Burnout Among Primary Care Healthcare Workers During the COVID-19 Pandemic

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Objectives: To measure the prevalence of burnout among healthcare workers (HCWs) in primary care during the COVID-19 pandemic and to understand the association between burnout, job-person fit, and perceptions of the pandemic. Methods: We surveyed 147 HCWs (73% response rate) in two clinics in the summer of 2020 on their burnout, job-person fit, perceptions of the pandemic, and demographic/job characteristics. Logistic regression analyses were conducted to explore relationships between these variables. Results: Forty-three percent of HCWs reported burnout. Lower HCW burnout was associated with better job-person fit in the areas of recognition or appreciation at work (odds ratio [OR] 0.26, 95% confidence interval [CI] 0.10 to 0.67) and congruent worker-organization goals and values (OR 0.30, 95% CI 0.11 to 0.76). Conclusions: Working environments with better job-person fit may be key to reducing HCW burnout even after the current crisis.

Keywords: burnout, COVID-19, healthcare organizations, healthcare workforce, primary care

B urnout is a prevalent occupational phenomenon among healthcare workers (HCWs) in all healthcare specialties the United States (US), including those who work in primary care.1–3 The spread of the SARS-CoV-2 virus and the resulting COVID-19 pandemic have been associated with burnout,4 depression, and anxiety5 among HCWs, but not all HCWs respond to COVID-19-related stressors in the same ways. Positive working environments can act as a buffer against burnout,6 even when stressors inherent to one’s work can drive the phenomenon.

Job-person fit is one way of measuring a positive working environment. Maslach and Leiter have theorized that mismatches between worker expectations and workplace realities (ie, a lack of job-person fit) can lead to burnout.7 They have also theorized that job-person fit can be measured in terms of six domains or areas of worklife: sustainable workload (workload), control over work (control), recognition and appreciation at work (reward), support and community at work (community), workplace fairness with fair access to resources and opportunities (fairness), and congruent worker-organization goals and values (values).8 These six worklife domains are inversely related to all three components of burnout (emotional exhaustion, depersonalization, and reduced personal accomplishment) in pooled analyses of almost 7000 workers across 17 studies.9

Workers who report job-person fit are less likely to be burned out, but this relationship has not been well studied during times of crisis. To examine associations between burnout and the working environment during a disaster, we surveyed HCWs in two primary care clinics in one regional healthcare network during COVID-19 pandemic in the summer of 2020.

Methods

We constructed a survey instrument containing an abbreviated version of the Maslach Burnout Inventory (aMBI; as previously described10), Areas of Worklife Survey – Short Form (AWS-SF), a subset of items from the Pandemic Experiences & Perceptions Survey (PEPS), and demographic characteristics.

Participants

All 209 core primary care HCWs (providers, nurses, and medical support assistants/clerks) in two clinics in one Veterans Health Administration (VA) regional healthcare network were invited by email to complete the survey during July and August 2020. One hundred fifty-two HCWs completed the survey (73% response rate).
This analysis was approved as a non-research operations project by Veterans Integrated Service Network 22.

**Main Outcome**

Main outcome: Burnout was measured via frequency (0: never; 1: a few times a year or less; 2: once a month or less; 3: a few times a month; 4: once a week; 5: a few times a week; 6: every day) of emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) symptoms using three three-item subscales (Cronbach’s alpha = 0.79 to 0.85). Burnout was operationalized as reporting symptoms at least once a week or more on average (≥12 points on three items) on either the EE or DP subscale, as previously described. Evidence of validity of the full MBI has been established by the consistent relationship of drivers (eg, job demands) and outcomes (eg, turnover) of burnout to the scale in a meta-analysis of 213 studies.

**Predictors**

Job-person fit with working environment was measured via the AWS-SF by HCW agreement (1: strongly disagree; 2: disagree; 3: hard to decide; 4: agree; 5: strongly agree) with six three-item domains (Cronbach’s alpha = 0.48 to 0.76): sustainable workload, control, reward, community, fairness, and values.

**TABLE 1. Demographic Characteristics and Survey Responses of the Sample (n = 152)**

| Characteristic                                      | n   | %    |
|----------------------------------------------------|-----|------|
| Gender                                             |     |      |
| Male                                               | 34  | 19.7 |
| Female                                             | 113 | 80.2 |
| Race                                               |     |      |
| White                                              | 110 | 74.3 |
| Black or African-American                          | 2   | 1.4  |
| American Indian or Alaska Native                   | 9   | 6.2  |
| Asian                                              | 6   | 4.1  |
| Native Hawaiian or other Pacific Islander           | 3   | 2.1  |
| Other                                              | 16  | 11.0 |
| Ethnicity                                          |     |      |
| Hispanic or Latino                                 | 29  | 19.7 |
| Not Hispanic or Latino                             | 118 | 80.2 |
| Age                                                |     |      |
| 18–24 years old                                    | 1   | 0.7  |
| 25–34 years old                                    | 20  | 13.4 |
| 35–44 years old                                    | 33  | 22.2 |
| 45–54 years old                                    | 49  | 32.9 |
| 55–64 years old                                    | 37  | 24.8 |
| 65–74 years old                                    | 8   | 5.4  |
| 75+ years old                                      | 1   | 0.7  |
| Work schedule                                      |     |      |
| Full-time                                          | 140 | 94.6 |
| Part-time                                          | 8   | 5.4  |
| Job type                                           |     |      |
| Provider (MD/DO; NP; PA)                           | 46  | 30.2 |
| RN                                                 | 56  | 36.8 |
| LPN/LVN/CNA                                        | 26  | 17.1 |
| MSA/clerk                                          | 24  | 15.8 |
| PACT type                                          |     |      |
| Primary care PACT                                   | 127 | 83.6 |
| Other special population PACT                       | 23  | 15.1 |
| Do not know/not sure                               | 2   | 1.3  |
| Tenure                                             |     |      |
| Less than 1 year                                   | 26  | 17.1 |
| 1–5 years                                          | 84  | 55.3 |
| 6–10 years                                         | 27  | 17.8 |
| 11–20 years                                        | 10  | 6.6  |
| More than 20 years                                 | 5   | 3.3  |
| Overall burnout (EE ≥ 12 or DP ≥ 12)               |     |      |
| Yes                                                | 66  | 43.4 |
| No                                                 | 86  | 56.6 |

**TABLE 1. (Continued)**

| Characteristic                                      | n   | %    |
|----------------------------------------------------|-----|------|
| Emotional exhaustion (EE ≥ 12)                      |     |      |
| Yes                                                | 65  | 42.8 |
| No                                                 | 87  | 57.2 |
| Depersonalization (DP ≥ 12)                         |     |      |
| Yes                                                | 8   | 5.3  |
| No                                                 | 144 | 94.7 |
| Reduced personal accomplishment (reverse PA ≥ 12)    |     |      |
| Yes                                                | 19  | 12.5 |
| No                                                 | 133 | 87.5 |

**Areas of worklife domains**

| Characteristic                                      | M (SD) | n    |
|----------------------------------------------------|--------|------|
| Workload                                           | 2.73 (1.06) | 147  |
| Control                                            | 3.03 (0.97)  | 146  |
| Reward                                             | 3.28 (1.10)  | 151  |
| Community                                          | 3.59 (1.01)  | 148  |
| Fairness                                           | 2.77 (0.94)  | 148  |
| Values                                             | 3.52 (0.86)  | 149  |

**Pandemic experiences and perceptions survey items**

| Characteristic                                      | n   | %    |
|----------------------------------------------------|-----|------|
| Frequency of contact with virus                     |     |      |
| Never                                              | 48  | 32.4 |
| Occasionally                                       | 71  | 48.0 |
| Regularly                                          | 15  | 10.1 |
| Often                                              | 9   | 6.1  |
| Every day                                          | 5   | 3.4  |
| Control over virus with training, equipment, and support |     |      |
| No control                                          | 9   | 6.0  |
| Minimal control                                     | 19  | 13.4 |
| Some control                                        | 52  | 36.6 |
| A lot of control                                    | 56  | 39.4 |
| Complete control                                    | 15  | 10.6 |
| Personal danger from virus                         |     |      |
| No danger to me                                     | 18  | 12.1 |
| Mild potential for harm                             | 59  | 39.6 |
| Usual potential for harm                            | 33  | 22.2 |
| Greater than usual potential for harm               | 30  | 20.1 |
| Life-threatening danger                             | 9   | 6.0  |

CNA, certified nursing assistant; DO, Doctor of Osteopathy; DP, depersonalization; EE, emotional exhaustion; LPN, licensed practical nurse; LVN, licensed vocational nurse; M, mean; MD, Doctor of Medicine; MSA, medical support assistant; NP, nurse practitioner; PA, physician assistant, personal accomplishment; PACT, patient-aligned care team; RN, registered nurse; SD, standard deviation.
(workload), control over work (control), recognition and appreciation at work (reward), support and community at work (community), workplace fairness with fair access to resources and opportunities (fairness), and congruent worker-organization goals and values (values). Domains that respondents rated as 4 or above on average were scored as having “job-person fit,” a more stringent cutoff than the survey manual recommendation of average scores of greater than 3. The full AWS scale was validated by a study of 1443 hospital workers that matched themes in free-text comment cards to AWS survey responses. The PEPS items measured aspects of HCW’s workplace experiences in a pandemic using ordinal scales, including perceptions of contact with, control over, and personal danger from the virus. These items were scored according to their response option, as shown in Table 1. The PEPS was created for the COVID-19 pandemic and has not been evaluated for validity or reliability.

Controls

Demographic and job characteristic measures included respondent gender (male or female); age (18 to 24 years old; 25 to 34 years old; 35 to 44 years old; 45 to 54 years old; 55 to 64 years old; 65 to 74 years old; 75+ years old); race (White; Black or African-American; American Indian or Alaska Native; Asian; Native Hawaiian or other Pacific Islander; other); ethnicity (Hispanic or Latino or not Hispanic or Latino); job tenure (less than 1 year; 1 to 5 years; 6 to 10 years; 11 to 20 years; more than 20 years); job type (providers [physicians, nurse practitioners, and physician assistants]; registered nurses; licensed vocational nurses, licensed practical nurses and certified nursing assistants; medical support assistants/clerks, work schedule (full-time or part-time); patient-centered medical home type (primary care patient-aligned care team or other special population patient-aligned care team).

Multivariate analysis involved regressing burnout on AWS-SF areas and PEPS items, controlling for job tenure and site. No other demographic characteristics were associated with burnout in bivariate analyses.

RESULTS

Over 40% of all respondents reported burnout and emotional exhaustion (43% in each category; Table 1). Only 5% and 13% of respondents reported depersonalization and reduced personal accomplishment, respectively. At least 40% of respondents indicated job-person fit for reward (40.1%), community (48.0%), and values (41.5%), but not for workload, control or fairness. Job-person fit scores were above average for control (mean [M] 3.03, standard deviation [SD] 0.97), reward (M 3.28, SD 1.10), community (M 3.59, SD 1.01), and values (M 3.52, SD 0.86), but not for the other two domains. Most respondents reported no (32.4%) or only occasional (48.0%) contact with the virus, a lot of (39.4%) or complete (10.6%) control over the virus, and no danger (12.1%) or mild potential for harm (39.6%) from the virus (Table 1).

The sample was mostly female (80.2%), white (74.3%), not Hispanic or Latino (80.2%), 45 years or older (63.8%). Most respondents worked full-time (94.6%), in primary care PACTs (83.6%), and had 5 years or less tenure at their current job (72.4%). Registered nurses (36.8%) and providers (30.2%) were the most prevalent respondents, but nearly a third of the sample was composed of vocational nurses (17.1%) and medical support assistants or clerks (15.8%).

Respondents who reported job-person fit for reward (odds ratio [OR] 0.26, 95% confidence interval [CI] 0.10 to 0.67; P < 0.05) or values (OR 0.30, 95% CI 0.11 to 0.76; P < 0.05) were less likely to be burned out (Table 2). HCWs with 11 to 20 years of job tenure were more likely to be burned out (OR 12.43, 95% CI 1.13 to 136.72; P < 0.05) than those with less than 1 year of tenure. Frequency of contact with, control over, or personal danger from the virus was not significantly related to burnout. Site was also unrelated to the outcome.

DISCUSSION

Over 40% of the primary care HCWs we surveyed reported burnout during the first summer of the COVID-19 pandemic. Emotional exhaustion among these HCWs was much higher than depersonalization or reduced personal accomplishment. Job-person fit in terms of reward and values was linked to lower burnout. Increased job tenure was additionally associated with increased burnout.

Burnout in our sample was actually lower than the ~50% average burnout among VA primary care providers from 2013 to 2017.13 Mid-, but not late-, career HCWs were more likely to be burned out than those early in their career, as previously described in non-VA contexts.13 In addition, a positive working environment may have helped HCWs in our sample avoid burnout during the pandemic. HCWs in our sample were less likely to be burned out if they perceived job-person fit for reward and values in their workplace. Workplace reward and burnout have been previously examined among primary care HCWs in the Midwest, but no link...

**TABLE 2. Odds of Burnout by Perceptions of the COVID-19 Pandemic and the Working Environment (n = 147)**

| Survey Item                              | OR  | 95% CI |
|------------------------------------------|-----|--------|
| Frequency of contact with virus          |     |        |
| Never/occasionally/regularly             |     |        |
| Often/every day                          | 0.35| 0.09–1.35 |
| Control over virus with training,        |     |        |
| equipment, and support                   |     |        |
| No/minimal/some control                  |     |        |
| A lot of/complete control                | 1.10| 0.46–2.62 |
| Personal danger from virus               |     |        |
| No danger to me or mild/usual            |     |        |
| potential for harm                       |     |        |
| Greater than usual potential for         | 1.24| 0.47–3.25 |
| harm/life-threatening danger             |     |        |
| Areas of workplace                       |     |        |
| Workload                                 |     |        |
| No job-person fit                        | 0.57| 0.19–1.67 |
| Job-person fit                           |     |        |
| Control                                  |     |        |
| No job-person fit                        | 1.06| 0.36–3.13 |
| Job-person fit                           |     |        |
| Reward                                   |     |        |
| No job-person fit                        | 0.63| 0.29–1.35 |
| Job-person fit                           |     |        |
| Community                                |     |        |
| No job-person fit                        | 0.26| 0.10–0.67 |
| Job-person fit                           |     |        |
| Fairness                                 |     |        |
| No job-person fit                        | 0.79| 0.34–1.83 |
| Job-person fit                           |     |        |
| Values                                   |     |        |
| No job-person fit                        | 0.25| 0.05–1.41 |
| Job-person fit                           |     |        |
| Job tenure                               |     |        |
| Less than 1 year                         |     |        |
| 1–5 years                                | 2.07| 0.64–6.74 |
| 6–10 years                               | 1.25| 0.29–5.14 |
| 11–20 years                              | 12.43| 1.13–136.72 |
| More than 20 years                       | 1.13| 0.10–13.29 |
| Site                                     |     |        |
| Site 1                                   |     |        |
| Site 2                                   | 0.51| 0.22–2.12 |

All models control for clinic tenure and site. CI, confidence interval; OR, odds ratio. *Ref. reference category. p < 0.05.
was found.\textsuperscript{14} Personal value-alignment with one’s workplace and considering one’s career in medicine a “calling” have been previously linked to lower burnout in primary care.\textsuperscript{15} Workplace reward and values may be especially important to HCWs during the current pandemic, as healthcare leaders are forced to make decisions that involve tradeoffs in terms of resources, risk, and staffing as to avoid overwhelming their healthcare systems. A workplace that provides rewards and value-alignment may act as a buffer against burnout, even during a crisis as unprecedented as the COVID-19 pandemic.

This study has strengths in its unique data, use of validated survey instruments, and timely analysis. However it also has several limitations: (1) small sample size, which precluded the building of a more robust analytical model, (2) few sampled clinics, which reduced the generalizability of the findings, and (3) use of survey items from the unvalidated COVID-related PEPS instrument, which reduced the validity of the COVID-related results.

Future research should evaluate burnout and the protective factors of the primary care working environment during times of normalcy. Qualitative research could aid in the discovery of specific protective factors in primary care that cannot be measured by a survey instrument like the AWS instrument. As other authors have suggested, strategies to implement evidence-based interventions to improve the working environment\textsuperscript{16} may be key to reducing HCW burnout after the COVID-19 pandemic. Research on specific interventions and implementation strategies that complement particular protective factors, or substitute for a lack of these factors, could facilitate the future reduction of HCW burnout in primary care.

A high quality working environment may be a powerful tool to reduce HCW burnout. While the current pandemic will end, future crises will appear, and primary care will always be a stressful environment. Creating and maintaining high quality workplaces could reduce HCW burnout in primary care for years to come.

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