Creativity and Temperament among Young Adults in Guwahati, Assam: A Correlational Analysis

Tahera Hoque Mozumdar[1], Phibapynbiang Dohtdong[2]

1 Assistant Professor, Royal School of Behavioural & Allied Sciences, The Assam Royal Global University,

2 Psychologist, Bethany Society, Shillong, Meghalaya
Email: mozumdartahi@gmail.com

Abstract:

Aim: *The current study aims to evaluate the relationship between creativity and temperament among young adults. It further seeks to find out if there are gender differences in creativity and temperament.*

Methods: *Young adults aged 18-25 years (N=70) participated in this study. Both male and female participants were in an equal sample (male, n = 35, female, n = 35). Samples were from Royal Global University, Assam. Self- report test questionnaires were used and interpreted. Pearson Correlation and Chi-Square test were used to analyse the data.*

Findings: *The results indicated that there is a significant relationship between creativity and temperament. Hence, there is a positive correlation between Creativity and Sanguine Temperament in males. However, there is a negative correlation between Creativity and Sanguine Temperament in females. There is a positive correlation between Creativity and Choleric Temperament in male, whereas in females, there is a negative correlation. In male, the result showed a negative correlation between Creativity and Phlegmatic Temperament, while in females, it showed a positive correlation. Correlation between Creativity and Melancholic Temperament in male is positive whereas in females, it's negative.*

Conclusion: *It can be concluded that there is a link/relationship between Creativity and Temperament among young adults. Also, there is no significant difference between male and female in Creativity. Furthermore, there is no significant difference between male and female in Temperament.*

Keywords: *Creativity, Temperament, Young Adults, Correlation.*

Introduction

Creativity and temperament shape young adults' personal growth, problem-solving skills, and social interactions (Mammadov et al., 2019). Creativity fosters independent thinking, adaptability, and innovation in academic and professional settings (Mazeh, 2020), thriving in emotionally secure environments that encourage exploration and risk-taking (Prabhu et al., 2008). Temperament influences emotional regulation, decision-making, and interpersonal relationships (Malik & Marwaha, 2019). Together, these traits build resilience and confidence, helping individuals thrive in diverse settings.

Creativity

Creativity involves generating original and adaptive ideas, contributing to various fields (Guilford, 1950). Darwin proposed that artistic expression evolved alongside sexual selection, shaping human creativity (Gabora & Kaufman, 2010). Aristotle linked creativity to psychological complexity, a notion echoed by Seneca and Shakespeare.

Contemporary creativity models emphasize its developmental and cognitive aspects. Kaufman and Beghetto's Four C Model categorizes creativity into:

Mini-c : Personal creativity emerging in the learning process.

Little-c : Everyday creative growth with skill development.

Pro-c : Professional-level creativity requiring practice and expertise.

Big-C : The Big-C level includes an evaluation of one's career and the entire body of work.

Guilford's Structure of Intellect Model identifies creativity as a function of divergent thinking, where multiple solutions are generated for a problem. He categorized mental tasks into operations, contents, and products, highlighting divergent production as key to creative thinking (Guilford, 1950).

Neuroscientific research supports the connection between creativity and emotional processing, indicating that creative individuals seek novelty similarly to emotional responses (Gu et al., 2018).

Temperament

Temperament refers to the innate core traits of an individual that is responsible for his or her reaction and interaction with the environment which forms a

general pattern. A person's approach to the world around them is organised by their temperament, which is a collection of traits. It is a component of personality that deals with emotional propensity and response.

Classical temperament theories categorize individuals as:

Sanguine : Social and energetic.
Choleric : Goal-oriented and ambitious.
Melancholic: Introspective and artistic.
Phlegmatic : Calm and dependable.

Thomas and Chess's infant temperament model classifies babies as easy, difficult, or slow-to-warm-up, shaping lifelong adjustment patterns (Rettew & McKee, 2005). Understanding temperament enhances emotional regulation, decision-making, and social functioning (Malik & Marwaha, 2019). The interplay between creativity and temperament highlights human adaptability and cognitive flexibility. Nurturing both fosters resilience, confidence, and meaningful contributions across domains. Educators and mentors play a crucial role in cultivating these traits by creating supportive environments that encourage exploration and growth (Kaufman, 2009).

Review of Literature:

Sakhavat Mammadov's (2021) meta-analysis of 228 studies (N = 413,074) examines the link between Big Five personality traits and academic performance. Cognitive ability is the strongest predictor (64% variance), while personality traits add 27.8%. Conscientiousness remains a key predictor (28% variance) even after controlling for cognitive ability. The impact of personality traits varies by education level, with openness, extraversion, and agreeableness being more influential in early schooling.

Marcin Jaracz's (2024) study finds higher creativity in individuals with bipolar affective disorder. Using Akiskal's affective temperament model, it explores the link between temperament and creativity. While temperamental traits enhance creativity, they also pose psychological risks and may lower academic performance. The study reviews research on temperament, mental health, and educational outcomes, highlighting implications for psychological and educational interventions.

Shengjie Lin et al. (2025) investigate how grit and curiosity predict creative achievement in adults (N = 522). Perseverance positively correlates with

creativity, while consistency of interest shows a negative relationship. Five curiosity dimensions further predict creativity, with thrill-seeking linked to achievements in both art and science, and deprivation sensitivity associated with artistic creativity. The study suggests curiosity plays a greater role in creative success than consistency of interest.

Rationale of the Study

Creativity is a fundamental aspect of human cognition, influencing problem-solving, innovation and self-expression (Mammadov et al., 2019). At the same time, temperament, as an inherent personality characteristic, plays a crucial role in shaping an individual's behaviour, emotions and cognitive processes. Inspite of importance of both creativity and temperament, limited research has explored their interrelationship, particularly among young adults in the Indian context.

Young adulthood is a critical developmental stage marked by significant cognitive, emotional and social change. During this phase, individuals often explore their creative potential while navigating various personal and professional challenges. Understanding how temperament influences creativity can provide valuable insights into how personality

Traits affect cognitive and emotional functioning, ultimately contributing to personal and professional growth.

Furthermore, the study seeks to address the role of gender in creativity and temperament. While previous research has examined gender differences in creativity and personality traits, findings remain inconsistent. Some studies suggest that males and females exhibit varying levels of creativity due to differences in personality traits, socialization patterns, and environmental influences. However, there is a lack of empirical evidence focusing on young adults in the context of Guwahati, Assam (Nath, 2017). By investigating the relationship between creativity and temperament among young adults, this study fills this research gap and contribute to a deeper understanding of individual differences in creativity. The findings could have implications for educational and psychological interventions designed to nurture creative potential and personal development in young adults (Nath, 2017; Gardner, 1988).

Objectives

1. To find out if there is any significant difference between men and women young adults in regard to Creativity.
2. To evaluate whether there is any significant difference between men and women young adults in case of Sanguine Temperament, Choleric Temperament, Phlegmatic Temperament and Melancholic Temperament.
3. To examine whether there is any relationship between Creativity and Sanguine Temperament among male and female young adults.
4. To evaluate whether there is any relationship between Creativity and Choleric Temperament mong male and female young adults.
5. To find out if there is any relationship between Creativity and Phlegmatic Temperament among male and female young adults.
6. To examine whether there is any relationship between Creativity and Melancholic Temperament among male and female young adults.

Hypotheses

1. There will be no significant difference between men and women young adults in the case of Creativity.
2. There will be no significant difference between men and women young adults in case of Sanguine Temperament, Choleric Temperament, Phlegmatic Temperament and Melancholic Temperament.
3. There will be no relationship between Creativity and Sanguine Temperament among male and female young adults.
4. There will be no relationship between Creativity and Choleric Temperament among male and female young adults.
5. There will be no relationship between Creativity and Phlegmatic Temperament among male and female young adults.
6. There will be no relationship between Creativity and Melancholic Temperament among male and female young adults.

Alternative Hypotheses

1. There will be significant differences between men and women young adults in Creativity.

2 There will be significant differences between men and women young adults in the case of Sanguine Temperament, Choleric Temperament, Phlegmatic Temperament and Melancholic Temperament.

3 There will be a relationship between Creativity and Sanguine Temperament among male and female young adults.

4 There will be a relationship between Creativity and Choleric Temperament among male and female young adults.

5 There will be relationship between Creativity and Phlegmatic Temperament among male and female young adults.

6 There will be relationship between Creativity and Melancholic Temperament among male and female young adults.

Method:

In the present study, Correlational research design was employed.

Sample

The sample comprised 70 young adults out of which 35 for young males and 35 for young females. Their age range was from 18 to 25 years. Samples were drawn through a purposive sampling method. Samples were selected from Royal Global University, Guwahati, Assam.

Inclusion Criteria

1. Persons in the age group of 18-25 years.
2. Persons having Basic English proficiency.
3. Equal number of males and females.

Exclusion Criteria

1. Persons who are not mentally and physically healthy.
2. Those who did not give voluntary consent for participation.

Measures

The following measures were used for data collection:

i. Personal Information data sheet: It was prepared in English language, by both the authors, which gathered information about socio-demographic details of the participants.

ii. The OSPP Four Temperament Scale: that was revised by Conrad Hock. The OSPP Four Temperament Scale that was revised by Conrad Hock. This test was used to assess the temperaments of the young adults. Four dimensions and 50 items were included in the test. The four dimensions which were included are: Sanguine, Choleric, Phlegmatic and Melancholic. The four dimensions which were included are:

(a) Sanguine **(**Blood)–People who are high on Sanguine are sociable, charismatic, and optimistic. They can also be impulsive, shameless and exaggerator.

(b) Choleric (Yellow Bile) – They may be ambitious, passionate and efficient. The darker side may be aggressiveness, impatient, argumentative.

(c) Phlegmatic (Phlegm)- People may be relaxed, kind and observant. They may also be shy, stubborn and lazy.

(d) Melancholic (Black Bile)- They may be thoughtful, organised and creative. They can also be obsessive, perfectionist and moody.

iii. Kaufman Domains of Creativity Scale (K-DOCS): Kaufman Domains of Creativity Scale (K-DOCS): developed by James C. Kaufman in 2012, is a self-report questionnaire that measures creativity across five domains: self/everyday creativity, scholarly creativity, performance creativity, mechanical/scientific creativity and artistic creativity. The scale has high reliability with Cronbach's alpha ranging from 0.78 to 0.87, and strong construct validity. There are 50 items in this scale.

Statistical Analysis

Statistics namely Percentage, Chi-square Test and Pearson Coefficient Correlation were computed to test the null hypotheses formed for this investigation.

Procedure

For the present study, data was collected for hypothesis testing. The young adult males and females were included from the age group of 18-25 years. Data collection was taken from Royal Global University, Assam. Permission was taken from the concerned institution. The participants were asked for their consent and rapport was established. The purpose of the study was explained to them and assured that their information will be held confidential. Instructions were given to the participants regarding the questionnaires. To

begin, the socio-demographic Questionnaire was given to them before they started with the OSPP Temperament Test and the Kaufman Domains of Creativity Scale. The scoring of different tools was done as per scoring procedure given in the respective manual. The data was collected and statistical analysis was done using Frequency, Percentage, Chi-square and Pearson Correlation. The research was concluded based on the finding.

Result

Table 1: Distribution of male and female young adults by their Creativity Level

Gender	N	V. High		High		Medium		Low		V. Low		Chi Square Value	df	Level of Significant
		f	%	f	%	f	%	f	%	f	%			
Male	35	5	14	22	62.9	7	20	1	2.85	0	0	5.439	4	Non-significant
Female	35	11	31	18	51.1	5	14.28	1	2.85	0	0			
Total	70	16	45	40	114	12	34.28	2	5.7	0	0			

Table 1 shows that the majority of male (62.9%) and female (51.1%) young adults have a “High” level of Creativity. On the other hand, larger percentages of females (31%) are found to have “Very High” levels of Creativity than the male (14%). Majority male (20%) are found in the level of “Medium” Creativity than the females (14.28%). Only 2.85% of male and females have a “Low” level of Creativity. It must be noted that no respondents belong to the “Very Low” level of Creativity.

Although Table 1 shows differences between male and female young adults regarding their various Creativity levels, the Chi square value i.e., 5.439 is found to be non- significant at both 5% and 1% level. Consequently, the null hypothesis states, **“There will be no significant difference between men and women young adults in the case of Creativity”,** cannot be rejected. Thereby it can be stated that there is no significant difference between male and female young adults regarding various levels of Creativity.

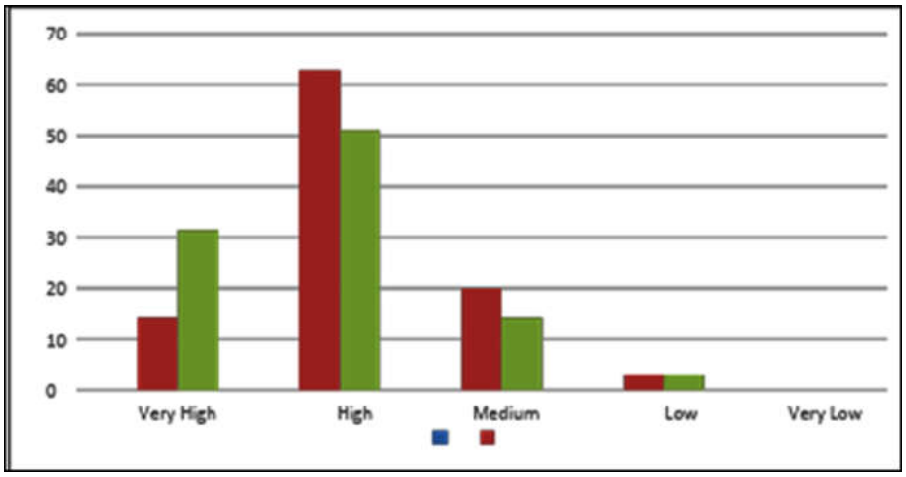

Fig. 1 : Graphical of male and female young adults regarding various level of Creativity

Table 2 : Distribution of male and female young adults in various areas of Temperament

Gender	N	Sanguine Temperament		Choleric Temperament		Phlegmatic Temperament		Melancholic Temperament		Chi Square Value	df	Level of Significant
		f	%	f	%	f	%	f	%			
Male	35	15	42.8	4	11.4	6	17.1	10	28.5	5.439	4	Non-significant
Female	35	8	22.8	2	5.71	8	22.8	17	48.5			
Total	70	23	65.6	6	17.1	14	39.9	27	77.1			

Table 2 shows that the majority of male (42.85%) are high on Sanguine whereas the majority of females (48.57%) are high on melancholic. On the other hand, larger percentages of male (11.42%) are found in Choleric than females (5.71%). However, larger percentages of females (22.85%) are found in Phlegmatic than male (17.14%).

Although table 2 shows differences between male and female young adults regarding their various areas of temperament, the Chi-square value i.e., 4.897 is found to be non-significant at both 5% and 1% level. Consequently, the null hypothesis states, "There will be no significant difference between men and women young adults in case of Sanguine Temperament, Choleric Temperament, Phlegmatic Temperament and Melancholic Temperament." cannot be rejected. Therefore, it can be stated that there is no significant difference between male and female young adults regarding their temperament. A graphical presentation is depicted below (Figure 2).

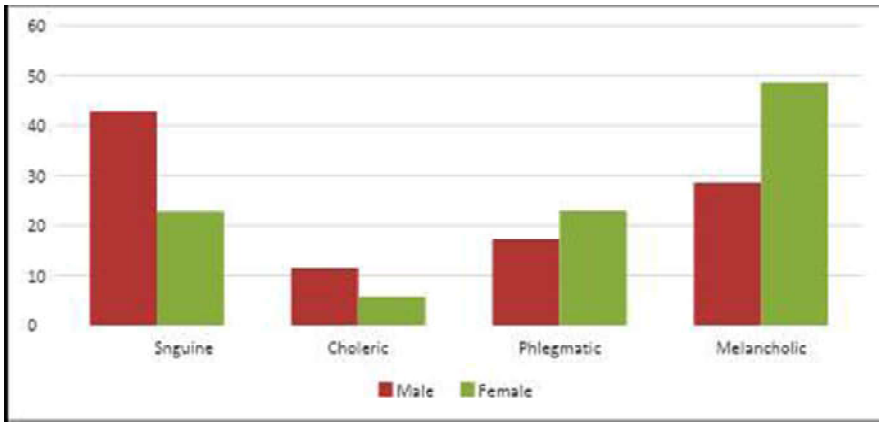

Fig. 2: Graphical representation of male and female young adults in various areas of Temperament

Table 3: Pearson Correlation between Creativity and Sanguine Temperament among male and female young adults

	Gender	N	Pearson Correlation Value	Interpretation
Correlation between Creativity and Choleric Temperament	Male	35	0.025	Positive Correlation
	Female	35	-1	Negative Correlation

Table 3 shows that there is positive correlation between Creativity and Sanguine in the case of male (0.157). On the other hand, in the case of females (-0.237) negative correlation was found between Creativity and Sanguine. As in case of both male (positive correlation) and female (negative correlation) relationship has been found between creativity and sanguine, therefore the null hypothesis states, **"There will be no relationship between Creativity and Sanguine Temperament among male and female young adults**", is rejected.

Table 4: Pearson Correlation between Creativity and Choleric Temperament among male and female young adults

	Gender	N	Pearson Correlation Value	Interpretation
Correlation between Creativity and Phlegmatic Temperament	Male	35	-0.2635	Negative Correlation
	Female	35	0.0436	Positive Correlation

Table 4 shows that there is positive correlation between Creativity and Choleric in the case of male (0.025). On the other hand, in the case of females (-1) negative correlation was found between Creativity and Choleric. As in case of both male (positive correlation) and female (negative correlation) relationship has been found between creativity and choleric, therefore the null hypothesis states, **"There will be no relationship between Creativity and Choleric Temperament among male and female young adults**." is rejected.

Table 5: Pearson Correlation between Creativity and Phlegmatic Temperament among male and female young adults

	Gender	N	Pearson Correlation Value	Interpretation
Correlation between Creativity and Phlegmatic Temperament	Male	35	-0.2635	Negative Correlation
	Female	35	0.0436	Positive Correlation

Table 5 shows that there is a negative correlation between Creativity and Phlegmatic in the case of male (-0.263). On the other hand, in case of females (0.043) positive correlation was found between Creativity and Phlegmatic. As in case of both male (positive correlation) and female (negative correlation) relationship has been found between creativity and phlegmatic, therefore the null hypothesis states, **"There will be no relationship between Creativity and Phlegmatic Temperament among male and female young adults**", is rejected.

Table 6: Pearson Correlation between Creativity and Melancholic Temperament among male and female young adults

	Gender	N	Pearson Correlation Value	Interpretation
Correlation between Creativity and Melancholic Temperament	Male	35	0.64015	Positive Correlation
	Female	35	-0.30163	Negative Correlation

Table 6 shows that there is a positive correlation between Creativity and Melancholic in the case of male (0.640). On the other hand, in the case of females (-0.301) negative correlation was found between Creativity and

Melancholic. As in case of both male (positive correlation) and female (negative correlation) relationship has been found between creativity and choleric, therefore the null hypothesis states, **"There will be no relationship between Creativity and Melancholic Temperament among male and female young adults."** is rejected.

Discussions

Gender Differences in Case of Creativity

The above Table 1 indicates no significant difference in creativity between male and female participants which confirms that gender does not influence creativity among young adults of Guwahati, Assam. This present finding is consistent with the previous studies where they found that there are no significant differences between men and women regarding their creative thinking (Fichnova, 2002; Misra, 2003 as cited in Taylor & Barbot, 2021).

In recent years both males and females have had similar educational opportunities and access to creative learning environments, which play a crucial role in fostering creativity (Nori et al., 2018) This suggests that traditional gender stereotypes surrounding creativity may be decreasing, allowing both genders to engage equally in problem-solving and artistic expression (Nori et al., 2018). Therefore, this equal treatment for both male and female young adults might be the reason for the present findings.

Gender Differences in Case of Temperament:

Table 2 above shows that there is no significant difference between male and female young adults regarding their temperament. But the present finding contradicts the previous study conducted by Olino, T. M., et al (2013) that there is a significant difference between male and female young children regarding their temperament traits. Furthermore, the lack of significant gender differences in temperament in the present study may be attributed to the homogeneity of the sample. Since most participants shared similar economic backgrounds and parenting styles, these environmental factors may have played a crucial role in shaping their temperament, minimizing potential differences between males and females.

The notion that temperament is primarily shaped by biological sex has been challenged by contemporary psychological research (Kiff et al., 2011), which suggests that temperament is a dynamic trait influenced by a complex interplay

of environmental, social, and individual factors. This perspective aligns with the findings of Rothbart et al., who posit that temperament is not a fixed, gender-based characteristic, but rather a dynamic trait influenced by a range of environmental and individual factors (Purper Ouakil et al., 2009).

Correlation between Creativity and Different Types of Temperament

In Table 3, it indicates that in the case of male, there is positive correlation (0.157) between Creativity and Sanguine indicating if the Sanguine trait is more dominant, creativity is also higher. People who are high on Sanguine are sociable, charismatic, and optimistic. Creativity doesn't mean talent or skill only, but it also includes problem solving and maintaining good social relationships. Hence, the findings mean that the more the male young adults become extravert; the more the creativity level will also be increased. The more socially connected with other people; the more they would get creative ideas. The present finding is consistent with Mammadov et.al's study (2019).

Personality traits significantly influence an individual's creative potential, with openness playing a crucial role. Individuals high in openness exhibit greater curiosity, adaptability, and receptiveness to new ideas, cultures, and perspectives, fostering creative thinking and problem-solving (Fürst & Grin, 2023; Raya et al., 2023). Their mental flexibility enables them to navigate complex and uncertain situations, a key attribute of creativity.

Additionally, the extraverted nature of Sanguine individuals enhances creativity through social engagement. Frequent interactions expose them to diverse viewpoints, stimulating new ideas and alternative solutions (Thadea et al., 2018). Their charisma and sociability further strengthen social connections, which serve as sources of inspiration and creative support (Huang, 2019; Sangkala, 2012). Thus, both openness and extraversion contribute to creative expression by fostering intellectual curiosity and enriching social experiences.

Table 3 also shows that in contrast to the male counterparts, females exhibited an opposite trend, showing a negative correlation (-0.23) between creativity and the Sanguine trait. This suggests that as their sociability increases, their creativity tends to decrease. This negative correlation between creativity and the Sanguine trait in female young adults may stem from their strong social orientation, emotional engagement, and cultural expectations (Gardner, 1988).

Women often take on emotionally demanding roles that may channel their creative energy toward social problem-solving rather than traditional creative tasks (Berlow et al., 2021). Moreover, constant social interaction can limit the solitude and deep thinking essential for creativity (Nori et al., 2018). Highly Sanguine females may derive greater fulfillment from interpersonal connections rather than from measurable creative outputs, meaning their creativity is more likely to emerge in relational contexts rather than in conventional assessments (Lin et al., 2011; Huang, 2019).

According to Galen's theory, the Sanguine personality type is associated with being sociable, energetic, and fun-loving (Thadea et al., 2018). This strong emphasis on social interactions may lead to a preference for emotional engagement over independent creative pursuits (Eagly & Wood as cited by Ãðåáíåâà, 2021). Additionally, cultural norms often pressure women to conform and maintain social harmony, potentially discouraging risk-taking and unconventional thinking, as discussed by Furnham (Weisberg et al. 2011). These factors collectively contribute to the observed negative correlation in this current study, suggesting that creativity in highly Sanguine females may require alternative assessment approaches. Therefore, further research is needed for a more in-depth inquiry into this phenomenon.

The findings in Table 4 above indicate a positive correlation (0.02) between Creativity and Choleric traits among males, suggesting that as Choleric traits increase, so does creativity. A possible reason for this finding lies in the inherent characteristics of the Choleric temperament, which naturally align with traits that foster creativity. Choleric individuals are goal-driven, proactive, and highly independent thinkers, all of which are essential qualities for innovative problem-solving (Mazeh, 2020). Their assertiveness and confidence allow them to take risks, challenge conventional ideas, and explore new solutions, further enhancing creative output.

Therefore, the positive correlation between Choleric traits and creativity in males can be defended by considering how these personality traits foster an environment conducive to innovation, decision-making, and adaptability—key elements of creative thinking (Gardner, 1988).

However, Table 4 reveals a negative correlation (-1) between creativity and Choleric traits among female young adults. Hence, the variables here move in opposite directions. Women with strong Choleric traits—marked by

dominance, assertiveness, and competitiveness, often face societal resistance, leading to suppressed creative expression due to conformity pressures (Chikwe et al., 2024). Their focus on efficiency, leadership, and structured decision-making may overshadow imaginative thinking, limiting creative risk-taking. Additionally, the need to constantly prove themselves in competitive environments can reduce the flexibility and playfulness essential for creativity (Wang et al., 2021). Moreover, assertive women often receive less encouragement for creative expression, as traditional roles prioritize leadership over innovation (Malhotra, 2023). Collective influence of these factors might be the reason for present finding.

The findings in Table 5 shows in the case of male (-0.26), there is a negative correlation between creativity and phlegmatic temperament. This finding does not necessarily indicate a lack of creativity but rather a difference in how creativity is expressed. Phlegmatic individuals are known for their calm, rational, and observant nature (Michel, 2020), which often translates into structured and methodical problem-solving rather than spontaneous or risk-taking creativity. Their preference for stability and routine may make them less inclined to engage in unconventional or highly expressive creative endeavours, which are commonly used in creativity assessments.

Moreover, Phlegmatic temperament individuals excel in diplomacy, interpersonal relations (Okal et al., 2012), and pragmatic decision-making. Their creativity may manifest in ways that prioritize harmony, efficiency, and logical solutions rather than artistic innovation or abstract thinking. Since traditional measures of creativity often emphasize originality and divergent thinking, the structured and socially adaptive creativity of Phlegmatic individuals might not be fully captured. This suggests that the observed negative correlation does not necessarily imply a lack of creative ability among male young adults but rather a different form of creative expression that requires alternative assessment methods and a further more in-depth research study.

On the contrary, Table 5 reveals a positive correlation (0.04) between creativity and Phlegmatic traits in case of female young adults, indicating that an increase in Phlegmatic tendencies corresponds with higher creativity levels. This association can be attributed to the defining characteristics of the Phlegmatic personality type.

Phlegmatic individuals are known for their calm, observant, and thoughtful nature (Гребневаet al., 2021). Their preference for deep reflection and structured problem-solving fosters a methodical approach to creativity. Unlike more impulsive personalities, they emphasize patience and attention to detail, enabling them to develop well-thought-out ideas (Gardner, 1988; Mammadov et al., 2019). This deliberate approach enhances their ability to generate innovative solutions, especially in contexts that demand emotional intelligence and strategic thinking.

Moreover, Phlegmatic temperament women often express creativity in interpersonal and social settings. Their ability to maintain stability and navigate complex social interactions allows them to develop innovative solutions in areas requiring diplomacy, empathy, and communication. While this form of creativity may not always align with traditional assessments of creative potential, it remains a vital aspect of creative thinking, particularly in fostering cooperation and problem-solving in social and professional environments. The contrasting findings between males and females suggest that Phlegmatic traits influence creative expression differently across genders, emphasizing the need for more nuanced assessments of creativity.

In the Table 6 above the findings indicate a positive correlation (0.64) between melancholic traits and creativity, observed among males. This suggests that as melancholic tendencies increase, so does creative expression. Melancholia is often associated with deep introspection, emotional intensity, and an ongoing state of uncertainty (Gabora & Holmes, 2013), which can serve as a catalyst for creative activity.

Melancholic temperament individuals, particularly men, tend to internalize their emotions and reflect deeply on their thoughts and experiences. When these emotions are directed into creative outlets, they often result in innovative and emotionally rich artistic and intellectual works. This phenomenon is evident in the case of Vincent van Gogh, whose melancholic disposition influenced his renowned masterpiece The Starry Night ht. (Shah et al., 2019). Many artists, poets, and musicians similarly transform their emotional struggles into creative expression, illustrating the connection between deep emotional experiences and artistic creativity. Hence, for males, melancholic introspection appears to enhance creativity by providing a reservoir of emotional depth from which they draw inspiration.

On the other hand, Table 6 also reveals a negative correlation (-0.30) between melancholic traits and creativity among females, indicating that as melancholic tendencies increase, creative expression declines. This contrast suggests that excessive melancholia in women may hinder rather than stimulate creativity. Emotional sensitivity, social expectations, and psychological burdens may contribute to this gender-based difference, as women may struggle to channel their melancholic tendencies into productive creative outlets in the same way as their male counterparts (Amabile, 2017). Conversely, women who exhibit lower melancholic tendencies may experience greater emotional stability, allowing for enhanced cognitive processing and creativity.

These gender-based differences in the relationship between melancholia and creativity highlight the need for further research. Future research should aim to provide a deeper understanding of these dynamics, offering alternative frameworks for assessing creativity across genders.

Conclusion

This present study highlights that while gender does not significantly influence overall creativity, temperament plays a crucial role in shaping creative expression. Sanguine and Choleric traits enhance creativity in males but show an inverse relationship in females, possibly due to sociocultural expectations. Similarly, melancholic traits foster creativity in males but hinder it in females, reflecting emotional and cognitive differences. Phlegmatic traits also influence creativity differently across genders. These findings emphasize the need for nuanced creativity assessments and further research on the interplay between personality, gender, and sociocultural factors in creative expression.

References

Amabile, T. M. (2017). *Creativity in context: Update to the social psychology of creativity.* Routledge.

Berlow, S., Falk, E. B., Scholz, C., and Bassett, D. S. (2021). The role of social networks in creative problem-solving. *Trends in Cognitive Sciences,25*(5),385-399. https://doi.org/10.1016/j.tics.2021.02.007

Chikwe, A. C., Eke, C. O., and Nwachukwu, P. O. (2024). Gender dynamics in leadership and creativity: Examining the influence of personality traits. *Journal of Organizational Psychology, 12*(1), 34-49.

Eagly, A. H., and Wood, W. (2021). The origins of sex differences in human behavior: Evolved dispositions versus social roles. In Гребнева, E. (Ed.), *Gender and social behavior* (pp. 45-67). Academic Press.

Fichnova, K. (2002). Creativity and gender: Examining differences in divergent thinking. *Journal of Educational Psychology, 94*(3), 567-575.

Fürst, G., and Grin, F. (2023). Openness to experience as a predictor of creativity and innovation. *Creativity Research Journal, 35*(2), 98-112. https://doi.org/10.1080/10400419.2023.2171123

Gabora, L., and Kaufman, S. B. (2010). The Cambridge Handbook of Creativity: Evolutionary Approaches to Creativity. In arXiv (Cornell University). Cornell University. http://arxiv.org/abs/1106.3386

Gabora, L., and Holmes, A. (2013). The psychology of creative inspiration: Emotional depth and creative expression. *Creativity Research Journal, 25*(1), 25-33.

Gardner, H. (1988). *Frames of mind: The theory of multiple intelligences.* Basic Books.

Gu, S., Gao, M., Yan, Y., Wang, F., Tang, Y.-Y., and Huang, J. H. (2018). The Neural Mechanism Underlying Cognitive and Emotional Processes in Creativity [Review of The Neural Mechanism Underlying Cognitive and Emotional Processes in Creativity]. Frontiers in Psychology, 9. Frontiers Media. https://doi.org/10.3389/fpsyg.2018.01924

Guilford, J. P. (1950). Creativity. In American Psychologist (Vol. 5, Issue 9, p. 444). American Psychological Association. https://doi.org/10.1037/h0063487

Huang, J. (2019). The role of social interactions in creativity: A meta-analysis. *Psychological Bulletin, 145*(3), 231-256. https://doi.org/10.1037/bul0000187

Jaracz, M. (2024). Temperament and creativity – implications for mental health and education. Journal of Education Health and Sport, 70, 55530. https://doi.org/10.12775/jehs.2024.70.55530

Kämpchen, M. (2017). The paradox of melancholia: Between despair and creative brilliance. *Journal of Aesthetic Psychology, 32*(4), 255-267.

Kiff, C. J., Lengua, L. J., and Zalewski, M. (2011). The interplay of temperament and parenting in child development. *Developmental Review, 31*(3), 89-112. https://doi.org/10.1016/j.dr.2011.07.002

Lin, S., Ivcevic, Z., Kashdan, T. B., & Kaufman, S. B. (2024). Curious and Persistent, but not Consistent: Self regulation Traits and Creativity. The Journal of Creative Behavior. https://doi.org/10.1002/jocb.638

Lin, Y., Hsu, C., and Cheng, C. (2011). The effects of cultural expectations on female creativity. *International Journal of Creativity and Problem Solving, 19*(1), 15-27.

Malhotra, R. (2023). Gender, leadership, and creativity: Overcoming societal resistance. *International Journal of Gender Studies, 8*(2), 112-130.

Malik, F., & Marwaha, R. K. (2019). Developmental Stages of Social Emotional Development In Children.

Mammadov, S., Ward, T. B., & Runco, M. A. (2019). Personality predictors of creativity: A meta-analysis. *Personality and Individual Differences, 142*, 117-128. https://doi.org/10.1016/j.paid.2019.02.003

Mammadov, S. (2021). Big Five personality traits and academic performance: A meta analysis. *Journal of Personality*, *90*(2), 222–255. https://doi.org/10.1111/jopy.12663

Mazeh, T. (2020). The choleric personality and creative leadership: An empirical study. *Leadership and Creativity Journal, 15*(1), 21-38.

Mazeh, Y. (2020). What Is Creativity and Why It Is So Important? In OALib (Vol. 7, Issue 3, p. 1). Scientific Research Publishing. https://doi.org/10.4236/oalib.1105562

Michel, A. (2020). The phlegmatic temperament and its impact on problem-solving and creativity. *Journal of Personality Psychology, 37*(2), 87-103.

Misra, R. (2003). Gender and creativity: Examining cognitive flexibility. In Taylor, C., and Barbot, B. (Eds.), *Perspectives on creative thinking* (pp. 109-125). Academic Press.

Nath, L. (2017). A Study on Creativity of Secondary School Students in Lakhimpur and Dhemaji Districts of Assam. In International Journal of Science and Research (IJSR) (Vol. 6, Issue 1, p. 1571). https://doi.org/10.21275/18011704

Nori, H., Piyapong, R., and Takahashi, K. (2018). Educational opportunities and creativity: A cross-cultural study. *Educational Psychology Review, 30*(2), 243-260. https://doi.org/10.1007/s10648-017-9412-3

Olino, T. M., Klein, D. N., Dyson, M. W., Rose, S. A., and Durbin, C. E. (2013). Temperament profiles in early childhood: Gender differences and developmental pathways. *Journal of Abnormal Child Psychology, 41*(3), 381-395. https://doi.org/10.1007/s10802-012-9686-5

Okal, M., Waweru, P., and Njogu, D. (2012). The role of phlegmatic temperament in interpersonal relations and workplace creativity. *African Journal of Psychology, 14*(2), 67-80.

Prabhu, V. P., Sutton, C. D., and Sauser, W. I. (2008). Creativity and Certain Personality Traits: Understanding the Mediating Effect of Intrinsic Motivation. In Creativity Research Journal (Vol. 20, Issue 1, p. 53). Taylor & Francis. https://doi.org/10.1080/10400410701841955

Purper Ouakil, D., Ramoz, N., and Lepagnol Bestel, A. M. (2009). Temperament and its role in personality development: A neurobiological perspective. *Journal of Child Psychology and Psychiatry, 50*(5), 497-509. https://doi.org/10.1111/j.1469-7610.2008.02061.x

Raya, M., Fuentes, D., and Escalante, P. (2023). The influence of openness on creative problem-solving: A neuropsychological perspective. *Creativity and Innovation Management, 32*(1), 44-59. https://doi.org/10.1111/caim.12456

Rettew, D. C., and McKee, L. G. (2005). Temperament and Its Role in Developmental Psychopathology [Review of Temperament and Its Role in Developmental Psychopathology]. Harvard Review of Psychiatry, 13(1), 14. Lippincott Williams and Wilkins. https://doi.org/10.1080/10673220590923146

Sangkala, S. (2012). The role of social intelligence in fostering creativity. *Asian Journal of Social Psychology, 15*(4), 321-335.

Shah, P., Gill, T., and Roberts, H. (2019). The emotional depth of creative individuals: Exploring the role of melancholia in artistic expression. *Psychology of Aesthetics, Creativity, and the Arts, 13*(3), 289-302.

Thadea, F., Wardhani, A., and Basir, F. (2018). The sanguine personality and creative expression: A cross-cultural study. *International Journal of Psychology, 53*(2), 192-205.

Wang, L., He, J., and Zhang, Y. (2021). The role of gender in creative self-efficacy and risk-taking. *Journal of Creative Behavior, 55*(4), 618-632. https://doi.org/10.1002/jocb.502

Weisberg, R. W., DeYoung, C. G., and Hirsh, J. B. (2011). Gender differences in creativity: Theoretical perspectives and empirical findings. *Creativity Research Journal, 23*(4), 330-348.