Providing Nurses with a Structured Approach to Emotional Support During COVID-19

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Abstract

The increased demands on healthcare facilities as a result of the COVID-19 pandemic have taken an emotional and physical toll on Healthcare Workers (HCW) including nurses, who are on the front lines of patient care. HCW are at an increased risk of mental health disorders, including depression, anxiety, and post-traumatic stress disorder (PTSD), as a result of repeated exposure to traumatic events, long working hours, workplace violence, and repeated exposure to death and suffering. Additionally, nurses have a higher risk of suicide than the general population. A literature review was conducted and identified resilience interventions as a theme. Interventions identified were small group resiliency training, a multiple intervention approach, structured debriefing, and peer-to-peer support. The purpose of this Doctor of Nursing Practice (DNP) project is to implement a strategy to promote resilience with the goal of alleviating fatigue, depression, burnout, anxiety and stress, and mental/physical quality of life. The Battle Buddy intervention consists of a structured process of peer-to-peer support. The Battle Buddy program is widely used by the U.S. Army and was recently implemented in the hospital setting by the University of Minnesota as a response to the COVID-19 pandemic. The Anticipate, Plan, Deter (APD) model and strategies to promote resilience and emotional well-being were made available to the participants. The intervention was piloted with Advanced Practice Registered Nurse (APRN) students in the graduate program of a large Midwestern College of Nursing. The intervention was implemented in phases that include assigning Battle Buddy pairs, providing resources, and structured (optional) Battle Buddy Workshops. An informal Battle Buddy workshop survey was administered following each workshop. The Well Being Index (WBI) was used to survey the APRN students at baseline, six, and 12 weeks after implementation. Despite

limited survey responses, the quantitative and qualitative data show that participants benefitted from being able to connect on their own time with a peer who understood their struggles.

Keywords: Healthcare workers, health care providers, resiliency, and emotional support

Providing Healthcare Workers with a Structured Approach to Emotional Support during COVID-19

With the emergence of the novel coronavirus disease (COVID-19) and subsequent worldwide pandemic, Michigan has had 785,307 positive cases and 16,840 confirmed deaths (MDHSS, 2021) as of April 17, 2021. As a result, increased demands have been placed on healthcare systems, people, supplies and finances. These demands are due to an overwhelming influx of COVID-19 patients receiving care and those coming to the hospital for screening and treatment.

The increased demands on healthcare facilities have taken an emotional and physical toll on healthcare workers (HCW), who are at the front lines of patient care. HCW have been asked to transfer to other areas outside of their expertise and work longer hours, at times without adequate personal protective equipment (PPE), placing both themselves and those around them at risk (Lai et al., 2020). In addition, many hospitals are struggling financially due to the cost of caring for COVID-19 patients, cancelation of elective services, increase in purchasing of PPE, and increased monetary support some hospitals are providing to their workers. The overall cost of the COVID-19 pandemic to hospitals in the United States (US) is estimated at over $202 billion during the initial four-month period (American Hospital Association (AHA), 2020). Therefore, many HCW faced furlough in the midst of the pandemic, further increasing anxiety and depression. HCW are at a significant risk of depression, anxiety, post-traumatic stress disorder (PTSD), and substance abuse (Maharaj, Lees, & Lal, 2018; Mealer, Burnham, Goode, Rothbaum, & Moss, 2009). Interventions must be focused on improving coping and resiliency and reducing the risk of anxiety and depression within HCW. The purpose of this paper is to investigate the emotional needs of nurses enrolled in the APRN program at a large Midwestern

University College of Nursing and implement evidence-based strategies to assist the nurses in managing stress endured during and after pandemic.

Background

Mental health disorders are extremely common in the United States. According to SAMSHA (2020), in 2017, approximately one in five of all adults ages 18 and over had some form of mental illness. According to the American Psychological Association (APA), in 2013, the cost of mental health care in the United States was estimated at $187.8 billion, which is the fourth highest cost of all diseases and disorders (2020). HCW are at an increased risk of mental health disorders including depression, anxiety, and PTSD as a result of repeated exposure to traumatic events, long working hours, workplace violence, and repeated exposure to death and suffering (Maharaj et al., 2018; Mealer et al., 2009).

According to the Anxiety and Depression Association of America (ADAA), feelings of depression may include hopelessness, sadness, guilt, decreased energy, decreased appetite, insomnia, or irritability (2020-c). Feelings of anxiety may include feeling nervous, irritable, difficulty concentrating, or insomnia (ADAA 2020-b). According to Magtibay, Chesak, Coughlin, and Sood (2017), 18% of nurses suffer from depression, which is more than double the depression prevalence in the U.S. general population. PTSD is characterized by increased anxiety and depression, edginess, or flashbacks regarding a traumatic event such as a disaster, physical abuse, or other traumatic events (ADAA 2020-a). PTSD is also common among nurses, with 18% of them experiencing signs and symptoms of PTSD compared to the general population of 8-10% (Mealer et al., 2009).

The COVID-19 pandemic has placed an additional strain on an already stressful occupation. Pappa et al. (2020) conducted a systematic review of 13 different studies from

China, two of which are from Wuhan, that included 33,062 participants. The review focused on the impact of the COVID-19 pandemic on mental health and prevalence of depression, anxiety, or insomnia amongst HCW. The results of the study were that 23.2% of the participants reported anxiety, 22.8% reported depression, and 34.32% reported insomnia.

A recent survey of over 10,000 nurses across the US conducted by the American Nurses Foundation, a branch of the American Nurses Association, measured feelings of the nurses surveyed. The survey was conducted from March 20th-July 6th, 2020, and demonstrates the significant impact on nurses' mental health because of the COVID-19 pandemic. Prior to COVID-19 pandemic, nursing had been identified as a very stressful occupation, and COVID has exacerbated this. The results of the survey included that 51% felt overwhelmed, 48% were anxious or unable to relax, and 40% felt sad in the 14 days prior to taking the survey (American Nurses Foundation, 2020). Nurses specifically are at an increased risk of suicide compared to the general population (Davidson et. al, 2020).

The COVID-19 pandemic highlights an already at-risk group. Interventions focusing on building positive coping skills and resilience must be explored to address this problem. With the increased risk of emotional and physical distress of COVID-19, it is imperative to ensure programs are available to manage the psychological well-being of these individuals.

Clinical Question and Problem Statement

According to systematic review by Cocker and Joss (2016), interventions that promote individual resilience and provide education on coping strategies are effective in reducing anxiety and depression in occupations with a high risk of trauma, compassion fatigue, and burnout.. In this large-sized, Midwestern college of nursing, what evidence-based strategy(s) would be most successful in promoting resilience and developing positive coping skills in HCW?

Organizational Assessment

At this large Midwestern College of Nursing, the APRN program consists of students enrolled in the post-masters track (those that already have an advanced degree) as well as students enrolled in the Nurse Practitioner (NP), Nurse Anesthetist (NA), and Clinical Nurse Specialist (CNS) track. Many of the nurses enrolled are continuing to work as nurses at the bedside while furthering their education.

The college of nursing did not have a formalized program specifically focused on emotional wellness and resilience in the APRN program. The associate dean and project advisor expressed that this was an identified need within the college especially during the COVID-19 pandemic. Students are experiencing many stressors academically, at the bedside, and at home.

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was performed within the organization as part of the process of scholarly inquiry (see Appendix A). A SWOT analysis is a tool used when assessing the organization or clinical unit, identifying strengths weakness opportunities, and threats provides information regarding the organizational climate and culture that can be utilized to determine the current state so that a robust and successful intervention will be implemented within the organization (Bonnel & Smith, 2018).

Strengths. The organization has several strengths. APRN students already have access to the university's learning management system for intervention implementation. Additionally, the intervention will be led by an adult gerontology CNS with experience in mental health. Lastly, the college of nursing listed student wellness as a priority on the strategic plan.

Weaknesses. There were some weaknesses identified. One weakness identified was the time availability of participants to participate in an intervention. Many of the APRN students are employed full or part time as registered nurses (RN) while furthering their education.

Opportunities. Several opportunities exist within the organization. First, the project will be led by a Doctor of Nursing practice (DNP) student who is an APRN certified as an adult gerontology CNS with expertise in mental health, emergency nursing, and organizational leadership. The DNP student is trained in Mind Strong ®, which is based on cognitive behavioral therapy and is a validated program to improve resiliency and promote positive thinking (Sampson, Melnyk, & Hoying, 2019). In addition, the DNP student has completed training from the national center for post-traumatic stress disorder (PTSD) Skills for Psychological Recovery (SPR) (Wade et al., 2015). Lastly, there is a national and international focus by multiple organizations to promote interventions to address HCW emotional well-being and improve resilience (WHO, 2020).

Threats. Threats were identified during the inquiry process. There is an evolving body of literature regarding specific interventions to address HCW emotional wellbeing during the COVID-19 pandemic. Multiple interventions that were identified in the literature, but they are relatively low levels of evidence. Many interventions that could support the emotional wellbeing of HCW and promote resilience also have an associated cost, which could be a barrier to implementation. Additionally, many of the interventions take several weeks or months of training sessions to demonstrate effectiveness.

Purpose of the Project

The purpose of this DNP project was to implement a strategy to promote resilience and develop positive coping skills alleviating fatigue, depression, burnout, anxiety and stress as well as improving mental and physical quality of life in nurses.

Evidence Based Practice Model

The evidenced based practice model utilized was the IOWA model (Doody & Doody, 2011). According to Doody and Doody (2011) the model allows us to focus on problem-focused triggers and follows seven steps: Selection of topic, forming a team, evidence retrieval, grading the evidence, developing an evidence based practice (EBP) standard. Implement the EBP, and evaluation.

Search Strategy

Search Methods

Cumulative Index of Nursing and Allied Health (CINAHL), The United States National Library of Medicine's (NLM) Pub Med, and Google Scholar were accessed with the following search terms: "Health care workers" OR "Nurses" OR "Physicians" OR "Healthcare Providers" AND "strategies" OR "methods" OR "techniques" OR "interventions" AND "Resiliency", articles were limited to within 5 years, peer reviewed, journal articles, English language, and in the adult population. Articles were additionally excluded if they referred to an incorrect study population, little to no relevance to clinical problems and not referring to a specific intervention. The search returned 156 results from CINAHL and 222 results from Pub Med. Additionally, 14 articles were obtained by looking at reference lists and google scholar with the same search terms. The Preferred Reporting Items for Systematic Reviews (PRISMA) method was utilized for the search and can be found in Appendix B PRISMA Diagram (Liberati et al., 2009). A total of 392 articles were included for initial review after duplicates were removed 375 articles were included for initial screening. Upon review of titles and abstracts 319 articles were excluded due to not meeting the inclusion criteria. The remaining 56 articles were prioritized and assessed further as they directly answered the clinical question, contained intervention(s) that might be

useful when addressing the identified clinical problem, were generalizable, and were conducted within the US.

Search Results

Fifteen articles were identified as most relevant to be included in the literature synthesis (see Appendix C Literature review table). Article references and clinical guidelines of the 15 articles were also searched for any applicable articles yielding one additional article for inclusion bringing the total to 16. The additional article was beyond the five-year time limit; however, it was the primary research article for one of the interventions. Study designs included three randomized controlled trials (RCT), a quantitative descriptive study, four cross-sectional surveys, a quasi -experimental study, a qualitative study, two mixed method designs, one expert opinion, one evidenced based quality improvement study, and two cohort designs. The hierarchy of evidence outlined by Melnyk (2005) was used to determine the level of evidence of the studies.

Literature Synthesis

Various themes emerged from the review of the literature (Appendix D Literature Synthesis Table). Almost all of the articles focused on interventions involving resiliency. The interventions consisted of small group resiliency training, structured debriefing, peer-to-peer support programs, or a multiple intervention approach to improving resiliency.

Resilience

When addressing emotional-well-being and the psychological wellbeing of nurses many of the interventions focused on building resiliency in HCW (Albott et al., 2020; Buchanan & Reilly, 2019; Cooper & Bates, 2019; Linda Grabbe, Melinda K. Higgins, Marianne Baird,

Patricia Ann Craven, & Sarah San Fratello, 2020; Kemper, Lynn, & Mahan, 2015; Lown, Lown, & Manning, 2010; Magtibay et al., 2017; Mistretta et al., 2018; Ramsberger, Legree, & Mills, 2002; Wahl, Hultquist, Struwe, & Moore, 2018; Weidlich & Ugarriza, 2015; Werneburg et al., 2018). The articles defined resiliency as the ability to quickly recover emotionally from traumatic events or stressful situations. While almost all of the articles focused on building resiliency within HCW several interventional themes emerged such as small group resiliency training (Buchanan & Reilly, 2019; Cooper & Bates, 2019; Mistretta, 2018; Sampson et al., 2019; Werneburg et al., 2018(L. Grabbe, M. K. Higgins, M. Baird, P. A. Craven, & S. San Fratello, 2020); structured debriefing (Pender & Anderton, 2016); peer to peer support (Albott et al., 2020; Edrees et al., 2016; Lown et al., 2010; Wahl et al., 2018); and a multiple intervention approach (Wong, Pacella-LaBarbara, Ray, Ranney, & Chang, 2020).

Small group resiliency training. The exposure to stressful events is difficult to control therefore the focus turns to providing HCW the skills, strategies, skills, support, and tools necessary to build resiliency. Five of the interventions focused on an in person small group resiliency training based on principals of cognitive behavioral therapy (CBT) (Buchanan & Reilly, 2019; Cooper & Bates, 2019; Mistretta, 2018; Sampson et al., 2019; Werneburg et al., 2018). One intervention the Community Resilience model (CRM) utilized a psychoeducation/sensory skills training approach to address resilience (Linda Grabbe et al., 2020). The small group therapy interventions can range from three hours to 12 weeks (Buchanan & Reilly, 2019; Cooper & Bates, 2019; Mistretta et al., 2018; Sampson et al., 2019; Werneburg et al., 2018). Five interventions require training to be completed by the facilitator (Buchanan & Reilly, 2019; Linda Grabbe et al., 2020; Magtibay et al., 2017; Sampson et al., 2019; Werneburg

et al., 2018)

The samples sizes of the small group resiliency trainings ranged from 60-196 (Buchanan & Reilly, 2019; Cooper & Bates, 2019; Linda Grabbe et al., 2020; Mistretta et al., 2018; Sampson et al., 2019; Werneburg et al., 2018). In addition to improving resiliency many of the interventions demonstrate decreased stress, anxiety, depression, fatigue, burnout, and secondary trauma (Buchanan & Reilly, 2019; Cooper & Bates, 2019; Linda Grabbe et al., 2020; Mistretta et al., 2018; Sampson et al., 2019; Werneburg et al., 2018). The quality of evidence ranged from a Level II to a Level VI. Mindstrong © had a positive effect on perceived anxiety (d=3.5), depressive symptoms (d=1.8), healthy lifestyle beliefs (d=5.59), and job satisfaction (d=0.98) when compared to the control group (Sampson et al., 2019). The US Army's care provider support program (CPSP) did not significantly impact resiliency or coping scores but was successful at reducing burnout (Weidlich & Ugarriza, 2015). In the stress management and resilience-training program (SMART), there was a significant improvement ($p< 0.001$) in resiliency scores from pre-program to post program assessment (Werneburg et al., 2018). HeartMath© training had similarly favorable outcomes as according to Buchanan and Reilly (2019) the results demonstrated a 24 % decrease in emotional distress ($p=0.001$) also it showed a decrease in physical stress (3.25-2.56) and fatigue (3.98-3.18).

Structured debriefing. Critical incident stress debriefing (CISD) was identified in the literature as well. CISD is an individual or group debriefing following a stressful event to talk about the event and any emotions experienced to normalize the experience and reduce the risk of PTSD (Pender & Anderton, 2016). Pender and Anderton (2016) in a qualitative study utilized provider feedback of 30 providers to determine whether the industry practice is consistent with professional standards, they found that it was consistent. Multiple organizations and low-level

evidence based studies do support the use of CISD, the American Association of Nurse Anesthetists (AANA) support this practice to be used with healthcare providers to debrief critical and adverse events to promote emotional well-being and healing immediately following an event (AANA, 2014).

However, many high quality meta-analysis and systematic reviews and organizations including the World Health Organization (WHO) and the American Red Cross actually discuss that critical incident debriefing immediately following a stressful event does not have a significant effect on the development of PTSD and may actually have a detrimental effect as the provider may not be ready to talk about the event initially (American Red Cross Advisory Council on First Aid, 2010; Rose, Bisson, Churchill, & Wessely, 2002; World Health Organization, 2012). When the participant hears other group members share their experience they may not see their reaction as a normal stress response, the mandated debriefing can therefore be detrimental to their normal psychological healing process (American Red Cross Advisory Council on First Aid, 2010; Rose et al., 2002; World Health Organization, 2012).

Peer to peer support. The literature search identified four interventions that specifically addressed ongoing peer support as an intervention to improve resilience and promote emotional well-being (Albott et al., 2020; Edrees et al., 2016; Lown et al., 2010; Wahl et al., 2018). Lown et al. (2010) evaluated the effectiveness of Schwartz center rounds within 10 hospitals across the country who utilize Schwartz center rounds that included 399 respondents. Schwartz center rounds offer a safe space in which providers can share their experiences, dilemmas, joys, concerns, and fears (both for their patients and for themselves). According to Lown et al. (2010), the results indicated a statistically significant decrease in perceived stress and an increase in ability to cope with the psychosocial demands. While the results are favorable, there is a

significant cost with this intervention as there is a fee that needs to be paid to the Schwartz center organization as well as the lunches that need to be provided and it is necessary to implement hospital wide without piloting the intervention.

Edrees et al. (2016) implanted a program called resilience in stressful (RISE) at Johns' Hopkins University. In the RISE program, a hotline was created with trained employees in providing emotional support. Following an adverse or patient safety event the HCW could call the hotline to discuss the event and receive peer-to-peer emotional support. The results of the study were that the RISE phone call intervention met the needs of the HCW in 88 % of the cases. RISE had limited participation in the first four years with only one-four phone calls per month.

The Battle Buddy intervention implemented at The University of Minnesota Hospital. Battle Buddies is an intervention in which peers with similar experience are paired up together and provide ongoing emotional support, larger group sessions and support is provided as well as resources if the Battle Buddies experience emotional distress (Albott et al., 2020). The Battle Buddy intervention was implemented during the COVID-19 pandemic and the article by Albott et al. (2020) describes their roll out process and indicates success but is not a formal research study, that study is underway. A further search was conducted to see if anyone else had implemented this in the hospital or academic setting and nothing could be found. The Battle Buddy system has been used extensively in the United States Army (Ramsberger et al., 2002). The Ramsberger et al. (2002) study was outside of the 5-year timeframe but was referenced by the Albott et al. (2020) article. Ramsberger et al. (2002) describes that ongoing peer-to-peer emotional support allowed Battle Buddies to form a relationship, therefore could identify when their Battle Buddy was demonstrating emotional distress, as they frequently would speak to them about their emotions and validate feelings. Since they were at the same level, they both had

similar experiences and could provide support to each other. The results of the Ramsberger et al. (2002) study of 964 soldiers 85 % indicated that they were responsible for their Battle Buddy's success, 94 % indicated they helped somewhat or a great deal, over half of those surveyed said that their Battle Buddy had a positive effect on their morale, commitment, and resilience. Lastly, in a study by Wahl et al. (2018) the effectiveness of a three-tiered peer support network (PSN) was evaluated and demonstrated an increase in caregiver stress and improvements in compassion fatigue.

Multiple intervention approach. Wong et al. (2020) utilized four separate interventions including CBT, mindfulness exercises, also indicated that electronic platforms such as electronic apps can be useful. One app that is recommended by Wong et al. (2020) is the post-traumatic stress disorder (PTSD) coach developed by the US national center for PTSD. The PTSD coach app asks the user about symptoms provides several evidenced based interventions that can help to alleviate their symptoms such as positive self-talk, mindfulness, guided imagery, etc. and then tracks progress and provides resources of crisis help lines if needed. In an RCT of 60 HCW Mistretta et al. (2018) evaluated a mindfulness based resiliency training compared to a smart phone based online resiliency training and found that the mindfulness based resilience training had a greater effect on resilience and emotional well-being compared to smart phone based training.

The literature identified several themes resilience, peer-to-peer, support, small group resiliency training, structured debriefing, peer to peer support, and a multiple intervention approach. Several of the interventions had a significant associated cost and many had a significant time commitment required of the participant. The Battle Buddies intervention was

chosen as the amount of time required was minimal, there was no cost involved, and the literature support peer-to-peer support as an intervention.

Goals, Objectives and Expected Outcomes

The goal of this Evidence Based Practice (EBP) project was to implement a Battle Buddy intervention as described by Albott et al. (2020). The expected outcome was to alleviate fatigue, depression, burnout, anxiety and stress, and mental/physical quality of life. The Well Being Index (WBI) will be used to measure these outcome measures. Additionally, the effect on resilience will demonstrate a positive impact on retention both within the APRN program and at the nurse participant's place of employment.

Methods

As previously mentioned, the Iowa Model was utilized as the theoretical model for this project. This section will focus on developing an EBP standard, implementing the EBP, and evaluation. The problem-focused trigger was the lack of a structured program to address the emotional well-being of nurses at the institution. The DNP student that led the implementation is a board-certified CNS but is not certified as a mental health provider. Other team members included the Director of the Psychiatric Mental Health Nurse Practitioner (PMHNP) Program who is a PMHNP, a community partner who is the Associate Dean of Academic Affairs at the College of Nursing, as well as the DNP project, a Doctoral prepared CNS.

The Battle Buddy intervention by Albott et al. (2020) was chosen as the best intervention because it does not require class time (time resource) and has a limited financial cost (financial resource). The program can be implemented rapidly, can scale to meet institutional needs, and is supported in the literature. Additionally, the Battle Buddy emotional support is easily

sustainable. Nurses will require emotional support on an ongoing basis even beyond this pandemic period. These factors increase the likelihood of sustainability within the organization beyond this pilot period. With this in mind, the associate dean and faculty advisor both indicated that the Battle Buddy intervention appears to be a good fit for the institution.

The Battle Buddy intervention consisted of a structured process of peer-to-peer support. Peers were paired according to level of experience and training. Nurses with similar characteristics were placed together. They reached out to their assigned Battle Buddy each week to check in on their emotional well-being; identify stressors; develop a plan to cope with stressors; and, if they noticed an acute change, they would refer them to free on-campus resources, such as counseling and psychiatric services (CAPS). The Anticipate Plan Deter (ADP) model from Schreiber, Cates, Formanski, and King (2019) and other strategies to promote resilience and improve emotional well-being were the principles of the Battle Buddy peer-to-peer intervention (see Appendix H for more information), and a were accompanied by guidelines, strategies, and resources placed in the learning management system to optimize peer-to -peer engagement and support. The pilot lasted 12 weeks, then an assessment and evaluation was made regarding the potential expansion and sustainability of the Battle Buddy intervention.

Project Site and Population

The implementation site was a large, Midwestern university located in an urban area. The intervention was implemented in the APRN program. The APRN program consists of students enrolled in the NP, CNS, NA, PMHNP, and Post-Masters programs. The key stakeholders in this project are all nurses enrolled in the APRN program, as well as patients, families, and resulting communities who will benefit from the increased resilience of the nurse participants. Strong leadership support from the institutional leadership team was crucial to success.

Ethical Considerations/Protection of Human Subjects

The College of Nursing at Michigan State University (MSU) approved the initial EBP project proposal and subsequent change in setting. After approved, it was submitted to the Institutional Review Board (IRB) for MSU and was deemed not human research. All data was contained within a password-protected laptop in a locked office.

Setting Facilitators and Barriers

One barrier that was anticipated was concerning time. The students that enrolled in the Battle Buddy intervention were also working at the bedside as nurses while studying in the APRN program. A streamlined and time efficient process was considered with the implementation. The goals were that the intervention would provide a significant impact while minimizing the time required of the participants, and that they could identify the benefits of peer-to-peer interaction. A facilitator of success at the institution was that the students are all enrolled at the same university and are familiar with the learning management system, which was instrumental in an efficient roll out and in enabling consistent communication with the participants. This strategic roll out and earning the buy-in of the participants and leadership was crucial to success.

Battle Buddy Peer to Peer Support Program

Implementation of the Battle Buddy intervention consisted of the following phases (See Appendix N for GANTT chart and timeline):

1. Students enrolled in the APRN program were recruited via email, video conferencing presentation (Zoom), and flyers sent to participants (see Appendix E). Participants were asked to complete an electronic survey that included the following information: Name

(first and last), MSU email, APRN program enrolled and semester in the program, work area of expertise and number of years of experience as a nurse.

2. Based on the survey responses, Battle Buddy partners were paired based on a Battle Buddy selection algorithm (see Appendix F).
3. The Battle Buddy resource site was created in the learning management system to include an overview of the program, tips on communicating with Battle Buddies, a discussion forum, and stress-relieving and resilience-building strategies (see Appendix G). Weekly emails and announcements with tips and strategies were sent out every Monday.
4. Participants were pre-surveyed using the Well Being Index (WBI) (see Appendix J). The Well-Being Index Survey Questions were distributed to participants prior to implementation and remained open for two weeks.
5. A welcome email connecting the Battle Buddy partners was sent and a link to the Battle Buddy Resource Site was provided to the participants (see Appendix I).
6. The first DNP-student-led Battle Buddy optional workshop was held for participants and included a Battle Buddy check in, stress-relieving strategies and exercises, and sharing of resources (see Appendix M). Participants were surveyed anonymously following each workshop on how many times per week they connected with their partner, if they had visited the Battle Buddy Resource Site, what is going well, and what could be improved with the program. Then, the survey asked specific questions about the workshop using a Likert scale (better understanding of the Battle Buddy program, utilization of stress-relieving strategies, and best day and time to attend Battle Buddy workshops).
7. Participants were asked to complete a Well Being Index (WBI) Survey six weeks into the program (see Appendix J). The survey questions were open for response for two weeks.

8. The second DNP-student-led Battle Buddy optional workshop was held for participants and included a Battle Buddy check in, stress-relieving strategies and exercises, and sharing of resources (see Appendix M).
9. Participants were asked to complete another Well Being Index (WBI) Survey at the end of the program (see Appendix J). The survey remained open for response for two weeks.

Measurement Instruments/Tools

The WBI was administered via electronic survey a total of three times (Week 0, Week 6, and Week 12). Demographic information about number of years of experience and clinical setting were also obtained. The surveys were administered to the APRN student participants via an electronic survey and were both emailed and set as an announcement in the learning management system (Dyrbye et al., 2019; Dyrbye, Johnson, Johnson, Satele, & Shanafelt, 2018; Dyrbye, Satele, Sloan, & Shanafelt, 2012, 2014). The surveys utilized yes/no questions with a score of one point being assigned for yes and zero for no. Each survey received an overall score (≥ 4 is associated with a higher risk for burnout, fatigue, poor quality of life, patient care errors, and leaving their position over the next 24 months). Permission was obtained from the MedEd manager (P. McNally, personal communication, July, 16, 2020) (see Appendix L). MedEd manages access to the WBI on behalf of the Mayo Clinic. Permission for full access and use was granted for academic and scholarly use only.

The WBI is a valid and reliable survey created by the Mayo Clinic that has national benchmark data available and is used to evaluate HCW on the outcome variables of burnout and emotional well-being, including depression, anxiety, suicidal thoughts, quality of life, and fatigue (Dyrbye et al., 2019; Dyrbye, Johnson, Johnson, Satele, & Shanafelt, 2018; Dyrbye, Satele,

Sloan, & Shanafelt, 2012, 2014). See Appendix K for detailed statistics of the predictive validity of the WBI survey tools.

Cost-Benefit Analysis and Budget

The Battle Buddy intervention is budget neutral as it utilizes the university's preexisting learning management system to enroll participants and provide resources, updates, tips, and strategies. The participants already have access to this learning management system as enrolled students. As the program is expanded beyond the student-led DNP project, an anticipated cost would be a CNS consultant fee of approximately $45-$55 per hour to administer the program.

Timeline

The total timeframe to complete the pilot intervention was 12 weeks. Phases 1, 2, and 3 were completed in the two weeks preceding implementation. Initially, the project was to be implemented at a hospital on a COVID unit, but due to unavoidable delays with the IRB process at the organization, I obtained approval to switch my implementation site to the APRN program in the College of Nursing (See Appendix N).

Results

Well Being Index

The initial WBI survey had a 40% response rate. The responses were analyzed using descriptive statistics and identified that 100% felt burned out, 75% were anxious, depressed, or irritable, 50% felt as if work was hardening them emotionally, and 50% were overwhelmed. These results demonstrated a low level of overall emotional well-being of the participants and

further demonstrated the need for the intervention.

The WBI survey that was administered at six weeks had one respondent, representing a response rate of 10%. The participant indicated feeling burned out and feeling like work was hardening them emotionally. However, the participant did not report feeling anxious, depressed, irritable, or overwhelmed. The WBI survey administered at 12 weeks did not have any respondents. It is difficult to determine if the intervention achieved projected outcomes based on the limited responses to the survey.

Battle Buddy Workshop Survey

The Battle Buddy workshops were recorded and delivered on-demand due to low turnout and scheduling conflicts for the scheduled virtual session. The first Battle Buddy workshop survey had two respondents. Both respondents indicated that they connect with their Battle Buddy 1-2 times per week, that they had visited the Battle Buddy resource site, and all strongly agreed that they learned at least one stress-relieving strategy. One respondent wrote, “It's nice to be able to connect whenever with my Battle Buddy. I actually really appreciated the prerecorded Battle Buddy workshop.” Another respondent wrote, “It’s nice having someone to share the stress of the pandemic with that understands.” The second Battle Buddy workshop had three respondents. All respondents indicated that they connected with their Battle Buddy 1-2 times per week, had visited the resource site, and all strongly agreed that they learned at least one stress-relieving strategy. One respondent wrote, “It's nice to be able to connect to my battle buddy whenever needed.” Another wrote that one benefit of the program was “having an outlet to discuss the stress of the pandemic,” and the third respondent wrote that it was “nice to be able to connect with Battle Buddy on my own time and when needed”.

While the data from the WBI was quite limited, the feedback from the surveys is encouraging and demonstrates that there are Battle Buddies connecting 1-2 times per week and visiting the resource site, and qualitative data suggests they are benefiting from the intervention.

Sustainability Plan

Throughout the 12-week program, participants established a working relationship with their Battle Buddy. They are encouraged to connect frequently moving forward. While the formal intervention, weekly emails, and announcements have ended, the Battle Buddies will remain enrolled on the Battle Buddy Resource Site for as long as they are a student at the university. The site will be updated with additional resources and information periodically. The hope is that the resilience building strategies and tips, along with continued peer-to-peer support will positively impact their emotional well-being moving forward. Since the Battle Buddies will continue to be enrolled in the course, a follow-up survey can be administered in the future to assess the longitudinal impact of the intervention on emotional well-being and resilience.

Discussion

The intervention had several strengths and weaknesses. First, the Battle Buddy program implementation was budget neutral and easily expandable. Additionally, the utilization of the learning management system streamlined communications for administering the program. Overall, based on the workshop surveys, there was positive feedback regarding the program and workshops specifically.

The Battle Buddy Program did overall have a limited number of participants, with only ten participants. A larger group would improve data analysis and evaluation as well as allow for matching the Battle Buddies with peers with similar years of experience, expertise, and level in

the program. The 6-week WBI survey had just one respondent and nobody responded to the 12-week WBI survey, making effectiveness difficult to evaluate. Strategies to increase survey completion need to be explored. Additionally, other validated evaluation tools should be considered. While the WBI included all of the key outcome variables this project sought to measure, it asks the participant have they "ever" felt the various emotions. This limits its usefulness in comparing results from different points in the intervention. Requesting permission from Mayo Clinic to change the language to "since the last survey" would be beneficial.

Implications for Nursing

The Battle Buddy program demonstrated that opportunities exist to further expand this program within the university and into healthcare organizations. Further research studies could evaluate the potential to expand use in multiple different settings. Lastly, this program is easily sustainable, but may require a CNS consultant to provide oversight of future expansion efforts.

Conclusion

The COVID-19 pandemic has had an additional negative impact on a health care workforce that was already burnt out, stressed, anxious, and experiencing a low emotional well-being, the Battle Buddy intervention, with origins in the US Army and implemented at the University of Minnesota Hospital, is ideal for improving resilience and emotional well-being by providing peer-to-peer support and resources for nurses. If nurses are going to get through this pandemic and the many other challenges that they face every day, peer-to-peer support and developing healthy stress-relieving and coping strategies will be critical.

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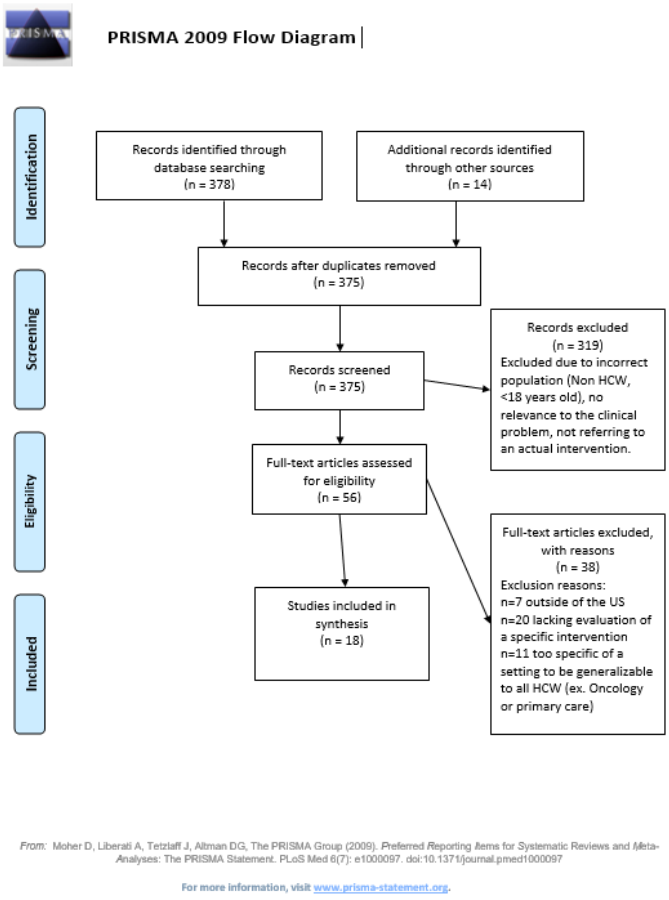
Appendix A (SWOT Analysis)

Strengths	Weaknesses
• APRN students already have access to the University's learning management system for intervention implementation. • Intervention led by an adult gerontology clinical nurse specialist with experience in mental health. • College of Nursing listed student wellness as a a priority on strategic plan.	• Time for participants to participate in planned intervention.
Opportunities	**Threats**

• Project led by a DNP student
  ○ Advanced Practice Registered Nurse (APRN) certified as an adult gerontology clinical nurse specialist (CNS)
  ○ Expertise in mental health, emergency nursing, and organizational leadership
  ○ Trained in Mind Strong, a cognitive behavioral therapy to improve resiliency and promote positive thinking
  ○ Trained in Skills for Psychological Recovery (SPR) from the national center for post-traumatic stress disorder (PTSD)
  ○ Faculty member with experience with the college of nursing learning management system.
  ○ Member of the College of Nursing Wellness committee
• National and international focus by multiple organizations to promote interventions to address HCW emotional well-being and improving resilience due to the COVID-19 global pandemic
	• Low levels of evidence regarding specific interventions to address HCW emotional well-being during the COVID-19 pandemic. Literature is rapidly evolving in this area
	• Many interventions to support HCW emotional well-being have an associated cost which may be a barrier to implementation
	• Several possible interventions take several weeks or months to demonstrate effectiveness

Appendix B (PRISMA Diagram)



Appendix C (Literature Review Table)

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
Ramsberger, P. F., Legree, P., & Mills, L., 2002	• N= 964 Army soldiers	• Quantitative descriptive Study	• Relationship between Batttle Buddy program and the well-being of the service members	• Batttle Buddy intervention • US Army recruits were assigned a Batttle Buddy to support them both throughout training and on deployment	• 85 % of those surveyed said they were at least somewhat responsible for their Batttle Buddies success • 94% of those surveyed said they helped their buddies somewhat or a great deal. • Over half of those surveyed said their Batttle Buddy had a positive effect on them in terms of confidence, morale, commitment, resilience, etc.	**Level of evidence: VI.** • Could be a great resource for peer to peer support in the clinical setting • To date, no studies found that critically evaluate the implementation of this type of program in the hospital setting • Article from Albott, S.C., Wozniak, J.F., McGlinch, B.P., Wall, M.H., Gold, B.S., & Vinogradov, S., 2020 described the implementation of this in with health care workers in a large academic

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
						health center as a response to the COVID-19 pandemic. • Positive feedback overall was indicated. • Does not have an associated cost and is scalable to the organization's needs • A formal study will be conducted to formally evaluate outcomes. • There is not a high level of evidence for this type of program
Kemper, K.J., Xiaokui, M., & Khayat, R., 2015	• N=213 clinicians and trainees	• Cross sectional survey	• Demonstrated a correlation between sleep and resilience • Strong correlation between	• No specific intervention Participants were surveyed with:	• Sleep disturbances were positively correlated with perceived stress (r= 0.43) and negatively correlated with poor health (r=-	**Level of evidence VI** • Doesn't provide evidence of an intervention itself.

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
			mindfulness and self-compassion.	• A 10 item cognitive and affective mindfulness scale • 12 item self-compassion scale • patient reported outcomes measurement information system Global Health measures • 10 Item perceived stress scale	0.33). Less mindfulness (r =-0.32) and self-compassion (r=-0.27). • Resilience was strongly correlated with less stress (r =-0.53), better mental health (r = 0.44), more mindfulness (r = 0.5) and more self-compassion (r=0.54).	• Demonstrates a significant correlation between Resilience and less stress, better mental health, more mindfulness and more self-compassion. • Provides evidence that an intervention focused on mindfulness and self-compassion would improve resilience in health care workers.

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
Magtibay, D.L., Coughlin, K., Chesak, S.S., & Sood, A., 2017	• N=50 Nurses	• Quasi-experimental • 1 –group baseline to post intervention	6 measurement tools were used to evaluate the outcome: • Subjective happiness scale • perceived stress scale • Generalized Anxiety Scale • Mindful Attention Awareness Scale • Connor-Davison Resilience Scale • Copenhagen Burnout Inventory	• 12 module Stress Management and Resiliency Training • Web based format • Delivered over 24 weeks	The Final surveys at week 24 showed a decrease in the following categories: • Anxiety (45.2 %) • Stress (29.8 %) • Personal burnout (32.6 %) • Client related burnout (38.5 %) *the p value for all was < .001*	**Level of evidence III** • Intervention had very favorable results • Would be difficult to implement as it is 12 modules over 24 weeks • Would require a significant time and financial commitment. • Would be appropriate in addressing the clinical problem • Isn't as feasible as some of the other interventions.
Pender, D.A. & Anderton, C., 2016	• N=30 • 16 mental health facilitators • 14 peer facilitators	• Qualitative study	• Experience of the Critical Incident Stress Debriefing (CISD) process. • The professional preparation to facilitate CISD, and demographic data	• Critical Incident Stress Debriefing (CISD)	• CISD groups that were described support that the scope of practice and conceptual framework is consistent with industry protocols. • When CISD was poorly received the one consistent factors is that there was variance from	**Level of evidence VI** • Sample size is very small • Applicability to the clinical problem is limited • Focused on the facilitator side

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
					established protocols.	rather than the participant. • Provides useful information regarding the importance of following an industry standard structure with CISD.
Wong, A.H., Pacella-LaBarbara, M. L., Ray, J.M., Ranney, M.L., & Chang, B.P., 2020	• First responders and Emergency Physicians	• Expert opinion (The authors cite credible resources for each of their interventions, some are included in this table)	• Focus awareness on the present moment • reducing perceived stress • Promoting resilience • Promoting a culture of healing, safety, and empowerment.	• Mindfulness exercises • Cognitive interventions • Digital and technological platforms • PTSD coach is cognitive behavioral free app that was developed by the US national center for PTSD	N/A	**Level of evidence VII** • Wasn't a formal literature review or synthesis • Overall a lower level of evidence (Level VII) • Presents several validated tools for addressing the emotional needs of HCW. • PTSD coach application is validated and may be used to augment another intervention.
Lown, B.A., & Manning, A.F., 2010	• N= 399 respondents from 10	• Cross Sectional Pre/Post survey design	• Insights into the psychosocial and emotional aspects of clinical care on	Schwartz center rounds: • Offer a safe forum in which providers can	• Statistically significant decreases in	**Level of evidence VI**

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
	Hospitals across the country • N=44 semi structured interviews		patient interactions • Teamwork • support for providers	share their experiences, dilemmas, joys, concerns, and fears (both for their patients and for themselves)	respondents' perceived stress • Statistically significant increases in their ability to cope with the psychosocial demands. • Emotional difficulties of work after they attended Rounds, as compared with those ratings before they began to attend Rounds. • Respondents and interviewees emphasized the impact of rounds on teamwork and communication across professions.	• Not a veryhigh level of evidence. • Results were statistically significant • 10 hospitals throughout the United States were surveyed with a good sample at 399 respondents and 44 structured interviews. • There is a financial cost associated with the rounds (further analysis would be needed) • This would need to be an intervention implemented hospital wide to have the greatest impact.
Buchanan, T.M., & Reilly, P.M., 2019	• N= 26 Providers • Completed both pre and post surveys.	• Cross Sectional Pre/Post survey design	• Increase in the POQA-r4 emotional vitality scale after completion of HeartMath training	• HeartMath training • Teaches participants the science behind and techniques designed to reduce the negative effects of stress and increase resilience.	• Preintervention and postintervention results showed a 24% decrease in emotional stress (P = .001) • physical stress scale (3.25 to 2.56, P =	**Level of evidence VI** • The sample size of the study is not very large

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
			• Decreases in the POQAr4 organizational stress, emotional stress, and physical Stress scales after completion of HeartMath training		.001) and the 2 subscales of fatigue (3.98 to 3.18, P =.001) and health symptoms (2.76 to 2.15, P = .001) all showed significant decreases.	• Not a very high level of evidence. • There is a cost associated with the training (would need to be investigated further). • Class takes 8 hours • Did decrease health care provider's emotional stress, physical stress and health symptoms
Endrees, H., Connors, C., Paine, L., Norvell, M., Taylor, H., & Wu, A.W., 2016	N= 144 staff in the department of Pediatrics	• Mixed-methods design that included a staff survey, peer responder self-evaluations and a focus group of peer responders	• A long-term goal of the program was to foster a culture in which all employees were resilient and mutually supportive before, during and after stressful events. • Intended to provide timely access to support employees' immediate needs to complement the services being offered by the	• RISE (Resilience In Stressful Events) program was developed at the Johns Hopkins Hospital to provide peer emotional support to healthcare workers following an adverse event (death, violence, error, etc)	• Peer responders reported that the encounters were successful in 88% of cases and 83.3% reported meeting the caller's needs. • Low awareness of the program was a barrier to hospital-wide expansion. • Over the 4 years, the rate of calls increased from ∼1–4 calls per month.	**Level of evidence VI** • Provides detailed description of the process of development and implementation. • Provides assessment tools that can be used by other organizations.

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
			existing employee assistance program			• No systematic follow-up of caller outcomes. • Relatively small sample sizes and some missing data. • Since the program is so well defined and there is evidence of effectiveness it could be applicable to support health care worker second victims in the clinical setting. • Financial costs would need to be further explored.
Werneberg, B.L., Jenkins, S.M., Friend, J.L., Berkland, B.E., Clark, M.M., Rosedahl, J.K., ….Sood, A., 2018	• N=144 adult wellness center health professionals	• Single arm cohort study	• Improve resiliency and other domains of wellness in members of the worksite wellness center.	• 12 week resilience program based on principles from Stress Management and Resilience Training Program (SMART) • 60-90-minute educational sessions over the course of 12 consecutive weeks • Small groups, ranging in size of 7-18 individuals, met in-person weekly at	• 119 of the participants reached study completion • Results indicated significant improvement ($p \leq .001$) in resiliency scores from pre-program participation (mean = 65.3) to post-program	**Level of evidence IV** • There is a relatively low sample size. • The program takes 12 weeks to implement. • You also need to take a facilitator

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
				a conference room of the employee wellness center.	assessment (mean 76.1) • Additional improvements at 3-month follow-up (78.5). • Also there were reductions in perceived stress	training course to lead groups • The financial cost is approximately $100 per participant. • While this intervention would be applicable and has some sound evidence the cost and timeframe of training might be a barrier to implementation.
Sampson, M., Melnyk, B.M., & Hoying, J., 2019	• N= 89 New graduate Nurses	• 2-group, cluster randomized controlled trial	• Stress • Depressive symptoms • Anxiety • Healthy lifestyle beliefs and behaviors • Job satisfaction.	• MINDBODYSTRONG, consisted of 8 manualized weekly 45-minute sessions. • provides a theory-based approach to improve the mental health, healthy lifestyle beliefs and behaviors, and job satisfaction	• Program had significantly improved perceived stress, depressive symptoms • Lower anxiety and lower than participants in the control group.	**Level of evidence II** • This appeared to be a well-designed RCT • Sample size was relatively low. • Performed with new nurses. • The training takes 8 weeks 45 minutes a week and does have an associated cost.

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
Cooper, D.C. & Bates, M.J, 2019	N= 82 Military health care providers	• mixed methods quantitative/qualitative approach	• Depressive symptoms • Distress, and resilience • social problem-solving	• Problem Solving Training (PST) is a four-session psychoeducational intervention • Didactic group format that emphasizes building social (i.e., real life) problem-solving skills to cope with stressful events • Maintain readiness while avoiding potentially stigmatizing clinical terms.	• Providers showed pre- to post-facilitator workshop increases in self-efficacy of PST skills (all $p < 0.001$) • Those selected as master trainers evaluated their workshop training favorably, particularly the role-playing exercises.	**Level of Evidence VI** • Was not a high level of evidence • Relatively low sample size. • While this was with military health providers it seems it would also be applicable to healthcare providers as a possible intervention to improve resiliency
Weidlich, C.P., & Ugarriza, D.N., 2015	• N= 93 military and civilian nurses, LPNs and medics	• prospective cohort pilot study	• long-term effects of Care Provider Support Program (CPSP) training • Connor-Davidson Resilience Scale • The Ways of Coping Questionnaire • Professional Quality of Life Questionnaire	• Army's Care Provider Support Program (CPSP) was created to improve the resiliency of military health care providers by educating them in 1-hour lessons in developing coping skills to reduce compassion fatigue, burnout, and stress.	• CPSP was significant in reducing burnout as measured by the Professional Quality of Life questionnaire, leading to decreased compassion fatigue. • CPSP training did not affect resiliency scores on the Connor-Davidson resilience scale or coping scores as measured by the	**Level of Evidence IV** • Was not a high level of evidence • Relatively low sample size. • While this was with military health providers it seems it would also be applicable to healthcare providers as a possible

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
					Ways of Coping Questionnaire	intervention to improve resiliency
Mistretta, E.G., Davis, M.C., Temkit, M, Lorenz, C., Darby, B., & Stonnington, C.M., 2018	• N=60 HCW participants	• Randomized Control Trial	• Stress • Well-being • Burnout	• in-person mindfulness-based resilience training (MBRT) • smartphone delivered resiliency-based intervention	• Both the MBRT and the smartphone groups showed improvements in well-being • Whereas only the MBRT group showed improvements in stress and emotional burnout over time.	**Level of evidence II** • Relatively small sample size. • Study was a high level of evidence being an RCT • This could be helpful in deciding to implement an in person or smartphone based intervention
Wahl, C., Hultquist, T.B.,, Struwe, L., Moore, J., 2020	• 33 Nurses • 8 non nurses	• nonexperimental purposive sample pre-post comparison design	• traumatic stress • anxiety/mood • psychosocial functioning	• Peer support Network (PSN) consists of 3 tiers: department peer supporters, a peer support team, and expert clinical professionals who provide support through alleviation of CF for colleagues experiencing normal and/or cumulative stress reactions.	• Statistically significant improvements in CS and non-statistical improvements in Compassion fatigue were found.	**Level of Evidence IV** • A tiered approach to providing peer emotional support would be beneficial in addressing the clinical problem. • Sample size is a bit low.
Grabbe, L., Higgins, M.K., Baird, M., Craven, P.A,	• 196 Nurses	• Randomized control trial	• well-being • resiliency • secondary traumatic stress	• 3 hour class CRM psychoeducation/sensory awareness skills training class	• well-being • resiliency • secondary traumatic stress • physical symptoms	**Level of evidence II** • certification required to

Authors	Sample	Study type	Outcomes	Intervention	Results	Worth to practice
San Fratllo, S, 2020			• burnout • physical symptoms	• control group attended a 3-hour class on nutrition/healthy eating.		teach CRM class • The outcome variables addressed did address my project goals. • It is a RCT, so it is a relatively good level of evidence.

Appendix D (Literature Synthesis table)

Interventions	Ramsberger, Legree, & Mills, 2002	Kemper, K.J., Xiaokui, M., & Khayat, R., 2015	Magtibay, D.L., Coughlin, K., Chesak, S.S., & Sood, A., 2017	Pender, D.A. & Anderton, C., 2016	Wong, A.H., Pacella-LaBarbara, M. L., Ray, J.M., Ranney, M.L., & Chang, B.P., 2020	Lown, B.A., & Manning, A.F., 2010	Buchanan, T.M., & Reilly, P.M., 2019	Endrees et al., 2016	Werneberg et al., 2018	Sampson, M., Melnyk, B.M., & Hoying, J., 2019	Cooper, D.C. & Bates, M.J, 2019	Weidlich, C.P., & Ugarriza, D.N., 2015	Mistretta, E.G., Davis, M.C., Temkit, M, Lorenz, C., Darby, B., & Stonnington, C.M., 2018	Wahl, C., Hultquist, T.B.,, Struwe, L., Moore, J., 2020	Grabbe, L., Higgins, M.K., Baird, M., Craven, P.A, San Fratllo, S, 2020
Resiliency interventions	X	X	X			X	X		X	X	X	X	X	X	X
2)Small group resiliency training							X		X	X	X	X	X		X
Multiple intervention approach					X										
Structured debreifing				X											
Peer to peer support	X					X		X						X	

Appendix E (Battle Buddy Recruitment Flyer)

Battle Buddies

Ongoing peer-to-peer emotional support for nurses

With COVID-19, health care professionals are being faced with multiple stressors. Additionally, you are advancing your education which can lead to increased stress. The Battle Buddies program is here to help!

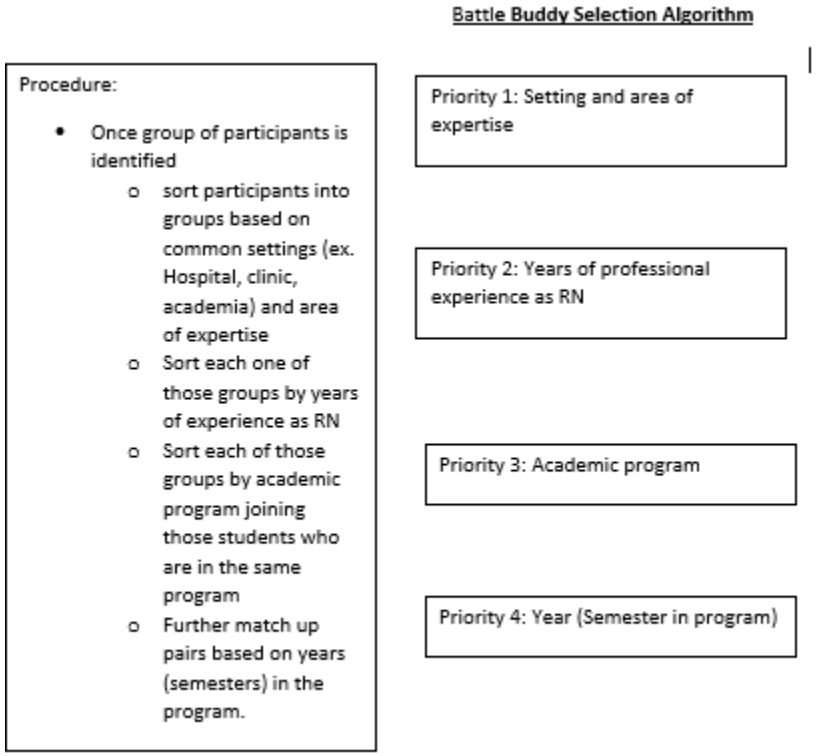
Battle Buddies is a program designed to provide nurses with the tools and resources necessary to support one another in these unprecedented times. In the program, buddies will be assigned based on similar professional and academic experiences, and will provide ongoing peer-to-peer support.

To register for Battle Buddies, click here or scan QR code

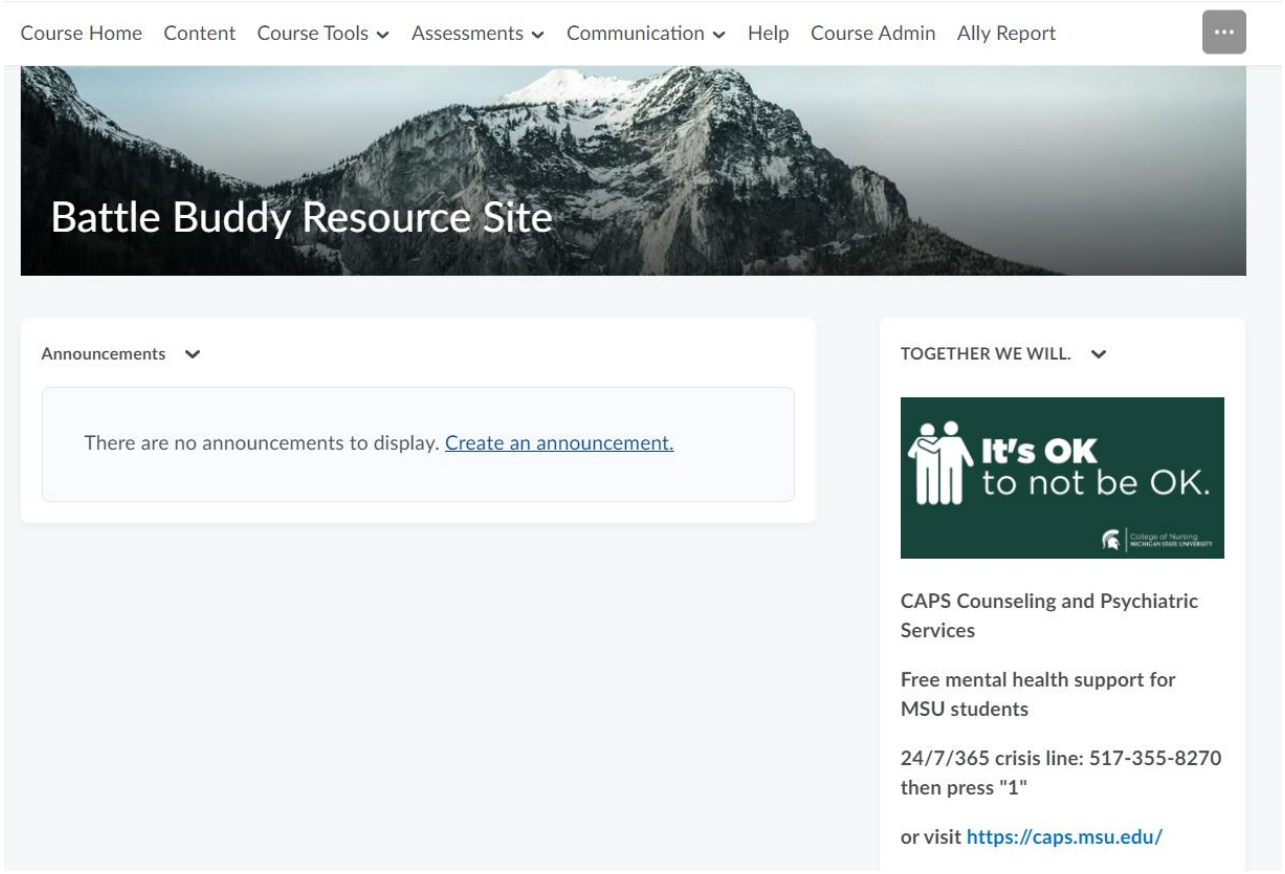
For more information, contact martelm1@msu.edu

Michael Martel, MSN, RN, AGCNS–BC
Post–Masters DNP Student
College of Nursing
MICHIGAN STATE UNIVERSITY

Appendix F (Battle Buddy Selection Algorithm)



Appendix G (Battle Buddy Resource Site (D2L))



Appendix H (Battle Buddy Program Overview)

BATTLE BUDDIES

1. **BATTLE BUDDY PARTNERS:**

Battle Buddy are partnered on priority with the following criteria:

- Number years experience as Nurse
- Work setting
- Semester in APRN program
- Type of program enrolled

2. **BATTLE BUDDY RESOURCE SITE:**

Battle Buddy resource site created in the University's Learning management system includes:

- What is a Battle Buddy? Tips for communicating with Battle Buddy

Battle Buddy Resources:

- Stress reduction tips
- Resources for emotional distress
- Weekly announcements and emails with additional strategies focused on improving emotional well-being and building resilience.

3. **BATTLE BUDDY WORKSHOPS (2 OVER THE 12 WEEKS)**

- Battle Buddy check in
- Stress relieving strategies such as:
  - Mindfulness
  - Self Compassion
  - Positive self-talk
- Resource sharing

Appendix I (Battle Buddy Welcome Email)

Good Morning Battle Buddy 1 and Battle Buddy 2,

Thank you both for registering for the Battle Buddy program! I would like to introduce you both to each other as a battle buddy pair if you haven't met already and provide additional information to get you started in the program.

The purpose of Battle Buddy's is to be a source of emotional support for each other. These are challenging times regularly connecting with your Battle Buddy can promote resilience and emotional well-being.

What should Battle Buddies do?

- Contact each other over text, call, or zoom the choice is yours and may vary based on what needs to be discussed.
- Remember to check in on your battle buddy 2-3 times per week or more if needed
- Listen, validate, and provide support and feedback, identify any issues that need additional support or attention

Examples of what to say:

- What is hardest right now?
- What worried you since we spoke last?
- What went well today?
- How are things at home?
- What challenges are you facing with sleep/rest, exercise, health/nutrition?
- Have you implemented any self-care/emotional well-being strategies lately? What worked? What didn't?

Battle Buddies are not meant to take the place of a mental health professional. If you or your Battle Buddy need additional emotional support or are experiencing emotional distress see the Battle Buddy resource module on the Battle Buddy Resource D2L site.

As part of the Battle Buddy program I am adding you to a D2L course titled “Battle Buddy Resource Site”. Let me know if you have any difficulty accessing the course (Also see attached detailed instructions of how to add the course). Additionally, there will be 2-3 optional battle buddy workshops held during the program (more info to come on this).

Lastly, as part of the program and to allow me to evaluate effectiveness, I am asking you to take the following anonymous survey (it takes less than 5 minutes to complete):

Please let me know if you have any questions throughout the program. More communication will follow. Have a great day!

Thank you,

Mike

Mike Martel MSN, RN, AGCNS-BC
DNP student MSU
(248)760-3435 cell
Martelm1@msu.edu

Appendix J (Well-Being Index survey questions)

The Well Being Index will be used to evaluate the effectiveness of the intervention. This will be done using an online survey. The first question will ask demographic information: Years of experience (<1, 1-3 years, 3-5 years, 5-10 years, 10-20 years, 20-30 years, 30 years +) and their work setting (outpatient, community health, hospital, academic setting, or other). The following are the questions for the survey:

Nurse WBI survey questions

During the past month...

1. have you felt burned out from your work? Y/N
2. have you worried that your work is hardening you emotionally? Y/N
3. have you often been bothered by feeling down, depressed, or hopeless? Y/N
4. have you fallen asleep while sitting inactive in a public place? Y/N
5. have you felt that all the things you had to do were piling up so high that you could not overcome them? Y/N
6. have you been bothered by emotional problems (such as feeling anxious, depressed, or irritable)? Y/N
7. has your physical health interfered with your ability to do your daily work at home and/or away from home? Y/N

Please rate how much you agree with the following statements

8. The work I do is meaningful to me i) 7 point Likert scale; anchor “very strongly disagree” at the 1 end of the scale and “very strongly agree” at the 7 end of the scale
9. My work schedule leaves me enough time for my personal/family life i) strongly agree; agree; neutral; disagree; strongly disagree

Dyrbye, L. N., Johnson, P. O., Johnson, L. M., Satele, D. V., & Shanafelt, T. D. (2018). Efficacy of the Well-Being Index to Identify Distress and Well-Being in U.S. Nurses. *Nursing Research, 67*(6), 447-455. doi:10.1097/NNR.0000000000000313

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Appendix K (Well Being Index Predictive Validity Table)

Sample of 3,238 US Nurses

Outcome Variable	LR (95% CI)
Burnout	4.43 (95% CI 3.25, 6.07)
High Fatigue	2.34 (95% CI 1.76, 3.09)
Low QOL	2.38 (95% CI 1.79, 3.09)
Below average job performance	2.18 (95% CI 1.59, 3)
Patient care error	2.02 (95% CI 1.17, 2.84)
Intent to leave	2.43 (95% CI 1.73, 3.44)

Appendix L (Permission to Use WBI for Academic Purposes)

Thu 7/16/2020 8:40 AM

Patrick McNally <pmcnally@mywellbeingindex.org>

Re: Free access for academic use

To Martel, Michael

Cc hello@mededwebs.com

You replied to this message on 7/16/2020 10:10 PM.

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hey Mike,
Thanks for reaching out!

Here is the link to the document - https://cdn2.hubspot.net/hubfs/465692/Well-Being%20Index%20Research%20Document%20-%20Updated-2019-V2.0.pdf?utm_medium=email&_hsenc=p2ANqtz-8SuUEfyfd-ncNC3IhgR8LhGTd04YVHJMN-IrZ9733-vCoagPqXELIurZp-49Qy65kGZ8SMHHGDOaahvz8A6EJKRi4lkg&_hsmi=60021745&utm_source=hs_automation&utm_content=60021745&hsCtaTracking=d44bf25a-5e22-47a2-93ea-62f9597b0029%7C671be2ba-1778-4e76-ae68-2d0a49fe397b

Please let me know if you have any questions!

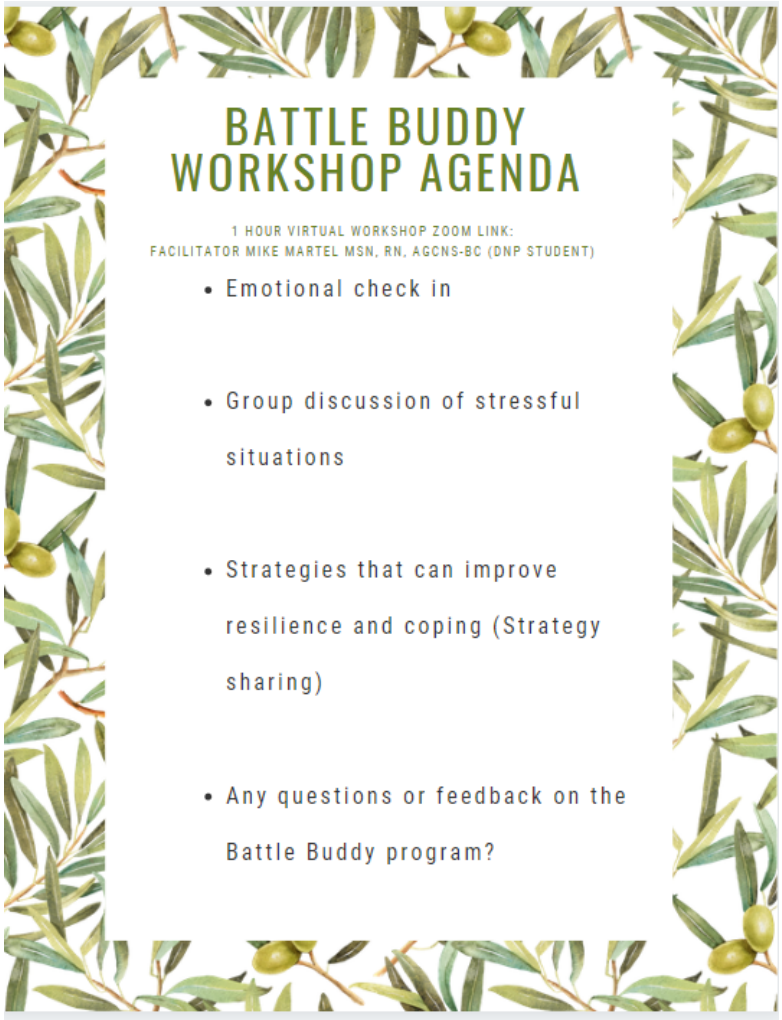
Be well,
-Patrick

Patrick McNally
pmcnally@mywellbeingindex.org
507.289.2229 Ext.713
Well-Being Index | MedEd Manager

On Thu, Jul 16, 2020 at 6:18 AM Martel, Michael <martelm1@msu.edu> wrote:

> Good morning,
>
> My name is Mike Martel and I was hoping to use your well being Index for my Doctor of Nursing Practice (DNP) project for my DNP program and possible future publication. My QI project focuses on the emotional well being of HCW. I would be using the scale to evaluate Nurse, APP, and Physician responses before and after implementing my intervention. I will be obtaining IRB approval from both my University and the organization where the intervention will be implemented, I filled out the form on your website for free use for Academic purposes and it indicated I would receive an email with access to the tool but I haven't seen it come through my email yet. I am hoping someone could provide me some assistance with this. My cell number is 248-760-3435. Have a great day!
>
> Thank you,
>
> Mike
>
> **Michael Martel,** MSN, RN, AGCNS-BC
> **Instructor**
> Michigan State University
> College of Nursing
> Life Science
> 1355 Bogue St., Room #A270
> East Lansing, MI 48824-1317
> Phone: (517) 432-6673

Appendix M (Battle Buddy Workshop Agenda)



Appendix N (Battle Buddy GANTT chart/Timeline)

Activity	20-Jun	20-Jul	20-Aug	20-Sep	Oct-20	Nov-20	Dec-20	Jan-21	21-Feb	21-Mar	21-Apr
Literature review	X	X									
Stakeholder meetings	X	X	X	X	X	X	X	X	X	X	X
Complete proposal and presentation		X									
Committee review and approval of P & P (college)			X								
Committee review and approval of P & P (organization)			X								
Apply for and receive IRB approval (college)			X								
Apply for and receive IRB approval (organization)							X				
Delay and change of implementation site and obtaining appropriate approvals							X				
Implementation of Batttle Buddy intervention (12 week pilot)							X				
Phase 1 Recruitment of participants							X				
Phase 2 Partnering of Battle Buddy partners							X				
Phase 3 Battle B uddy Resource site launched							X				
Phase 4 Pre survey sent to participants							X				
Phase 5 Send link for resource site							X				
Phase 6 DNP Student led workshop session 1								X			
Phase 7 WBI survey to be administered (6 week)								X			
Phase 8 DNP Student led workshop session 2									X		
Phase 10 WBI to be administered post Pilot (12 week)										X	
collect outcome data											X
write final report											X