



# Creativity, Personality and Intelligence an Interrelation Study among Adolescence

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## Abstract:

*The aim of the research is to assess the relationship between creativity, personality and intelligence among adolescence. It is hypothesized that there would be a positive correlation between creativity and personality traits among adolescence, intelligence and personality traits among adolescence and a positive correlation between creativity and intelligence among adolescence. The study was conducted in a municipal School of New Delhi named as Saraswati Vidya Mandir. The school is a co-ed school with more number of male students. Medium of Instruction is English. Data was collected from the nine standard students with strength of 46. The data was collected from 30 students in three consecutive days where each new test was given on each fresh day. The students were of 14 to 15 years of age. Correlational Research was used where the same group of samples were used for the three test used for this research. Purposive sampling method was used. Torrance Test of Creative Thinking (TTCT) was use to assess creativity, Standard Progressive Matrices was used to assess intelligence and NEO Five-Factor Inventory was use to assess personality traits. Statistical tools used were mean, Standard Deviation and correlation. The results indicate that there is positive correlation between Resistance to Premature Closure of creativity domain and intelligence among adolescence. Other creativity domains such as Fluency, Originality, Elaboration and Abstraction of titles do not correlate with intelligence. The results also indicate that there is Correlation between Resistance to Premature Closure of creativity domains and Personality Traits. Other personality traits such as Neuroticism, Extraversion, Openness, and Conscientiousness do not correlate with the creativity domains. Another result indicate that there is a correlation between Intelligence and Originality of creativity domain. Other creativity domains such as Fluency. Abstraction of Titles, Elaboration and Resistance to Premature Closure do not correlate with intelligence. One more result indicates that represents that there is correlation between Extraversion and intelligence, Agreeableness and Intelligence and Conscientiousness and Intelligence .Other creativity domains such as Neuroticism and Openness do not correlate with intelligence.*

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**Keywords:** Adolescence, Creativity, Intelligence, Personality

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## 1. Creativity

Sternberg and Lubart (1999, 3) maintains that “Creativity is the ability to produce work that is both novel (i.e. original, unexpected) and appropriate (i.e. useful concerning tasks constrains)”. Runco (2007) present several authors that define creativity as involving the creation of something new and useful. Runco (2007), calls these “products definitions” of creativity. He calls these definitions “product bias”. For him, product bias consists on assuming that all creativity requires a tangible product: “It would be more parsimonious to view creative products as inventions and the process leading up to them as creative or innovative”.

## 2. Personality

Gordon Allport(1973) defined personality as “ personality is a dynamic organization within the individual of psychosocial system that determine his unique adjustments to his environment.” (Baron, R.A., 2008). Mischel (1976) defined personality as “the distinctive pattern of behavior (including thoughts and emotions) that characterizes each individuals adaptation to the situation of his or her life” (Baron, R.A., 2008).

## 3. Intelligence

The term intelligence refers to individuals ability to understand complex ideas, to adapt effectively to the environment, to learn experience, to engage various forms of reasoning, to overcome obstacles by careful thoughts.

## 4. Review of literature

A study demonstrated a close relationship between creativity and personality traits. Creative subjects indicated that they perceive themselves to be significantly more independent thought, open to experience, dominant individualistic and competent than less creative subjects. Subjects with average and high creativity levels indicate that they tend to be more resourceful, self-sufficient and tend to be more responsible. They have more abstract thinking and bright. Less creative subjects tend to be more restraints, shy, sensitive threat and timid.(Naude, T., 2005)

In a finding Guilford's Alternate Uses, Plot Titles, and Consequences tests were given university students along with the Concept Mastery Test, a traditional measure of verbal intelligence. These measures were correlated with an inventory of creative activities and accomplishments. A composite index of ideational fluency correlated with four creativity indices: Crafts, Performing Arts, Math-Science, and Total Creativity, while the Concept Mastery Test correlated with three indices: Art, Literature, and Total Creativity. With the exception that verbal intelligence was a better predictor of creativity in literature, no statistical difference between the predictive accuracies of ideational fluency and verbal intelligence were found. (Barron , F., Harrington,M., 2006)

## 5. Methodology

### 5.1 Objectives

1. To assess the relationship between creativity, personality and intelligence among adolescence.

### 5.2 Hypothesis

1. There would be a positive correlation between creativity and personality traits among adolescence.
2. There would be a positive correlation between intelligence and personality among adolescence.
3. There would be a positive correlation between creativity and intelligence among adolescence.

### 5.3 Sample

The study sample comprises of 60 school going students. The students are of 13 to 15 years of age. The students belong to a municipal school of Ahmedabad. The sample comprised of both male and female with more number of males.

**Sampling type:** Purposive sampling of non probably sampling technique have been used for sample selection.

#### 5.4 Test used

1. **Torrance Test of Creative Thinking (TTCT)** : Building on J.P. Guilford's work and created by Ellis Paul Torrance, the Torrance Tests of Creative Thinking (TTCT), a test of creativity, originally involved simple tests of divergent thinking and other problem-solving skills, which were scored on four scales:
2. **Standard Progressive Matrices**: Raven's Progressive Matrices (often referred to simply as Raven's Matrices) or RPM, is a nonverbal group test typically used in educational settings. It is the most common and popular test administered to groups ranging from 5 year-olds to the elderly. It is made of 60 multiple choice questions, listed in order of difficulty.
3. **NEO Five-Factor Inventory**: The Revised NEO Personality Inventory, or NEO PI-R, is a psychological personality inventory; a 240-item measure of the Big Five personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.

#### 5.5 Statistical tools used

1. Mean and Standard Deviation
2. Correlation

### 6. Results and Discussion

To verify the proposed hypothesis, the correlation were calculate between the personality traits and creativity domains , intelligence and creativity domains , intelligence and personality traits, creativity index and personality traits. Mean and standard deviation of the creativity domains were also assessed.

To make computation easy there were numeric value selected. The values are mentioned below:

**Table 1: Correlation between Fluency and Personality Traits**

Variables	Correlation	Significance
Fluency x Neuroticism	-.155	p > .05
Fluency x Extraversion	.216	p > .05
Fluency x Openness	.121	p > .05
Fluency x Agreeableness	.160	p > .05
Fluency x Conscientiousness	.158	p > .05

The above table represents that there is no statistically significant correlation between Fluency and other personality traits.

**Table 2: Correlation between Originality and Personality Traits**

Variables	Correlation	Significance
Originality x Neuroticism	-.055	p > .05
Originality x Extraversion	-.093	p > .05
Originality x Openness	-.150	p > .05
Originality x Agreeableness	-.123	p > .05
Originality x Conscientiousness	-.100	p > .05

The above table represents that there is no statistically significant correlation between Originality and other personality traits.

**Table 3: Correlation between Abstraction of Titles and Personality Traits**

Variables	Correlation	Significance
Abstraction of Titles x Neuroticism	.114	p >.05
Abstraction of Titles x Extraversion	-.156	p > .05
Abstraction of Titles x Openness	-.153	p >.05
Abstraction of Titles x Agreeableness	-.247	p > .05
Abstraction of Titles x Conscientiousness	-.211	p > .05

The above table represents that there is no statistically significant correlation between Abstraction of Titles and other personality traits.

**Table 4 : Correlation between Elaboration and Personality Traits**

Variables	Correlation	Significance
Elaboration x Neuroticism	.239	p >.05
Elaboration x Extraversion	.124	p > .05
Elaboration x Openness	.115	p > .05
Elaboration x Agreeableness	-.052	p > .05
Elaboration x Conscientiousness	-.059	p >.05

The above table represents that there is no statistically significant correlation between Elaboration and other personality traits.

**Table 5: Correlation between Resistance to Premature Closure and Personality Traits**

Variables	Correlation	Significance
Resistance to Premature Closure x Neuroticism	.194	p >.05
Resistance to Premature Closure x Extraversion	.168	p > .05
Resistance to Premature Closure x Openness	.143	p > .05
<b>Resistance to Premature Closure x Agreeableness</b>	<b>.059</b>	<b>p &lt; .05*</b>
Resistance to Premature Closure x Conscientiousness	.109	p >.05

The above table represents that there is a statistically significant correlation between Resistance to Premature Closure and agreeableness of personality traits ( $p < .05$ ). Other personality traits such as Neuroticism, Extraversion, Openness, and Conscientiousness do not correlate with the creativity domain of Resistance to Premature Closure. Resistance to Premature Closure in Torrance Test of Creative Thinking (TTCT) represent that a creative person is able to keep open and delay closure enough to make the mental leap that makes possible original ideas. Less creative individual tend to leap to conclusions prematurely without considering the available information. Therefore it can be concluded that, individual who is fundamentally altruistic, sympathetic to others, eager to help them, and believe that others will be equally helpful to them do not tend to leap into conclusion prematurely without considering the available data.

**Table 6: Correlation between creativity domains and intelligence**

Variables	Correlation	Significance
Fluency x Intelligence	.131	$p > .05$
<b>Originality x Intelligence</b>	<b>.059</b>	<b><math>p &lt; .05^*</math></b>
Abstraction of Titles x Intelligence	-.286	$p > .05$
Elaboration x Intelligence	-.168	$p > .05$
Resistance to premature closure x Intelligence	-.215	$p > .05$

The above table represents that there is a statistically significant correlation between Intelligence and Originality of creativity domain ( $p < .05$ ). Other creativity domains such as Fluency, Abstraction of Titles, Elaboration and Resistance to Premature Closure do not correlate with intelligence. **It represents that individuals who are high in intellectual capacity gives more original and unusual responses in creativity domains.** Intelligence refers to individual's ability to understand complex ideas, to adapt effectively to the environment, to learn experience, to engage various forms of reasoning, to overcome obstacles by careful thoughts. Therefore it can be concluded that an individual who have higher intellectual level have more original thinking in creativity.

**Table 7: Correlation between creativity domains and intelligence**

Variables	Correlation	Significance
Neuroticism x Intelligence	-.215	$p > .05$
<b>Extraversion x Intelligence</b>	<b>.364</b>	<b><math>p &lt; .05^*</math></b>
Openness x Intelligence	.309	$p > .05$
<b>Agreeableness x Intelligence</b>	<b>.392</b>	<b><math>p &lt; .05^*</math></b>
<b>Conscientiousness x Intelligence</b>	<b>.400</b>	<b><math>p &lt; .05^*</math></b>

The above table represents that there is a statistically significant correlation between Extraversion and intelligence ( $p < .05$ ), Agreeableness and Intelligence ( $p < .05$ ) and Conscientiousness and Intelligence ( $p < .05$ ). Other creativity domains such as Neuroticism and Openness do not correlate with intelligence. **Therefore it represents that an individual with high IQ scores will be more sociable, active, cheerful in nature, energetic and optimistic. They will also develop altruistic behavior, believe that others**

**are honest and well-intended, straightforward i.e. frank, sincere and ingenious. As well as these individuals are purposeful, strong-willed and determined and probably become great musician or athletes without a reasonably high level of these traits.** Visa-versa can be also be interpreted that with the higher level of personality traits such as Extraversion, Agreeableness and Conscientiousness an individual will have higher score in intelligent tests.

The hypothesis that “There would be a positive correlation between creativity and personality traits among adolescence, there would be a positive correlation between intelligence and personality among adolescence, there would be a positive correlation between creativity and intelligence among adolescence.” has been retained. The results indicate that there is positive correlation between Resistance to Premature Closure of creativity domain and intelligence among adolescence. Other creativity domains such as Fluency, Originality, Elaboration, and Abstraction of titles do not correlate with intelligence. The results also indicate that there is Correlation between Resistance to Premature Closure of creativity domains and Personality Traits. Other personality traits such as Neuroticism, Extraversion, Openness, and Conscientiousness do not correlate with the creativity domains. Another result indicates that there is a correlation between Intelligence and Originality of creativity domain. Other creativity domains such as Fluency, Abstraction of Titles, Elaboration and Resistance to Premature Closure do not correlate with intelligence. One more result indicates that represents that there is correlation between Extraversion and intelligence, Agreeableness and Intelligence and Conscientiousness and Intelligence. Other creativity domains such as Neuroticism and Openness do not correlate with intelligence an ample amount of studies and also the findings of the present study have supported the proposed hypothesis.

## 7. Conclusion

By concluding all the results mentioned in the previous chapter it can be revealed that creative adolescence who are able to keep open and delay closure long enough to make the mental leap that makes possible ideas are more altruistic. These individuals develop sympathy towards others and eager to help them. They believe that others will be equally helpful in return. Adolescence having high resistance to premature closure tends to be more socially preferable and psychologically healthier. These individuals are more popular than antagonist individuals. As well as, they believe that others are honest and well-intended. Straightforwardness, humble and self-effacing are additional qualities of individuals with resistance to premature closure.

Majority of the adolescence who have high IQ scores tend to give more unusual and infrequent response in creativity domains. This shows that intelligent individuals are more open to new experiences and self-confident. They use to give novel and new ideas to the society which neither are nor copied neither based on the work of others. It is a work created with a unique style and substance. Therefore creativity and intelligence have a positive correlation, showing that intelligent individuals give more original ideas.

In addition to above conclusions the present study also indicates that individuals with high IQ scores tend to be more extraverts, fundamentally altruistic, purposeful, strong-willed and determined. In addition to liking people and preferring large groups and gatherings, extraverts are also assertive, active and talkative. They like excitement, stimulation and to be cheerful in disposition. They are upbeat, energetic and optimistic. Moreover, intelligent adolescence is sympathetic, eager to help others and believe that others will be equally helpful in return. These individuals are straightforward, humble, altruistic and self-effacing in nature.

In the present study it has also been found that intelligent individuals have self-control; involve in more active process of planning, organizing and carrying out task. They are conscientious individuals and probably a few people become great musician or athletes without a reasonably high level of this traits.

Intelligent individuals have a sense of being capable, sensible, prudent and effective. They are well prepared to deal with life and keep things in proper places. These individuals adhere to strictly to their ethical principles and scrupulously fulfill their moral obligations. As well as, they have high aspiration levels and work hard to achieve their goals. They are diligent, purposeful and have sense of direction in life. These individuals think carefully before acting.

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