

## BRIEF REPORT

## Relationship of Training in Acupuncture to Physician Burnout

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**Background:** Physician burnout is an ongoing problem that affects both physician wellbeing and patient care. Burnout is characterized by emotional exhaustion and depersonalization. Studies have explored ways to prevent and alleviate burnout. Receiving training in acupuncture may reduce physician burnout.

**Objective:** The purpose of this study is to determine if acupuncture training is associated with less patient depersonalization and less emotional exhaustion among physicians.

**Methods:** These self-reported data were collected from a cross-sectional survey of family physicians at the Uniformed Services Academy of Family Physicians 2017 conference. Physicians answered questions regarding their level of acupuncture training as well as questions about burnout (depersonalization and emotional exhaustion).

**Results:** The overall response rate was 66% (325/492). Of these, 233 cases provided complete datasets. In a model controlling for years' practice and clinical pace, acupuncture training was significantly associated with decreased depersonalization,  $F(1, 194) = 5.82, P < .05$ .

**Conclusion:** Study data show an association between decreased physician depersonalization and acupuncture training, suggesting acupuncture training may be a helpful strategy to reduce family physicians' depersonalization of patients. (J Am Board Fam Med 2019;32:259–263.)

**Keywords:** Acupuncture Therapy, Depersonalization, Family Physicians, Integrative Medicine, Professional Burnout, Self Report

Physician burnout has become the focus of considerable discussion and research in recent years. Through their work, physicians' emotional re-

sources are depleted and they may be unable to fully engage in clinical encounters, which could in turn create negative feelings about their patients. These negative reactions to patients (depersonalization) may be linked to the experience of emotional exhaustion.<sup>1</sup> Characterized by emotional exhaustion and depersonalization, burnout is “the final step in a progression of unsuccessful attempts to cope with a variety of negative stress conditions.”<sup>2</sup> Physician burnout is associated with lower job performance, decreased quality of patient care, and an increase in medical errors.<sup>3,4</sup> Among primary care physicians, burnout is associated with increased job stress, greater time pressure during visits, and less control at work. Frequently, quality of care is preserved at the expense of physician wellbeing,<sup>5</sup> impacting both provider mental health and patient care.

The high rate of physician burnout and the factors contributing to it has become more urgent as the stressors surrounding medical practice multiply. Recent studies have evaluated systemic and

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provider-oriented measures that target possible burnout contributors.<sup>6,7</sup> Organizational interventions have included duty-hour limitations and facility-specific modifications to improve communication and workflow and promote the development of quality improvement projects. Other interventions target individual behaviors, including mindfulness sessions, stress-management training, small group discussions, healthy exercise habits, work-life balance, and reducing clinical administrative burdens.<sup>8–11</sup>

Another approach to addressing physician burnout is providing continuing medical education opportunities.<sup>12</sup> One specific type of additional training that has potential to affect physician burnout is acupuncture. Primary care physicians seek to practice acupuncture as a way to provide options for their patients, to focus on patients' whole-person health, and to expand their knowledge and skills.<sup>13</sup> Acupuncture is a method of treatment using fine needles inserted into predetermined points on the body.<sup>14</sup> It has successfully treated various clinical conditions including: headache, stress, lower back pain, and other musculoskeletal conditions.<sup>15–18</sup>

Drawing from the premise that burnout in professionals can be reduced by providing avenues for creativity and developing a sense of purpose,<sup>19</sup> we sought to determine if physicians who completed acupuncture training report less emotional exhaustion and depersonalization than those who did not.

## Methods

These cross-sectional data were drawn from an omnibus survey conducted by the Clinical Investigations Committee of the Uniformed Services Academy of Family Physicians. Within the omnibus survey, the acupuncture items were the final set of questions. The sampling frame included family physicians who registered to attend the annual scientific assembly in March 2017. Data were collected anonymously from participants at the meeting. Members not in attendance on the day of presentation were sent an email invitation to participate in the survey. A follow-up email was sent after the initial invitation to encourage nonrespondents to participate. This study was approved by the Uniformed Services University of Health Sciences Institutional Review Board.

## Study Variables

Participants reported demographics, including number of years practice, current percentage of time spent in clinical care, and acupuncture training. A single question assessed level of acupuncture training, asking, "What acupuncture training have you completed?" Respondents could indicate 1 of 4 options: none, battlefield (auricular) acupuncture, advanced battlefield acupuncture, and full 220+ hour medical acupuncture. This item was collapsed to "no training" versus "auricular and/or medical acupuncture."

The present study uses the 2-item Maslach Burnout Inventory,<sup>20</sup> which has previously been validated among family physicians.<sup>21</sup> The single emotional exhaustion item score ranges from 0 to 6, and the single depersonalization item score ranges from 0 to 6. To obtain estimates comparable to the full Maslach Burnout Inventory, the emotional exhaustion and depersonalization scores on the single-item measures were multiplied by 9 and 5, respectively.<sup>20</sup>

## Data Analysis

SPSS 24<sup>22</sup> was used for descriptive and associative statistical tests. Analysis of covariance (ANCOVA) was used to test for an association between completion of acupuncture training and 2 separate dimensions of burnout: emotional exhaustion and depersonalization. Two covariates from previous burnout literature are included: percentage of time in clinical practice<sup>23</sup> and career stage,<sup>24</sup> measured here by years' practice.

## Results

The overall response rate was 66% (325/492). Of these, 233 respondents (47.4%) provided complete datasets. Of the 233 respondents, 134 physicians reported completing acupuncture training and 99 reported completing no acupuncture training. Table 1 presents the sample characteristics.

In 2 separate ANCOVAs, controlling for years practice and percentage of time in clinical practice, we tested the effect of acupuncture training on the 2 dimensions of burnout. Emotional exhaustion and acupuncture training were not significantly related. As a covariate, greater percentage of time in clinical practice was associated with greater emotional exhaustion,  $P < .05$ . The test did not reveal a significant association for years' practice.

**Table 1. Uniformed Services Academy of Family Physicians 2017 Annual Meeting Omnibus Survey Respondents**

Characteristics	Survey Respondents, n (% or SD)
Practice setting (n = 216)	
Clinical	97 (44.9%)
Nonclinical	105 (45.1%)
None of the above	14 (6.5%)
Race (n = 217)	
White	186 (79.8%)
African American	8 (3.4%)
Asian American	10 (4.3%)
Native American/Alaskan Native	2 (0.9%)
Mixed or multiple ethnicities	8 (3.4%)
Other	3 (1.3%)
Gender (n = 219)	
Male	143 (61.4%)
Female	76 (32.6%)
Mean percentage of time spent in clinical care (n = 210)	52.9 (SD, 32.42)
Mean years practice (n = 209)	11.67 (SD, 8.75)

SD, standard deviation.

Acupuncture training was significantly associated with less depersonalization,  $F(1,194) = 5.82$ ,  $P < .05$ . Respondents who had completed acupuncture training reported less depersonalization than respondents who had not completed acupuncture training. In the model, as covariates, higher percentage of clinical time was associated with greater depersonalization,  $P < .01$ ; and more years practice was associated with less depersonalization,  $P < .01$ . See Table 2 for burnout dimensions by group.

## Discussion

Our results suggest that acupuncture training has the potential to influence burnout among family physicians—particularly by reducing depersonalization. To provide context for the clinical implications, previous

research with surgeons demonstrated that every 1-point increase in depersonalization was associated with an 11% increase in the likelihood of reporting a major medical error.<sup>25</sup> Therefore, the statistically significant 3-point difference in depersonalization between the 2 groups here suggests a clinically significant impact on patient safety.

Decreased depersonalization may be associated with acupuncture practice as it provides physicians with an approach to develop rapport with patients. In addition, acupuncture is an accessible treatment modality that may provide immediate benefit from which patients experience positive impact rather than the delayed efficacy of traditional treatments. Qualitative research can provide insight into how acupuncture training and practice relates to personalizing the patient. In one study,<sup>26</sup> patients contrasted their acupuncture experiences with interactions with other physicians/departments about the same condition. In nonacupuncture interactions, patients repeatedly described the physician as not listening or being inflexible, whereas medical acupuncturists were more responsive to patients through listening, answering questions, and not rushing patients. The nature of acupuncture treatments requires physicians to engage with patients more closely, both literally and figuratively. This closeness could have a humanizing effect in the interaction.

In addition, previous research demonstrated the amount of time that an individual pursued an activity in which they were passionately engaged was directly associated to their risk for burnout.<sup>27</sup> Encouraging scholarly pursuits in new and interesting subjects that inspire passion could further help to inoculate against the effects of burnout. Issues of reimbursement, insufficient time to learn and inflexible medical practices all contribute to this. To truly assess the impact of our study, we need an

**Table 2. Burnout Dimension Scores by Group**

	No Acupuncture Training	Auricular or Medical Acupuncture Training	P Value
Emotional exhaustion*	26.10 (95% CI, 22.82–29.37)	23.14 (95% CI, 20.33–25.94)	.188
Depersonalization†	12.99 (95% CI, 11.12–14.85)	9.90 (95% CI, 8.29–11.51)	.017

Scores are estimated marginal means as calculated by an analysis of covariance (ANCOVA), controlling for years practice and percentage of time in clinical practice.

\*Range, 0–54, score increases with increased emotional exhaustion.

†Range: 0–30, score increases with increased depersonalization.

CI, confidential interval.

assessment of physicians' desires to train in acupuncture.

## Limitations

Findings are limited by the cross-sectional survey design and participant sample. Finding time to train in medical acupuncture and incorporate it into practice is a huge challenge.<sup>28,29</sup> The military setting may have a high uptake of acupuncture due to the structure of the medical system that does not rely on reimbursement for compensation. The sample includes uniformed physicians practicing in military facilities, civilian physicians practicing in military facilities, and retired uniformed physicians practicing in either military or civilian facilities. We did not collect this level of demographic data to be able to address the proportionality of these physician-practice subgroups. The generalizability to other physician groups needs exploration.

More research is needed to understand the reasons physicians choose acupuncture training. It is possible that those seeking acupuncture training have personality styles or coping mechanisms that make them less susceptible to burnout. Additional research should focus on prospectively evaluating burnout measures across acupuncture training, and then attempt to identify which acquired acupuncture skills are the most effective at reducing burnout.

## Conclusion

Acupuncture training may be a viable strategy to prevent or reduce patient depersonalization. This training could enable physicians to build stronger connections to their patients.

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