



Research Article

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Alexithymia and Family Environment as Predictors of Avoidant Personality Disorder Symptoms Among International University Students

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Abstract

Background: While personality disorders had less research interest than other disorders, Avoidant Personality Disorder (AVPD) is one of the prevalent and dysfunctional personality disorders. There is an essential role for family environment-related factors in the development of AVPD and alexithymia. International students face psychosocial challenges that may be associated with AVPD symptoms. **Objective:** To investigate the contribution of alexithymia and family environment in predicting AVPD symptoms among international university students in Jordan. **Methods:** To achieve the objectives of this study, three measures were used: the University Students' AVPD Scale, the Toronto Alexithymia Scale (TAS-20), and the short version of the Family Environment Scale, which were administered to a sample composed of 393 participants, including 188 males and 205 females. Multiple regression analysis was used. **Results:** The results showed that alexithymia and family environment significantly predicted AVPD among international students, accounting for 67.4% of the variance. Specifically, alexithymia was the strongest predictor, followed by family. Intellectual orientation, expression, organization, and cohesion, whereas family conflict and orientation to recreational activities did not predict AVPD symptoms. Gender-specific analysis indicated that the model explained 72.2% of variance in males and 62.6% in females. **Conclusions:** These findings clarify that the difficulties that international students have in understanding and expressing their emotions, together with their family environment, play a pivotal role in their lives. Considering these factors may help identify students who are more susceptible to AVPD symptoms and facilitate efforts to develop effective psychosocial interventions.

Keywords: Avoidant personality; Alexithymia; Family environment; International students.

الأكسيثيميا والبيئة الأسرية كمتنبئين بأعراض اضطراب الشخصية التجنبية لدى الطلبة الجامعيين الدوليين

الخلاصة

الخلفية: على الرغم من أن اضطرابات الشخصية حظيت باهتمام بحثي أقل من غيرها، يُعد اضطراب الشخصية التجنبية من أكثرها شيوعاً وتأثيراً على الأداء الوظيفي. وتشير الأدبيات إلى دور محتمل للعوامل الأسرية في تطور هذا اضطراب الشخصية التجنبية والأكسيثيميا، وفي حين يواجه الطلبة الوافدون تحديات نفسية واجتماعية قد ترتبط باضطراب الشخصية التجنبية. **الأهداف:** دراسة دور الأكسيثيميا والبيئة الأسرية في التنبؤ بأعراض اضطراب الشخصية التجنبية لدى طلبة الجامعة، ومقياس تورنتو للأكسيثيميا TAS-20، والنسخة المختصرة من مقياس البيئة الأسرية، والتي طبقت على عينة قوامها 393 من الطلبة الوافدين، منهم 188 ذكر و 205 إناث، وقد استخدم تحليل الانحدار المتعدد في تحليل البيانات. **النتائج:** أظهرت النتائج أن الأكسيثيميا والبيئة الأسرية تتنبأان بشكل هام بأعراض اضطراب الشخصية التجنبية لدى الطلبة الدوليين، إذ فسر النموذج 67.4% من التباين. وعلى وجه الخصوص، كانت الأكسيثيميا هي الأكثر تنبؤاً، يليها أبعاد البيئة الأسرية الآتية على التوالي: التوجه الفكري، والتعبيرية، التنظيم، والتماسك الأسري، في حين لم يتنبأ بعدد الصراع الأسري، والتوجه نحو الأنشطة الترفيهية بأعراض اضطراب الشخصية التجنبية. كما أظهر التحليل الخاص بالجنس أن النموذج يفسر 72.2% من التباين لدى الذكور، و62.6% لدى الإناث. **الاستنتاجات:** أن الصعوبات التي تواجه الطلبة الدوليين في فهم مشاعرهم والتعبير عنها، إلى جانب العوامل المرتبطة بالبيئة الأسرية، تلعب دوراً محورياً في حياتهم النفسية والاجتماعية. وبالتالي، أن أخذ هذه المتغيرات بالاعتبار يساعد في تحديد الطلبة الأكثر عرضة لظهور أعراض اضطراب الشخصية التجنبية لديهم، ويفتح المجال أمام تطوير تدخلات نفسية واجتماعية فعالة.

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INTRODUCTION

Attending college is one of the most important achievements in a student's life [1]. While most students attend colleges in their home countries, some of them travel abroad to pursue their education, away from their homes, families, and loved ones. Some international students develop mental health problems such as adjustment disorder, depression, and acute psychosis [2], and some concerns include language hurdles because of cultural differences [3,2]. These

are challenges that they may face during their study journey, resulting in problems that may worsen their situation. International students typically report receiving less quantity and quality support from their family and social networks, which may increase the likelihood of having psychological and social problems. Minutillo found an increasing number of mental health problems among international students, and Minutillo discovered a rising trend of mental health issues among international students, suggesting that they may experience greater challenges than

domestic students; this finding suggests that international students may suffer more than domestic students [4]. AVPD is one of the common personality disorders (PDs) [5]. AVPD is a psychiatric condition characterized by persistent feelings of generalized inadequacy, heightened sensitivity to positive criticism, and social inhibition [6]. The main symptoms of AVPD include social activity avoidance, hypersensitivity to criticism, reservedness in personal relationships, and feelings of inferiority [7]. It is indicated that AVPD symptoms have been correlated to the emergence and persistence of alexithymia and an adverse family environment [8]. Alexithymia is a cognitive-affective disorder that alters how people experience and express their emotions [9]. According to Martínez-Sánchez [10], alexithymia can be defined as a particular emotional processing disturbance characterized by difficulties recognizing and expressing emotions as well as a propensity to concentrate on and intensify the physical sensation that goes along with emotional arousal. Taylor presented that the construction of alexithymia typically has four essential elements: (a) problems with identifying feelings; (b) difficulties of emotional description; (c) limited imaginal capacity; and (d) an externally oriented style of thinking [11]. People who have alexithymia may find it difficult to comprehend and control their emotions, which may make them emotionally distant from others and withdraw from social situations. Individuals with alexithymia may also find it difficult to build meaningful connections [9]. This crucial issue affects many AVPD patients, yet alexithymia varies in severity and does not always correspond with AVPD [12]. Literature indicated that the exact cause of alexithymia is unknown. For example, it is proposed that adverse early experiences can exacerbate alexithymia tendencies; there has also been limited research on the impact of family environmental factors on the development of alexithymia [13]. Furthermore, other studies have demonstrated that family environment aspects significantly influence the development of AVPD [14]. The concept of family environment generally refers to overall atmosphere, relationships, and interactions, which could be described based on that as a positive or negative family environment [15]. Roca found correlations between family environment and personality disorders. Children who have healthy self-esteem and effective stress-coping strategies typically grow up in positive family environments [16]. Conversely, unfavorable family dynamics, such as inadequate parenting, low levels of parental support, and an inability to establish healthy emotional connections, may be associated with high stress levels and low self-esteem [17]. Additionally, it was shown that parenting practices played a crucial role in the development of alexithymia [18]. As studies indicated, there is a connection between some environmental factors and expressing the symptoms of alexithymia [13]. Moreover, individuals with low emotional expressiveness in families are believed to be less likely to communicate their feelings spontaneously and clearly during conversation than individuals from highly expressive families [13].

Families that support the appropriate emotional regulation skills, where emotional expression and parent-child verbal exchanges are encouraged, therefore help to improve children's ability to cognitively represent emotions [19]. Studies that consider the family environment in the context of AVPD are very limited. It can be concluded that family environment's aspects contribute to the development of alexithymia alongside AVPD, and a link between alexithymia and family environment in developing AVPD is possible. Only a few studies addressed the problems and traits associated with AVPD among international students. It is also indicated that personality problems among international students are a poorly researched topic [29,30]. Nicolò *et al.* stated that there is a relationship between alexithymia and some personality disorders, especially AVPD [31]. Chaim *et al.* suggested that future research should prioritize examining the causality and directionality of the relationship between alexithymia and personality disorders, including AVPD [27]. It is also noted that the prevalence of AVPD varies depending on social and psychological factors. It is emphasized that even though some studies attempted to clarify the factors that contribute to AVPD, concentrating on how family factors contribute to this disorder is crucial, as this topic is still poorly researched [32]. Although AVPD symptoms overlap with social anxiety disorder, it has received much less attention in terms of research [33]. Even though there is an appreciated effort to understand the potential factors associated with AVPD among university students, AVPD symptoms among international students are still not clear enough and need more attention.

Research Questions

The study aimed to answer the following question:

What is the relative contribution of alexithymia and family environment in predicting AVPD symptoms among international students at Yarmouk University?

Does the relative contribution of alexithymia and family environment in predicting AVPD symptoms among international students at Yarmouk University differ by gender?

Research Hypothesis

Both alexithymia and family environment statistically significantly contribute to predicting AVPD symptoms among international students at Yarmouk University. Alexithymia and family environment contribute differently to predicting AVPD symptoms among international students at Yarmouk University, depending on gender.

METHODS

Study design and setting

This cross-sectional study was conducted among international students at Yarmouk University in Jordan during the academic year 2024-2025. Using a convenient sampling method, the study sample consisted of 393 international students from Yarmouk University, Jordan, including 188 males (47.8%) and 205 females (52.2%), who enrolled in various elective courses and successfully completed responding to the study tools.

Outcome measurements

To achieve the goals of this study, the following tools were used: The TAS-20 is a 20-item self-report scale measure of alexithymia. The total score ranges from 20 to 100. This scale has total and subscale scores for identifying feelings, describing feelings, and externally oriented thinking. The cutoff scores for the TAS-20 are ≤ 51 , no alexithymia; 52–60, possible alexithymia; ≥ 61 , alexithymia. Some studies indicated satisfactory validity and reliability values [34] and sufficient psychometric characteristics, and the factor analysis indicated three dimensions [35]. In this study, the internal consistency values were computed, and Cronbach's alpha ranged from 0.80 to 0.88. The scale items were reviewed by experts in the field of psychology. The Family Environment Scale—FES [36], the short version, was adopted for the Jordan environment by Dwairi & Jaradat [37] to suit Jordan's family environment. The scale includes 36 items, and the confirmatory factor analysis revealed six dimensions: cohesion, expression, conflict, intellectual orientation toward recreational activities, and organization. The psychometric properties were acceptable; internal consistency ranged between 0.70 and 0.78. In this study, to ensure the scale's content validity, the scale was reviewed by experts, resulting in approximately 85% consensus on the appropriate distribution of the items across six dimensions, which required only minor linguistic adjustments. Internal consistency was assessed using computed Cronbach's alpha values, which ranged from 0.75 to 0.91, to ensure the proper distribution of items across the dimensions, including avoiding contact with others, feeling helpless in new social situations, integrating only with caring people, and avoiding relationships due to fear of disgrace, sarcasm, and criticism. The University Students' Avoidant Personality Scale (USAPS), developed by Ibraheem and applied to South Valley University students in Egypt, was used to ensure the proper distribution of items across the dimensions, which include avoiding contact with others, feeling helpless in new social situations, integrating only with caring people, and avoiding relationships due to fear of disgrace, sarcasm, and criticism. The psychometric properties of the scale were originally calculated, showing adequate reliability and validity values. Expert review indicated a consensus of more than 80% regarding the omission of certain items and the need for some linguistic adjustments. The test-retest Pearson correlation coefficient was 0.96 for total, and for dimensions ranged from 0.83 to 0.97; split-half reliability (Spearman) was 0.81. Additionally, the factorial

analysis was used to ensure the proper distribution of items across the dimensions, which include avoiding contact with others, feeling helpless in new social situations, integrating only with caring people, and avoiding relationships due to fear of disgrace, sarcasm, and criticism, as well as feelings of inadequacy and inferiority. The scale generally consists of 38 items distributed to six subscales, and for this study purpose, the focus is on the overall score. The responses will be treated as never (1), rarely (2), often (3), and always (4). It is that a higher score represents higher AVPD symptoms, and a lower score represents lower AVPD symptoms. In this study, content validity was tested; experts from Yarmouk University reviewed the scale and emphasized consensus around 85% that the items and dimensions are valid. Cronbach's alpha showed that the scale was internally consistent; item-total was 0.81, dimension-total ranged from 0.83 to 0.87, and item-dimension ranged from 0.86 to 0.92. The scale scores fall between 38 and 152, so each category length is equal to range/3; $114/3=38$. The tool's overall score is categorized as low (38-75), moderate (76-113), and high (114-152) [38].

Ethical considerations

Study ethical approval was obtained from the IRB at Yarmouk University-Jordan (IRB/2024/091). The participant information sheet clearly explained that participation was completely voluntary. Participants were advised not to share any personally identifiable information to ensure confidentiality and anonymity of their data. Only the research team had access to the collected information.

Statistical analysis

Data was analyzed using the statistical package for social sciences (SPSS) version 26. Multiple linear regression analysis was conducted to determine whether alexithymia and family environment are significant predictors of AVPD symptoms. A P-value of less than 0.05 was considered statically significant. Multiple regression analysis was conducted to examine the predictive effects of alexithymia and family environment dimensions on AVPD symptoms. The estimated regression model was

$$\text{AVPD} = \beta_0 + \beta_1 (\text{Alexithymia}) + \beta_2 (\text{Intellectual Orientation}) + \beta_3 (\text{Expression}) + \beta_4 (\text{Organization}) + \beta_5 (\text{Conflict}) + \beta_6 (\text{Orientation toward recreational activities}).$$

Based on the final regression model, the prediction equation was

$$Y = 0.230 X_1 + 0.311 X_2 - 0.276 X_3 - 0.410 X_4 + 0.255 X_5 + 1.502$$

Separate regression analyses were also conducted for males and females, producing the following prediction equations:

For males: $Y = 0.218 X_1 - 0.304 X_2 + 0.269 X_3 - 0.475 X_4 + 0.276 X_5 + 1.362$

For females: $Y = 0.319 X_1 - 0.239 X_2 + 0.277 X_3 - 0.349 X_4 + 0.225 X_5 + 1.596$

RESULTS

The study included 393 international students; female students represented 52.2% of the participants. The results showed that the overall model for the alexithymia and family environment was predictive in the AVPD symptoms among international students and was statistically significant, explaining a total of 67.4% of the variance ($R^2 = 67.4$). The contribution of these variables was in the following order: alexithymia (total), intellectual orientation, expression, organization, and family cohesion (Table 1).

Table 1: Summary of Hierarchical regression analysis predicting AVPD symptoms

Model	R	R ²	Adjusted R ²	F Change	p-value
1	0.581	0.337	0.336	199.174	<0.001
2	0.678	0.459	0.437	71.155	<0.001
3	0.749	0.561	0.558	107.934	<0.001
4	0.797	0.636	0.595	36.913	<0.001
5	0.821	0.674	0.67	88.203	<0.001

The multiple regression analysis was computed, as presented in Table 2, to investigate the relative contribution of alexithymia and family environment dimensions (intellectual orientation, expression, organization, cohesion, conflict, and orientation toward recreational activities) in the AVPD symptoms. Alexithymia ($B = 0.230$, $\beta = 0.435$, $p < 0.001$) and positively predicted the AVPD. Intellectual orientation ($B = 0.311$, $\beta = 0.425$, $p < 0.001$) and positively predicted the AVPD. Expression ($B = -0.276$, $\beta = -0.389$, $p < 0.001$) and negatively predicted the AVPD. Organization ($B = -0.410$, $\beta = -0.298$, $p < 0.001$) and negatively predicted the AVPD. Cohesion ($B = 0.255$, $\beta = 0.242$, $p < 0.001$) positively predicted the AVPD.

Table 2: Multiple regression analysis predicting AVPD

Predictor	B	β	p-value
Constant	1.502	-	<0.001
Alexithymia	0.23	0.435	<0.001
Intellectual Orientation	0.311	0.425	<0.001
Expression	-0.276	-0.389	<0.001
Organization	-0.41	-0.298	<0.001
Cohesion	0.255	0.242	<0.001

B: Unstandardized regression coefficient; β : Standardized coefficient.

The findings also indicated that there is a significant difference in the level of AVPD symptoms based on gender (males and females). The fifth model provided shows that the independent variables (alexithymia and family environment) explain 0.722 of variance in the dependent variable (AVPD) among males. Whereas the fifth model shows that the independent variables explain 0.626 of variance in the dependent variable among females. The same statistically significant predicting variables were found for both sexes, but their relative importance varied. For males,

alexithymia was the most important variable, followed by expressivity, intellectual orientation, organization, and cohesion. The most important significant predicting variable among females was intellectual orientation, followed by cohesiveness, expressivity, alexithymia, and organization, as shown in Table 3.

Table 3: Hierarchical regression model summary predicting AVPD symptoms by gender

Gender	Model	R ²	Adjusted R ²	ΔR^2	F Change	p-value
Male	1	0.423	0.403	0.423	136.114	<0.001
	2	0.539	0.509	0.116	34.932	<0.001
	3	0.63	0.62	0.092	57.701	<0.001
	4	0.685	0.67	0.055	19.921	<0.001
	5	0.722	0.70	0.036	36.011	<0.001
Female	1	0.307	0.30	0.307	89.75	<0.001
	2	0.425	0.413	0.119	41.702	<0.001
	3	0.513	0.501	0.088	29.79	<0.001
	4	0.587	0.564	0.074	16.534	<0.001
	5	0.626	0.612	0.038	46.808	<0.001

All the regression coefficient values were statistically significant for both males and females at ($\alpha = 0.01$). To summarize, a multiple regression analysis was run to predict AVPD symptom levels from alexithymia and family environment (cohesion, expression, conflict, intellectual orientation, orientation towards recreational activities, and organization). These variables, but conflict and orientation towards recreational activities, statistically significantly predicted AVPD in males, $F = 36.011$, $p < 0.01$, $R^2: 0.722$, and in females, $F = 46.808$, $p < 0.01$, $R^2: 0.626$. These variables added statistically significant value to the prediction model (Table 4).

Table 4: Multiple regression coefficients predicting AVPD symptoms by gender

Gender	Predictor	B	β	p-value
Male	Constant	1.362	-	<0.001
	Alexithymia	0.218	0.416	<0.001
	Expression	-0.304	-0.398	<0.001
	Intellectual orientation	0.269	0.337	<0.001
	Organization	-0.475	-0.333	<0.001
	Cohesion	0.276	0.269	<0.001
Female	Constant	1.596	-	<0.001
	Intellectual orientation	0.319	0.458	<0.001
	Expression	-0.237	-0.441	<0.001
	Alexithymia	0.277	0.433	<0.001
	Cohesion	-0.349	-0.263	<0.001
	Organization	0.225	0.207	<0.001

B: Unstandardized regression coefficient; β : Standardized coefficient; AVPD: Avoidant Personality Disorder.

DISCUSSION

Alexithymia predicted the AVPD due to several psychological factors that are related to difficulties recognizing and expressing emotions; individuals with alexithymia have difficulty understanding emotional cues, which may contribute to their feelings of social isolation. This condition may lead to avoidance of social situations due to fear of being unable to communicate emotionally or express feelings appropriately [39]. These difficulties are even more pronounced for international students, who face additional cultural and linguistic challenges, reinforcing their tendency to develop avoidance behaviors as a defense mechanism to deal with social tensions. These behaviors contribute to the development of AVPD traits, such as fear of criticism and avoidance of social interactions. Eikenæs *et al.*

presented that alexithymia is a predictor of social withdrawal [40]. Simonsen *et al.* demonstrated that alexithymia is considered an indicator of personality dysfunction severity in AVPD [12]. Previous studies indicated a relationship between high levels of alexithymia and AVPD, and the results of this study are consistent with previous literature [41-43]. The second result indicated that the family environment clearly predicted AVPD in international students. The finding is consistent with some previous studies that have shown some family factors contribute to personality traits and disorders; Smith *et al.* demonstrated that exposure to unstable and stressful environments increases the likelihood of avoidant behaviors [44]. Dawoud found that family factors, especially parenting styles, explained around 47% of the variance in alexithymia [45]. Bani-Hamad & Jaradat presented that some family environment dimensions are associated with social media addiction, especially the dimensions of cohesion, expression, and organization [46]. Additionally, it was indicated that dysfunctional family relationships are associated with social withdrawal [47]. Adverse family environments, such as negative parenting styles and family relationships, contribute to the development of social anxiety. Regarding the imbrication between AVPD and social anxiety, it can be concluded that adverse family relationships contribute to AVPD [40]. It is also implied that some family environment's features contribute to the development of self-esteem [48], as it is one of the aspects of AVPD. It was found that feelings of inadequacy were also positively associated with negative family relationships, which emphasizes the contribution of family environment in the development of AVPD [22,40]. Specifically, the results indicated that family cohesion and family intellectual orientation positively significantly predicted AVPD symptoms among international students. This finding could be explained by the fact that strong relationships between family members may reduce the probability of external communication orientation, as they are rather involved in internal family communicative activities. This phenomenon could also be explained by referring to their cultural and social backgrounds; international students may come from intellectually inclined families and maintain constant communication with them. Their social discipline and academic success are their families' top concern. They also face different academic and social difficulties; these challenges may foster their fear of failure and criticism and ultimately increase social avoidance tendency. Because of emotional dependency, international students from close-knit families may be less able to communicate, especially in unfamiliar settings. Being away from their families, in a different culture, may hinder their adaptation, increasing the probability of withdrawal and social avoidance. Trusty & Chunk-Kennedy [49] presented that international students are more socially isolated than domestic students. This finding supports previous evidence that was reported by Bani-Hamad & Jaradat [46] that indicated a cohesive family environment is associated with some avoidant

behaviors, including social media addiction. Moreover, it is also consistent with previous studies that emphasized the role of family environment, especially parenting styles, and negative early experiences in the development of AVPD [16,26]. The results also indicated that both expression and regulation were negative predictors of AVPD symptoms. Expression involves expressing feelings, thoughts, and opinions within the family. This seems logical, as families that allow members to freely express their thoughts, opinions, and feelings foster positive attitudes toward engaging in interactions with others and lower levels of anxiety and negative expectations associated with those interactions. Thus, high levels of expression in the family environment are associated with low levels of AVPD. This result is consistent with the finding of this study that alexithymia is a positive predictor of AVPD. Some studies indicated how expression or inhibition of emotions is associated with some personality disorders, including AVPD [27,33]. Regarding organization, which refers to clarity of roles, respect for family rules, and planning, the negative prediction indicates that a low level of organization is associated with a higher level of AVPD symptoms. This phenomenon may be because individuals who live in an unorganized family environment experience it difficult to adapt to social situations, which increases their feelings of confusion and anxiety in social interactions. Furthermore, a lack of organization may result in reduced control over one's environment, which in turn reinforces avoidant behaviors as a natural response to limiting unexpected or unplanned situations. This supports a prior study that found people with AVPD are more prone to making mistakes, which could be an indication of a lack of organization [40,48]. Diab *et al.* demonstrated a positive correlation between emotional dysregulation and AVPD [50]. Even though the results indicated that both alexithymia and family environment play an important role in the development of AVPD symptoms among international students, there was a difference in the strength of prediction between males and females. The higher rate in males may reflect that they have more difficulties expressing their emotions (alexithymia) and family environment aspects than females. In contrast, the lower rate of prediction in females may reflect that AVPD among females is influenced by additional factors, which may include social adjustment and emotional support.

Study Limitations

This study, however, has several limitations that can be addressed as follows: first, cross-sectional design doesn't allow determination of causal relationships between the study variables. Second, the data were based on self-reported responses, which may be affected by recall or reporting bias. Third, using convenient sampling methods may limit the possibility of generalizability to all international students. Future research is recommended to investigate the influence of cultural and family factors on the development of AVPD among international

students, such as parenting styles, family rejection and criticism, and bullying experience using a more diverse sample.

Conclusion

These findings suggest that AVPD symptoms are closely associated with the way that international students understand and manage their emotions as well as the quality of their family environment. The interaction between these factors increases the severity of avoidant symptoms among international students, especially in a university environment characterized by cultural differences. These findings call for the development of psychosocial support programs to improve emotional expression skills and enhance social adaptation among international students, with particular attention to creating a supportive and comprehensive learning environment and raising the awareness of the importance of a moderate level of family cohesion.

Conflict of interests

The authors declared no conflict of interest.

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Data sharing statement

The data that supports the findings of this study are available from the corresponding author upon a reasonable request.

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