

## Introduction

### Background

- An estimated 50% of physicians have burnout with some symptoms occurring at a higher incidence in women than men.<sup>1-3</sup>
- Wellness promotion strategies to combat burnout have included exercise.<sup>4-7</sup>
- Recent studies have shown improved burnout symptoms in those performing regular physical activity, however most of these participants were men.<sup>7-9</sup>
- To our knowledge, this is the first study to survey a cohort of self-declared active women physicians and analyze how burnout symptoms are affected by exercise and nutrition practices.

### Objectives

- Primary: determine the prevalence of burnout symptoms among this cohort of women physicians and describe their health behavior.
- Secondary: evaluate associations of demographics and health behavior with burnout; define a Healthy Lifestyle Subgroup (HLS) for burnout comparisons.

### Hypothesis

- We hypothesized that exercise and healthy dietary practices reduce burnout.

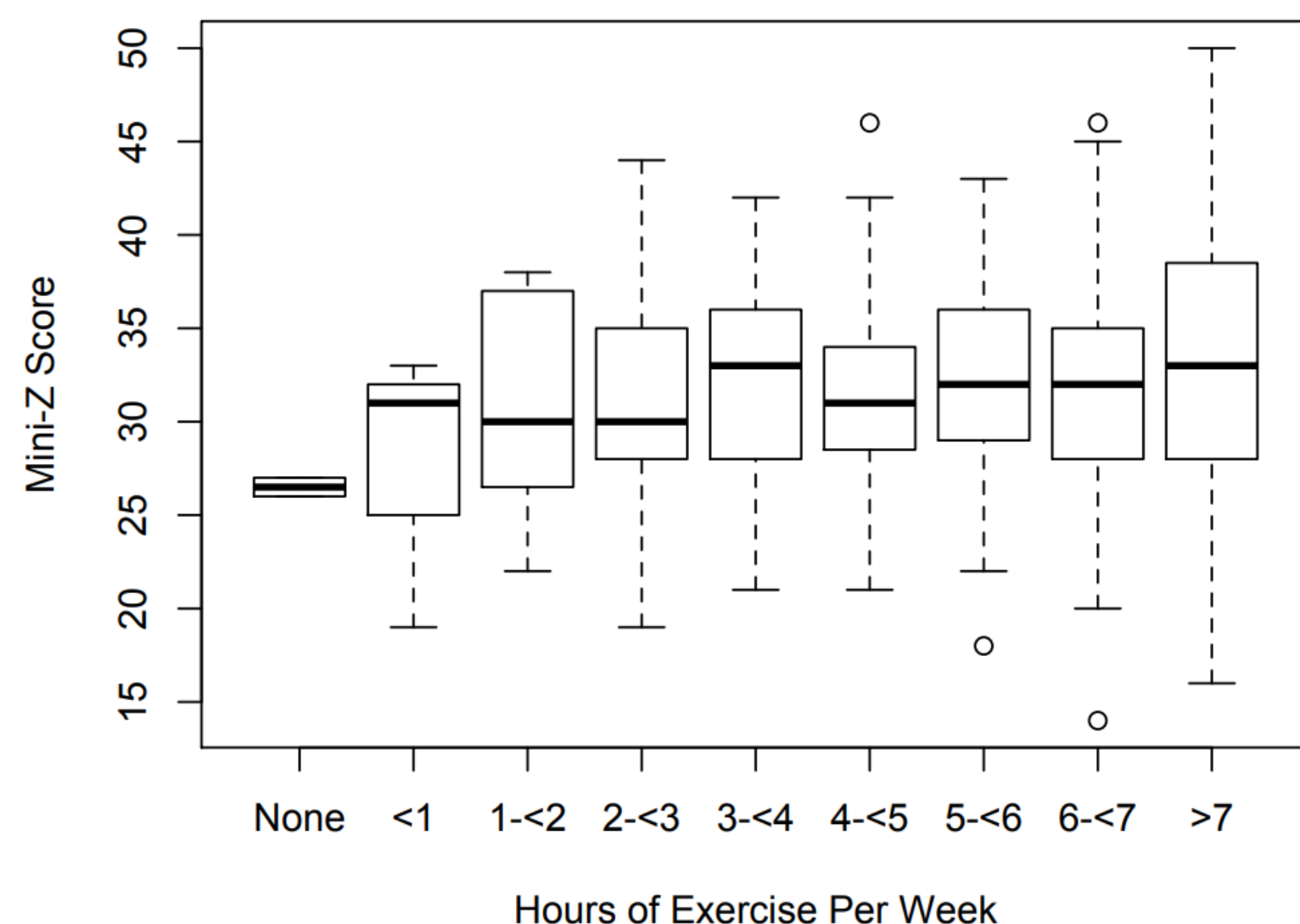


Figure 1. Trend of increased MZBS score (lower burnout) with increased hours of exercise per week.

## Methods

### Design

- Cross-sectional survey study collected over a 3-week period in February & March 2020
- Anonymous electronic survey with 60 questions assessing demographics, finances, domestic responsibility, and health behavior as it relates to exercise and nutrition practices. Questions from the American Medical Association's Mini-Z Burnout Survey (MZBS) were included to assess burnout.
- A HLS was created to include those meeting healthy lifestyle criteria, defined as exercising at least 2-3 hours per week and consuming an average of at least five servings of fruits and vegetables per day, based on the American Heart Association recommendations for physical activity and nutrition.<sup>10-11</sup>

### Participants

- Women physicians actively engaged in a running related social media group for physician mothers.

### Outcomes

- Determine the prevalence of burnout.
- Describe health behaviors.
- Investigate associations between demographics and health behavior with burnout.
- Define a HLS and compare burnout between subgroups.

### Statistical Analyses

- Chi-square testing was performed to 1) compare burnout in this group to available data in a similar population 2) assess the relationship between hours exercised weekly and hours worked weekly, number of fruits/vegetables consumed, and percent of domestic responsibilities.
- One-way analysis of variance was performed to evaluate the relationship between the mean MZBS score, demographic factors, and health behavior responses.
- Wilcoxon rank sum tests were used to compare MZBS scores between the subgroups.

## Results

Hours Spent Exercising per Week	n (%)
None	2 (0.5)
<1	3 (0.8)
1-2	12 (3.3)
2-3	26 (7.0)
3-4	53 (14.4)
4-5	70 (19.0)
5-6	65 (17.6)
6-7	61 (16.5)
>7	77 (20.9)
Step Count	
1000 - <2500	2 (0.7)
2500 - <5000	13 (4.3)
5000 - <7500	36 (12.0)
7500 - <10,000	69 (22.9)
10,000 - <12,500	86 (28.6)
12,500 - <15,000	56 (19.6)
15,000 - <17,500	20 (6.6)
17,500 - <20,000	9 (3.0)
>20,000	10 (3.3)
No Response	68 (18.4)
Daily Servings of Fruits & Vegetables	
None	3 (0.8)
1 - <3	56 (15.2)
3 - <5	180 (48.8)
5 - <7	100 (27.1)
7 - 9	24 (6.5)
>9	6 (1.6)

Table 1. Health Behavior

- Of 369 included respondents, nearly all (99.7%) reported exercise improved their overall sense of wellbeing.
- 155 respondents (42.1%) were experiencing burnout symptoms.
- This cohort had significantly less burnout ( $p < 0.0001$ ) compared to that in a study of women physicians, the majority of whom were also mothers, that found burnout in 64.9% of those surveyed using a similar question and 5-point response scale to the MZBS.<sup>12</sup>
- No difference was found in burnout scores between the HLS ( $n=122$ ) and others ( $p=0.37$ ).
- 130 respondents (35.2%) reported consuming  $\geq 5$  servings of fruit & vegetables daily. Increased consumption was associated with greater time spent exercising per week ( $p=0.00002$ ).
- There was not a significant relationship between time exercising and hours worked ( $p=0.95$ ) or percentage of domestic responsibilities ( $p=0.30$ ).
- While the MZBS trended toward higher scores (indicating lower burnout) with greater hours of exercise, there was not a significant association ( $p=0.078$ ; see Figure 1).

## Conclusions

Within our sample of self-reported physically active women physicians, a trend of lower burnout was observed with increased exercise. Increased fruit and vegetable consumption was associated with increased time spent exercising per week. Those in the HLS did not have significantly different burnout scores compared to those not meeting this criteria. Health behaviors like exercise and nutrition may be protective against burnout in women physicians but deserve further investigation, particularly in a larger sample of women physicians who have more heterogeneous health behaviors.

## References



To view an expanded Table 1 with additional information about the demographics & health behaviors, scan here:

