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Personality and Stress: Understanding the Roles of Extraversion and Neuroticism in Social Stress Scenarios

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PERSONALITY AND STRESS:

UNDERSTANDING THE ROLES OF EXTRAVERSION AND NEUROTICISM IN SOCIAL STRESS SCENARIOS

by

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Abstract

The purpose of this study was to increase knowledge regarding personality and stress, with a focus on ambiverts, by investigating potential non-linear relationships and overall relationships between extraversion and stress levels, and neuroticism and stress levels. Two hundred thirty-eight participants completed an online survey through SONA, consisting of the Perceived Stress Scale (PSS), Social Stress Scenarios (SSS), the Big Five Aspects Scale (BFAS), and the Open Extended Jungian Type Scales 1.2 (OEJTS). In general, those lower in extraversion and those higher in neuroticism were found to have higher perceived stress levels. Both aspects of extraversion—enthusiasm and assertiveness—were negatively related to stress. The withdrawal aspect of neuroticism was more strongly related to stress than was the volatility aspect. With respect to stress in specific social scenarios, introverts anticipated experiencing more stress than ambiverts and extraverts when "at a party" and "interacting with strangers." In turn, ambiverts anticipated more stress than extraverts in these scenarios. Interestingly, the "waiting in line" or "at work" SSS found no differences related to extraversion. Overall, this study increased the body of knowledge on the role of personality in stressful experiences and provided support for prior research studies (e.g., Ebstrup, Eplov, Pisinger, & Jørgensen, 2011; Subhashini, 2017). The information learned could be applied to peoples' personal lives or to professional lines of work, such as counseling, to help people understand and cope with stress.

Keywords: Perceived Stress Scale, Big Five Aspects Scale, Personality, Stress, Extraversion, Ambiverts, Introverts, Neuroticism

Personality and Stress:

Understanding the Roles of Extraversion and Neuroticism in Social Stress Scenarios

With respect to the literature on personality, especially as it relates to stress, little research has focused on the experiences of ambiverts. On the other hand, information on extraversion and introversion using Myers-Briggs and the Big Five traits, including studies related to stress, are more available (Ebstrup, Eplov, Pisinger, & Jørgensen, 2011; Furnham, 1996; Subhashini, 2017). On scales of extraversion, one side relates to extraverts (high extraversion), and the other relates to introverts (low extraversion), with ambiverts in the middle (average extraversion). Furthermore, little research has examined specific aspects of personality beyond the Big Five in relation to stress experiences. The purpose of the present investigation was to specifically examine the stress experiences of ambiverts in relation to introverts and extraverts and to examine specific aspects of the Big Five traits that have been shown to be related to stress (i.e., specific aspects of extraversion and neuroticism).

Personality Dimensions and Measurement

Many factors in people's lives influence their personality, including both nature (genetic influences) and nurture (e.g., life events, trauma) (Hopwood et al., 2011). To determine a person's personality, an individual can take a number of various assessments. The existence of many different assessments both simplifies and complicates discovering one's personality as assessments are relatively easy to complete, but the numerous types of personality indicators can complicate understanding. Two common personality assessments are the Myers-Briggs Type Indicator (MBTI), which indicates which side of a person's personality is more dominant (e.g., Introverted or Extraverted) (The Myers & Briggs Foundation, 2018a), and the Big Five Aspects

Scale (BFAS), which indicates a number on a scale of low to high on a given trait (e.g., a higher number means more extraverted) (DeYoung, Quilty, & Peterson, 2007).

Isabel Myers and, her mother, Katharine Briggs created the MBTI (The Myers & Briggs Foundation, 2018b). The main goal of their work was to help people understand themselves on a personal level. Another goal was to help people appreciate how other people are different them themselves through the understanding of different personalities. Inspired by Jung's *Psychological Type* book (Jung, 1921), Myers created a paper questionnaire instrument to test for different personality types. Over time, thousands of people have participated in the creation of the well-known MBTI.

In 1990, Goldberg began research to disprove an argument that the five factor model of personality was not generalizable to other sets of personality markers beyond Raymond Cattell's (1943) initial set of 35 variables. Three studies analyzing traits terms led to the formation of clusters for future Big Five markers. In a subsequent study, Goldberg (1992) further refined the factor makers for the Big Five that were similar in meaning to those developed 25 years earlier by Norman (1963), but more up-to-date and applicable.

Furnham (1996) examined the relationship between MBTI and the Big Five, finding that the two measures generally correlate with one another: the MBTI Thinking-Feeling dimension correlates with Agreeableness; the Judging-Perceiving dimension correlates with Conscientiousness; and the Extraversion-Introversion dimension strongly correlates with Extraversion. The Big Five trait of Openness strongly correlates with the MBTI Sensing-Intuitive dimension but also correlates to a lesser extent with the other three MBTI dimensions. The Big Five trait of Neuroticism has no representation in the MBTI.

Personality and the Experience of Stress

Extraversion levels illustrate the tendency of social activity and positive emotions someone may feel (Costa & McCrae, 1992). Jung looked at extraverts and introverts as neither good nor bad, but as a person's preference to focus their energy either on the outer or inner world (The Myers & Briggs Foundation, 2018c). Extraverted people tend to get most of their energy from the outside world. People that are extraverted will feel or fuel their energy when they are engaging with other people in various activities. Introverted people tend to get most of their energy from within themselves. People that are introverted feel more energy or fuel their energy when they have time to themselves (The Myers & Briggs Foundation, 2018a).

Research has shown that higher extraversion is related to lower experiences of stress. Subhashini (2017) used the stress inventory and Eysenck personality inventory in a pre/post-test experiment, finding that doing activities like physical exercises, breathing exercises, yoga, meditation, and developing a positive attitude overtime decreased stress compared to a control group for extraverts, ambiverts, and introverts. However, introverts were highest in stress. In a different study using the NEO Personality Inventory Revised (NEO-PI-R) and Perceived Stress Scale (PSS), results of regression analyses found a significant negative relationship between PSS and extraversion (Ebstrup, et al., 2011).

Neuroticism levels show the emotional stability of a person. Words such as tense, unstable, and envy may describe someone high in neuroticism (Goldberg, 1990, 1992). Some words that relate to people that are high in neuroticism tend to be anxious or depressed. Over long periods of time, higher levels of anxiousness or depressed feelings may lead to anxiety or depression (Costa & McCrae, 1992). Research has shown that people higher in neuroticism tend to have higher stress scores. The study by Ebstrup et al. (2011) using the NEO-PI-R and PSS

showed a significant positive relationship between PSS and neuroticism in the results of regression analyses.

High stress can lead to the decay of mental health and physical health. The decay of health can hinder quality of life (Nielsen et al., 2016). Fortunately, personality indicators can predict what therapies or treatments work best for certain clients based on personality results. For example, speech-based therapy is less suited for clients that are introverted but work best with extraverts (Costa & McCrae, 1992).

The Current Research

The purpose of the present study was to increase the body of knowledge on how personality is related to stress by examining both general perceptions of life stress and stress as it relates to specific social situations, with a focus on the experiences of ambiverts relative to introverts and extraverts. Based on the literature discussed above, extraversion was expected to negatively relate to both general perceptions of stress and anticipated stress in specific social situations. Conversely, neuroticism was expected to positively relate to both general perceptions of stress and anticipated stress in specific social situations.

To more fully understand the experiences of ambiverts, group differences based on extraversion (introverts vs. ambiverts vs. extraverts) were explored to examine possible non-linear relationships between extraversion and stress (e.g., ambiverts higher than introverts or extraverts in perceived stress).

To further add to the literature on personality and health, an exploratory analysis was conducted to examine the extent to which specific aspects of extraversion and neuroticism were related to stress perceptions.

Method

Participants

A total of 238 University of North Florida students participated in this study. 211 identified as female (88.7%), 26 as male, and 1 as transgender. The students received extra credit within their psychology classes after completing SONA studies, with other extra credit opportunities offered in their classes. With respect to race, 74.8% of participants identified as white, 11.8% Hispanic, 9.7% African American, 7.1% Asian/Asian American, 4.6% other, 1.7% American Indian, and .8% Pacific Islander. Students' ages ranged from 18 to 57, with a mean of 21.26. Of the 238 students, 37 students belonged with some form of honors at the college level.

Measures

The Open Extended Jungian Type Scales 1.2 (OEJTS) (Jorgenson, 2015) was used to replace the Myers-Briggs, four-type indicator (see Table 1 for descriptive statistics). On this measure, participants answer 32 questions. The questions are pairs of words, and the participants pick 1 (closest to the left-handed word) to 5 (closest to the right-handed word) depending on how the words describe them. A participant that chooses 3 is in the middle with respect to the words in the pair. An example item is "improvises" or "prepares" asking the participants to choose 1 to 5. Like the Myers-Briggs, the scores are calculated using a mathematic equation key provided on the assessment. The category I-E is introverted to extraverted, S-N is sensing to intuitive, F-T is feeling to thinking, and J-P is judging to perceiving. Participants with scores higher than 24 in their IE, SN, FT, and JP categories are E, N, T, P. Participants with scores 24 and lower, are I, S, F, J. The OEJTS I-E score was split into thirds, to account for ambiverts.

The 50-question Big Five Aspects Scale (BFAS) (DeYoung et al., 2007) has questions divided equally between the Big Five traits, with two aspects for each trait. The five traits and

aspects consist of neuroticism (volatility and withdrawal), agreeableness (politeness and compassion), conscientiousness (industriousness and orderliness), extraversion (enthusiasm and assertiveness), and openness (openness and intellect). Participants indicated the extent to which each item was descriptive of them using a 5-point scale ranging from *strongly disagree* to *strongly agree*. An example item is "make friends easily." The responses received appropriate reverse scoring and then were averaged together to obtain a score (see Table 1). After configuring the score, the extraversion score was split into thirds to account for ambiverts.

The Keirsey Temperament Sorter was modified to collect information on extraverts only (Keirsey, 1998), which we refer to as Social Stress Scenarios (SSS) (see the Appendix for the scenarios). The SSS contains five extraverted questions developed into scenarios. For example, the question "your phone is ringing" was presented, asking participants to describe what they imagined and felt in detail. We then followed the scenario with a stress scale (1 = *no stress* to 6 = *stress overload*) asking for the anticipated stress they felt when putting themselves in the hypothetical scenario (see Table 2 for descriptive statistics). Finally, to gather their anticipated behavioral response, we gave them two options about how they would react to the situation. For example, the options would be "hurry to get to it first" (extraverted) or "hope someone will answer" (introverted).

The Perceived Stress Scale (PSS) presents 10 statements and participants are asked to indicate how often they have experienced certain thoughts and feelings using a 5-point scale from *never* to *very often* (see Table 2 for descriptive statistics). Participants are reminded to answer the questions while thinking about the last month. A sample question is "how often have you felt nervous and 'stressed" (Cohen, 1994). Questions 4, 5, 7, and 8 have reverse scoring,

meaning 1 is now 5, and 5 is now 1. Scores between 1 (lowest stress level) to 5 (highest stress level) are possible after calculating the average.

Typical demographic questions were asked such as age, gender, ethnicity, and level of education. We also asked if participants have participated in any honors at the college level. Students could choose multiple options such as Latin Honors, University Honors, Honors in the Major, Honor Societies and other. Due to the small population of honor students, no test used determined the ratio of extraversion in the honor student population.

Procedure

The first 250 students to sign up for the online study through SONA were able to participate. The online survey was open for 83 days, and the students completed the survey during this time at their own convenience. Of the 250 students signed up, 237 students fully completed the study.

Once the students started the study, they signed a consent form, allowing them to continue. The first part of the study was always the PSS. We did not want the other parts of the study to influence their general stress level. Students next filled out the randomized SSS. Randomizing was necessary to prevent carryover-effects from happening. The 50 question BFAS were given next, followed by OEJTS. Students concluded the survey study by completing demographic questions. Once they completed the study, the student received 1 hour of SONA time, which turned into different amounts of extra credit, depending on the class and professor.

Results

Relation of Perceived Stress Scale to Social Scenario Stress

The possible correlation between overall SSS and the PSS was analyzed using Pearson's r. The two stress scales correlated at $r(236) = .41$, $p = .000$, $r^2 = .17$. Figure 1 shows the scatterplot of PSS and overall social stress.

Extraversion and Stress

Correlations between the extraversion scales and stress scales were analyzed using Pearson's r. Table 3 shows the correlations between different SSS levels and different extraversion scales. "At a party," "interacting with strangers," and "overall social stress" correlated negatively with BFAS-extraversion, assertiveness, enthusiasm, and OEJTS E-I. All but five had a p-values less than .001. No correlations were found between the extraversion scales and the SSS of "waiting in line" and "at work," or between assertiveness and the PSS.

One-way ANOVAs examined the stress levels by extraversion groups. Significant ANOVAs were then followed up with Fisher's LSD test to examine specific group differences. Table 4 shows the mean differences between specific extraversion groups.

The BFAS groups differed in anticipated stress in the following SSS situations: "phone is ringing," $F(2,235) = 4.04$, $p < .019$, "at a party," $F(2,235) = 13.18$, $p < .001$, and "interacting with strangers," $F(2,235) = 17.57$, $p < .001$. BFAS groups did not differ with respect to anticipated stress of waiting in line or being at work. A similar pattern emerged for OEJTS I-E groups: "phone is ringing," $F(2,233) = 4.79$, $p < .009$, "at a party," $F(2,233) = 18.43$, $p < .001$, and "interacting with strangers," $F(2,233) = 20.55$, $p < .001$.

The BFAS groups also differed in anticipated stress in the following: overall SSS, $F(2,235) = 12.11$, $p < .000$, and the PSS, $F(2,235) = 6.46$, $p < .002$. OEJTS I-E groups differed

only in overall SSS, $F(2,233) = 14.79$, $p < .000$. The OEJTS I-E groups did not differ with respect to the PSS.

Independent samples t-tests were used to examined mean trait level differences based on SSS choices. As shown in Table 5, means levels for all extraversion scales were higher for those who chose to "answer right away," "chat with others," "interact with many," "energize you," and "be social with colleagues." Overall, the people who answered the extraverted answer to "phone rings," "waiting in line," "at a party," "interact with strangers," and "at work" scored higher in BFAS-extraversion, assertiveness, enthusiasm, and OEJTS E-I, with *p*-values less than .01.

Neuroticism and Stress

Possible correlations between BFAS neuroticism scales and stress scales were analyzed using Pearson's *r*. Table 3 shows the correlations between different SSS levels and BFAS-neuroticism, volatility, and withdrawal. Overall, all the stress levels correlated positively with BFAS-neuroticism and withdrawal, with a *p*-value .01 or lower. No correlations with "phone rings," "waiting in line," and "at work" was found in relation to volatility, but "at a party" and volatility were slightly, positively correlated.

Independent samples t-tests were used to examined mean trait level differences based on SSS choices. As shown in Table 5, means levels for BFAS-neuroticism scale were lower for those who chose to "interact with many," "energize you," and "be social with colleagues." The means level for the volatility aspect was only lower those who chose "interact with many." Overall, means levels for the withdrawal aspect were lower for all SSS. People who chose the extraverted option to "phone rings," "waiting in line," "at a party," "interact with strangers," and "at work" scored lower in the withdrawal aspect, with *p*-values less than .05.

Discussion

The main purpose of this study was to further the understanding of the relation of personality to stress, with a focus on ambiverts. The current research is different from prior studies because it looked at extraversion broken down into three groups: introvert, ambivert, and extravert. Additionally, it examined the individual aspects that make up the broader traits of extraversion and neuroticism in relation to stress. There were also two different stress scales used: general perceived stress in one's life and anticipated stress in five common social scenarios.

Examination of stress levels by BFAS and OEJTS extraversion groups revealed that the groups differed in general perceived stress (BFAS only), and the anticipated stress in certain SSS: "at a party," "interacting with strangers," and "phone rings." No differences were observed for "waiting in line" and "at work." In general, introverts reported the highest levels of stress, followed by ambiverts and then extraverts. However, follow-up analyses revealed that ambiverts were not significantly different from introverts in general perceived stress (they were more stressed than extraverts), but did differ from introverts when anticipating social situations (they tended to be more similar to extraverts) (see Figures 2 and 3 for bar graphs).

Overall, extraversion and stress had a negative relationship, meaning as extraversion increases, stress decreases. Based on the results, the enthusiasm aspect of extraversion seems to be a better predictor of someone's stress level than the assertiveness aspect. On the other hand, neuroticism and stress had a strong, positive relationship, meaning as neuroticism increases, stress increases. The results showed that the withdrawal aspect of neuroticism was a better predictor of someone's stress level than the volatility aspect.

As prior research by Ebstrup et al. (2011) and the current study have shown, there is a significant negative correlation between stress and extraversion. Thus, as suggested by Subhashini (2017), extraverts appear to have less stress than introverts. Even though few studies have specifically examined ambiverts, Subhashini (2017) found similar results to the current study: introverts were higher in stress than ambiverts or extroverts. The current study helps provide additional support for prior research on stress and extraversion relationships, especially related to ambiverts. Prior research and the current study have also shown that there is a significant positive correlation between stress and neuroticism (Ebstrup, et al., 2011).

Unexpected findings were that anticipated stress in the SSS of "waiting in line" and being "at work" were not significantly predicted by extraversion or the volatility aspect of neuroticism. Even though these are extraverted scenarios, it seems that people do not perceive them as particularly stressful. This may be because these situations are not perceived as particularly social or because everyone must do them, almost every day. Perhaps scenarios that people see as bettering their lives, such as making money or waiting in line to buy necessities, are perceived as not stressful but a part of everyday life. Possibly these scenarios have clear scripts or norms for behavior that alleviate stress. It would be interesting to see research on this idea in the future.

Implications

The information in this research could help people understand more about what makes up their personality and how it relates to their health. By understanding more about extraversion or neuroticism in relation to stress, people who tend to be introverted or higher in neuroticism can see how they may relate to stress and make changes in their life to reduce stress to live healthier.

In counseling settings, therapists could use this information to understand better why some clients tend to be more stressed, especially looking at the aspects of extraversion and

neuroticism. If a client is more introverted and higher in stress, a therapist can refer to Tables 4 and 5 to see how their client relates to the results of this study in relation to similar social stress scenarios. The tables may help a therapist see how their client relates to the population in this study, to predict if it is normal for their personality type to feel certain stress levels. If someone is high in neuroticism, a therapist can predict that the client would most likely be high in stress. Overall, this study can provide information for counselors to utilize and determine the best plan of action to help their clients.

Limitations and Future Research

Although the study added to knowledge regarding personality and stress, a number of limitations should be noted. The study only recruited SONA participants, who were all college students taking psychology classes for extra credit. With this population also comes a large gender and ethnicity gap. Most of the students taking these classes and participating in SONA are women, so few male participants completed the study. Though the university is relatively diverse in ethnicity, most participants were Caucasian. Another limitation is how the recording of stress occurred. The only way to collect stress levels in this style study was to gather participants' anticipated stress, which may be different from people's experiences in actual social stress scenarios.

An important next step would be to do a laboratory-setting experiment to see if certain aspects or scenarios cause or influence stress to change. In a laboratory setting, researchers could record real stress data. Longitudinal studies would also be important to establish whether personality predicts stress experiences over time or vice versa. Additionally, to enhance generalization, future research should use more diverse samples regarding age, gender, and race.

An interesting direction for a future study would be to investigate introverted SSS such as "at home alone." The current study only examined scenarios normally perceived as social or extraverted (e.g., "at a party"). Perhaps anticipated stress experiences for introverts would be lower with stress scenarios that are asocial or introverted. Beyond expanding the type of SSS examined, an important avenue for future research is to examine the relations of stress with aspects of the BFAS traits of conscientiousness, agreeableness, and openness.

Conclusion

Overall, the findings in the current study—as extraversion increases, stress decreases and as neuroticism increases, stress increases—provide support for prior studies (Ebstrup, et al., 2011; Subhashini, 2017). With respect to novel findings regarding extraversion groups and stress in specific social scenarios, introverts anticipated experiencing more stress than ambiverts and extraverts when "at a party" and "interacting with strangers." In turn, ambiverts anticipated more stress than extraverts in these scenarios. Interestingly, the "waiting in line" or "at work" scenarios found no differences related to extraversion. Further adding to the literature on personality and stress, findings suggest that the enthusiasm aspect of extraversion (relative to the assertiveness aspect) and the withdrawal aspect of neuroticism (relative to the volatility aspect) are better predictors of someone's stress experiences. Further longitudinal and behavioral studies related to these new findings are needed to understand more about the relationship between personality and stress.

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Appendix

Social Stress Scenarios Scale

1. Your phone is ringing.
   - Imagine your phone is ringing right now... Please describe what you just imagined in detail and include how you felt.
   - Imagine your phone ringing right now.

	Stress Level					
How much stress do you feel because your phone is ringing?	No Stress	Little Stress	Moderate Stress	Major Stress	Extreme Stress	Stress Overload (Panic, breakdown)

   - When the phone rings do you...
     a. Hurry to get to it first
     b. Hope someone will answer

2. You are waiting in line.
   - Imagine you are waiting in line right now... Please describe what you just imagined in detail and include how you felt.
   - Imagine you are waiting in line right now.

	Stress Level					
How much stress do you feel because you are waiting in line?	No Stress	Little Stress	Moderate Stress	Major Stress	Extreme Stress	Stress Overload (Panic, breakdown)

   - Waiting in line, do you often...
     a. Chat with others
     b. Stick to business

3. You are at a party.
   - Imagine you are at a party right now... Please describe what you just imagined in detail and include how you felt.
   - Imagine you are at a party right now.

	Stress Level					
How much stress do you feel because you are at a party?	No Stress	Little Stress	Moderate Stress	Major Stress	Extreme Stress	Stress Overload (Panic, breakdown)

   - At a party, do you…

a. Interact with many, even strangers
b. Interact with a few friends

4. You are interacting with strangers.
   - Imagine you are interacting with strangers right now... Please describe what you just imagined in detail and include how you felt.
   - Imagine you are interacting with strangers right now.

	Stress Level					
How much stress do you feel because you are interacting with strangers?	No Stress	Little Stress	Moderate Stress	Major Stress	Extreme Stress	Stress Overload (Panic, breakdown)

   - Does interacting with strangers…
     a. Energize you
     b. Tax your reserves

5. You are at work.
   - Imagine you are at work right now... Please describe what you just imagined in detail and include how you felt.
   - Imagine you are at work right now.

	Stress Level					
How much stress do you feel because you are at work?	No Stress	Little Stress	Moderate Stress	Major Stress	Extreme Stress	Stress Overload (Panic, breakdown)

   - At work do you tend to…
     a. Be sociable with your colleagues
     b. Keep more to yourself

Based on Keirsey (1998)

Table 1

Descriptive Statistics for Big Five Aspect Scales and Open Extended Jungian Type Scales

Variables	*M*	*SD*	α
Extraversion	3.49	.59	.82
Enthusiasm	3.54	.72	.78
Assertiveness	3.43	.68	.79
Neuroticism	3.07	.66	.83
Volatility	3.04	.78	.79
Withdrawal	3.09	.74	.74
OEJTS I vs. E	21.25	5.71	.71

Table 2

Descriptive Statistics for Stress Measures

Variables	*M*	*SD*	α
Phone rings	2.03	1.05	--
Waiting in line	2.25	.97	--
At a party	2.45	1.23	--
Interacting with strangers	2.63	1.20	--
At work	2.70	1.10	--
Overall Social Stress	4.41	.67	.57
Perceived Stress Scale	3.07	.57	.83

Table 3

Correlations of Extraversion and Neuroticism with Stress Perceptions

	Personality Trait						
Perceived Stress Levels	BFAS-E	Assertiveness	Enthusiasm	OEJTS E-I	BFAS-N	Volatility	Withdrawal
Phone rings	-.17**	-.15*	-.13*	-.22**	.21**	.11	.25***
Waiting in line	.00	-.02	.02	.04	.19**	.12	.22**
At a party	-.32***	-.22**	-.32***	-.40***	.29***	.16*	.36***
Interacting with strangers	-.42***	-.38***	-.33***	-.45***	.40***	.26***	.44***
At work	-.08	-.01	-.12	-.07	.20**	.11	.24***
Overall Social Stress	-.34***	-.27***	-.31***	-.38***	.43***	.25***	.50***
Perceived Stress Scale	-.21**	-.11	-.25***	-.12	.71***	.57***	.66***

Note. BFAS: Big Five Aspects Scale; E: Extraversion; OEJTS: Open Extended Jungian Type Scales; E-I: Extroversion vs. Introversion; N: Neuroticism. P-values correspond to comparisons of mean trait levels by scenario choice. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4

Mean Levels of Stress by Extraversion Group

	BFAS E Group			OEJTS E Group		
Perceived Stress Levels	Introvert	Ambivert	Extravert	Introvert	Ambivert	Extravert
Phone rings	2.32_a	1.88_b	1.93_b	2.30_a	$2.03_{a/b}$	1.79_b
Waiting in line	2.21_a	2.27_a	2.28_a	2.13_a	2.33_a	2.29_a
At a party	2.97_a	2.42_b	2.00_c	2.97_a	2.51_b	1.88_c
Interacting with strangers	3.23_a	2.56_b	2.16_c	3.22_a	2.58_b	2.09_c
At work	2.75_a	2.76_a	2.58_a	2.74_a	2.77_a	2.58_a
Overall Social Stress	2.70_a	2.38_b	2.19_b	2.67_a	2.44_b	2.12_c
Perceived Stress Scale	3.22_a	3.10_a	2.90_b	3.14_a	3.05_a	3.00_a

Note. BFAS: Big Five Aspects Scale; E: Extraversion; OEJTS: Open Extended Jungian Type Scales. Means with different subscripts differ at $p < .05$.

Table 5

Mean Levels of Extraversion Aspects and Neuroticism Aspects by Social Stress Scenario Choices

	Personality Trait						
Social Scenario Choices	BFAS-E	Assertiveness	Enthusiasm	OEJTS E-I	BFAS-N	Volatility	Withdrawal
Phone rings:							
Answer right away	3.59***	3.55***	3.63**	22.06**	3.02	3.05	2.99**
Ignore it	3.25	3.15	3.35	19.35	3.18	3.03	3.33
Waiting in line:							
Chat with others	3.75***	3.63**	3.87***	23.92***	2.94	2.94	2.93*
Stick to business	3.38	3.35	3.42	20.21	3.12	3.08	3.15
At a party:							
Interact with many	3.80***	3.67***	3.92***	24.74***	2.90**	2.92*	2.88***
Interact with few	3.27	3.26	3.29	18.82	3.19	3.31	3.25
Interact with strangers:							
Energize you	3.78***	3.65***	3.91***	24.39***	2.93**	2.96	2.89***
Tax your reserves	3.27	3.26	3.27	18.91	3.18	3.11	3.25
At work:							
Be social with colleagues	3.64***	3.55***	3.73***	22.56***	2.99**	3.00	2.99**
Keep to oneself	3.09	3.12	3.05	17.88	3.25	3.15	3.35

Note. BFAS: Big Five Aspects Scale; E: Extraversion; OEJTS: Open Extended Jungian Type Scales; E-I: Extroversion vs. Introversion; N: Neuroticism. P-values correspond to comparisons of mean trait level differences by scenario choice. * $p < .05$, ** $p < .01$, *** $p < .001$

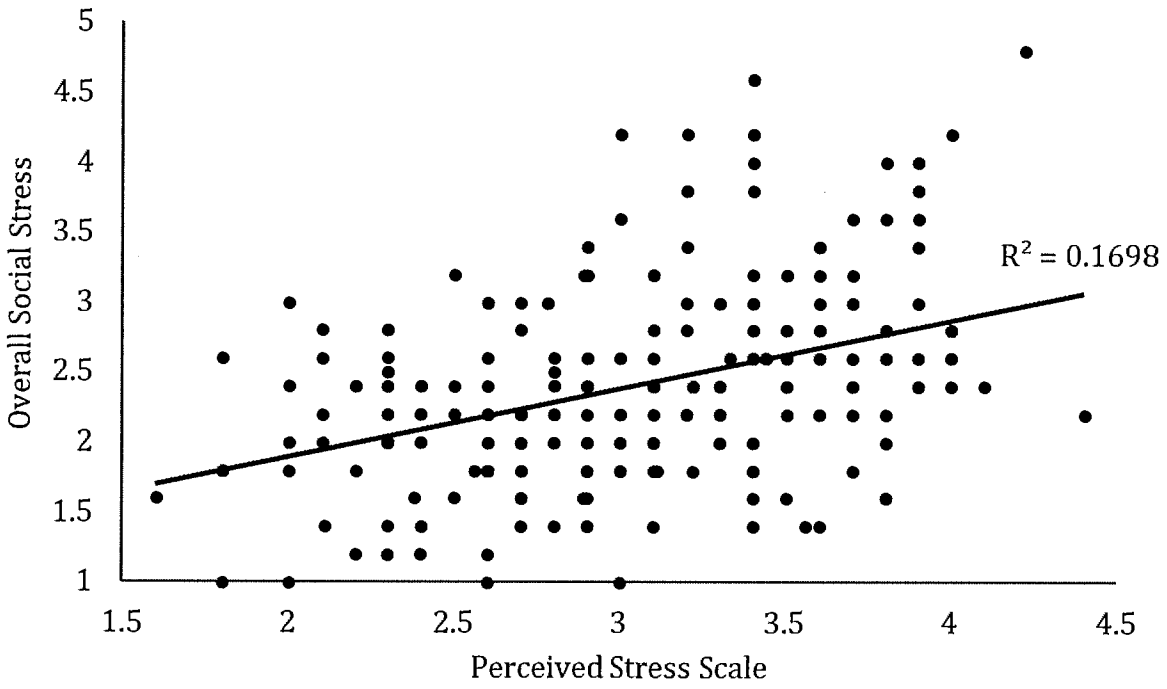

Figure 1. Scatterplot of Perceived Stress Scale and Overall Social Stress Scenarios, $r(236) = .41$, $p = .000$.

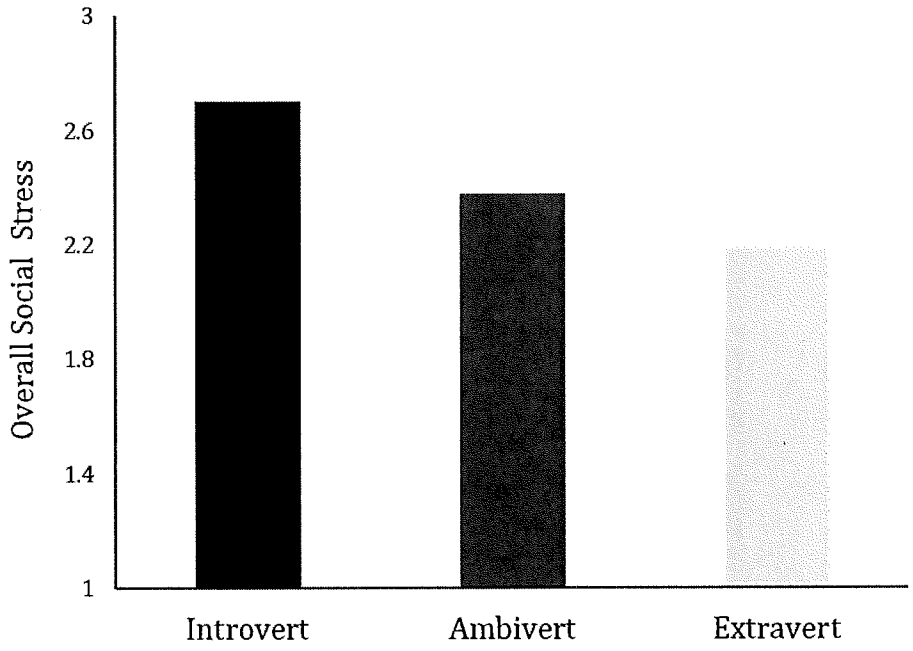

Figure 2. Mean Social Stress Scenarios by BFAS Extraversion groups. Introverts differ at $p < .05$ from Ambiverts and Extraverts. Ambiverts and Extraverts do not differ at $p < .05$ from each other.

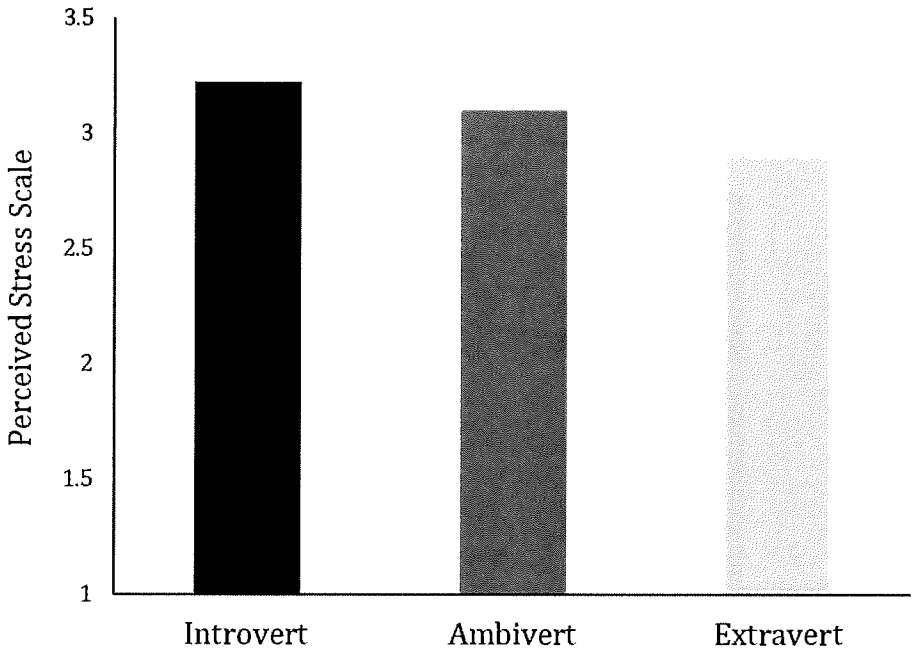

Figure 3. Mean Perceived Stress Scale scores by BFAS Extraversion groups. Introverts and Ambiverts do not differ at $p < .05$ from each other. Extraverts differ at $p < .05$ from Introverts and Ambiverts.