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Online Training in Specific Meditation Practices Improves Gratitude, Well-Being, Self-Compassion, and Confidence in Providing Compassionate Care Among Health Professionals

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Abstract

Mind-body practices that intentionally generate positive emotion could improve health professionals' well-being and compassion. However, the feasibility and impact of clinician training in these practices is unknown. Data were analyzed from 3 online modules offered to health professionals: (*a*) Gratitude, (*b*) Positive Word, and (*c*) Loving-kindness/Compassion meditation. Paired *t* tests were used to assess pre- to posttraining changes in gratitude (Gratitude Questionnaire), well-being (World Health Organization Well-Being Index), self-compassion (Neff's Self-Compassion Scale), and confidence in providing compassionate care (Confidence in Providing Calm, Compassionate Care Scale). The 177 enrollees included diverse practitioners (nurses, physicians, social workers, and others). Training was associated with statistically significant improvements in gratitude (38.3 $\pm$ 4.6 to 39.5 $\pm$ 3.3), well-being (16.4 $\pm$ 4.0 to 17.9 $\pm$ 4.2), self-compassion (39.5 $\pm$ 8.1 to 43.1 $\pm$ 7.6), and confidence in providing compassionate care (73.3 $\pm$ 16.4 to 80.9 $\pm$ 13.8; $P < .001$ for all comparisons). Brief, online training appeals to diverse health professionals and improves their gratitude, well-being, self-compassion, and confidence in providing compassionate care.

Keywords

meditation, training, health professionals

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Meditation practices are diverse and include approaches that cultivate mindfulness (moment-to-moment nonjudgmental awareness) and approaches that build focused attention.[1] In focused-attention meditation, attention can be centered on a neutral object or a positive word, image, or emotion. Practices that intentionally focus on a positive word, image, or emotion tend to generate more positive emotion.[2-5] These practices (including gratitude meditation, positive-word-focused meditation, loving-kindness meditation, and others) benefit patients with chronic pain,[6-9] depression,[10] posttraumatic stress disorder,[11,12] and social anxiety,[13] but could also be useful for health professionals.

According to Fredrickson's "broaden-and-build" theory,[14,15] positive emotion leads to better cognitive function, social support, and mental health, all of which can contribute to an overall sense of well-being. Even a fleeting experience of positive emotion temporarily broadens thinking and allows individuals to consider ideas they would not have otherwise considered. Positive emotion gives rise to greater creativity, attention, and ability to integrate many sources of information; in other words, meditation focused on increasing positive emotions could improve clinicians' cognitive functioning.[2,14,15] Hospitals and clinics are busy, intellectually demanding work environments; meditation practices that improve cognitive function could help clinicians process information more effectively and could improve patient outcomes. Broadened thinking arising from positive emotion leads individuals to engage more fully with people around them, strengthening their social networks.[14,15] Through the regular practice of positive-emotion-generating meditation, clinicians could repeatedly experience prosocial feelings and gradually reinforce their support networks, eventually experiencing positive emotion more frequently.[2,14,15] The frequent experience of positive emotion can lead to resilience, a key psychological resource that may reduce compassion fatigue or burnout.[2,14-16]

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Although compassion (the strong desire to relieve suffering) is a cornerstone of clinical care, meditation focused on building compassion and other positive emotions is largely unstudied among clinicians,[17] and the impact of online training in these practices for health professionals is unknown. Online training is cost-effective and convenient[18] and could be attractive to busy practitioners.[19]

We conducted this study to determine the impact of brief, online training for health professionals in 3 types of positive-emotion-generating meditation: Gratitude-focused Meditation; Positive- or Sacred-Word-focused Meditation; and Loving-kindness/Compassion-focused Meditation. Our 2 study questions were as follows:

1. Do diverse health professionals enroll in this type of training?
2. Does brief, online training increase positive emotion—as measured using standard scales for gratitude, well-being, self-compassion, and confidence in providing compassionate care?

Table 1. Participant Characteristics.

Characteristics	Participants Who Completed One or More Heart-Centered Meditation Module, n (%)
Number of enrollees	177 (100%)
Gender (% female)	148 (84%)
Ohio State University staff or students	155 (88%)
Trainees	30 (17%)
Profession	
Acupuncturists, chiropractors, massage therapists	8 (5%)
Dietitians	15 (8%)
Nurses	73 (41%)
Physicians	29 (16%)
Social workers, psychologists, or licensed counselors	15 (8%)
Researchers	5 (3%)
Others, including occupational and physical therapists, laboratory and radiology technicians, unit clerks, volunteers, human resources staff, and others	32 (18%)

Methods

Data Collection

Data were collected from 3 online meditation training modules offered to health professionals from May 2014 to October 2015: (*a*) Gratitude-focused Meditation, (*b*) Positive- or Sacred-Word-focused Meditation, and (*c*) Loving-kindness/Compassion-focused Meditation. Modules were offered free of charge to health professionals at our university and at a small fee to individuals outside the university community. Each module took approximately 1 hour to complete, and participants were eligible for continuing education credit.[20]

Module Content

Modules contained descriptions of each meditation technique; discussions of available scientific evidence regarding risks and benefits of each approach; links to guided practices to encourage experiential learning; suggestions for incorporating each technique into clinical practice; and pre- and postmodule self-reflection exercises. Self-reflection exercises used validated instruments to measure gratitude, well-being, self-compassion, and confidence in providing compassionate care.

Measures

Participant gender, trainee status, university affiliation, and health profession was collected at registration. The "Gratitude-focused Meditation" module invited participants to complete the 6-item Gratitude Questionnaire[21] before and after module completion; this questionnaire has been validated in adults and adolescents and has shown good internal reliability, strong correlations with positive affect and life satisfaction, and negative correlations with depression.[22] The "Positive- or Sacred-Word-focused Meditation" unit asked participants to complete the 5-item World Health Organization Well-Being index before and after course completion; this instrument has good internal and external validity and has been used globally in diverse populations.[23,24] The "Loving-kindness/Compassion-focused Meditation" unit asked participants to complete the short form of Neff's Self-Compassion Scale (12 items, maximum overall score 60, maximum subscale score 10)[25,26] and the Confidence in providing Compassionate Care scale (10 items, maximum score 100)[27]; both scales have good internal reliability and correlate in expected directions with standardized measures of mindfulness, empathy, and resilience.[25-27]

Statistical Analysis

Analysis was restricted to participants who completed both pre- and postmodule self-reflection assessments for one or more modules. Descriptive statistics were used to characterize participants by gender, trainee status, university affiliation, and health profession and to compare participant characteristics by module topic. In the analysis of health profession, trainees were grouped with corresponding professional groups (eg, medical students were grouped with physicians). Two-tailed paired *t* tests ($\alpha < .05$) were used to compare pre- and postmodule measures of gratitude, well-being, self-compassion (overall and by subcategory), and confidence in providing compassionate care. All analyses were conducted in Microsoft Excel (Office 365, Version 15.0.4753.1003) and R (Version 3.2.2; The R Foundation for Statistical Computing).

Results

Of the 177 enrollees who completed at least one module, 84% were female, 88% were affiliated with our university, and 17% were trainees (Table 1). The training attracted health professionals from a variety of disciplines: 41% nurses; 16% physicians; 8% dietitians; 8% social workers, psychologists, or licensed counselors; and 18% others, including occupational and physical therapists, laboratory and radiology technicians, massage therapists and acupuncturists, volunteers, human resources staff, medical researchers, unit clerks,

Table 2. Changes in Gratitude, Well-Being, Self-Compassion, and Confidence in Providing Compassionate Care.

Module/Scale	Before (Mean ± SD)	After (Mean ± SD)	*P* Value
Gratitude-focused meditation (n = 165)			
Gratitude Questionnaire (max 42)	38.3 ± 4.6	39.5 ± 3.3	<.001
Positive or sacred word-focused meditation (n = 132)			
World Health Organization Well-Being Index (max 25)	16.4 ± 4.0	17.9 ± 4.2	<.001
Loving-kindness/compassion-focused meditation (n = 153)			
Self-Compassion Scale (overall, max 60)	39.5 ± 8.1	43.1 ± 7.6	<.001
Self-Kindness (max 10)	6.7 ± 1.4	7.3 ± 1.4	<.001
Self-Judgement (max 10)	6.3 ± 1.8	7.0 ± 1.8	<.001
Common Humanity (max 10)	6.7 ± 1.8	7.3 ± 1.6	<.001
Isolation (max 10)	6.3 ± 1.7	7.0 ± 1.6	<.001
Mindfulness (max 10)	7.5 ± 1.4	7.8 ± 1.4	<.002
Overidentification (max 10)	6.0 ± 1.8	6.7 ± 1.7	<.001
Confidence in providing Calm, Compassionate Care Scale (max 100)	73.3 ± 16.4	80.9 ± 13.8	<.001

and others (Table 1). Participant characteristics (gender, trainee status, university affiliation, and profession) did not differ by module topic.

We observed pre- to posttraining improvements on all questionnaires (Table 2). Among the 165 participants who completed pre- and posttraining questionnaires (maximum score 42) for the Gratitude unit, there were significant improvements in gratitude, from mean gratitude levels of 38.3 ± 4.6 before training to 39.5 ± 3.3 afterward ($P < .001$). Among the 132 participants who completed the "Positive- or Sacred-Word-focused Meditation" unit, there were significant increases in well-being on the World Health Organization 5-item Well-Being Index (maximum score 25), from 16.4 ± 4 before the course to 17.9 ± 4.2 afterward ($P < .001$; Table 2). Participants (n = 153) in the "Loving-kindness/Compassion-focused Meditation" unit reported significant improvements in self-compassion overall (39.5 ± 8.1 to 43.1 ± 7.6 out of a maximum score of 60; $P < .001$) and within each subcategory of self-compassion: self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification ($P < .001$ for all except mindfulness, which had a P value <.002). Participants also reported increased confidence in providing compassionate care to others from 73.3 ± 16.4 to 80.9 ± 13.8 out of a maximum possible 100 points ($P < .001$).

Discussion

This is the first study to evaluate the feasibility and impact of brief online training in positive-emotion-generating meditation practices for health professionals. The training attracted health professionals and trainees from many disciplines, and was associated with small but significant improvements in every measure—gratitude, well-being, self-compassion, and confidence in providing compassionate care.

These results reinforce previous findings that brief, online training in mind-body skills for health professionals can be both feasible and effective.[20,28,29] In this study, enrollees came from diverse professional backgrounds. We observed no differences in participant profession between courses, suggesting that online interprofessional training in gratitude, positive-word, and loving-kindness meditation can draw professionals from many disciplines. Health professionals are willing to pursue training in mind-body practices, particularly training that is convenient and that increases feelings of well-being and compassion.[19]

Meditation practices focusing on gratitude, compassion, and other positive emotions generate even more positive emotion,[4,5] and if introduced to health professionals, could lead to better clinical endpoints. By augmenting positive emotion and enhancing cognitive function, social support, and mental health,[2,14,15] these practices could improve clinician well-being and reduce burnout. For example, long-term practice of loving-kindness meditation is associated with immunologic and cardiovascular benefits—higher circulating levels of CD3+, CD4−, CD8+ lymphocytes; B lymphocytes; and natural killer cells,[30] and increased nitric oxide levels[31]—and could improve physical health among clinicians. These meditation practices also increase self-compassion,[32] and greater self-compassion could also protect against burnout or compassion fatigue.[33-35]

Training health professionals in positive-emotion-generating meditation practices could also improve patient outcomes. Compassion fatigue among clinicians leads to worse patient care[36]; positive-emotion-generating meditation could improve the quality of patient care. Practices that build positive emotion improve interpersonal interactions[37] and reduce implicit bias,[38] which together may also improve the quality of patient care. Clinicians trained in other mindfulness practices have shown greater ability to use these techniques in clinical practice[39]; introducing positive-emotion-generating meditation to patients with chronic pain, depression, posttraumatic stress disorder, and social anxiety could improve disease management.[6-8,10,11,13]

Limitations

This study includes data from a large sample of diverse health professionals; however, participants were largely from one academic institution. Additional studies are needed at community

hospitals and outpatient clinics. Other investigators could also measure enrollment rates to better assess the feasibility of brief, online training in positive-emotion-generating meditation practices. Because information regarding the training was available online to any health care provider (affiliated or unaffiliated with our institution), we could not determine enrollment rates. Our training in positive-emotion-generating meditation included multiple components—cases, evidence-based information, links to original research, guided practice, and tips for teaching patients; the contributions of each component were not tested with this study design. Future studies should include control training, and should compare various course designs (in-person vs online and free vs fee-based) to determine the optimal format for training. Participants' prior experiences with mindfulness techniques—including completion of 1 of the other 3 modules offered as part of our course—may have affected their responses to training. Additional studies will need to compare the effect of brief, online training on experienced and inexperienced meditators and examine the impact of various ''doses'' of mind-body skills training. Further studies will also need to assess the practical meaning of the small effect sizes observed in our study. Data are needed to examine whether small improvements in positive emotion translate to measurably reduced clinician burnout and better patient outcomes.[20]

Conclusions

Brief, online training in positive-emotion-generating meditation practices appeals to diverse health professionals and affects standard measures of gratitude, well-being, and compassion. Future studies can evaluate the effect of this training on clinician burnout, quality of care, and patient outcomes.

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Data collection for this project occurred at the Ohio State University, and data analysis was conducted at the Center for Integrative Health and Wellness at the Ohio State University.

Author Contributions

Nisha Rao analyzed the data, drafted the manuscript, and approved the final manuscript. Kathi J. Kemper planned the analysis, revised the manuscript, and approved the final manuscript.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethical Approval

This project was approved by the Ohio State University Office of Research Institutional Review Board (Approval Number 2013 B0611).

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