

Emotional Wellness of Current Musculoskeletal Radiology Fellows

Jack Porrino, MD
Felix Chew, MD
Michael Mulcahy, MD
Hyojeong Mulcahy, MD
Annemarie Relyea-Chew, MD

jporrino@uw.edu



Department of Radiology
University of Washington

Disclosures

Disclosure of Commercial Interest: None of the authors have a financial relationship with a commercial organization that may have a direct or indirect interest in the content.

What is Burnout?

- Burnout is a psychological syndrome defined by Maslach as emotional exhaustion, depersonalization, and sense of lack of personal accomplishment.
- The syndrome is a result of prolonged occupational stress, in which the burned out individual becomes increasingly cynical, callous to those they are serving, and grow increasingly dissatisfied with their accomplishments within the workplace.



Why Does Burnout Matter?

- Burnout syndrome can lead to deterioration in the quality of care or service that is provided by staff, and reflects a factor in job turnover, absenteeism, and low morale.
- Burnout may lead to physical exhaustion, insomnia, increased use of alcohol and drugs, and marital and family problems.

Burnout in Medicine

- Burnout in medicine:
 - Linked to a lower degree of medical knowledge
 - Deterioration of professionalism
 - Suboptimal patient care
 - Medical errors
 - Early retirement
 - Reduced empathy



Goals and Objectives

- Determine the prevalence of burnout amongst musculoskeletal (MSK) radiology fellows.
- Explore significant causes of emotional stress that might contribute to burnout.

Methods

The study was granted exemption by the Investigational Review Board at the University of Washington

Society of Skeletal Radiology website was used to identify the MSK radiology fellowship director/equivalent at 82 programs

A survey on SurveyMonkey* was made available to MSK radiology fellows through the fellowship contact via email notification (~180 fellows)

* www.surveymonkey.com

Burnout Survey

24-items

- 2 requests made to program director/equivalent, separated by 1 week
- Survey closed 1 week after the second request

3 demographic questions

7 questions adapted from the Maslach Burnout Inventory (MBI) to assess burnout

2 questions regarding dissatisfaction with radiology

3 questions regarding financial stress

2 questions exploring work-life balance and demands related to care of dependents

4 questions pertaining to the evolution of healthcare and job market constraints

2 questions pertaining to feelings of powerlessness and isolation in the workplace

1 open-ended comments item

Maslach Burnout Inventory

22-item tool established in 1981 by Maslach and Jackson, with burnout comprised of 3 subscales of the syndrome:



Criteria for Burnout

- Maslach et al. 2010 report normative ranges for low, medium, and high levels of burnout for various occupational groups, including “medicine”:
 - High levels of burnout in this population include subscale scores of:
 - Depersonalization > 9
 - Emotional exhaustion > 26
 - Personal accomplishment < 34

Potential Contributors to Burnout

- Through a review of the literature, 13 items were presented addressing stress generators that may contribute to burnout

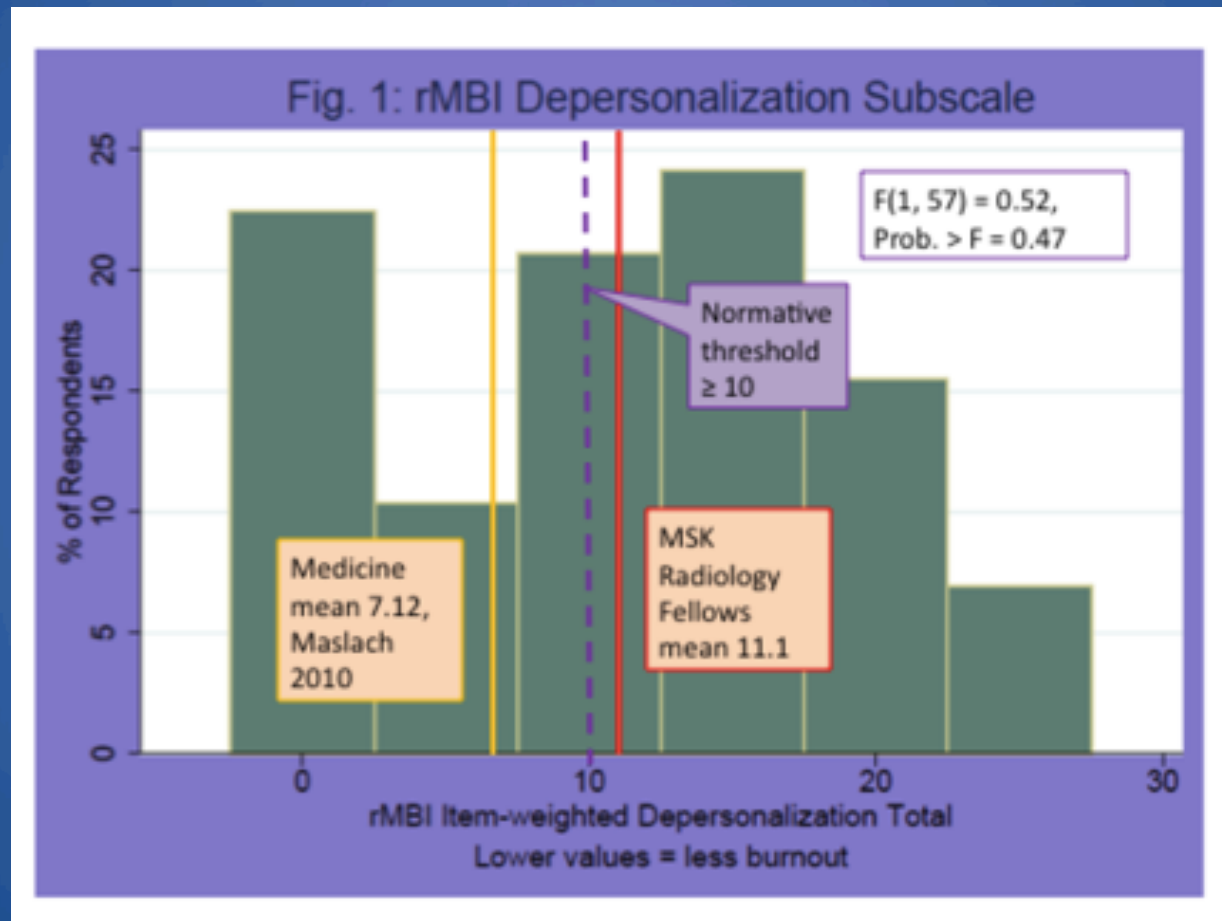


Results

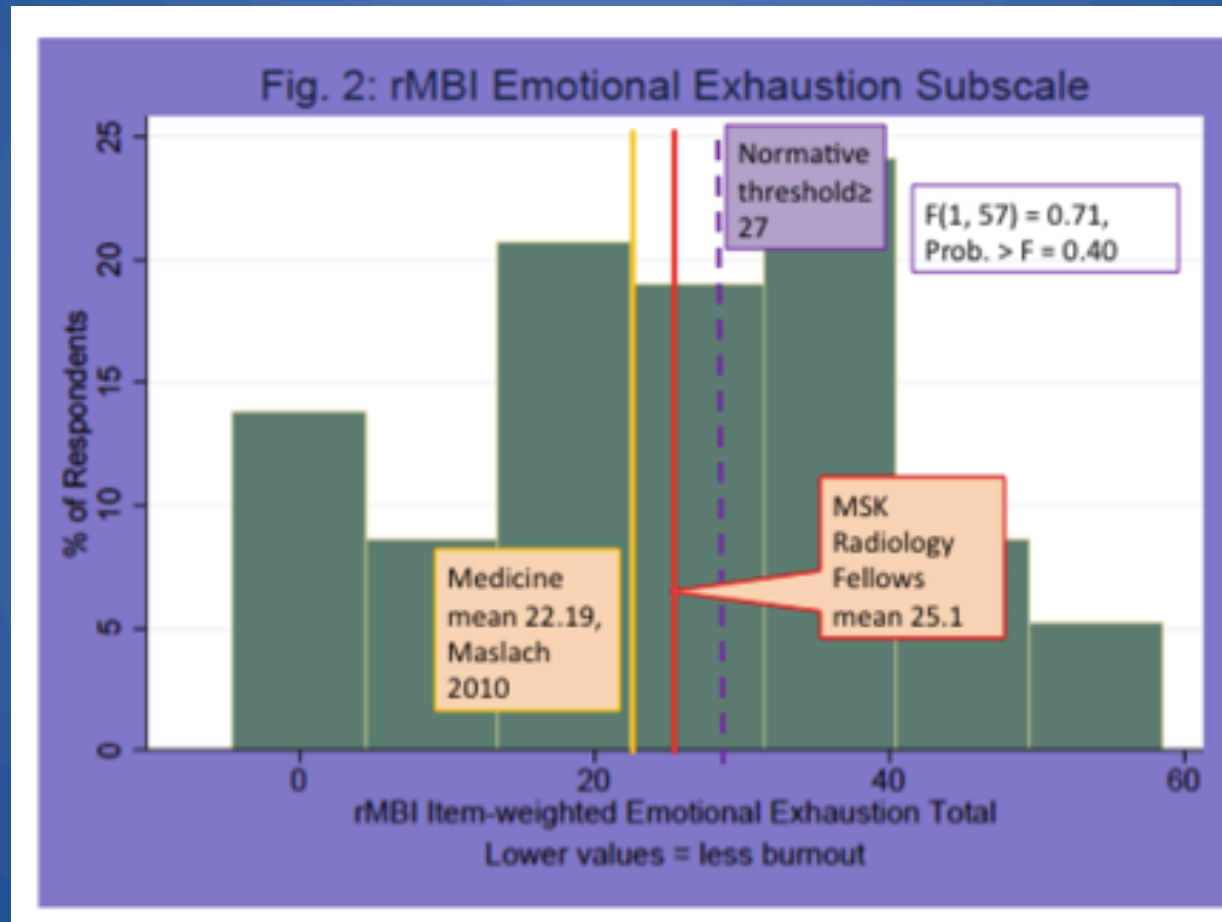
- The proportion of women in our sample is 0.17 (we estimate the proportion of female MSK fellows in the US in recent years has been 0.15-0.25, based on a range of sources)
- Prior studies indicate women differ from men in their susceptibility to burnout, as well exposure and response to stressors
- Our analyses use post-stratification weights based on an estimated female proportion of 0.20 in the population



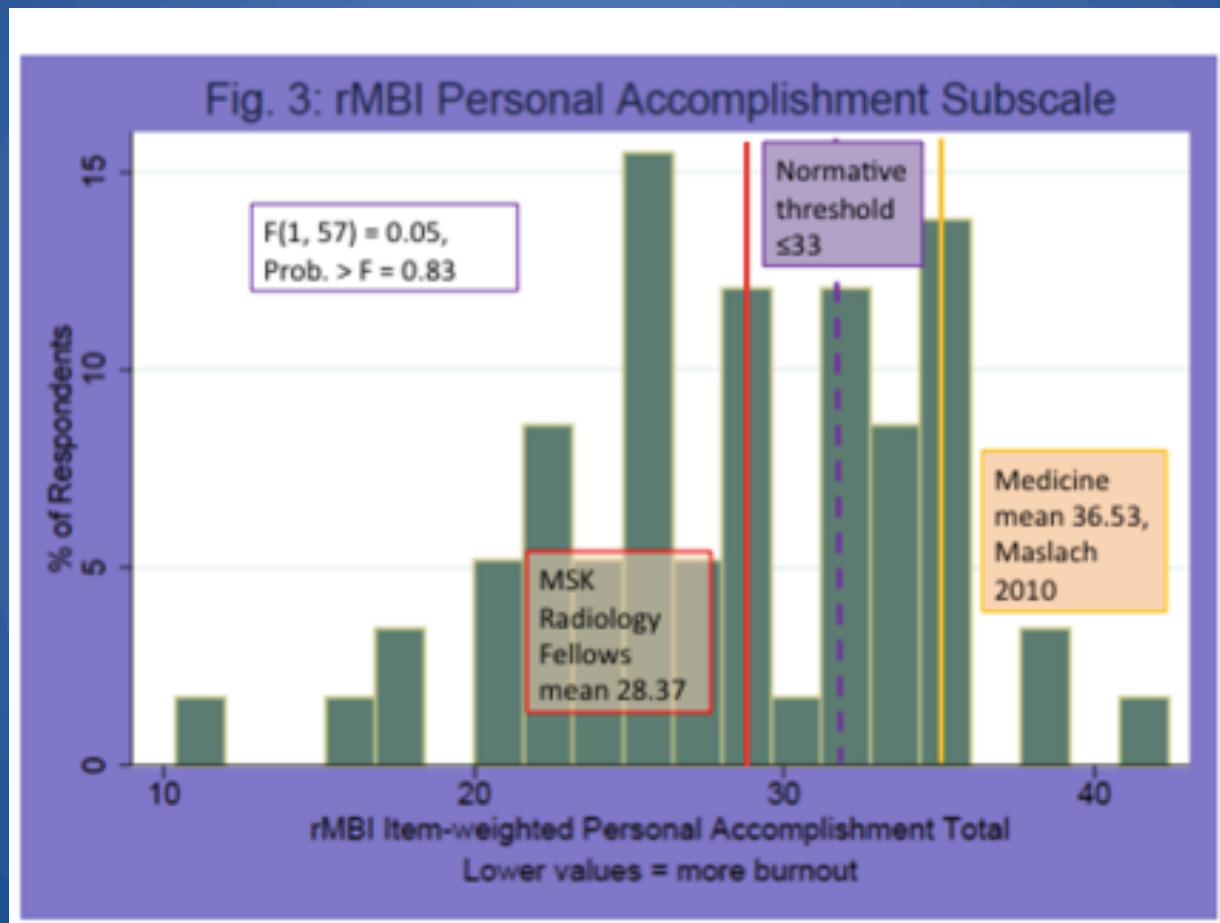
Depersonalization Amongst MSK Fellows



Emotional Exhaustion Amongst MSK Fellows



Personal Accomplishment Deficiency Amongst MSK Fellows



Results

Table 2: Comparison of MSK Radiology Fellows Mean weighted rMBI scales, disaggregated by Sex, to Maslach's Normative MBI Subscale Thresholds and Sex-Disaggregated MBI Subscale Means

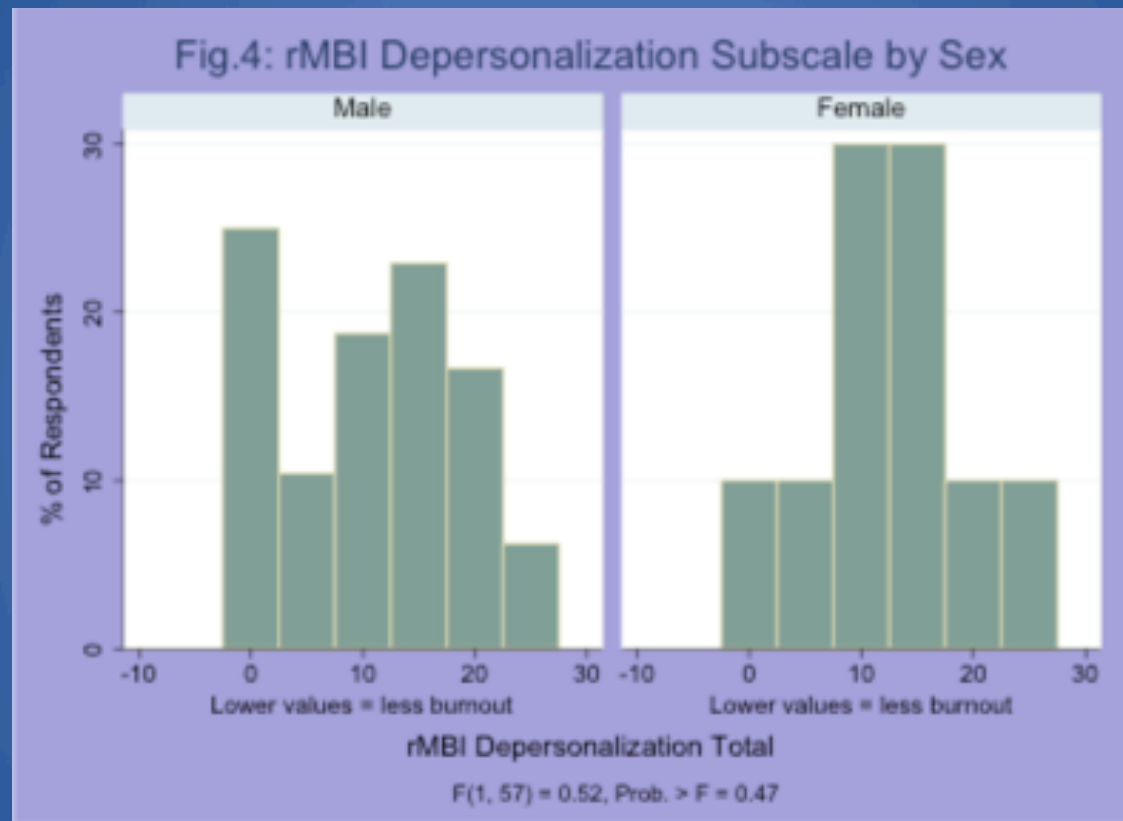
		Emotional Exhaustion	Depersonalization	Personal Accomplishment
Normative thresholds (physicians and nurses)		≥ 27	≥ 10	≤ 33
Male	Maslach 2010	19.86	7.43	36.29
	MSK Radiology	24.37	10.73†	28.3†
Female	Maslach 2010	20.99	7.02	36.50
	MSK Radiology	27.90†	12.5†	28.4†
Adjusted Wald Tests of Subscale Means (Male-Female Comparisons)				
F (1, 57)		0.71	0.52	0.05
Prob > F		0.40	0.47	0.83

† Indicates value in "high" range of Maslach et al's (2010) normative distributions.

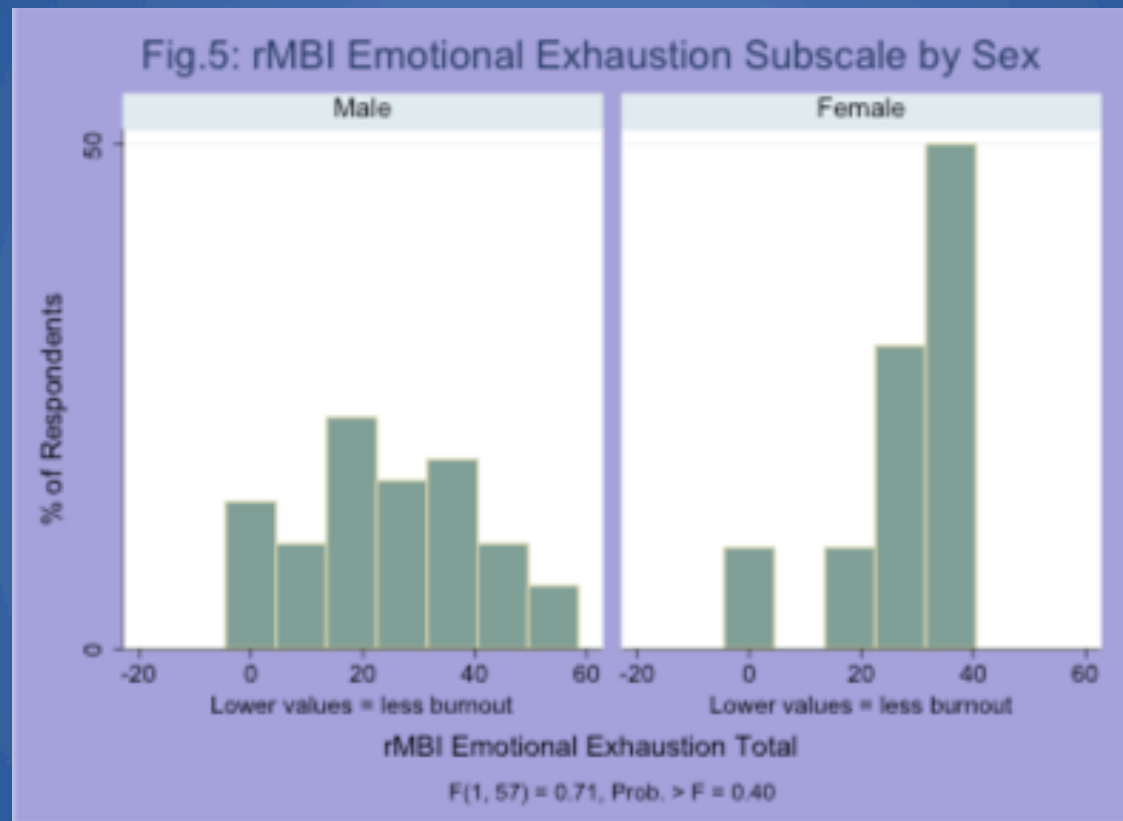
Results Summary

- When comparing the weighted subscale means in our data with the normative subscale thresholds for medical occupations, MSK radiology fellows report relatively high levels of burnout with regard to personal accomplishment and depersonalization.
- Levels of emotional exhaustion in our sample are within the average range reported by Maslach et al. 2010.

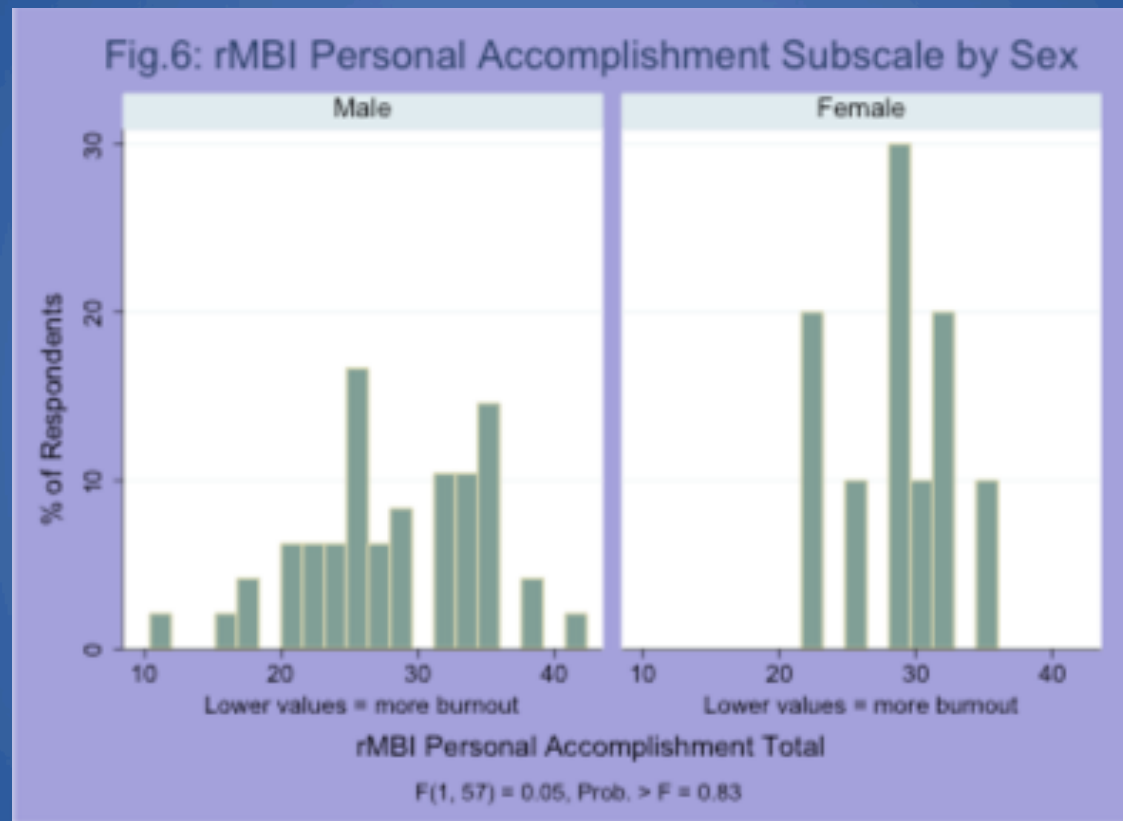
Male vs Female Influence



Male vs Female Influence



Male vs Female Influence



Sources of Burnout

We regressed emotional exhaustion, depersonalization, and personal accomplishment subscales on 4 measures:

Financial circumstances	Regulatory changes associated with the Affordable Care Act AND job market conditions	Work-life balance AND care for dependents	Local practice conditions
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Table 4: Regression of Reduced MBI Personal Accomplishment, Depersonalization and Emotional Exhaustion Subscales on Stressors and Subfield Satisfaction†

Independent Variables	Model 1	Model 2	Model 3
	Personal Accomplishment Subscale	Depersonalization Subscale	Emotional Exhaustion Subscale
Gender	0.151 (0.213)	0.586 (0.671)	0.485 (0.353)
Stress Measures			
<i>Financial Stress</i>	-0.118 (0.177)	0.024 (0.344)	-0.061 (0.240)
<i>Job Market Stress</i>	0.350* (0.136)	0.106 (0.258)	0.132 (0.292)
<i>Health Care Regulations</i>	-0.168 (0.174)	-0.057 (0.345)	0.033 (0.321)
<i>Work-Life Balance</i>	0.055 (0.106)	0.390+ (0.224)	0.686** (0.204)
<i>Care for Dependents</i>	0.322** (0.105)	-0.172 (0.287)	-0.488* (0.205)
<i>Isolation at work</i>	0.058 (0.142)	0.390 (0.263)	0.342 (0.238)
<i>Powerlessness at work</i>	0.171 (0.128)	0.477* (0.236)	0.693** (0.199)
Satisfaction with MSK Radiology Subfield	0.095 (0.096)	0.469** (0.137)	0.628** (0.126)
Constant	0.121 (0.410)	-0.099 (0.936)	-0.361 (0.822)
Observations	58	58	58
R-squared	0.279	0.318	0.531

** p<0.01, * p<0.05, + p<0.10

† Standard errors in parentheses; poststratification gender weights applied, based on estimated female population proportion of .20

Conclusions:

- No effects of financial stressors, changes in health care regulations, or isolation at work on any of the 3 burnout subscales
- Job market-related stress AND effort required providing care for dependents significantly affect personal accomplishment
- Imbalances in work-life relationship AND feelings of powerlessness significantly affect depersonalization and emotional exhaustion
- MSK radiology fellows dissatisfied with their subfield report higher levels of depersonalization and emotional exhaustion

Stressor Results and Gender Influence

Fig. 7: Financial Stress
(3-Item Average)

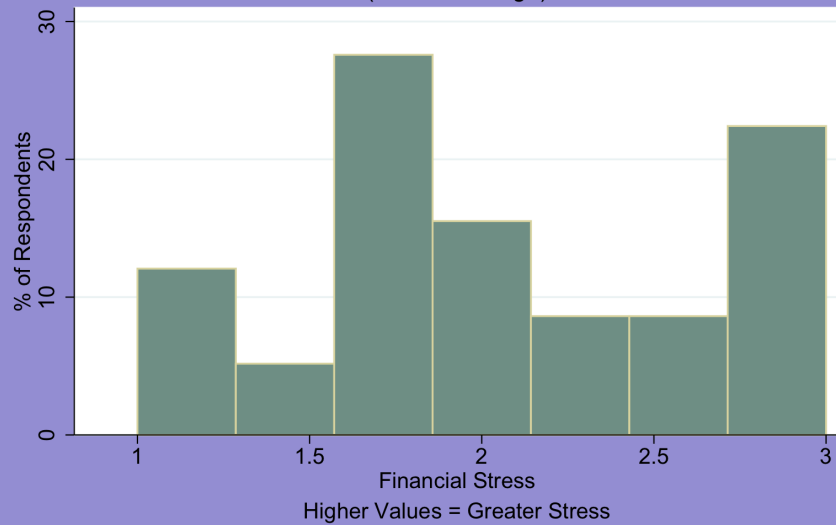
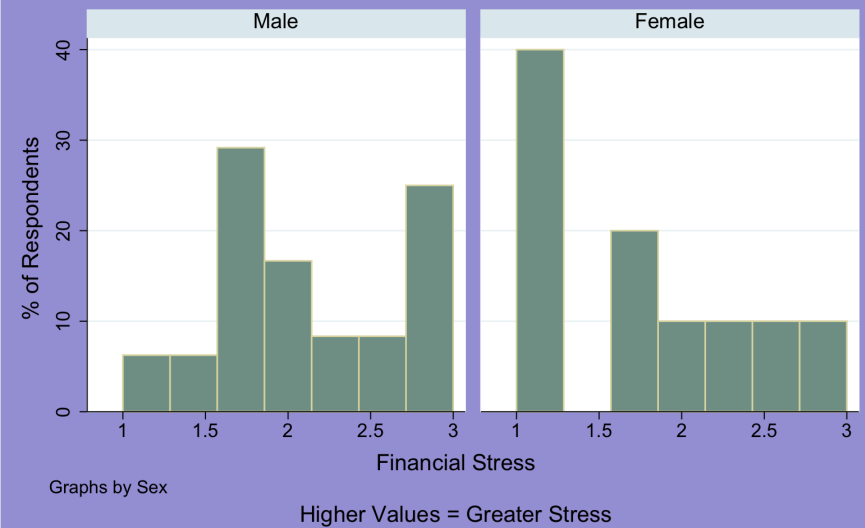


Fig. 8: Financial Stress by Sex
(3-Item Average)



Stressor Results and Gender Influence

Fig. 9: Job Market Stress
(2-Item Average)

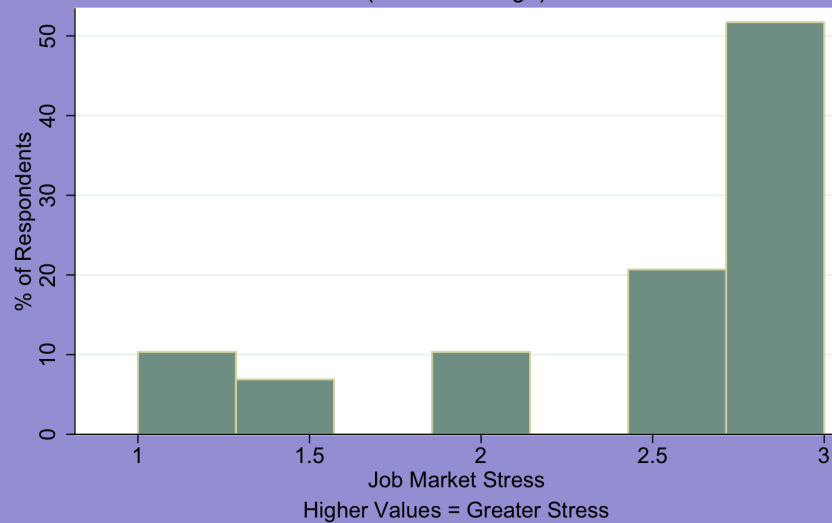


Fig. 10: Job Market Stress by Sex
(2-Item Average)



Stressor Results and Gender Influence

Fig. 11: Stress from Changes in Health Care Regulations
(2-Item Average)

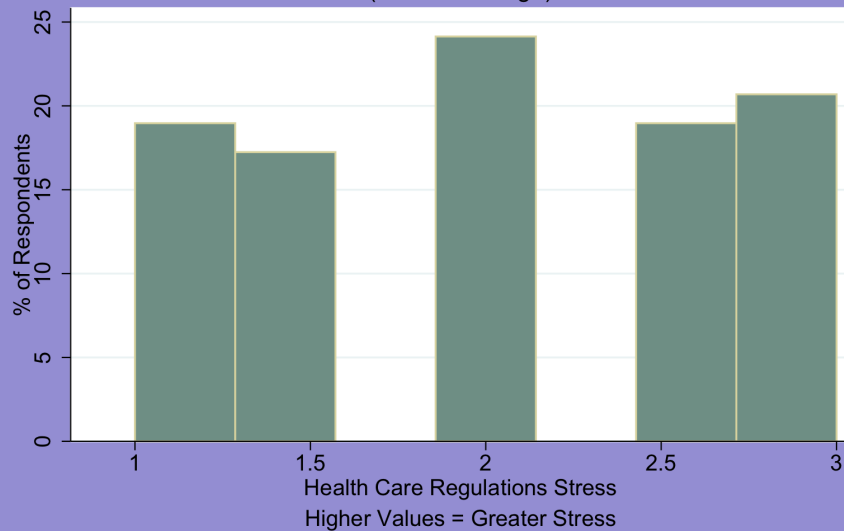
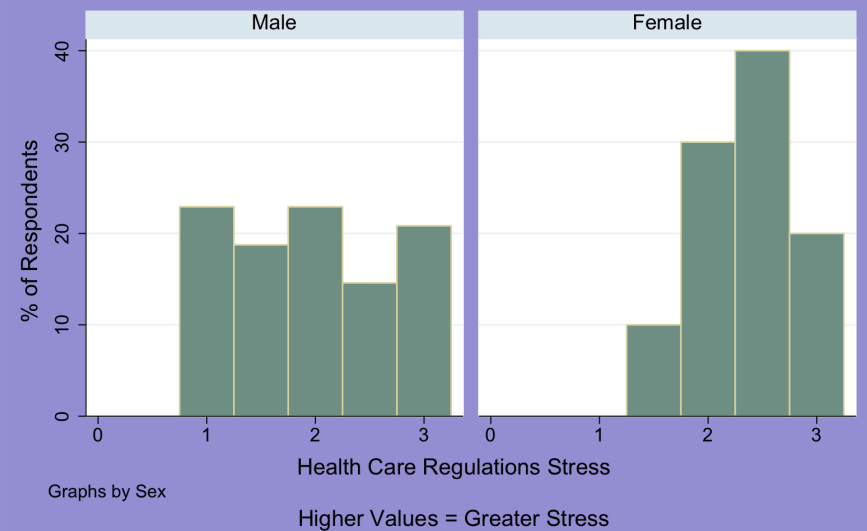


Fig. 12: Stress from Changes in Health Care Regulations, by Sex
(2-Item Average)



Stressor Results and Gender Influence

Fig. 13: Work-life Balance Stress

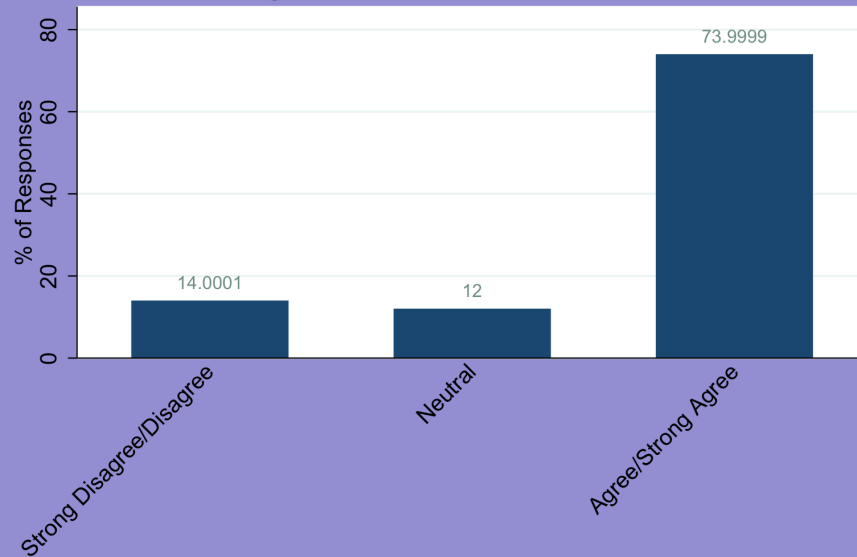
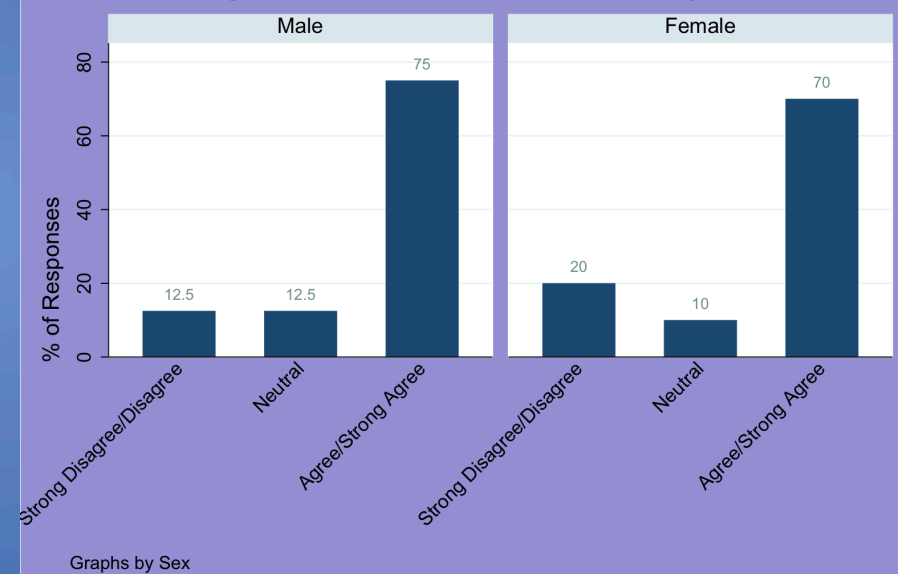


Fig. 14: Worklife Balance Stress, by Sex



Stressor Results and Gender Influence

Fig. 15: Stress from Caring for Dependents

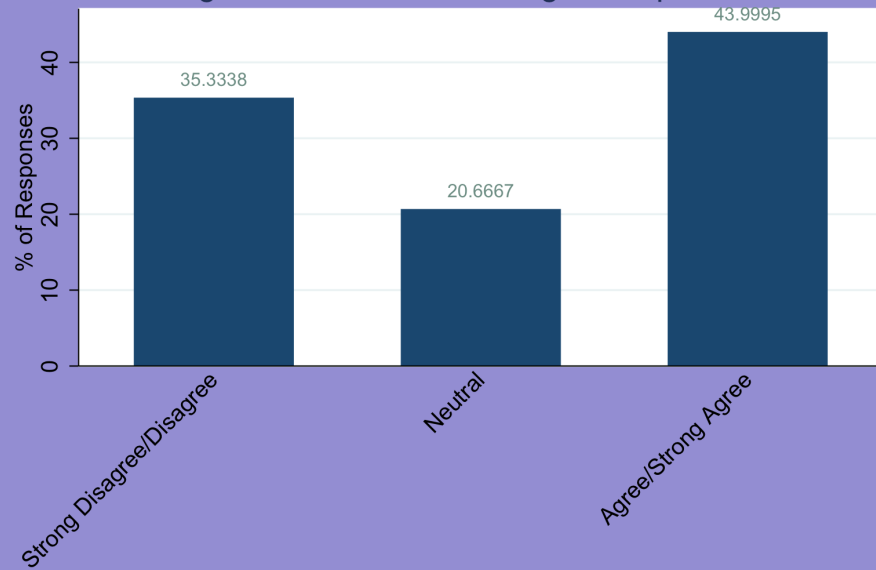
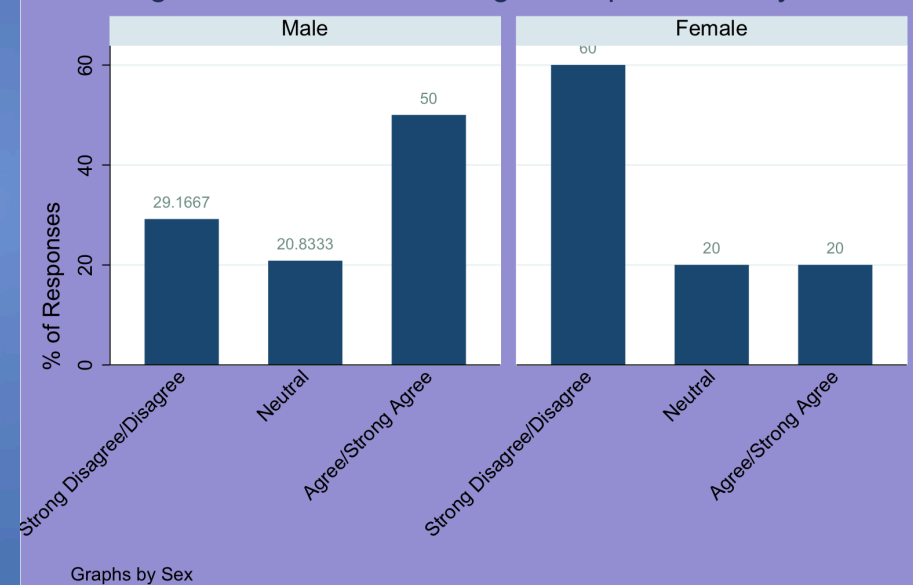


Fig. 16: Stress from Caring for Dependents, by Sex



Stressor Results and Gender Influence

Fig. 17: Stress from Caring for Dependents

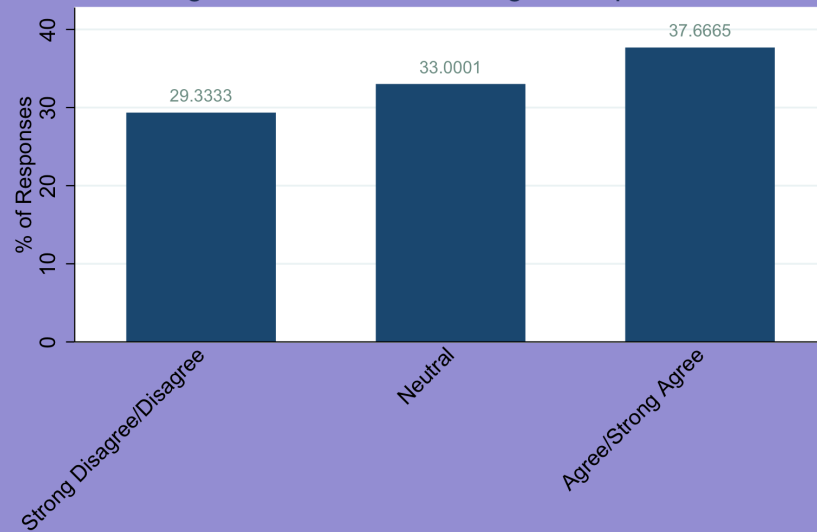


Fig. 18: Stress from Caring for Dependents, by Sex



Graphs by Sex

Stressor Results and Gender Influence

Fig. 19: Stress from Isolation at Work

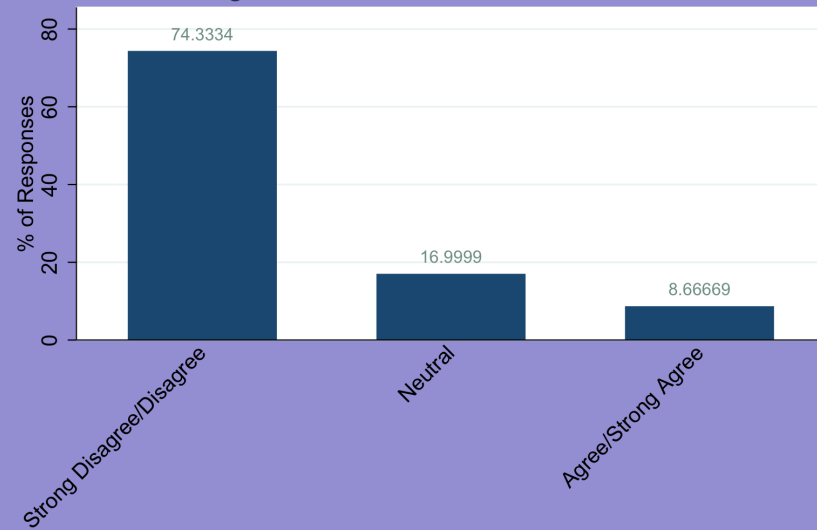
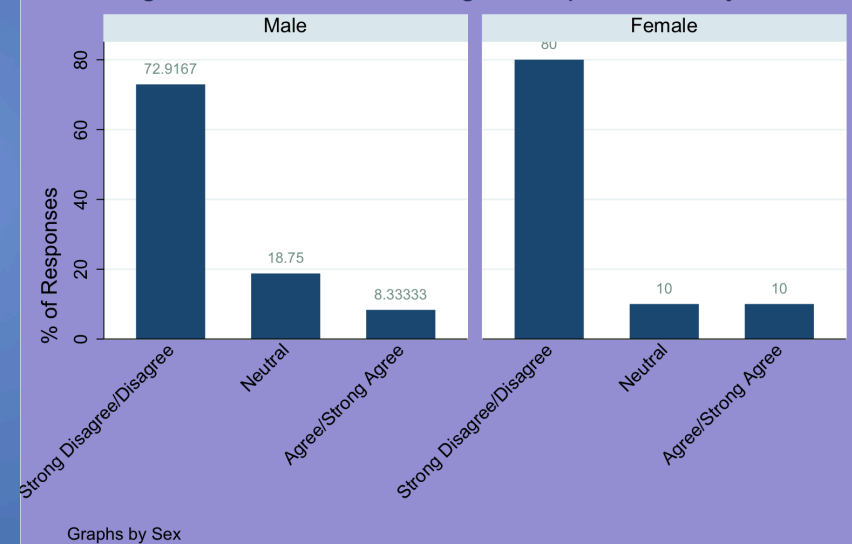


Fig. 20: Stress from Caring for Dependents, by Sex



Graphs by Sex

Satisfaction with MSK Radiology and Gender Influence

Fig. 21: Satisfaction with Subfield / Specialization
(2-Item Average)

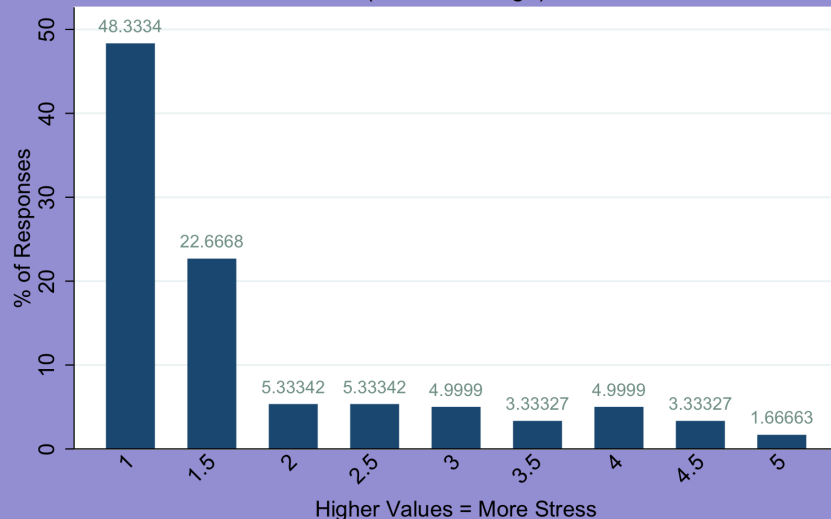
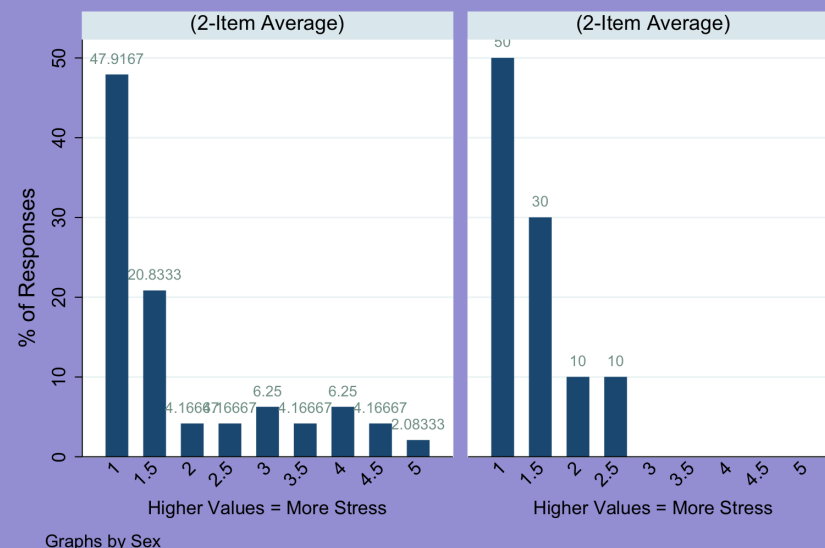


Fig. 22: Satisfaction with Subfield / Specialization, by Sex



How do we put out the fire?

- Unfortunately, MSK radiology fellows report relatively high levels of burnout with regard to lack of personal accomplishment and depersonalization, whereas emotional exhaustion levels from our sample are within the average range reported by Maslach et al. 2010 for medical occupations.

- Author Sam Keen once wrote: “Burnout is nature’s way of telling you, you’ve been going through the motions your soul has departed; you’re a zombie, a member of the walking dead, a sleep walker.”



How do we put out the fire?

- Sleepwalking is NO WAY TO PRACTICE MEDICINE!
- Nicola et al. report a series of strategies that may reduce burnout in the field of radiology:
 - Physical fitness
 - Minimize distractions in the reading room
 - Structure time commitments
 - Create routine workplace activities
 - Enhance your social network
 - Maintain a sense of purpose
 - Augment your social status



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