





The moderating role of conscientiousness and gender in the relationship between perceived family atmosphere and academic performance in students from the city of Babylon, Iraq

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ABSTRACT

Objective: The present research aimed to determine the moderating role of conscientiousness and gender in the relationship between perceived family atmosphere and academic performance.

Methods and Materials: The research method was correlational, utilizing hierarchical regression analysis, with the population comprising all students from the University of Babylon in Iraq, among whom 258 were conveniently selected. Data were collected using the Family Atmosphere Perception Questionnaire (Grolnick et al., 1997), the Conscientiousness Questionnaire (Costa & McCrae, 2008), and students' academic averages and were analyzed using Pearson's correlation coefficient and hierarchical regression analysis through SPSS software version 26.

Findings: Results showed that there is a positive and significant relationship between perceived family atmosphere in both dimensions of parent-child and mother-child relationships with conscientiousness and academic performance, and between conscientiousness and academic performance ($p < 0.01$). Furthermore, the results of the hierarchical regression analysis indicated that conscientiousness and gender moderate the relationship between perceived family atmosphere and academic performance ($p < 0.01$).

Conclusion: Based on the results of the current study, it can be concluded that perceived family atmosphere is an important variable for enhancing academic performance, considering the role of conscientiousness and gender in Iraqi students.

Keywords: Perceived family atmosphere, academic performance, conscientiousness, students

1. Introduction

The acquisition of knowledge and skills, along with the attainment of various skills for entering the desired career path, holds significant importance for students worldwide (Civera et al., 2023). The increasing number of enthusiasts and applicants for university education simply reflects such significance. The trace of this growing need for university education is also clearly visible in studies conducted in Iraq (Khammat Al-iessa et al., 2023). In the shadow of such importance, variables in the educational field, covering a wide range of performance, progress, and success areas, have increasingly become the focus of scientific research by thinkers and researchers. Among these educational variables, academic performance, as a reflection of each student's actions, has maintained an unparalleled position among researchers from different countries for scientific studies, despite the numerous studies it has attracted so far (Tadese et al., 2022). In terms of definition, performance refers to the quality and, from a measurement perspective, the quantity of an individual's actions in tasks and duties assigned to them. In the educational aspect, academic performance similarly pertains to an individual's qualitative and quantitative actions in academic tasks and duties, the ultimate reflection of which can be seen in the results of exams and ultimately in students' GPA or any other studying demographic (Gebru & Versteegen, 2023). According to scientific studies worldwide, various variables are significantly related to academic performance. Among these, family functioning and the nature of parent-child relationships hold special importance among various variables.

The family atmosphere and the perception that each family member has of the prevailing atmosphere have been defined and considered from various perspectives. At a glance, the perception of family atmosphere refers to the forms and styles of communication among members alongside the level of emotional and affective bonding that family members have with each other (Kurock et al., 2022). From this perspective, the more family members feel that warm, intimate, and supportive relationships exist among members, especially between parents and children, the more positive their perception of the family atmosphere will be (Olson et al., 2019). A positive understanding of the family atmosphere has various functions and effects for parents and children (Pourseyed et al., 2019; Valdés-Cuervo et al., 2018). According to available studies, the family atmosphere and members' positive perception of it are related to coping

with problems and issues, social and emotional adaptability, goal setting, moral identity formation, a sense of efficacy, and resilience, especially in children (Kohiyanafzal Dehkordi et al., 2022; Kurock et al., 2022). The theoretical and practical basis for such a connection is the possibility of skill exchange and the creation of a positive family atmosphere for the positive development and flourishing of children through granting autonomy based on efficacy and trust (Qiu & Ye, 2023).

Children in families with a positive atmosphere have the opportunity and ability to pursue their personal growth and development goals confidently and securely. Therefore, not only is a positive family atmosphere associated with positive family and social outcomes, but it also inevitably links to academic progress and performance (Khatoun & Sharma, 2021). In line with these points, Khatun and Sharma (2021) reported a positive relationship between perception of the family environment and academic achievement, Poursaeed et al. (2019) between parents' involvement and enthusiasm with children's academic motivation (Pourseyed et al., 2019), and Ghamari et al. (2015) also between family functioning and children's progress and academic performance (Ghamari et al., 2015). Beyond the direct relationship and regardless of the role of other variables between the perception of atmosphere and family performance with academic performance, children's personality and individual variables can play a role in the relationship between the perception of family atmosphere and academic performance due to differences in the nature of parent-child relationships for boys and girls alongside the different transmission and reinforcement of a sense of commitment and responsibility to sons and daughters (Shokri, 2008). Based on the theoretical foundations and evidence to be reviewed later, conscientiousness as a personality trait and gender as a demographic variable have the potential to moderate the relationship between perceived family atmosphere and students' academic performance.

Conscientiousness, as one of the personality traits in the Big Five personality traits approach (Verbree et al., 2023), encompasses the ability to regulate, control, and direct behaviors and decisions in different situations and conditions (Javaras et al., 2019). Conscientious individuals are those who exert great effort and precision to ensure that tasks are performed correctly, efficiently, and in an organized manner, in line with goals and plans (Ching, 2021). There is evidence that conscientiousness, despite being a personality trait, can be strengthened through education, including family teaching and the process of

development and learning during schooling, based on both genetic foundations and learning through modeling (Tackman et al., 2017). On the other hand, there is considerable evidence that conscientiousness is related to academic performance and progress (Khan, 2020; Mammadov, 2022; Nguyen et al., 2005; Wang et al., 2023). The moderating ability of conscientiousness in the relationship between perceived family atmosphere and academic performance lies in the role that conscientiousness plays according to the approach of the pervasive effect of personality traits on behaviors and decisions in different conditions (Ching, 2021). In fact, since conscientiousness facilitates behaviors such as active engagement in academic tasks and duties (Meyer et al., 2023), it has the ability to also affect the influence of family atmosphere on performance. Supporting this, Wang et al. (2023) in their study showed that a variable like conscientiousness, by creating a sense of efficacy and individual identity, lays the groundwork for enhancing academic progress (Wang et al., 2023).

Alongside conscientiousness, differences in performance and conscientiousness between girls and boys, which have attracted considerable attention in recent studies (Hessen & Kuncel, 2022; Mac Giolla & Kajonius, 2019), pave the way for considering gender as another moderating variable in the relationship between perception of family atmosphere and academic performance. In fact, based on existing evidence, evolved parenting patterns and styles towards girls compared to boys, who historically had fewer restrictions on their behaviors and decisions, have provided the context and foundation for girls in many societies today to pursue social and academic goals and overall life plans with more seriousness and commitment (Khan, 2020; Kuśnierz et al., 2020). Supporting this, the study by Shokri et al. (2008) and the study by Hessen and Kuncel (2022) highlighted the role of conscientiousness and gender on academic performance (Hessen & Kuncel, 2022; Shokri, 2008), Khan's (2022) study on the role of gender on academic performance in the context and beyond personality traits like conscientiousness on academic performance, and Nguyen et al. (2005) well documented the moderating role of gender in the relationship between personality traits like conscientiousness and academic performance. Searches did not yield studies that have investigated the moderating role of conscientiousness and gender in the relationship between perception of family atmosphere and academic performance in students (Nguyen et al., 2005). However, consistent with the evidence regarding the roles and functions of conscientiousness and

gender mentioned, the present study has raised and tested this moderating role.

In conclusion, emphasizing the theoretical and research foundations reviewed, the perception of parent-child relationships, which is the main axis of perceived family atmosphere, is among the variables related to significant and impactful variables such as students' academic performance. On the other hand, based on the foundations and theoretical approaches to the functions of personality and gender variables, the personality trait of conscientiousness and gender in students can be moderating variables for the relationship between perceived family atmosphere and students' academic performance. This moderating ability of conscientiousness and gender has been the focus of relatively few studies, especially among students and their families in Iraq. In this direction, it is necessary to further investigate through scientific research like the present study the real and potential capacities of perceived family atmosphere for academic performance and the role of conscientiousness and gender in students in the mentioned relationships in a country like Iraq to fill the scientific knowledge gap in this context. This could provide a basis for expanding scientific insight for a diverse range of students in Iraq and pathways to enhance their academic performance. Accordingly, this research has been conducted to answer the question: Is there a relationship between perceived family atmosphere and academic performance, considering the moderating role of conscientiousness and gender among students in the city of Babylon, Iraq?

2. Methods and Materials

2.1. Study Design and Participants

This research is correlational, based on hierarchical regression analysis. The study population consisted of 600 psychology and educational sciences students at the University of Babylon, Iraq, in the winter of 2023. Based on Krejcie and Morgan's (1970) recommendation, 260 participants (considering a 10% increase over the recommended 234 participants to account for potential sample loss due to incomplete questionnaires) were selected through convenience sampling. Inclusion criteria included the willingness and consent to participate in the research and being enrolled in psychology or educational sciences programs. After collecting 260 questionnaires, 2 were excluded due to damage (0.7%), resulting in a final sample size of 258. Ethical considerations included ensuring anonymity to protect participants from any potential

negative consequences, confirming voluntary participation without any coercion from the researcher, and informing participants that results would be used strictly for research purposes.

2.2. Measures

2.2.1. Family Atmosphere

To assess family atmosphere, the 42-item questionnaire by Ryan et al. (1996), measuring the father-child relationship (21 items) and the mother-child relationship (21 items), was used. The response scale ranged from strongly disagree (1) to strongly agree (7), with a total score range from 42 to 294 (and 21 to 147 for each dimension). Higher scores indicate a more positive perception of the family atmosphere (Grolnick et al., 1997). The questionnaire's construct validity was confirmed through exploratory factor analysis. Zare Jamalabad et al. (2017) reported satisfactory validity and reliability, with Cronbach's alpha coefficients for the father-child and mother-child dimensions at 0.84 and 0.87, respectively. Additionally, positive correlations between the questionnaire scores and creative thinking in children serve as evidence of convergent validity (Zarejamalabadi et al., 2017). In the current study, Cronbach's alpha for the overall score was 0.91, and for the father-child and mother-child dimensions, it was 0.89 and 0.87, respectively.

2.2.2. Conscientiousness

The NEO Personality Inventory conscientiousness scale with 12 items was used to measure conscientiousness. The response scale was a 5-point Likert scale from strongly disagree (1) to strongly agree (5), with scores ranging from 12 to 60. Higher scores indicate higher levels of conscientiousness. Costa & McCrae (2008) validated the factor structure (construct validity) of the questionnaire through exploratory and confirmatory factor analysis, demonstrating its satisfactory structure. The questionnaire's convergent and divergent validity was documented through correlations with the Myers-Briggs Type Indicator and the Self-Directed Search inventory, with a reported Cronbach's

alpha of 0.90 for the conscientiousness dimension (Costa & McCrae, 2008; McCrae & Costa Jr, 2010). This questionnaire has been validated in the Iranian student population by Anisi et al. (2012), who reported significant correlations with the Eysenck Personality Questionnaire and a Cronbach's alpha of 0.83 (Anisi, 2012). In the present study, Cronbach's alpha for this questionnaire was 0.71.

2.2.3. Academic Performance

In this research, academic performance was measured by the GPA of terms up to the time of the study, collected through self-report.

2.3. Data analysis

Data were analyzed using Pearson's correlation coefficient along with mean and standard deviation, and after checking for assumptions of normality through the Shapiro-Wilk test and linearity through scatter plots, using hierarchical regression analysis via SPSS version 26.

3. Findings and Results

In terms of academic year, the sample included 25 first-year students (9.7%), 40 second-year students (15.5%), 38 third-year students (14.7%), and 155 fourth-year students, constituting the majority with 60%. The cumulative percentage of students by academic year reached 100%. Age groups were divided as follows: up to 20 years old (11.6%), 21 to 25 years old (59.3%), 26 to 30 years old (12.8%), and 31 years and older (16.3%), with a cumulative total of 100%. Economically, 7.4% of the participants were classified as having a weak economic status, 84.9% as medium, and 7.7% as strong, achieving a 100% cumulative distribution. Regarding marital status, 65.1% were single and 34.9% were married, totaling 100% of the sample. Gender-wise, the sample comprised 44.2% males and 55.8% females, summing up to 100% of the participants.

Table 1 presents the mean, standard deviation, and relationships between the research variables.

Table 1

Mean, Standard Deviation, and Relationships Between Research Variables

Variable	Mean	Standard Deviation	Relationship 1	Relationship 2	Relationship 3
Father-Child Relationship	70.31	10.97	0.89		
Mother-Child Relationship	73.32	10.02	0.61	0.87	
Conscientiousness	43.25	5.87	0.51	0.52	0.71
Academic Performance	14.25	2.41	0.242	0.392	0.249

All relationships between the research variables were found to be significantly positive ($p < 0.01$).

Table 2 shows the results of the hierarchical regression analysis of the relationship between perceived family atmosphere and academic performance, considering the moderating role of conscientiousness. As seen in Table 2, in the first step, both mother and father-oriented perceived family atmospheres had significant coefficients for predicting academic performance, explaining 19.2% of the variance. In the second step, conscientiousness accounted for an additional 7% of significant variance in predicting

academic performance. In the third step, the interaction of mother-oriented perceived family atmosphere \times conscientiousness and father-oriented perceived family atmosphere \times conscientiousness explained an additional 6.9% of significant variance. Therefore, the hypothesis that conscientiousness moderates the relationship between perceived family atmosphere (both mother and father-oriented) and academic performance was supported.

Table 2

Hierarchical Regression Analysis Results for Predicting Academic Performance Through Perceived Family Atmosphere Oriented to Mother and Father and Conscientiousness

Predictor Variables	Model 1 β	Model 2 β	Model 3 β
Perceived Family Atmosphere Oriented to Mother	**0.24	**0.24	**0.29
Perceived Family Atmosphere Oriented to Father	**0.21	*0.19	*0.18
Conscientiousness	-	**0.22	**0.20
Mother-Oriented Family Atmosphere \times Conscientiousness	-	-	**0.24
Father-Oriented Family Atmosphere \times Conscientiousness	-	-	*0.18
R ² or Adjusted R ²	0.192	0.07	0.069
F or Adjusted F	**10.52	**7.32	**6.72

* $p < 0.05$, ** $p < 0.01$

As observed in Table 3, the initial phase showed that both the mother-oriented and father-oriented perceptions of family atmosphere had significant coefficients for predicting academic performance, explaining 19.2% of the variance. In the second phase, gender accounted for an additional significant variance of 7.5% in predicting academic performance. In the third phase, the interaction between

mother-oriented family atmosphere perception \times gender and father-oriented family atmosphere perception \times gender accounted for an additional significant variance of 7.7% in predicting academic performance. Thus, the hypothesis that gender moderates the relationship between perceived family atmosphere (oriented towards both mother and father) and academic performance was confirmed.

Table 3

Hierarchical Regression Analysis Results for Predicting Academic Performance Through Perceived Family Atmosphere Oriented to Mother and Father and Gender

Predictor Variables	Model 1 β	Model 2 β	Model 3 β
Perceived Family Atmosphere Oriented to Mother	**0.24	**0.24	**0.29
Perceived Family Atmosphere Oriented to Father	**0.21	*0.19	*0.18
Gender	-	**0.26	**0.21
Mother-Oriented Family Atmosphere \times Gender	-	-	**0.26

Father-Oriented Family Atmosphere × Gender	-	-	*0.19
R ² or Adjusted R ²	0.192	0.075	0.077
F or Adjusted F	**10.52	**8.41	**7.55

*p<0.05, **p<0.01

4. Discussion and Conclusion

This study aimed to determine the relationship between perceived family atmosphere and academic performance, considering the moderating roles of conscientiousness and gender among students in Babylon, Iraq. The results indicated that both variables, conscientiousness and gender, moderate the relationship between perceived family atmosphere and students' academic performance. No prior studies were found that examined the relationship between perceived family atmosphere and academic performance with a focus on the role of conscientiousness. However, studies (Khan, 2020; Mammadov, 2022; Nguyen et al., 2005; Wang et al., 2023) have discussed the relationship between conscientiousness and academic performance and progress. Tackman et al. (2019) also referred to the roles and functions of the family in fostering children's conscientiousness (Tackman et al., 2017). Furthermore, as Meyer et al. (2023) pointed out, conscientiousness as a personality trait leads to behaviors such as active engagement in academic tasks and duties (Meyer et al., 2023). This sets the stage for conscientiousness to further strengthen the relationship between a positive emotional, emotional, and supportive family atmosphere and academic performance. Based on the explanations provided, the moderating capability of conscientiousness in the relationship between perceived family atmosphere and academic performance in this study aligns significantly with the theoretical foundations presented and findings from previous studies.

In line with the approach of the pervasive effects of personality traits in different social, familial, and even work contexts (Ching, 2021), the current study's findings showed that there is a stronger positive relationship between mother-oriented perceived family atmosphere and academic performance, as well as between father-oriented perceived family atmosphere and academic performance, at higher levels of conscientiousness compared to lower levels. This means that when conscientiousness in students is high, the relationship between perceived family atmosphere and academic performance is stronger. This finding supports the pervasive effects approach of conscientiousness as a personality trait (Ching, 2021) and implies that considering both environmental factors like family atmosphere and

personality traits is realistic and necessary when examining variables influencing students' academic performance. The mentioned relationships occur because parents who can create a positive emotional atmosphere in the family are responsible and conscientious, accepted by their children as role models due to the bond based on respect and emotional exchange. This modeling by children of their parents fosters conscientiousness, thus placing this personality trait in an influential position regarding the relationship between perceived family atmosphere and children's academic performance.

Another part of the findings demonstrated that gender can moderate the relationship between perceived family atmosphere and students' academic performance. A closer examination of the results revealed that male students have a stronger positive relationship between mother-oriented perceived family atmosphere and academic performance compared to females, and conversely, females have a stronger positive relationship between father-oriented perceived family atmosphere and academic performance compared to males. These findings align with previous studies, such as Shokri et al. (2008) and Hessen & Kuncel (2022), on the role of gender alongside conscientiousness in academic performance, Khan (2022) on the role of gender in academic performance beyond personality traits like conscientiousness, and Nguyen et al. (2005) on the moderating role of gender in the relationship between personality traits like conscientiousness and academic performance (Hessen & Kuncel, 2022; Khan, 2020; Nguyen et al., 2005; Shokri, 2008). The results indicate that opposite-gender parents play a more serious and prominent role in motivating and modeling their children towards better academic performance, potentially due to greater attention from parents to their opposite-gender children in countries like Iraq. This not only highlights the necessity of both parents' involvement in creating a positive family atmosphere but also suggests that if one parent fails to play their role in creating a positive emotional and emotional family atmosphere, the opposite-gender child's academic performance may suffer.

5. Limitations & Suggestions

This study has limitations that must be considered when generalizing and interpreting the results. Firstly, as it was

conducted among university students in Babylon, Iraq, caution should be exercised when generalizing the findings to other populations or educational levels. To address this limitation, future studies could be conducted among high school students in different provinces and cities within Iraq to allow for broader generalizations. Future research could also explore the relationship between family structure, atmosphere, and performance with variables such as academic commitment, engagement, and success. Finally, given that perceived family atmosphere, especially the nature and quality of the relationship between parents and children, was determined to play a significant and determinant role in students' academic performance considering the moderating roles of conscientiousness and gender, it is recommended to pursue the enhancement of a positive and emotional family atmosphere in Babylon, Iraq, through short to long-term educational programs overseen by experienced family psychologists, focusing on conscientiousness and gender among students through organizations involved in improving family life quality in Iraq, as a primary goal.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors contributed equally.

References

- Anisi, J. (2012). Validity and reliability of NEO Five-Factor Inventory (NEO-FFI) on university students. *International Journal of Behavioral Sciences*, 5(4), 351-355. https://www.behavsci.ir/article_67753_f1de17620c2496200a_f180ad86ede6a5.pdf
- Ching, G.-S. (2021). The Moderating Role of Personality in the Relationship between Internet Use and Study Abroad Difficulties. *International journal of environmental research and public health*, 18(14), 7707. <https://doi.org/10.3390/ijerph18147707>
- Civera, A., Lehmann, E. E., Meoli, M., & Paleari, S. P. (2023). The Attractiveness of European Higher Education Systems: A Comparative Analysis of Faculty Remuneration and Career Paths. <https://escholarship.org/uc/item/08x00432>
- Costa, P. T., Jr., & McCrae, R. R. (2008). The SAGE Handbook of Personality Theory and Assessment: Volume 2 — Personality Measurement and Testing. In. SAGE Publications Ltd. <https://doi.org/10.4135/9781849200479>
- Gebru, H. T., & Versteegen, D. (2023). Assessing predictors of students' academic performance in Ethiopian new medical schools: a concurrent mixed-method study. *BMC Medical Education*, 23(1), 448. <https://doi.org/10.1186/s12909-023-04372-4>
- Ghamari, M., Amiri Majd, M., & Khoshnam, A. H. (2015). The relationship between family function and parent-adolescents conflict with academic achievement among secondary school students. *JOURNAL OF INSTRUCTION AND EVALUATION*, 7(28), 52-62. magiran.com/p1606368
- Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The self-determination theory perspective. *Parenting and children's internalization of values: A handbook of contemporary theory*, 135-161. https://selfdeterminationtheory.org/wp-content/uploads/2020/10/1997_GrolnickDeciRyan.pdf
- Hessen, P. R., & Kuncel, N. R. (2022). Beyond grades: A meta-analysis of personality predictors of academic behavior in middle school and high school. *Personality and individual differences*, 199, 111809. <https://doi.org/10.1016/j.paid.2022.111809>
- Javaras, K. N., Williams, M., & Baskin-Sommers, A. R. (2019). Psychological interventions potentially useful for increasing conscientiousness. *Personality Disorders: Theory, Research, and Treatment*, 10(1), 13-24. <https://doi.org/10.1037/per0000267>
- Khammat Al-iessa, A. H., Amiryousefi, M., & Afrouz, M. (2023). Relationship between Iraqi EFL Students' Perceptions of Community of Inquiry and their Attention and Engagement in Online Classes. *Teaching English Language*, 1-28. https://www.teljournal.org/article_164844_cbe37d53c5114d327bcfdd19009b6102.pdf?lang=fa
- Khan, D. (2020). Gender Differences in Personality Traits in Relation to Academic Performance. *MIER Journal of Educational Studies Trends and Practices*, 10(1), 124-137. <https://doi.org/10.52634/mier/2020/v10/i1/1356>
- Khatoon, A., & Sharma, D. M. (2021). RELATIONSHIP BETWEEN FAMILY ENVIRONMENT AND ACADEMIC ACHIEVEMENT. *Elementary Education Online*, 20(1), 3202-3202. <https://www.ilkogretim-online.org/index.php?mno=83279>

- Kohiyanafzal Dehkordi, E., Mohammadi, K., & Amavis, S. A. (2022). Determining The Mediating Role of Moral Identity in the effect of Family Function on Moral Behavior in Female Students of hormozgan University. *Knowledge & Research in Applied Psychology*, 23(1), 89-99. https://jsr-p.isfahan.iau.ir/article_691849.html?lang=en
- Kurock, R., Gruchel, N., Bonanati, S., & Buhl, H. M. (2022). Family Climate and Social Adaptation of Adolescents in Community Samples: A Systematic Review. *Adolescent Research Review*, 7(4), 551-563. <https://doi.org/10.1007/s40894-022-00189-2>
- Kuśnierz, C., Rogowska, A. M., & Pavlova, I. (2020). Examining Gender Differences, Personality Traits, Academic Performance, and Motivation in Ukrainian and Polish Students of Physical Education: A Cross-Cultural Study. *International journal of environmental research and public health*, 17(16), 5729. <https://doi.org/10.3390/ijerph17165729>
- Mac Giolla, E., & Kajonius, P. J. (2019). Sex differences in personality are larger in gender equal countries: Replicating and extending a surprising finding. *International journal of psychology*, 54(6), 705-711. <https://doi.org/10.1002/ijop.12529>
- 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>
- McCrae, R. R., & Costa Jr, P. T. (2010). NEO Inventories: Professional manual. Lutz, FL: Psychological Assessment Resources. *Inc.[Google Scholar]*. https://www.researchgate.net/publication/240133762_Neo_P_I-R_professional_manual
- Meyer, J., Jansen, T., Hübner, N., & Lüdtke, O. (2023). Disentangling the Association Between the Big Five Personality Traits and Student Achievement: Meta-Analytic Evidence on the Role of Domain Specificity and Achievement Measures. *Educational psychology review*, 35(1), 12. <https://doi.org/10.1007/s10648-023-09736-2>
- Nguyen, N. T., Allen, L. C., & Fraccastoro, K. (2005). Personality Predicts Academic Performance: Exploring the moderating role of gender. *Journal of Higher Education Policy and Management*, 27(1), 105-117. <https://doi.org/10.1080/13600800500046313>
- Olson, D. H., Waldvogel, L., & Schlieff, M. (2019). Circumplex Model of Marital and Family Systems: An Update. *Journal of Family Theory & Review*, 11(2), 199-211. <https://doi.org/10.1111/jftr.12331>
- Pourseyed, P. D., S.M., Fouladchang, P. D., M., & Pourseyed, P. D., S.R. (2019). The Relationship between Personality Traits, Parental Involvement in their Children's Education, and Students' Academic Motivation [Research]. *Quarterly Journal Of Family and Research*, 16(1), 127-146. <http://qjfr.ir/article-1-1006-en.html>
- Qiu, Y., & Ye, P. (2023). The influence of family socio-economic status on learning engagement of college students majoring in preschool education: The mediating role of parental autonomy support and the moderating effect of psychological capital [Original Research]. *Frontiers in psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1081608>
- Shokri, O. (2008). Gender differences in academic performance: The role of personality traits. *International Journal of Behavioral Sciences*, 2(2), 127-141. http://www.behavsci.ir/article_67585_8e4b710e97fa8890baf4d80f50b95a0b6.pdf
- Tackman, A. M., Srivastava, S., Pfeifer, J. H., & Dapretto, M. (2017). Development of conscientiousness in childhood and adolescence: Typical trajectories and associations with academic, health, and relationship changes. *Journal of research in personality*, 67, 85-96. <https://doi.org/10.1016/j.jrp.2016.05.002>
- Tadese, M., Yeshaneh, A., & Mulu, G. B. (2022). Determinants of good academic performance among university students in Ethiopia: a cross-sectional study. *BMC Medical Education*, 22(1), 395. <https://doi.org/10.1186/s12909-022-03461-0>
- Valdés-Cuervo, A. A., Alcántar-Nieblas, C., Martínez-Ferrer, B., & Parra-Pérez, L. (2018). Relations between restorative parental discipline, family climate, parental support, empathy, shame, and defenders in bullying. *Children and Youth Services Review*, 95, 152-159. <https://doi.org/10.1016/j.childyouth.2018.10.015>
- Verbree, A.-R., Hornstra, L., Maas, L., & Wijngaards-de Meij, L. (2023). Conscientiousness as a Predictor of the Gender Gap in Academic Achievement. *Research in Higher Education*, 64(3), 451-472. <https://doi.org/10.1007/s11162-022-09716-5>
- Wang, H., Liu, Y., Wang, Z., & Wang, T. (2023). The influences of the Big Five personality traits on academic achievements: Chain mediating effect based on major identity and self-efficacy [Original Research]. *Frontiers in psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1065554>
- Zarejamalabadi, M., Mehdad, A., Manshaee, G.-r., & Afshani, S.-a. (2017). Predicting academic performance through perceptions of the family atmosphere with the mediation of creative thinking [Research]. *Journal of Medical Education and Development*, 12(1), 51-64. <http://jmed.ssu.ac.ir/article-1-785-en.html>