Revue d'études en psychologie de la déviance
Revue internationale semestrielle ISSN :2602-554X EISSN :2773-2568
Volume : 08 Numéro 02 Année 2023 pp :557-570

Exploring Variations in Personality Traits Across The Big Five Factors By Gender among Students

Mohammed Ilyes Direm Cherifa Chennouf
Laboratory of mental health, education, talent and creativity
Blida 2 University, Algeria Blida 2 University, Algeria
ilyesdirem@gmail.com fa.chennouf@gmail.com

Received date 20/09/2023 Acceptance date 19/10/2023

Abstract:

This study aimed to investigate gender differences in the Big Five factors of personality among 74 students (46 females and 28 males) using the Five Factors Inventory (NEO-FFI) developed by Costa and McCrae. The research revealed statistically significant variations between the sexes in terms of neuroticism, favoring females who scored higher in this trait. However, the study did not detect any significant gender differences in the personality traits of agreeableness, openness, extraversion, and conscientiousness. These findings underscored the prominence of neuroticism as the primary distinguishing factor in personality traits between male and female students within this particular sample.

Keywords: Personality traits, Big Five Factors, gender differences, students.

Introduction:

Education is a cornerstone of societal progress, serving as the conduit through which knowledge, skills, and values are transmitted to future generations. Within the realm of academia, a topic of perennial interest and debate revolves around the presence and implications of gender differences in academic performance and pursuits. Throughout history, these differences have been observed across various domains, from classroom engagement to career choices. Understanding the intricacies of these gender disparities is not merely an academic exercise; it holds profound significance for educational policy and the broader social fabric.The study of personality has long been a captivating field of inquiry, delving into the intricacies of what makes individuals unique. One of the most reliable methods that scientists have developed to study personality is to describe its traits. A trait is a specific component of personality that describes certain tendencies a person has in the way they think, feel, and behave. From this perspective, personality traits are seen as relatively enduring and consistent patterns of behavior, thought, and feeling across a variety of contexts and situations (Roberts, 2009). Therefore, personality traits are dimensions that describe individual differences in the tendency to exhibit consistent patterns of thoughts, emotions, and actions (McCrae & Costa, 1990, p. 23). According to Allport (1937), human personality results from a combination of biology and the environment. Both acquired and innate factors contribute to the development and expression of personality traits. This assumption has been supported by numerous rigorous studies, primarily involving twins. The social component continues to play a significant role in shaping behaviors, thoughts, and other epigenetic factors (Krueger et al., 2008). A person's personal characteristics significantly influence their behavior and interactions with others. They thus largely determine one's attitudes towards themselves and their environment. Other psychological factors, such as the self-system, also exert an influence on individuals' behaviors (Lallouna, 2022). For this reason, it is important to have a detailed interpretation of the data obtained through high-precision measurements of personality traits in practically all spheres of human activity, whether academic or otherwise.

After many years of research on personality trait theory, the Big Five model emerged through the use of factor analysis as a method to reduce the dimensionality of data. This model includes vocabulary that describes personality and social interactions. It was first introduced by Lewis Goldberg in 1981 and has since become a mainstream scientific approach in the field of personality psychology. Various studies have supported the structure proposed by Goldberg, known as the lexical hypothesis, in which the author suggests a set of personality characteristics derived from one hundred linguistic personality descriptors. This model has been employed in numerous cross-cultural studies that have confirmed its structural validity through factor analysis. (Saucier, et al., 2000). Subsequently, Costa and McCrae proposed a five-factor model consisting of five dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (McCrae & John, 1992). Openness to experience encompasses intellectual curiosity, active imagination (fantasy), aesthetic sensitivity, attentiveness to inner feelings, preference for variety (adventurousness), and challenging authority. Extraversion involves sociability, energy, seeking stimulation/comfort, and assertiveness. Conscientiousness pertains to rigor, reliability, self-control, efficiency, and organization. Agreeableness relates to kindness, selflessness, cooperation, and compassion. Lastly, neuroticism addresses anxiety, depression, anger, vulnerability, and emotional instability (Costa et al., 2001). Ever since its inception, the Five Factor Model, often referred to as the Big Five, has been widely recognized as the most accurate description of human personality traits.

Several studies have validated the scientific nature of this model as well as the questionnaires or inventories used to measure the main features. Although there is still a theoretical debate

concerning the most appropriate number of factors to categorize personality, this debate has given rise to several models, the most famous of which are those which propose 3 factors, 5 factors, 8 factors or 16 factors (Woods, Hampson, 2005). But, according to Woods and Hampson, consensus has grown on the Big Five model.

One intriguing dimension within this domain is the exploration of gender differences in the Big Five factors of personality. These factors offer valuable insights into the ways in which individuals perceive, interact with, and adapt to their social and emotional environments. Over the years, researchers have sought to unravel whether and how gender influences the expression and distribution of these personality traits.

Numerous studies have investigated gender differences in students using the Five Factors Model, as demonstrated in the Awlad Hadar study (2017), which examined a sample of 500 students. The findings revealed statistically significant variations, with girls scoring higher in measures of introversion, agreeableness, conscientiousness, and openness, while boys showed higher scores in the measure of neuroticism. Another study conducted by Alkhamaiseh and Alzoubi (2020) in Jordan aimed to identify the five major personality factors among students using a sample of 362 students from Al-Balqa Applied University. The results showed that conscientiousness was at a high level, whereas neuroticism was at a medium level. Additionally, the study found that females exhibited higher levels of extraversion and conscientiousness compared to males. Based on data from a German population sample, gender differences were observed, with females scoring higher than males in openness, neuroticism, conscientiousness, and agreeableness (Rammstedt, 2007). When examining gender differences in personality traits across cultures, women tended to score higher in neuroticism, agreeableness, warmth, and openness, while men scored higher in assertiveness and openness to new ideas (Costa et al., 2001).

The present study continues along the described path. This investigation is not merely an academic pursuit but holds practical implications for understanding human behavior, relationships, and even societal dynamics. Studying gender differences in the Big Five factors of personality among students is crucial for understanding the diversity of human personalities, as well as how they might be influenced by gender. Moreover, this knowledge informs educational approaches and student support mechanisms, making education more effective and inclusive, while also guiding career choices for students of different genders. Additionally, it sheds light on why individuals may gravitate towards specific fields or career paths, aiding educators in providing tailored guidance and opportunities. Furthermore, it contributes to addressing mental health concerns by designing interventions that consider gender-related personality traits. Furthermore, understanding how gender intersects with personality enhances interpersonal relationships and teamwork among students, creating a more inclusive and cooperative learning environment. Ultimately, research in this area advances both psychology and gender studies, offering a deeper comprehension of human behavior.

In this examination, we delve into the existing body of research to shed light on the intriguing landscape of gender differences in the Big Five factors of personality, uncovering the nuances that shape who we are. Based on the previous discussion, we hypothesize gender differences in the five major personality factors.

1. Description of the factors:

The Big Five Personality Factors, also recognized as the Five-Factor Model (FFM) or OCEAN model, serve as a widely embraced structure for comprehending human personality. These factors describe different dimensions of personality, and each factor can be thought of as a spectrum:

1.1. Openness to Experience:
This factor refers to a person's willingness to explore new ideas, experiences, and their imagination. High scores indicate individuals who are open-minded, creative, and curious, while low scores suggest those who are more conventional and prefer routine.

1.2. Conscientiousness:
This factor relates to how organized, responsible, and goal-oriented an individual is. People with high conscientiousness are often reliable, detail-oriented, and disciplined, while those with low scores may be more spontaneous and disorganized.

1.3. Extraversion:
Extraversion measures the level of sociability, assertiveness, and energy a person exhibits in social situations. High scores signify extroverts who are outgoing and energized by social interactions, while low scores indicate introverts who may prefer solitude or smaller gatherings.

1.4. Agreeableness:
This factor assesses a person's cooperativeness, empathy, and friendliness. Individuals with high agreeableness tend to be compassionate, cooperative, and considerate, while those with low scores may be more competitive or less concerned about others' feelings.

1.5. Neuroticism:
Neuroticism measures emotional stability and emotional reactivity. High scores indicate individuals who are more prone to anxiety, mood swings, and negative emotions, while low scores suggest emotional stability and resilience. (McCrae & Costa, 2008).

2. Neuroscientific approach:
The neuroscientific approach to the Big Five factors of personality involves studying how these personality traits are related to the structure and function of the brain. Overall, neuroscientific research on the Big Five factors aims to uncover the biological and neural mechanisms underlying these personality traits, providing insights into how individual differences in personality are grounded in the biology of the brain. Studies often involve brain imaging techniques such as fMRI (functional magnetic resonance imaging) to observe brain activity and structure in relation to personality traits.

2.1. Genetic and biological underpinnings:
Understanding the genetic and biological foundations of personality traits is a crucial area of research. Numerous studies have explored the heritability of personality traits and their associations with genes and neural mechanisms. Twin and family studies have consistently indicated that genetics play a substantial role in shaping personality traits, with heritability estimates typically falling in the range of 40% to 60% for each factor. Moreover, there's evidence of shared heritability among different personality traits (Vernon et al., 2008; Jang et al., 1996; Jang et al., 2001). Furthermore, specific genes have been linked to certain personality traits. For example, the COMT gene has been associated with Openness and Extraversion, while the 5-HTTLPR gene has been linked to Neuroticism, Conscientiousness, and Agreeableness (Kotyuk et al., 2015).

2.2. Neurobiology:
Brain structure and function are also related to the Big Five factors. For instance, Extraversion has been associated with differences in reward processing and brain regions linked to social behavior. Extraversion was found to have a correlation with the size of the medial orbitofrontal cortex, which is responsible for processing reward-related information. On the other hand, Neuroticism was associated with the size of brain regions associated with threat perception, punishment, and negative emotional responses. Furthermore, Agreeableness demonstrated a correlation with the size of regions involved in understanding the intentions and mental states of others, while Conscientiousness was linked to the size of the lateral

prefrontal cortex, a region involved in planning and voluntary behavioral control. (DeYoung et al., 2010).

2.3. Epigenetics:

Environmental factors can interact with genes to influence personality traits. Epigenetic modifications can impact gene expression and contribute to personality development. Research has delved into examining the link between epigenetic modifications of the oxytocin receptor (OXTR) gene through DNA methylation and the Big-5 personality traits. Certain findings suggest that there is a correlation between DNA methylation of OXTR and the trait of openness to experience, even after accounting for other dimensions within the Big-5 personality framework. This discovery reinforces existing models that connect oxytocin to variations in human personality. (Haas, et al., 2018)

3. Gender differences in the big five personality traits:

Gender differences in the Big Five personality traits have been a subject of extensive research. While there are overlapping characteristics between genders, some trends have been observed:

3.1. Openness to experience:

Openness to experience measures an individual's receptiveness to new ideas, experiences, and their creativity. Typically, there are no substantial gender variations observed in Openness/Intellect at the broader domain level, which may be attributed to the trait's diverse nature. For instance, prior studies have indicated that women often exhibit greater levels of the emotional aspect of openness, while men tend to score higher on the intellectual aspect. Researchs have shown that women tend to achieve higher scores than men in facets like aesthetics and feelings (Costa et al., 2001). They often exhibit a greater appreciation for art and beauty and might be more inclined to engage in activities related to the arts, such as painting, music, or literature. This inclination towards aesthetics is a facet of openness, while men typically score higher on the ideas facet (Feingold, 1994, Costa et al., 2001). Individuals with a strong inclination toward the "Ideas" facet often have vivid imaginations, and they are more likely to engage in creative thinking. Those high in this facet often prefer complex and abstract ideas over simple and straightforward ones, enjoying intellectual challenges. They are drawn to intellectual pursuits, having a wide range of interests in areas such as science, or philosophy, and they may excel in problem-solving tasks that require thinking outside the box and coming up with innovative solutions.

3.2. Conscientiousness:

Conscientiousness, encompassing qualities such as diligence, dependability, orderliness, ambition, self-discipline, and determination (McCrae & Costa, 1987), stands out as the personality trait that exhibits the highest correlation with academic success (Trapmann et al., 2007).

Women tend to achieve slightly higher scores than men in certain aspects of Conscientiousness, including traits like organization, duty, and attention to detail. But usually, there isn't a notable gender gap observed in Conscientiousness when examining the Big Five personality traits. (Costa, et al., 2001). While not a direct aspect of Conscientiousness, some studies suggest that women may be more risk-averse than men. This risk aversion can contribute to their tendency to be more cautious and diligent in decision-making. Men are more prone to engaging in risky behaviors (Rhodes & Pivik, 2011) and exhibit greater representation in high-risk sports (Frick, 2021).

3.3. Extraversion:

Extraversion measures an individual's sociability, outgoingness, and comfort in social situations. Research on gender differences in Extraversion has produced mixed results, and there is often no significant difference between men and women in terms of overall

Extraversion. This means that, on average, men and women are relatively similar when it comes to sociability. Some studies have found that while there may not be a significant gender difference in overall Extraversion, there can be variations in specific facets of Extraversion. These studies suggest that men may score higher on assertiveness, indicating a greater willingness to take charge in social situations, while women may score slightly higher on warmth and gregariousness, indicating a greater inclination toward building and maintaining social relationships. (Costa et al., 2001).

3.4. Agreeableness:

Agreeableness measures an individual's tendency to be cooperative, empathetic, and considerate in their interactions with others. When it comes to gender differences in Agreeableness, women generally score higher in agreeableness, indicating greater empathy and a nurturing disposition. This means that, as a group, women often display greater warmth and a willingness to cooperate. Women are often seen as more empathetic and compassionate, making them more attuned to the emotional needs of others. This can lead to more nurturing and caring behaviors, both in personal relationships and caregiving roles. They also may be more inclined to avoid conflicts and seek harmonious resolutions to disagreements. They tend to prioritize maintaining positive relationships, which can manifest in their communication and conflict-resolution styles. While women tend to score higher in Agreeableness, men, on average, may score somewhat lower in this trait. (Costa et al., 2001).

3.5. Neuroticism:

Neuroticism measures an individual's emotional stability, resilience to stress, and tendency to experience negative emotions. Women tend to score slightly higher in neuroticism, indicating a greater susceptibility to experiencing negative emotions such as anxiety and depression. Men, on average, may score somewhat lower in neuroticism. Women often exhibit greater emotional reactivity, meaning they may react more strongly to emotionally charged situations. This heightened emotional sensitivity can make them more attuned to their own and others' feelings. But when faced with emotional distress, women may be more likely to seek social support and talk about their feelings with friends and family. This can be a positive coping mechanism that helps them navigate emotional challenges. The only aspect of Neuroticism where women don't consistently demonstrate higher scores compared to men is in the realm of Anger or Angry Hostility (Costa et al., 2001). Women may engage in more rumination, which is the tendency to dwell on negative thoughts and emotions. This can contribute to a greater susceptibility to anxiety and depression. Furthermore, women tend to achieve higher scores than men in assessments related to traits not explicitly focused on the Big Five personality traits, such as measures of self-esteem levels (Kling et al., 1999).

4. Method :

4.1. Participants :

Data were collected through a questionnaire comprising items on individual characteristics, including 60 personality trait items. The questionnaire was administered in Arabic to a sample of 74 students, consisting of 46 women (62.16%) and 28 men (37.84%).

4.2. Measures :

The most frequently employed tool by researchers for evaluating the Big Five personality traits is the 60-item NEO Five-Factor Inventory (NEO-FFI). This inventory comprises 12 items for each trait, as developed by Costa and McCrae (1992). A five-point Likert scale, spanning from 1 (strongly disagree) to 5 (strongly agree), was used for rating each item. Previous studies have demonstrated that this instrument exhibits robust psychometric properties. However, we measured both the validity and reliability of the scale to ensure its quality, and the results were as follows:

Table 1: Internal Consistency Reliability of the NEO-FFI

Construct	correlation coefficient	Significance level
Neuroticism	0.527**	0.003
Extraversion	0.467**	0.009
Openness	0.576**	0.001
Agreableness	0.557**	0.001
Conscientiouness	0.735**	0.000
** Signifiant at 0.01 * Signifiant at 0.05		

Source : Data compiled and analyzed by the researchers

The results in Table 1 show that the Pearson correlation coefficients between the NEO-FFI and the total score of the inventory are statistically significant at the $p < .05$ level. This suggests that the scale is valid, reliable, and measures what it is designed to measure.

Table 2: Discriminative validity of the NEO-FFI

Group	P	n	M	t-value	df	α
Lower	33%	10	186,20	-11,43	18	0.000
Upper	33%	10	219,20			

Source : Data compiled and analyzed by the researchers

From Table 2, we can see that the t-value between the lower and upper groups was estimated at (-11.43) with a significance level of (0.000), which is less than the significance level of (0.05). Therefore, we can conclude that there are statistically significant differences between the lower and upper groups of the Five-Factor Personality Scale among the research sample members. This means that the scale is valid for what it was designed for and can be used in the main study.

Table 3 : Split-half reliability

Scale	Items	split-half reliability			Cronbach's alpha
		correlation coefficient	Spearman's rho	Guttman's split-half reliability	
NEO-FFI	60	0.670	0.669	0.662	0.674

Source : Data compiled and analyzed by the researchers

As shown in Table 3, the correlation coefficient between the first and second parts of the Big Five Personality Inventory was r=0.670. The split-half reliability coefficient of the scale according to Guttman's formula was λ=0.662. The value of Spearman-Brown's coefficient was ρ=0.669. Finally, Cronbach's alpha coefficient was α=0.674. All of these values are considered good and exceed the acceptable standard. This indicates that the study's instrument is reliable and valid.

5. Results and discussion :

Mean values and independent-samples t-tests were performed to assess disparities in the sample's responses across various dimensions and the overall scale. The ensuing tables showcase the results.

Table 4: Gender differences in Extraversion

Variable	Gender	N	Mean	t-value	df	A
Extraversion	Male	28	38,75	0,158	72	0,875
	Female	46	38,58			

Source : Data compiled and analyzed by the researchers

Based on this dataset, it appears that there are no discernible gender differences in the Extraversion personality trait. The t-value (0.158) exceeds the significance level (0.05), indicating that the variances in mean scores between males and females lack statistical significance. Consequently, we cannot make a conclusive statement regarding gender-based disparities in this trait.

Males and females exhibit relatively similar mean Extraversion scores, with males having a mean Extraversion score of 38.75 and females having a mean score of 38.58.

The findings of this study are in opposition to previous research by Alkhamaiseh and Alzoubi (2020), which proposed substantial gender variations in extraversion favoring females.

Extraversion encompasses a range of behaviors tied to sociability, assertiveness, and the desire for external stimulation (McCrea, Costa, 2008). Rather than being a binary characteristic, extraversion operates on a continuum, allowing individuals to display varying degrees of this trait. It's worth emphasizing that extraversion is distributed along a spectrum, and although there may be tendencies for males or females to slightly lean towards introversion or extraversion on average, significant overlap exists between the two groups (Costa et al., 2001). This overlap implies that numerous individuals of both genders exhibit a wide range of extraversion levels.

When researchers compare Extraversion between males and females, they typically find that, on average, there might be slight differences. For instance, studies Costa and others (2001) suggest that, on average, males may score slightly higher in certain aspects of Extraversion, such as assertiveness, while females may score slightly higher in other facets like warmth or sociability. Additionally, extraversion is influenced by a multitude of factors, including genetics. The findings implied that 53% of the extraversion trait's variation could be attributed to heritability (Jang et al.,1996).

Another psychosocial perspective that can explain the similarity between students of both sexes in extroversion is that academic settings often involve group projects, discussions, and collaborations. These activities can encourage both male and female students to interact with their peers, share ideas, and become more comfortable with social interaction, promoting extraversion. Public speaking, presentations, class discussions, and speaking in front of the class can help students of all genders become more confident in expressing themselves in social situations, contributing to the development of extraversion. Furthermore, academic environments provide opportunities for both male and female students to network with professors, classmates, and guest speakers, allowing them to build social connections and improve their social skills. Many universities offer extracurricular clubs, organizations, and events, and participating in these activities can encourage both male and female students to step out of their comfort zones, meet new people, and develop extraversion traits. Moreover, encouraging both male and female students to actively participate in class discussions and ask

questions can help them become more comfortable with social interaction and expressing their ideas in front of others. Ultimately, creating a supportive and inclusive academic environment can help both male and female students feel more at ease, facilitating the development of extraversion traits.

Table 5: Gender differences in Openness

Variable	Gender	N	Mean	t-value	df	A
Openness	Male	28	37,46	-1,401	72	0,165
	Female	46	38,71			

Source : Data compiled and analyzed by the researchers

According to the data in Table 5, the t-value of 1.401 surpasses the significance level of 0.05, suggesting that there is a potential for statistical significance in the differences between the mean scores of males and females.

The results of the study on the trait of Openness revealed no significant difference between men and women in this regard. These findings align with existing scientific and psychological research, which suggests that gender differences in Openness, as as previously noted, demonstrates that women show higher levels of the emotional aspect of openness, while men tend to score higher on the intellectual facet (Feingold, 1994), but Openness as a general trait, the difference is generally minimal (Costa, et al., 2001).

From a biological perspective, some theories suggest that the fundamental neurobiological mechanisms underpinning Openness are alike between sexes. Openness is thought to be influenced by the dopamine system, which doesn't exhibit substantial sex-based disparities. This biological similarity may contribute to the lack of significant differences in Openness between the sexes. Furthermore, the experiences that people have throughout their lives can also shape their personality traits. For example, people who have had a lot of exposure to different cultures or ideas may be more open-minded than those who have had a more limited experience. In the academic environment, which can be a very open and accepting environment, students are often encouraged to be more open to emotions, art, and ideas. This psychosocial perspective highlights that the educational setting itself can play a pivotal role in fostering openness. Moreover, within this academic environment, the peer group also has a significant influence on shaping openness. If a student's peer group demonstrates a high level of openness, this social influence may further encourage the student to be more open to new experiences and ideas. Thus, both psychological and social factors interplay to shape a student's level of Openness.

Table 6: Gender differences in Conscientiousness

Variable	Gender	N	Mean	t-value	Df	α
Conscientiousness	Male	28	41,25	-1,148	72	0,883
	Female	46	41,41			

Source : Data compiled and analyzed by the researchers

The results indicate that there are no statistically significant differences in the Conscientiousness trait among the sample members based on the gender variable. This conclusion is drawn from the calculated t-value of 1.148, which has a significance level of 0.883, indicating a lack of statistical significance at the 0.05 level.

The results of this study closely align with Costa et al.'s findings (2001), indicating no statistically significant differences in trait Conscientiousness. However, our findings contrast with those of Alkhamaiseh and Alzoubi (2020), Awlad Haddar (2017), and Rammstedt (2007), all of whom suggested statistically significant differences in Conscientiousness favoring female students.

The lack of a notable gender gap in Conscientiousness, as observed in this study, can be attributed to several factors. Conscientiousness, encompassing traits such as organization, dependability, and self-discipline, may not have a strong biological basis linked to gender differences. Unlike some other traits like neuroticism (associated with emotional stability) and agreeableness (related to interpersonal interactions), Conscientiousness may not be strongly influenced by gender-related biological factors. Gender roles and societal expectations can significantly shape Conscientiousness. In many societies, both men and women are taught to value conscientious behaviors like responsibility, reliability, and hard work. These societal norms and expectations may lead to similar levels of conscientiousness in both genders, despite potential gender differences in the expression of Conscientiousness due to socialization and cultural expectations. In other words, both males and females may be equally encouraged to exhibit traits related to responsibility and diligence. For example, organizational skills and responsibility are emphasized for both males and females in various aspects of life, such as academics and work.

Table 7: Gender differences in Agreableness

Variable	Gender	N	Mean	t-value	Df	A
Agreableness	Male	28	40,53	_0,337	72	0,737
	Female	46	41,00			

Source : Data compiled and analyzed by the researchers

The results presented in Table 7 reveal that there are no statistically significant differences in the Agreeableness dimension among the sample members based on the gender variable. This conclusion is drawn from the calculated t-value of 0.337, which has a significance level of 0.737, indicating a lack of statistical significance at the 0.05 level. Additionally, it is noteworthy that the mean scores for males and females on the Agreeableness dimension are similar, suggesting a convergence in their responses.

Our findings indicate that there is an unexpected similarity in agreeableness between men and women, which contrasts with prior research that proposed substantial gender variations in Agreeableness favoring females. (Rammstedt, 2007; Costa et al., 2001; Awlad Hadar, 2017).

The lack of significant gender differences in the trait of Agreeableness among students can be explained through various psychological theories. According to socialization theory in psychology, individuals, starting from a young age, undergo a process of socialization wherein society, encompassing parents, peers, the media, and other cultural influences, shapes many of their roles and behaviors. These gender roles frequently dictate specific behaviors, attitudes, and traits deemed suitable for men and women. Historically, these roles have been quite distinct, with men being encouraged to exhibit assertiveness and restrain emotional expression, while women were encouraged to display empathy and cooperation. Nevertheless, in recent decades, various societal aspects have undergone changes, resulting in alterations in how children are nurtured and educated. Both boys and girls are now encouraged to express empathy, kindness, and cooperation, which are key components of Agreeableness. Morever, in academic settings, peer groups also play a significant role in shaping students' behaviors

and attitudes. Positive interactions between students in educational settings can contribute to the development of certain aspects of agreeableness in both males and females.

Table 8: Gender differences in Neuroticism

Variable	Gender	N	Mean	t-value	df	A
Neuroticism	Male	28	39,82	-1,960	46,94	0,033
	Female	46	42,08			

Source : Data compiled and analyzed by the researchers

Based on the data presented in Table 8, notable gender differences are observed in the neuroticism personality trait. The t-value (-1.960) falls below the significance level (0.05), signifying statistical significance in the disparities between the mean scores of males and females. Consequently, we can assert that gender influences this trait.

Specifically, males exhibit a lower average neuroticism score (mean score of 39.82) compared to females (mean score of 42.08). This suggests a greater likelihood that males experience less susceptibility to anxiety, stress, and depression when contrasted with females.

The findings of our study contrast with those of Awlad Haddar's (2017) research, which suggested statistically significant differences in neurosis that favored male students. Interestingly, our results closely resembled those of Costa et al. (2001) and Rammstedt's (2007) studies, in which statistically significant differences in trait neuroticism favored women. In fact, upon extrapolating data from various studies on this aspect, a consistent trend emerges, indicating a higher level of neuroticism in females, albeit in varying proportions.

The expression of neuroticism among female students can be influenced by the process of socialization. From a young age, girls are often encouraged to be more emotionally expressive and open about their feelings, while boys may face societal pressure to conceal their emotions. This gender-specific socialization can lead to differences in how neuroticism-related traits are expressed and perceived. Female students may feel more comfortable seeking support, discussing their worries openly, and engaging in problem-focused coping strategies when facing stressors. While these behaviors can be adaptive and reflective of healthy emotional expression, they may also contribute to higher scores on measures of neuroticism, as they often include items related to emotional reactivity, seeking help, or expressing concerns. On the other hand, biological factors, particularly hormonal differences, may play a significant role in the development of neuroticism in women. Some researchers have explored the influence of hormones like estrogen, progesterone, and testosterone on aspects of personality, including emotional responsiveness. These hormones are known to regulate various physiological and psychological processes, with estrogen and progesterone being associated with female reproductive processes and mood regulation (Wu, et al., 2014). In contrast, testosterone, more prevalent in males, can also impact mood and behavior. This hormonal influence could potentially contribute to variations in personality traits, such as neuroticism, among female students. Research has demonstrated that gender variations exist in how individuals respond to stress, as well as in anxiety rates (Kling et al., 1999), with females often exhibiting unique stress-coping mechanisms influenced by these hormonal factors. Consequently, these mechanisms may influence how female students respond to academic and social stressors, ultimately shaping their levels of neuroticism.

Conclusion:

Research on the differences between sexes in students' personality traits, specifically focusing on the five major factors of personality, has revealed that the most significant difference was

found in the trait of neuroticism, where females tended to score higher than males. This suggests that females may be more prone to experiencing negative emotions and anxiety compared to their male counterparts.

However, in contrast to neuroticism, no significant differences were observed between the sexes in the traits of agreeableness, conscientiousness, openness, and extraversion. This implies that both male and female students generally exhibit similar levels of agreeableness, conscientiousness, openness to experience, and extraversion in their personalities.

These findings highlight that while there may be variations in neuroticism between male and female students, the other four major personality traits appear to be fairly consistent across genders within the student population. Understanding these differences can provide insights into gender-related aspects of personality and potentially inform strategies for student support and development.

In light of the above, we can make the following recommendations:

- Conduct more research using larger and more diverse samples, including samples from different cultures.
- Investigate the mechanisms underlying gender differences in personality, such as biological, environmental, and social factors.
- Use the research findings to understand gender differences in behavior, relationships, and mental health.

References:

- Allport, F. H. (1937). Social psychology. Boston: Houghton Mifflin.
- Awlad Hadar, Zaynib. (2017). Personality traits among university students according to Costa and McCrae's list of the five big personality factors: a comparative study between students with positive thinking and those with negative thinking at the University of Ghardaia. Journal of Reasercher in Humanities and Social Sciences, vol. 2017, p. 30 A, p. p. 73-88.
- Costa, P. T., Jr., & McCrae, R. R. (2009). The Five-Factor Model and the NEO Inventories. In J. N. Butcher (Ed.), Oxford handbook of personality assessment (pp. 299–322).
- Costa, P. T., Jr., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. Journal of Personality and Social Psychology, 81(2), 322–331
- DeYoung CG, Hirsh JB, Shane MS, Papademetris X, Rajeevan N, Gray JR. (2010). Testing predictions from personality neuroscience. Brain structure and the big five. Psychological science 21 (6): 820-828
- Feingold A. (1994). Gender differences in personality: a meta-analysis. Psychol. Bull. 116, 429–456
- Frick, B. (2021). Gender differences in risk-taking and sensation-seeking behavior: Empirical evidence from "extremesports". DeEconomist, 169(1), 5–20.
- Haas BW, Smith AK, Nishitani S. (2018). Epigenetic Modification of OXTR is Associated with Openness to Experience. Personality Neuroscience. Vol 1: e7, 1–5
- Hogan, R. & Hogan, J. (2007). Hogan Personality Inventory, 3rd Edition. Tulsa: Hogan Press.
- Jang, K. L., Livesley, W. J., Riemann, R., Vernon, P. A., Hu, S., Angleitner, A., Alois Angleitner, Ando, J,. Ono, Y., Hamer, D. H. (2001). Covariance structure of neuroticism and agreeableness: a twin and molecular genetic analysis of the role of the serotonin transporter gene. Journal of Personality and Social Psychology, 81(2), 295.
- Jang K.L, Livesley W.J, Vernon P.A. (1996). Heritability of the big five personality dimensions and their facets: a twin study. J Pers. 64 (3):577-591.
- Kling K. C., Hyde J. S., Showers C. J., Buswell B. N. (1999). Gender differences in self-esteem: a meta-analysis. Psychol. Bull. 125, 470–500
- Kotyuk E, Duchek J, Head D, Szekely A, Goate A.M, Balota D.A. (2015). A Genetic Variant (COMT) Coding Dopaminergic Activity Predicts Personality Traits in Healthy Elderly. Pers Individ Dif. 1;82:61-66
- Krueger, R. F., South, S., Johnson, W., & Iacono, W. (2008). The heritability of personality is not always 50%: Gene-environment interactions and correlations between personality and parenting. Journal of personality, 76(6), 1485-1522.
- Lallouna, Tillou. (2022). Psychological Perception Of The Self Concept. Journal of Studies in Deviation Psychology. Vol 7 (3): 816-826
- McCrae, R.R.& Costa, P.T. (1990) Personality in adulthood. New York: The Guilford press.
- McCrae, R. R., & Costa, P. T., Jr. (2008). The five-factor theory of personality. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), Handbook of personality: Theory and research (pp. 159–181).
- McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. Journal of Personality and Social Psychology, 52(1), 81–90.
- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. Journal of Personality, 60(2), 175–215.
- Omar Soud Alkhamaiseh, Ahmad M. Alzoubi, 2020, Al-Balqa Applied University. The five major factors of personality among students of Al-Balqa Applied University in light of some variables.

- Rammstedt, B. (2007). The 10-item big five inventory: Norm values and investigation of sociodemographic effects based on a German population representative sample. European Journal of Psychological Assessment, 23(3), 193–201.
- Rhodes, N., & Pivik, K. (2011). Age and gender differences in risky driving: The roles of positive affect and risk perception. Accident Analysis & Prevention, 43(3), 923–931.
- Roberts, B. W. (2009). Back to the future: Personality assessment and personality development. Journal of Research in Personality, 43, 137-145.
- Saucier, G., Hampson, S. E., & Goldberg, L. R. (2000). Cross-language studies of lexical personality factors. In S. E. Hampson (Ed.), Advances in personality psychology, Vol. 1, pp. 1–36.
- Vernon, P. A., Martin, R. A., Schermer, J. A., & Mackie, A. (2008). A behavioral genetic investigation of humor styles and their correlations with the big-5 personality dimensions. Personality and Individual Differences, 44(5), 1116–1125.
- Woods, S.A. & Hampson, S.E. (2005). Measuring the Big Five with Single Items using a Bipolar response Scale. European Journal of Personality, (19), 373-390.
- Wu, Mengying, Zhou, Renlai, Huang, Yamei. (2014). Effects of menstrual cycle and neuroticism on females' emotion regulation. International Journal of Psychophysiology. Vol 94, (3): 351-357.