

# We Matter Too! Addressing the Wellness of Program Coordinators in Graduate Medical Education

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**Introduction:** Burnout and stress in medical settings have been associated with despondent staff and decreased productivity. Although Program Coordinators (PCs) play an integral role in residency training programs, there exist few, if any, interventions aimed at addressing their burnout.

**Methods:** A longitudinal study design was used to evaluate data from residency/fellowship training PCs who participated in a wellness retreat held at a single institution in August 2016. Subjects completed anonymous, pre- and post-retreat questionnaires in addition to a 3-month follow-up questionnaire, which included questions used to assess aspects of job demand, resiliency, and well-being. The seven-item Physician Well-Being Index and a logistic regression model were used to assess well-being. Mean values and SDs were reported to examine changes in mental health scores and participants' job satisfaction over the course of the intervention.

**Results:** Nineteen of the 45 (43%) invited residency/fellowship training PCs completed data collection. Coordinators ranged in age from 25 to 64 years; all were female. Well-being, sleep, resiliency, and employee satisfaction scores improved over the assessment period. Well-being scores initially decreased by 0.37 at the postassessment, but increased at follow-up (mean: 2.0; SD 1.7). Stress scores increased from baseline to post, but decreased from baseline to follow-up: 0.2 and -0.2, respectively.

**Discussion:** Residency PCs experienced improvements in mental quality of life, resiliency, stress, and sleep scores on attending the wellness program. Attention to such findings may have important implications, as we address the burnout crisis in the medical education community.

**Keywords:** burnout, well-being, wellness program, residency, Program Coordinators

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Although the concept of physician burnout is well described, it has recently received increased attention in both the medical and lay literature. A study on burnout among US physicians found that 45.8% of physicians reported experiencing at least one symptom of burnout, and they were 10%

more likely to experience symptoms of burnout compared with other working adults.<sup>1</sup>

Burnout was first described by psychologist Herbert Freudenberger<sup>2</sup> and later defined by Maslach.<sup>3</sup> The syndrome is made up of three components: (1) emotional exhaustion; (2) cynicism/depersonalization, an emotional and mental separation from one's work; and (3) reduced personal accomplishment and feelings of ineffectiveness.<sup>3</sup> Burnout affects employees personally and professionally, creating high turnover for organizations. As found in Maslach and Susan Jackson's early research in the 1980s, burnout seemed to be correlated with family problems and an increased use of alcohol and drugs,<sup>4</sup> which is often followed by poor morale and a rise in patient safety incidents.<sup>5</sup>

Although much of the current literature has focused on clinical staff well-being and interventions,<sup>6–12</sup> research on burnout among nonclinical staff, all of whom indirectly impact patient care, remains limited. Residency Program Coordinators (PCs) manage the administrative aspects of residency programs and are responsible for ensuring compliance with regulatory bodies, including their specialty board, the institution, and the Accreditation Council for Graduate Medical Education (ACGME).<sup>13</sup> Program Directors (PDs) and Graduate Medical Education (GME) Offices consider PCs an integral member of the program leadership team, yet there is a paucity of literature examining the wellness and burnout of these essential members of the training program. PCs are often frequently required to generate resident case log and duty hour reports, schedule departmental intern orientation and graduation, manage the

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residency recruitment process, and serve as liaisons between housestaff and multiple jurisdictions.<sup>13</sup> In addition to these innumerable administrative tasks, PCs often serve as mentor, confidante, and project manager for both residents and PDs. Coordinators undoubtedly influence trainee experience, impact the care that trainees provide throughout residency, and play a critically important role in shaping the next generation of physicians.

Although the relationship between PCs, PDs, and the GME office varies from institution to institution, the ACGME does mandate that training programs have a baseline level of administrative support, and there are PC responsibilities that are common across all specialties. Although the exact number of PCs is unknown, there were approximately 10,700 ACGME-accredited residency and fellowship programs involving approximately 130,000 active residents and fellows in academic year 2016–2017.<sup>14</sup> Although not required, many PCs are active within their own specialty-specific organizations, some go on to obtain formal training and certification from the National Board for Certification—Training Administrators of Graduate Medical Education (TAGME). At our institution, PCs have the opportunity to interact with one another at monthly coordinator meetings as well as through an internal email listserv where they are able to pose questions to the group and share best practices.

This study aimed to evaluate the effect a wellness program had on addressing burnout and well-being among a cohort of residency and fellowship PCs at a large safety-net hospital with more than 700 trainees. We obtained and examined data using the seven-item Physician Well-Being Index (PWBI) to assess well-being.<sup>15</sup> The single-item measures of emotional exhaustion and depersonalization were examined to identify characteristics of burnout.<sup>16</sup> In addition, questions from Smith's Brief Resilience Scale (BRS) were used as a measurement of stress recovery.<sup>17</sup> Five factors that may impact overall quality of life (QOL) among employees were examined: employee satisfaction; mental QOL/well-being; resiliency; perceived stress; and sleep quality. Participants were asked to complete a pre-, post-, and 3-month follow-up questionnaire. We hypothesized that individuals participating in the wellness program would use the learned coping skills to combat burnout and stress, ultimately leading to a reduction in burnout levels. To our knowledge, this is the first study that addresses burnout and well-being among PCs in residency and fellowship training programs.

## METHODS

### Study Population

All (45) Residency/Fellowship Coordinators were invited to participate in the educational program that consisted of a one-day retreat. Those participating in the wellness program were asked to complete a pre-retreat, post-retreat, and 3-month follow-up questionnaire. Coordinators who did not attend the program in its entirety and did not complete the pre- and post-retreat questionnaire were not eligible to participate in the study.

### Intervention and Wellness Activities

The concept of the need for a wellness retreat specifically targeting PCs grew from a gap identified in a preliminary baseline survey distributed by the GME Office at our institution in which

15 of the 31 (48%) respondents considered themselves burned out. These data, along with anecdotal reports from our Coordinators, were the driving force behind the genesis of the project.

In August 2016, a 6-hour retreat was held on the medical campus. Sessions included team-building exercises as well as several sessions aimed at addressing the physical and mental health of attendees (see **Appendix I, Supplemental Digital Content 1**, <http://links.lww.com/JCEHP/A37>). These activities introduced and incorporated several concepts, including a discussion of the "Window of Tolerance"<sup>18,19</sup> and one's stress response, and how factors affecting one's ability to remain within their "window" may affect sleep, resiliency, and burnout (among other considerations).

Over the next 3 months, a number of other wellness initiatives, organized by members of our GME community, were offered, including a luncheon featuring "ice breakers" (for example, "2 Truths & 1 Lie"), a visit to the medical center's demonstration kitchen to learn new recipes, and a 6-week, 10,000 steps per day challenge.

### Outcome Measures

We collected demographic information, including age, sex, ethnicity, education, and length of employment from participants as well as self-reported data reflecting employee satisfaction, well-being, resilience, perceived stress, sleep quality, and exercise. Changes in employee satisfaction were assessed by examining responses to three statements asked at each assessment period: (1) "I like the work I do," (2) "The amount of job stress I feel is reasonable," and (3) "Overall, I am a satisfied employee". Scores ranged from 1 to 5, with "1" being "Strongly disagree" and "5" being "Strongly agree" (Table 1).

To measure well-being, we obtained data using Dyrbye's PWBI.<sup>14</sup> Participants were asked seven "yes" or "no" questions from the PWBI. Participants were asked six questions from Smith's BRS<sup>17</sup> and four questions from the Perceived Stress Scale (PSS).<sup>20</sup> Sleep disturbance was assessed through the PROMIS-29 Profile v1.0 4a (Patient Reported Outcome Measurement Information System).<sup>21</sup> To measure exercise, we asked participants if they participated in any exercise over the past week, and if yes, how frequently they exercised. Participation in physical activity was evaluated to address what has been shown to positively impact mental and physical well-being.<sup>22</sup>

The study protocol was deemed exempt by the institution's Institutional Review Board, and written informed consent was obtained from all participants.

### Statistical Analyses

Descriptive statistics were used to report demographics. Mean values and SDs were used to test changes in reported outcome measures (well-being, resiliency, perceived stress, and sleep quality) over the course of the study. All measures were treated as continuous variables. We used a logistic regression model to test changes in responses to questions derived from the PWBI ("Have you felt burned out from your work?," "Have you worried that your work is hardening you emotionally?," etc.). The scoring of Smith's BRS, Cohen's PSS, and the PROMIS-29 Profile v1.0 4a are described elsewhere.<sup>17,20,21</sup>

SAS software version 9.4 (SAS Institute, Inc) was used for all statistical analyses. Study data were collected and managed using REDCap electronic data capture tools, CTSI 1UL1TR001430.<sup>23</sup>

**TABLE 1.**  
**Demographic Characteristics of Program Coordinators by Mental QOL Status at 3-Month Follow-up\* Reported as “N” and Prevalence (%)†**

Characteristic	Total Population (N = 14)	Low-Mental QOL (n = 3)	High-Mental QOL (n = 11)
<b>Age</b>			
25–34 y	5 (36)	2 (67)	3 (27)
35–44 y	3 (21)	1 (33)	2 (18)
45–54 y	3 (21)	0 (0)	3 (27)
55–64 y	3 (21)	0 (0)	3 (27)
<b>Ethnicity</b>			
White	6 (43)	2 (67)	4 (36)
Nonwhite (Black or African American and other)	8 (57)	1 (33)	7 (64)
<b>Highest degree or level of school completed</b>			
High school graduate, diploma or equivalent	1 (7)	1 (33)	0 (0)
Some college credit, no degree	3 (21)	1 (33)	2 (18)
Associate or technical degree	4 (29)	0 (0)	4 (36)
Bachelor's degree	5 (36)	1 (33)	4 (36)
Master's degree	1 (7)	0 (0)	1 (9)
<b>Length of employment as Program Coordinator</b>			
0–1 y	4 (29)	1 (33)	3 (27)
2–4 y	3 (21)	1 (33)	2 (18)
5–8 y	7 (49)	0 (0)	2 (18)
>8 y	5 (36)	1 (33)	4 (36)
<b>Length of employment as program coordinator at institution</b>			
0–1 y	5 (36)	1 (33)	4 (36)
2–4 y	3 (21)	1 (33)	2 (18)
>8 y	6 (43)	1 (33)	5 (46)
<b>In the past week, did you participate in any exercise</b>			
Yes	10 (71)	2 (67)	8 (73)

\*Statistical significance was determined using the Fisher exact test.

†Percentages may not sum to 100 due to rounding.

QOL, quality of life.

## RESULTS

### Demographic Characteristics

Forty-five PCs were invited to the wellness retreat. Of these, 19 participated in the retreat and completed the baseline survey (43%), and 14 of the 19 (74%) completed the 3-month follow-up questionnaire. Four of those lost to follow-up had transitioned to other positions within the organization or outside the institution. All participants were female, ranging in age from 25 to 64 years. Of those who completed the 3-month follow-up, 40% reported that they were Caucasian/White, 40% Black/African American, 7% Hispanic/Latino, and 7% Asian/Pacific Islander. Many (43%) of the participants had a bachelor's degree or higher, and 50% were employed as a PC for at least five years (86% of which had been a PC at our institution for at least 8 years).

### Employee Satisfaction

The percentage of favorable (agree or strongly agree) responses to questions around employee satisfaction increased from pre-retreat to 3-month follow-up. There was no appreciable difference from pre- to post-retreat in those responding favorably to “I like the work I do”; however, favorability did increase by 10% at 3-month follow-up. A sustained increase in those reporting that they were a satisfied employee was evident from pre- to post-retreat and post-retreat to follow-up, 5% and 7%, respectively.

### QOL

Participants were defined as having either a low- or high-mental QOL based on responses to questions from the PWBI, with a score of  $\geq 4$  representing a poorer or low-mental QOL and a score of  $< 4$  representing a high-mental QOL. Scores  $\geq 4$  related to poor mental QOL, clinical fatigue, and recent suicidal ideation.<sup>15</sup> The percentage of those in the high-mental QOL group increased from 74% (pre-retreat) to 79% (post-retreat), with a 0.3% decrease at 3-month follow-up. The QOL score decreased by 0.37 (CI  $-0.81$  to  $0.07$ ) from pre to post; resiliency, stress, and sleep scores also improved. Of the five participants lost to follow-up, two had QOL scores  $\geq 4$ . Demographics did not significantly differ among the two QOL groups (Table 2). Demographic characteristics were collected, as race and ethnicity, for example, have been shown to affect mental health status.<sup>24</sup>

A logistic regression model was used to investigate changes in “no” responses for all seven questions taken from the PWBI (Table 3). Subjects were 1.2 times as likely to have reported not feeling burned out from work immediately following the retreat. At the 3-month follow-up, the odds did decrease to 0.68 (CI  $0.17$ – $2.71$ ). Participants were 1.3 times as likely (CI  $0.33$ – $4.84$ ) to not worry that their work was hardening them emotionally than what was reported at baseline. At the 3-month follow-up period, participants maintained an increased odds (1.1 times as likely), although the effect was somewhat diminished.

**TABLE 2.**  
Employee Satisfaction and Program Assessment Among Study Population

Statement/Question	Pre-retreat (n = 19)	Post-retreat (n = 19)	3-Month Follow-up (n = 14)
I like the work I do.*			
% agree/strongly agree	90	90	100
The amount of job stress I feel is reasonable.*			
% Agree/strongly agree	63	74	64
Overall, I am a satisfied employee.*			
% agree/strongly agree	74	79	86
Has this program changed the way you think about your stress or burnout?			
% Yes	N/A	78	43
Would you attend a similar event annually?			
% Yes	N/A	100	93
Would you recommend this course to other staff?†			
% Yes, definitely/probably	N/A	100	86

\*5-point Likert scale: strongly disagree to strongly agree, with "1" being strongly disagree.

†5-point Likert scale: definitely not to yes, definitely, with "1" being yes, definitely.

N/A indicates not applicable.

### Resiliency

Resiliency score increased by 0.95 immediately after the initial intervention and increased by 0.36 when evaluated 3 months after the retreat, representing a slight decrease in resiliency from post to follow-up, but an overall increase from baseline (Table 4).

### Sleep and Stress

The average baseline sleep quality score (10.9) decreased by 4.6% at the 3-month follow-up. Sleep scores decreased by 1.0 (CI -2.04 to 0.04; SD 4.6) immediately after the session; the trend was evident at follow-up, with a decrease of 0.48. Stress scores decreased by 3.6% and average resiliency scores increased by 1.3% from baseline to follow-up. Stress scores increased by 0.16 at the postassessment, but decreased when evaluated at the follow-up period. (A higher stress score is associated with poorer health outcomes).<sup>20</sup>

### DISCUSSION

In recent years, there has been increasing focus on the well-being and burnout of health care providers. ACGME and the public have recognized that physician burnout is increasing at an alarming rate,<sup>25</sup> with trainees being disproportionately affected. Although recognized to play a critical role in training programs, PCs have not traditionally been the targets of well-ness/burnout initiatives. The intervention described above

sought to address this gap, measure its effectiveness, and provide a framework that others might mirror. In this study, resiliency, stress, and sleep quality were shown to improve from pre- to post-retreat. Such improvements were evident at the 3-month follow-up period, although the effects were lessened.

We believe that the results of this study are critically important as one considers the optimization of the learning environment and the role that PCs may play in the experience of trainees. PCs often fill many roles in training programs, including those of "parent" and "confidante," "counselor," and "mentor," and are a key part of educational infrastructure. Their ability to be a liaison between trainee and program leadership, the impact of their leadership, and their mental health and well-being should not be underestimated.

The data presented here lay the groundwork for future innovation and interventions and represent a vital first step in designing programs that address the needs of an often forgotten member of the GME team. This study pointed to the need to create a QOL tool that has been validated in this population. Furthermore, partnerships with other institutions would allow researchers to more effectively evaluate the impact an intervention has on QOL. Future longitudinal studies should examine changes in PCs cognizance of resident/fellow burnout and their ability to report signs when evident.

Leadership support is crucial in creating an organizational and cultural commitment to address burnout. In addition to PCs, future retreats may be extended to a full day to include PDs

**TABLE 3.**  
Mental Health Measures Among Program Coordinators Reported as Mean and SD

Mental Health Measures	Assessment Period		
	Pre-retreat (n = 19)	Post-retreat (n = 19)	3-Month Follow-up (n = 14)
PWBI (range from 0 to 7)*	2.1 (2.1)	1.7 (1.7)	2.0 (1.7)
Smith Brief Resilience Scale (range from 6 to 30)	23.2 (3.0)	24.2 (2.4)	23.5 (4.4)
Perceived Stress Scale (range from 0 to 16)	5.6 (3.1)	5.8 (2.8)	5.4 (2.9)
PROMIS-29 (range from 4 to 20)†	10.9 (4.3)	9.9 (4.6)	10.4 (4.5)

\*Physician Well-Being Index.

†Patient-Reported Outcome Measurement Information System.

PWBI, Physician Well-Being Index.

**TABLE 4.**  
Odds Ratio of Well-Being Characteristics Among Study Participants by the Assessment Period\*

Question†	Wellness Program Assessment Period			P
	Pre (n = 19)‡	Post (n = 19)	Follow-up (n = 14)	
During the past month. . .				
Have you felt burned out from your work?	1.0	1.24 (0.34–4.45)	0.68 (0.17–2.71)	.694
Have you worried that your work is hardening you emotionally?	1.0	1.26 (0.33–4.84)	1.05 (0.25–4.42)	.939
Have you often been bothered by feeling down or hopeless?	1.0	1.00 (0.26–3.93)	1.15 (0.26–5.22)	.979
Have you felt that all the things you had to do were piling up so high that you could not overcome them?	1.0	1.26 (0.33–4.84)	1.05 (0.25–4.42)	.939
Have you been bothered by emotional problems such as feeling depressed, anxious, or irritable?	1.0	1.58 (0.42–5.95)	1.31 (0.32–5.43)	.796

\*Calculated using the logistic regression model (response = "no").

†Source: questions derived from the Physician Well-Being Index.<sup>13</sup>

‡Reference.

across disciplines and include facilitated discussions of topics such as “unconscious bias” and “negotiation and conflict resolution.” Such topics were solicited from our GME community in 2017 after our first annual retreat in 2016. A more inclusive approach including PDs and PCs may engender a stronger sense of community and a call to action. Qualitative data collected from the post- and 3-month follow-up surveys taken by attendees also suggest that there remains value in isolated PC and PD sessions where challenges facing specific groups can be discussed in a more intimate and “private” setting.

Aside from the content presented, the retreat itself gave participants the opportunity to disengage from work responsibilities. PDs were asked to urge their coordinators to attend and participate. The GME Office, along with the Designated Institutional Official, supported the initiative.

This study had several important limitations: the results may not be generalizable, as the subjects were from one institution and may not be representative of the PC population. For example, 95% of our institution’s PCs are female, and it is unknown if this sex disparity is reflected at other institutions, as there are no known databases that contain PC demographics (ie, number of national coordinators). With a large number of programs and with such varied schedules throughout the year, planning a retreat where nearly all PCs attend becomes challenging. Several coordinators cited they were too busy to attend the retreat and some were away on vacation. In addition, data collected on our outcome measures may be influenced by the timing of the academic and recruitment calendar (data were collected in August and November). Although there is some variation in recruitment calendars (for example, Main Match versus San Francisco Match), recruitment season is generally a busy time for most. Although participation in this study was voluntary and responses were collected anonymously, it is unknown whether the level of burnout of participants and nonparticipants was equivalent, as burnout was only measured among eligible participants. Given that our PCs expressed a strong desire for a retreat, we elected to not randomize PCs to attend or not attend the program. It is important to note that Dyrbye’s PWBI has not been validated in a population other than clinicians, but in discussion with several local content experts, we believed that it provided the best framework to measure mental QOL in our subjects.

Data collection was largely dependent on questionnaires, and the sample size was relatively small. As a result, statistical power to detect a difference is admittedly limited and the ability

to draw conclusions from the data must be tempered. Further studies, perhaps across other organizations, might serve to increase sample size and strengthen any conclusions.

## CONCLUSION

This study represents an important initial step in describing a wellness curriculum aimed specifically at PCs. Further research on the impact of these types of interventions on the coordinator, as well as the trainees, is certainly warranted.

### Lessons for Practice

- The consequences of burnout in Graduate Medical Education (GME) may include Residency Program Coordinators.
- The wellness needs of clinical and administrative staff should be examined.
- Residency PCs in one institution experienced improvements in mental quality of life, resiliency, stress, and sleep scores on attending a wellness program.

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