Secondary Traumatic Stress: Mental Health Professionals' Silent Illness

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Abstract

On average, 50% of mental health professionals experience secondary traumatic stress (STS) which has led to burnout and worsening the mental health provider shortage. Those with STS can have traumatic memories, emotional outbursts, and may avoid clients or work after constantly being exposed clients' traumas. Burnout is an occupational phenomenon combining emotional exhaustion, work depersonalization, and diminished accomplishment in the workplace. Burnout has led to decrease in organizational committed, absenteeism, and even physical illness. A literature review was conducted to determine the role of mindfulness-based interventions in preventing burnout. The project was completed with four psychiatric mental health nurse practitioners (PMHNP) at a telepsychiatry clinic in the southwestern region of the US. The international review board approved the project prior to implementation. The providers were asked to complete a survey known as the Maslach Burnout Inventory to measure their level of burnout before and after the five senses grounding technique. It was to be completed at least once during their work week for eight weeks. The results are still being collected and analyzed at this time. It hypothesized that the participants in the project have decreased levels of burnout after participating in the intervention. This project will be able to show that burnout can be prevented and mitigated at an individual level utilizing mindfulness techniques that many of the PMHNP encourage their patients to use. A cost-effective and efficient way to decrease burnout, reduce STS, and prevent more PMHNP and other mental health professionals from leaving the workforce.

Keywords: secondary traumatic stress, burnout, mental health, mindfulness-based interventions

Secondary Traumatic Stress: Mental Health Professionals' Silent Illness

Secondary traumatic stress (STS) is well-studied but not considered a priority for many mental health organizations. As part of their jobs, mental health professionals work closely with those who have experienced trauma. The emotional and cognitive content of their individualized work with clients places mental health providers at increased risk for developing STS. Many mental health professionals struggle to continue working in the mental health field due to the overwhelming nature of their jobs without reprieve. Improving their mental health will lead to career longevity so that they may continue to help others.

Problem Statement

Mental health workers are unknowingly putting themselves at risk of developing secondary traumatic stress disorder. This problem results from knowing about another individual's traumatic event (Potocky and Guskovict, 2020). Every day they listen to their patient's stories with empathy to individualize treatment. The symptoms closely resemble posttraumatic stress disorder with the following similaries; intrusive thoughts, traumatic memories, emotional outbursts, irritability, changes in sleep, poor concentration, avoidance of clients and work, and hypervigilance (Potocky and Guskovict, 2020). Roughly 50% of mental health workers have shown at least one symptom of this stress disorder, and those with high levels of empathy reported more symptoms (Brown et al., 2022; Yazici and Ozdemir, 2022).

Secondary traumatic stress among mental healthcare workers leads to burnout, correlating to workers switching jobs or leaving the healthcare field entirely. About 24% of adults and 17% of youth experience mental health, with more than 40% living in areas throughout Arizona with a mental health shortage (Koch et al., 2020; Reinart et al., 2022). There

is a continual demand for mental health services. Due to its damaging effects, mental health professionals have been leaving the mental health field, further impacting the ability to meet the rising demand for mental health services in the community.

Purpose and Rationale

Burnout is a recognized phenomenon within the workforce. The source and cause of burnout vary among careers but is manifested by secondary traumatic stress within the mental health field. Compounding stress from interacting with multiple traumatized clients leaves mental health workers with overwhelming stress levels. Secondary traumatic stress has been widely researched; however, implementation of the evidence is still lacking. This paper aims to acknowledge the prevalence of secondary traumatic stress among mental health workers and propose an efficient intervention.

Background and Significance

Secondary traumatic stress disorder was brought to the world's attention by Charles Figely in 1993, who recognized that clinicians and educators could develop trauma from exposure to another individual's trauma (Ogińska-Bulik et al., 2021). Since its popularization, multiple studies have been conducted among nurses, paramedics, and mental health personnel to demonstrate the prevalence of developing STS when working with trauma victims (Ogińska-Bulik et al., 2021).

Theoretical models were developed to explain this particular phenomenon, such as the Ecological Framework of Trauma and the Constructivist Self-Development Theory (Ogińska-Bulik et al., 2021). The Ecological Framework of Trauma focuses on personal and environmental factors and their relationship to secondary trauma (Ogińska-Bulik et al., 2021). The Constructivist Self-Development Theory emphasizes vicarious trauma and its relationship to

secondary trauma (Ogińska-Bulik et al., 2021). Studies have been conducted regarding the occupational load, job satisfaction, social work environment, and their effects on secondary trauma (Ogińska-Bulik et al., 2021).

The National Child Traumatic Stress Network has recognized the impact of secondary traumatic stress on healthcare professionals, specifically those working directly with traumatized clients (Introduction, 2018). Resources, interventions, and information has been available to individuals and organizations to address the problem. However, prevention efforts have been focused on education and self-care.

Mental Health Workers

Mental health professionals must schedule or interact with as many clients as possible while providing individualized care. They have become severely busy due to heavy patient loads affected by the mental health professional shortage (Ogińska-Bulik et al., 2021; Reinart et al., 2022). For every 100,000 people that require mental health treatment, there are only 11 psychiatrists, 22 psychologists, and 155 counselors that vary in multiple fields within multiple fields (Koch et al., 2020). Burnout tends to occur with an increased workload, long hours, and poor social support (Garcia et al., 2019). It has been found that burnout has led to a decline in patient safety, a decrease in patient satisfaction, and an increase in patient complaints (Garcia et al., 2019).

Self-Care

The primary intervention for stress and anxiety is self-care, emphasizing prevention. Most medical professionals recommend a form of self-care to maintain low-stress levels and a healthy mind. Encouraging mental health workers to engage in healthy lifestyles and focus on their health can prevent development of stress disorders (Steinlin et al., 2017). Despite self-care

being the primary focus, many individuals do not partake in or follow through. Education training focusing on self-care is attended but does not result in increased self-care (Sprang et al., 2019). It has been found that many mental health workers are not provided with the appropriate tools for self-care or are not supported by their organization (Jirek, 2020). Mindfulness is one of the best self-care practices and highly recommended for feelings of stress. (Potocky and Guskovict, 2020).

Coping

The coping skill tool kit is another intervention that allows mental health workers to deal with the trauma exposure in the moment or soon after. Providing education about the differences between positive and negative coping skills has a positive impact on symptom severity (Marković and Živanović, 2022; Potocky and Guskovict, 2020). It is imperative to follow up with mental health professionals to ensure they utilize positive coping skills appropriately and avoid negative ones.

Organizational Changes

Systemic change in behavioral health organizations is another promising and promoted intervention. Creating a culture that supports mental health workers and encourages self-care allows mental health workers to focus on their health. Organizations are encouraged to reduce caseloads to ensure proper debriefing and recovery from traumatic patients (Introduction, 2018; Potocky and Guskovict, 2020).

Employee Assistance Program

Work stress and burnout are not exclusive to healthcare. It occurs across all career types. The employee assistance program (EAP) was created to address decreased work performance related to work stress and feelings of burnout (Chen et al., 2021; Doran, 2022). When

implemented and utilized correctly, workers' stress and the likelihood of leaving the profession decreases (Chen et al., 2021). It is free of charge across most organizations and is encouraged to be used, yet, it is the most underutilized due to lack of time and misunderstanding (Doran, 2022).

Better Job Satisfaction and Less Burnout

The primary goal of most interventions is prevention. Due to the nature of mental health professionals' duties, interventions are embedded within the workday to mitigate the risk of developing STS. When appropriately addressed, there will be increased job satisfaction, decreased work stress, and less burnout (Chen et al., 2021; Introduction, 2018; Marković and Živanović, 2022; Potocky and Guskovict, 2020). It is highly recommended that research focus on identifying the various factors involved with secondary traumatic stress and developing best practices to address it (Potocky and Guskovict, 2020; Sprang et al., 2019).

STS has been thoroughly defined throughout the research because it is commonly interchanged with burnout and compassion fatigue (Leung et al., 2022; Potocky and Guskovict, 2020; Singh et al., 2020). Providing a definitive definition sets the tone for what the intervention is meant to target. Organizations are a big part of the change, and researchers are working on making cost-effective interventions that will lead to STS prevention (Potocky and Guskovict, 2020; Sprang et al., 2019). Secondary traumatic stress has been proven to impact mental health workers; now, an effective intervention must follow.

Internal Data

Private mental health facilities are flexible in the services that they offer to varying populations and with the increased usage of telehealth, they can reach individuals who are unable to access mental health treatment in person. Current services offered include psychiatric evaluations and follow ups, genetic testing, case management, online attention

deficit/hyperactivity disorder (ADHD) testing, legal consultation, and emergency after hour calls. These are offered indiscriminately to their clients with some of the services being covered through health insurance.

The organization has two locations in Phoenix, one in Tempe, and one in Flagstaff. The organization started as a telehealth only clinic and has recently offered in person appointments at these locations through appointment only. The organization has plans to expand the clinic's reach by acquiring more healthcare providers.

The chief executive office and found had stated that as the demand for mental health services increases, the organization finds themselves needing to increase their caseload. There is concern that as the workload increase, the current employees will begin developing secondary traumatic stress symptoms and burnout. Developing an intervention to prevent STS will decrease burnout which will, in turn, prevent turnover and maintain the current retention rate.

PICOT Question

In mental health workers (P), how does the use of mindfulness-based interventions (I) compared with nothing (C) impact the feelings of burnout (O)?

Search Strategy

A detailed review was conducted of current evidence to answer the PICOT question. The three databases utilized in this search were CINAHL, PubMed, and PsycINFO. These databases provided high levels of primary research relevant to burnout and mental health workers.

Keyword Selection

The main keywords utilized among the databases were *burnout, mental health workers, mindfulness,* and *interventions*. Each keyword was partnered with additional words to help expand searches. Burnout was typically used with *stress, fatigue, secondary traumatic stress,* and

exhaustion. Mental health workers were typically used with *mental health staff, mental health professionals, therapists, social workers, counselors,* and *mental health providers.*

Initial and Final Search Yields

CINAHL produced 33 articles when the keywords *burnout, stress, fatigue, mindfulness, mental health workers, mental health staff, therapists, counselors,* or *social workers* were utilized. PubMed produced 137 articles with the keywords *burnout* and *mental health worker.* It was decreased to 50 with the addition of *stress* and *mental health workers* to the search. PsycInfo produced 247 articles with the keywords *mental health workers* and *burnout*. It was decreased to 63 with the addition of the words *intervention* and *mindfulness*. Ten articles with high levels of evidence were chosen from the three databases; eight were randomized controlled trials, one was an exploratory study, and one was an interventional study.

Limitations, Inclusion, and Exclusion Criteria

During the search, several limitations were utilized to find articles relevant to the PICO question. The search focused on clinical and randomized control trials (RCTs). It was further limited to articles published within the last five years. Articles were chosen if they were relevant to the mental health field or burnout in healthcare but did not discriminate on the type of professional.

Critical Appraisal and Synthesis of Evidence

The quality and level of evidence of each study were determined utilizing the rapid critical appraisal (RCA) tool (Melnyk & Fineout-Overholt, 2019). Quantitative studies are among the highest levels of evidence, with systematic reviews being the gold standard (Melnyk & Fineout-Overholt, 2019). Quantitative studies were the primary choice emphasizing randomized control trials (RCTs) with a minimal bias to provide evidence regarding mindfulness

and reduced burnout symptoms (see Appendix A, Table A1). Only one study had an overt bias, as they were the author of the book utilized in the intervention (Hofer et al., 2018). The studies were placed in a synthesis table to clearly display the interventions and outcomes (see Appendix A, Table A2).

The participants were white women in their 40s with varied occupations in healthcare, either in a hospital or clinic. The online studies still recruited participants from hospitals or clinics. All studies used mindfulness to address feelings of burnout and quality of life. The measurement tools were heterogeneous as they utilized different tools to measure stress, quality of life, depression, and anxiety. Studies using Maslach's theory of burnout utilized the Maslach Burnout Inventory (see Appendix A, Figure A1). Frameworks had a small degree of homogeneity, the most common being Maslach's burnout theory. One study was added due to the additional information on burnout prevalence among psychiatric professionals and the potential positive impact of a mindfulness-based intervention. The most considerable difference among the studies was the specific intervention utilized; while all were mindfulness-based, each focused on a different type (see Appendix A, Figure A2).

Four of the ten studies focused on only nurses, while the others had a mix of occupations (see Appendix A, Figure A2). All the studies had low attrition rates, but two had less than ten participants (see Appendix A, Figure A2). Seven studies measured overall burnout, while the others had a mixture of stress, quality of life, depression, and anxiety (see Appendix A, Figure A2). Overall, there was a decrease in negative symptoms with an increase in quality of life and wellness (see Appendix A, Figure A2). Most of the studies did three to six-month follow-ups. They found that participants in the study continued to practice mindfulness and maintained decreased burnout symptoms (see Appendix A, Figure A1).

Discussion

Mindfulness has a significant impact on STS. Reducing stress, depression, and anxiety is tied to introducing mindfulness, lowering the risk of stress and burnout. Though second to organizational changes, implementing mindfulness on an individual level can be cost-effective and personalized to the needs of each employee. With the increasing call for psychiatric services, higher workloads and longer hours will lead directly to the development of STS. The evidence clearly shows the feasibility of implementing mindfulness activities and the positive effects. It is vital to include mindfulness and foster self-care within the organizational culture to lessen the risk of STS and burnout.

A Multidimensional Theory of Burnout

A Multidimensional Theory of Burnout explains the three interrelated concepts of burnout. The complex intermingling of emotional exhaustion, depersonalization, and reduced personal accomplishment is the underlying cause of burnout (Maslach, 1998). Emotional exhaustion is feeling emotionally overextended and drained of emotional resources (Maslach, 1998). Depersonalization is the negative response to others, usually seen as having a detached response (Maslach, 1998). Lastly, reduced personal accomplishment is a declining sense of competence and work productivity (Maslach, 1998).

Exhaustion is considered the central quality and main display of burnout, as it is the stress component (Maslach, 1998). Chronic fatigue leads people to distance themselves from work emotionally and cognitively to minimize its effect on their exhaustion; this is how depersonalization develops (Maslach, 1998) (see Appendix B, Figure B1). A decline in feelings of personal accomplishment occurs parallel to the other aspects (Maslach, 1998). The theory further explores that occupational demands and lack of personal resources are critical to

developing burnout (see Appendix B, Figure B1). It is proposed that exhaustion and depersonalization result from lacking personal resources, while the decline in personal accomplishments is related to occupational demand. It explains that the consequences of burnout are displayed as job withdrawal, a decrease in patient quality of care, and a decline in overall health (see Appendix B, Figure B1).

The theory provided the definitions and influenced the measurement tools utilized in the studies gathered (see Appendix A, Figure A1). Stress, job satisfaction, quality of life, depression, and anxiety were measured as they are typically part of the lack of resources, demands, or costs for burnout (see Appendix A, Figure A2). Mindfulness-based interventions focus on replenishing the individual's resources to combat burnout, while any organizational changes would affect the demands. Though not all the studies utilized the multidimensional theory of burnout, its influence affected the choice of interventions, outcome measurements, and measurement tools.

Clinical Scholar Model

The Clinical Scholar Model is an evidence-based practice (EBP) model created to encourage nurses to implement quality improvement projects utilizing EBP (Strout et al., 2009). This model guides individuals through identifying the problem, researching EBP, and implementing the change (Honess et al., 2009). The model is broken up into seven steps: observe, determine, analyze, synthesize, apply, evaluate, and disseminate (Strout et al., 2009) (see Appendix B, Figure B2). The proposed project is focused on quality improvement for a healthcare organization that supports the use of the clinical scholar model.

The first step is to observe and determine the force driving the need for change (Strout et al., 2009). The need for change is staff-driven and data-driven (see Appendix B, Figure B2). The key stakeholder in the project had noted the increase in turnover and frequent complaints of

stress. The second step is to determine the significance of the problem, desired outcomes, and feasibility (see Appendix B, Figure B2). The key stakeholder shared the significance of the problem, emphasizing the overwhelming increase of staff leaving the organization and the need for more staff. The desired outcome is to decrease the levels of turnover and stress felt throughout the organization. The feasibility is possible as it does not take away from the workload nor cost money.

The third step is analyzing external and internal evidence (see Appendix B, Figure B2). The external evidence was gathered and critically appraised. It demonstrated the prevalence of burnout and the positive effect of mindfulness-based interventions. The internal evidence comes from the key stakeholder interviews but is missing raw data. The fourth step is synthesis which involves putting together a proposal for the project, getting approval from the IRB, and educating the organization about the upcoming intervention. IRB is necessary due to the study involving the mental health workers within the organization, and educating the organization will be aided by the key stakeholder. The fifth and sixth steps are applying the intervention and evaluating the outcomes (see Appendix B, Figure B2). Utilizing the measurement tools for burnout and STS before and after the intervention will determine the effect.

The final step is disseminating the findings (see Appendix B, Figure B2). With the help of the key stakeholder, disseminating the results internally will help encourage the continuation of the intervention. Disseminating the results externally by publishing a paper will assist other organizations attempting to apply the intervention.

Methods

Ethical Considerations

Three ethical principles will guide this project: respect for person(s), beneficence, and justice. Respect for persons is treating an individual with autonomy and allows for protection for individuals that lack the ability to make their own decisions (Office for Human Research Protections, 1979). The project adhered to this principle by ensuring that clinical all subjects participated voluntarily and with ample information (Office for Human Research Protections, 1979). Prior to recruiting participants, information regarding the study was shared by the shareholder, Clinic Founder, in advance to assure the organization is aware. There was also informed consent forms with information regards mindfulness, length of the project, and information being recorded. Consent was collected prior to beginning the intervention and was obtained online to maintain anonymity.

Beneficence is to avoid harm and maximize benefits while also minimizing any risk for harm (Office for Human Research Protections, 1979). The project adhered to this principle by researching the possible risks to participants and implementing ways to minimize the risk (Office for Human Research Protections, 1979). Surveys utilized in the project were deidentified and all information collected is collected anonymously online.

Justice is the final principal and is the process of fairness distribution regarding the benefits of the project (Office for Human Research Protections, 1979). The project adhered to this principle by ensuring the subjects are selected due to their relevance to the problem being addressed by the project rather than easy access to participants (Office for Human Research Protections, 1979). The project specified the effect of burnout on mental health workers and the benefit of preventing high turnover within the organization. The project ensured that vulnerable participants are either excluded for provided extra explanation to their participation in the

project. The project's methodology was reviewed by faculty mentors and received IRB approval (see Appendix C, Figure C1).

Participants and Setting

The participants are employees within the organization that work directly with mental health clients. Individuals that work with the mentally ill population are at a higher likelihood to develop STS symptoms and feelings of burnout (Brown et al., 2022). The following employees accepted will be, nurse practitioners, psychiatrists, psychologists, therapists, social workers, case workers, registered nurses, and other mental health professionals that regularly work directly with behavioral health clients. Exclusion criteria will be leadership and any employee that does not work directly with mental health clients most of their workdays. Anyone that regularly participates in mindfulness activities will also be excluded. The exclusion is necessary to ensure that data isn't skewed from people that are not very likely to develop symptoms or already utilizes the proposed intervention.

Recruitment will be done with assistance of the stakeholder. It will involve sending out a recruitment email with a flyer attached (see Appendix C, Figure C2). The flyer will explain the eligibility requirements and what is expected of their participation. The flyer also holds ways to contact the project head for more information. The flyer also contains a QR code that leads individuals to the consent form (see Appendix C, Figure C3). The consent adds details of what is expected of individuals that was shown in the flyer. Most importantly, the consent document outlines that participation is completely voluntary and that all information collected is deidentified.

Project Description

The project aims to determine whether using a mindfulness grounding technique will reduce feelings of burnout. Recruitment will be allotted a week, to provide ample time for anyone to asks questions and take the time to decide if they want to join. During recruitment, the consent document will be read, completed, and returned. During this time, the demographic survey will also be sent to be completed by participants (see Appendix C, Figure C4). At the beginning of week two, questionnaires will be sent out to emails provided by the stakeholder. The survey will be the Maslach Burnout Inventory (MBI) for medical personnel. The MBI is a 22-item questionnaire about burnout symptoms (see Appendix C, Figure C5). Participants will not be expected to calculate their own scores.

Education materials on the mindfulness technique, five-senses, will be sent to the email individuals provided in the demographics survey at the beginning of week three (see Appendix C, Figure C6). The five-senses technique is when an individual takes the time to recognize their environment utilizing each of their sense. They will identify five things they can see, four things they can touch, three things they can hear, two things they can smell, and one they can taste (Smith, 2018). It is expected that the technique is utilized at least once during the workday, but there isn't a maximum amount.

The following eight weeks will include weekly email reminders to the participants to complete the mindfulness along with a link to confirm they complete the mindfulness activity (see Appendix C, Figure C7). During those eight weeks, there will be an assumption that participants are completing the five-sense technique at least once a day while they are at work. During week 12, MBI will be sent out again to the participants to collect new data regarding their feelings of burnout. The project is estimated to take a total of 12 weeks, including recruitment and data collection.

Data Collection Plan

The demographics survey and MBI were the instruments chosen to complete the project. They were chosen due to their relevance to the outcomes as well as their relation to the theoretical framework. Demographics collected will allow to determine potential differences when identifying symptoms of burnout. MBI focuses on burnout and directly tied to the theoretical framework of the project. The multidimensional theory of burnout explains the factors contributing to burnout and the MBI allows those factors to be measured.

The demographic survey created by the project lead will collect age, gender, role within the organization, and experience in mental health (see Appendix C, Figure C4). The email is utilized to send out reminders about the intervention and send out the follow up surveys at the end of the intervention. The email will be promptly removed from the survey at the end of the intervention stage of the project as it is not needed to analyze data.

The MBI for human services tailored to medical personnel (MBI-HSS-MP) is a 22-item questionnaire that focuses on measuring the symptoms of burnout (see Appendix C, Figure C5). The survey was created shortly after the creation of the Maslach Multidimensional Theory of Burnout to be able to measure burnout in individuals (Maslach, 1998). Though it has multiple versions, the MBI-HSS-MP has its own psychometrics for validity and reliability. Reliability was measured using Cronbach's alpha that measured values between 0.733 and 0.844 (Lin et al., 2022). Validity was measured using Rasch analyses and questions were found to have good fit statistics (Lin et al., 2022).

Data collection will be done utilizing a website named Qualtrics. It allows for the creation of multiple questionnaires and surveys to be delivered electronically. Qualtrics will also provide anonymity by not collecting IP addresses or personal data that can be found on personal

devices. The results for each survey will be in a central location that will only be accessed by the project lead through a locked laptop. The data collected through this website will only be stored for a year for potential external publication.

To answer the project question, the symptoms of burnout will be measured among the participants. Scores prior to starting the mindfulness intervention and after will be compared to determine significance. The logic model displays the expected outcomes of the project (see Appendix D). Expected short term outcomes are increased knowledge on the topics of burnout, mindfulness as well as comfortability using mindfulness while at work. Expected long term outcomes are proficient understanding of mindfulness, consistent use of mindfulness while at work, and decrease symptoms of burnout. The long terms goals will be assessed with the MBI.

Data Analysis Plan

The data will be analyzed with the Intellectus statistics software. The specific test being run will be the Paired t-test or Wilcoxon Signed-Rank test and Descriptive statistics. The test is utilized to assess differences between variables that utilize the same scale (Intellectus Statistics Team, 2021). At least three complete cases are required to run the test with the assumption that data will be normally distributed. The Wilcoxon test can be run in place of the t-test if the rules are not met for the Paired t-test. Descriptive statistics test is utilized to analyze the participants and identify relationships in relation to the data provided (Intellectus Statistics Team, 2021).

Budget

The project had direct costs and indirect cost but did not get outside funding (see Appendix E). The direct costs are specific for recruitment and providing information to potential project participants. Recruitment and education were done online and did have any direct costs. The direct costs also include utilization of the data collection instrument. Permissions and license

are needed to utilize them. The cost is $2.50 per test with a minimum of 50 tests needing to be purchased. The direct costs will be funded by the DNP student.

The indirect costs are what are needed to operate the project. Canva is a website that allows for the creation of media materials such as flyers and brochures. The subscription allows for unlimited access to all their creation materials. The gas is for travel between locations to deliver flyers. The internet is for a fully functioning computer to complete everything necessary for the project. The total cost is done over six months to account for prepping for the project and the active implementation.

The funding is inaccessible. However, it's important to note that there is federal funding for high turnover among health care workers (Assistant Secretary for Public Affairs, 2022). Over the potential savings are over $30-45,000 per employee each year. That is the average price to hire a new employee due after losing one (Enrich, 2016). The organization has roughly 13 mental health workers equating to $390,000 - $585,000 in savings a year.

Results

Five participants completed the consent form and three of those participants completed all the required surveys. Of the three participants, two of them identified as female. All the participants were nurse practitioners within the clinic and had master's degrees. Most of the participants had anywhere from two to five years of experience working in mental healthcare (see Appendix F, Table F1). The average age of the participants is 39.33 years old (see Appendix F, Table F2).

The Shapiro-Wilk test was conducted to determine whether the differences in in the pre and post survey could have been produced by a normal distribution (Intellectus Statistics Team, 2021). The alpha value was 0.05 suggesting the possibility of normal distribution. A two-tailed paired sample *t*-test was completed to determine the significance between the pre and post surveys the participants completed. Statistical significance is found when the *p*-value is less than 0.05 (Intellectus Statistics Team, 2021). The MBI survey results break down into three sections: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) (see Appendix F, Table F3). Three separated statistical tests were completed to compare the scores from each section individually.

The results of the two-tailed paired samples *t*-test for emotional exhaustion was not significant based on an alpha value of .05, $t(2) = -0.34$, $p = .764$, indicating that there was not a decrease in feelings of emotional exhaustion after the intervention. The result of the two-tailed paired samples *t*-test for depersonalization was not significant based on an alpha value of .05, $t(2) = -0.46$, $p = .691$, indicating there was not a decrease in feelings in depersonalization after the intervention. The result of the two-tailed paired samples *t*-test for personal accomplishment was not significant based on an alpha value of .05, $t(2) = 0.95$, $p = .441$, indicating there was not an increase in feelings of personal accomplishment (see Appendix F, Table F4).

The results do not allow for correlation between the intervention and maintaining low feelings of burnout. The intervention has proven to have limited impact on both the participants and overall, for the clinic. The intervention, however, can still be sustained through the providers that participated in the project. The key stakeholder also has access to the materials provider to the participants allowing for continual distribution for newer employees.

Discussion

Burnout is a combination of feelings of emotional exhaustion, depersonalization, and personal accomplishment. The participants showed low burnout before and after the intervention was introduced. The mindfulness grounding technique did not have any effect on the participants burnout. Many factors were involved to produce these specific findings. The key stakeholder and owner of the telepsychiatry clinic reported wanting involvement in the project as a preventative measure for STS and burnout. There was concern for potential burnout, but the owner did not have data showing burnout and the pre-survey results confirmed low burnout among the participants. Though the intervention did not further decrease overall feelings of burnout, it did not significantly increase burnout allowing the grounding technique to still be a viable preventative method.

There were multiple limitations within the study. The first limitation is a lack of face-to-face interaction with the participants. The clinic is mostly done over telehealth with widely varying schedules among the employees. There was not a central hub to allow for proper recruitment with flyers or luncheon. Education material and instructions were all provided electronically, depersonalizing the project, and potentially preventing potential participants from being comfortable asking questions.

The second limitation is self-reporting and self-education. The project relied on the honesty of the participants. It was possible for participants to have not read the education materials or have understood how to complete the surveys. Due to the self-reporting nature of the surveys, each question could have been interpreted differently for each participant causing inconsistency in results. There is also the potential that participants did not complete the mindfulness technique as they were instructed too.

The final limitation, and most significant, is the small sample size. The clinic had nine providers at the time consent for the project was sent out and 12 when the intervention officially started. However, of the original nine, only five had completed the consent and three completed the intervention. This prevents the project results from being generalized, regardless of the significance of the results.

A significant challenge with the project is only have one project champion supporting and pushing the project. Potential participants could only hear the information from the key stakeholder and project lead, and information was only provided via email. Information could have easily been overlooked and the project viewed as insignificant with minimal people advocating for participation. Communication with the key stakeholder was also difficult due to maintaining an online only format for the project. For the same reason, participants could have missed key information, the stakeholder had minor delays with responses with could have impacted the project.

Mindfulness-based interventions have been shown to improve feelings of burnout with the effect being the most significant with emotional exhaustion (Salvada et al., 2021). Among studies that had small sample sizes utilizing mindfulness-based interventions, showed limited to no improvement regarding burnout (Reyes Ortega et al., 2019; Watanabe et al., 2019). Robust mindfulness-based interventions, such as regular face to face sessions, had the most positive effect on burnout and STS among healthcare professionals (Strauss et al., 2021; Xie et al., 2020; Cascales-Perex et al., 2021).

There is potential for future research and studies to continue focusing on mindfulness-based interventions specifically for mental health professionals. Choosing a setting that can support in-person recruiting and/or intervention sessions could improve the sample size. If the

clinic is primarily online, scheduling education sessions via online platforms to in-person engagement and ensure each participant thoroughly understands the intervention. Increasing the survey to weekly, to track a trend instead of just two points of time could be a more accurate representation of the burnout. Finally, adding a post-survey to the entire study or project will can show subjective impact of an intervention versus just objective.

Secondary traumatic stress is a phenomenon that is experienced by few professions with the potential of being overrepresented in mental healthcare due to the nature of the occupation. Developing symptoms can lead to the current occupational phenomenon of burnout. Burnout is the culmination of emotional exhaustion, depersonalization, and personal accomplishment caused by increased work demands, decreased organization support, and lack of personal stress resources. Mindfulness-based interventions provides personal stress resources which is only one section of the overall burnout phenomenon. Mindfulness-based intervention has limited impact with low engagement and participation but has the potential to prevent the consequences of STS and burnout. Mental health professionals recommend mindfulness to many of their patients, failing to use it themselves. It is imperative that mental health professionals take care of themselves with the tools they offer to others in order to continue to make differences in the lives of others.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table for Quantitative Studies

Citation	**Theoretical/ Conceptual Framework**	**Design/ Method/ Purpose**	**Sample/Setting**	**Variables**	**Measurement/ Instrumentation**	**Data Analysis**	**Results/ Findings**	**Level of Evidence; Application to practice; Generalization**
Sampson, M., et al. (2020) The MINDBODYSTRONG Intervention for New Nurse Residents **Country**: USA **Funding**: None Reported **Bias**: Hired the new grads and then utilized them in the study Did not expand to new grads that were hired recently before	Cognitive Behavioral Theory	**Design:** RCT **Purpose:** Evaluate the effects of MINDBODYSTRONG on mental health, job satisfaction, and health lifestyle behaviors	**N**= 89 **Demographics:** New Grad Nurses hired at the hospital **Setting:** Midwestern Academic Medical Center **Exclusion:** Non-new grad nurses **Attrition:** 17% for 6 month follow-up 19% - control 17% - intervention	**IV1:** MINDBODYSTRONG **DV1:** Stress levels **DV2:** Depressive symptoms **DV3:** Anxiety Symptoms **DV4:** Job satisfaction **DV5:** Health lifestyle behaviors **Definitions:** N/A	**Tools:** Perceived Stress Scale Generalized Anxiety Disorder Scale (GAD-7) PHQ-9 Job Satisfaction Scale Healthy Lifestyle Behaviors Scale **Validity/ Reliability:** Yes	**Statistical Tests Used:** IBM SPSS Statistics ANOVA Independent Sample t-tests	**DV1:** Decreased **DV2:** Decreased **DV3:** Decreased **DV4:** Improved **DV5:** Improved	**Level of Evidence**: 2 **Strengths**: Measured both short and long term effects RCT for controlling internal validity Valid tools the **Weakness**: Small sample Nonrandom sample(all were new grads and new hires)

Key: **ACT** Acceptance and Commitment Therapy, **CBT** Cognitive Behavioral Therapy, **CF** Compassion Fatigue **CPS** Child Protective Services, **DV** Dependent Variable, **IV** Independent Variable, **RCT** Randomized Control Trial, **S.P** Social Pedagogues, **SUD** Substance Use Disorder **SW** Social Worker

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
								Feasibility: Slightly **Application**: Program is applicable for new grads
Günüşen, N.P., et al. (2021) The effect of a nurse-led intervention program on compassion fatigue, burnout, compassion satisfaction, and psychological distress in nuses: A randomized controlled trial. **Country**: Turkey **Funding**: None **Bias**: Only included those that scored high risk for CF	Cognitive Behavioral Theory	**Design:** RCT **Purpose:** Evaluate the effect of a nurse-led intervention on psychological distress	**N= 48** Even split for control and intervention group **Demographics:** 34-36 y.o. 48 nurses 1 male **Setting:** Public Hospital in Western Turkey **Exclusion:** Non-nurses, nurse leadership, did not complete the questionnaire, at low risk for CF, less than 6 months experience **Attrition:** 8.3%	**IV1:** Nurse-led CBT **DV1:** Compassion Fatigue **DV2:** Burnout **DV3:** Compassion Satisfaction DV4: Psychological Distress **Definitions:** CF: stress of trying to help someone who is suffering	**Tools:** Demographic Questionnaire ProQOL-IV GHQ-12 **Validity/ Reliability:** Yes	**Statistical Tests Used:** Kolmogorov Zmirnov test Yates's correction Fisher's Exact Test Mann-Whitney *U* test Wilcoxon signed-rank test with Bonferroni Correction	**DV1:** no difference between the groups **DV2:** no difference between the groups **DV3:** no difference between the groups **DV4:** Decrease in psychological distress	**Level of Evidence**: 2 **Strengths**: Valid scales Clear definitions **Weakness:** only done at one hospital small sample size no even diversity among nurses potential of breaking blindness during the study **Feasibility**: Slightly **Application**: Can be replicated on a

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
								larger scale for generalization
Strauss, C. et al. (2021) Reducing stress and promoting well-being in healthcare workers using mindfulness-based cognitive therapy for life **Country:** UK **Funding:** Health Education England and Welcome Trust **Bias:** None	Cognitive Behavioral Theory	**Design:** RCT **Purpose:** Assess the effectiveness of mindfulness CBT in reducing stress	**N= 234** IV N=115 Control N=119 **Demographics:** 42-44yrs old Mostly female Mostly white **Setting:** Completed online, but recruited from 4 Healthcare organizations under NHS **Exclusion:** No listed exclusion criteria **Inclusion:** Work for NHS, understand English, be older than 18, and no currently on leave **Attrition:** 18% = IV	**IV:** Mindfulness-based CBT **DV1:** Stress **DV2:** Acceptability **DV3:** Effects on wellbeing **DV4:** Depression **DV5:** Anxiety **DV6:** Burnout **Definitions:** None	**Tools:** DASS-21 SWEMWBS MBI-HSS iMTA PCQ SOCS FFMQ-SF **Validity/ Reliability:** Yes	**Statistical Tests Used:** Mixed-effects regression model Cohen's *d*	**DV1:** Decrease **DV2:** Increase **DV3:** Increase **DV4:** Decrease **DV5:** Decrease **DV6:** No change	**Level of Evidence**: 2 **Strengths**: Valid scales Anonymity for data collection Large sample size **Weakness:** Control group was not an active comparison Participants mostly white and female Lack of long term follow-up **Feasibility**: Yes **Application**: Yes while addressing specific organizational structure affecting burnout

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
			3% = Control					
Xie, C. et al., (2020) Education intervention versus mindfulness-based intervention for ICU nurses with occupational burnout: A parallel, controlled trial **Country:** China **Funding:** Sichuan University doctoral research funds **Bias:** None	Theory of Mindfulness Therapy	**Design:** A randomized parallel, controlled trial **Purpose:** Evaluate the effectiveness of mindfulness-based intervention on burnout	**N=** 106 Even split between the groups **Demographics:** All females 27 y.o. **Setting:** ICU Hospital **Exclusion:** Worked less than one year, were on vacation or leave, have been part of of a mindfulness program in the last 6 months **Attrition:** 13.2% Control 3.8% IV	**IV:** Mindfulness-based intervention **DV1:** Level of Mindfulness **DV2:** Emotional Exhaustion DV3: Depersonalization DV4: Sense of Personal Accomplishments **Definitions:** Occupational Burnout: the combination of emotional exhaustion, depersonalization and sense of personal accomplishments Depersonalization: unfeeling and impersonal response toward recipients of one's service	**Tools:** Maslach Burnout Inventory MAAS AAQ-II **Validity/ Reliability:** Yes	**Statistical Tests Used:** independent t-tests Chi-square tests ANOVA	**DV1:** Increased **DV2:** Decreased **DV3:** Decreased **DV4:** Increased	**Level of Evidence**: 2 **Strengths**: Valid tool for burnout Large sample size **Weakness:** Limited to ICU Nurses Randomization was limited to unit not participant Only 3-month followup **Feasibility**: Yes **Application**: Yes, but needs to be opened to other healthcare workers

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Kiley, K. A. et al. (2018) The Effectiveness of Guided Imagery in Treatment Compassion Fatigue and Anxiety in Mental Health Workers **Country:** United States **Funding:** None reported **Bias:** None	The Professional Quality of Life Elements Theory and Measurement	**Design:** Two-arm RCT **Purpose:** Determine if Guided Imagery could be an effective tool	**N=** 56 **Demographics:** Mostlymiddle aged white women, **Setting:** Non-profit Mental Health Agency **Exclusion:** Non-full time, substance abuse, suicidal ideation, serious mental health issues, use of guided imagery prior to study **Attrition:** Lost 7 from treatment Lost 10 from control	**IV:** Guided Imagery **DV1:** Compassion Fatigue **DV2:** Stress Levels **DV3:** Sleep quality **DV4:** Anxiety **Definitions:** Burnout - physical, mental, and emotional exhaustion STS - harmful reaction to work-related trauma Guided Imagery - relaxation technique that relies on descriptive language	**Tools:** SRRS BFI-10 ProQOL PSQI Question 6 PSS STAI - short form **Validity/ Reliability:** yes	**Statistical Tests Used:** Unpaired t-tests	**DV1:** No overall increase or decrease **DV2:** Decrease **DV3:** Increase **DV4:** Decrease	**Level of Evidence**: 2 **Strengths**: valid tools **Weakness:** Small sample size. Potential bias among workers **Feasibility**: Yes **Application**: Can be replicated on a larger scale
Reyes Ortega et al. (2019) A preliminary test of social connectedness burnout intervention for mexican mental	Functional Analytic Psychotherapy	**Design:** Interventional Study **Purpose:** To see if HTHP was able to decrease job burnout	**N= 6** **Demographics:** 5 therapists, 1 psychiatrist Age: 26-44 3 male, 3 female	**IV:** Helping the Helper Program (HTHP) **DV1:** Emotional Exhaustion	**Tools:** Maslach Burnout Inventory World Health Organization Quality of Life-BREF	**Statistical Tests Used:** Robust improvement rate difference score	**DV1:** Decreased **DV2:** Decreased **DV3:** Increased	**Level of Evidence**: 3 **Strengths**: valid tools **Weakness:**

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
health professionals. **Country:** Mexico **Funding:** None reported **Bias:** Setting is under co-direction of first author			**Setting:** Borderline Personality Disorder Clinic **Exclusion:** All mental health workers were invited. No explicit exclusion. **Attrition:** 0%	**DV2:** Depersonalization **DV3:** Personal Accomplishment **DV4:** Psychological Health **DV5:** Social Relationships **DV6:** Union and Support **Definitions:** Burnout - syndrome of emotional exhaustion, depersonalization, and lack of personal accomplishment Functional Analytic Psychotherapy (FAP) - a contextual-behavioral therapy approach in to improve client behavior related to interpersonal relationships	Multidimensional Scale of Organizational Climate **Validity/ Reliability:** Yes		**DV4:** Increased **DV5:** Increased **DV6:** Increased	Small sample size. Potential bias among authors No control group **Feasibility**: Yes **Application**: Can be replicated on a larger scale

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Hofer et al. (2018). Self-Help for stress and burnout without therapist contact: An online RCT **Country:** Switzerland **Funding:** Schweizerischer Nationalfonds zur Förderung der Wissenschaftlichen Forschung **Bias:** 2 of the authors wrote the self-help book utilized in the study	Acceptance and Commitment therapy	**Design:** RCT **Purpose:** To determine if a self-help book could decrease burnout	**N=** 119 61 - intervention 58 - control **Demographics:** Average Age: 44 Mosty female **Setting:** Online **Exclusion:** Concurrent psychotherapy, suicidal intent **Attrition:** 17.6%	**IV:** ACT self-help book **DV1:** Perceived Stress **DV2**: Burnout **DV3**: Depressive symptoms **DV4:** Well-being **DV5:** Impact of difficult emotions **DV6:** Psychological Flexibility **Definitions:** Burnout: one's response to chronic stressors in the workplace ACT: a CBT with the goal of enhancing psychological flexibility	**Tools:** -Perceived Stress Scale -Maslach Burnout Inventory - General Survey -Beck Depression Inventory -Mental Health Continuum-Short Form -Emotion Regulation Scale -Acceptance and Action Questionnaire II -Cognitive Fusion Questionnaire -Kentucky Inventory of Mindfulness Skills **Validity/ Reliability:** Yes	**Statistical Tests Used:** SPSS Reliable Change Index	**DV1:** Improved **DV2**: Improved **DV3**: Improved **DV4:** Improved **DV5:** Improved **DV6:** Improved	**Level of Evidence**: 2 **Strengths**: valid tools **Weakness:** Reliant on self-reported information **Feasibility**: Yes **Application**: Can be replicated on a larger scale

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Cascales-Perez et al. (2021). Effects of a mindfulness-based programme on health- and work-related quality of life of healthcare professionals **Country:** Spain **Funding:** None **Bias:** Potential selection bias	Maslach's Theory of Burnout	**Design:** RCT **Purpose:** Evaluate the effectiveness of mindfulness-based stress reduction to improve quality of life and analyze persistence of improvement after follow-up	**N=** 58 30 = intervention **Demographics:** Mean Age: 49-52. Majority were nurses **Setting:** Primary Care centers in Alicante Public Health Service **Exclusion:** Psychiatric diagnosis **Attrition:** 0%	**IV:** Mindfulness-based stress reduction programme **DV1:** Quality of Life **DV2:** Burnout	**Tools:** Five Facet Mindfulness Questionnaire SF-36 Health Questionnaire Profile of Mood States Maslach Burnout Inventory Professional Quality of Life **Validity/ Reliability:** Yes	**Statistical Tests Used:** Kolmogorov-Smirnoff test Levene Test Mixed 2x2 ANOVAS Repeated Measures ANOVAS	**DV1:** Improved **DV2:** Decreased	**Level of Evidence**: 2 **Strengths**: valid tools No one dropped the study **Weakness:** Small sample size Not blinded **Feasibility**: Yes **Application**: Can be replicated on a larger scale

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Watanabe et al. (2019). Brief mindfulness-based stress management program for a better mental state in working populations - happy nurses project: A randomized controlled trial **Country**: Japan **Funding**: Intramural Research Grant for Neurological and Psychiatric Disorders of National Center of Neurology and Psychiatry, Japan **Bias**: None	Maslach's Theory of Burnout	**Design:** RCT **Purpose:** Compare the effectiveness of a brief mindfulness-based stress management program (IV) with a psychoeducation leaflet group (Control)	**N= 80** **Demographics:** Female Nurses 21-55 yrs old **Setting:** Inpatient Wards at the general hospitals in the Tama Region **Exclusion:** planning to take leave within 26 weeks, engaged in psychotherapy, being treated for mental health disorder, history of taking supplements, clinical depression, consumption of fish more than 4x a week, taking anticoagulants, history of stroke **Attrition:** 3 dropped from intervention group	**IV:** Mindfulness-based stress management program **DV1**: Depression **DV2:** Anxiety **DV3**: Burnout **DV4**: Insomnia	**Tools:** Hospital Anxiety and Depression Scale PHQ-9 Generalized Anxiety Disorder Scale Maslach Burnout Inventory Insomnia Severity Index The World Health Organization and Work Performance Questionnaire EuroQol **Validity/ Reliability:** Yes	**Statistical Tests Used:** Mixed model repeated measures analysis	**No significant differences found**	**Level of Evidence**: 2 **Strengths**: valid tools low attrition rate **Weakness:** Small sample size **Feasibility**: Yes **Application**: Can be replicated on a larger scale

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Wampole et al. (2020). Exploring social work lead mindfulness-based intervention to address burnout among inpatient psychiatric nurses: A pilot study **Country:** U.S. **Funding**: None **Bias:** None	**Theoretical Framework:** Maslach's Theory of Burnout **Conceptual Framework:** Dialectical Behavioral Therapy	**Design:** Exploratory Study **Purpose:** If SW led mindfulness intervention can lead to reduction in burnout	**N= 5** **Demographics:** Nurses Mean Age: 42 Experience: 13 yrs **Setting:** 1 inpatient psychiatric unit **Exclusion:** Uncontrolled mental health disorder, non-nurses, nurses not working in direct care **Attrition:**	**IV:** SW led mindfulness intervention **DV1**: Burnout **Definitions:** Burnout: adverse behavioral, emotional, and physical symptoms developed in relation to the workplace Mindfulness: the practice of directing one's thoughts and emotions to the here and now	**Tools:** Maslach Burnout Inventory - Human Services	**Statistical Tests Used:** Descriptive Statistics	**DV1:** Minor improvement	**Level of Evidence**: 3 **Strengths**: valid tools **Weakness:** Small sample size intervention not held at a regular interval **Feasibility**: Yes **Application**: Can be replicated on a larger scale

Key: **ACT** Acceptance and Commitment Therapy, **CBT** Cognitive Behavioral Therapy, **CF** Compassion Fatigue **CPS** Child Protective Services, **DV** Dependent Variable, **IV** Independent Variable, **RCT** Randomized Control Trial, **S.P** Social Pedagogues, **SUD** Substance Use Disorder **SW** Social Worker

Table A2

Synthesis Table

Study (Author, year)	Sampson et al., 2020	Günüşen et al., 2020	Strauss et al., 2021	Xie et al., 2020	Kiley et al., 2018	Reyes Ortega et al., 2019	Hofer et al., 2018	Cascales-Perex et al., 2021	Watanabe et al., 2019	Wampole et al., 2020
Design **LOE**	RCT II	RCT II	RCT II	RCT II	RCT II	IS III	RCT II	RCT II	RCT II	ES III
Sample										
n subjects	89	48	234	168	56	6	119	58	80	5
M-Age		34-36	42-44	27		26-44	44	49-52	30	42
AR	17%	8.3%	18%		30%	0%	17.6%		3.75%	0%
Nurses	89	48	59	168				30	80	5
SW			45			5				
MD/NP			10			1		12		
Other			120				44	16		
Setting										
Hospital	X	X		X					X	X
Clinic					X	X		X		
Online			X				X			
Interventions										
MINDBODYSTRONG	X									
Guided Imagery					X					
HTHP						X				
Self-Help Book							X			X
MBI			X	X				X	X	X
CBT		X	X							
Outcomes/ Themes										
Stress Levels	↓	↓	↓		↓		↓			
QoL		↑	↑			↑		↑		
Burnout		-	-	↓		↓	↓	↓	-	↑
Anxiety	↓		↓		↓				-	
Depression	↓		↓				↓		-	

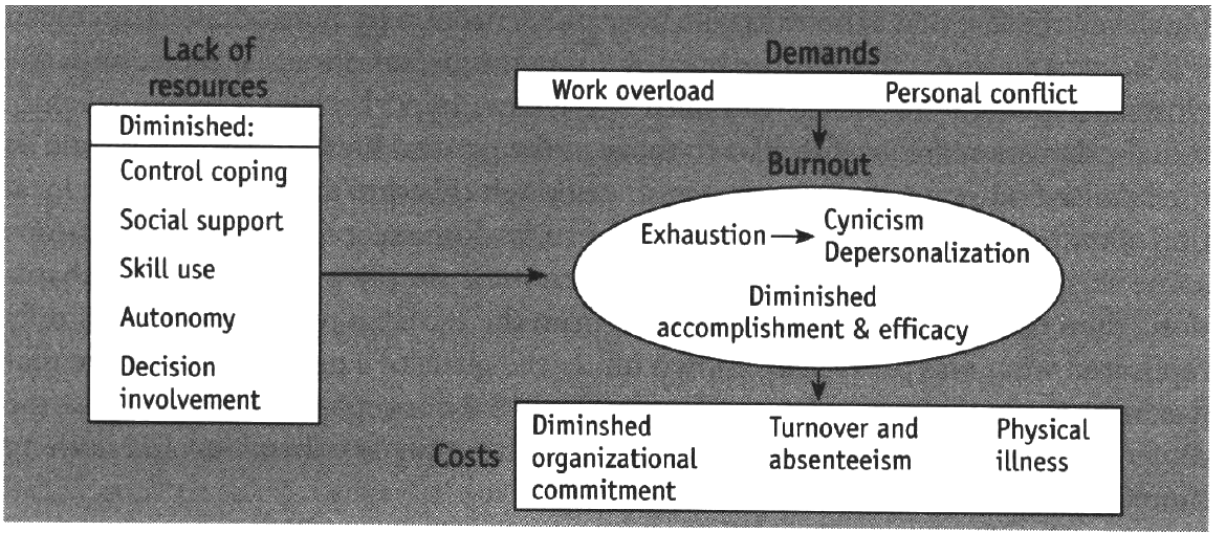
Key: **AR** Attrition Rate **CBT** Cognitive Behavioral Therapy **ES** Exploratory Study **HTHP** Helping the Helper Program **IS** Interventional Survey **LOE** Level of Evidence **M-Age** Mean Age **MD** Doctor **MBI** Mindfulness-Based Intervention **NP** Nurse Practitioner **QoL** Quality of Life

Appendix B

Models and Frameworks

Figure B1

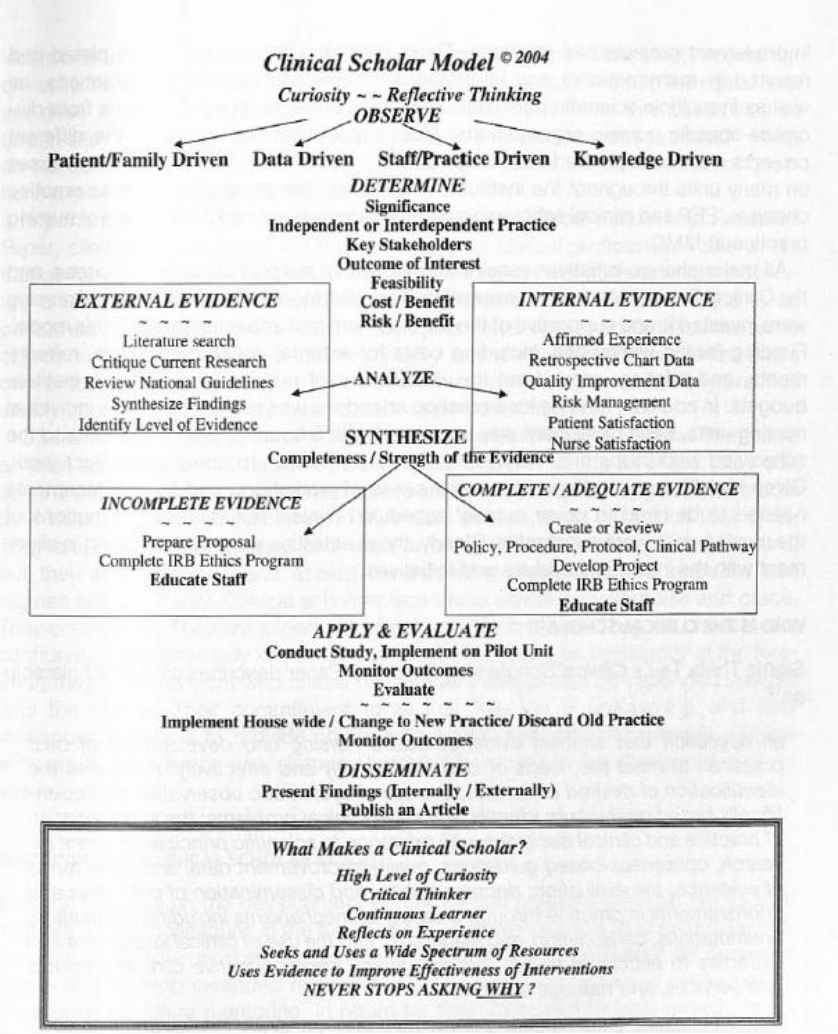
Model of Burnout



Note. Demonstrates the factors influencing burnout noted by lack of resources and demands. Shows the three components of burnout: exhaustion, cynicism/depersonalization, and diminished accomplishment. Displays the consequences of burnout noted by costs (Maslach, 1998).

Figure B2

The Clinical Scholar Model



Note. The Clinical Scholar Model encourages nurses to use EBP to implement clinical change and develop a culture of innovative change (Strout et al., 2009).

Appendix C

Methods Documents

Figure C1

Approval: Expedited Review

Dear Zita Schiller:

On 7/27/2023 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Five Common Senses: A Mindfulness Approach to Burnout
Investigator:	Zita Schiller
IRB ID:	STUDY00018336
Category of review:	7
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• IRB Social Behavioral Protocol Revised.docx, Category: IRB Protocol; • Recruitment Email Script, Category: Recruitment Materials; • Revised Consent Form, Category: Consent Form; • Revised Consent Form, Category: Consent Form; • Supporting Documents Qualtrics , Category: Other; • Supporting_Documents_BurnoutSurvey_FiveCommonSenses, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

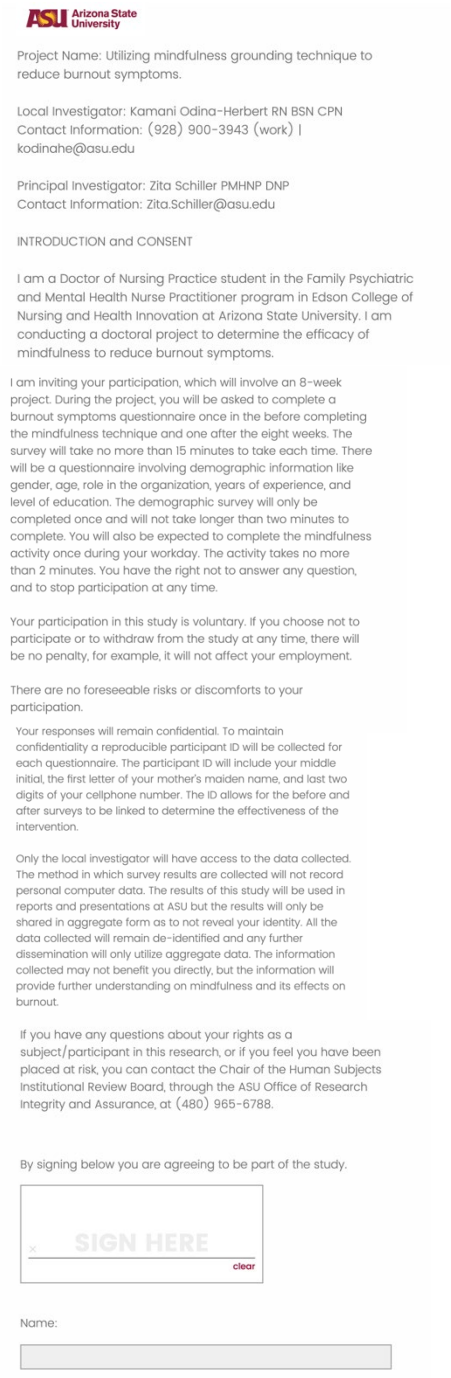
The IRB approved the protocol effective 7/27/2023. Continuing Review is not required for this study.

Figure C2

Recruitment Flyer

Figure C3

Consent Form



Arizona State University

Project Name: Utilizing mindfulness grounding technique to reduce burnout symptoms.

Local Investigator: Kamani Odina-Herbert RN BSN CPN
Contact Information: (928) 900-3943 (work) | kodinahe@asu.edu

Principal Investigator: Zita Schiller PMHNP DNP
Contact Information: Zita.Schiller@asu.edu

INTRODUCTION and CONSENT

I am a Doctor of Nursing Practice student in the Family Psychiatric and Mental Health Nurse Practitioner program in Edson College of Nursing and Health Innovation at Arizona State University. I am conducting a doctoral project to determine the efficacy of mindfulness to reduce burnout symptoms.

I am inviting your participation, which will involve an 8-week project. During the project, you will be asked to complete a burnout symptoms questionnaire once in the before completing the mindfulness technique and one after the eight weeks. The survey will take no more than 15 minutes to take each time. There will be a questionnaire involving demographic information like gender, age, role in the organization, years of experience, and level of education. The demographic survey will only be completed once and will not take longer than two minutes to complete. You will also be expected to complete the mindfulness activity once during your workday. The activity takes no more than 2 minutes. You have the right not to answer any question, and to stop participation at any time.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty, for example, it will not affect your employment.

There are no foreseeable risks or discomforts to your participation.

Your responses will remain confidential. To maintain confidentiality a reproducible participant ID will be collected for each questionnaire. The participant ID will include your middle initial, the first letter of your mother's maiden name, and last two digits of your cellphone number. The ID allows for the before and after surveys to be linked to determine the effectiveness of the intervention.

Only the local investigator will have access to the data collected. The method in which survey results are collected will not record personal computer data. The results of this study will be used in reports and presentations at ASU but the results will only be shared in aggregate form as to not reveal your identity. All the data collected will remain de-identified and any further dissemination will only utilize aggregate data. The information collected may not benefit you directly, but the information will provide further understanding on mindfulness and its effects on burnout.

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

By signing below you are agreeing to be part of the study.

SIGN HERE

clear

Name:

Figure C4

Demographic Survey

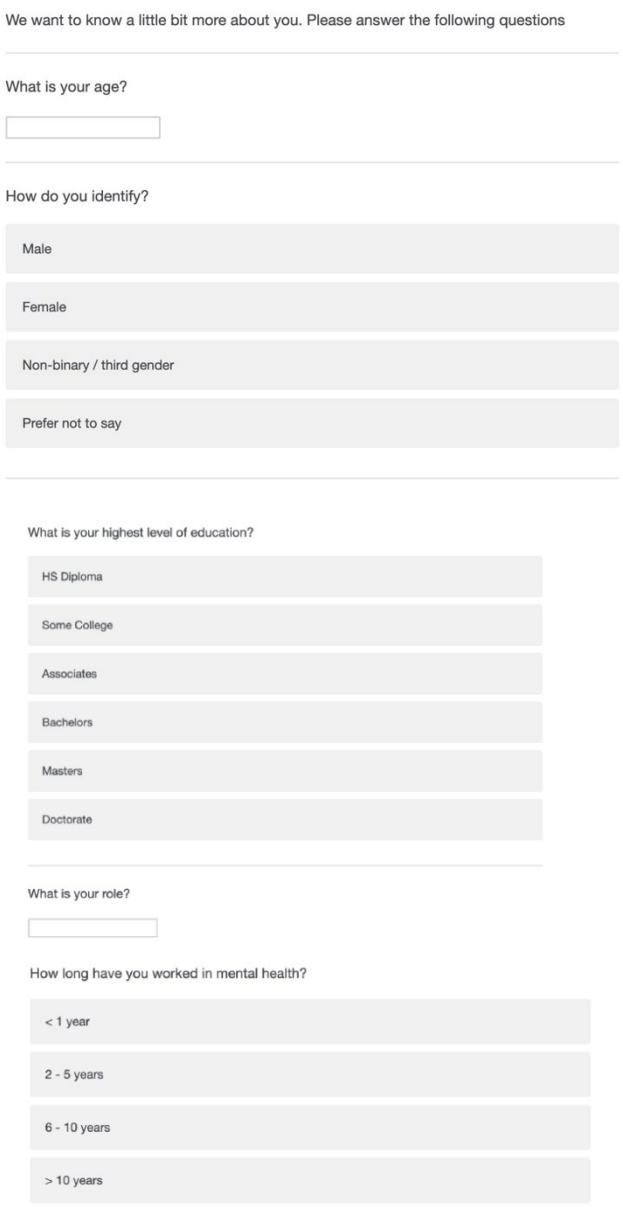


Figure C5

Maslach Burnout Inventory: Human Services Survey for Medical Personnel

ASU Arizona State University

Instructions: The following are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, select "**0**" (zero). If you have had this feeling, indicate how often you feel it by selecting the number (**from 1 to 6**) that best describes how frequently you feel that way.

	0	1	2	3	4	5	6
I feel emotionally drained from my work	○	○	○	○	○	○	○
I feel used up at the end of the workday	○	○	○	○	○	○	○
I feel fatigued when I get up in the morning and have to face another day on the job	○	○	○	○	○	○	○
I can easily understand how my patients feel about things.	○	○	○	○	○	○	○
I feel I treat some patients as if they were impersonal objects.	○	○	○	○	○	○	○
Working with people all day is really a strain for me.	○	○	○	○	○	○	○
I deal very effectively with the problems of my patients.	○	○	○	○	○	○	○
I feel burned out from my work.	○	○	○	○	○	○	○
I feel I'm positively influencing other people's lives through my work.	○	○	○	○	○	○	○
I've become more callous toward people since I took this job.	○	○	○	○	○	○	○
I worry that this job is hardening me emotionally.	○	○	○	○	○	○	○
I feel very energetic.	○	○	○	○	○	○	○
I feel frustrated by my job.	○	○	○	○	○	○	○
I feel I'm working too hard on my job.	○	○	○	○	○	○	○
I don't really care what happens to some patients.	○	○	○	○	○	○	○
I don't really care what happens to some patients.	○	○	○	○	○	○	○
Working with people directly puts too much stress on me.	○	○	○	○	○	○	○
I can easily create a relaxed atmosphere with my patients	○	○	○	○	○	○	○
I feel exhilarated after working closely with my patients.	○	○	○	○	○	○	○
I have accomplished many worthwhile things in this job.	○	○	○	○	○	○	○
I feel like I'm at the end of my rope.	○	○	○	○	○	○	○
In my work, I deal with emotional problems very calmly.	○	○	○	○	○	○	○
I feel patients blame me for some of their problems	○	○	○	○	○	○	○

This survey is completed before and after the mindfulness intervention.

Figure C6

Educational Flyer

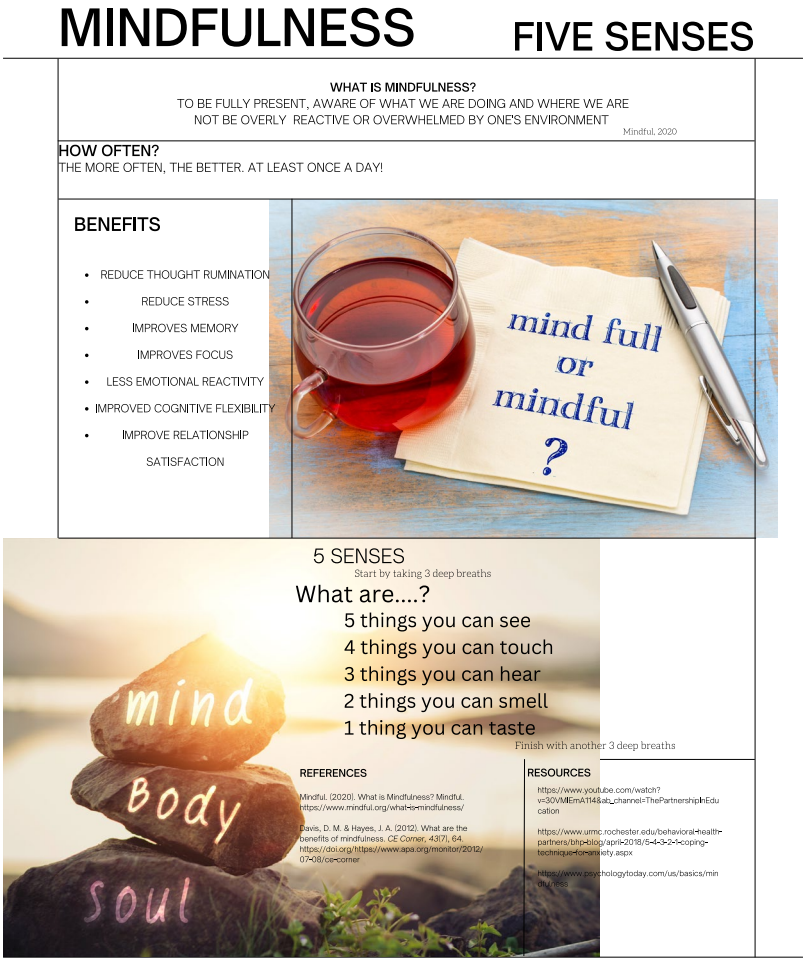


Figure C7

Weekly Check in Email and Check in Questionnaire

Weekly Reminder Email

Don't forget to practice mindfulness today!

FIVE-SENSES TECHNIQUE

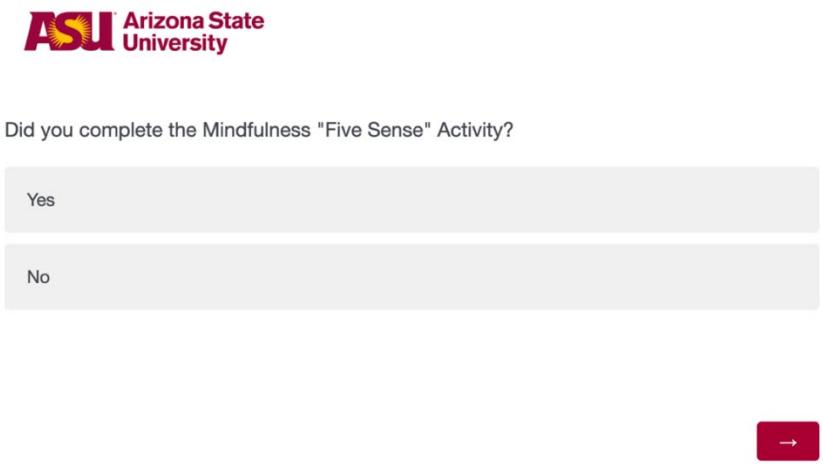
Start with 3 deep breaths…

What are…?

5 things you can see
4 things you can touch
3 things you can hear
2 things you can smell
1 thing you can taste

Finish with 3 deep breaths ☺

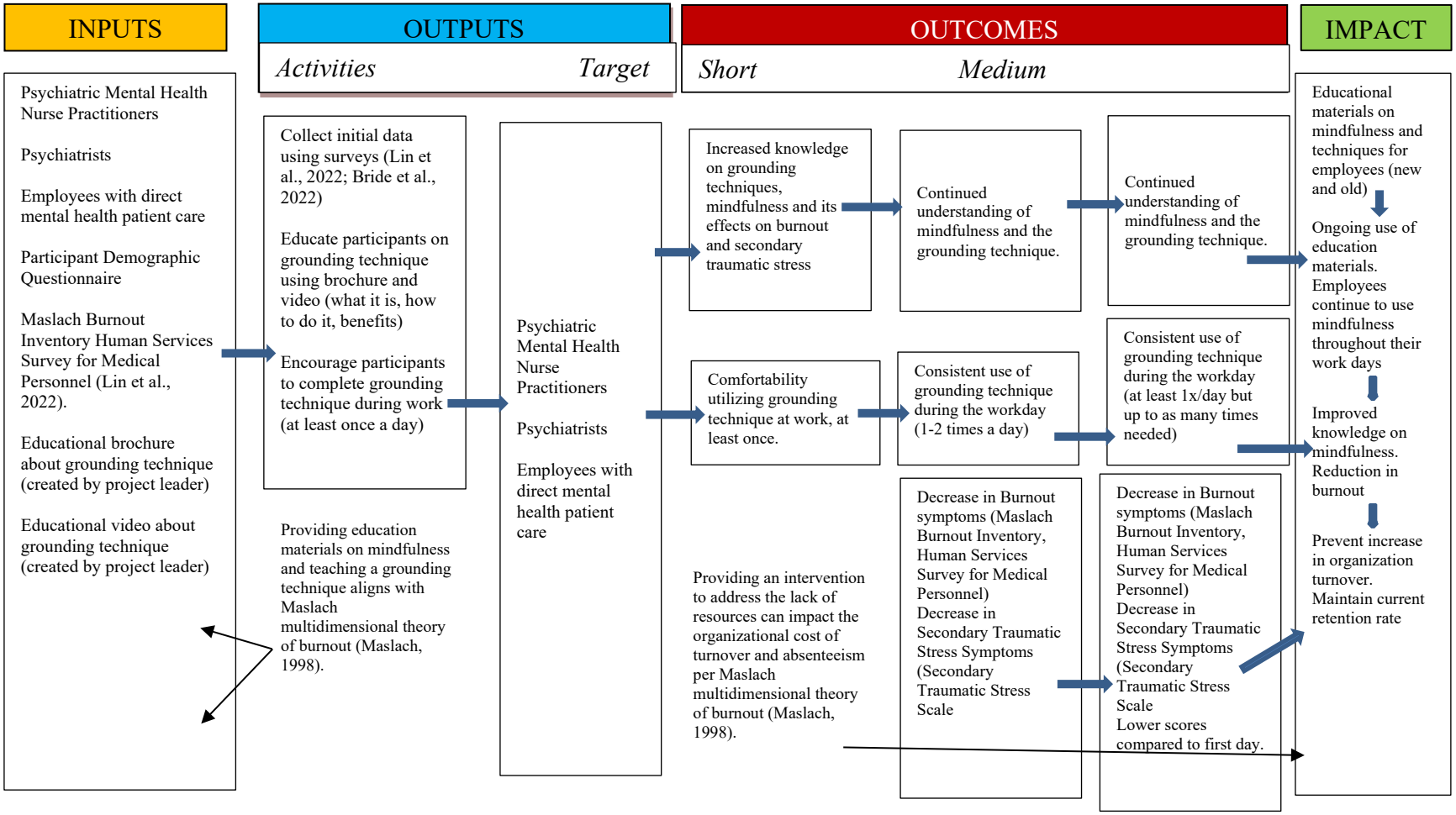
Click the link to record completing the technique:
https://asu.co1.qualtrics.com/jfe/form/SV_3k2GjgNoMACiwHc



Appendix D

Logic Model

Goals: The purpose of this doctoral nursing project is to reduce feelings of burnout in mental health professionals through a mindfulness grounding technique.



Assumptions: The participants will have some symptoms of burnout and secondary traumatic stress (Brown et al., 2022; Yazici and Ozdemir, 2022). The participants will not have their own mindfulness techniques. The participants will learn from the educational materials provided. The participants will complete the grounding technique regularly.

Appendix E

Project Budget

	Activities	Cost	Total
Direct Cost	Permission to utilize picture of burnout inventory in paper and for IRB review	$50	$50
	License permission to distribute and collect burnout inventory in project	$2.50 per test (min 50)	$250
			$320
Indirect Cost	Internet bill	$200/month	$1200
	Canva Pro subscription (create flyers, brochures, etc)	$12.99/month	$77.94
			$1200.94
Funding	American Rescue Plan – improving mental health worker retention and mental health (Assistant Secretary for Public Affairs, 2022).	$103 million nationwide	
			Inaccessible
Potential Revenue/Cost Savings	Avoid turnover/low retention costs	$30-45,000/recruit	
			+$390,000 - $585,000

Appendix F

Results

Table F1

Demographics Table

Variable	*n*	%
Gender		
Male	1	33.33
Female	2	66.67
Highest Education		
Masters	3	100
Role/Job Title		
NP	3	100
Time in Mental Healthcare		
2 – 5 years	2	66.67
< 1 year	1	33.33

Table F2

Summary Statistics of Ages

Variable	*M*	*SD*	*n*	SE_M	Min	Max
Age	39.33	2.08	3	1.20	37.00	41.00

Table F3

Summary Results from the MBI pre and post Intervention

	EE Pre	EE Post	DP Pre	DP Post	PA Pre	PA Post
M	26.00	27.67	9.00	9.67	31.33	27.67
SD	14.00	7.51	7.55	6.11	2.52	5.03

Note. N=3.

Table F4

Statistical Significance Results from the MBI pre and post Intervention

	EE	DP	PA
t	-0.34	-0.046	0.95
p	0.764	0.691	0.441
d	0.20	0.26	0.55

Note. N=3. Degrees of Freedom for the *t*-statistic = 2. d represents Cohen's *d*.