

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix. Internal Medicine In-Training Examination: 2008 Residents Questionnaire

**Internal Medicine In-Training Examination
2008 Residents Questionnaire**

The Examination Committee would like your help to improve future examinations and training programs. Please complete this voluntary questionnaire after you complete the examination. Although your responses will be stored with your identification number and score, your answers will be kept confidential and your individual identity will not be used. Your Program Director will not have access to any of the information that is unique to your program. Some collective information may be published in peer-reviewed journals. If you prefer not to participate in this research, please mark this on your survey.

1. What is your PGY level?

- PGY-1
- PGY-2
- PGY-3
- PGY-4
- Other

2. Which of the following best describes your overall quality of life?

- As bad as it can be
- Somewhat bad
- Neutral
- Somewhat good
- As good as it can be

3. How satisfied are you with the balance between your personal and professional life?

- Very dissatisfied
- Somewhat dissatisfied
- Neutral
- Somewhat satisfied
- Very satisfied

4. How often do you feel burned out from your work?

- Never
- A few times a year or less
- Once a month
- A few times a month
- Once a week
- A few times a week
- Every day

5. How often do you feel you've become more callous toward people since you started your residency?

- Never
- A few times a year or less
- Once a month
- A few times a month
- Once a week
- A few times a week
- Every day

6a. In the past 30 days, approximately how many hours did you devote to moonlighting at your training location?

- 0
- 1-24
- 25-72
- >72

6b. In the past 30 days, approximately how many hours did you devote to moonlighting at an outside facility?

- 0
- 1-24
- 25-72
- >72

7. What is the approximate amount of your total current educational debt? (e.g., college, medical school)

- None
- \$1 - \$49,999
- \$50,000 - \$99,999
- \$100,000 - \$149,999
- \$150,000 - \$200,000
- More than \$200,000

eTable 1. Quality of Life and Satisfaction With Work-Life Balance Among US Internal Medicine Residents Responding to the 2008 Internal Medicine In-Training Examination Residents Questionnaire

Variable	Level	No. (%)	Low QOL, No. (%) ^a	Low QOL, odds ratio (99% CI) ^a	P value ^c	Low Satisfaction with Work-Life Balance, No. (%) ^b	Low Satisfaction with Work-Life Balance, odds ratio (99% CI) ^b	P value ^c
Year of Training	PGY-1	4692 (30.5)	2119 (45.2)	1.0 (Ref.)	.005	2856 (60.9)	1.0 (Ref.)	<.001
	PGY-2	5681 (36.9)	2475 (43.6)	0.96 (0.87-1.07)		3435 (60.5)	1.00 (0.90-1.11)	
	PGY-3	5015 (32.6)	2047 (40.8)	0.88 (0.79-0.98)		2728 (54.4)	0.80 (0.72-0.89)	
Sex	Male	8649 (56.2)	3732 (43.1)	1.0 (Ref.)	.59	4995 (57.8)	1.0 (Ref.)	.007
	Female	6739 (43.8)	2909 (43.2)	1.02 (0.93-1.11)		4024 (59.7)	1.10 (1.01-1.19)	
Program	Categorical	14081 (91.5)	6077 (43.2)	1.0 (Ref.)	.67	8244 (58.5)	1.0 (Ref.)	.90
	Primary Care	1307 (8.5)	564 (43.2)	0.98 (0.84-1.14)		775 (59.3)	1.01 (0.86-1.17)	
Medical School Location	USMG	7472 (48.6)	3070 (41.1)	1.0 (Ref.)	<.001	4388 (58.7)	1.0 (Ref.)	.04
	IMG	7916 (51.4)	3571 (45.1)	1.25 (1.13-1.38)		4631 (58.5)	1.08 (0.98-1.20)	
Debt	None	5578 (36.2)	2374 (42.6)	1.0 (Ref.)	.002	3134 (56.2)	1.0 (Ref.)	<.001
	\$1-49,999	2315 (15.0)	1047 (45.2)	1.14 (1.00-1.29)		1392 (60.1)	1.19 (1.04-1.36)	
	\$50,000-99,999	1315 (8.5)	577 (43.9)	1.17 (0.99-1.38)		779 (59.2)	1.18 (1.00-1.39)	
	\$100,000-\$149,999	1800 (11.7)	750 (41.7)	1.11 (0.95-1.30)		1048 (58.2)	1.14 (0.98-1.34)	
	\$150,000-\$200,000	2287 (14.9)	944 (41.3)	1.10 (0.95-1.28)		1348 (58.9)	1.19 (1.02-1.37)	
	>\$200,000	2093 (13.6)	949 (45.3)	1.25 (1.08-1.44)		1318 (63.0)	1.38 (1.19-1.59)	
Moonlighting in Past 30 Days	No	14127 (91.8)	6174 (43.7)	1.0 (Ref.)	<.001	8363 (59.2)	1.0 (Ref.)	<.001
	Yes	1261 (8.2)	467 (37.0)	0.78 (0.67-0.92)		656 (52.0)	0.80 (0.69-0.94)	

Abbreviations: QOL = quality of life; CI, confidence interval; PGY = postgraduate year; USMG = United States medical graduate; IMG = international medical graduate
N=15,388 responding to all variables in table.

^aQOL measured on a 5-point Likert scale, with response anchors ranging from "As bad as it can be" (1) to "As good as it can be" (5). Low QOL defined as score of 3 or lower. All odds ratios from multivariable logistic regression including all variables in the table.

^bSatisfaction with work-life balance measured on a 5-point Likert scale, with response anchors ranging from "very dissatisfied" to "very satisfied". Low work-life balance defined as score of 3 or lower. All odds ratios from multivariable logistic regression including all variables in the table.

^cP value for full variable from multivariable logistic regression including all variables in the table.

eTable 2. Debt Levels Across Demographic Characteristics and Mean Internal Medicine In-Training Examination (IM-ITE) Scores of US Internal Medicine Residents Responding to the 2008 IM-ITE Residents Questionnaire

Debt Level	None (n=5812), No. (%)	\$1-\$49,999 (n=2446), No. (%)	\$50,000- \$99,999 (n=1387), No. (%)	\$100,000- \$149,999 (n=1853), No. (%)	\$150,000- \$200,000 (n=2349), No. (%)	>\$200,000 (n=2147), No. (%)	Total n (%)
PGY-1	1744 (35.2)	822 (16.6)	402 (8.1)	506 (10.2)	712 (14.4)	765 (15.5)	4951 (31.0)
PGY-2	2092 (35.7)	883 (15.1)	536 (9.2)	723 (12.3)	849 (14.5)	773 (13.2)	5856 (36.6)
PGY-3	1976 (38.1)	741 (14.3)	449 (8.7)	624 (12.0)	788 (15.2)	609 (11.7)	5187 (32.4)
Male	3105 (34.8)	1555 (17.4)	784 (8.8)	976 (10.9)	1243 (13.9)	1257 (14.1)	8920 (56.1)
Female	2682 (38.4)	873 (12.5)	590 (8.5)	865 (12.4)	1091 (15.6)	881 (12.6)	6982 (43.9)
Categorical Primary Care	5378 (37.0) 398 (29.3)	2172 (14.9) 248 (18.3)	1180 (8.1) 195 (14.4)	1646 (11.3) 198 (14.6)	2159 (14.9) 181 (13.3)	2000 (13.8) 138 (10.2)	14535 (91.5) 1358 (8.5)
USMG	1119 (14.7)	649 (8.5)	844 (11.1)	1507 (19.8)	1975 (25.9)	1517 (19.9)	7611 (47.8)
IMG	4668 (56.2)	1781 (21.4)	538 (6.5)	340 (4.1)	363 (4.4)	615 (7.4)	8305 (52.2)
Moonlighting in Past 30 Days	401 (31.5)	199 (15.6)	127 (10.0)	154 (12.1)	221 (17.4)	171 (13.4)	1273 (8.2)
No Moonlighting in Past 30 Days	5251 (36.6)	2157 (15.1)	1214 (8.5)	1665 (11.6)	2094 (14.6)	1948 (13.6)	14329 (91.8)
IM-ITE Score, Mean (SD) ^a	62.2 (8.8)	61.4 (8.8)	61.0 (9.1)	60.4 (9.0)	59.3 (8.7)	57.2 (8.6)	15994

Abbreviations: PGY = postgraduate year; USMG = United States medical graduate; IMG = international medical graduate; SD = standard deviation. N=15,994 responding to debt question. Totals summing to less than this figure reflect missing data.

^aScore represents percentage correct. 2008 IM-ITE mean score 60.3, standard deviation 9.0. 2009 IM-ITE mean score 59.0, standard deviation 9.0.

eTable 3. Demographic Characteristics and Learning Measured by Mean Change in Internal Medicine In-Training Examination (IM-ITE) Scores of US Internal Medicine Residents Responding to Both 2008 and 2009 IM-ITE Residents Questionnaires

Variable	Category	No. (%)	Mean Change in IM-ITE Score from 2008 to 2009 (99% CI) ^a	P value ^b
Year of Training in 2008	PGY-1	3907 (46.5)	4.1 (3.9-4.3)	<.001
	PGY-2	4489 (53.5)	2.6 (2.4-2.8)	
	PGY-3	--	--	
Sex	Male	4757 (56.7)	3.1 (2.9-3.3)	<.001
	Female	3603 (42.9)	3.5 (3.3-3.7)	
Program	Categorical	7712 (91.9)	3.3 (3.2-3.5)	.14
	Primary Care	638 (7.6)	3.1 (2.6-3.6)	
Medical School Location	U.S.	3874 (46.1)	3.0 (2.8-3.2)	<.001
	International	4486 (53.4)	3.5 (3.3-3.7)	
Educational Debt in 2008	None	2987 (35.6)	3.4 (3.2-3.7)	.75
	\$1-\$49,999	1264 (15.1)	3.2 (2.8-3.6)	
	\$50,000-\$99,999	697 (8.3)	3.3 (2.8-3.9)	
	\$100,000-\$149,999	925 (11.0)	3.1 (2.7-3.5)	
	\$150,000-\$200,000	1180 (14.1)	3.1 (2.7-3.4)	
	>\$200,000	1131 (13.5)	3.3 (2.9-3.7)	
Moonlighting in Past 30 Days	Yes	379 (4.7)	3.1 (2.3-3.8)	.44
	No	7681 (95.3)	3.3 (3.1-3.4)	

Abbreviations: CI, confidence interval.

N=8,396. Totals summing to less than this figure reflect missing data.

^aScore represents percentage correct. 2008 IM-ITE mean score 60.3, standard deviation 9.0. 2009 IM-ITE mean score 59.0, standard deviation 9.0.

^bP value for full variable from multivariable logistic regression including all variables in the table.

eTable 4. Association of Well-being Factors With Learning Measured by Mean Change in Internal Medicine In-Training Examination (IM-ITE) Scores of US Internal Medicine Residents Responding to Both 2008 and 2009 IM-ITE Residents Questionnaires

Well-Being Variable	Level	No. (%)	Mean Change in IM-ITE Score from 2008 to 2009 (99% CI) ^a	P value ^b
Quality of Life	As Good As It Can Be	1256 (15.2)	3.5 (3.1-3.8)	.11
	Somewhat Good	3381 (40.8)	3.3 (3.1-3.5)	
	Neutral	2395 (28.9)	3.4 (3.1-3.7)	
	Somewhat Bad	1106 (13.4)	2.9 (2.5-3.3)	
	As Bad As It Can Be	144 (1.7)	3.6 (2.4-4.7)	
Satisfaction with Work-Life Balance	Very Satisfied	692 (8.4)	3.4 (3.2-3.7)	.05
	Somewhat Satisfied	2644 (31.9)	3.4 (2.9-4.0)	
	Neutral	2179 (26.3)	3.3 (3.0-3.6)	
	Somewhat Dissatisfied	2324 (28.1)	3.1 (2.8-3.4)	
	Very Dissatisfied	445 (5.4)	3.2 (2.6-3.9)	
Emotional Exhaustion	Never	121 (1.5)	3.4 (2.2-4.6)	.52
	A Few Times a Year or Less	618 (7.5)	3.0 (2.4-3.5)	
	Once a Month	884 (10.7)	3.2 (2.8-3.6)	
	A Few Times a Month	2716 (32.9)	3.3 (3.0-3.5)	
	Once a Week	1740 (21.1)	3.4 (3.1-3.7)	
	A Few Times a Week	1868 (22.6)	3.3 (3.0-3.6)	
	Every Day	317 (3.8)	3.3 (2.6-4.1)	
Depersonalization	Never	1179 (14.7)	3.7 (3.3-4.1)	.59
	A Few Times a Year or Less	1396 (17.4)	3.0 (2.6-3.3)	
	Once a Month	1246 (15.5)	3.5 (3.1-3.8)	
	A Few Times a Month	1996 (24.8)	3.4 (3.1-3.7)	
	Once a Week	1024 (12.7)	3.1 (2.7-3.5)	
	A Few Times a Week	922 (11.5)	3.0 (2.6-3.5)	
	Every Day	283 (3.5)	2.7 (2.0-3.5)	

Abbreviations: CI, confidence interval.

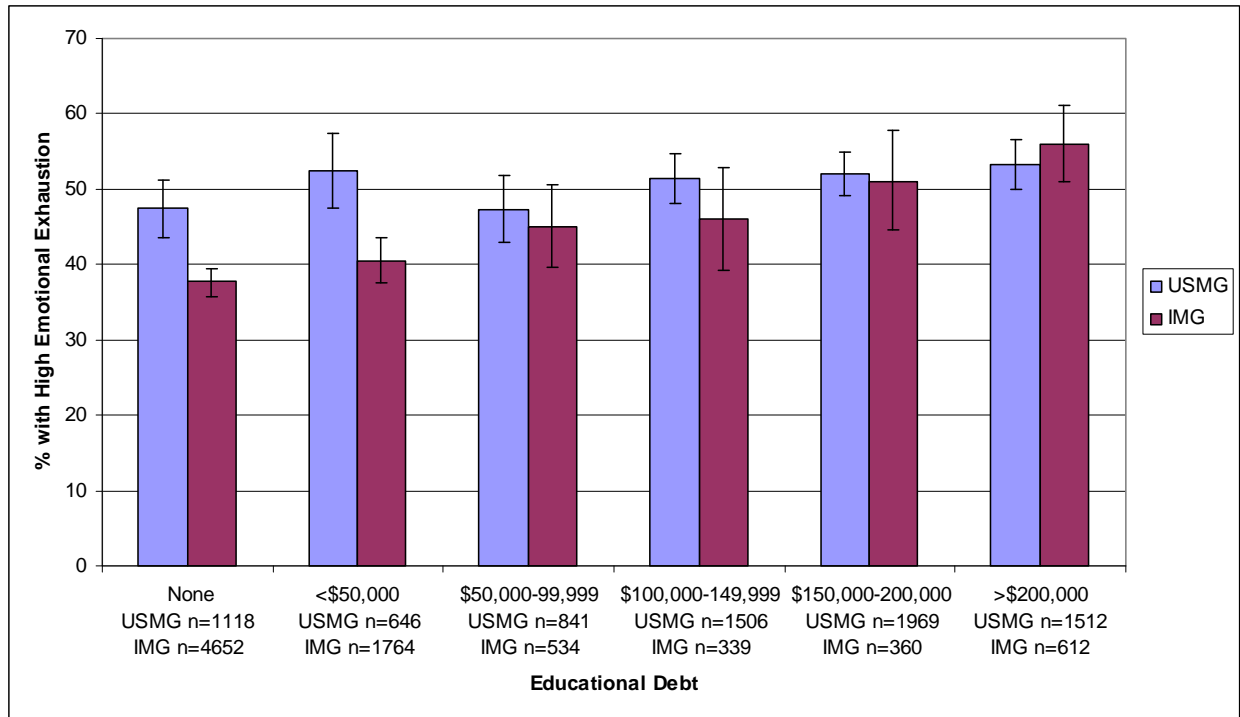
N=8,396. Numbers may not sum to 8,396 due to missing data.

^aScore represents percentage correct. 2008 IM-ITE mean score 60.3, standard deviation 9.0. 2009 IM-ITE mean score 59.0, standard deviation 9.0.

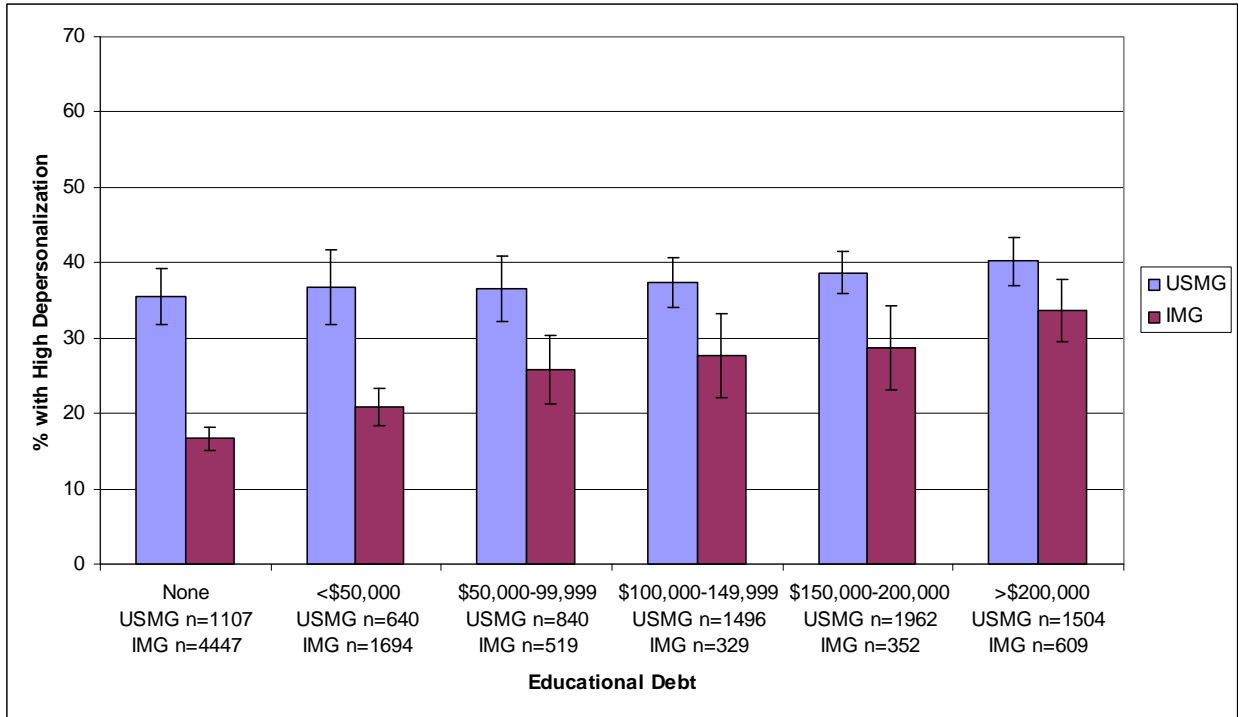
^bP value for full variable from multivariable logistic regression including year of training, sex, program type (categorical or primary care), medical school location (United States or international), debt level, and moonlighting status.

eFigure. Symptoms of (A) Emotional Exhaustion, (B) Depersonalization, and (C) Either Burnout Domain for United States Medical Graduate and International Medical Graduate Residents Across Levels of Educational Debt for US Internal Medicine Residents Responding to the 2008 Internal Medicine In-Training Examination (IM-ITE) Residents Questionnaire, With 99% Confidence Intervals

A.



B.



C.

