



Investigating the relationship between Personality Traits and Creativity

Shanza Liaqat¹, Huma Bhatti², Shahida Parveen³, Zainab Kausar Khan⁴, Umar Hayat⁵, Saba Idrees⁶

Abstract

Creativity is a complex phenomenon, and personality traits interact in nuanced ways to influence creative thinking. A well-balanced personality, where openness, conscientiousness, and a willingness to take risks are balanced, can optimize creativity. This quantitative study was completed through correlational research design. Survey was administered with the help of questionnaire as a method of data collection. Convenient sampling technique was employed to select 100 (male=50, female=50) college students as the sample of the study. Results suggest that extroversion, agreeableness, conscientiousness, openness to experience are the significant positive predictors of creativity. In addition, neuroticism is a significant negative predictor of creativity. Findings of the study reveal that male students have the greater level of extroversion, conscientiousness, openness to experience and creativity as compared to female college students. Moreover, female students were found with higher level of agreeableness, and neuroticism than male. It is necessary to expand the sample range for future research. The relationship among personality traits and creativity among college students can be deeply explored through qualitative in-depth interviews.

Keywords: Personality traits, creativity

1. Introduction

The Big Five Personality Traits, also known as the Five-Factor Model (FFM), represent a comprehensive model of human personality. The five traits are: Openness to Experience: This trait reflects an individual's openness to new ideas, experiences, and unconventional thinking. High levels of openness are often associated with curiosity, imagination, and a willingness to engage in creative endeavors. Conscientiousness: Characterized by dependability, organization, and goal-orientation. It involves a preference for structured and methodical approaches. Extraversion: This trait is marked by sociability, assertiveness, and high energy. Extraverted individuals tend to enjoy social interactions and seek excitement. Agreeableness: Reflecting interpersonal harmony, this trait encompasses traits like kindness, empathy, and cooperativeness. Neuroticism: This dimension captures emotional instability, anxiety, and mood fluctuations. High neuroticism may contribute to higher stress or difficulty in managing emotions. Creativity: Creativity can be defined in many ways, but generally refers to the ability to produce novel and useful ideas. It encompasses various forms of expression, including artistic, scientific, and everyday problem-solving. Creativity often involves divergent thinking, flexibility, originality, and the ability to break away from conventional thinking patterns (Rasheed, 2020; Li et al., 2022).

The Big Five Personality Traits have been extensively studied to understand their impact on creativity. Openness to Experience: This is often considered the most significant predictor of creativity. Individuals who score high on openness tend to have higher levels of imaginative thinking, a greater tolerance for ambiguity, and an interest in novel ideas, which are essential components of creative thinking. Conscientiousness: While creativity requires freedom and openness, conscientiousness can provide structure and persistence. High conscientiousness may contribute to the ability to follow through with creative projects, but overly high conscientiousness can sometimes stifle spontaneous thinking. Extraversion: Research suggests that extraverted individuals may benefit from social engagement and being exposed to new ideas, which could enhance creativity. However, creativity is not necessarily linked to high levels of extraversion. Some creative tasks, especially those requiring deep introspection or concentration, may be more suited to introverts. Agreeableness: High agreeableness may foster collaborative creative work, but it might hinder creativity in some cases. Agreeable individuals may be more inclined to conform to group norms, thus limiting their creative expression in environments where conflict and alternative viewpoints stimulate new ideas. Neuroticism: The relationship between neuroticism and creativity is complex. High levels of neuroticism may lead to anxiety or emotional instability, which could hinder creativity in some individuals (Li et al., 2022; Ibrahim & Rasheed, 2020).

1.1. Personality Traits and Creativity

Many empirical studies have found that the personality traits are closely related to creativity (Sarma and Borooah, 2021). Among these traits, neuroticism has a significant negative impact on creativity (Amin et al., 2020; Shokrkon and Nicoladis, 2021), whereas conscientiousness, extraversion, and agreeableness positively and significantly impact creativity (Mumford, 2011). Openness has a positive and significant impact on creativity (Jirásek and Sudzina, 2020; Ismail & Ali, 2020; Theurer et al., 2020). Extraversion has a positive and significant impact on creativity (Russ, 2003). In addition, a study by Amin et al. (2020) found that neuroticism has a negative and significant impact on creativity, whereas openness, extroversion, and agreeableness have a positive and significant impact on creativity. People with high openness are more creative but exhibit less agreeableness (Silvia et al., 2012; Karwowski et al., 2013; Karwowski and Lebeda, 2016). In conclusion, personality traits are an essential factor for creativity (Woodman et al., 1993).

1.2. Research Gap

While many studies suggest a positive relationship between openness to experience and creativity, the findings for the other Big Five traits (conscientiousness, extraversion, agreeableness, and neuroticism) are mixed or inconclusive. Some studies show that extraversion or conscientiousness might foster creativity, while others find no significant relationship. The lack of consistent findings calls for a deeper exploration of the nuances and factors that might influence these relationships.

¹ City College of Science and Commerce, University Campus, Multan, Pakistan, shanzaliaqatkhokhar@gmail.com

² City College of Science and Commerce, University Campus, Multan, Pakistan, humabhatti849@gmail.com

³ Ph.D Scholar Bahuddin Zakariya University Multan, Pakistan, ranareyyan96@gamil.com

⁴ Lecturer City College of Science and Commerce, University Campus, Multan, Pakistan, zainabhank520@gmail.com

⁵ Ph.D Scholar Department of Business and Admisntration, NCBA&E Sub Campus, Multan, Pakistan, umarhayatrehmani786@gmail.com

⁶ Lecturer City College of Science and Commerce, University Campus, Multan, Pakistan, sabaidreesheikh@gmail.com

Addressing these gaps can provide a more comprehensive and nuanced understanding of how personality traits influence creativity.

1.3. Statement of the Problem

The relationship between personality and creativity has been widely discussed, but the specific influence of the Big Five Personality Traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) on creativity remains underexplored in current psychological research. While there is a general understanding that certain personality characteristics may foster or hinder creative thinking and problem-solving, empirical studies that comprehensively examine how each of the Big Five traits individually and collectively contribute to creative expression and innovation are limited. This gap in research leaves uncertainties regarding the specific mechanisms through which personality traits influence creativity, both in the context of artistic and non-artistic domains. A more nuanced understanding of these relationships is crucial for enhancing creative processes in various professional, academic, and personal settings. This problem statement sets the stage for investigating how different facets of personality influence creativity and seeks to clarify the underlying connections between these variables.

1.4. Rationale of the Study

The rationale for investigating the relationship between the Big Five Personality Traits and creativity lies in the understanding that personality and creative potential are interconnected but remain underexplored in many contexts. The Big Five Personality Traits—Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—are well-established psychological dimensions that influence various aspects of human behavior, cognition, and emotional experiences. By investigating how the Big Five Personality Traits relate to creativity, the study seeks to provide a nuanced understanding of the psychological factors that support or constrain creative potential, offering valuable insights for personal growth, team dynamics, and organizational innovation.

1.5. Objectives of the Study

- To investigate the impact of extroversion, agreeableness, conscientiousness, neuroticism, openness to experience and creativity
- To compare the mean score difference in term of extroversion, agreeableness, conscientiousness, neuroticism, openness to experience and creativity between male and female students

1.6. Significance of the Study

- **Understanding the Link between Personality and Creative Potential:** Creativity is often viewed as a complex and multifaceted trait. The Big Five personality traits—Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—are core to understanding individual differences in behavior and cognition. Investigating how these traits relate to creativity can provide insights into the psychological processes that foster or inhibit creative thinking.
- **Enhancing Creative Performance in Various Contexts:** Whether in the arts, business innovation, or scientific discovery, creativity is a highly valued skill. Knowing which personality traits are most strongly correlated with creativity could lead to strategies for enhancing creative performance in specific environments, such as workplaces, educational settings, and artistic domains.
- **Improving Talent Selection and Development:** Many organizations seek creative individuals to drive innovation. Understanding how the Big Five traits impact creativity could improve recruitment processes and help organizations identify and nurture talent more effectively. For example, if Openness to Experience is found to be a key predictor of creativity, employers might prioritize candidates who score highly on this trait for roles that require high levels of creative problem-solving.
- **Personality-Centric Interventions:** For individuals who wish to enhance their creativity, understanding the connection between personality and creativity could inform personalized development programs. For instance, someone low in Openness might work on broadening their experiences to foster creativity, while someone high in Neuroticism could benefit from stress management techniques to avoid self-doubt, which could inhibit creative expression.
- **Contributing to Psychological Theory:** The Big Five framework is one of the most widely accepted models in psychology. By investigating the link between these established personality traits and creativity, researchers can expand existing psychological theory. Understanding how personality influences creativity can help refine psychological models that explain human behavior in creative contexts.
- **Cross-Cultural Insights:** Since the Big Five traits have been shown to be universal across different cultures, examining creativity through this lens can reveal cross-cultural patterns. It can help determine whether creativity is universally influenced by personality traits or whether certain cultural contexts play a role in how these traits affect creativity. In summary, investigating the relationship between the Big Five personality traits and creativity is significant because it offers a deeper understanding of the factors that shape creative thinking, helps in optimizing the creative potential of individuals, and provides practical applications for talent development and organizational innovation.

2. Method

2.1. Participants

This quantitative study was completed through correlational research design. Survey was administered with the help of questionnaire as a method of data collection. Convenient sampling technique was employed to select 100 college students as the sample of the study.

2.2. Instrument

Big-Five Personality Scale: The Big Five Personality Simplified Scale (John et al., 1991) was used in this study and revised from Wang et al. (2011) to the Chinese Big Five Personality Inventory brief version, suitable for college students. The scale comprised 40 questions, which involved five dimensions, namely neuroticism, conscientiousness, agreeableness, openness, and extroversion. Likert's six-point scale was used for scoring, and reverse questions were used for reverse scoring.

Creativity Scale: This study used the creativity scale (He et al., 2015), which comprises 16 questions and the following three dimensions: divergent thinking, intellectual application ability, and personality characteristics. The scale uses a five-point scoring method.

3. Results

Table 1: Correlation among Extroversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience and Creativity

Variables	E	A	C	N	O	C
Extroversion	1	.857**	.736**	.767**	.632**	.488**
Agreeableness		1	.822**	.779**	.635**	.457**
Conscientiousness			1	.828**	.661**	.510**
Neuroticism				1	.781**	-.471**
Openness to Experience					1	.496**
Creativity						1

Table 1 shows the correlation between personality traits and creativity among university students. Findings of the study reveal that there is significant positive correlation among the study variables; extroversion, agreeableness, conscientiousness, openness to experience and creativity. Moreover there is negative correlation between neuroticism and creativity.

Table 2: Impact of Personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience) Creativity

Model	Unstandardized Coefficient B	Std. Error	Standardized Coefficients Beta	T	p-value
(Constant)	17.488	1.467		11.919	.000
E	.247	.073	.488	3.364	.001
A	-.241	.086	.457	8.801	.001
C	.276	.079	.510	3.472	.001
N	-.275	.087	-.471	-3.147	.001
O	.167	.061	.496	5.742	.000

Table 2 shows the impact of extroversion, agreeableness, neuroticism, conscientiousness, openness to experience on creativity. Results suggest that extroversion, agreeableness, conscientiousness, openness to experience are the significant positive predictors of creativity. In addition, neuroticism is a significant negative predictor of creativity.

Table 3: Mean score difference of Extroversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience and Creativity (n=100)

Variable	Gender	N	M	Std.Deviation	df	t-test	p-value
Extroversion	Male	50	9.5012	3.63912	98	10.931	<.001
	Female	50	3.9028	2.09230			
Agreeableness	Male	50	11.0392	5.29361	98	9.092	<.001
	Female	50	17.0510	7.00123			
Conscientiousness	Male	50	7.0528	3.19205	98	5.710	<.001
	Female	50	4.0518	2.91820			
Neuroticism	Male	50	8.0910	4.86016	98	-4.501	<.001
	Female	50	13.6294	8.19280			
Openness to Experience	Male	50	7.8304	3.70192	98	7.610	<.001
	Female	50	4.6901	2.09283			
Creativity	Male	50	16.1820	5.01906	98	8.917	<.001
	Female	50	11.6012	2.60172			

Table 3 shows the significant mean score difference on extroversion, agreeableness, neuroticism, conscientiousness, openness to experience and creativity. Findings of the study reveal that male students have the greater level of extroversion, conscientiousness, openness to experience and creativity as compared to female college students. Moreover, female students were found with higher level of agreeableness, and neuroticism than male.

4. Discussion

The Big Five Personality Traits have been extensively studied to understand their impact on creativity. Openness to experience is the significant predictor of creativity. Individuals who score high on openness tend to have higher levels of imaginative thinking, a greater tolerance for ambiguity, and an interest in novel ideas, which are essential components of creative thinking (Li et al., 2022). High levels of openness are often associated with curiosity, imagination, and a willingness to engage in creative endeavors. Creativity often involves divergent thinking, flexibility, originality, and the ability to break away from conventional thinking patterns (Li et al., 2022; Musa, 2024). Results of current study suggest that extroversion, agreeableness, conscientiousness, openness to experience

are the significant positive predictors of creativity. In addition, neuroticism is a significant negative predictor of creativity. Findings of the study reveal that male students have the greater level of extroversion, conscientiousness, openness to experience and creativity as compared to female college students. Moreover, female students were found with higher level of agreeableness, and neuroticism than male. Many empirical studies have found that the personality traits are closely related to creativity (Sarma and Borooah, 2021). Among these traits, neuroticism has a significant negative impact on creativity (Amin et al., 2020; Shokrkon and Nicoladis, 2021), whereas conscientiousness, extraversion, and agreeableness positively and significantly impact creativity (Mumford, 2011). Openness has a positive and significant impact on creativity (Jirásek and Sudzina, 2020; Theurer et al., 2020; Henry, 2022). Extraversion has a positive and significant impact on creativity (Russ, 2003). In addition, a study by Amin et al. (2020) found that neuroticism has a negative and significant impact on creativity, whereas openness, extroversion, and agreeableness have a positive and significant impact on creativity. People with high openness are more creative but exhibit less agreeableness (Silvia et al., 2012; Karwowski et al., 2013; Karwowski and Lebuda, 2016). In conclusion, personality traits are an essential factor for creativity (Woodman et al., 1993).

5. Conclusion

Current study concludes that extroversion, agreeableness, conscientiousness, openness to experience are the significant positive predictors of creativity. In addition, neuroticism is a significant negative predictor of creativity. Findings of the study reveal that male students have the greater level of extroversion, conscientiousness, openness to experience and creativity as compared to female college students. Moreover, female students were found with higher level of agreeableness, and neuroticism than male. This study highlights the significant and multifaceted relationship between personality traits and creativity. The results suggest that certain traits, particularly those related to openness to experience and extraversion, are positively correlated with higher levels of creativity. Individuals who score high on openness tend to demonstrate more imaginative thinking, willingness to explore novel ideas, and an ability to see connections between disparate concepts, all of which are key factors in creative processes. The study also underscores the importance of the interaction between various personality traits. Creativity is not determined by a single trait but by the interplay between openness, extraversion, conscientiousness, and emotional stability. Additionally, the cultural and contextual factors influencing creativity should not be overlooked, as they can significantly shape how personality traits are expressed in creative endeavors. In conclusion, while certain personality traits can enhance or inhibit creativity, the relationship between personality and creativity is dynamic, shaped by both internal and external factors.

5.1. Contribution of the Study

The study investigating the relationship between the Big Five Personality Traits and creativity can provide valuable insights in multiple areas. Here are some of the key contributions such a study might make:

- **Understanding Personality-Creativity Link:** One of the major contributions is a clearer understanding of how specific personality traits influence creative abilities. The Big Five traits—Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—are commonly studied in psychology, and this research could identify which traits foster or hinder creativity. For instance, high Openness to Experience is often associated with greater creativity, but the roles of other traits like Conscientiousness or Neuroticism could yield important insights.
- **Guiding Creativity Development:** Such a study could offer practical applications for creativity training and development. If particular traits are found to be strongly linked to creativity, it could help educators, employers, and psychologists design tailored programs or interventions that help individuals strengthen these traits to enhance their creative output.
- **Predicting Creative Potential:** The research could provide predictive models for assessing a person's potential for creativity based on their personality profile. This is especially useful in industries or fields where innovation is highly valued, such as marketing, technology, and the arts.
- **Improving Selection Processes:** In organizational settings, understanding the Big Five traits in relation to creativity could help in recruitment and talent management. Employers might focus on identifying candidates with traits like high Openness or moderate levels of Neuroticism, depending on the type of creativity required (e.g., artistic vs. practical innovation).
- **Cultural and Contextual Considerations:** Such a study could reveal how personality traits interact with cultural or contextual factors to influence creativity. This could highlight the role of environmental factors in fostering creativity in different societies or work environments, and whether personality traits contribute universally or if they are shaped by external contexts.
- **Contribution to Personality Psychology:** On a theoretical level, the study could add depth to personality psychology, offering new insights into how personality traits shape various cognitive and emotional processes, such as problem-solving, divergent thinking, and idea generation, which are core to creativity.
- **Innovative Methodologies:** The study could also contribute to the development of new research methodologies or tools to measure creativity and personality traits in a more nuanced and integrated way, enhancing the accuracy of future studies in this domain. Overall, this study can bridge two key domains—personality psychology and creativity research—and open avenues for more targeted interventions, applications, and deeper theoretical understanding in both fields.

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