness practices take much longer than 30 seconds, with one mindfulness study recommending a practice of 20 minutes a day for

8 weeks (Hunter, 2016). Time management in nursing is critical and is taught from the first day on the job (Leis & Anderson, 2020). According to Maldonado (2018), a 30-second meditation program can help reduce stress in small intervals throughout the day.

The nursing career embodies the accumulation of stress and STS (McKinless 2020). The COVID-19 pandemic has forced nurses to push through exhaustion while working longer-than-usual hours and with sicker-than-normal patients (Gordon et al., 2021). This doctoral project held significance for the nursing community because it provided a quick program to help nurses reduce stress during the workday and not need extra time away from the unit.

### **Purpose Statement**

The purpose of this quantitative, descriptive, comparative study was to address the gap in nursing practice related to the increased stress the nursing staff at the project site was experiencing. The staff education project focused on educating nurses about a 30-second MBSM practice that can be used to help reduce stress and promote self-relaxation through incorporating mind-body integration. The practice-focused question that this doctoral project addressed was: Will educating nurses about a 30-second MBSM practice reduce their stress in the workplace?

Through mind-body modalities, human bodies secrete endorphins that increase pleasure and happiness that can produce mental clarity and reduce body tension (Butterfield et al., 2017). Nurses have a need to reduce stress during the workday, and this 30-second MBSM exercise provided them with an outlet to assist in focusing on the mind-body connection when encountering stressful experiences. Importantly, the 30-

second MBSM exercise can also be incorporated during other instances when nurses may experience stress. This doctoral project addressed the gap in nursing practice by educating nurses on a technique to consciously reduce symptoms of stress in 30-second intervals.

### **Nature of the Doctoral Project**

I used the Walden University Library to access the following databases and search engines to search for peer-reviewed, evidence-based sources for this DNP project: CINAHL, MEDLINE, PubMed, Cochrane Database of Systematic Reviews, ProQuest, Allied Health Database, and Google Scholar. Keyword search terms used include *compassion fatigue, secondary traumatic stress, stress, perceived stress, pain scale, nurse, nurs\**, *body scan, mindfulness, and mind-body intervention*.

I used Selye's (1950) stress adaptation model as the theoretical framework to guide this staff education project. In this quantitative study, the PSS, a validated tool, was used to collect data from the participants pre- and post-MBSM education program. Data is organized and analyzed using the Statistical Package for Social Sciences (SPSS) and t tests of the pre- and post-MBSM education program PSS scores. The purpose of this study was to address the gap in practice through using the MBSM to reduce stress in the workplace.

### **Significance**

The stakeholders associated with this project included cardiac step-down and medical surgical nurses as well as upper management. The potential outcome was the reduction of stress through education on a 30-second MBSM program that could be

consciously practiced every day or every shift. The practice of MBSM can be performed by the nurses in any situation, whether at work or in their personal life. The potential contribution of this doctoral project to the nursing practice is to provide a means to help nurses reduce the stress that accumulates during their work due to STS syndrome.

Conscious MBSM has the potential to decrease STS (Mattioli, 2018). This project has potential transferability and could be used to help other nursing departments and health care institutions learn and use the 30-second MBSM practice. Ultimately, all health care personnel could adopt this MBSM program.

Being in the present moment and not thinking of the past or the future is beneficial for nurses to provide the highest quality of care to their patients. Being present is achievable with conscious mindfulness techniques (Kabat-Zinn & Gazella, 2005). This DNP project can impact social change by promoting healthy communities with education and proactive positive change by learning to reduce stress in small amounts of time.

### **Summary**

CF occurs when health care workers continuously take care of people with illnesses and trauma while also having to keep themselves healthy; this constant work can cause stress that is accompanied by physical and mental exhaustion (Milligan & Almomani, 2020). The symptoms of STS were significant at the suburban hospital in the northeastern United States where this DNP project took place. The purpose of teaching the 30-second MBSM program to nurses was to give them a tool with which to reduce their stress levels during their work shifts. I used online pre- and posttests of the PSS surrounding a 4-week MBSM program that asked nurses to perform a 30-second MBSM

twice a day during their work shift to determine if this 30-second MBSM program was successful at reducing the nurses' stress levels. In the future, this MBSM education program could be taught at multiple health care systems. In Section 2, I will discuss the significance of the project; underlying concepts, models, and theory; the project's relevance to nursing; and my role as the DNP student in the project.



## Section 2: Background and Context

### Introduction

The practice problem addressed in this project was the stress and accumulation of STS by nurses in the telemetry and medical surgical units as well as upper management at the project site. The practice-focused question was: Will educating nurses about a 30-second MBSM practice reduce their stress in the workplace? The purpose of this doctoral project was to educate staff on a stress-reduction practice that decreased stress in 30-second intervals using MBSM (see Leis & Anderson, 2020). Stress is a subjective feeling that is real to the person experiencing it (Keyzer-Dekker et al., 2014). According to Brannon (2017), if stress is not recognized and properly addressed, it can cause physical and mental disorders. I used Selye's (1950) stress adaptation model as the theoretical framework to guide this staff educational project.

In this section, I discuss concepts, models, and theories that guided the project; definitions; the project's relevance to nursing practice; local background and context; the role of the DNP student; and the role of the project team before concluding the section with a summary.

### Concepts, Models, and Theories

Selye's (1950) stress theory provided the foundational basis for this project because it allows a person to recognize the signs and symptoms of physical and mental stress and willingly act to reduce these stressors. Selye's theory of stress, also known as the *general adaptation syndrome*, is structured in three responses (Tan & Yip, 2018). The first response is the *alarm response* where a stressor is first noticed, and the body is in a

state of heightened awareness. The alarm response is also known as the *fight-or-flight* response in which the mind and body decide to stay and confront the stressful situation or leave the situation (Kovács, 2013). The second response is *resistance* to the stressor, in which the body feels something is not normal and develops a new hormonal balance. During the resistance phase, the body expends extra energy to maintain balance (Buckner et al., 2017). The third response of the general adaptation syndrome is *exhaustion*, during which the stressor has not stopped and the relationship between the body and its hormones remains unbalanced (Buckner et al., 2017). In this stage, the body is expending extra energy and, therefore, starts to deteriorate. The MBSM exercise I taught to nurses in this program was intended to be completed during the work shift and before the resistance phase, when a nurse recognizes a stressor is approaching.

Perceived stress is greater when a person's mental and physical health is reduced (Muhamad Robat et al., 2021). Wu et al. (2021) conducted a quantitative, cross-sectional study of 724 southern Taiwanese nursing students and found that perceived stress increased and came from a multitude of factors. The greater the amount of perceived stress, the more exhaustion occurs in the body system (Wu et al., 2021). Body scan meditation, which is part of the MBSM process, is an exercise that connects the mind and body through conscious breathing (Lindayani et al., 2020). Body scan meditation allows participants to be conscious and aware of physical and mental situations in the present moment (Kabat-Zinn, 2015).

## **Definitions**

*Body scan meditation:* A technique that uses breath recognition to connect the mind and body (Lindayani et al., 2020).

*Cell:* The basic building blocks of organisms (Arendt et al., 2016).

*CF/STS:* A state of physical and mental exhaustion stemming from the traumatic illness of others (Cocker & Joss, 2016).

*Conscious energy:* The energy that moves atomic particles such as cells (Nagarkatte, 2013).

*Mindfulness:* An awareness of being in control of thoughts; a powerful tool to increase mental clarity (Hunter, 2016).

*Perceived stress:* The real concern that people have about stressful situations (Besharat et al., 2020) that occurs when external demands and the psychological demands of meeting those demands are unbalanced (Muhamad Robat et al., 2021).

## **Relevance to Nursing Practice**

According to Cocker and Joss (2016), STS is a state of physical and mental exhaustion caused by an individual's inability to cope with their everyday environment. Secondary stress can frequently occur in the bedside nursing population given their role as caregivers (Henson, 2020). According to Bock et al. (2020), STS can result in more call-out sick days, reduced staffing that causes increased workloads, and decreased attentiveness to patient needs (Schoenfelder et al., 2020). The aim of this DNP project was to reduce stress among nurses with a MBSM program with an overall period of 6 weeks and 4 weeks of the MBSM intervention.

During the COVID-19 pandemic, the state where I live experienced the second-largest influx of the novel coronavirus incidences, which increased nurses' stress and distress levels. In the first 100 days after the pandemic came to the state in March 2020, the state's documented COVID-19- positive patients totaled 165,861, which took over hospitals and led to 1,705 ventilators being used (Pavlu et al., 2021). Nurses face stress and anxiety through psychological and physical ailments, but there is potential for their symptoms to be reduced (Gordon et al., 2021). In this DNP, I attempted to reduce the stress levels of nurses using a 30-second MBSM program.

Nurses caring for sick patients in the hospital witness traumatic events, and this was especially true during the COVID-19 pandemic. Managing stress during these events is possible through the implementation of appropriate, refreshing, stress-reduction techniques. According to Van der Riet et al., (2018) eight studies in eight different countries on nurses and nursing students completing 5 minutes of meditation a day for 24 weeks produced an overall reduction in stress among the group. Implementing a 30-second MBSM program fills a gap in nursing practice and can help reduce the impact of overall stress in brief 30-second intervals (Maldonado, 2018). According to Melnyk et al. (2021), an important factor in the safety of patients is nurses' ability to remain calm and maintain their mental well-being. While the project site hospital had several fitness centers to help employees stay healthy, there were no strategies available for immediate stress reduction during work. The potential stress experienced by the staff during the workday represents an important gap in nursing self-care. This project addresses

accumulated stress by introducing a 30-second MBSM technique for stress reduction among the nursing population.

In this project, I evaluated if the implementation of a 30-second MBSM technique minimizes and reduces stress among nurses during their workday. I assessed if positive outcomes occurred with use of the MBSM program compared to the outcomes with no stress-reduction program. The goal of this DNP project was to advance current nursing practice with a MBSM practice that can be performed by nurses in their working environment without disrupting normal job functions. This practice only takes a short amount of time and fills the gap in nursing practice by helping to reduce stress and optimize nurse self-care.

### **Local Background and Context**

The problem of increased stress has accompanied the recent COVID-19 pandemic and has led to increased workloads and anxiety levels among nurses (Gordon et al., 2021). The direct bedside care role of nurses may increase exposure to a variety of situations that can lead to STS (Henson, 2020). Currently, the only outlet for stress relief at the project site hospital campus is the onsite fitness centers, which is available to staff for a fee but is not used during the workday due to time constraints. Some staff members use these facilities, and others do not have to opportunity to do so, possibly due to a lack of time or exhaustion. This lack of use means the fitness centers are not serving the entire population's stress-reduction needs. Implementing a MBSM program filled the gap in nursing practice by consciously reducing the impact of nurses' overall stress in 30-second intervals.

### **Role of the DNP Student**

My professional role and relationship to the project was that I worked as a nurse in a telemetry unit at a different hospital and experienced STS. I was not aware of my STS at the time and continued to perform my job and help my patients, doctors, and the nursing unit. I dismissed the stress because my duty was to be a nurse and hard work was expected. I practice mindfulness, but at the time, I was experiencing STS I did not implement the 30-second MBSM practice to aid in stress reduction. If I had known about a 30-second MBSM technique to reduce stress was available to me, I would have practiced it at work.

My role in the DNP staff education project was as an educator to a group of nurses who work on telemetry and medical surgical units as well as upper management in a suburban hospital in the northeastern United States. I educated participating nurses on a simple 30-second MBSM technique through teaching them at their morning huddles at the hospital and providing them with a YouTube video that I created (see Appendix D). I did not have a relationship with any of the nurses where the staff education project was conducted. Nurses on the telemetry and medical surgical units and managers were recruited with an in-person announcement, demonstration, and flyers. They were invited to participate in the 4-week MBSM program if they had been experiencing stress. The conversations and education took place in person and electronically, for a total of 6 weeks.

I conducted this staff education mindfulness project to provide nurses with a 30-second MBSM technique to reduce the impact of STS and assess the impact of this

stress-reduction program. The 30-second MBSM technique has the potential to support nurses who experience stress during the workday and reduce intensifying stressors inherent to this profession. Some nurses may not experience stress and may not feel the need for the 30-second MBSM program. This staff education project has implications for positive social change through encouraging self-help among nurses, which can improve patient care.

### **Role of the Project Team**

I received approval from the vice president/CEO of nursing at the project site organization to implement this project. I was in communication with the vice president/CEO through emails about the progression of the project. Based on findings from this study, other nursing units in the hospital may also benefit from implementing the 30-second MBSM program.

### **Summary**

In Section 2, I reviewed the model used to guide this DNP project. The gap in the nursing process, the practice-focused question, and the supportive evidence were also provided. In the literature review in Section 2, I detailed the impact of mindful meditation and the reasons a nurse can experience stress and STS. The project's relevance to nursing practice, the local nursing problem, and my role in the DNP project were also identified in this section. In Section 3, I will describe the development and implementation of the project as well as the data collection and analysis processes.

### Section 3: Collection and Analysis of Evidence

#### **Introduction**

The practice problem was stress and the accumulation of STS by nurses on a cardiac step down, medical surgical unit, including managers. The purpose of this doctoral project was to educate staff on a stress reduction program using a 30-second MBSM (see Appendices C and D). STS, which can accumulate in nurses at the bedside, is a state of physical and mental exhaustion caused by an individual's inability to cope with their everyday environment (Cocker & Joss, 2016). The goal of this DNP project was to reduce nurses' stress by implementing 30-second intervals of MBSM practice. In Section 3, I discuss the development of the evidence-based practice of a mindfulness meditation project and provide an analysis and synthesis of the data collected.

#### **Practice-Focused Question**

The local problem was that the COVID-19 pandemic heightened the stress and accumulation of CF/STS faced by the nursing staff at the project site. Increased stress has accompanied the recent COVID-19 pandemic and has been indicated to amplify nurses' stress levels with increased workloads and anxiety (Gordon et al., 2021). The gap in nursing practice this DNP project focused on was addressing the stress that nursing staff was experiencing through educating nurses using a method to reduce stress in 30-second MBSM intervals. This purpose aligned with the practice-focused question that guided this doctoral project: Will educating nurses about a 30-second MBSM practice reduce their stress in the workplace?



After receiving approval from both the project site's Institutional Review Board (IRB) IRB22-16 and the Walden University IRB # 06-14-22-0564564, I began data collection by recruiting nurses on cardiac step down and medical surgical units for voluntary participation in the project. The overall program took 6 weeks with the MBSM intervention being implemented over 4 of those weeks. Week 1 was dedicated to participants completing the pretest of the PSS, learning the 30-second MBSM, and asking clarifying questions. Over Weeks 2–5, the program was implemented with nurses performing the 30-second MBSM twice during their shifts (i.e., once at the beginning of their shift and once at the end). Week 6 was used to complete the posttest of the PSS. After the pre- and posttest PSS data were collected, I began the analysis by entering data into the SPSS program.

### **Sources of Evidence**

I collected sources of evidence for this DNP project by conducting a literature review. Searches for relevant, peer-reviewed literature were conducted in the following databases and search engines, accessed through the Walden University Library: CINAHL, MEDLINE, PubMed, Cochrane Database of Systematic Reviews, ProQuest, Allied Health Database, and Google Scholar. Search terms included *compassion fatigue*, *secondary traumatic stress*, *stress*, *perceived stress*, *pain scale*, *nurse*, *nurs\**, *body scan*, *mindfulness*, and *mind-body intervention*. Evidence generated for the doctoral project included a validated pre-/posttest, in the form of the PSS, which was completed by the participants through a SurveyMonkey link to measure their perceived stress before and after the implementation of the MBSM for 4 weeks. The 30-second MBSM practice is a

method where nurses can perform a relaxation technique without disrupting the natural flow of the units' daily tasks. Selye's (1950) stress adaptation model was the framework that guided this staff education project..

The purpose of this doctoral project was to educate staff on a stress reduction tool based on peer-reviewed evidence to include the best practices for them to succeed. I communicated with participants through in-person demonstration, the Survey Monkey application for the PSS, emails, and cellular texting, as approved by the vice president/CEO of nursing at the facility. The 30-second MBSM project was conducted in a suburban hospital in the northeastern United States. The overall project took 6 weeks, and the MBSM program took place on their respective units at the beginning and end of the nurses' shift. Over the course of the 6 weeks, I communicated with the vice president of nursing and participants to see how they were progressing or if they needed any additional training and answer any questions they had.

### **Participants**

Participation in this project was voluntary. I used convenience sampling to recruit participants that met the following inclusion criteria: Any nurse or manager working on a cardiac step down or medical surgical unit who were experiencing stress. Convenience sampling was used for participants in this hospital setting, exclusion criteria included employees that were not nurses, and did not work in telemetry or medical surgical nursing.

I recruited participants through in-person demonstrations delivered to perspective nursing units and explaining the DNP project. I needed to recruit 34 nurses to participate

in this study, if more nurses had signed up, they would have been welcome. Names of voluntary nurse participants and their hospital site or unit were de-identified. I maintained participant confidentiality by concealing their names with designated numbers. For example, I coded the nurses' names with numbers 1–24 and kept a data log for confidentiality. The number of participants were calculated using the G\* power analysis using a paired-dependent *t* test with a power of .8, alpha of .05 and medium effect of .50, which yielded a sample size of 34 (see Faul et al., 2020).

After receiving approval from both the project site IRB and the Walden University IRB as well as the vice president/CEO of nursing at the project site, I sent an informational flyer through email and went to speak at a nursing unit manager meeting to inform managers about the DNP project and how the study was open to nurses and managers from the cardiac step down and medical surgical units. My contact information was included on the flyer for nurses to confidentially notify me if they wished to participate. If a nurse was experiencing stress, they were eligible to sign up for the 30-second MBSM program (see Appendix C).

The nurses who volunteered to participate in this staff education DNP project agreed to complete the PSS pretest after they had read the informed consent agreement that was sent to them via cellular text message. Survey Monkey was used for the PSS survey, and I sent the Survey Monkey link to the participants through text message and email. Participants completed a pretest of the validated PSS before learning how to perform the program. Before educating the nurses on the stress reduction process, I sent them a cellular text message with written instructions and a video that I created on

YouTube that identified how to perform the 30-second MBSM technique (see Appendix D). The participants performed the 30-second MBSM at the beginning and the end of their shifts over a 4-week span. Throughout the program nurses could text me to ask any questions or give any comments. During the four-week intervention program, I checked in on the nurses through text messages, and when the 4 weeks were complete, the PSS was readministered in the 6th week to the nurses to compare pre- and posttest scores and identify if their stress was reduced.

I received permission to use the PSS from its author (see Appendix B). This PSS is a 10-item questionnaire using a 5-point Likert scale with answers for ranging perceived stress ranging from 0 = *Never*, 1 = *Almost Never*, 2 = *Sometimes*, 3 = *Often*, and 4 = *Very Often* (Cohen, n.d.). The higher the PSS score, the more vulnerable a person is to continue having stress in their lives (Cohen, n.d.). I administered the PSS to the nurses before and after the 4-week intervention of the 30-second MBSM program, and there were no modifications made to the validated tool. This tool was found to show a suitable reliability and validity, with a total score of .086 when used among Brazilian university teachers (Siqueira Reis et al., 2010).

My safeguarding of the participants' privacy, which was required by Walden University IRB, allowed nurses to be able to stay in or withdraw from this project at any time; this was explained to the participants prior to them starting the survey. The participants received the education program through video and written instruction as well as the opportunity to text me if they had any questions, which gave them direct access to

and the option to establish a working relationship with me. I de-identified the participants' names and coded them with participant numbers 1–24.

Nurses had 4 weeks to practice the MBSM program. The nurses could practice the MBSM independently at the beginning and end of their shifts. In addition, if a nurse felt the need to practice during their shift, they did not have to leave the unit because the 30-second MBSM could be performed and practiced from any location.

### **Analysis and Synthesis**

At project completion, I reviewed and compiled the data. The participants' perceived stress levels were measured using the validated PSS tool for both pre- and posttests. Scoring of stress levels were finalized to check for efficacy. I used SPSS for analysis of the pre- and posttest data. A paired-sample *t* test was used to determine if the 30-second MBSM program reduced the participants' perceived stress scores by comparing their pre- and posttest data. After the data were analyzed, I reviewed the data set to make sure there was no missing information. If there had been missing information, multiple imputation would have been implemented using the most possible mean score (see Peeters et al., 2015).

The purpose of the DNP project was to help nurses reduce the amount accumulated stress in the workplace. Use of the 30-second MBSM program to reduce nurses' perceived stress during their work shift filled the gap in nursing practice regarding the stress that nursing staff had reported experiencing. I used statistics to report the study findings and develop my recommendations.

### **Summary**

In Section 3, I provided a complete review of the DNP project sources of evidence and a descriptive analysis and synthesis of the DNP project evidence. The recruitment of nurses, the inclusion and exclusion criteria, confidentiality, communication, tools used for data collection regarding the 30-second MBSM, the dependent  $t$  test, and sample size were described. In Section 4, I will present the findings and implications as well as provide my recommendations after the completion of the program.

## Section 4: Findings and Recommendations

### **Introduction**

The COVID-19 pandemic heightened the local problem of the stress and accumulation of CF/STS faced by the nurses at the project site. Increased stress has accompanied the recent COVID-19 pandemic and has been indicated to magnify nurses' stress levels with increased workloads and anxiety (Gordon et al., 2021). The gap in nursing practice that this DNP project addressed was the stress that nursing staff were currently experiencing through educating them on using a method to reduce stress in 30-second MBSM intervals. This purpose aligned with the practice-focused question that guided this doctoral project: Will educating nurses about a 30-second MBSM practice reduce their stress in the workplace?

Participant recruitment strategies included speaking to all the nurse leaders at their managers meetings, then going to hospital unit huddles at 7:00 a.m. after the nurse leaders invited me. In these forums, I spoke about the project and demonstrated the 30-second MBSM intervention to all the nurses present. A sign-up sheet for participants was distributed, and I kept looking for further participation until 24 nurses were recruited. When I got to the point of needing 10 more nurses to meet my minimum sample size, the hospital administration told me, "Sorry, the nurses are pulled in many directions with many different projects." I text messaged each nurse in the units to ask them if they wanted to participate in the DNP project. For those nurses who responded yes, I sent them a consent form, the written instructions (Appendix C), and the YouTube video (Appendix D). I also sent every participant a daily inspirational quote and the number of

days they had been practicing the 30-second MBSM. This daily reminder allowed the participants to get in touch with me if they had any questions or comments. At the end of the 30 days, I sent them all the posttest of the PSS through a Survey Monkey link to complete.

### Findings and Implications

The test results included a paired-samples  $t$  test to evaluate if there was a statistically significant difference in nurses' perceived stress before and after the 30-second MBSM program. Descriptive statistics are presented at Table 1 and include the participant demographics.

**Table 1**

*Descriptive Statistics*

Registered nurses	$n$	Percentage
Women	22	91.6%
Men	2	8.3%
Managers	5	20.8%
Bedside nurses	19	77.2%

*Note.*  $N = 24$ .

Table 2 includes the mean increase (2.83) between the pre- and posttest measures. The results were statistically significant,  $t(24) = 2.36$ ,  $p = .029$ .

**Table 2**

*Paired Sample  $t$  Test Showing Paired Differences*



**Table 2**  
*Paired Samples Test*

	Paired Differences			95% Confidence Interval of the Difference				Significance	
	<i>M</i>	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	One-sided <i>p</i>	Two-sided <i>p</i>
Pretest– posttest score	2.62500	5.53104	1.12902	.28945	4.96055	2.325	23	.015	.029

I was only able to recruit 24 of the 34 participants needed to meet the minimum sample size due to many factors. Through consultations with a Walden University statistician, I received the recommendation to bootstrap the collected data for a paired-sample *t* test. Bootstrapping is when the sample is taken through the process of going through the experiment numerous times with different scenarios (Lasky, 2020). Repeating the study many times could take many years, and bootstrapping indicates what the results can be with a more extensive array of possible conditions and is completed through a computer program (Lasky, 2020). The mean increase (2.83) and significance ( $p = .029$ ) results, which meant the study will reject the null hypothesis of not reducing stress, as this intervention did reduce stress for the RNs. As shown in Table 3, as the data were bootstrapped,  $p = .025$ , which shows a significance in the reduction of perceived stress with the 30-second MBSM intervention. The bootstrapping significance, which is a lower percentage, shows that when the 30-second MBSM intervention is performed multiple times, the perceived stress that any person will experience is reduced.

**Table 3**

*Bootstrap for Paired Samples Test*

	<i>M</i>	Bias	<i>SE</i>	Bootstrap <sup>a</sup>		Significance
				Sig. (2-tailed)	Lower	Upper
Pretest– posttest score	2.62500	.02871	1.08134	0.25	.54273	4.75000

<sup>a</sup> Unless otherwise noted, bootstrap results are based on 1,000 bootstrap samples.

### **Contribution of the Doctoral Project Team**

The contribution of the doctoral project team was that the vice president/CEO of nursing allowed me to present the educational project to the nurse managers. He also sent out emails, and even though all the nursing units were going through many projects at the time, nurse managers emailed me and asked me to present at their huddles at the beginning of the morning shifts. RNs who were interested in being part of the DNP project continued to practice the intervention daily or when they were on their shifts for 30 days.

### **Strengths and Limitations of the Project**

The strengths of this DNP project included teaching the nurses to be able to perform a mind body relaxation technique that was effective in 30 seconds, anywhere and anytime they felt like it. The nurses did not have any extra responsibilities, such as covering other nurses' patients while they went off the unit to perform this MBSM. Another strength of this DNP project was that it resulted in nurses feeling more confident in their daily duties by being able to feel that they have more control over their thoughts and emotions.

One unanticipated limitation was the inclusion criteria for this project. There are many different hospital units, and the inclusion criteria of only telemetry and medical surgical nurses deterred many participants from joining. This inclusion criteria did not

impact the findings although I did not have enough nurses to meet the calculated minimum sample size.

Another unanticipated limitation was that during the recruitment phase, I found that many nurses were already working on different projects throughout the hospital and this DNP study increased their workload along with their nursing responsibilities. Performing a pre- and posttest of the PSS 30 days apart was also a variable. Many of the possible participants had many responsibilities, such as exams and studying for school coupled with their home lives.

PSS scores ranging from 0–13 is considered low stress, scores ranging from 14–26 are considered moderate stress, and scores ranging from 27–40 are considered high perceived stress (see Cohen et al., 1994).

The implications resulting from this finding are numerous. Although this project did not meet the calculated minimum sample size of participants, many who participated stated that their friends and family now do the 30-second MBSM as a daily habit. The MBSM program has the potential to be a quick stress reducer for all health care professionals. Other potential implications for positive social change include learning how to perform the 30-second MBSM. Once people learn this technique, I believe the practice will allow them to reduce stress anytime and anywhere they please.

### **Summary**

The 30-second MBSM is a way to reduce stress in short periods and can be done anywhere. Stress in nursing was heightened by the COVID-19 pandemic, which struck the northeastern section of the United States quickly. Realizing that nurses did not have

enough time to take breaks as sanctioned by hospital policy, the intervention in this project taught nurses a way to reduce stress in 30 seconds that could be performed anywhere and as many times as they wanted in different situations. When the data from the PSS were compiled and analyzed, the results showed that this 30-second MBSM was significantly effective in reducing nurses' stress levels. This 30-second technique should be shared with all health care workers and would also be beneficial for people who do not work in the health care field.

## Section 5: Dissemination Plan

My plan to disseminate this work to institutions experiencing stress would be to present at conferences with a poster presentation and also contact hospital administration at other institutions. This DNP project showed the significant reduction of perceived stress using a simple, 30-second, stress-relieving technique that could be done anywhere and by any employee. The DNP project findings indicated that the 30-second MBSM program significantly reduced nurses' perceived stress and made them more confident in having control of themselves and their thoughts in intense, stressful situations and moments at work. Most health care workers experience stress at some point in their careers. This technique will allow them to learn how to be proactive and reduce their stress with a MBSM technique that takes 30 seconds to perform.

### **Analysis of Self**

When I analyzing myself in the roles of practitioner, scholar, and project manager, I felt and still feel very confident that whoever learned this technique was taken on a journey of their self-coupled with their breath and consciousness. Once learned, this technique can be practiced for a lifetime and taught to others. One of my long-term goals is to continue spreading integrative medicine techniques to health care workers while taking into consideration and respecting the limited time they have at their disposal when working.

My biggest challenge was recruiting participants that met the inclusion criteria. To avoid this barrier, I recommend including all nurses from all backgrounds as participants in future studies. Being unable to advertise the projects and recruit the nurses

directly and first having to present this project to the nursing managers only when they invited me to come to their units was also a challenge. One of the solutions to my struggles recruiting participants was to use the snowball sampling strategy, where nurses in the study reached out to their nurse friends about participating in the DNP project. This strategy increased my ability to recruit more nurses. Some nurses also reported that they shared this 30-second MBSM technique with their friends and families and now those friends and families also practice this intervention.

One of the insights that I gained on this scholarly journey is to never give up. The COVID-19 pandemic hit the state hard, and I consistently worked as a nurse practitioner every day through the pandemic. Although I also went through a lot of stress, this DNP project kept me pushing forward while I continued practicing the 30-second MBSM daily.

### **Recommendations**

The gap in nursing practice addressed in this DNP project was the stress that nursing staff were currently experiencing through educating them on using a method to reduce stress in 30-second MBSM intervals. Learning the technique of this intervention and practicing it daily can significantly address the gap in the nursing practice of reducing stress over time. A video of instructions on how to practice the 30-second MBSM technique are located in Appendix D.

### **Summary**

Stress is real feelings and thoughts that can accumulate over time (Mottaghi et al., 2020). Stress is difficult to avoid for health care workers. It can also be hard for health

care workers to make time for themselves when they are on a shift. Some workers do not even take a full break. This 30-second MBSM is a way for health care workers to reduce their stress that does not take away from their already busy day. I hope everyone will help themselves by relieving stress and taking care of themselves 30 seconds at a time with this MBSM technique, which also will allow them to better take care of their patients.

## References

- Arendt, D., Musser, J. M., Baker, C. V. H., Bergman, A., Cepko, C., Erwin, D. H., Pavlicev, M., Schlosser, G., Widder, S., Laubichler, M. D., & Wagner, G. P. (2016). The origin and evolution of cell types. *Nature Reviews Genetics*, *17*(12), 744–757. <https://doi.org/10.1038/nrg.2016.127>
- Besharat, M.-A., Khadem, H., Zarei, V., & Momtaz, A. (2020). Mediating role of perceived stress in the relationship between facing existential issues and symptoms of depression and anxiety. *Iranian Journal of Psychiatry*, *15*(1), 80–87.
- Bock, C., Heitland, I., Zimmermann, T., Winter, L., & Kahl, K. G. (2020). Secondary traumatic stress, mental state, and work ability in nurses—Results of a psychological risk assessment at a university hospital. *Frontiers in Psychiatry*, *11*. <https://doi.org/10.3389/fpsy.2020.00298>
- Brannon, L. (2017). Stress and illness. In *The SAGE encyclopedia of abnormal and clinical psychology* (Vol. 1–7, pp. 1741–1744). SAGE Publications, Inc. <https://doi.org/10.4135/9781483365817>
- Buckner, S. L., Mouser, J. G., Dankel, S. J., Jessee, M. B., Mattocks, K. T., & Loenneke, J. P. (2017). The general adaptation syndrome: Potential misapplications to resistance exercise. *Journal of Science and Medicine in Sport*, *20*(11), 1015–1017. <https://doi.org/10.1016/j.jsams.2017.02.012>
- Butterfield, N., Schultz, T., Rasmussen, P., & Proeve, M. (2017). Yoga and mindfulness for anxiety and depression and the role of mental health professionals: A literature



review. *The Journal of Mental Health Training, Education, and Practice*, 12(1), 44–54. <https://doi.org/10.1108/JMHTEP-01-2016-0002>

Cocker, F., & Joss, N. (2016). Compassion fatigue among healthcare, emergency and community service workers: A systematic review. *International Journal of Environmental Research and Public Health*, 13(6), 618.

<https://doi.org/10.3390/ijerph13060618>

Cohen, S. (n.d.). *Perceived Stress Scale*, 5.

Faul, F., Buchner, A., & Lang, A.-G. (1992–2020). *G\*Power, Version 3.1.9.6*.

Universität Kiel.

Gordon, J. M., Magbee, T., & Yoder, L. H. (2021). The experiences of critical care nurses caring for patients with COVID-19 during the 2020 pandemic: A qualitative study. *Applied Nursing Research*, 59, 151418.

<https://doi.org/10.1016/j.apnr.2021.151418>

Henson, J. S. (2020). Burnout or compassion fatigue: A comparison of concepts. *MEDSURG Nursing*, 29(2), 77–95.

Hunter, L. (2016). Making time and space: The impact of mindfulness training on nursing and midwifery practice. A critical interpretative synthesis. *Journal of Clinical Nursing*, 25(7–8), 918–929. <https://doi.org/10.1111/jocn.13164>

Kabat-Zinn, J., & Gazella, K. A. (2005). Jon Kabat-Zinn, PhD: Bringing mindfulness to medicine. *Alternative Therapies in Health & Medicine*, 11(3), 56–64.

- Karcioglu, O., Topacoglu, H., Dikme, O., & Dikme, O. (2018). A systematic review of the pain scales in adults: Which to use? *The American Journal of Emergency Medicine*, 36(4), 707–714. <https://doi.org/10.1016/j.ajem.2018.01.008>
- Keyzer-Dekker, C. M. G., Vries, J., Mertens, M. C., Roukema, J. A., & Steeg, A. F. W. (2014). The impact of diagnosis and trait anxiety on psychological distress in women with early-stage breast cancer: A prospective study. *British Journal of Health Psychology*, 19(4), 783–794. <https://doi.org/10.1111/bjhp.12076>
- Kovács, K. J. (2013). CRH: The link between hormonal-, metabolic- and behavioral responses to stress. *Journal of Chemical Neuroanatomy*, 54, 25–33. <https://doi.org/10.1016/j.jchemneu.2013.05.003>
- Lasky, J. (2020). Bootstrapping (statistics). In *Salem press encyclopedia of science*. <https://eds.p.ebscohost.com/eds/detail/detail?vid=1&sid=7a36be18-c4bf-449e-9902-27e7ce9c4031%40redis&bdata=JkF1dGhUeXB1PXNoaWImc2l0ZT1lZHMtbGl2ZSZzY29wZT1zaXRl#AN=146566020&db=ers>
- Leis, S. J., & Anderson, A. (2020). Time management strategies for new nurses. *AJN: American Journal of Nursing*, 120(12), 63–66. <https://doi.org/10.1097/01.NAJ.0000724260.01363.a3>
- Lindayani, L., Hendra, A., Juniarni, L., & Nurdina, G. (2020). Effectiveness of mindfulness based stress reduction on depression in elderly: A systematic review. *Journal Of Nursing Practice*, 4(1), 8–12. <https://doi.org/10.30994/jnp.v4i1.101>
- Maldonado, D. (2018). No time to meditate? Try this 30-second exercise to focus your mind for work. *Inc.* <https://www.inc.com/debra-maldonado/no-time-to-meditate->

[try-this-30-second-exercise-to-focus-your-mind-for-work.html](#)

- Mattioli, D. (2018). Focusing on the caregiver: Compassion fatigue awareness and understanding. *MEDSURG Nursing*, 27(5), 323–327.
- McKinless, E. (2020). Impact of stress on nurses working in the district nursing service. *British Journal of Community Nursing*, 25(11), 555–561.
- Melnyk, B. M., Tan, A., Hsieh, A. P., Gawlik, K., Arslanian-Engoren, C., Braun, L. T., Dunbar, S., Dunbar-Jacob, J., Lewis, L. M., Millan, A., Orsolini, L., Robbins, L. B., Russell, C. L., Tucker, S., & Wilbur, J. (2021). Critical care nurses' physical and mental health, worksite wellness support, and medical errors. *American Journal of Critical Care*, 30(3), 176–184. <https://doi.org/10.4037/ajcc2021301>
- Milligan, F., & Almomani, E. (2020). Death anxiety and compassion fatigue in critical care nurses. *British Journal of Nursing*, 29(15), 874–879.  
<https://doi.org/10.12968/bjon.2020.29.15.874>
- Mottaghi, S., Poursheikhali, H., & Shameli, L. (2020). Empathy, compassion fatigue, guilt and secondary traumatic stress in nurses. *Nursing Ethics*, 27(2), 494–504.  
<https://doi.org/10.1177/0969733019851548>
- Muhamad Robot, R., Mohd Fauzi, M. F., Mat Saruan, N. A., Mohd Yusoff, H., & Harith, A. A. (2021). Why so stressed? A comparative study on stressors and stress between hospital and non-hospital nurses. *BMC Nursing*, 20(1), 1–10.  
<https://doi.org/10.1186/s12912-020-00511-0>
- Nagarkatte, C., Nagarkatte, U. (2013). *Spandakarika* (1st ed.). Berman.

- Pavlu, D., DeMarco, K., & Sobrino-Bonilla, Y. (2021). Field notes from the frontline of a COVID-19 outbreak: Dyspnea management for hospitalized patients at end-of-life. *Journal of Hospice & Palliative Nursing*, 23(2), 128–134.  
<https://doi.org/10.1097/NJH.0000000000000728>
- Peeters, M., Zondervan-Zwijenburg, M., Vink, G., & van de Schoot, R. (2015). How to handle missing data: A comparison of different approaches. *European Journal of Developmental Psychology*, 12(4), 377–394.  
<https://doi.org/10.1080/17405629.2015.1049526>
- Schoenfelder, J., Bretthauer, K. M., Wright, P. D., & Coe, E. (2020). Nurse scheduling with quick-response methods: Improving hospital performance, nurse workload, and patient experience. *European Journal of Operational Research*, 283(1), 390–403. <https://doi.org/10.1016/j.ejor.2019.10.047>
- Selye, H. (1950) Stress and the general adaptation syndrome. *British Medical Journal*, 1383-1392.
- Siqueira Reis, R., Ferreira Hino, A. A., & Romélio Rodriguez Añez, C. (2010). Perceived Stress Scale: Reliability and validity study in Brazil. *Journal of Health Psychology*, 15(1), 107–114. <https://doi.org/10.1177/1359105309346343>
- Sharp Donahoo, L. M., Siegrist, B., & Garrett-Wright, D. (2018). Addressing compassion fatigue and stress of special education teachers and professional staff using mindfulness and prayer. *The Journal of School Nursing*, 34(6), 442–448.  
<https://doi.org/10.1177/1059840517725789>

Tan, S., & Yip, A. (2018). Hans Selye (1907–1982): Founder of the stress theory.

*Singapore Medical Journal*, 59(4), 170–171.

<https://doi.org/10.11622/smedj.2018043>

Van der Riet, P., Levett-Jones, T., & Aquino-Russell, C. (2018). The effectiveness of mindfulness meditation for nurses and nursing students: An integrated literature review. *Nurse Education Today*, 65, 201–211.

<https://doi.org/10.1016/j.nedt.2018.03.018>

Wu, C.-S., Rong, J.-R., & Huang, M.-Z. (2021). Factors associated with perceived stress of clinical practice among associate degree nursing students in Taiwan. *BMC Nursing*, 20(1), 1–12.

<https://doi.org/10.1186/s12912-021-00602-6>

## Appendix A: Perceived Stress Scale

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

## Appendix B: Permission for Use of the Perceived Stress Scale

---

### PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

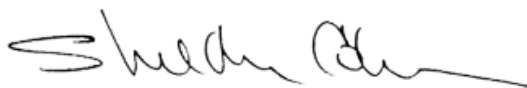
**PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS:** If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

**PERMISSION "FOR PROFIT" USE:** If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

**QUESTIONS ABOUT THE SCALE:** Information concerning the PSS can be found at <https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html> (**click on scales on the front page**). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

**TRANSLATIONS:** The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.



Sheldon Cohen  
Robert E. Doherty University Professor of Psychology  
Department of Psychology  
Baker Hall 335-D  
Carnegie Mellon University  
Pittsburgh, PA 15213

---

### Appendix C: 30-Second Mindful Body Scan Meditation

Welcome to 30 seconds of Mindful Body Scan Meditation to connect your mind and body through conscious energy.

As we breathe in and breath out each cycle of inhalation and exhalation should last 6 seconds, breathe in for 3 seconds and then out for 3 seconds. In those 6 seconds per section of the body, imagine parts of your body as cells.

#1 Focus on your feet and ankles (imagine these body parts as cells)

#2 Focus on your legs and your lower back and abdomen (imagine these body parts as cells)

#3 Focus on your arms, chest, and upper back (imagine these body parts as cells)

#4 Focus on your heart, neck, and face (imagine these body parts as cells)

#5 Focus on your brain and mind (imagine these body parts as cells)

Your 30 second body scan mindful meditation is complete, thank for participating in your healthcare.



#### Appendix D: YouTube Video

Here is a link to the video explaining how to perform the 30 second Mindful Body

Scan Meditation: <https://youtu.be/qjzRmjxj8ic>