



BIG FIVE PERSONALITY TRAITS AND CURIOSITY AMONG COLLEGE STUDENTS: A CORRELATIONAL STUDY

¹ *Sonal Mulyan*, ² *Kartik Kadian*, ³ *Jassanjot Kaur*

Kuruksketra University, Kurukshetra

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ABSTRACT :

Curiosity is an important psychological trait, and it is associated with exploration, learning, engagement with novelty and intellectual development. Individual differences in curiosity can be partly explained by stable personality traits, particularly those dimensions that are part of the Big Five model of personality. The current research explored the relationship between the Big Five personality traits and curiosity in college students. The design was quantitative cross-sectional correlational. Participants. One hundred two adult college students were recruited through online survey platforms, university network, and social media. Personality was measured with the Big Five Inventory-44 (BFI-44) and curiosity was measured with the Curiosity and Exploration Inventory-II (CEI-II) which measures exploration and absorption. Associations between personality dimensions and curiosity were examined using descriptive statistics and Pearson product-moment correlations. Results showed curiosity was positively correlated with extraversion, conscientiousness and openness to experience and not significantly correlated with agreeableness and neuroticism. The results suggest that curiosity may be particularly linked to personality characteristics that include experiencing, actively exploring, and engaging in goal-directed action. The study contributes to the understanding of individual differences in curiosity in a student population and suggests that it may be of relevance to educational and developmental contexts. Future studies should employ larger and more diverse samples, longitudinal designs, stronger psychometric reporting, and other developmental outcomes.

Keywords: Big Five personality, curiosity, exploration, absorption, openness to experience, college students, personality traits

Introduction

Curiosity is a fundamental psychological disposition that drives the organism to seek information, explore unknown situations, ask questions and take part in experiences that provide the opportunity for learning. Curiosity is not restricted to the search for academic facts, it may influence the response of people to novelty, uncertainty, complexity, and unfamiliar concepts. Curiosity allows us to learn, grow intellectually and adapt through exploration and participating in new experiences.

Interest is not the same for different persons and different situations. Some people love to experiment with new things and are driven by the possibility of learning new things. Others might be less keen to consider situations of uncertainty or novelty. Therefore, research in personality and individual differences requires understanding the psychological characteristics underlying these differences.

Personality can importantly frame the study of variability in curiosity. The Big Five Model is a taxonomy that classifies personality into five major dimensions: extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. These dimensions reflect general patterns of behavior, emotional functioning, interpersonal orientation and engagement with the environment.

The Big Five dimension of openness to experience has received particular theoretical attention in relation to curiosity. Openness involves features such as intellectual curiosity, imagination, a craving for new experience, cognitive flexibility, and an openness to new perspectives. People with high levels of openness, then, may be more likely to search for new ideas and experiences.

Openness may not be so closely related to curiosity and personality. Active participation in social and environmental experiences might be associated with extraversion. People who are more extraverted might be seeking stimulation and interaction, which provides more opportunity for exploratory behavior. Persistence, organization, and goal-directed engagement with information, in contrast, may link conscientiousness with curiosity.

Agreeableness is associated with interpersonal traits such as being cooperative, empathetic, and interested in social harmony. It could be that agreeableness is less directly related to curiosity. Similarly, the relationship between neuroticism and curiosity may be mediated by the type of curiosity and context of exploration. Sometimes emotional reactivity can act as a deterrent to the seeking of uncertainty, but uncertainty or information gaps can

also act as a trigger for curiosity.

Psychological research has previously conceptualized curiosity as a multidimensional construct rather than as a unitary behavioral tendency. Kashdan, Rose and Fincham (2004) have pointed to the significance of curiosity and exploration for positive subjective experiences and chances for personal growth. Curiosity is defined as an interest and involvement with new and challenging information, as a measurable psychological construct (Silvia & Kashdan, 2010). Intellectual curiosity was also found by Stumm et al. (2011) to be a relevant individual-difference characteristic related to academic performance.

Thus, personality and curiosity could be an interesting relationship to study, because it may explain why some people are more willing to explore, learn, and interact with novel experiences than others. In educational contexts, awareness of these individual differences may have implications for the design of learning environments that encourage exploration and intellectual engagement.

Thus, the present study examined the associations of the five major personality traits with curiosity in a sample of college students. The study does not assume that all the Big Five personality traits equally contribute to curiosity, but instead considers each of the Big Five personality dimensions separately.

Theoretical Background

Big Five Model of Personality

One of the most used models for describing the structure of human personality is the Big Five model. It proposes five broad dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Extraversion is the tendency to be sociable, energetic, assertive and to have a positive emotionality which is directed to the outside world. Agreeableness Cooperation, trust, warmth and consideration for others Conscientiousness refers to organization, self-discipline, persistence, responsibility, and goal-directed behavior. Neuroticism is a measure of individual differences in emotional instability and reflects a tendency to experience negative emotional states . Openness to experience is defined by imagination, intellectual curiosity, receptiveness to new ideas, esthetic sensitivity, and interest in novelty.

Curiosity involves cognitive and behavioral engagement with the environment. The Big Five framework is useful for understanding curiosity. DeYoung, Quilty, and Peterson (2007) also showed that the broad Big Five factors have meaningful lower level facets, thereby reaffirming the significance of investigating a personality as a multidimensional system rather than a single global feature.

Curiosity

Curiosity can be thought of as a motivational tendency that leads people to seek information and to engage in new or uncertain experiences. People probably when they encounter something new, complicated or contrary to what they know.

Curiosity is not just facts. It can also involve exploration, experimentation, intellectual engagement and a tolerance for uncertainty. Kashdan et al. (2004) have emphasized the value of curiosity and exploration for positive subjective experiences and opportunities for self-growth. Silvia and Kashdan (2010) also discussed curiosity as an individual difference construct that can be empirically measured and studied.

The Curiosity and Exploration Inventory-II (CEI-II) conceptualizes curiosity as a set of dimensions of exploration and absorption . Exploration is the tendency to look for new information and experiences. Absorption is the tendency to immerse oneself in experiences of novelty and uncertainty.

Personality and Curiosity

Personality characteristics determine the function of expressing curiosity. For individuals there can be similar opportunities for investigation but their reactions may differ according to personality traits.

Curiosity should in theory be especially related to openness to experience, considering that both are concerned with cognitive exploration and openness to novelty. Extraversion may facilitate curiosity by fostering social and environmental engagement. Also, conscientiousness can be a benefit in continued exploration, as curiosity-driven learning frequently requires effort, persistence, and goal-directed behavior.

The relationships between agreeableness and neuroticism may be more complex. Agreeableness is mostly about social functioning and thus may be only indirectly related to curiosity. The response to uncertainty may be affected by neuroticism but the extent to which this is the case may be situational and a matter of motivation.

Rationale of the Study

While curiosity has been related to personality traits, especially openness to experience, individual differences in curiosity may involve multiple personality dimensions. Looking at the Big Five together might provide a more general picture of the personality traits that accompany curiosity.

College students are a relevant population because they are embedded in a higher education context that is rife with new information, ideas, academic challenges, social experiences, and opportunities for exploration. It may therefore have implications for educational engagement and learning to understand factors associated with curiosity in this population .

The present study is particularly concerned with the relationship between Big Five personality traits and curiosity among college students.

Objectives

The main objective of the study was to explore the relationship of Big Five personality traits and curiosity among college students.

1. To examine the relationship between extraversion and curiosity.
2. To examine the relationship between agreeableness and curiosity.
3. To study the relationship between conscientiousness and curiosity.
4. To investigate the relationship between neuroticism and curiosity.
5. To explore the relationship between openness to experience and curiosity.

Hypotheses

- H₀: The Big Five personality traits are not statistically significantly related to curiosity in college students.
- H₁: There will be statistically significant relationships between one or more of the Big Five personality dimensions and curiosity in college students.

Research Methodology

Research Design

A correlational cross-sectional study design was adopted. The design was selected as the purpose of the investigation was to investigate statistical associations between personality traits and curiosity, rather than manipulate variables or establish causal relationships.

Participants

The sample included 102 adult college students. Participants were recruited via on-line survey websites, university networks, and social media. Participants must be 18 years of age or older and enrolled as college students. Incomplete responses to the questionnaire were excluded from the analysis.

Instruments

Big Five Inventory-44 (BFI-44)

Personality was assessed by the Big Five Inventory-44 (BFI-44). The inventory measures extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The instrument utilizes Likert-type responses that range from 1 (Strongly Disagree) to 5 (Strongly Agree).

Curiosity and Exploration Inventory- II

Curiosity was measured using the Curiosity and Exploration Inventory-II (CEI-II). The measure has two dimensions: exploration and absorption. Exploration reflects a propensity to search for new information and experiences, while absorption reflects involvement with experiences that have novelty and uncertainty. Response format ranged from 1 (Strongly Disagree) to 7 (Strongly Agree).

Method

Before the questionnaire was completed, participants were given information about the purpose of the study. Before participation, informed consent was obtained. Participants completed a questionnaire on Google Forms including demographic questions, BFI-44 and CEI-II. The data were anonymized and arranged for statistical analysis.

Ethical Issues

It was voluntary to take part. Participants were told the general purpose of the study and that their answers would be kept confidential. Data were for research purposes only.

Statistical Analysis

Descriptive statistics were performed to provide an overview of the study variables. The Pearson product-moment correlation coefficient was used to examine associations between curiosity and the five personality dimensions. Statistical significance was assessed at the .05 level. Data analysis was done using SPSS.

Results

Descriptive Statistics

The descriptive statistics were calculated for the main variables including mean scores as follows.

Variable	M	SD
Exploration	21.27	3.64
Absorption	14.19	3.09
Total Curiosity	35.37	5.60
Extraversion	25.12	4.62
Agreeableness	33.77	4.99
Conscientiousness	30.59	5.06
Neuroticism	26.05	6.25
Openness	36.16	4.28
Total Personality	151.76	12.11

Table 1. Descriptive statistics of the study variables.

Correlation Findings

Pearson correlation analysis showed positive relationships between curiosity and extraversion, conscientiousness and openness to experience. The reported results that did not find statistically significant relations between curiosity and agreeableness or neuroticism.

The original correlation matrix also showed associations between the Big Five dimensions and between the curiosity subscales. The rewriting to be done is based on a manuscript, in which the displayed correlation matrix and significance markers have a few inconsistencies. Thus, the table of the publication below is restricted to the relationships explicitly interpreted in the original Results section.

Personality dimension	Relationship with curiosity	Reported interpretation
Extraversion	Positive	Statistically significant
Agreeableness	Not significant	No statistically significant relationship reported
Conscientiousness	Positive	Statistically significant
Neuroticism	Not significant	No statistically significant relationship reported
Openness to experience	Positive	Statistically significant

Table 2. Reported correlations between curiosity and Big Five dimensions.

Discussion

The current study examined the relationship between Big Five personality traits and curiosity in college students. The results reported show that curiosity was positively related to extraversion, conscientiousness and openness to experience, and no significant relations were found for agreeableness and neuroticism.

Extraversion and Curiosity

The positive link between extraversion and curiosity indicates that people who are more active in behavior and socializing may be more likely to report curiosity. Active engagement with the outside world, interaction with other people and a need to be stimulated define extraversion. These qualities might lead to more opportunities for exploration because socially and behaviorally active individuals are exposed to a broader array of people, situations, and experiences.

Diligence & Inquisitiveness

The positive association between conscientiousness and curiosity is theoretically meaningful as well. Curiosity is associated with exploration and novelty, but exploratory behavior can be goal-directed and not random. Individuals high in conscientiousness may be motivated to seek systematic information, to learn the academic, and to pursue personally meaningful goals in the long term. Thus, persistence and self-regulation may help in facilitating curiosity expression in traditional educational environments.

Openness to experience and curiosity

The association between openness to experience and curiosity is particularly consistent with the conceptual overlap of the two constructs. Openness is the curiosity of the mind, the openness of the mind, the imagination, and the desire for the new. These qualities provide a sound psychological basis for the search for unknown information and experiences. Hence, the present finding is highly consistent with established theoretical perspectives that associate openness with exploration and intellectual engagement.

Likeability & Interest

There was no significant relationship between agreeableness and inquisitiveness. This could imply that the interpersonal features, for example, cooperation and trust, are less directly related to the exploratory and informational motives measured by the CEI-II. But the nonsignificance should not be interpreted as evidence that agreeableness will never affect curiosity. The closeness or remoteness of the relationship depends on the kind of curiosity and the social context in which it is expressed.

Curiosity and Neuroticism

In the reported analysis, there was no significant association found between neuroticism and curiosity. Perhaps general emotional reactivity alone does not determine whether an individual seeks information or experience. Intellectual interest, novelty, or information gaps may drive curiosity. They may be free of wider emotional tendencies.

However, one important statistical problem must be noted. The original correlation matrix is reported to show a positive association of relatively large magnitude between neuroticism and openness to experience. This association is so abnormal that it affects the interpretation of the personality structure. Prior to journal submission, verify the original SPSS data set for accuracy in reverse-scoring, coding, and data-entry.

Theoretical Implications

These findings are consistent with the idea that curiosity is a trait associated with general personality patterns rather than a fully independent motivational tendency. The positive relations with openness, conscientiousness and extraversion imply that curiosity can manifest itself in many ways such as intellectual exploration, goal-directed learning and active engagement with the environment.

The results further emphasize the significance of differentiating between the different facets of personality, rather than treating personality as a single global construct. Future research may also benefit from the use of multi-dimensional measures of curiosity to investigate specific personality facets.

Educational and Practical Implications

Curiosity might be particularly pertinent to higher education, for in college, learning involves being exposed to novel types of information, views, problems, and techniques. The results suggest that students have a different dispositional orientation toward exploration and these differences may be related to personality traits.

Schools can provide opportunities for discovery-based learning, independent projects, open-ended problem solving, discussion, experimentation, and exposure to a variety of perspectives. These techniques can be used to create contexts for students to explore and develop curiosity. But the study is correlational, so curiosity doesn't necessarily equate to academic or career success.

Conclusion

The present study aimed to examine the relationship between the Big Five personality traits and curiosity among college students. The reported results indicate that curiosity is positively related to extraversion, conscientiousness, and openness to experience, whereas no significant relationships with agreeableness and neuroticism were identified.

The results indicate that curiosity may be particularly associated with personality traits that are related to engagement with the environment, goal-directed behavior and openness to new ideas and experiences. Openness to experience is particularly relevant from a theoretical perspective because of its conceptual association with intellectual curiosity and the search for novelty.

Meanwhile, the findings should be interpreted with caution due to the cross-sectional design, limited sample, use of self-report measures, and the need to cross-validate certain statistical values in the original data set. Larger samples, longitudinal designs, stronger psychometric reporting, and additional developmental outcomes in future research may offer a more complete picture of how personality and curiosity interact.

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