

Combating Compassion Fatigue With Mindfulness Practice in Military Nurse Practitioners

Natasha Ideta Best, DNP, WHNP-BC, Carol F. Durham, EdD, RN,
Cheryl Woods-Giscombe, PhD, PMHNP-BC, Julee Waldrop, DNP, FNP-BC

A B S T R A C T

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Like their civilian counterparts, military clinicians are at risk for compassion fatigue. Studies have shown a relationship between mindfulness interventions and reduction of compassion fatigue and its components of burnout and secondary traumatic stress. A pilot feasibility study using a mindfulness-based stress reduction program via a mobile application was completed with a group of nurse practitioners in the military. Seventy-five percent of the participants showed improvement in burnout and stress levels and 100% improvement in mindfulness attention. Mindfulness training maybe one way to mitigate symptoms of compassion fatigue for nurse practitioners in the military.

Introduction

Many view providing health care as a selfless, rewarding career that calls on the giving of oneself through empathy and compassion for others. Yet those in the profession can lack empathy and compassion for themselves.^{1,2} This may lead to compassion fatigue among health care providers. Compassion fatigue is described as “a state of exhaustion and dysfunction biologically, psychologically, and socially, because of prolonged exposure to compassion stress and all it involves.”³ It is the combination of 2 components: burnout and secondary traumatic stress. Burnout is chronic or long-term stress related to one’s occupation that may result in physical and emotional exhaustion. Often replicating symptoms of post-traumatic stress in individuals, secondary trauma stress is trauma experienced vicariously related to one’s proximity to another’s pain and suffering.³⁻⁶ Compassion fatigue has been noted to have negative correlations with patient care and outcomes, as well as relationships among health care professionals, and it is known to be detrimental to mental health. These negative correlations place providers at risk of leaving their profession altogether.⁴

Background and Significance

Military providers are particularly vulnerable to developing compassion fatigue. They provide care to a specialized population that includes armed service members, Department of Defense members, retirees, and their dependents. They face the same demands of the modern health care industry as their civilian counterparts. However, the added stressors of frequent environmental changes (ie, deployments to active war zones and change-of-duty stations), working within the limitations of rank structure, and

frequent leadership changes can make military providers’ professional lives even more complex.⁶ Lack of support from leadership and work–life imbalance was associated with high levels of burnout in a US military medical center.⁷ In 1 study, 59% of active duty Air Force health care providers reported medium levels of emotional exhaustion, and nearly 66% reported low levels of depersonalization, 2 symptoms known to lead to burnout, a component of compassion fatigue.²

The practice of mindfulness is the process of being in the present, void of judgement.⁸ Mindfulness-based interventions focus on drawing participants’ attention of awareness to thoughts, feelings, and body sensations in a nonjudgmental, curious way, with the goals of thinking clearer, gaining more compassion for self and others, being open-hearted and gaining a sense of emotional, spiritual, and physical balance overall.⁸ Mindfulness interventions have been shown to reduce symptoms of compassion fatigue.^{4,9-12} Although no study included only military health care providers, the promising results of mindfulness-based interventions in multiple studies on US health care providers are readily transferable to military health care providers as they face similar challenges, as well as the specific stressors previously mentioned. Health care providers (military and civilian) must build both internal and external resiliency to mitigate symptoms of compassion fatigue. Mindfulness may be one way they can accomplish this mission.

This pilot feasibility study had 2 purposes. The first was to assess the use of the Professional Quality of Life (ProQOL)¹³ to help military health care providers self-identify risk for compassion fatigue. The second was to determine whether the use of an abbreviated mindfulness-based stress reduction (MBSR) program involving a mobile application and integrated web-based tools was feasible

and would help decrease symptoms of compassion fatigue and its components among a convenience sample of military providers who identified as active duty women's health nurse practitioners (WHNPs).

Methods

A quasi-experimental pretest–post–test design was used in this pilot study. Recruitment was conducted through an electronic announcement posted via a private Facebook group page and personal email sent to active duty WHNPs serving in the US Air Force. Project recruits had to have reliable Internet access and connectivity, as well as mobile application download capabilities throughout the project. To incentivize completion of the study, all participants who completed the intervention phase were entered in a drawing for a \$200 gift card. Data were collected pre- and postintervention through an electronic link. To protect the participant's anonymity yet be able to match responses, Damrosch's self-generated codes strategy was used.¹⁴ The project was reviewed and approved by a credible US university's Institutional Review Board.

Measurement

Demographic information was collected on length of military career, rank, leadership roles held, and experience with meditation or mindfulness.

Compassion fatigue was measured using the ProQOL. The ProQOL is a 30-item Likert scale tool with 3 subscales that addresses both the negative (burnout and secondary trauma) and positive (compassion satisfaction) of caring for patients who have been exposed to trauma. Adequate construct validity and reliability have also been established.¹³

The Mindful Attention Awareness Scale (MAAS) is a 15-item tool that assesses mindfulness.¹⁵ The MAAS has proven psychometric validity and reliability and has been used in numerous studies involving health care providers.^{9-12,15-17} Change scores on each measurement tool were analyzed using descriptive statistics.

Length of time participants practiced mindfulness was captured within the mobile app. Journal entries and evaluation question responses were reviewed for common themes within the mobile app and Facebook group page.

Intervention

The intervention was based on an abbreviated version of an MBSR program developed by Dr. Jon Kabat-Zinn,⁸ which is an 8-week program developed to mitigate symptoms of stress in a

healthy way. His program incorporates mindful meditation and movement to enhance awareness and reduce psychological effects of stress, pain, and illness.⁸

To better orient the participants to the project and provide background information on compassion fatigue and mindfulness, 6 informational modules were provided (Table 1), which included the completion of pre- and post-measurements. These informational modules were prerecorded by the author and available online to be accessed at the participants' convenience throughout the intervention phase (Table 2).

Participants were asked to use the Insight Timer, a mobile application designed to help mitigate burnout. This application has several positive features: it is free, offers tracking of practices, has a built-in timer, and has a user interactive network.¹⁸ The Insight Timer app includes timers, sleep stories and music, and more than 30,000 guided meditations. There is an option to purchase specific educational courses on mindfulness (<https://insighttimer.com>).

Participants were encouraged to use any mindfulness practice offered by the app for 15 to 20 minutes a day for 4 weeks. Additionally, participants were encouraged to pay purposeful attention to their emotional, mental, and physical responses both at work and at home. Throughout this phase of the project, participants were encouraged to journal their experiences.

At midpoint and postintervention, assessment of the participants' journey was performed through open post messages on the Facebook group page, personal email, and the mobile application group message. Four questions were asked: (1) How has the journey been for you at this point? (2) Are there any challenges that you've come across in completing the daily exercises? (3) Have you noticed any changes in your work/life routines? (4) Have you noticed any changes in how you are providing patient care?

Results

Sample Characteristics

Six active duty WHNPs enrolled, and 4 participants completed the project. Members of this racially and ethnically diverse group were all female, had been WHNPs for at least 5 years and in the military for 12 to 22 years.

ProQOL Scores

Postintervention, 75% (n = 3) of the participants had low burnout scores (see Table 3 for raw scores pre- and post-intervention). Postintervention, 75% (n = 3) of the participants'

Table 1
Project Timeline

Time	Activities	Mode
Week 1	<ul style="list-style-type: none"> - Study's overview w/consent forms - Prerecordings of modules uploaded - Presurveys completed 	<ul style="list-style-type: none"> - FaceBook post/email - Online modules - Electronic survey link
Week 2	<ul style="list-style-type: none"> - Instructions on download and use of Insight Timer - Participants do 15–20 min practice daily 	<ul style="list-style-type: none"> - Online modules - Mobile app
Week 3	<ul style="list-style-type: none"> - Participants log mindful practice sessions and optional journaling - Participants do 15-20 min practice daily - Participants log mindful practice sessions and optional journaling 	<ul style="list-style-type: none"> - Mobile app/personal journal - Mobile app - Mobile app/personal journal
Weeks 4 and 5	<ul style="list-style-type: none"> - Investigator checks in with participants - Participants do 15-20 min practice daily - Participants log mindful practice sessions and optional journaling 	<ul style="list-style-type: none"> - Mobile app/email - Mobile app - Mobile app/personal journal
Week 6	<ul style="list-style-type: none"> - Post-surveys completed - Investigator's final check in with participants - Thank you email sent to participants - Rough data findings shared with participants - Selecting participant for incentive drawing 	<ul style="list-style-type: none"> - Electronic survey link - Mobile app/FaceBook post/email - FaceBook post/email - FaceBook post/email - FaceBook Post/Email

Table 2
List of Modules

Module 1	Overview of the project
Module 2	Instructions on how to complete pre- and post-surveys
Module 3	Downloading and use of the mobile application
Module 4	Logging of sessions/journaling
Module 5	The background and history of mindfulness-based stress reduction
Module 6	Body scan
Module 7	Mindful movement
Module 8	Walking meditation
Module 9	Sitting meditation
Module 10	An overview of compassion fatigue and its subcomponents of burnout and secondary traumatic stress

Sample Narrative of Module 6.

Lead Investigators' voice over PowerPoint presentation. Source: Greater Good in Action: Science-Based Practices for a Meaningful Life website, 2018.

Body Scan

The body scan provides a rare opportunity for us to experience our body as it is, without judging or trying to change it. It may allow us to notice and release a source of tension we weren't aware of before, such as a hunched back or clenched jaw muscles. Or it may draw our attention to a source of pain and discomfort. Our feelings of resistance and anger toward pain often only serve to increase that pain, and to increase the distress associated with it; according to research, by simply noticing the pain we're experiencing, without trying to change it, we may actually feel some relief.

The body scan is designed to counteract these negative feelings toward our bodies. This practice may also increase our general attunement to our physical needs and sensations, which can in turn help us take better care of our bodies and make healthier decisions about eating, sleep, and exercise.

This exercise asks you to systematically focus your attention on different parts of your body, from your feet to the muscles in your face. It is designed to help you develop a mindful awareness of your bodily sensations, and to relieve tension wherever it is found. Research suggests that this mindfulness practice can help reduce stress, improve well-being, and decrease aches and pains.

The body scan can be performed while lying down, sitting, or in other postures. These following steps are a guided meditation designed to be done while sitting. Begin by bringing your attention into your body. You can close your eyes if that's comfortable for you. You can notice your body seated wherever you're seated, feeling the weight of your body on the chair, on the floor. Take a few deep breaths. And as you take a deep breath, bring in more oxygen enlivening the body. And as you exhale, have a sense of relaxing more deeply. You can notice your feet on the floor, notice the sensations of your feet touching the floor. The weight and pressure, vibration, heat. You can notice your legs against the chair, pressure, pulsing, heaviness, lightness. Notice your back against the chair. Bring your attention into your stomach area. If your stomach is tense or tight, let it soften. Take a breath. Notice your hands. Are your hands tense or tight? See if you can allow them to soften. Notice your arms. Feel any sensation in your arms. Let your shoulders be soft. Notice your neck and throat. Let them be soft. Relax. Soften your jaw. Let your face and facial muscles be soft. Then notice your whole-body present. Take one more breath. Be aware of your whole body as best you can. Take a breath. And then when you're ready, you can open your eyes.

This exercise can be found on the Insight Timer App.

secondary traumatic stress was low, and 75% (n = 3) of the participants scored high for compassion satisfaction (see Table 3).

MAAS Scores

The logged time in the mobile application for the participants' practice sessions ranged from 10.8 minutes to 122 minutes per day. All 4 participants increased their mindfulness per the MAAS

Table 4
Participants' Pre and Post MAAS Scores

Participant	Preintervention	Postintervention
1	2.80	3.86
2	3.46	3.53
3	3.46	3.73
4	3.46	4.60

post-intervention. Higher scores on this scale represent higher levels of mindfulness (see Table 4).

Participants' Reflections

At midpoint, participants posted that they were enjoying the designated "carved-out" time for practicing mindfulness, although they were finding it challenging as to when, specifically, they found time to practice. At this point, they did not necessarily see changes in their work/life routines or how they were providing patient care, but they did report that they were starting discussions with their coworkers on how to become more resilient at work.

Postintervention, participants posted that although they had some difficulty being consistent with the daily practices in the beginning, overtime their journeys became easier and they liked using the application. The constant challenge throughout the intervention phase was finding time to practice and accessing Wi-Fi to use the mobile application at low or no cost instead of using up their mobile data plans. The participants posted feeling less stressed, better rested, and being more "mindful of [their] surroundings, attitudes and feelings." One participant posted that she started asking her patients to give "positive thinking" and "being aware of their thoughts" consideration as they worked to improve their own health.

Discussion

The results of this project add to the literature on the positive benefits of using the ProQOL scale to self-identify risk for compassion fatigue in military providers.⁵ Previous studies that incorporated modified versions of MBSR were feasible and well received and still reported positive impacts.¹² In this project, the mindfulness levels for 100% of the participants increased post-intervention. The outcomes of this pilot study coincide with other research indicating that mindfulness-based activities may be a tool that health care providers can use to combat symptoms of compassion fatigue.^{5,9-12,15-17}

Prior studies on mindfulness-based interventions specifically for health care providers demonstrated that the more successful interventions were brief and easily assessable.⁹ Participants in this project reported that they found the application easy to use and enjoyed the variety of activities that it had to offer.

With the seemingly endless demands on the US health care industry and shortage of health care professionals, providers may find themselves stressed, unable to find a healthy work-life balance, and with much less time to dedicate to their own self-care. Implementation of a MBSR intervention for busy health care

Table 3
Participants' Pre- and Post-ProQOL Scores Across 3 Subscales

Participant	Pre-CS	Post-CS	Pre- Burnout	Post- Burnout	Pre-STs	Post-STs
1	35 (50/A)	41 (50/A)	30 (50/A)	25 (50/A)	35 (50/A)	25 (50/A)
2	40 (50/A)	44 (57/H)	25 (50/A)	22 (43/L)	21 (50/A)	22 (43/L)
3	47 (57/H)	44 (57/H)	25 (50/A)	18 (43/L)	11 (43/L)	17 (43/L)
4	46 (57/H)	50 (57/H)	10 (43/L)	14 (43/L)	18 (43/L)	13 (43/L)

The first number in each row is the participant's raw score, followed by their converted scores. A = average, CS = Compassion Satisfaction; H = High; L = low; STS = Secondary Traumatic Stress.

providers could be modified depending on the needs of the participants; this might include class sessions that meet for less than 1 hour at a time and offer communication through the Internet and mobile device applications. Costs could be minimal if done virtually over the Internet and through a free mobile device application download, as was done in this study.

Limitations

Because this was a pilot study, it is not intended to be generalized to a broader population. However, as a feasibility study done with military providers, it can provide some guidance for future research with larger samples and control groups. In addition, the participants in this study were not colocated geographically and only had the opportunity to have contact with each another via the mobile application and online channels. Although participants posted comments through these channels, they did not appear to make direct contact with one another. There is no way of knowing whether their outcomes may have been different with the traditional, in-person delivery where more direct contact would occur.

Conclusion

This project was a way to bring an abbreviated mindfulness-based stress reduction program to geographically separated military healthcare providers. The entire project was completed via a mobile application with integrated web-based tools. During the project, participants used an easily accessible program that integrated several tools to combat compassion fatigue. Future research on the use of this intervention would include a larger sample size and inclusion of other military health care providers. Additional, group supports could also be added, such as holding real-time group chats online to provide a platform for interaction among participants and selecting another mobile application that could be downloaded for use even when an online connection (data plan or Wi-Fi) is not available.

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Natasha Ideta Best, DNP, WHNP-BC, is an assistant professor at Uniformed Services University, Bethesda, MD. She can be reached at Natasha.Best@usuhs.edu. Carol F. Durham, EdD, RN, ANEF, FAAN, is a professor, Cheryl Woods-Giscombe, PhD, PMHNP-BC, FAAN, is a distinguished term associate professor, and Julee Waldrop, DNP, PNP-BC, FNP-BC, FAANP, FAAN, is a professor, at the University of North Carolina at Chapel Hill School of Nursing, Chapel Hill, NC.

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