

Supplemental Tables: Impact of EHR and Clerical Work on Burnout

Table 1: Average Burnout Scores by Personal, Professional Characteristics and EHR & Clerical Burden (Bivariate)

	MBI-2 Burnout Score Max= 12 Mean (std)	P value	WBI Burnout Score Max=7 Mean (std)	P value
Total	4.01 (3.20)		2.76 (1.93)	
Demographics and Professional Characteristics				
Gender				
Female	4.37 (3.22)	p<.001 ^a	3.01 (1.85)	p<.001 ^a
Male	3.55 (3.07)		2.39 (1.92)	
Non-binary/third gender/other	5.00 (3.56)		3.604 (2.00)	
Age				
20-39	4.81 (3.08)	p<.001 ^a	3.14 (1.84)	p<.001 ^a
40-59	4.00 (3.23)		2.77 (1.91)	
60+	2.545 (2.76)		1.91 (1.84)	
Faculty Level				
Instructor/other	4.161 (3.40)	p<.001 ^a	2.93 (1.85)	p<.001 ^a
Assistant Prof	4.41 (3.20)		2.92 (1.89)	
Associate Prof/Professor	3.29 (3.00)		2.34 (1.94)	
Full-time Status				
Full-time	4.09 (3.23)	p=.02 ^a	2.81 (1.93)	p<.001 ^a
Part time (Any %)	3.42 (2.96)		2.12 (1.76)	
% Time Spent on Clinical Care				
1-40%	3.50 (3.11)	p=.003 ^a	2.46 (1.87)	p=.004 ^a
41-60%	4.05 (3.01)		2.97 (1.97)	
61-100%	4.23 (3.28)		2.81 (1.93)	

Hours worked per week <40 41-60 >60	3.88 (3.38) 3.84 (3.09) 4.30 (3.25)	p=.08	2.42 (1.87) 2.60 (1.87) 3.08 (1.98)	p<.001 ^a
Department Primary Care All Others	4.743 (3.254) 3.905 (3.176)	p=.002 ^a	3.01 (1.88) 2.72 (1.93)	p=.07
Medicine/Pediatrics Specialty All Others	3.87 (2.93) 4.04 (3.245)	p=.45	2.86 (1.82) 2.74 (1.95)	p=.38
Surgery All Others	4.089 (3.38) 4.00 (3.17)	p=.74	2.90 (2.12) 2.74 (1.90)	p=.34
Hospital and Emergency Med All Others	5.00 (3.18) 3.89 (3.18)	p<.00 ^a	3.14 (1.91) 2.71 (1.93)	p=.01 ^a
Anesthesia/Radiology/Pathology All Others	3.10 (2.91) 4.17 (3.22)	p<.001 ^a	2.12 (1.83) 2.87 (1.92)	p<.001 ^a
Other Specialties All Others	3.40 (3.08) 4.14 (3.21)	p=.002 ^a	2.34 (1.88) 2.84 (1.93)	p<.001 ^a
Other Department All Others	4.25 (3.23) 4.00 (3.20)	p=.50	2.720 (3.20) 2.759 (1.93)	p=.86
EHR and Clerical Work				
Daily Clerical Work Time (min) <=60 >60	3.66 (3.03) 5.12 (3.44)	p<.001 ^a	2.56 (1.86) 3.39 (1.99)	p<.001 ^a
Daily EHR Time Outside Work (min) <=90 >90	3.77 (3.11) 4.89 (3.34)	p<.001 ^a	2.60 (1.86) 3.30 (2.03)	p<.001 ^a

EHR frustration Agree Disagree/neutral	4.58 (3.30) 3.44 (2.98)	p<.001 ^a	3.08 (1.94) 2.44 (1.85)	p<.001 ^a
Practice Unloads Clerical Work Agree Disagree/neutral	3.48 (2.89) 4.60 (3.389)	p<.001 ^a	2.56 (1.89) 2.99 (1.94)	p<.001 ^a
Depression, Meaning and Resilience				
Depression Yes No	6.41 (3.27) 3.31 (2.81)	p<.001 ^a	4.89 (1.46) 2.15 (1.58)	p<.001 ^a
Meaning in work Agree Neutral/disagree	3.82 (3.08) 7.13 (3.59)	p<.001 ^a	2.699 (1.90) 3.871 (2.08)	p<.001 ^a
Resilience (CD-RISC-2) (Pearson Corr)	-0.22	p<.001 ^a	-0.21	p<.001 ^a

CD-RISC-2 = Conner-Davidson Resilience Scale 2 item; EHR = Electronic health record; MBI-2 = Maslach Burnout Inventory 2 item; WBI = Mayo Well-Being Index; PS = Professional Satisfaction (Overall I am satisfied with my job), PHQ-2 = Patient Health Questionnaire 2 item; WLI = Work-life integration (My work schedule leaves enough time for my personal/family life)

^a T-tests for dichotomous predictors and the Levene's test for equal variance p-value assessment, significant p value <.05. Anova tests for predictors with more than 2 groups and post-hoc analyses, Tukey's HSD (equal variances) and Dunnett's T3 (equal variance not assumed) tests completed with Bonferroni correction for p value for multiple comparisons, significant p value <.008.

Supplemental Table 2: Average Burnout Scores by Personal, Professional Characteristics and EHR & Clerical Burden (Multivariable)

	MBI-2 Burnout Coefficient [95% CI]	P Value	WBI Burnout Coefficient [95% CI]	P Value
Adjusted R Square	0.32		0.20	
Gender (ref: Male)				

Female	0.42 [0.09, 0.77]	p=.01aa	0.49 [0.27, 0.71]	p<.001aa
Non-binary/third Gender	0.30 [-0.56, 1.16]	p=.49	0.68 [0.11, 1.24]	p=.02aa
Age (ref: 20-39 yo)				
40-59 yo	-.54 [-0.93, -0.14]	p=.008 ^a	-0.29 [-0.54, -0.03]	p=.03 ^a
>60 yo	-1.58 [-2.15, -1.02]	p<.001 ^a	-0.86 [-1.23, -0.50]	p<.001 ^a
Part-time Status (ref:Full-time)	-0.25 [-0.81, 0.30]	p=.37	-0.34 [-0.69, 0.02]	p=.06
Time Spent on Clinical Care (ref:1-40%)				
41-60%	0.09 [-0.39, 0.58]	p=.71	0.40 [0.09, 0.72]	p=.01 ^a
61-100%	0.47 [0.05, 0.88]	p=.03 ^a	0.29 [0.02, 0.56]	p=.04 ^a
Hours worked/week (ref: <=40)				
41-60	0.25 [-0.28, 0.77]	p=.35	0.23 [-0.11, 0.56]	p=.18
>60	0.47 [-0.10, 1.05]	p=.11	0.56 [0.20, 0.93]	p=.003 ^a
Level (ref: Instructor/other)				
Assistant Professor	0.52 [0.01, 1.04]	p=.04 ^a	0.08 [-0.25, 0.41]	p=.63
Associate Professor/Professor	0.33 [-0.26, 0.92]	p=.27	0.02 [-0.36, 0.41]	p=.90
Department				
Primary Care	-0.23 [0.90, 0.43]	p=.49	-0.30 [-0.73, 0.12]	p=.16
Medicine/Pediatrics Specialty	-0.64 [-1.29, 0.02]	p=.06	-0.33 [-0.74, 0.09]	p=.12
Surgery	-0.65 [-1.33, 0.02]	p=.06	-0.29 [-0.72, 0.14]	p=.18
Hospital and Emergency Medicine	0.10 [-0.60, 0.80]	p=.78	0.003 [-0.45, 0.45]	p=.99

Anesthesia, Radiology, Pathology	-1.05 [-1.74, -0.37]	p=.003 ^a	-0.72 [-1.15, -0.28]	p<.001 ^a
Other Specialties	-1.10 [-1.74, -0.46]	P<0.001 ^a	-0.72 [-1.13, -0.31]	p<.001 ^a
Other	--	--		
Depression (PHQ-2)	2.33 [1.93, 2.73]	p<.001 ^a	-	-
Resilience (CD-RISC-2)	-0.29 [-0.42, -0.16]	p<.001 ^a	-0.26 [-0.35, -0.18]	p<.001 ^a
Meaning in Work (ref: disagree/neutral)	-1.69 [-2.38, -1.00]	p<.001 ^a	-0.66 [-1.11, -0.21]	p=.004 ^a
EHR and Clerical Burden				
Practice Unloads Clerical Work (ref: disagree/neutral)	-0.73 [-1.06, -0.40]	p<.001 ^a	-0.28 [-0.49, -0.06]	p=.01 ^a
Frustration with EHR (ref: Disagree/neutral)	0.65 [0.31, 0.99]	p<.001 ^a	0.42 [0.20, 0.64]	p<.001 ^a
EHR Time Outside Work (ref:<=90 min)	0.35 [-0.06, 0.76]	p=.09	0.22 [-0.05, 0.48]	p=.11
Time on Clerical Work/day (ref:<=60 min)	0.65 [0.26, 1.04]	p<.001 ^a	0.38 [0.13, 0.64]	p=.003 ^a

CD-RISC-2 = Conner-Davidson Resilience Scale 2 item; EHR = Electronic health record; MBI-2 = Maslach Burnout Inventory 2 item; WBI = Mayo Well-Being Index; PS = Professional Satisfaction (Overall I am satisfied with my job), PHQ-2 = Patient Health Questionnaire 2 item; WLI = Work-life integration (My work schedule leaves enough time for my personal/family life)

^a Multivariable Linear Regression; significant factors with p value < 0.05