The Influence of Neuroticism and Extraversion  
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Introduction
- High neuroticism scores predispose individuals to experience more objective negative life events. (Magnus, Diener, Fujita, Pavot, 2006).
- High extraversion scores predispose individuals to experience more objective positive life events. (Magnus, Diener, Fujita, Pavot, 2006).
- Neuroticism indirectly lowers performance on a vocal mental math test used to monitor stress, measured with heart rate. (Schneider, Rench, Lyons, Riffle, 2011).
- High amounts of stress in childhood is strongly related to poor physical health and poor social relationships later in life. (Shern, Blanch, Steverman, 2016).
- Exhaustion is positively correlated with stress and neuroticism. (Lue, Chen, Wang, Cheng, Chen, 2010)

Hypothesis
- If participants score high on personality characteristics like extraversion and neuroticism then participants will score as having high stress, represented with heart rate (HR) and galvanic skin response (GSR), after taking a stress test.

Method
Participants
- N=10 students from Eastern Connecticut State University.
- 40% Male (n=4), 60% Female (n=6).
- 90% Caucasian (n=9), 10% Hispanic/Latino/Latina.
- 10% Freshmen (n=1), 40% Sophomore (n=4), 20% Junior (n=2), 30% Senior (n=3).

Measures
- Eysenck Personality Questionnaire (EPQ) (Eysenck, 1975).
  - Consists of 12 “yes” or “no” items, 6 items for extraversion and 6 items for neuroticism.
  - Scores range from 0-6 on each of the 2 subsections, higher scores indicate a stronger presence of the personality trait.
- Modified Stroop Test based on J.R. Stroop’s original (Stroop 1935).
  - Participants press keys after an on-screen prompt displays a color.
  - Higher scores indicate better test accuracy.
- BioPackMP150 machine measures HR and GSR using electrocardiograms on the forearm and hand respectively.

Procedure
- Wash hands with soap and water up to elbows.
- BioPac monitors applied to forearms and palms.
- Baseline data gathered first for 5 minutes.
- Stroop Test
  - Participants complete the test at their leisure.
  - Following completion, test accuracy and speed are recorded.
  - Heart rate and GSR measured during and after.
  - Mean heart rate and GSR calculated.
- Eysenck Personality Questionnaire completed by participants.
- Demographic questionnaire completed by participants.

Results
- IBM SPSS 22
- Mean values: Extraversion, M=4.40 (SD=1.34). Neuroticism, M=3.1 (SD=2.07). Changed Galvanic Skin Response (GSR), M=0.21 (SD=0.11). Changed Heart Rate (HR), M=11.85 (SD=9.51).
- A Spearman’s rho correlation coefficient was calculated.
  - No correlation between neuroticism and GSR, \( r_s \) (N=10) = .112.
  - No correlation between extraversion and GSR, \( r_s \) (N=10) = .317.
  - No correlation between neuroticism and heart rate, \( r_s \) (N=10) = .164.
  - No correlation between extraversion and heart rate, \( r_s \) (N=10) = .151.

References