Effects of Self-Confidence as a Public Speaker on Physiological Response

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Introduction

- Daily stressors can impact emotional response and can cause an increase in reactivity to daily situations (Farmer & Kashdan, 2015).
- Hammen (2015) states that, “Current articles define stress or stressors...as naturally occurring daily stressors or momentary life experiences, and recent stressful life events...”
- Past research has supported that speaking in front of others causes an increase in physiological response (Farmer & Kashdan, 2015).
- In a past experiment, when people reported experiencing performance anxiety, they had a higher level of reaction to outside criticism rather than just doing a self-evaluation (Hook, Valentiner, & Connelly, 2011).
- In this same experiment, participants displayed slight increases in heart rate while partaking in the public speaking task (Hook, Valentiner, & Connelly, 2011).
- When presented with a public speaking task, participants that rated themselves with a lower public speaking self-confidence, prior to actually completing the task, will show an increase in heart rate as well as Galvin Skin Response.

Method

Participants
- N=10
- Female (n=8)
- Male (n=2)
- Average age was 18.9 years

Materials
- Biopac™ Electrocardiogram
- Personal Report on Self-Confidence as a Public Speaker Scale (PRCS)
- Galvin Skin Response

Procedure
- Prior to exposure to public speaking, each participant was asked to fill out a paper and pencil measure called the Personal Report of Self-Confidence on Public Speaking (PRCS) as well as demographic information.
- Each participant was asked to prepare a speech for one minute based on two prompted questions.
- The two questions asked were to describe how you are qualified for your dream job and to discuss neuropsychology based on what was learned this week. The participant was either given one minute or two minutes to execute their speech based on random assignment to the condition.
- While giving the speech, there were people present in the room with the participant.
- To measure heart rate, participants were hooked up to the Biopac™ electrocardiogram(ECG). A measure of Galvin Skin Response (GSR) was also recorded.

Results

Personal Report of Self-Confidence as a Public Speaker
M=4.80 SD=3.48
Heart rate
M=99.19 SD=12.23
Galvin Skin Response
M=0.74 SD=0.16

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Personal Report of Self-Confidence as a Speaker</th>
<th>Heart Rate</th>
<th>Galvin Skin Response</th>
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</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
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<td>-1.00*</td>
<td>-3.26, 0.00</td>
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<td></td>
<td>Sig.(2-tailed)</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Standardized Residual Correlation Coefficient</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>1.62</td>
<td>0.00</td>
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</tbody>
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- A Spearman's Rho correlation was calculated to examine the relationship between the Personal Report of Self-Confidence as a Public Speaker (PRCS) scale and heart rate during the task.
  - There was no correlation found (r(8)=−.238, p=.508)
- The correlation between the PRCS scale and Galvin Skin Response during the task was also examined.
  - There was no correlation found (r(8)=−.372, p=.290)
- The PRCS is not related to heart rate or Galvin Skin Response during a public speaking task.

Conclusion

- The hypothesis was disproven.
- No correlation was found between the PRCS and heart rate and the PRCS and Galvin Skin Response during the public speaking task.
- These results, however, are not generalizable because of the small sample size as well as a small age range between the students who participated in the task.
- If this experiment was to be redone, a larger sample size could give a better result due to a more diverse group of people as well as a larger data set to analyze.
- There were other tasks that were being done in conjunction with the present task which could have caused skewed results.
- In future studies, participants could be put into a more stressful situation while completely the public speaking task i.e. a larger audience to speak to, a more detailed public speaking task, or having zero prep time before hand.

References