Introduction

Stress

- Lazarus and Folkman (1984) define stress as when a situation's perceived demands exceed the perceived resources (as cited by Falconer, Nussbeck, Bodenmann, Schneider, & Bradbury, 2015).
- Stress causes increased cognitive failures (Boals, & Banks, 2012), depression (Aselton, 2012), and lower relationship satisfaction (Falconer et al., 2015).

Social Support

- Social support provides a positive effect on health problems associated with stress, independent of the type of stressor (Ditzen & Heinrichs, 2014).
- Familial social support decreases stress levels most in comparison with friendship support (Romero, Riggs, & Ruggero, 2015).
- Social support moderates the effects of stress and ambulatory blood pressure (Bowen, Uchino, Birmingham, Carlisle, Smith, & Light, 2014).

Public Speaking

- Public speaking causes a stress response by increased galvanic skin response (GSR; Elfering & Grebner, 2011).

Hypothesis

It is hypothesized that participants with higher levels of overall social support will be less reactive to stress induced by a public speaking task as measured by heart rate and galvanic skin response.

Method

Participants

- N = 10 students from Eastern Connecticut State University
- 18% Male (n = 2), 72% Female (n = 8)
- 9% Freshman (n =1), 45% Sophomore (n =5), 36% Junior (n = 4)
- 72% Caucasian (n = 8), 18% Hispanic/Latino(a) (n = 2)
- Mean Age: 18.9 (SD = .74)

Materials

Perceived, Instrumental, and Negative Social Support Indices (Libby, Orton, Beals, Buchwald, & Manson, 2008)
- 3 pt. Likert type scale.
- Higher scores indicate higher levels of social support.

Public Speaking Task

- One minute preparation.
- Random assignment to one or two minute presentation duration.
- Questions:
  - 1. Describe your dream job and how you are qualified for it.
  - 2. Discuss the topic of Neuropsychology in regards to what we’ve learned this week.

BioPac MP150 machine measured GSR on the palm of the hand and heart rate using electrocardiogram on the forearms.

Procedure

- Washed hands with Neutrogena soap to the elbows.
- BioPac monitors applied to forearms and palms of the hand.
- Five minute baseline.
- Public Speaking prompt
  - One minute preparation timed by experimenter with a stopwatch.
  - GSR and heart rate were measured during speech.
  - Perceived, Instrumental, and Negative Social Support Indices.
  - Demographic measure.

Results

- IBM SPSS 22
- Mean values: Social support, M = 3.06 (SD = .80); Heart rate, M = 99.19 (SD = 12.23); GSR, M = .17 (SD = .17).
- A Spearman’s rho correlation coefficient was calculated
- No correlation was found between social support and heart rate, r (N = 10) = -.44, p = .20.
- No correlation was found between social support and GSR, r (N = 10) = .37, p = .29.
- A median split was implemented for social support group 1 was values from 1-3, and group 2 was values above 3.
- A Mann Whitney U test was conducted
- No difference was found between groups in relation to heart rate, U(N = 10) = 8, p = .42.
- No difference was found between groups in relation to GSR, U (N = 10) = 10, p = .69.

Discussion

Summary

- No relation was found between heart rate, GSR, and social support.
- No difference found between participants with high levels of social support and participants with low levels of social support on ability to deal with stress.

Limitations

- Small sample size
- Low power
- External Validity
- Internal Validity

Future Directions

- Larger sample size
- Social support measure
- Public speaking task

References