

Research Article

Cite this article: Jawarneh, E., Jawarneh, R., Maberah, S., & Al-Zoubi, N. (2025). Family Environment as A Predictor of Neuroticism and Extraversion Among Students of Jadara University. *Educational Process: International Journal*, 16, e2025294.

<https://doi.org/10.22521/edupij.2025.16.294>

Received April 30, 2025

Accepted June 8, 2025

Published Online June 30, 2025

Keywords: Family environment, neuroticism, extroversion, university students

Author for correspondence:

Shooroq Maberah

✉ shooroq@jadara.edu.jo

✉ Associate Professor - Jadara University - Department of Family Counseling and Reform, Jordan

Family Environment as A Predictor of Neuroticism and Extraversion Among Students of Jadara University

Eman Jawarneh , Ruba Jawarneh , Shooroq Maberah , Nizar Al-Zoubi 

Abstract

Background/purpose. This study aimed to investigate the extent to which the family environment predicts neuroticism and extraversion among students at Jadara University. A total of 425 university students were recruited.

Materials/methods. Two scales, the Family Environment Scale and the Neuroticism and Extraversion Scale, derived from the Big Five Personality Factors Inventory, were utilized. Multiple linear regression was employed for data analysis using a stepwise approach.

Results. The findings showed that two variables involved in predicting neuroticism (conflict and cohesion) accounted for 19.7% of the variance in neuroticism. Conflict was a stronger predictor of neuroticism, followed by cohesion. The variance explained by these predictors was statistically significant at the $\alpha=0.05$ level. Conversely, expressiveness, Intellectual-Cultural Orientation, recreational orientation, and organization were not included in the prediction of neuroticism. Additionally, the findings showed that a one-standard-deviation increase in conflict was associated with a 0.401-standard-deviation rise in neuroticism. In contrast, a one standard deviation gain in cohesion was linked to a 0.213 standard deviation fall in neuroticism. The $\alpha = 0.05$ criterion indicated that these predicted variables were statistically significant. The variables that predict extroversion were recreational orientation and conflict, accounting for 16.4% of the variance. The former was the most capable of predicting extroversion. The variance explained by these variables was statistically significant at the $\alpha = 0.05$ significance level. Cohesion, expressiveness, intellectual-cultural orientation, and organization variables did not predict extroversion.

Conclusion. The researchers presented a set of recommendations, the most important of which was holding educational seminars for families and students to familiarize them with the dimensions of the family environment that contribute to reducing neuroticism and raising extroversion among students.



OPEN ACCESS

© The Author(s), 2025. This is an Open Access article, distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction, provided the original article is properly cited.

1. Introduction

The family environment plays a fundamental role in shaping an individual's personality and behavior, significantly influencing various psychological and social aspects. Family is the primary social context in which children are nurtured, providing the initial framework for socialization and skill acquisition (Casper, 2001). In this environment, people typically develop competencies such as cooperation, problem-solving, communication, and emotional control (Nokali et al., 2010).

Family serves as a fundamental unit that provides emotional and social support. This support has a significant impact on both psychological and physical health and plays a crucial role in early socialization. This effect, which forms the basis for personal development, arises from the dynamic interaction of material, psychological, and social components within the familial setting (Smith, 2019). Furthermore, when people absorb and imitate the behaviors displayed by family members, behavioral patterns within the family are developed through observational learning (Bandura, 2013). Parental oversight further reinforces these behaviors, shaping their continuity and stability over time (De Vet et al., 2011).

From a systems theory perspective, the family environment is described as a dynamic group consisting of interdependent and constantly evolving entities through reciprocal interactions between parents and their children (Noller & Atkin, 2014). From a systems theory perspective (Bowen, 2021), patterns within family dynamics, such as conflict, cohesion, and communication, create feedback loops that shape students' emotional regulation and social behavior, both of which are essential for successful adaptation within educational settings. Additionally, social learning theory (Bandura, 1977) posits that students tend to model the interaction styles they observe at home, which can affect how they communicate with peers and teachers, ultimately influencing their classroom experiences and sense of belonging. Empirical research demonstrates the significance of a stable and supportive family environment in enhancing individuals' emotional and social development from an early age, positively affecting their future academic and professional development (Jones, 2020). Conversely, a family environment characterized by insufficient emotional support and ineffective communication may lead to the emergence of psychological and behavioral problems such as neuroticism and introversion, which negatively affect the lives and mental health of individuals (Brown, 2021).

Neuroticism is typically a personality trait characterized by an individual's tendency to respond excessively to stress and anxiety, while extroversion reflects an individual's tendency to be social and active. Markedly, family environment plays a crucial role in shaping these two traits. Studies indicate that individuals who are raised in environments full of conflict and stress are more prone to develop neurotic behaviors. In contrast, those nurtured with emotional support and good communication exhibit greater extroversion (Williams & Gage, 2020).

Understanding how the family environment shapes behaviors and personalities is crucial to enhancing people's lives by promoting healthy family relationships. Analyzing the relationships between different family factors and individuals' self-behaviors can provide valuable insights into how to build supportive and influential family environments. Empirical research has demonstrated that positive relationships within the family, including parental interactions with children and sibling relationships, play a pivotal role in developing positive personality traits such as cooperation and self-confidence. Individuals raised in families characterized by understanding, openness, and support tend to develop practical skills, including effective communication, strong social skills (Garcia, 2021), and critical thinking (Baumrind, 1971).

Some studies have confirmed that positive and supportive family relationships enhance children's sense of security and confidence, contributing to the development of positive personality traits, such as extroversion (Steinberg, 2001; Eisenberg et al., 1998; Baumrind, 1971). These relationships also reduce neuroticism levels and increase adjustment levels among family members.

Some studies have indicated that family environments that suffer from psychological pressures and constant conflicts have been observed to have high levels of neuroticism. (Eysenck, 1991) contends that individuals who are nurtured in environments marked by conflicts suffer from chronic anxiety and depression, which negatively influence their mental health and their ability to adapt to life's challenges. (Mammadov, 2022) introduced the Big Five Factor Model, a robust framework for understanding the relationship between different types of personalities and academic behaviors. He defines neuroticism as an individual's tendency to feel negative emotions such as anxiety, depression, and anger. People who show high neuroticism tend to be more vulnerable to stress and psychological problems. According to Lahey (2009), neuroticism is a strong indicator of many psychological disorders, such as anxiety and depression.

Extraversion reflects an individual's inclination toward social interactions and activities requiring interpersonal communication. Extraverted individuals typically tend to be more energetic, sociable, and positive. Pawlak et al. (2025) found that extraversion is correlated with higher life satisfaction and happiness. Each extraversion dimension represents a fundamental tendency towards social interaction, encompassing warmth, assertiveness, activity, excitement seeking, and positive affect (Mammadov, 2022).

The correlation between positive effects and extraversion has long been a topic of interest in the field of personality studies. (Wilson, 1967) identified social interactions as a major determinant of well-being and found a direct correlation between happiness and social interactions. More recent studies suggest that extraversion promotes positive emotions while neuroticism produces negative emotions, and these two factors generally influence happiness (Lee et al., 2021). Furthermore, the social advantages of extraversion persist throughout adulthood, as extroverted individuals tend to have wider social networks (Shen et al., 2015). Although extroverts develop wide-ranging social networks, these ties are typically superficial (Pollet et al., 2011).

Both extraversion and neuroticism are early-onset emotional traits (Bellingtier et al., 2023). Extraversion is marked by active engagement with the world, sociability, activity, and positive effects (John et al., 2008). Research has shown that the main aspects of extraversion involve positive affectivity, sociability, conscientiousness, and adventurousness (Shiner & Caspi, 2003). Neuroticism is viewed as a tendency to experience negative emotions, including emotional instability and reactivity to stress and negative environmental stimuli (John et al., 2008). Research has shown that the main aspects of neuroticism include trait hostility, anxiety, and depression (Simms, 2009; Naragon-Gainey et al., 2009). Depression involves a combination of high neuroticism and low extraversion (De Fruyt et al., 2006).

Amalu (2017) examined the influence of family environment (family cohesion, family conflict) and self-esteem as predictors of psychological adjustment among high school students from disrupted family backgrounds. The study sample consisted of 128 eleventh-grade students. Positive family cohesion, support, and low rates of family conflict were significant predictors of psychological adjustment among students. Similarly, Bala et al. (2018) examined the family environment and psychological and social problems of 240 adolescents from high schools. A positive correlation was observed between family conflict and adolescent problems. Adolescents who perceived their family environment as unstable reported higher levels of psychological distress compared to those who viewed their family environment as economically and emotionally stable.

Motamedi (2020) conducted a study to investigate the role of the family environment in the emotional, social, and academic adjustment of a sample of middle school students. The study sample comprises 9728 male and female students. The findings revealed that healthy family structures, appropriate economic status, and high-level parental professions facilitate behavioral adaptation, and maintaining a positive relationship between family members creates a harmonious educational environment. (Leto et al., 2021) conducted a study on 1,004 Russian primary school students aged 7 to 10 to determine how personality and family environment combine to influence children's life satisfaction. It was found that children's life satisfaction is highly correlated with income, parental pressure, physical punishment, and personality traits such as IQ and neuroticism. The findings also demonstrated the significance of satisfaction and emotional stability regarding personality traits and the family environment as a safeguard for children who experience harsh and inconsistent parenting.

A study by Verduyn and Brans (2012) aimed to investigate the characteristics of trait influence and the connection between neuroticism and extraversion. One hundred first-year psychology university students made up the study sample. The correlation analysis's findings demonstrated that while neuroticism is typically linked to the strength and length of negative emotions, extraversion frequently corresponds to the intensity and duration of positive emotions. According to regression models, the length of time spent experiencing positive emotions is the strongest predictor of extraversion and neuroticism. A study conducted by Fan et al. (2020) aimed to identify the effect of parents' personality traits (extroversion and neuroticism) on their children's subjective well-being. The study sample consisted of 301 families. The results showed that parents with high levels of extroversion tend to increase children's satisfaction and subjective well-being. In contrast, parents with high levels of neuroticism tend to reduce children's satisfaction and subjective well-being. Furthermore, parents' well-being and their children's personality traits (extroversion and neuroticism) have impacted children's subjective well-being.

Nilsen et al. (2024) examined the correlation between personality and self-control. The study sample comprises 480 military students. A negative correlation was observed between neuroticism and all dimensions of self-control. In contrast, a positive correlation was found between extroversion, conscientiousness, openness to experience, and agreeableness and all dimensions of self-control.

Reviewing earlier research reveals that few studies jointly addressed the factors of neuroticism, extroversion, and the familial environment. Leto et al. (2021) researched this subject and found a substantial correlation between children's satisfaction and neurotic personality features. While previous research has examined the family environment and personality traits as separate areas of inquiry, few studies have integrated these variables within an educational context. This study aims to address that gap by investigating how aspects of the family environment predict levels of neuroticism and extraversion among university students, and considering the practical implications of these findings for educational settings. In particular, the study highlights how understanding these relationships can inform interventions designed to support student well-being, enhance academic engagement, and foster healthier teacher-student and peer relationships.

Therefore, the current study differs from other research in that it sought to clarify the degree to which students' family environments influence their neuroticism and extroversion.

1.1. Research Problem and Questions

The literature on the family environment reveals that no study has been conducted on this topic; however, the family environment plays a crucial and significant role in shaping students' personality characteristics. University students may exhibit a range of positive and negative personality traits due to the patterns of their family environment and interactions between family members. Therefore, it was necessary to determine the extent to which the family environment contributes to the development of neuroticism and extroversion in students. While numerous studies have explored

the influence of the family environment on various aspects of personality, research examining its predictive role on neuroticism and extraversion remains limited. This gap is particularly noticeable among university students, and even more so within the context of educational sciences. Addressing this intersection could offer valuable insights into how familial factors influence key personality dimensions closely linked to students' academic, social, and emotional experiences. This study explores the family environment that predicts neuroticism and extroversion in a sample of students from Jadara University. More specifically, the current study aimed to address the following research questions:

1. To what extent does the family environment contribute to neuroticism development among students at Jadara University?
2. To what extent does the family environment influence the level of extraversion among students at Jadara University?

1.2. Research Importance

The theoretical and practical applications of this study demonstrate their significance. As it focuses on predicting the relationship between the family environment, neuroticism, and extroversion, the theoretical component is its explanation of key ideas about the individual's mental health. This study is anticipated to advance researchers' knowledge of mental health and family, which will positively impact their understanding of the factors influencing the family environment and enhance the theoretical and research literature in this area, particularly considering the scarcity of studies that address these variables collectively, as observed in earlier studies.

Regarding the practical application component, family specialists can use these findings to determine the characteristics of the family environment that predict students' levels of neuroticism and extroversion. They can then hold educational seminars for the students' families, educating them on the elements of the family environment that increase extroversion and decrease neuroticism.

1.3. Operational Definition

Family environment: A dynamic group consisting of mutually exclusive and constantly changing relationships resulting from parents' and children's interactions (Noller & Atkin, 2014). It is operationally defined as the total score obtained by students on the Family Environment Scale used in this study.

Neuroticism refers to an individual's tendency to feel negative emotions such as anxiety, depression, and anger. Individuals who score high in neuroticism tend to be more vulnerable to stress and psychological problems (Lahey, 2009). Neuroticism is operationally defined as the total score obtained by students on the neuroticism scale used in this study.

Extraversion: expresses the extent to which an individual enjoys social interactions and activities that require communication with others. Extraverted individuals tend to be more energetic, sociable, and positive (Pawlak et al., 2025). Operationally, it is defined as the total score obtained by students on the extraversion scale used in this study.

2. Methodology

2.1. Research Approach

The current study employed a descriptive and predictive approach, which is most suitable for examining and assessing the extent to which the family environment contributes to neuroticism and extroversion among Jadara University students. A descriptive predictive design was used in this study, as it enables the investigation of how different dimensions of the family environment predict levels of neuroticism and extraversion. To analyze these relationships, stepwise multiple regression was

employed, allowing the identification of the most significant predictors from several family environment variables. This approach helps ensure both the simplicity and clarity of the final model, making the results more accessible and practically helpful for application in educational counseling and student support programs.

2.2. Participants

The study population consisted of all undergraduate students at Jadara University across all academic levels who were enrolled in the first semester of the 2024/2025 academic year, totaling 10,000 students, according to statistics provided by the Admission and Registration Department. A random sample was selected, and the final sample size was 425 students.

3. Methodology

3.1. Family Environment Scale

An adapted and condensed version of the Family Environment Scale prepared by Moos & Moos (1994) and developed by Al-Duwairi & Jaradat (2013) was employed. The original version of the scale comprises 90 items, spanning ten dimensions: family cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, recreational orientation, moral-religious orientation, organization, and control. Each of these dimensions has nine items. Al-Duwairi and Jaradat (2013) translated the scale from English to Arabic, and English language experts reviewed it to validate the accuracy of the translation. After that, the scale was adapted to align with the Jordanian environment; however, some items were deleted and added. The final scale comprises 36 items assessing six dimensions: cohesion, expressiveness, conflict, intellectual-cultural orientation, recreational orientation, and organization.

To confirm the revised scale's construct validity, Al-Duwairi and Jaradat (2013) applied it to a pilot sample of 70 male and female students. The correlation coefficients for the items of each dimension were calculated, and the values ranged between 0.32 and 0.73, demonstrating an adequate level of construct validity.

To assess the construct validity within the present study, correlation coefficients were calculated for each item with the overall score, as well as between each item and its corresponding dimension, and between the fields with each other and the total score, by administering the scale to an external pilot sample of 30 students. Item-total ranged between (0.37-0.82), while item-dimension (0.37-0.91). The field correlation coefficient with the overall score and the correlation coefficients between the fields with each other were also calculated, as shown in Table 1.

Table 1. Results of the Correlation Between the Fields and the Total Score

	Cohesion	Expressiveness	Conflict	Intellectual- Cultural Orientation	Recreational Orientation	Organization	Family Environment Scale
Cohesion	1						
Expressiveness	0.819**	1					
Conflict	0.613**	0.635**	1				
intellectual- cultural orientation	0.603**	0.502**	0.527**	1			
recreational orientation	0.718**	0.726**	0.623**	0.548**	1		

Organization	0.734**	0.657**	0.695**	0.632**	0.751**	1	
Family environment scale	0.879**	0.865**	0.889**	0.723**	0.900**	0.856**	1

* Statistically significant at the significance level (0.05).

** Statistically significant at the significance level (0.01).

Results presented in Table 1 reveal that all correlation coefficients had acceptable degrees and were statistically significant, indicating an appropriate degree of construct validity.

Al-Duwairi & Jaradat (2013) verified the reliability of the adopted family environment scale, consisting of 36 items distributed over six dimensions, by calculating the internal consistency coefficient using Cronbach's alpha. The scale was applied to a pilot sample (n=70) of male and female students. The reliability coefficient was calculated using the internal consistency method, and the values of Cronbach's alpha coefficients ranged between 0.70 - 0.78.

To confirm the reliability of the current study scale, the test-retest method was verified by administering the scale to a group of 30 male and female students outside the study sample and then re-administering it two weeks later. Then, the Pearson correlation coefficient was calculated between their estimates in the two applications.

The reliability coefficient was also calculated using the internal consistency method, as per Cronbach's alpha equation, and the retest reliability for the domains and the total score. The results were as follows: cohesion (re-test 0.88, internal consistency 0.85), Expressiveness (re-test 0.84, internal consistency 0.82), conflict (re-test 0.82, internal consistency 0.70), intellectual-cultural orientation (re-test 0.80, internal consistency 0.75), recreational orientation (re-test 0.86, internal consistency 0.79), and organization (re-test 0.83, internal consistency 0.80). The overall retest result was (0.90) with internal consistency (0.86).

3.2. The Big Five Factors Inventory (BFI)

This study employed the adapted version of the Big Five Factors Inventory, developed by John et al. (1991). The BFI comprises 44 items assessing five dimensions: neuroticism, which reflects emotional agreeableness or stability; extraversion evaluates sociability, assertiveness, energy levels, and enthusiasm in social settings; openness to experience, which measures creativity, curiosity, and imagination; and agreeableness, which reflects compassion, cooperativeness, trust, and prosocial behaviors, non-criticism, and competition. Conscientiousness assesses organization, dependability, goal-directed behavior, and self-discipline. Participants rate each BFI item on a 5-point scale ranging from 1 (disagree strongly) to 5 (agree strongly).

Participants rate each item on a five-point Likert scale ranging from 1 (very low) to 5 (very high). Jaradat and Abu Ghazal (2014) translated the scale and verified its content validity. Convergent validity was assessed for the items of each dimension to establish construct validity by applying them to a pilot sample of 56 university students. The corrected correlation coefficient was calculated for each item, where the correlation coefficients for the extraversion dimension ranged between 0.31 and 0.48, agreeableness (0.32 and 0.47), conscientiousness (0.35 and 0.51), neuroticism (0.30 and 0.44), and openness to experience (0.35 and 0.71).

Regarding scale reliability, the internal consistency coefficient (Cronbach's alpha) was calculated for the scale's dimensions on the pilot sample's scores. The values of the internal consistency coefficients were acceptable and ranged between 0.70 and 0.85.

To establish construct validity, the item correlation coefficients were calculated with the overall score of the corresponding domains by applying them to a pilot sample ($n=30$) of students. The item correlation coefficients with the total score of the neuroticism domain ranged between 0.53 and 0.77, and the item correlation coefficients with the overall score of the extroversion domain ranged between 0.58 and 0.81.

To establish the reliability of the current instrument, it was verified using the test-retest method on a sample of 30 male and female students. The Pearson correlation coefficient was calculated between their estimates in both applications.

The reliability coefficient was also calculated using the internal consistency method, utilizing Cronbach's alpha. Results are presented in Table 2. These values were considered appropriate for this study. It is worth noting that the study variables are one predictive variable, the family environment, and the predicted variables are neuroticism and extroversion.

Table 2. Results of Cronbach's Alpha Internal Consistency Coefficient and Retest Reliability of the Axes

Domain	Test-retest	Internal consistency
Neuroticism	0.89	0.85
Extraversion	0.91	0.82

4. Findings and Discussion

4.1. Results of The First Question

"To what extent does the family environment contribute to neuroticism development among students at Jadara University?"

Multiple linear regression analysis was employed to examine the influence of the family environment on the development of neuroticism among students at Jadara University. The predictor variables were adopted into the regression equation using the Stepwise method, as shown in Table 3.

Table 3. Results of the Multiple Regression Test to Detect the Impact of the Family Environment on Neuroticism Using the Stepwise Method

Predictors	R	R ²	Added R ²	B	F	t	b ₀	P
Conflict	.395	.156	.156	.401	78.157	6.222	8.841	.000
Cohesion	.444	.197	.041	-.213	51.705	-4.634	3.118	.000

Dependent variable: Neuroticism

Results in Table 3 indicate that conflict and cohesion jointly predict neuroticism, accounting for 19.7% of the variance in neuroticism. Conflict emerged as the strongest predictor of neuroticism, as it explained 15.6% of the variance, followed by the cohesion variable, which contributed an additional 4.1% to the explained variance. The percentage of variance added to these variables was statistically significant at the significance level $\alpha = 0.05$. In contrast, the variables expressiveness, cultural-intellectual orientation, recreational orientation, and organization did not contribute to predicting neuroticism, as the explained variance they added was not statistically significant at the $\alpha = 0.05$ significance level.

As indicated in Table 3, a one-unit increase in conflict (measured in standard deviation units led to a 0.401-unit increase in neuroticism, whereas a one-unit increase in cohesion resulted in a 0.213-unit decrease in neuroticism.

The findings further revealed that conflict positively predicted neuroticism, suggesting that higher levels of conflict within the family contribute to greater emotional instability, anxiety, and symptoms of neuroticism, such as depression and mood swings. Children are more likely to suffer from anxiety and increased emotional reactivity when family members quarrel regularly and use maladaptive methods to vent their anger, such as yelling or physical violence.

The current study's findings are consistent with those of Williams and Gage (2020), who observed that individuals raised in environments characterized by frequent conflict are more prone to developing neurotic tendencies. In a similar vein, Bala et al. (2018) identified a significant positive association between family conflict and psychological difficulties among adolescents, suggesting that unstable family dynamics contribute to elevated levels of neuroticism. Additionally, Eysenck (1991) emphasized that individuals from conflict-laden family backgrounds tend to experience persistent anxiety and emotional instability, further corroborating the present study's results, which indicate heightened neuroticism among students exposed to high-conflict family environments. Conversely, family cohesion negatively predicted neuroticism, implying that greater family unity, mutual support, and cooperation contribute to lower neuroticism levels. Families that exhibit mutual respect, emotional warmth, and practical problem-solving skills offer a psycho-social buffer against stress, allowing individuals to release tension and pressure healthily.

The negative relationship between family cohesion and neuroticism identified in the present study is consistent with the findings of Eisenberg et al. (1998), who reported that supportive and positive family interactions help alleviate emotional distress and reduce the likelihood of neurotic traits. Similarly, Amalu (2017) demonstrated that students' psychological adjustment is significantly shaped by the degree of family cohesion and support, reinforcing the protective influence of cohesive family environments highlighted in the current study.

4.2. Findings of The Second Question

To what extent does the family environment influence extraversion among students at Jadara University?

Multiple linear regression analysis was employed to investigate the influence of the family environment on extroversion among students at Jadara University. The predictor variables were entered into the regression equation using the Stepwise method. Details are presented in Table No. (4).

Table 4. Results of the Multiple Regression Test to Detect the Impact of the Family Environment on Extraversion Using the Stepwise Method

Predictors	R	R ²	Adde R ²	B	F	t	b0	P
Orientation toward recreational activities	.363	.132	.132	.328	64.263	8.016	2.118	.000
Conflict	.406	.164	.033	-.155	41.537	-4.057	2.598	.000

Dependent variable: Extraversion

Results in Table 4 show that recreational orientation and conflict predict extraversion, explaining 16.4% of the variance in extraversion. Recreational orientation emerged as the strongest predictor of extraversion, explaining 13.2% of the variance, followed by conflict, which added 3.3%. The

percentage of variance added to these variables was statistically significant at the significance level $\alpha = 0.05$. Cohesion, expression, intellectual-cultural orientation, and organization did not contribute to predicting extraversion, as the explained variance they added was not statistically significant at the $\alpha = 0.05$ significance level.

Results in Table 4 suggest that an increase in recreational orientation by one standard unit (standard deviation) increases extraversion by 0.328 of the standard unit and that a rise in conflict by one standard unit (standard deviation) reduces extraversion by 0.155 of the standard unit. These predictive variables were statistically significant at the $\alpha = 0.05$ significance level. The results show that the orientation towards recreational activities positively predicted extroversion.

A family that places a high value on social interaction and participation, such as attending events like weddings and graduations, keeping in touch with friends and family, and participating in common pastimes, helps its members develop their social skills. Participating actively in social activities, hobbies, and sports helps to develop extroverted personality traits by reinforcing these abilities. By encouraging self-assurance, friendliness, and active participation in social situations,

The present study's finding that a recreational orientation positively predicts extraversion aligns with Steinberg's (2001) study, which highlighted that active involvement in family-based social and recreational activities fosters the development of social competencies and extroverted tendencies. Additionally, Verduyn and Brans (2012) found that extraversion is strongly linked to both the frequency and intensity of positive emotional experiences, often nurtured through engaging social interactions. This relationship is reflected in the current study's focus on the role of recreational family activities in promoting extraverted behavior. Conflict also came as a negative predictor of extroversion, as the presence of conflict and problems between family members and the constant tension between them reduces children's participation in social interactions and creates a kind of isolation and avoidance of others and interaction with them because they do not feel comfortable due to the charged family environment.

Individuals who actively engage in conversations, maintain social connections, and participate in communal events are more likely to have been raised in a healthy family environment characterized by low conflict. The adverse predictive effect of family conflict on extraversion identified in this study is consistent with the findings of Garcia (2021), who noted that familial conflicts tend to suppress social engagement and hinder the formation of interpersonal relationships. Similarly, Fan et al. (2020) indirectly supported this connection by demonstrating that parents exhibiting high levels of neuroticism, a trait often rooted in conflict-laden family environments, adversely affect their children's psychological well-being and social behaviors, thereby diminishing characteristics typically associated with extraversion. Notably, a review of previous studies revealed no directly comparable findings, further reinforcing the significance and originality of the current study.

This study is distinguished by incorporating both neuroticism and extraversion within a unified predictive model of the family environment, effectively addressing a gap previously acknowledged by the authors during their review of existing literature.

In summary, the findings of this study closely align with a wide range of prior research, both affirming and expanding current understanding of how specific aspects of the family environment, particularly conflict, cohesion, and recreational orientation, shape the development of neuroticism and extraversion. The study's key contribution lies in its integrated examination of these two personality traits within a single framework, offering valuable insights into their combined relationship with family dynamics among university students.

5. Conclusion

The present study aimed to reveal the extent to which the family environment predicts neuroticism and extroversion among Jadara University students. A total of 425 male and female university students. The findings demonstrate that the family environment has a significant impact on levels of neuroticism and extroversion. Family coherence and mutual support were linked to lower levels of neuroticism, while a conflict-filled family environment was found to enhance neuroticism.

Since engaging in activities and pursuing various hobbies with family members boosts extroversion, a positive correlation has been found between recreational orientation and extroversion. Conflict was also found to be a negative predictor of extroversion, as family members who are constantly at odds with one another are less likely to engage in social activities, thereby lowering extroversion in students.

The researchers presented a set of recommendations, the most important of which was holding educational seminars for families and students to familiarize them with the dimensions of the family environment that contribute to reducing neuroticism and raising extroversion among students.

6. Recommendations

1. Conducting educational seminars for parents and students can help familiarize them with the dimensions of the family environment, potentially contributing to a reduction in neuroticism and an increase in extroversion among students.
2. Conducting similar studies on other samples that predict other personality factors, such as agreeableness.
3. Conducting additional studies examining the family environment regarding demographic variables, such as gender and educational level.
4. More studies should be conducted to examine how family environment and personality traits influence students' academic performance, classroom behavior, peer relationships, and teacher-student interactions.

Declarations

Author Contributions. Eman Ahmad Mousa Jawarneh and Shooroq Maberah: Literature review, conceptualization, and data collection. Ruba Ahmad Musa Jawarneh and Nizar Mohammed Yousef Al-Zoubi: Methodology design and statistical analysis. Shooroq Maberah: Review, editing, and original manuscript preparation. All authors have read and approved the final version of the manuscript for publication.

Conflicts of Interest. The authors declare no conflict of interest.

Data Availability Statement. The data supporting the findings of this study are available from the corresponding author upon reasonable request. All datasets were collected and stored in compliance with institutional research ethics and privacy guidelines.

Acknowledgements. NA

References

- Al-Duwairi, Wafaa & Jaradat, Abdul Karim. (2013). Bullying and victimization and their relationship to the family environment among a sample of primary school students in Irbid Governorate. PhD thesis, Yarmouk University, Irbid, Jordan.
- Jaradat, Abdul Karim and Abu Ghazal, Muawiyah. (2014). Differences in the Big Five Personality Factors According to Gender and Need for Cognition. *Journal of Educational and Psychological Sciences*, 15(3). 1-29. DOI: 10.12785/JEPS/150304

- Amalu, M. N. (2017). Family environment and self-esteem as predictors of psychological adjustment of secondary school students from divorced homes in Cross River State, Nigeria. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 7(6), 9–16. DOI: 10.9790/7388-0706010916
- Bala, M., Balda, S., & Kumari, A. (2018). Family environment and psycho-social problems among adolescents, 7(12), 2184-2191. <https://doi.org/10.20546/ijcmas.2018.712.248>
- Bandura, A. (2013). Health promotion from the perspective of social cognitive theory. *In Understanding and Changing Health Behavior* (299–339). <https://doi.org/10.1080/08870449808407422>
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental psychology*, 4(1p2), 1–103. <https://psycnet.apa.org/doi/10.1037/h0030372>
- Bellingtier, J. A., Mund, M., & Wrzus, C. (2023). The role of extraversion and neuroticism in experiencing stress during the third wave of the COVID-19 pandemic. *Current Psychology*, 42(14), 12202-12212. <https://doi.org/10.1007/s12144-021-02600-y>.
- Bradburn, N. M. (1969). The structure of psychological well-being. <https://doi.org/10.2307/2093340>
- Brown, A. (2021). Family Dynamics and Behavioral Outcomes. *Journal of Child Psychology*, 57(2), 120–135.
- Casper, M. (2001). A definition of “social environment”. *American journal of public health*, 91(3), 465–470. <https://doi.org/10.2105/AJPH.91.3.465a>.
- De Fruyt, F., Van Leeuwen, K., Bagby, R. M., Rolland, J. P., & Rouillon, F. (2006). Assessing and interpreting personality change and continuity in patients treated for major depression. *Psychological assessment*, 18(1), 71. <https://psycnet.apa.org/doi/10.1037/1040-3590.18.1.71>
- De Vet, E., De Ridder, D. T. D., & De Wit, J. B. F. (2011). Environmental correlations of physical activity and dietary behaviors among young people: a systematic review of reviews. *Obesity reviews*, 12(5), e130-e142. <https://doi.org/10.1111/j.1467-789X.2010.00784.x>
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, 9(4), 241-273. https://doi.org/10.1207/s15327965pli0904_1
- Eysenck, H. J. (1991). Dimensions of personality: 16, 5, or 3 criteria for a taxonomic paradigm. *Personality and individual differences*, 12(8), 773-790. [https://doi.org/10.1016/0191-8869\(91\)90144-Z](https://doi.org/10.1016/0191-8869(91)90144-Z)
- Fan, H., Li, D., Zhou, W., Jiao, L., Liu, S., & Zhang, L. (2020). Parents’ personality traits and children’s subjective well-being: A chain mediating model. *Current Psychology*, 1–12. <https://doi.org/10.1007/s12144-020-01078-4>.
- Garcia, R. (2021). Positive Family Interactions and Child Development. *Journal of Social Psychology*, 52(3), 190–203.
- Jaradat, A. K. M., & Ghazal, M. M. A. (2014). Differences in the Big Five Personality Traits according to Gender and Need for Cognition. *Journal of Educational & Psychological Sciences*, 15(03). DOI: 10.12785/JEPS/150304
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). Big Five Inventory. *Journal of personality and social psychology*.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy. *Handbook of personality: Theory and research*, 3(2), 114-158.

- Jones, L. (2020). Emotional Support in Family Systems. *International Journal of Psychology*, 38(1), 50–67.
- Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist*, 64(4), 241. <https://psycnet.apa.org/doi/10.1037/a0015309>
- Lee, S. A., Kim, S. J., & Korean QoL in Epilepsy Study Group. (2021). Neuroticism and extraversion affect the health-related quality of life of persons with epilepsy independently of depression and anxiety symptoms: *Epilepsy & Behavior*, 117, 107858. <https://doi.org/10.1016/j.yebeh.2021.107858>
- Leto, I. V., Loginova, S. V., Varshal, A., & Slobodskaya, H. R. (2021). Interactions between family environment and personality in the prediction of child life satisfaction. *Child Indicators Research*, 14(4), 1345–1363. 10.1007/s12187-020-09798-6
- Mammadov, S. (2022). Big Five personality traits and academic performance: A meta-analysis. *Journal of Personality*, 90(2), 222–255. <https://doi.org/10.1111/jopy.12663>.
- Moos, R. H., & Moos, B. S. (1994). Family Environment Scale Manual: Development, Applications, and Research. (No Title).
- Motamedi, V. (2020). Family environment on adolescents' emotional, social, and academic adaptation: A study of middle school students. *Journal of Education and Learning (EduLearn)*, 14(4), 550–557. <https://doi.org/10.11591/edulearn.v14i4.16629>.
- Naragon-Gainey, K., Watson, D., & Markon, K. E. (2009). Differential relations of depression and social anxiety symptoms to the facets of extraversion/positive emotionality. *Journal of Abnormal Psychology*, 118(2), 299. <https://psycnet.apa.org/doi/10.1037/a0015637>.
- Nilsen, F. A., Bang, H., & Røysamb, E. (2024). Personality traits and self-control: The moderating role of neuroticism. *Plos one*, 19(8) .<https://doi.org/10.1371/journal.pone.0307871>.
- Nokali, N. E., Bachman, H. J., & Votruba-Drzal, E. (2010). Parent involvement and children's academic and social development in elementary school. *Child development*, 81(3), 988-1005. <https://doi.org/10.1111/j.1467-8624.2010.01447.x> .
- Noller, P., & Atkin, S. (2014). Family life in adolescence. *De Gruyter Open*. <https://doi.org/10.2478/9783110402490.c> .
- Pawlak, M., Schmidtler, H., & Kopala-Sibley, D. C. (2025). Neuroticism and extraversion as predictors of first-lifetime onsets of depression, anxiety, and suicidality in high-risk adolescents. *Development and Psychopathology*, 37(1), 529-540. <https://doi.org/10.1017/S0954579424000130> .
- Pollet, T. V., Roberts, S. G., & Dunbar, R. I. (2011). Extraverts have larger social network layers. *Journal of Individual Differences*. <https://doi.org/10.1027/1614-0001/a000048> .
- Shen, J., Brdiczka, O., & Liu, J. (2015). A study of Facebook behavior: What does it tell about your Neuroticism and Extraversion? *Computers in Human Behavior*, 45, 32-38. <https://doi.org/10.1016/j.chb.2014.11.067> .
- Shiner, R., & Caspi, A. (2003). Personality differences in childhood and adolescence: Measurement, development, and consequences. *Journal of child psychology and psychiatry*, 44(1), 2–32. <https://doi.org/10.1111/1469-7610.00101> .
- Simms, E. E. (2009). Assessment of the facets of the five-factor model: Further development and validation of a new personality measure. The University of Iowa.

- Smith, J. (2019). Family Environment and Child Development. *Journal of Family Studies*, 45(3), 200–215.
- Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Adolescent Research*, 11(1), 1-19. <https://doi.org/10.1111/1532-7795.00001>.
- Verduyn, P., & Brans, K. (2012). The relationship between extraversion, neuroticism, and aspects of trait affect. *Personality and Individual Differences*, 52(6), 664-669. <https://doi.org/10.1016/j.paid.2011.12.017>.
- Williams, K., & Gage, L. (2020). Family Influence on Academic Performance. *Journal of Educational Research*, 62(4), 300–318.
- Wilson, W. R. (1967). Correlates of avowed happiness. *Psychological bulletin*, 67(4), 294. <https://psycnet.apa.org/doi/10.1037/h0024431>.

About the Contributor(s)

Dr. Eman Ahmad Mousa Jawarneh, Assistant Professor - Jadara University - Department of Family Counseling and Reform, Jordan
 Email: e.Jawarneh@jadara.edu.jo
 ORCID: <https://orcid.org/0009-0003-7128-0855>

Dr. Ruba Ahmad Musa Jawarneh, Part-time Lecturer - Jadara University - Department of Psychological and Educational Counseling, Jordan
 Email: jawarnehruba417@yahoo.com
 ORCID: <https://orcid.org/0009-0004-4070-7454>

Dr. Shooroq Maberah, Associate Professor - Jadara University - Department of Family Counseling and Reform, Jordan
 Email: shooroq@jadara.edu.jo
 ORCID: <https://orcid.org/0000-0002-7085-4541>

Dr. Nizar Al-Zoubi, Associate Professor - Jadara University - Department of Psychological and Educational Counseling, Jordan
 Email: ni.alzubi@jadara.edu.jo
 ORCID: <https://orcid.org/0009-0000-8092-9079>

Publisher's Note: The opinions, statements, and data presented in all publications are solely those of the individual author(s) and contributors and do not reflect the views of Universitepark, EDUPIJ, and/or the editor(s). Universitepark, the Journal, and/or the editor(s) accept no responsibility for any harm or damage to persons or property arising from the use of ideas, methods, instructions, or products mentioned in the content.
