Abstract

Context. Palliative care clinicians (PCCs) are vulnerable to burnout as a result of chronic stress related to working with seriously ill patients. Burnout can lead to absenteeism, ineffective communication, medical errors, and job turnover. Interventions that promote better coping with stress are needed in this population.

Objectives. This pilot study tested the feasibility of the Relaxation Response Resiliency Program for Palliative Care Clinicians, a program targeted to decrease stress and increase resiliency, in a multidisciplinary cohort of PCCs ($N = 16$) at a major academic medical center.

Methods. A physician delivered the intervention over two months in five sessions (12 hours total). Data were collected the week before the program start and two months after completion. The main outcome was feasibility of the program. Changes in perceived stress, positive and negative affect, perspective taking, optimism, satisfaction with life, and self-efficacy were examined using nonparametric statistical tests. Effect size was quantified using Cohen’s d.

Results. The intervention was feasible; all participants attended at least four of the five sessions, and there was no attrition. After the intervention, participants showed reductions in perceived stress and improvements in perspective taking.

Conclusion. Our findings suggest that a novel team-based resiliency intervention based on elicitation of the relaxation response was feasible and may help promote resiliency and protect against the negative consequences of stress for PCCs. J Pain Symptom Manage 2016;51:604–608. © 2016 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words
Palliative care providers, health care provider wellness, stress, group intervention, relaxation response, resiliency, mind-body therapies

Introduction

Health care providers are susceptible to the deleterious effects of stress, resulting in consequences such as decreased productivity because of absenteeism and increased medical errors. In addition, stress may play a role in quality of care, as elevated stress may lead to poor communication and teamwork in health care settings. These negative consequences of stress have been demonstrated in palliative care clinicians (PCCs) as well. Not only do palliative care providers experience these stressors but also constant exposure to death and loss, time pressures and unpredictable schedules, increasing workloads, and competing role demands.

Given these findings, there has been increased interest in the development of treatments aimed at promoting provider wellness and resiliency in palliative care. Resiliency is the capacity of a dynamic, malleable system to withstand challenges to its stability, viability, or development. Studies of group interventions to enhance resiliency in health care providers have found improvements in various domains of provider well-being.

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Although these interventions have focused primarily on providers within a single discipline, palliative care services often are unique in their organizational structure in that they consist of an interdisciplinary team, which often includes physicians, nurses, chaplains, psychologists, and social workers. Success of the palliative care service is contingent on the cohesion and wellbeing of the team members, especially as caseloads and job demands have increased. However, to our knowledge, no intervention to date has explored the feasibility of mind-body resiliency programs among an interdisciplinary palliative care team.

The Relaxation Response Resiliency Program (3RP) is a mind-body program designed to promote resiliency and has been shown to decrease stress and increase resiliency in a broad range of populations. For the purposes of this study, we adapted the existing program based on our previous qualitative work to meet the specific stressors, challenges, and training needs of PCCs. We sought to test the feasibility of this adapted 3RP among a team of palliative care providers. Additionally, we explored PCC characteristics that could be associated with higher levels of stress.

Methods

Participants

Our pilot study intervened with a multidisciplinary team of PCCs (physicians, nurse practitioners, nurses, and social workers) at a major academic medical center. PCCs were informed about the 3RP program through e-mails and informal presentations. Informed consent was obtained from each participant. There were no specific financial incentives provided to participants, except that their time was protected by the Division Chief. Staff members were expected to participate in the resiliency training sessions as part of job responsibilities but were not required to participate in the research component and could opt out of the self-report questionnaires at their discretion. The primary inclusion criterion was full-time employment as a clinician in the Palliative Care Division. There were no exclusion criteria, and the Partners Human Research Committee approved the project.

Assessment

Study data were collected and managed using REDCap (Research Electronic Data Capture) tools hosted at Massachusetts General Hospital (MGH) and were deidentified. REDCap is a secure, web-based application designed to support data capture for research studies. Study data were collected at two time points: the week before the start of the program, and two months after completion of the program. Research assistants performed the data collection and analysis. Members of the Palliative Care Division leadership did not participate in data collection or analysis. Data were confidential and not reviewed by the PC leadership at any time.

Intervention

The 3RP for PCCs (3RP-PCC) was adapted from the MGH Benson-Henry Institute for Mind-Body Medicine (BHI) manualized 3RP program through an iterative process, taking into account the PC needs assessment and discussions with PC leadership. The intervention consisted of an initial four-hour introductory session followed by four two-hour education sessions delivered in a group format by a physician from the MGH (BHI). The sessions were held every other week over a period of two months. Based on principles of cognitive behavioral therapy and positive psychology, the goals of the program included 1) eliciting the relaxation response, 2) reducing overall stress reactivity, 3) increasing connectedness to oneself and others. The 3RP for PCCs incorporated a multimodal approach to introduce and reinforce new skills, including didactics, in-session activities, discussions, and weekly practice assignments. Each education session began with the practice of a new exercise to elicit the relaxation response (e.g., breath awareness), followed by didactics and in-class exercises.

Outcome Measures

We assessed feasibility as the proportion of full-time MGH PCCs who enrolled in the pilot trial, attended the intervention sessions, and completed the assessments. In addition, six constructs were selected to explore the three core components of the 3RP relaxation response: stress awareness, adaptive strategies, and resiliency. Each construct was assessed at preintervention and postintervention.

Relaxation Response. We evaluated perceived stress using the well-validated Perceived Stress Scale (10 items, score range 0–40). The Perceived Stress Scale assesses the extent to which life has been stressful, uncontrollable, or unmanageable during the past week, with higher scores indicating greater stress.

Stress Awareness. Participants’ affect during the past week was assessed with the Positive and Negative Affect Schedule. The Positive and Negative Affect Schedule comprises two 10-item subscales (positive affect and negative affect, score ranges 10–50), with higher scores indicating more affect.

Adaptive Strategies. We administered the perspective-taking subscale of the Interpersonal Reactivity Index (IRI). The 28-item IRI was developed to assess cognitive and affective dimensions of empathy. The IRI
perspective-taking subscale (seven items, score range 0–28) specifically assesses perceived attention to others’ points of view, with higher scores indicating greater perspective taking. Optimism was assessed with the Life Orientation Test—Revised, a measure of optimistic versus pessimistic expectations about the future. Higher scores (six items, score range 0–24) indicate greater optimism/lower pessimism. Global satisfaction with life was assessed using the brief Satisfaction with Life Scale (five items; score range 5–35), with higher scores reflecting higher satisfaction.

**Resiliency.** We evaluated self-efficacy for managing stressful life events using the General Self-Efficacy Scale (10 items, score range 10–40). The GSE was developed to assess perceived self-efficacy as a predictor of coping with daily stressors and adapting to stressful events.

**Statistical Analysis**

We characterized the enrolled sample using descriptive statistics. We also explored preliminary associations of select sample characteristics (age, gender, marital status, and years of palliative care experience) with preintervention scores and preintervention to postintervention change scores on the proposed outcome measures, using nonparametric tests (Spearman ρ [r_s] and independent samples Mann-Whitney U test). In an additional exploratory analysis, we evaluated preintervention to postintervention changes in our six proposed outcomes, reflecting core 3RP components relevant to palliative care providers: perceived stress, positive and negative affect, perspective taking, optimism, satisfaction with life, and self-efficacy. Sum scores were imputed for a small number of cases in which one to two items were missing from a scale. Changes in sum scores were evaluated for statistical significance with nonparametric Wilcoxon signed-rank tests, using both liberal (P < 0.10) and conservative (P < 0.05) critical values. Cohen’s d effect sizes were calculated, controlling for dependence between preintervention and postintervention mean scores.

**Results**

**Feasibility**

Among 16 palliative care providers, 15 (93.8%) were available to participate and enrolled in the study. Participant characteristics are noted in Table 1. There was no study attrition among enrollees. All participants attended at least four (80%) of the five sessions and completed the preintervention and postintervention study assessments. However, two participants (13.3%) were missing data for a subset of questionnaires within the preintervention assessment.

| Table 1 Demographic Characteristics of Palliative Care Clinicians (N = 15) |
|-------------------------------|-----------------|------------------|
| Demographic Characteristic    | N (%)           | Mean ± SD        |
| Age, yrs                      |                 | 44 ± 8.1         |
| Gender                        |                 |                  |
| Male                          | 3 (20)          |                  |
| Female                        | 12 (80)         |                  |
| Race                          |                 |                  |
| White                         | 13 (87)         |                  |
| Asian                         | 1 (7)           |                  |
| Black or African American     | 1 (7)           |                  |
| Ethnicity                     |                 |                  |
| Hispanic                      | 0 (0)           |                  |
| Non-Hispanic                  | 15 (100)        |                  |
| Marital status                |                 |                  |
| Never married                 | 7 (47)          |                  |
| Married/living as if married  | 7 (47)          |                  |
| Divorced/separated            | 1 (7)           |                  |
| Children under 18 at home    |                 |                  |
| Yes                           | 5 (33)          |                  |
| No                            | 10 (67)         |                  |
| Role in palliative care service|               |                  |
| Physician                     | 6 (40)          |                  |
| Nurse practitioner            | 6 (40)          |                  |
| Clinical social worker        | 2 (13)          |                  |
| Registered nurse              | 1 (7)           |                  |
| How long in palliative care service|             |                  |
| < 1 yr                        | 1 (7)           |                  |
| 1–5 yrs                      | 7 (47)          |                  |
| 6–10 yrs                     | 7 (47)          |                  |
| Hours per week in palliative care service|       | 48 ± 8.4         |

**Exploratory Associations Between Sample Characteristics and Baseline Outcomes**

At preintervention, longer time working in palliative care was associated with greater self-efficacy (r_s = 0.57, P = 0.04), whereas older age was associated with less perspective taking (r_s = –0.66, P = 0.01). There were no other associations of age, gender, marital status, or years of palliative care experience with the proposed outcome measures at P < 0.05.

**Postintervention Outcomes**

At postintervention, participants showed a reduction in perceived stress (z = –2.17, P = 0.03; Cohen’s d = 0.65) and increase in perspective taking (z = –1.66, P = 0.10; Cohen’s d = 0.67), with a medium effect size for change in each factor. Effect sizes for improvements in positive affect (z = –1.37, P = 0.17; Cohen’s d = 0.42), optimism (z = –1.44, P = 0.15; Cohen’s d = 0.36), satisfaction with life (z = –1.18, P = 0.24; Cohen’s d = 0.29), and self-efficacy (z = –0.88, P = 0.38; Cohen’s d = 0.30) were small. Reduction in negative affect was negligible (z = –0.71, P = 0.48; Cohen’s d = 0.19).

**Discussion**

To our knowledge, this is the first study to examine a team-based resiliency intervention for PCCs. We found that the intervention and its evaluation were
feasible and acceptable. We were not powered to detect changes in our proposed outcomes from preintervention to postintervention. However, in our exploratory analyses, participants showed preliminary evidence of a reduction in perceived stress, and a trend toward an increase in perspective taking. There were small improvements in positive affect, perspective taking, optimism, and global life satisfaction; these findings were not found to be statistically significant. Taking into account our small sample size and nonrandomized design, these findings must be replicated in a larger-scale, randomized-controlled trial of this program with PCCs.

Consistent with our findings, several studies have found that professional self-care strategies are helpful in preventing burnout, compassion fatigue, and moral distress among health care providers. Additional factors that may improve professional well-being include regular appraisal of all aspects of work life; developing a network; increasing self-awareness in setting limits; and pursuing reflective practice. Similar to what has been found in other multidisciplinary team-based approaches, our intervention included strategies to improve the ability to empathize with others as well as sharing personal and professional sources of meaning.

There are several factors that allowed for successful participation and completion of this intervention. First, it was supported and codeveloped by the leadership of the palliative care service. Second, a needs assessment helped optimize the intervention for this specific team. Third, we focused on a skills-based approach, which empowered PCCs to use these skills not just in their personal lives but also in professional and clinical contexts.

There are several important limitations to bear in mind with regard to interpretations of these findings. Because our study used a single-arm, pre-post design and recruited PCCs from a convenience sample of individuals, study findings are limited in generalizability. Additionally, it is possible that any observed changes could be attributable simply to the nature of the intervention (time spent away from usual duties, in a social space with colleagues) rather than its specific content. This concern can best be addressed by a future controlled trial. However, this study was designed to examine study feasibility within an academic medical center, and our findings provide pilot data for future studies within palliative care teams. Second, we did not measure the sustainability of these effects beyond the immediate evaluation on conclusion of the study. Third, the intervention was supported and codeveloped by the leadership of the palliative care service. This support was central to the successful application of the intervention; as such, although participation in the research component was optional, given the small size of the PC team, we cannot exclude the effect of the hierarchical organizational structure in the interpretation of the findings, and it is likely that the excellent attendance rate was impacted by the PC leadership’s messaging that attendance at the sessions should be considered part of job duties. Importantly, our needs assessment was intended to mitigate that effect by tailoring the content of the intervention. Finally, we did not calculate the “lost revenues” that happened as a result of participation in the intervention. Having said that, prior studies have found that healthcare provider burnout is associated with lower quality of care, increased medical errors, and reduced work efficiency—all factors that lead to increased medical costs.

As medicine moves into multidisciplinary team-based care, future interventions should bear in mind several key issues that need to be substantiated through rigorous outcome measures. First, they would benefit from exploring the effects of this program on PCCs with varying age and varying degrees of experience. This is particularly important in light of our baseline data showing greater self-efficacy among seasoned clinicians. Second, in light of evidence suggesting that burnout may lead to physician turnover, particularly among younger physicians, future studies should examine the program’s impact on provider retention. Third, as this was a single-arm study, it will be important to replicate these findings in larger cluster-based designs in other centers. Finally, future studies should examine the potential direct and indirect effects of this intervention on patient care. Specifically, they should examine how improvements in provider resiliency allow for improvements in quality of care (e.g., decreased medical errors, increased patient satisfaction, etc.).

Conclusion

Our findings suggest that it is possible to develop a novel and feasible team-based intervention that uses elicitation of the relaxation response and cognitive behavioral strategies to promote resiliency for PCCs. This intervention is a step forward in providing palliative care teams with an effective program that can be easily integrated and has the potential to minimize provider stress. The effect of such an intervention on provider stress and patient level outcomes should be studied in a larger sample using a controlled trial methodology.

Disclosures and Acknowledgments

No competing financial interests exist.
References