Stress and Burnout among Medical Students: Exploring the Differences between Female and Male Millennials

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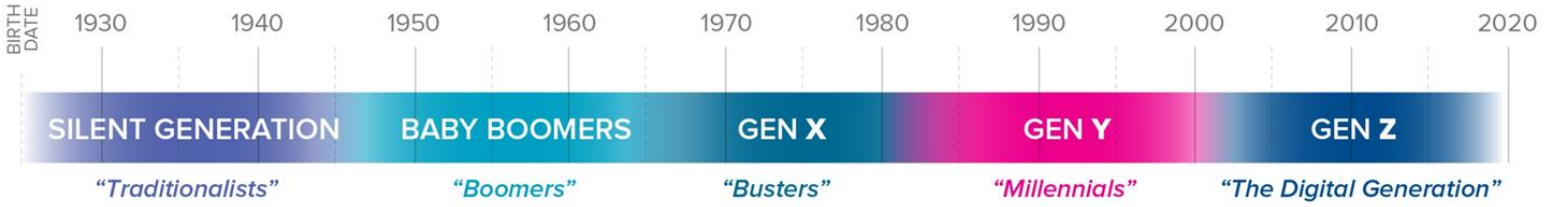
Defining Characteristics

- Conventional
- Confident
- Special
- Sheltered
- Self-Assured
- Stressed
- Achieving
- Team-oriented
- Racially diverse
- Extremely close with parents
- Savvy with technology
- Less interested in humanities

Eastern Illinois University



Millennials



We live in a …

- Fast-pace, changing society
- Information-overloaded world





Millennial Medical Students

- Approximately 20-50% or more medical students and physicians experience high levels of stress or burnout (Al-Dabal, Koura, Rasheed, Al-Sowielem, & Makki, 2010; Dyrbye & Shanafelt, 2011; Lee, Brown, & Stewart, 2009)



Stress vs. Distress vs. Burnout

The Cost of Poor Coping

- Health-care providers who use poor stress-management techniques are more likely to experience (Dyrbye & Shanafelt, 2011; Spickard, Gabbe, & Christensen, 2002):
  - Health problems
  - Medical errors
  - Job dissatisfaction
  - Early retirement
  - Suicide



The Blueprints of Tomorrow

- Significance:
  To promote and support a generation of healthy and balanc physicians:
  - Informed decisions
  - Quality patient care
  - Patient safety





Purpose

To explore the prevalence and gender differences in burnout, stressors, and coping mechanisms used in a sample of third-year, millennial medical students rotating at a Southern California hospital.



Hypothesis

- The prevalence and gender difference regarding burnout would reflect that which is reported in the literature.
  - Prevalence: 20-50% burnout or associated characteristics
  - Gender differences: Mixed findings regarding burnout, stressors, and coping mechanisms (Hassan et al., 2014; Paro et al., 2014; Richter et al., 2014)



Methods

- Cross-sectional study
- Convenience sample: 139 third-year medical students
- 4-week rotation in different specialty services/departments (2014-2015)
- Anonymous, paper-and-pencil questionnaire
- IRB approval

Instruments

Identifying Stressors and Stress Management Techniques

- 4-items (multiple choice with the option of selecting more than one answer):
  - What is stressful to you?
  - How do you feel about stress in general?
  - What do you currently do to manage stress?
  - What will be your ideal approach to manage stress?

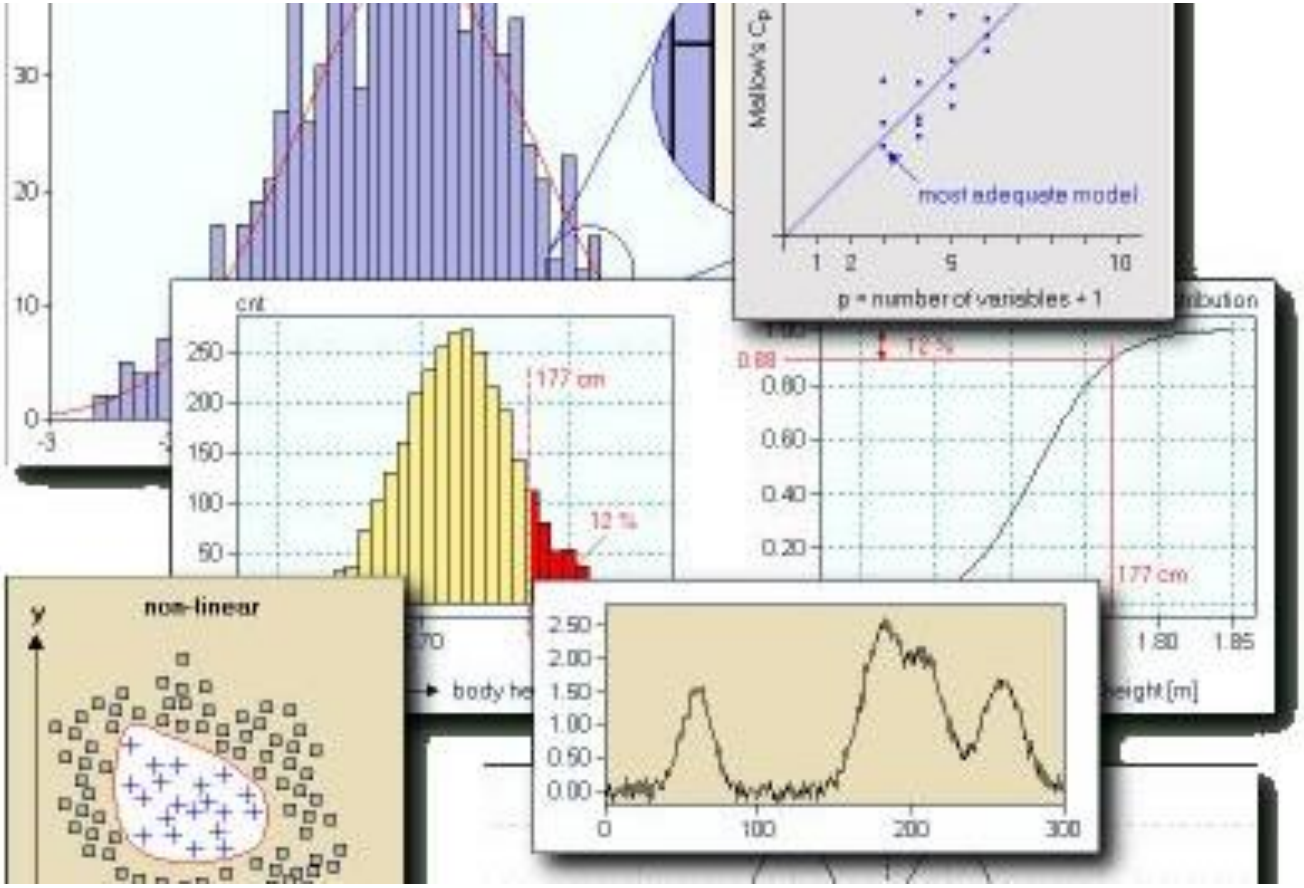


Instruments



Assessing Burnout with the Maslach Burnout Inventory Student Survey (MBI-SS)(Rostami, Abedi, Schaufeli, Ahmadi, & Sadeghi1, 2014; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002)

- 15 items; 3 subscales (⇧ emotional exhaustion, ⇧cynicism, & ⇩ professional efficacy)
- Cronbach's alpha for the 3 subscales: .78, .78, and .71, respectively



Data Analyses

- Descriptive statistics: identify demographic characteristics and prevalence of burnout (MBI-SS), stressors, and stress management techniques

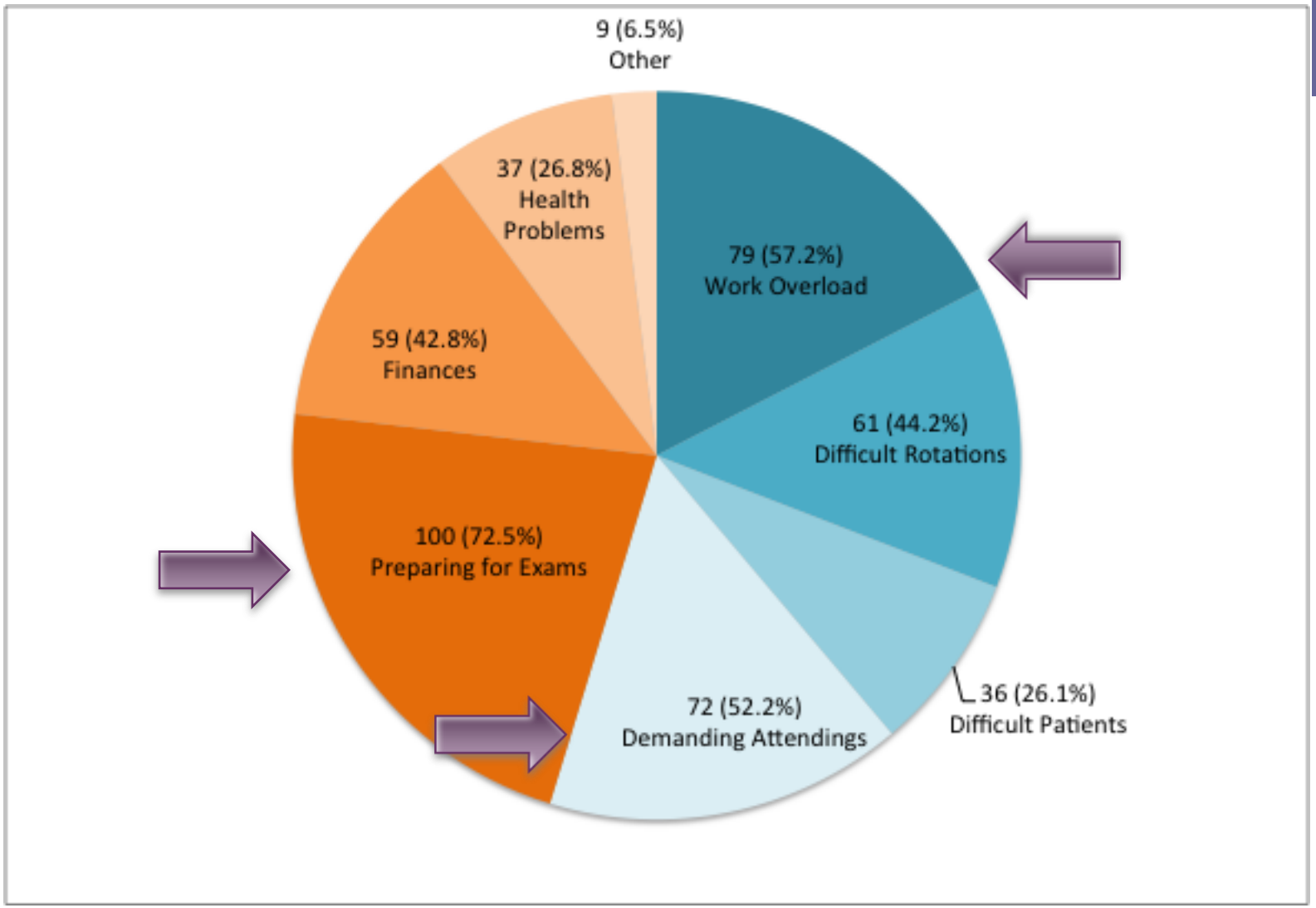
- T-test and Chi-square: assess the relation between gender and burnout, stressors, and stress management techniques



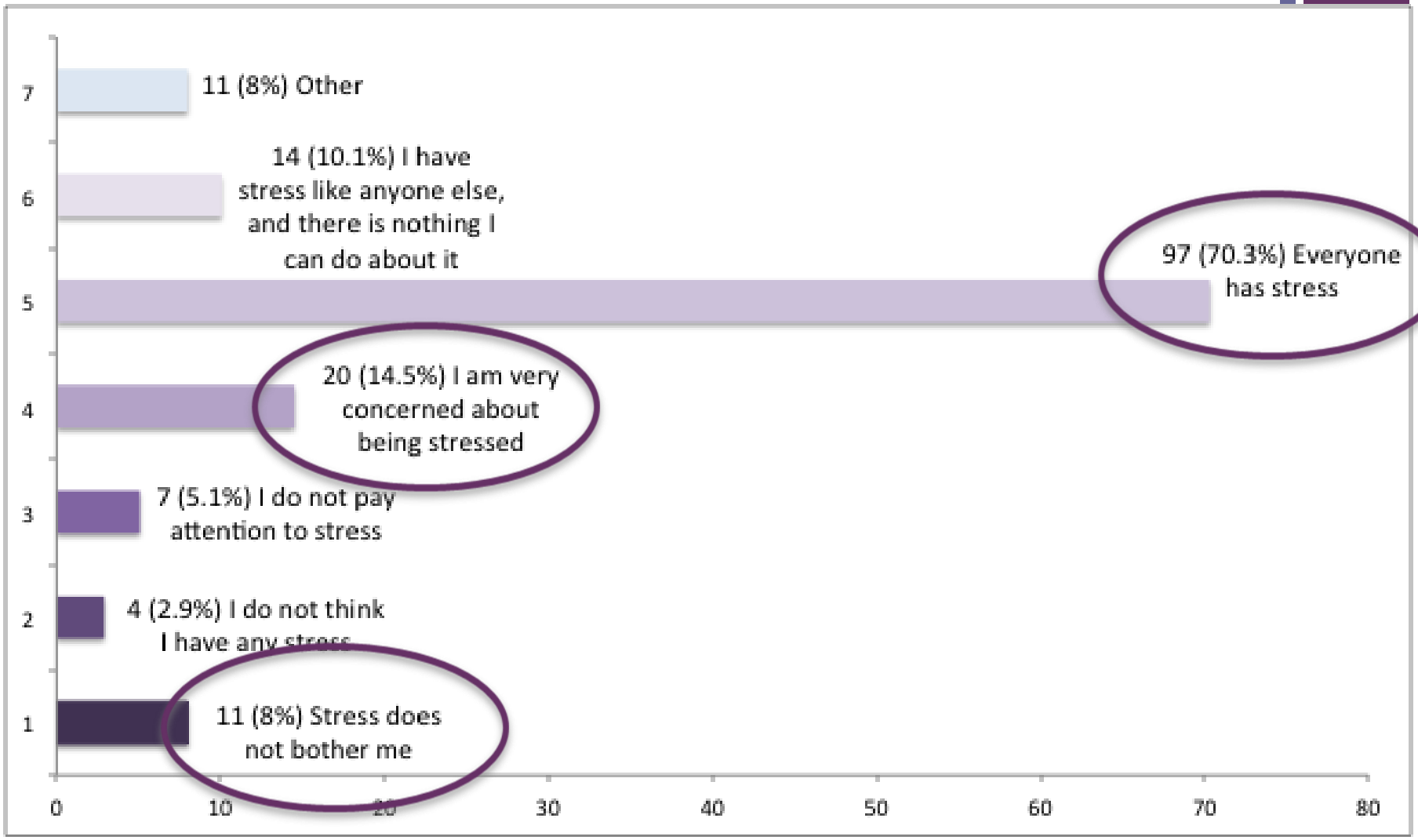
Results: Demographics

- N=139 third-year medical students
- Gender: 59/114 (51.8%) Males; 55/114 (48.2%) Females
- Mean age: 26.4 +/- 3.72 years old

Results: What is stressful to you?



Results: How do you feel about stress in general?



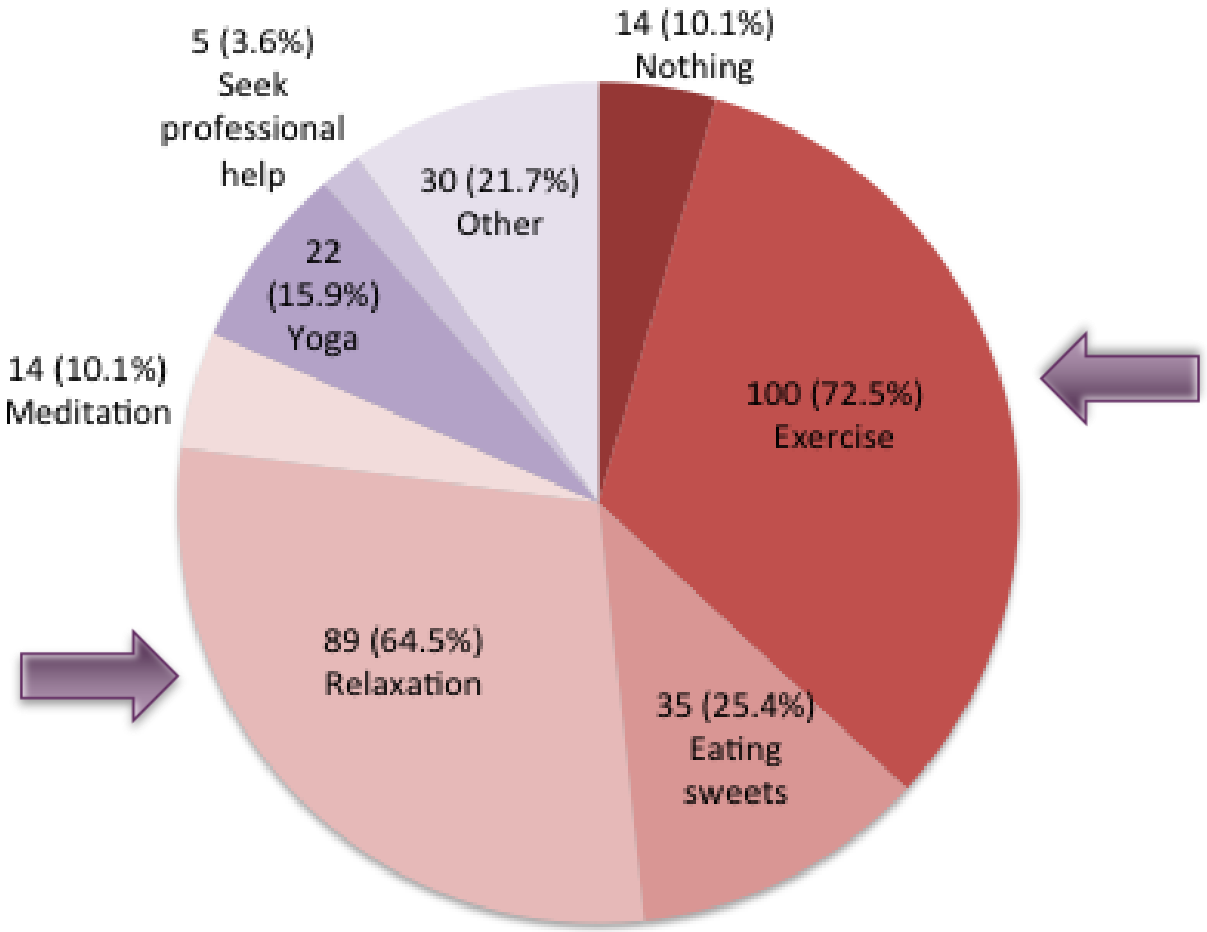
Results: Gender differences regarding perception of stress

Perception of stress	χ^2	*p*
More males (n=7) than females (n=1) reported that stress did not bother them	4.509	0.03*
More males (n=5) than females (n=0) reported that they did not pay attention to stress	4.961	0.03*

P < 0.05 *

Note: No other significant gender differences were found.

Results: What do you currently do to manage stress?



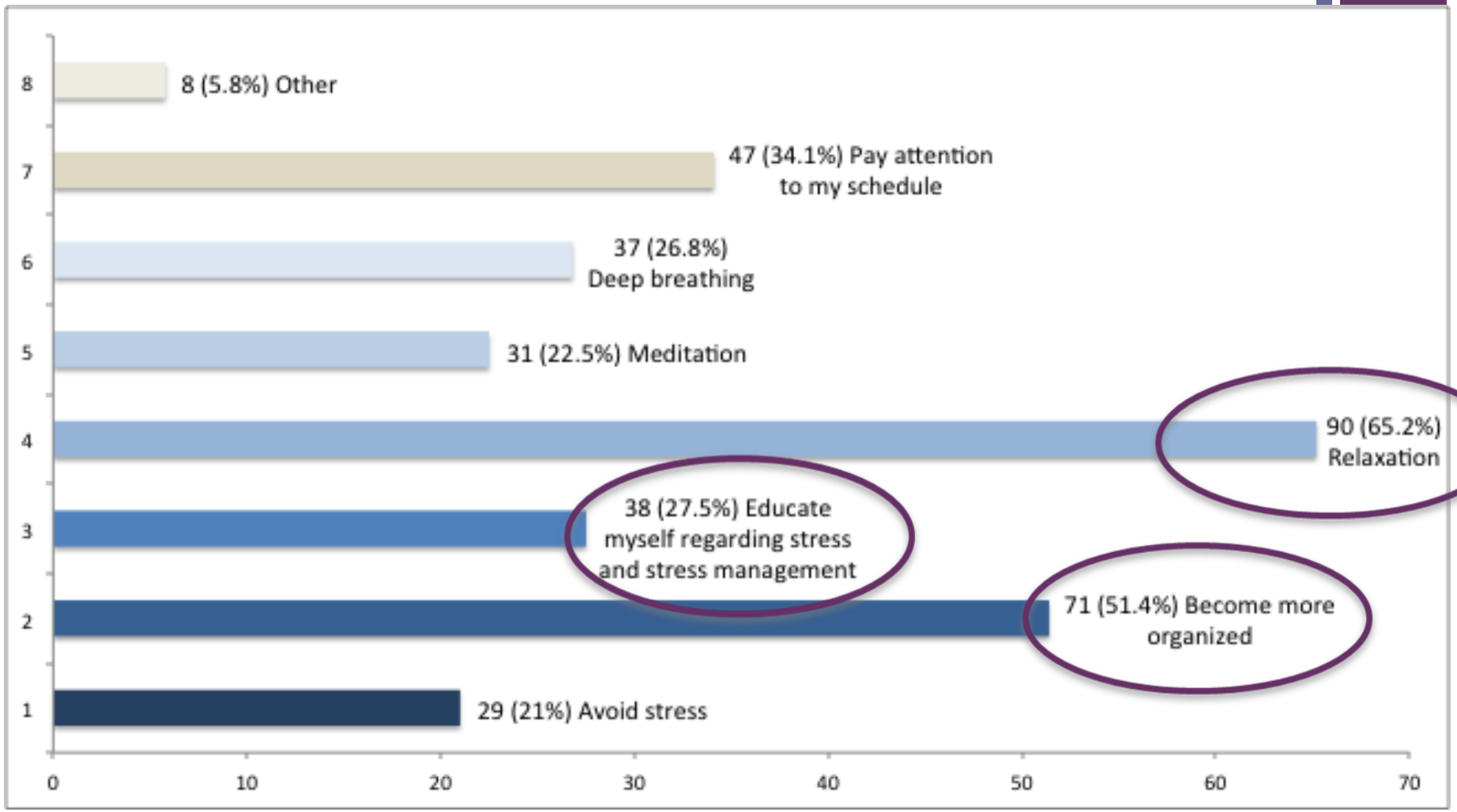
Results: Gender differences regarding stress management

Managing stress	χ^2	*p*
More females (n=19) than males (n=10) reported to eat sweets	4.431	0.04*
More females (n=14) than males (n=5) reported to practice yoga	5.719	0.02*
More females (n=4) than males (n=0) reported to seek professional help	4.373	0.04*

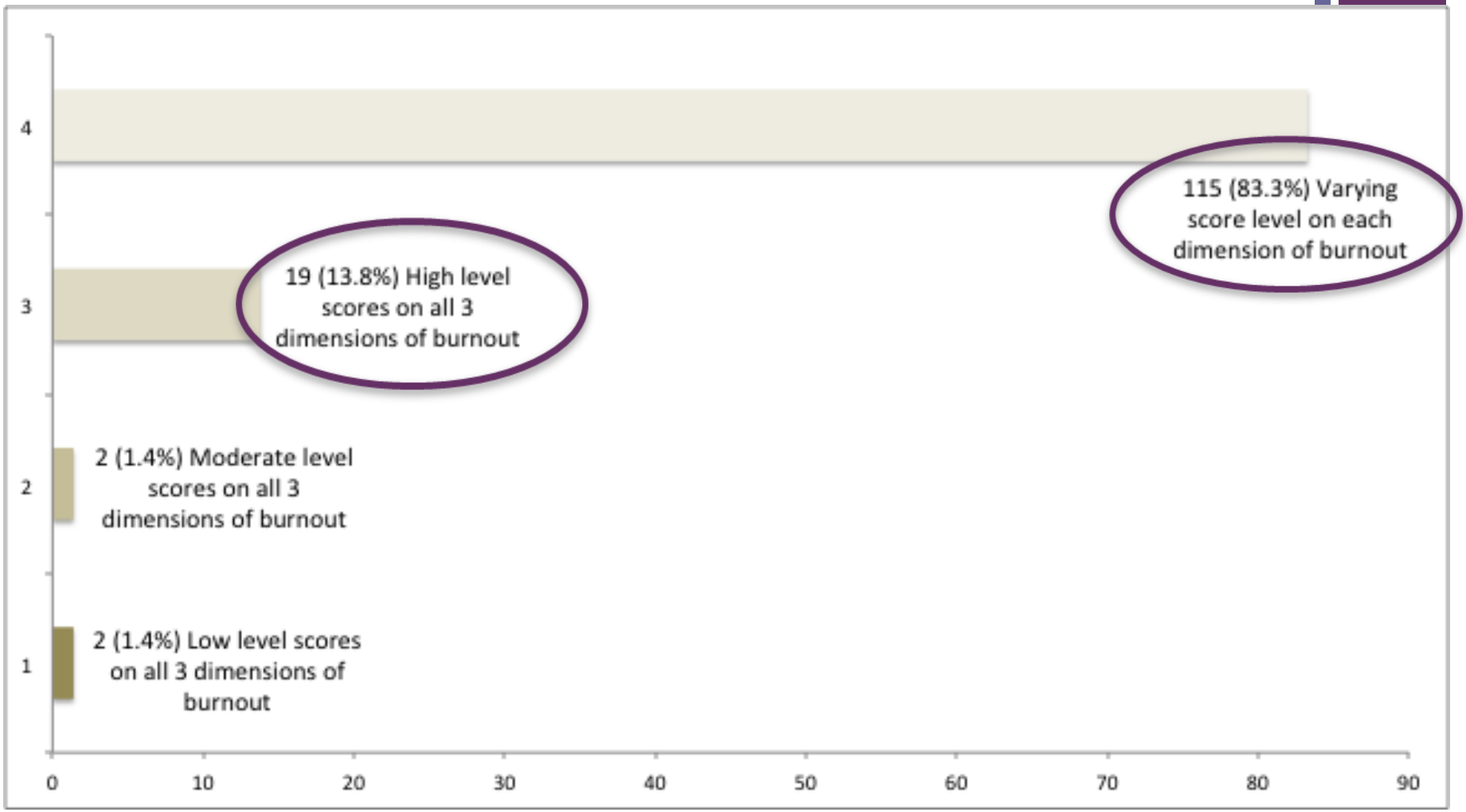
*$p < 0.05$

Note: No other significant gender differences were found.

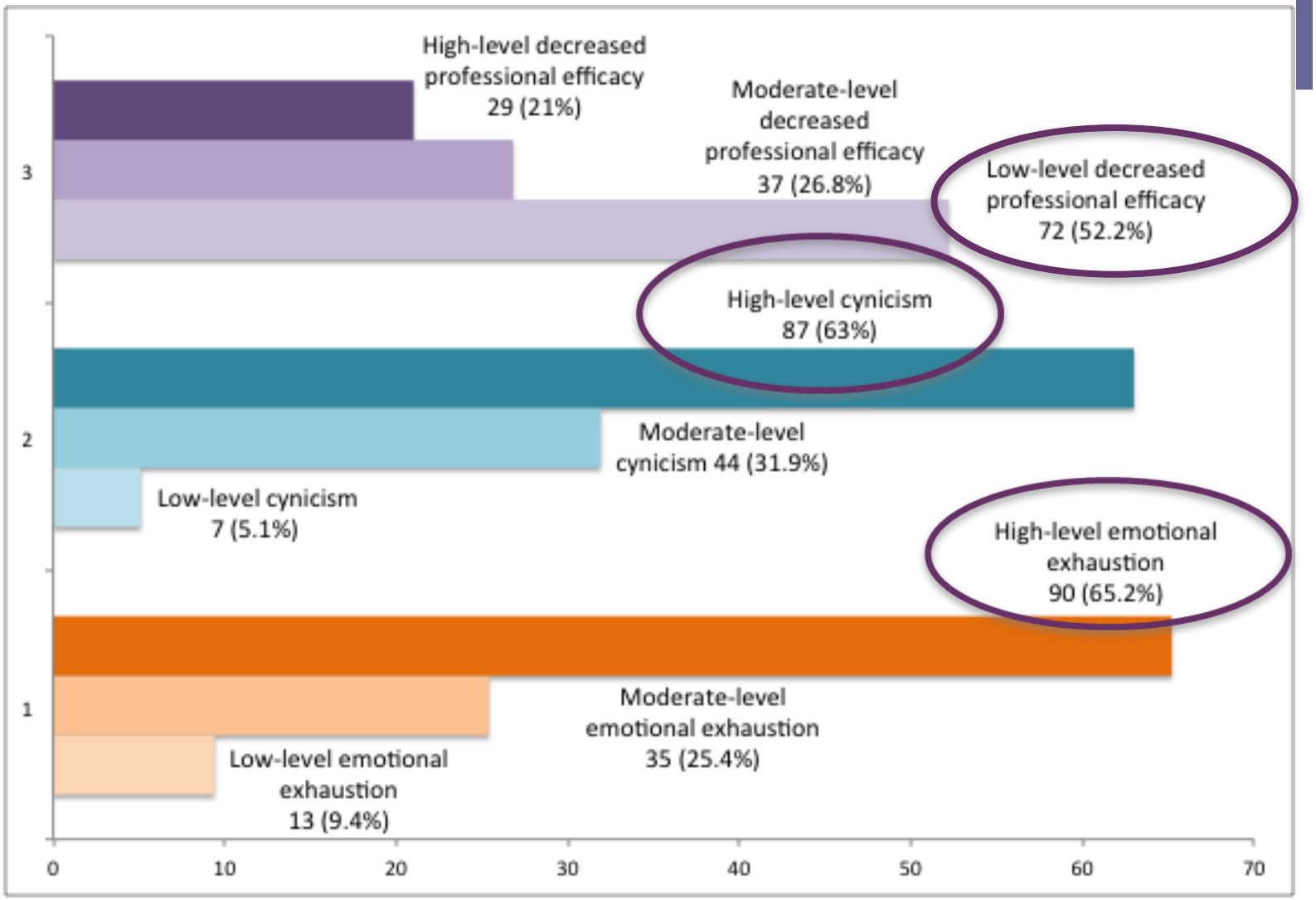
Results: What will be your ideal approach to manage stress?



Results:
Prevalence of Overall Burnout



+ Results:
Prevalence of Burnout Characteristics



Results: Gender differences regarding burnout

Burnout	t (df)	*p*
Females (M=1.87; SD=.84) scored higher on professional efficacy than males (M=1.56; SD=.75)	-2.105 (112)	0.04*

P < 0.05 *

Note: No other significant gender differences were found.

Discussion

- Denial of experienced stress seems to be more prevalent among male medical students.
- Female students are more likely to seek professional help and practice stress management techniques than male students.
- Burnout, as a consequence of chronic stress, affects equally the female and male 3rd year medical students.
- Female students have higher level of professional efficacy than male students.





Conclusion

Burnout was common among this sample of third-year medical students, with significant gender differences regarding coping mechanisms.

Early and effective wellness interventions in medical training are suggested.

Further assessment regarding how medical students perceive and respond to stress, including potential gender differences is recommended.







Study Strength & Limitations

Strengths

- Data was collected in one morning; received 100% participation
- Prevalence findings mirror those found in the literature (Al-Dabal et al., 2010; Colbert-Getz, Fleishman, Jung, & Shilkofski, 2013; Yusoff et al., 2010)

Limitations

- Single location and time limits generalizability
- Recall bias





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- Student participants and research team



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