

Literature review

Psychology



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Personality Literature Article Review Here Here Here Here Personality

Literature Article Review Introduction

A 2010 study by DeYoung and colleagues examined the relationship between personality, brain structuring, and the Big Five Personality Inventory. Their experiment was motivated by the desire to examine potential biological correlates of the popular personality test. The authors explain that while personality research has revealed a wealth of information about various aspects of the concept (DeYoung, 2010), little has been revealed about the neurological structures that underlie the formation and influence of individual traits (Jackson, Balota, & Head, 2012). Most of the existing research on personality is based on theorization and subject interactions, leaving a noticeable gap in evidence obtained from the direct measurement of neural characteristics (Beer, 2012). In response to the information shortage, this article describes an experiment that examined the connection between the Big Five personality items and individual differences in the volume of specific brain regions. Each item in the inventory was hypothesized to be associated with a specific region of the brain, based on existing evidence as well as original theorizations.

Methods

The study involved 116 right-handed students from a St. Louis university, with an equal amount of male and female participants. All potential subjects were pre-screened for potential neuropsychological abnormalities before being considered for acceptance into the group. Structural images of the brain were acquired in high resolution using a whole-brain magnetization-prepared image rapid gradient-echo (MPRAGE) system, and individual traits were measured with the Revised NEO Personality Inventory. A random

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participant was selected to serve as the reference source for volume comparisons. Statistical, cluster-based analyses were performed to reveal any significant associations between brain area volumes and personality traits.

Results

The experimenters found that four of the five personality traits were significantly correlated with their hypothesized partnered brain area or even several, with the sole exception being openness-intellect. Extraversion was positively associated with the medial orbitofrontal cortex, neuroticism was linked with a few areas including the left medial temporal lobe, agreeableness with the posterior singular cortex among other areas, and conscientiousness related to a region of the lateral prefrontal cortex. Most of these associations were positive in nature, but there were a few instances of negative correlations.

Discussion

The findings of this study clearly demonstrate an existing significant connection between aspects of personality and the volume of brain matter. Specifically, there is evidence for a multitude of relationships that can take either positive or negative forms, displaying the influence of both deficits and surpluses in neural volume on the expression of at least some personal traits. The lack of a finding for the openness-intellect quality may be due to design factors rather than an actual disconnect between the trait and brain volume.

It is concluded that this experiment demonstrates the validity of personality-physical brain relationships, and should provide incentive for the continued growth of personality neuroscience as a field. The Big Five provides a <https://assignbuster.com/literature-review-article-review-samples/>

framework for related examinations, though this study suggests that the system developed between brain volume and personality can be complex, even when only a few characteristics and locations are considered. Future research should be conducted with these implications in mind.

References

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