

The Connection between Personality Traits and Perceived Stress:

An in-depth look at how personality traits can influence perceived stress during an immersion study in a developing nation.

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Abstract

The purpose of this study is to examine the relationships of the Big Five personality traits on levels of perceived student stress. A convenience sample of 28 undergraduate students (13 who were immersed in the culture of a developing nation and 15 in a normal setting) completed measures of perceived stress and the NEO-Personality Inventory. It was found that personality traits (neuroticism and extraversion) play a role in how stress is perceived, and that there is significant differences between the experimental and control groups on levels of perceived stress.

Literature Review

Previous research established a connection between perceived stress and college student populations (Gadzella et al., 2012; Ross et al., 1999; Towbes & Cohen, 1996), the relationships between neuroticism, extraversion, and perceived stress (Bolger & Schilling, 1991; Bolger & Zuckerman, 1995; Ebstrup et al, 2011; Furnham, 1981; Mroczek & Almeida, 2004) and heightened levels of perceived stress during travel to a developing nation (Bakker et al., 2006; Berno & Ward, 2005; Grant & Langan-Fox, 2007).

Hypotheses

- Participants who scored high on neuroticism would report higher levels of perceived stress during immersion in a developing nation
- Participants who scored high on extraversion would report lower levels of perceived stress during immersion in a developing nation
- Those participants immersed in a developing nation would report higher overall perceived stress than those who remained in their country of origin

Method

Participants

- The participants consisted of 28 individuals from a small, Midwestern university. They were selected by convenience sampling through their registration for/in an upper level psychology course.
- The experimental group were 13 individuals who traveled to Ghana, West Africa to participate in an immersive research project regarding post-traumatic stress disorder. This group consisted of 11 females and two males, with ages ranging from 21 – 50 and a (M = 28.8).
- The control group consisted of 15 individuals: 14 females and 1 male, with ages ranging from 20 - 56 and a mean age of (M = 27.8).

Procedure

The participants in both the experimental and control groups completed a total of three questionnaires. Initial measurements included a demographics survey and a revised NEO-Personality Inventory (NEO-PI; McCrae & John, 1992), to measure personality factors, specifically extraversion and neuroticism. Spontaneous Emotional Reactions (SERs) were then collected over an extended time (21 days for the experimental group and 7 days for the control group) to measure perceived stress levels. Stress levels were self recorded twice daily at random times determined by random time generator.

Results

- The results supported hypothesis one by showing a significant positive correlation between neuroticism and stress, $r(28) = .51, p < .05$.
- The results also supported hypothesis two, showing a significant negative correlation between extraversion and stress, $r(28) = -.44, p < .05$.
- The results supported hypothesis three by showing that college students who were immersed in a developing nation show significantly higher overall levels of perceived stress than those who do not leave their country of origin, $t(26) = 6.76, p < .05$.

Table 1

Descriptive Statistics of NEO-PI scores for Neuroticism and Extraversion and Mean SER Scores

	Mean	Standard Deviation
NEO-PI Neuroticism scores	41.57	14.12
NEO-PI Extraversion scores	47.96	15.57
Mean SER scores	4.40	1.60

Note: N = 28

Table 2

Descriptive Statistics of Mean SER scores of both the Experimental and Control Groups

	Mean	Standard Deviation
Experimental group	5.75	.85
Control Group	3.23	1.08

Note: N (Experimental) = 13
N (Control) = 15

Discussion

- The results for hypotheses one and two support past research regarding neuroticism, extraversion and perceived stress in a college student population (Ebstrup et al, 2011). Individuals who are more neurotic perceive life events as more stressful, while those who are more extraverted perceive life events as less stressful.
- The results for hypothesis three also corroborate past research (Gadzella et al., 2012) suggesting a heightened state of perceived stress while/when immersed in a developing nation. College students who are immersed in a developing nation show significantly higher overall levels of perceived stress than those who do not leave their country of origin.
- In the future, researchers should consider: the inability to control the exact times for recording the SERs, time changes, circadian rhythms, and jetlag for the experimental group, and low mean age, an alternate way to collect SERs while maintaining a monitoring system to ensure prompt recordings, seeking out a more diversely aged participant group, and the amount of time the participants are immersed in the experimental setting (developing nation), as there is the potential for different results based on immersion time.

