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High Burden of Burnout on Rheumatology Practitioners

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ABSTRACT. ***Objective.*** Burnout among physicians is common and has important implications. We assessed the extent of burnout among rheumatology practitioners and its associations.

Methods. One hundred twenty-eight attendees at the 2019 Rheumatology Winter Clinical Symposium were surveyed using the Maslach Burnout Index (MBI) and a demographics questionnaire. Scores for emotional exhaustion (EE) ≥ 27, depersonalization (DP) ≥ 10, and personal accomplishment (PA) ≤ 33 were considered positive for burnout. Data regarding practitioner characteristics including age, sex, years in practice, and other demographics of interest were also collected. These data were used to determine prevalence and interactions of interest between practitioner characteristics and the risk of burnout.

Results. Of the 128 respondents, 50.8% demonstrated burnout in at least 1 MBI domain. Dissatisfaction with electronic health records was associated with a 2.86-times increased likelihood of burnout (OR 2.86, 95% CI 1.23–6.65, $P = 0.015$). Similar results were found for lack of exercise (OR 5.00, 95% CI 1.3–18.5, $P = 0.016$) and work hours > 60 per week (OR 2.6, 95% CI 1.16–5.6, $P = 0.019$). Practitioners in group practice were 57% less likely to burn out (OR 0.43, 95% CI 0.20–0.92, $P = 0.029$), as were those who spend > 20% of their time in personally satisfying work (OR 0.32, 95% CI 0.15–0.71, $P = 0.005$).

Conclusion. In what we believe to be one of the largest studies regarding burnout among rheumatology practitioners, we found a substantial prevalence of burnout, with 51% of all respondents meeting criteria in at least 1 domain defined by the MBI and 54% of physicians meeting these same criteria.

Key Indexing Terms: exercise, health services, physician practice patterns, quality of life, work

Burnout among physicians is common and has major implications for healthcare[1]. Recently, the 11th revision of the International Classification of Diseases (ICD-11) included burnout as an occupational phenomenon[2]. It has been defined as chronic workplace stress characterized by exhaustion, feelings of negativism/cynicism, and reduced professional efficacy. In the medical fields, it is most commonly measured using the Maslach Burnout Inventory-Human Services Survey for Medical Personnel (MBI-HSS), a 22-item questionnaire that includes 3 domains: emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA).

To investigate the prevalence of burnout among rheumatology practitioners, we surveyed a group of attendees to the 2019 Winter Rheumatology Clinical Symposium (RWCS) in Maui, Hawaii. To the best of our knowledge, this represents one of the largest surveys regarding burnout focusing specifically on rheumatologists.

MATERIALS AND METHODS

As part of a lecture on burnout in February 2019 at the RWCS, an established, continuing medical education–accredited rheumatology meeting, the MBI and a demographics questionnaire were administered to attendees. Of approximately 160 eligible attendees, 128 participated in the survey. Demographics information included age, sex, marital status, tobacco/alcohol use, degree, electronic health record (EHR) use, income, hours of work per week, exercise, vacation time, practice type, location, and years in practice (Table 1). The survey was scored as per the MBI guidelines, with values of EE ≥ 27, DP ≥ 10, and PA ≤ 33 being considered as positive for burnout.

Prior to the initiation of this study, an institutional review board (IRB) waiver from the Mercy Hospital IRB (Lansdowne, Pennsylvania) was obtained; no consent was felt to be necessary, as adequate precautions to deidentify participants were in place. Statistics and logistical regressions were calculated using Stata V14 (StataCorp.).

RESULTS

Of the 128 respondents, 50.8% demonstrated burnout in at least 1 MBI domain. Of the respondents, 37.5% reported EE burnout, 30.5% DP burnout, and 21.1% PA burnout. Twenty percent had burnout in 1 domain only, 22.7% had burnout in any 2 domains, and 7.8% had burnout in all 3 domains. When only physicians (n = 109) were included, 54.1% reported burnout in at least 1 domain, 39.5% reported EE burnout, 33.0% reported DP burnout, and 12.1% reported PA burnout. There were 22% who had burnout in only 1 domain, 24.8% had burnout in any 2 domains, and 7.3% had burnout in all 3 domains (Table 2).

There were 34.6% of respondents who reported not being happy with their electronic health records (EHR). Practitioners unhappy with their EHR were 2.86 times more likely to report burnout (OR 2.86, 95% CI 1.23–6.65, $P = 0.015$). Compared

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Table 1. Participant demographics.

Age, yrs	25–34	35–44	45–54	55–64	> 64			
	14	32	27	32	19			
Sex	Male	Female						
	56	65						
Marital status	Married	Divorced	Single	Widowed				
	74	7	12	2				
Degree	MD	DO	RN	PA	NP	Other		
	99	10	4	4	3	3		
Smoker	No	Current	Former					
	119	2	3					
EtOH drinks/week	0–6	7–14	15–20	21–28	> 28			
	74	12	1	1	0			
Practice type	Solo	Private Group	Hospital-owned	Academic/ University	Industry	Retired		
	27	41	25	23	4	0		
Years in practice	0–5	6–10	11–15	16–20	21–25	> 25		
	35	16	17	10	7	38		
Use EHR	Yes	No						
	111	10						
Years using EHR	0–5	6–10	11–15	16–20				
	44	38	14	6				
Happy with EHR	Yes	No	Unsure	Don't use				
	52	36	15	1				
Income, US $1000/yr	0–150	151–250	251–350	351–450	> 450			
	24	42	30	13	10			
Exercise, days/week	0	1	2	3	4	5	> 5	
	16	10	15	44	20	18	1	
Vacation, week/yr	0	1	2	3	4	5	> 5	
	1	6	25	19	38	15	20	
Hours/week worked	0–10	11–20	21–30	31–40	41–50	> 50		
	0	1	8	24	51	39		
Percentage of time doing meaningful work	0–5	6–10	11–15	16–20	21–25	26–30	31–35	> 35
	3	6	9	17	13	13	14	46.

DO: Doctor of Osteopathic Medicine; EHR: electronic health record; EtOH: ethyl alcohol; NP: nurse practitioner; PA: physician assistant.

Table 2. Burnout by respective MBI domains.

	All Respondents, %	Physicians, %
EE burnout	37.5	39.5
DP burnout	30.5	33.0
PA burnout	21.1	12.1
At least 1 domain	50.8	54.1
Only 1 domain	20.0	22.0
Any 2 domains	22.7	24.8
All 3 domains	7.8	7.3

EE: Emotional exhaustion; DP: depersonalization; MBI: Maslach Burnout Index; PA: personal accomplishment.

to people who exercise at least once a week, lack of exercise was associated with a 5-fold increase in burnout (OR 5.00, 95% CI 1.3–18.5, $P = 0.016$). Work hours > 60/week were found to be positively associated with burnout (OR 2.6, 95% CI 1.16–5.6, $P = 0.019$) compared to work hours < 60/week. Compared to other practice types, practitioners in group practice were 57% less likely to burn out (OR 0.43, 95% CI 0.20–0.92, $P = 0.029$). Practitioners who spend > 20% of their time in work performing personally satisfying activities were 68% less likely to report burnout than those spending less time (OR 0.32, 95% CI 0.15–0.71, $P = 0.005$). There was no appreciable difference when nonphysician practitioners were excluded. Of note, sex, marital status, graduate degree, income, and years in clinical practice did not appear to have a significant association with burnout in these respondents (data not shown). A trend was noted in those practitioners taking more vacation time (≥ 3 weeks/yr) having less burnout, but this did not reach statistical significance ($P = 0.055$). A similar trend toward less burnout in moderate drinkers (7–14 drinks/week) versus light or nondrinkers (< 7 drinks/week) was also noted ($P = 0.074$; data not shown).

DISCUSSION

Physician burnout has varied and multidimensional effects on patients, the healthcare system as a whole, and physicians as individuals. Major studies have identified multiple factors contributing to this syndrome, including administrative regulations,

paper/clerical work, lack of autonomy, and widespread use of EHR.

The consequences of burnout to physicians' well-being is of concern, as it has been shown to contribute to depression, suicidal ideation, alcoholism, and broken relationships[3]. Burnout can result in the delivery of inferior quality of care to patients, a decline in professionalism, and increased medical errors[4]. The healthcare system is affected by burnout, with lower productivity[5], increased turnover of physicians and hiring costs, and lost revenue. A cost-consequence analysis estimated the annual economic cost related to burnout to be approximately $7600 per physician and about $4.6 billion annually for the United States health system as a whole[6].

Shanafelt, *et al*[1] estimated the current prevalence of burnout among all physicians to be 43.9%. A similar study in 2015[7] revealed approximately 54% of US physicians reporting burnout in at least 1 domain of the MBI. The literature on burnout in rheumatologists is scant. A 2019 report by Medscape showed burnout among rheumatologists to be 41%[8]. Our study suggests the prevalence of burnout among rheumatology practitioners may be even higher at 51% for all practitioners and 54% among rheumatology physicians. That this level is at, or above, the levels reported among the entire physician pool, which includes specialties traditionally considered high-risk for burnout, such as emergency medicine, family practice, and pediatrics, is notable and disconcerting.

Our study demonstrates that dissatisfaction with EHR contributes to an increased incidence of burnout, with those who were dissatisfied being almost 3 times more likely to report burnout than others who were not. Although defended as having the potential to improve patient care, studies have shown many physicians consider EHR technology to negatively affect professional satisfaction[1]. Factors contributing to dissatisfaction with EHR include EHR usability, computerized physician order entry, interference with time spent on face-to-face patient care, and the issues with documentation requirements[9]. With the wide adoption of EHR, the contribution of EHR toward physician burnout should be carefully analyzed. Our results should serve as a wake-up call to institutions regarding the choice and implementation of any EHR platform. Although interventions at both individual and organizational level have been uniformly recommended for attempting to address burnout, the particular aspect related to EHR and documentation requirements is something that will need to be dealt with at many other levels including health insurers, EHR vendors, and healthcare delivery systems.

One of the significant findings of this study was to confirm that physicians who spent more than 20% of their time in activities they find meaningful were less likely to burn out. Another study by Shanafelt, *et al* in 2009[10] showed a strong association between physician burnout and time spent doing the most meaningful activity. That study indicated that most of the physicians related patient care as being the most meaningful aspect of their practice. Only a relatively small percentage of those respondents found other activities such as research, teaching, or administration to be the most meaningful activity of their profession. As we did not specifically address this question, we cannot comment on what our study practitioners would define as meaningful.

Both individual-level and organizational strategies have been advocated to reduce burnout among physicians. Examples of individual interventions that have been studied to reduce burnout are mindfulness-based approaches[11], professional coaching[12], and self-care training, including an exercise program[13]. The value of an individual exercise program was shown by our data, with lack of exercise showing a 5-fold increase in burnout among respondents compared to the those who exercise at least once a week.

Similarly, organizational interventions that have been suggested to reduce burnout are related to fostering positive work environment, improving workflow, and the introduction of novel methods like the implementation of third-party documentation (e.g., medical assistance or scribes)[14] and utilizing annual bundled prescription renewal[15]. Limiting work hours could be another intervention that could be adopted at an organizational level. The association of working hours with burnout is controversial and not well-studied, however. Some studies have shown long working hours, especially more than 60 hours in a week, are associated with burnout[16]. Our study demonstrating a 2.6-fold increase in burnout among practitioners who work more than 60 hours per week would lend support to this association.

This study is subject to several limitations. Not all eligible attendees completed the survey. The attendees might represent a nonhomogenous group of practitioners who may not reflect the general practicing rheumatology workforce. However, it is not clear whether this would have a favorable or unfavorable effect on the results.

In what we believe to be one of the largest studies regarding burnout among rheumatology practitioners, we found a notable prevalence of burnout, with 51% of all respondents meeting criteria in at least 1 domain defined by the MBI and 54% of physician rheumatologists meeting this same criteria. Although the front-line specialties like internal medicine, emergency room medicine, family medicine, and general surgery are considered to be greatly affected by burnout, it is disconcerting to see a high prevalence among rheumatology practitioners, who have been found previously to be the happiest physicians.[8] Many factors contribute to the occurrence of burnout. While we have demonstrated some associations, we are unable to give specific recommendations on how to address these issues. Burnout may well have important implications for the rheumatology workforce.

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