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The Association Between the Big Five Personality Traits and Anxiety

Tatiana Blair

Melody Bordenkircher

Raquel Cartagena

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INTRODUCTION

- Studies have found that anxiety has increased from 5.12% in 2008 to 6.60% in 2018 in adult Americans. (Goodwin et al., 2020).
- Studies have consistently shown an association between mental illness and high neuroticism, low conscientiousness, low extraversion, and low agreeableness, but no association with openness (Fan 2020).

Research Questions:

- Are the Big Five traits correlated with anxiety?

Hypotheses:

- In general psychology students, traits neuroticism will be positively correlated with anxiety.
- In general psychology students, trait conscientiousness and extraversion will be negatively correlated with anxiety.
- In exploratory analyses, we will examine the association between trait openness and agreeableness in relation to anxiety in general psychology students.

METHODOLOGY

Participants

- 48 college students recruited through psychology subject pool
- Mean Age = 18.89 ($SD = 1.99$)
- Predominantly female (72.3%)
- Predominantly Caucasian (83%)

Procedure

- Participants completed an online survey.
- Conducted on Qualtrics in a computer lab on campus.

Measures

- IPIP Big-Five Factor Markers** (Goldberg, 1992): Higher scores reflect higher levels of personality traits.
 - Extraversion
 - Neuroticism
 - Openness
 - Agreeableness
 - Conscientiousness
- State-Trait Anxiety Inventory** (Spielberger, 1977): Higher scores reflect higher levels of anxiety.

MEASURES

State Trait Anxiety Inventory (STAI):

1. The State-Trait Anxiety Inventory (STAI) questionnaire was used to assess participants' overall level of anxiety (Spielberger, 1977). Participants answered 40 items using a Likert Scale. For the first 20 items, the options were: 1 (Not at all), 2 (Somewhat), 3 (Moderately so), and 4 (Very much so). Answer options for the next 20 items were: 1 (Almost never), 2 (Sometimes), 3 (Often), and 4 (Almost always). A prior study measuring the psychometric properties of four measures of anxiety, of which the STAI was included among them, obtained support for the convergent validity (Stanley, 1996). Below are some example questions:

	Not at all	Somewhat	Moderately so	Very much so
1. I feel calm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Almost Never	Sometimes	Often	Almost Always
28. I feel that difficulties are piling up so that I cannot overcome them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IPIP Big-Five Factor Marker:

2. The IPIP Big-Five Factor Markers questionnaire (Goldberg, 1992) was used to measure five personality traits (i.e., extroversion, neuroticism, agreeableness, openness, conscientiousness) and contained 50 items. In the present study, participants answered each question using a Likert Scale, selecting an option from 1 (Very Inaccurate) to 5 (Very Accurate). In a prior study measuring the IPIP Big-Five Factor Markers, researchers calculated the corrected correlation between item responses and factor score (Cupani, 2015). Below are some example questions:

	Very Inaccurate	Moderately Inaccurate	Neither Accurate Nor Inaccurate	Moderately Accurate	Very Accurate
1. Am the life of the party.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Feel little concern for others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TABLE 1

Means and standard deviations for the variables of interest. Bivariate correlations between levels of anxiety and the Big Five Traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness.

	M	SD	1	2	3	4	5	6
1. Anxiety	97.59	21.63	-	-.09	-.19	-.21	-.79*	.13
2. Extraversion	28.02	7.74	-	-	.27	-.16	-.06	.20
3. Agreeableness	40.43	6.33	-	-	-	.18	.11	.16
4. Conscientiousness	33.34	5.53	-	-	-	-	.28	.00
5. Neuroticism	25.32	6.82	-	-	-	-	-	-.18
6. Openness	33.96	5.70	-	-	-	-	-	-
Age	18.89	1.99	-	-	-	-	-	-

* $p < .001$

RESULTS

- The correlation between anxiety and neuroticism was significant and negative in the direction ($r = -.79, p < .001$).
- Conscientiousness ($r = -.21, p = .163$) and extraversion ($r = -.09, p = .567$) were negatively correlated with anxiety. The coefficients were negative in the direction, which is consistent with our second hypothesis, but were not significant.
- The association between agreeableness ($r = -.19, p = .203$) and anxiety was negative. The association between openness ($r = .13, p = .385$) and anxiety was positive. Both traits were not significantly correlated with anxiety.
- Therefore, we failed to support our main hypothesis.

DISCUSSION

- The current results suggest that neuroticism is significantly negatively correlated with anxiety. As one's score for neuroticism increases, their level of anxiety decreases. This is the opposite of our hypothesis.
- For the current results, we looked from every angle, and we did not find any specific reason to explain our findings.
- One limitation is our anxiety questionnaire used outdated language that may not be familiar to the younger generation.
- Since both measures were self-report questionnaires, this could have led to participants answering in a socially desirable way.

REFERENCES

- Cupani, M., & Lorenzo-Sevo, U. (2015). The development of an alternative IPIP inventory measuring the big-five factor markers in an Argentine sample. *Personality and individual differences*, 91, 40-46. <http://dx.doi.org/10.1016/j.paid.2015.11.051>.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26-42. https://projects.ori.org/lrg/PDFs_papers/Goldberg.Big-Five-Markers-Psych.Assess.1992.pdf.
- Goodwin, R. D., Weinberger, A. H., Kim, J. H., Wu, M., & Galea, S. (2020). Trends in anxiety among adults in the United States, 2008-2018: Rapid increases among young adults. *Journal of psychiatric research*, 130, 441-446. <https://doi.org/10.1016/j.jpsychires.2020.08.014>.
- Fan, J. (2020). Relationships between five-factor personality model and anxiety: The effect of conscientiousness on anxiety. *Open Journal of Social Sciences*, 8(8). <https://doi.org/10.4236/jss.2020.88039>.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1977). State-trait anxiety inventory for adults. *Mind Garden*. https://oml.eular.org/sysModules/obxOml/docs/ID_150/State-Trait-Anxiety-Inventory.pdf.
- Stanley, M. A., Beck, J. G., & Zebb, B. J. (1996). Psychometric properties of four anxiety measures in older adults. *Behaviour Research and Therapy*, 34(10), 827-838. [https://doi.org/10.1016/0005-7967\(96\)00064-2](https://doi.org/10.1016/0005-7967(96)00064-2).