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Compassion Meditation Training for Hospital Chaplain Residents: A Pilot Study

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ABSTRACT

This study examines the effectiveness of incorporating compassion meditation training into a clinical pastoral education (CPE) curriculum to enhance compassion satisfaction and reduce burnout among hospital chaplain residents. Specifically, a longitudinal, quasi-experimental design was used to examine the impact of Cognitively-Based Compassion Training (CBCT), a group-delivered compassion meditation intervention. Hospital chaplain residents ($n = 15$) were assigned to participate in a CBCT intervention or a waitlist comparison group. Chaplains assigned to CBCT reported significant decreases in burnout and anxiety compared to the waitlist group; effects were not maintained at 4-month follow-up. Other outcomes, including compassion satisfaction, did not differ significantly but were trending in the expected direction. Findings suggest that compassion meditation training incorporated into CPE promotes chaplain wellbeing, although it may be necessary to extend CBCT throughout residency to sustain effects.

Introduction

Occupational burnout is considerably more prevalent among medical providers and helping professionals compared to age-matched cohorts (Dyrbye, Thomas, & Shanafelt, 2006; Hinderer et al., 2014; Sorenson, Bolick, Wright, & Hamilton, 2016). Burnout among healthcare providers impairs clinical care; patients of providers experiencing burnout report lower satisfaction and longer recovery times (Firth-Cozens & Greenhalgh, 1997; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004). Less is known about the experience of burnout among hospital chaplains who, as members of the healthcare team, provide emotional

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and spiritual care to distressed patients (Galek, Flannelly, Koenig, & Fogg, 2007; Idler, Grant, Quest, Binney, & Perkins, 2015). The experience of burnout encompasses several factors including emotional exhaustion, depersonalization (treating patients like objects), and ineffectiveness (Maslach, 2003; Maslach, Schaufeli, & Leiter, 2001). Care providers who interact frequently with patients experiencing trauma, acute distress and loss of control have an increased risk for burnout and secondary trauma stress (STS) (often defined as "compassion fatigue") (Figley, 2013; Pines & Maslach, 1978; Sinclair, Raffin-Bouchal, Venturato, Mijovic-Kondejewski, & Smith-MacDonald, 2017; Slocum-Gori, Hemsworth, Chan, Carson, & Kazanjian, 2013). Hospital chaplains are frequently referred to patients for emotionally-laden experiences including anxiety, depression, and loss (Fogg, Flannelly, Weaver, & Handzo, 2004; Pesut, Sinclair, Fitchett, Greig, & Koss, 2016; Vanderwerker et al., 2008). As such, hospital chaplains may be particularly susceptible to experiences of burnout and STS.

Given the consistently high rates of burnout among clinicians in other healthcare domains, it is surprising that preliminary evidence indicates that chaplains do not experience high rates of burnout despite working with high-acuity patient populations (Oliver, Hughes, & Weiss, 2018; Taylor, Weaver, Flannelly, & Zucker, 2006; Yan & Beder, 2013). While burnout rates are estimated to be between 30% and 40% among physicians (Wallace, Lemaire, & Ghali, 2009), Oliver et al. (2018) found that mean burnout scores of chaplains surveyed were in the bottom quartile of normed scores, indicating very low burnout. However, there is some reason to believe that burnout may be a problem for hospital chaplains. First, levels of burnout may vary by chaplain specialty. One study among chaplains in palliative care found that over 60% reported feeling worn out in the past three months as a result of their work (White, Murphy, Jeuland, & Fitchett, 2019). Second, years of chaplaincy work has been positively associated with burnout, and frequency of consultations with patients who experienced trauma has been positively associated with STS among chaplains (Galek, Flannelly, Greene, & Kudler, 2011). Furthermore, research on burnout and STS among chaplains is based entirely on self-report data, which is subject to potential social desirability biases wherein participants may feel uncomfortable reporting feelings of burnout and STS (Dodd-McCue & Tartaglia, 2010).

Despite the limited research and potential nuances related to burnout among chaplains, it is important to consider what factors might be protecting chaplains from experiencing high rates of burnout and STS as observed among other clinicians in healthcare. One study found that chaplains exhibit high levels of compassion satisfaction (Hotchkiss & Lesher, 2018), and previous literature indicates that compassion satisfaction and perceiving one's work as meaningful are inversely associated with burnout (Craig & Sprang, 2010; Martins Pereira, Fonseca, & Sofia Carvalho, 2011; Sprang, Clark, & Whitt-Woosley, 2007). In addition, participation in clinical pastoral education (CPE) has been shown to protect against burnout and STS among chaplains (Flannelly, Roberts, & Weaver, 2005). Given these findings, this study sought to examine if CPE could be further optimized to enhance compassion satisfaction among hospital chaplain residents.

Chaplains who report engaging in formal and informal self-care practices also report less distress at work (White et al., 2019), and there is broad evidence that meditation-based interventions can mitigate burnout and stress among healthcare professionals (Dharmawardene, Givens, Wachholtz, Makowski, & Tjia, 2016; Oman, Hedberg, &

Thoresen, 2006; Thimmapuram et al., 2017; Walsh et al., 2019). Meditation is accepted as an effective practice to reduce stress and enhance wellbeing (Goyal et al., 2014; Grossman, Niemann, Schmidt, & Walach, 2004). While most research on meditation has examined mindfulness-based practices (Grossman et al., 2004), increasingly researchers have examined the efficacy of more affective and axiologically-explicit practices for cultivating compassion in the face of suffering (Lutz, Jha, Dunne, & Saron, 2015). These contemplative practices seek to diminish attitudes that hinder compassion for self and others and to strengthen attitudes that facilitate it. Previous research suggests that participation in compassion-based meditation interventions can alter neural responses to the suffering of others (Desbordes et al., 2012; Weng et al., 2013). While few studies have directly examined the effectiveness of compassion-based meditation interventions to reduce burnout among healthcare providers, one study observed that physicians participating in a 12-week "Heartfelt Meditation" course reported less burnout and enhanced wellbeing (Thimmapuram et al., 2017).

This study examines the effectiveness of incorporating Cognitively-Based Compassion Training (CBCT), a secular compassion-training intervention implemented in group settings (Ozawa-de Silva et al., 2012), into CPE training. CBCT has been shown to reduce depressive symptoms (Desbordes et al., 2012; Dodds et al., 2015) and inflammation attributable to psychosocial stress (Pace et al., 2009; Pace et al., 2013). CBCT appears to also improve empathic accuracy (Mascaro, Rilling, Negi, & Raison, 2013), defined as the ability to accurately recognize the mental state of another person (Ickes, 2009). Among a sample of medical school students, CBCT was associated with increased compassion and decreased loneliness and depression (Mascaro et al., 2016).

These data indicate that incorporating CBCT into CPE may further enhance compassion satisfaction and buffer against burnout. To examine the incorporation of CBCT as a means to optimize CPE, we conducted a longitudinal, quasi-experimental waitlist comparison study. Group-delivered CBCT was systematically integrated into a CPE program which provides a year of full-time training to hospital chaplain residents. The program is accredited by the Association for Clinical Pastoral Education (ACPE). To our knowledge this is the first study of its kind to test the effectiveness of compassion-based meditation when systemically integrated into an education curriculum for hospital chaplains. The primary aim of the study was to test the initial effectiveness of CBCT to promote compassion satisfaction and buffer against burnout during CPE residency. A secondary aim of this study was to assess if any benefits associated with CBCT were sustained at 4-month follow-up.

Materials and methods

Participants

Following approval from the Emory University Institutional Review Board, participants were recruited from an ACPE-accredited CPE program that recently incorporated CBCT into its education curriculum. All chaplain residents received CBCT as part of their residency training, but participation in the research described here was voluntary. CPE educators and administrators were blind to whether chaplain residents elected to enroll in the research study. Prior to enrolling in the study, all participants had
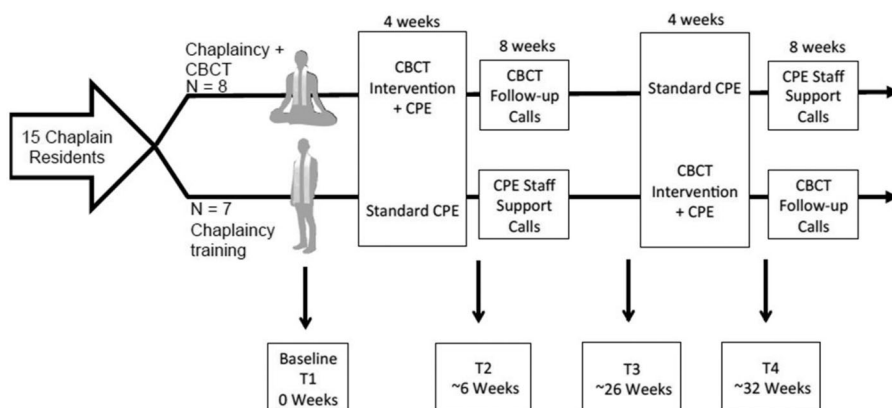
Figure 1. Study schedule.

completed one unit of CPE, during which they would have been exposed to potentially stressful chaplaincy work. Participants in this study provided spiritual care to patients in acute-care hospital settings. Their responsibilities included responding to all cardiac arrest codes, deaths, staff requests, and patient or family requests. They also assisted patients in end-of-life planning and the completion of advance directives. In addition, participants addressed the religious and spiritual needs of hospital staff including bereavement from death of patients as well as distress arising from events in their personal lives. The inclusion criterion was enrollment in the CPE program as a hospital chaplain resident. There were no exclusion criteria.

Study design

This pilot study employed a quasi-experimental design. Data were collected at four time points, beginning in August 2017 and extending through April 2018. At Time 1, participants had completed their residency orientation and 2–3 weeks of clinical practice (see Figure 1). Following recruitment and signed consent, participants completed a set of baseline assessments (Time 1). Participants were then assigned to receive CBCT in the fall (the intervention group) or continue standard CPE as usual (the waitlist comparison group). Assignments were based on logistical factors related to participants' schedules; assignments were not based on preference or personal characteristics of the participants. After the intervention group completed CBCT, all participants completed post-intervention assessments (Time 2). Participants in the waitlist group completed assessments on the same schedule as the CBCT intervention group. All participants repeated the same assessments at 4-month follow-up (Time 3). The waitlist group received CBCT training in the spring. After the waitlist condition received CBCT training, all participants completed a fourth and final assessment (Time 4).

Intervention

The CBCT course included four full-day sessions offered once per week over the course of 1 month. CBCT classes were taught by two certified CBCT instructors, one of whom is also a CPE educator. Class sessions included didactic information, group discussion, activities, and guided meditations. To supplement class instruction, participants were

given audio recordings of guided meditations and requested to regularly meditate outside class, though adherence was not monitored. Training also included eight one-hour follow-up group video calls led by the CBCT instructors, which occurred twice a month for 4 months after classes were completed. Follow-up calls included guided meditation, reflection on supplemental readings, and group discussion. The waitlist comparison group received standard CPE training. They also had commensurate staff-support training discussion phone calls twice a month for 4 months.

CBCT is designed to engender increased compassion for a wide group of people through a series of meditation exercises and reflective practices (for an overview of CBCT's theoretical underpinnings and pedagogical model, see Ash, Harrison, Pinto, DiClemente & Negi, 2019). All CBCT practices are secular in nature, though, hospital chaplain residents were encouraged to adapt any practices to be supportive of their own personal faith perspectives. The CBCT course content consists of a foundational practice followed by six skills-based modules. The modules build iteratively, beginning with basic mindfulness skills and progressing to analytical practices in which CBCT participants actively analyze the ways in which they interact with self and others. The content of each module is described below:

- *Foundational Practice:* participants aim to generate feelings of safety and appreciation by placing their attention on a moment of nurturance – often, a memory when they felt cared for or secure.
- *Module I. Attentional Stability and Clarity:* participants learn attentional control by practicing maintaining their focus on the sensations of breathing.
- *Module II. Insight into the Nature of Mental Experience:* participants familiarize themselves with their own mental activity by practicing non-judgmental observation of present-moment experiences (e.g., thoughts, feelings, and sensations) without becoming engrossed in them.
- *Module III. Self-Compassion:* participants cultivate a compassionate disposition toward themselves by relating to difficulties and imperfections from a broader perspective.
- *Module IV. Cultivating Impartiality:* participants cultivate a mindset of increased equanimity and inclusivity by reflecting that everyone, including strangers and difficult people, share a desire for happiness.
- *Module V. Gratitude and Affection:* participants broaden their circle of concern beyond their immediate networks of family and friends by reflecting on the intended and unintended benefits that others provide; generating appreciation and affection.
- *Module VI. Empathetic Concern and Engaged Compassion:* participants culminate the practice by considering others' vulnerabilities and strengthening the motivation to see them free from suffering.

Measures

Depression and Anxiety Stress Scale

The Depression and Anxiety Stress Scale (DASS) is a 42-item measure that assesses depressive symptomology over the previous week (Lovibond & Lovibond, 1995).

The DASS contains three subscales, each with 14 items, for depression, anxiety, and stress. Responses are provided on a 4-point Likert scale ranging from 0 ("did not apply to me at all") to 3 ("applied to me very much or most of the time"), for a possible range of 0–42 per subscale. Scores are coded according to the three subscales where higher scores indicate higher levels of symptoms. At baseline, the Cronbach's α for each subscale indicated satisfactory internal reliability: depression $\alpha = .92$, anxiety $\alpha = .85$, and stress $\alpha = .84$.

The Professional Quality of Life Scale

The Professional Quality of Life Scale (ProQOL) version 5 is a 30-item scale which measures three dimensions related to professional quality of life over the previous 30 days: compassion satisfaction (10 items), burnout (10 items), and STS (10 items) (Stamm, 2010). Responses are provided on a 5-point Likert scale ranging from 1 ("never") to 5 ("very often"), for a possible raw score of 10–50 on each subscale. Scores are coded according to the three subscales where higher scores indicate higher levels of compassion satisfaction, burnout, and STS. At baseline, Cronbach's α indicated satisfactory internal reliability for each subscale: compassion satisfaction $\alpha = .90$, burnout $\alpha = .84$, and STS $\alpha = .81$.

Statistical analyses

The data were analyzed using Statistical Package for the Social Sciences software, version 25.0. Statistical significance was evaluated at the 0.05 level. The Shapiro–Wilk test was used to assess data normality. The following outcome measures showed a non-normal distribution: depression ($p = .001$), anxiety ($p = .009$), and compassion satisfaction ($p = .022$). All other outcome measures were found to be normally distributed. As such, a combination of non-parametric tests and parametric tests were used for analysis. Descriptive analyses were conducted to characterize the study sample. Independent t-tests and Mann–Whitney U tests were used to assess whether any variables of interest differed between groups at baseline. No differences were observed. Repeated measures analysis of variance (ANOVAs) were used to assess our primary aim of whether there were group by time interactions in response to the CBCT intervention. For outcomes that showed statistically significant group by time interactions, additional repeated measures ANOVAs were used to assess if changes were sustained at a 4-month follow-up. Finally, to maximize power to evaluate changes in response to the CBCT intervention, secondary analyses were conducted for exploratory purposes by collapsing data collected immediately pre and post-CBCT from the intervention group (Time 1 and Time 2) and the waitlist condition (Time 3 and Time 4) into a single group pre–post design. Paired t-tests and Wilcoxon Signed Rank Tests were used to assess within-group changes in all measures.

Results

Sixteen participants enrolled in the study. Prior to group assignment, one participant withdrew from the CPE program. While chaplain residents were not required to

Table 1. Demographics.

Variable	Category	Total ($n = 15$)	Intervention group ($n = 8$)	Waitlist control ($n = 7$)
Gender	Female	10 (66.7%)	4 (50%)	6 (85.7%)
	Male	5 (33.3%)	4 (50%)	1 (14.3%)
Age (years)[a]		38.0	33.4	43.3
Race	White	3 (20%)	2 (25%)	1 (14.3%)
	Black	8 (53.3%)	4 (50%)	4 (57.1%)
	Asian	3 (20%)	2 (25%)	1 (14.3%)
	Other	1 (6.7%)	0	1 (14.3%)
Marital status	Single	6 (40%)	3 (37.5%)	1 (14.3%)
	Married	8 (53.3%)	4 (50%)	4 (57.1%)
	Widowed	1 (6.7%)	1 (12.5%)	0
Meditation	Yes	8 (53.3%)	7 (87.5%)	1 (12.5%)
Experience	No	7 (46.7%)	5 (71.4%)	2 (28.6%)

[a]Values are means.

participate in the study, all chose to do so. Eight participants were assigned to the intervention group that received CBCT in the fall unit of the CPE curriculum. Seven participants were assigned to the waitlist comparison condition, which received the standard CPE curriculum during the fall CPE unit and initiated CBCT in the spring CPE unit. Demographic data are summarized in Table 1. The mean age of participants was 38 years. The majority were women (66.7%) and about half of participants were black (53.3%) and married (53.3%). About half (53.3%) of participants had prior experience with meditation before enrolling in this study. Attendance at CBCT sessions was high as it was a mandatory component of the CPE curriculum.

Groups did not differ significantly at baseline with respect to outcome measures. At baseline, the mean compassion satisfaction score was 42.5 indicating high levels of compassion satisfaction according to ProQOL scoring categories (Stamm, 2010). The mean burnout score was 18.6 and the mean STS score was 20.4 indicating low levels of burnout and STS. At baseline, the mean depression score was 3.9, the mean anxiety score was 3.2, and the mean stress score was 7 indicating normal levels in each category according to standard DASS scoring guidelines. The results for outcome measures assessed at baseline (Time 1) and immediately after the intervention (Time 2) are presented in Table 2. There were not significant effects of group or time for any outcome measure. There were significant group by time interactions for anxiety ($F(1,13) = 5.173$, $p = .041$) and burnout ($F(1,13) = 5.860$, $p = .031$), indicating that participants in the CBCT group reported a significant decline in anxiety and burnout compared to those in the waitlist group. There were no group by time interactions for compassion satisfaction, STS, depression, or stress, although mean differences within the CBCT group did change in the expected direction.

Table 3 summarizes results of the analyses assessing whether immediate effects of CBCT were maintained at follow-up. There were no significant effects of group, time, or group by time interaction when data from the 4-month follow-up (Time 3) were included in the analysis. Results for anxiety approached statistical significance ($F(2,12) = 1.358$, $p = .056$).

Given the small sample size, we were underpowered to detect any but the largest effect size changes in outcome measures. Therefore, on an exploratory basis, analyses were conducted that combined pre-CBCT and post-CBCT data for the intervention group (Time 1–Time 2) and waitlist condition (Time 3–Time 4). The invention group at Time 1 did

Table 2. Comparison of main outcomes for CBCT intervention and waitlist condition between Time 1 and Time 2 assessments

Measure	Time	CBCT intervention (mean)	Waitlist (mean)	$F_{interaction}$	df	p Value	Partial eta squared
Depression	T1	4.8	3.4				
(DASS)	T2	2.5	3.7	2.813	1,13	.216	.115
Anxiety	T1	4.3	2.4				
(DASS)	T2	1.1	3.1	5.173	1,13	.041*	.285
Stress	T1	7.9	5.9				
(DASS)	T2	6.8	8.0	1.965	1,13	.184	.131
Compassion	T1	42.5	42.3				
Satisfaction (ProQOL)	T2	44.1	43	.182	1,13	.677	.014
Burnout	T1	20.1	17.3				
(ProQOL)	T2	18.0	18.3	5.860	1,13	.031*	.311
Secondary	T1	20.5	21.0				
Trauma stress (ProQOL)	T2	17.9	21.3	2.952	1,13	.109	.185

*$p \leq .05$.
DASS subscales possible scores range from 0 to 42 where higher scores indicate higher levels.
ProQOL subscales possible raw scores range from 10 to 50 where higher scores indicate higher levels.

Table 3. Comparison of outcomes between assessments at baseline (T1), post-intervention (T2) and follow-up (T3).

Measure	Time	CBCT intervention (mean)	Waitlist (mean)	$F_{interaction}$	df	p Value	Partial eta squared
Anxiety	T1	4.8	3.4				
(DASS)	T2	2.5	3.7				
	T3	3.1	3.6	1.358	2,12	.056	.199
Burnout	T1	20.1	17.3				
(ProQOL)	T2	18.0	18.3				
	T3	19.8	19.4	1.753	2,12	.193	.119

Table 4. Nonparametric assessments of within group change from combined pre and post CBCT intervention data from CBCT intervention group (T1–T2) and waitlist group (T3–T4).

Measure	Time	Mean	Z	p Value
Depression	Pre	4.3		
(DASS)	Post	2.7	−2.427	.015*
Anxiety	Pre	3.9		
(DASS)	Post	1.8	−2.156	.031*
Compassion	Pre	42.5		
Satisfaction (ProQOL)	Post	44.9	−2.173	.030*

*$p \leq .05$.

not differ significantly from the waitlist comparison group at Time 3 with respect to any outcome measure (see Tables 4 and 5). Mean scores significantly increased from pre-CBCT to post-CBCT for compassion satisfaction ($Z = -2.173$, $p = .030$). Mean scores significantly decreased from pre-CBCT to post-CBCT for depression ($Z = -2.427$, $p = .015$), anxiety ($Z = -2.156$, $p = .031$), burnout ($t(14) = 3.873$, $p = .002$), and STS ($t(14) = 2.987$, $p = .010$). Significant differences were not observed for stress.

Discussion

This study examined whether group-delivered CBCT incorporated into a CPE program can be effective in enhancing compassion satisfaction and reducing negative emotions among hospital chaplain residents. Results show that residents assigned to a CBCT

Table 5. Parametric assessments of within group change from combined pre and post CBCT intervention data from CBCT intervention group (T1–T2) and waitlist group (T3–T4).

Measure	Time	Mean	t	df	p Value
Stress	Pre	7.1			
(DASS)	Post	5.9	1.042	14	.315
Burnout	Pre	19.8			
(ProQOL)	Post	17.8	3.873	14	.002**
Secondary	Pre	21.2			
Trauma stress (ProQOL)	Post	18.9	2.987	14	.010**

$*p \leq .05.$
$**p \leq .01.$

intervention reported significant decreases in burnout and anxiety immediately following CBCT compared with a waitlist comparison group. Although results should be taken as preliminary given the small sample size, the fact that this is the first study we are aware of to examine the impact of integrating a compassion-meditation intervention into a training program for hospital chaplains adds to their potential importance.

While other outcome measures of compassion satisfaction, STS, depression, and stress did not differ significantly between groups, observed mean changes trended in the expected direction. It is likely that the study was underpowered to detect all but large effect-size changes in these areas. Secondary analyses, based on combining pre- and post-CBCT data from both groups, suggest that the intervention produced significant increases in compassion satisfaction as well as significant reductions in depression, anxiety, burnout, and STS. While these analyses do not account for potential placebo effects nor do they control for number of CPE units taken (the comparison condition took CBCT later in their residency when they had more clinical experience), they do suggest that group-delivered CBCT may broadly promote mental health and compassion satisfaction. Future trials should evaluate these findings in a larger sample.

In the intervention group, improvements in burnout and anxiety were not maintained at 4-month follow-up. Several explanations might account for this finding. (1) The CBCT course was much more intensive than the episodic follow-up phone calls that occurred in the months following CBCT completion. Study findings suggest that this follow-up delivery modality may have been ineffective for sustaining the initial observed effects of CBCT. (2) Alternatively, some of the benefit derived from the CBCT intervention may have resulted from feelings of social support or stress-relief related to the group-delivered CBCT experience, and it is possible that a more prolonged "dose" of group-based CBCT would promote more enduring therapeutic effects. (3) It is also possible that chaplains stopped practicing meditation with the same frequency once CBCT was complete and practice was no longer regularly facilitated and encouraged. A previous study using a CBCT intervention found that practice frequency was associated with increased hopefulness and decreased anxiety (Reddy et al., 2013). Future trials should measure and evaluate meditation practice time during and after the CBCT intervention.

Very few studies of interventions aimed to promote provider compassion satisfaction and reduce provider burnout have also studied post-intervention effects. In a systematic review of interventions to prevent or reduce physician burnout, West and colleagues (2016) discuss that it is still unknown whether interventions to reduce burnout require

intermittent re-exposure to sustain potential benefits. Given that burnout is understood as a result of ongoing workplace stressors, it is reasonable to expect that continual boosters may be required to maintain intervention effects.

In this study, it should also be noted that both the intervention and waitlist comparison group reported low levels of depression, anxiety, stress, and burnout, and high levels of compassion satisfaction compared with normed data of medical school students (Dyrbye et al., 2006, 2014) as well as normed data from the general population (Henry & Crawford, 2005; Stamm, 2010). This finding is consistent with prior research indicating that chaplains have high levels of compassion satisfaction, suggesting they find their work to be rewarding (Hotchkiss & Lesher, 2018), and as such may not be as susceptible to burnout and other negative emotions compared with other healthcare professionals in training (Oliver et al., 2018; Yan & Beder, 2013). Importantly, despite the potential for floor effects due to high reported wellbeing at baseline among the current sample of hospital chaplain residents, there were still significant decreases in burnout and anxiety for those assigned to CBCT compared with the waitlist comparison group. This suggests that CBCT can have benefit and optimize the effects of CPE, even for those who already exhibit relatively high wellbeing.

Strengths and limitations

This study had several limitations that warrant mention. First, because the study was a pilot effort, the sample size was small, which resulted in limited ability to detect any but large-effect size between-group differences. Second, due to logistical constraints, chaplains could not be randomly assigned to study conditions. Third, while a waitlist-comparison design was implemented to isolate the effects of CBCT, it is important to consider that the intervention group and waitlist-comparison group interacted frequently throughout their CPE program. The experiences of the intervention group's participation in CBCT may have influenced the waitlist comparison condition; however, instructors attempted to minimize such influence by providing the intervention group opportunities for discussing their CBCT-related experiences within their assigned group only. Finally, all outcome measures were self-reported and potentially susceptible to social-desirability and other forms of bias. Within psychological research broadly, as well as research specific to contemplative practice and compassion, there is an increasing call for more naturalistic and objective methods for measuring compassion and wellbeing (Mascaro, Darcher, Negi, & Raison, 2015; Zaki & Ochsner, 2012). Future research should attempt to incorporate behavioral measures, such as experience sampling, to investigate outcomes beyond self-report measures.

This study also had several notable strengths. The longitudinal, quasi-experimental design allowed for assessment of follow-up effects. Additionally, the study had low attrition compared with other pilot studies testing compassion meditation interventions (Gonzalez-Hernandez et al., 2018; Mascaro et al., 2016). This effect is likely attributable to the fact that CBCT was integrated as a mandatory component of the CPE curriculum, though participation in the research was not required.

Future directions

Within the domain of spiritual health, there is an increasing call to identify shared practices across diverse faiths and to better align chaplaincy work with evidenced-based practices (Burton, 2002; Fitchett, 2002; O'Connor, 2002). While chaplains may engage in their training from their own religious perspective, CPE programs do not priviledge any one religion. Due to its secular orientation, CBCT may serve as an exemplary evidence-based health promotion intervention to incorporate in CPE. Compassion is considered to be a core value across religious traditions (Alharbi & Al Hadid, 2019; Dalai-Lama, 2011; Käppeli, 2008; Vogt, 2004). As such, CBCT's emphasis on compassion may provide a unifying framework that would be acceptable to chaplain residents coming from a diversity of faith traditions.

While findings from this study suggest that CBCT is a beneficial component of CPE, further research should examine factors related to successful implementation including the acceptability and sustainability of incorporating CBCT into CPE. Given that this study found the benefits of CBCT were not maintained at 4-month follow-up, it will be important for future research to examine questions related to adequate dosage. To date, there is little research across compassion training interventions regarding ideal training length (Skwara, King, & Saron, 2017). In order to assess this question, programs and corresponding research should consider innovative means for providing refresher sessions, including not only additional in-person boosters but also technology-based methods such as mobile apps. Future studies should also consider including qualitative approaches, such as focus groups, to better understand the unique needs and circumstances of hospital chaplain residents and their experiences engaging with CBCT. Such research could inform modifications to program length and design as well as lay the groundwork for wide-scale implementation of CBCT into hospital chaplain residency programs.

We recommend that future research also evaluate the costs and benefits of incorporating CBCT into CPE. There is evidence that relatively small reductions in provider burnout can have meaningful effects (West et al., 2016). One point changes in provider burnout were associated with fewer perceived medical errors (Shanafelt et al., 2010; West, Tan, Habermann, Sloan, & Shanafelt, 2009) and reductions in suicidal ideations (Shanafelt et al., 2011). As such, future research should consider broader benefits that may result from small improvements in burnout among chaplains. The inclusion of CBCT holds the potential to not only improve chaplain wellbeing, but it may also impact interactions between chaplains and patients. As previously discussed, provider burnout is associated with lower patient satisfaction (McHugh et al., 2011; Vahey et al., 2004). Emerging research also indicates that provider warmth and assurance may moderate treatment efficacy (Howe, Goyer, & Crum, 2017; Leibowitz, Hardebeck, Goyer, & Crum, 2018). While this study did not examine whether CBCT impacted chaplain-patient interactions, it is possible that the skills gained from CBCT may allow chaplains to treat patients with greater attention and compassion. Future research could examine if CBCT influences chaplain-patient interactions and patient outcomes as well as interactions between chaplains and other professionals on the healthcare team; such research may provide justification for wider scale implementation of CBCT in CPE programs.

Conclusions

The results of this study suggest that compassion training can be effective at reducing burnout and anxiety among hospital chaplain residents. While our study did not directly test feasibility or acceptability, CBCT appears to provide an effective, group-delivered intervention that can be incorporated into existing CPE programs to promote the wellbeing of chaplain residents. Future studies should continue to test the feasibility and acceptability of incorporating CBCT into chaplaincy education. In addition, future trials should evaluate the extent to which CBCT affects chaplain-patient interactions and ultimately patient outcomes.

Disclosure statement

Dr. Negi reports that he is the developer of CBCT, but neither he nor any of the other authors hold a financial stake in the intellectual property rights of CBCT. Dr. Raison reports that in the prior 12 months he has served as a consultant to Shire, Alkermes, Usona Institute, National Center for Continuing Medical Education, and Emory Healthcare. No other disclosures were reported.

Data availability statement

The data that support the findings are available from the corresponding author, MJA, upon reasonable request.

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