

# The Relationship between Stress, Sleep Quality, and Emotional Eating

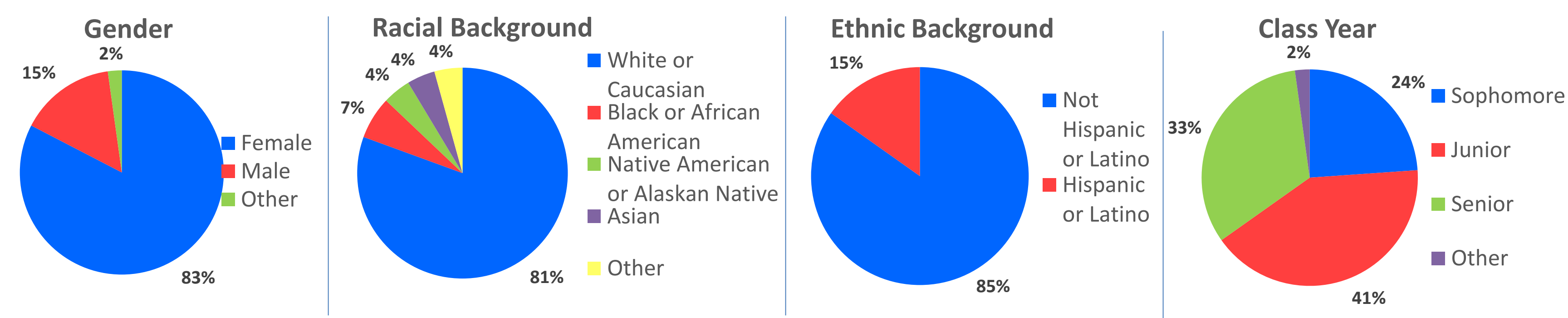
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## Introduction

- Stress levels in teenagers have passed those in adults (Bethune, 2014) which is an alarming statistic because previous research has found:
  - As stress levels increase, sleep quality decreases (Kashani et al., 2012; Yan et al., 2018).
  - As stress levels increase, emotional eating increases (Diggins et al., 2015; Richards & Specker, 2018).
  - As sleep quality decreases, emotional eating increases (Farhangi, 2019; Miller et al., 2019).
    - This correlation has also been found when under a high level of stress, but not under a lower level of stress (Dweck et al., 2014).
- Hypotheses:
  - A negative correlation is expected between perceived stress and sleep quality.
  - A positive relationship is predicted between perceived stress and emotional eating.
  - A negative correlation is predicted between emotional eating and sleep quality for those under high stress, but not under low stress.

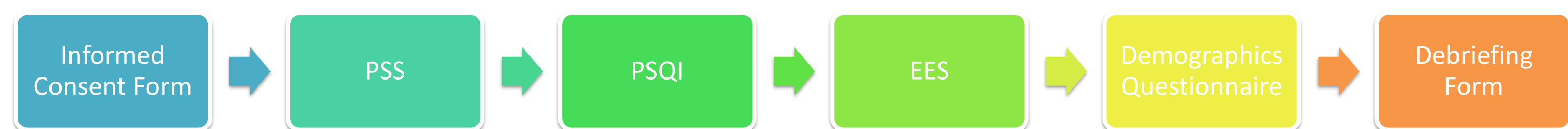
## Method

- Participants: 46 ECSU Undergraduate students, at least 18 or older, mean age = 21.04 ( $SD = 1.62$ ).



- Measures:
  - Perceived Stress Scale (PSS; Cohen et al., 1983).
  - Pittsburgh Sleep Quality Index (PSQI; Buysse, 1989).
  - Emotional Eating Scale (EES; Arnow et al., 1995).

- Procedure:



## References

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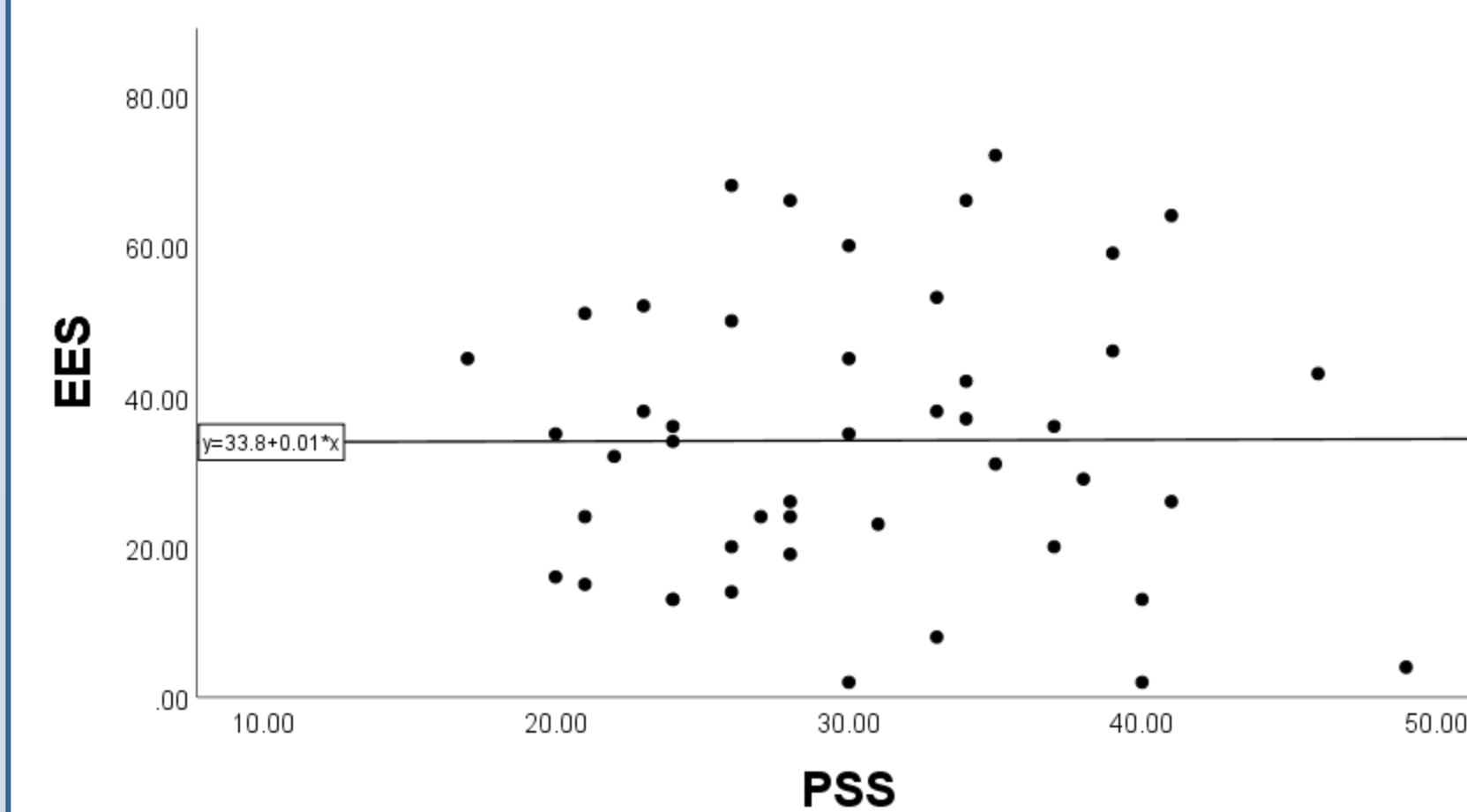
## Results

### Descriptive Statistics

	N	Mean	Std. Deviation
sumpss	46	30.3478	7.46910
sumees	46	34.1114	18.79787
sumpsqi	46	7.1087	3.85993
Valid N (listwise)	46		

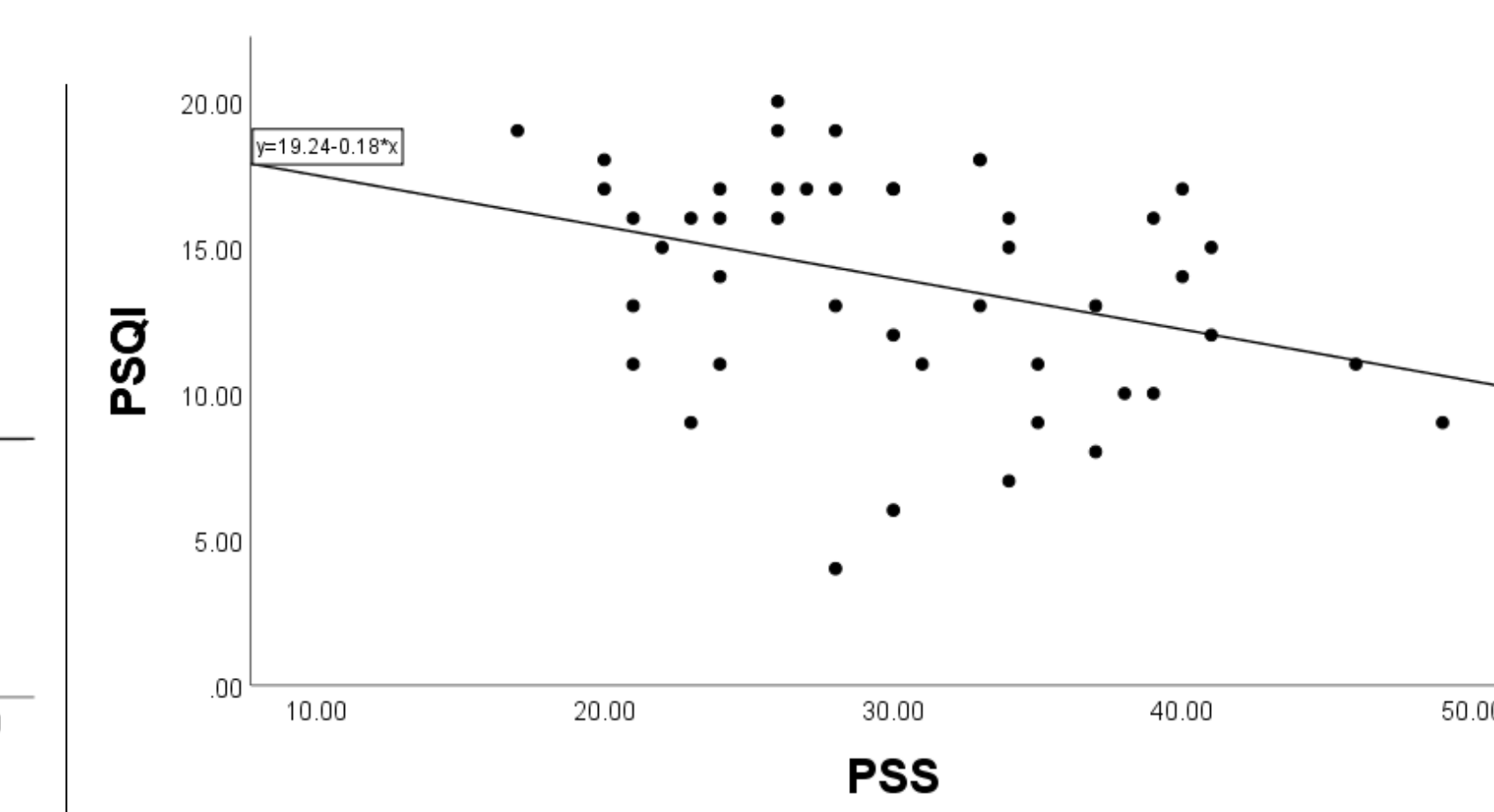
- Internal reliability:
  - Perceived stress:  $\alpha = 0.82$
  - Emotional eating:  $\alpha = 0.94$
  - Sleep quality:  $\alpha = 0.73$

Correlation between Perceived Stress and Emotional Eating



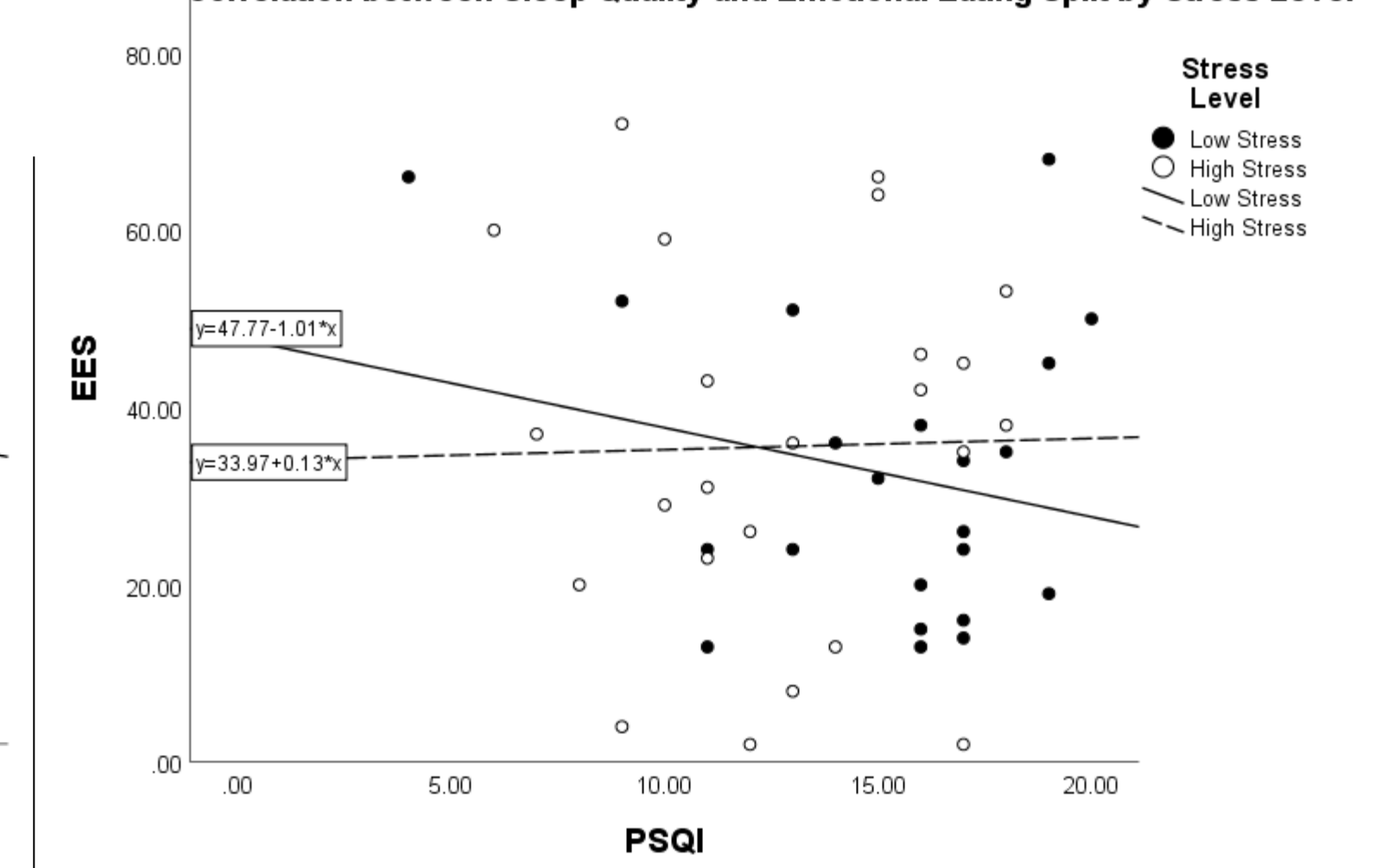
- There was no significant correlation between perceived stress and emotional eating,  $r(44) = 0.00$ ,  $p = 0.98$ .

Correlation between Perceived Stress and Sleep Quality



- There was a significant negative correlation between perceived stress and sleep quality,  $r(44) = -0.34$ ,  $p = 0.02$ .

Correlation between Sleep Quality and Emotional Eating Split by Stress Level



- There was no significant correlation between emotional eating and sleep quality under high stress,  $r(22) = -0.02$ ,  $p = 0.92$ , or under low stress,  $r(20) = -0.23$ ,  $p = 0.31$ .

## Discussion

- The negative relationship predicted between perceived stress and emotional eating was the only hypothesis supported.
- There were no other significant correlations found between the three variables, meaning the other hypotheses weren't supported.

### Limitations

- Sample specificity:
  - 82.6% female, 80.4% White or Caucasian, and 84.8% not Hispanic or Latino.
  - All ECSU undergraduate students, primarily in psychology courses.
- The PSS-10 has slightly higher criterion validity than the PSS-14.
  - Although both are still adequate measures.
- A history effect due to the COVID-19 pandemic might have effected how participants responded.

### Future research

- The relationship between stress, sleep quality, and coping mechanisms.
- The relationship between stress, sleep quality, and burnout.

### Implications

- Stress management courses may be a beneficial resource for high school and college students.
  - Help to manage stress in a more proactive way to decrease its effect on other behaviors.
  - An experiment would be useful to establish the effectiveness of the courses.