

Relationship between Family Climate and Academic Superiority of Schooled Adolescents

المناخ الأسري وعلاقته بالتفوق الأكاديمي لدى المراهق المتمدرس

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Abstract:

The objective of this study is to reveal the relationship between family climate and academic superiority among secondary school pupils. Our study was based on a sample of 100 brilliant pupils (girls and boys) from high schools in the city of Bouira (Algeria). The family climate scale, composed of six dimensions, developed by (Mohamed Bayoumi Khalil), was used as a study tool, adapted to the Algerian context. The descriptive approach was favored. A positive and statistically significant correlation was observed between family climate and academic superiority among schooled adolescents. The results of the correlation according to the dimensions of the family climate scale were statistically significant, with the exception of the dimension of spiritual life.

Keywords: Family Climate; Family Climate Dimensions; Academic Superiority; Schooled Adolescent; High School.

ملخص:

تهدف هذه الدراسة إلى الكشف عن العلاقة بين المناخ الأسري والتفوق الأكاديمي لدى تلاميذ المرحلة الثانوية. حيث أجريت الدراسة على عينة من 100 تلميذ متفوق (ذكور وإناث) من ثانويات مدينة البويرة (الجزائر). وقد استخدم مقياس المناخ الأسري، المكون من ستة أبعاد، والذي صممه (محمد بيومي خليل)، كأداة للدراسة، والمكيف على البيئة المحلية. كما تم الاعتماد على المنهج الوصفي. وقد تم التوصل إلى وجود علاقة ارتباطية موجبة ودالة إحصائية بين المناخ الأسري والتفوق الأكاديمي لدى المراهقين المتمدرسين. وكانت نتائج الارتباط وفقًا لأبعاد مقياس المناخ الأسري دالة إحصائية، باستثناء بُعد الحياة الروحية.

الكلمات المفتاحية: مناخ أسري؛ أبعاد المناخ الأسري؛ تفوق أكاديمي؛ مراهق متمدرس؛ ثانوية.

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1. Introduction:

The world today is experiencing a huge revolution in various aspects of life - including various sciences and technology - at a rapid pace, which requires all countries to follow the path of this revolution, which has created rules and standards for progress in the world, as it is the vital artery in the development of societies, through investing in both material and

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human capabilities - the latter represented by superior and talented individuals - who are considered one of the human resources and energies that can be creative, and which represent the human capital of any society.

Because caring for, preparing and interesting for superior individuals means preparing the energies of the future from scientists, doctors, engineers, writers, and others in various fields, the family that brought the child into life plays an essential and vital role in raising its children and forming their first experiences in life through the different stages of growth, and performs its multiple functions by caring for them and responding to their successive and changing growth requirements.

Therefore, the family - as a micro-social institution responsible for the process of socialization - plays an important major role in determining the level of academic achievement of adolescents, especially in the secondary stage, where the adolescent builds his / her ambition. This role is evident through the family climate, which represents the family environment in all its dimensions, as the family climate contributes in its various aspects to academic superiority or backwardness. Many studies have confirmed the importance of the family climate in raising the level of academic achievement and excellence among adolescents, due to the supportive environment and factors that the family provides to encourage excellence. A healthy family climate works to satisfy the needs of children in a healthy way without excess or deficiency and in a balanced manner according to the priority of needs, their importance and their suitability for each developmental stage. A tense family climate also leads to poor satisfaction of the psychological needs of children or their frustration in a way that pushes children to anxiety, stress and a rush towards negative deviant behavior. (Khalil, 2000, p. 16)

This is what was confirmed by Moussa's study (1963) that children who live in turbulent family circumstances and are exposed to contradictory parental treatment methods between cruelty and pampering and overprotection and neglect, and are exposed to physical punishment, in addition to deprivation and failure to satisfy many of their needs, suffer from emotional, behavioral, and sentimental problems. (Khalil, 2006, p. 489)

Family factors also play an important role in the future lives of children from the educational side, because they enrich their cultural balance at home by providing the means that help them acquire various knowledge, and this is achieved through the presence of a family climate characterized by understanding, love, and cooperation. (Al-Ghassani, 2012, p. 15).

On the other hand, the educational and social level of the parents has an important role in the academic excellence of the children, as indicated by the study of Zigha Naoual (2008) the importance of one of the indicators of superiority, which is academic achievement, as the study showed that academic achievement is not only affected by the relationship between the student and the teacher, but there are other factors that intervene in it, namely: the curriculum, the social environment in which the student lives, as all of these factors lead to acquiring academic achievement that is either high or low.

2. General framework:

2.1 Study problem:

We address in this study the research on the relationship between the family climate of the schooled adolescent and his academic superiority, and from here we pose the main question as follows:

Is there a relationship between the family climate and academic superiority of the schooled adolescent?

The following sub-questions arise from it:

- Is there a statistically significant relationship between the level of family security and academic superiority of the schooled adolescent?
- Is there a statistically significant relationship between the level of sacrifice and family cooperation and academic superiority of the schooled adolescent?
- Is there a statistically significant relationship between the level of clarity of roles and determination of family responsibilities and academic superiority of the schooled adolescent?
- Is there a statistically significant relationship between the level of control and the family life system and academic superiority of the schooled adolescent?
- Is there a statistically significant relationship between the level of satisfaction of family needs and academic superiority of the schooled adolescent?
- Is there a statistically significant relationship between the level of spiritual life within the family and academic superiority among schooled adolescents?

2.2 Study objectives:

- Identify the relationship between the family climate and academic superiority of schooled adolescents.
- Reveal the relationship between family security in the family and academic superiority of schooled adolescents.
- Reveal the relationship between the level of sacrifice and family cooperation and academic superiority of schooled adolescents.
- Reveal the relationship between the level of clarity of roles and definition of family responsibilities and superiority of schooled adolescents.
- Reveal the relationship between the level of control and family life system and academic superiority of schooled adolescents.
- Reveal the relationship between the level of satisfaction of family members' needs and academic superiority of schooled adolescents.
- Reveal the relationship between the level of spiritual life within the family and academic superiority of schooled adolescents.

2.3 Importance of the study:

- The importance of this study comes from the importance of the subject of academic superiority for schooled adolescents, and the necessity of providing a psychological, social and family climate that helps to discover them early, especially within the framework of the family and school and the role played by these two social institutions in caring for them.

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- The importance and sensitivity of this category of individuals in contributing in the future to the progress and prosperity of society based on their mental and creative output, so it was necessary to conduct many researches and studies on this category to care for them.

- In addition to the necessity of the government providing the tools to discover the capabilities of this category of schooled students, efforts must be made and specialists must be assigned to prepare special programs and appropriate curricula and the quality of teachers to care for them inside and outside the classes to benefit from their human energy and not waste it.

- The research has social importance because it studies an important and sensitive aspect of the individual's life, which is the family, as the primary caregiver for children, and the basic unit for building society.

2.4 Concepts definition:

2.4.1 Academic superiority:

It is someone who has reached a higher level of performance than the average in a field that expresses the functional mental level of the individual. (Mansour, 2003, p. 45)

In the current research, is the students' grades and the ratings of teachers and those in charge of the educational institution, and we have limited this category of special students to all students of both sexes who have obtained a grade greater than or equal to fourteen out of twenty (14/20); the equivalent of seventy percent (70%) of the total grade.

2.4.2 Family climate:

Khalil (2000, p. 16) defines it as: "The general character of family life in terms of the availability of security, sacrifice, cooperation, clarity of roles, definition of responsibilities, forms of control, and the system of life, as well as the method of satisfying human needs, the nature of family relationships, and the spiritual and moral lifestyle that prevails in the family, which gives a general family character, as we say a happy family, a worried family, a cohesive family, or a fractured family."

The family climate in the current study is a combination of factors and surrounding circumstances that the student's family lives in, which play an important role in motivating him to obtain high grades in his studies. Which is determined procedurally in the current study, by the degree that the sample members obtain on the family climate scale prepared by (Mohamed Bayoumi Khalil)

2.4.3 The schooled adolescent:

Adolescence is a stage of life that comes after childhood and continues until adulthood, and is known for physiological and psychological changes, among others. It starts from the age of (11 - 13) years until the age of (18 - 20) years. External and internal conflicts occur in it, such as the desire for freedom, independence, and sexual desire that is contradicted by social standards, personal pressures, and others. (Sillamy, 2010: 08)

And in the current study, is every student (male and female) from the age group coinciding with the period of adolescence, whose age ranges between (15 - 20) years, who studies systematically in the high schools in the Algerian educational system.

2.5 Previous studies:

Previous studies are considered a primary source for the researcher, as they provide him with a complete picture of the backgrounds of the topics of his research. Therefore, in this study, we relied on a number of studies related to the topic of our current research, which are as follows:

- **Study of Linda Marie McDaniel (1997):** This study aimed to identify the factors leading to academic success among both high school and university students. The researcher used the experimental method, and the study sample was random and was divided into two groups: experimental and control. As a tool for collecting data, the researcher used a questionnaire containing a set of questions about the family background and structure, which he distributed to first and second secondary school students. The study concluded that the educational level of parents is one of the most significant factors in influencing academic achievement. A positive correlation was also found between family income, size, and academic achievement. The presence of parents with their children also contributes to raising the level of academic achievement.

- **Study of Tiina Onatsu-Arvilommi (2003):** titled “Pupil’s achievement Strategies, Family background and School performance”, where the researcher conducted three studies to evaluate the impact of family variables on the problems of adolescent and young adult pupils. The variables include: family composition, form and climate, parents' educational level, level of study, and socio-economic level. To achieve the goal, the researcher put forward the hypothesis: There is a correlation between the family climate in adolescents’ homes, and parental control over the child’s behavior in the context of school work with the level of academic achievement. The researcher relied on a sample consisting of (220) male and female pupils who were selected by random sampling from secondary schools in Helsinki. The researcher used the descriptive analytical method. As for the data collection tool, the study relied on the family climate scale (Niemi, 1981) and the parental control questionnaire (Onatsu & Nurmi, 1992). She concluded that the negative family climate experienced by the family, including disagreements and separation between the parents, is negatively reflected in the children’s academic achievement. However, there is no correlation between the level of academic achievement and the level of education among the parents among the sample members.

- **Study of Nahed Mohamed (2003):** entitled “Educational, social and economic factors affecting academic excellence among secondary school students in Beni Suef Governorate – Egypt”, the study was conducted on an original community consisting of (2325) students who obtained 85% of the total score for the certificate of completion of study in the basic education stage, and the study also included a sample of teachers of outstanding students in these schools of both sexes, from which a sample of 25% of the study community was drawn, as the researcher relied on the descriptive analytical method and the questionnaire as a tool for collecting data, and she reached many results, the most important of which are: The social and economic level of the family affects academic superiority, and the effect of family size on academic superiority is related to the level of monthly income, and the absence of one of the parents affects academic superiority.

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- **Study of Victor Uwaifo (2008):** entitled “The effects of family structure and Parenthood on the academic performance of Nigerian university students”, and the research sample consisted of (240) students from Nigerian universities, selected by random sampling. The researcher relied on the descriptive analytical approach, and the questionnaire as a tool for collecting data. The study concluded that there are statistically significant differences between the academic performance of a student who lives in a family with both father and mother and the academic performance of students who live in a family that has lost one of the parents. The results also showed statistically significant differences between families regarding their positions on the wrong practices of children that affect their academic performance.

- **Study of Fayrouz Zerarka (2009):** entitled “The Social Environment of the Family and Its Relationship to Children’s Academic Excellence”, the researcher relied on the descriptive approach and on the direct interview as a tool for collecting data from a deliberate sample consisting of (35) families whose children are outstanding students in middle and secondary education. The researcher reached many results, including that parental relationships that are dominated by love, understanding, harmony and cooperation lead to a healthy family atmosphere, which makes the interest of both of them focus on caring for and following up on their children academically and behaviorally, and the economic conditions and level of education of the parents also contribute to their children’s academic excellence.

- **Study of Malha Aliouat (2010):** entitled “Family climate and its relationship to academic superiority among schooled adolescents”. The field study was conducted in high schools in the states of Bouira and Tizi Ouzou. The researcher relied on the descriptive approach and the family climate scale (prepared by Mohamed Bayoumi Khalil) as a tool for collecting data, on a sample selected by the intentional sample method, which included (300) schooled adolescents in high school. The results were: Children's feeling of sacrifice and cooperation within the family is considered the most important factor in achieving academic superiority. Commitment to discipline and order within the family is a factor that plays a fundamental role in the adolescent's discipline and commitment to organization in his life. The availability of family security is a very essential factor that helps the adolescent achieve academic superiority. Clarity of roles between the father, mother and children in the family is of great importance in avoiding conflict and disagreement within the family, and thus the family contributes to motivating and creating motivation among schooled adolescents. The spiritual life of the family contributes to the adolescent's achievement of academic superiority.

- **Study of Adel Kiwan and Mohamed Hamza (2013):** entitled "The reality of high achievers in Latakia (Syria) secondary schools and the factors that led to their excellence”, where the researcher used the social survey method, and the sample consisted of (100) male and female students. Among the most important results reached by the study: Excellence is linked to the high educational level of the mother and father, family income, and the way free time is spent. It was found that females excel academically over males, but this excellence is not essential, and the teacher's love affects the students' excellence. The study

showed that the presence of a designated place for studying lessons contributes to the student's excellence, but the number of family members negatively affects the percentage of excellence, and this is attributed to the ability of small families to secure the requirements of the high achievers, and the genetic factor played a major role in excellence, as most families of high achievers include individuals who excel academically. Among the important factors is the number of study hours per day, as it affects the percentage of high achievers academically.

- **Study of Shuchi Sharma (2014):** entitled “Effect of family environment on academic achievement of Adolescents”, where the researcher relied on the descriptive method and on a random sample of (220) adolescents enrolled in different secondary schools in Shimla (India). The researcher relied on the family environment scale prepared by Moos & Moos (1994) to assess the quality of the family environment. Academic performance was determined using other performance records taken from secondary schools. The most important findings reached by the researcher are: A cohesive family creates a suitable atmosphere for the advancement of its members and improving their condition. Also, in a cohesive family, there is a degree of commitment, assistance and support from each member to the other, raising the child with appropriate guidance and encouragement from the parents, which leads to the development of a positive self-concept, all of which leads to better academic achievement. Independence refers to the extent to which family members are stable, self-sufficient and make their own decisions in families, where the adolescent is respected as an individual and is allowed to direct his behavior when he is able to do so, the adolescent develops better self-control and greater creativity. Therefore, independence is good for academic achievement, but it should be within limits, otherwise the results may be dangerous. Democratic atmosphere refers to the extent to which family members are encouraged to express their feelings directly. If the family is more expressive, adolescents can also express their opinions in exams freely, which leads to better academic achievement. A supportive, helpful, encouraging, affectionate, etc. Family environment helps adolescents develop their potential. Therefore, all family members should maintain a meaningful relationship in their families. It has been observed that the family environment has a positive effect on student's academic achievement.

- **Study of Hafidha Belkhir (2015):** entitled “Family backgrounds of academically superior students - a comparative study between academically superior and non-superior students”, a field study in high schools in Sidi Bel Abbes state (Algeria). The research sample consisted of (470) students (230 superior and 240 non-superior) from the second year of high school in Sidi Bel Abbes city. After conducting statistical processing, the researcher concluded that family backgrounds play a major role in the academic superiority of the student, as she found that there is a relationship between the cultural level of the family and the educational level of the parents and the size of the family and the student's academic results. She also found statistically significant differences in the family's standard of living and entertainment between the two groups of academically superior and non-superior students, and differences in the family's economic level and in the level of the family climate between the two group of students, and the existence of a relationship

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between the educational style used by parents in dealing with their children and academic results. The researcher also concluded that Family backgrounds have a moderate impact on student excellence, as there are individual and personal factors that contribute to their excellence.

- **Study of Samira Oundjen (2017):** entitled “The family's educational contribution to the academic superiority of children”, where the study was conducted on a sample selected intentionally, including outstanding students from the fourth year of middle school in some institutions in the city of Biskra. The researcher relied on the descriptive analytical method and the statistical method, and the sample consisted of (220) students, and concluded that possessing the skill of educational follow-up by the family increases the academic superiority of children.

- **Study of Mohammed Lahzil and Hocine Gharib (2017):** entitled The Relationship between Family Climate and Academic Excellence among a Sample of Secondary School Students, where the study was conducted on a sample of (100) students in the third year of secondary school (50 high achievers and 50 low achievers), who were selected using the intentional sampling method. The researchers used the descriptive approach, and to achieve the objectives of the study, a tool was used, which was the Family Climate Scale prepared by (Mohamed Bayoumi Khalil), which meets the conditions of reliability and validity. The results showed statistically significant differences between high achievers and low achievers in the family climate, statistically significant differences between high achievers and low achievers in family security, statistically significant differences between high achievers and low achievers in control and family life system, and statistically significant differences between high achievers and low achievers in satisfying family needs.

Through our presentation of previous studies, we find that they focused on the category of academically superior students, and the factors contributing to achieving good academic achievement, as the focus was on important variables related to the family and its role.

And all the previews studies helped us to adjust the hypotheses of the current study, as well as discuss the expected results.

3. Method:

3.1 Study methodology:

In our study, we relied on the descriptive method, which is known in the field of education and psychology as: "One of the forms of scientific analysis and interpretation, to describe a specific phenomenon or problem and visualize it quantitatively by collecting standardized data and information about the phenomenon or problem, classifying it, analyzing it, and subjecting it to accurate study." (Melhem, 2000: 324)

3.2 Study sample:

Our study sample consists of (100) schooled adolescents (males and females) in high schools from different specialties.

Our study sample was chosen intentionally to represent a category of society, namely the academically superior.

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We relied in selecting the sample members on their level of academic achievement, which was determined by their academic averages in the second semester, and thus we formed our study sample and distributed the scale to it.

The study was conducted in April 2024, in a group of high schools in Bouira province. The following table shows the names of these high schools and the number of pupils who were selected:

Table (01): Distribution of sample members by high school

High schools	Number of students
Mustafa Ben Boulaid	20
Hamza Ben Hassan Al-Alaoui	50
Boukram Al-Djadida	30
Total	100

Table (02) shows the distribution of sample members according to gender and educational level.

Table (02): Distribution of sample members by gender and educational level

Gender \ Educational level	Males	Females	Total
First year of high school	21	29	50
Second year of high school	0	11	11
Third year of high school	16	23	39
Total	37	63	100

To verify that the sample distribution was normal (considering that the sample was intentional and not random), we applied the Kolmogorov-Smirnov test of normality. The results were as shown in the following table:

Table (03): Results of the Kolmogorov-Smirnov test of normality:

Variables	Mean	Standard Deviation	Z-test	Significance Index (sig)
Family Climate Scale	157.96	13.69	1.312	0.064
Participant Means	14.44	2.43	1.206	0.109

From the results of the previous table, it is clear that the study sample has a normal distribution. The value of the Z-test for the family climate scale reached (1.312), and the statistical significance index reached (0.064), a value greater than (0.05), which means that there are no statistically significant differences in the distribution of sample individuals' scores on the scale. The value of the Z test for the sample individuals' rates reached (1.206) and the statistical significance index reached (0.109), which is a value greater than (0.05), which means that there are no statistically significant differences in the distribution of the sample individuals' rates. This allows us to use parametric statistics to verify the study's hypotheses.

3.3 Tool:

In this study, we relied on the family climate scale prepared by Mohamed Bayoumi Khalil (2000), which it published in his book "Psychology of Family Relations".

The scale contains (61) items and consists of (6) axes, which are: family security, family sacrifice and cooperation, clarity of roles and definition of family responsibilities,

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control and order of family life, satisfaction of the needs of family members, and the spiritual life of the family.

The following table shows the axes of the scale and the items that measure each one:

Table (04): Distribution of items on the axes of the scale

axes	Item numbers		Total
	Positive items	Negative items	
01. Family security	1,7,49,37,25,13,58	43,31,19	10
02. Family sacrifice and cooperation	20,8,32,44,50,61	38,26,14,2	10
03. Defining family roles and responsibilities	3,21,27,45,51	39,33,15,9	09
04. Control and family life system	4,10,16,22,28,34,40,46,52,59		10
05. Satisfying the needs of family members	53,47,29,23,11,5,60	41,35,17	10
06. Spiritual life of the family	6,18,30,36,42,48,54,55,56,57	24,12	12
Total			61

As for how to estimate the scores, it is done as follows:

- Positive items: always = 3, sometimes = 2, rarely = 1
- Negative items: always = 1, sometimes = 2, rarely = 3

The total score on the scale is between 61 - 183. The higher score indicates the better situation.

• Validity and reliability of the scale in the local environment:

The scale was applied to a survey sample of (20) schooled adolescents, and the following table illustrates the validity of the scale:

Table (05): Discriminant validity of the family climate scale in the local environment

Scale	Groups	Group size	Arithmetic mean	Standard deviation	T test	degree of freedom	Significance level
Family climate	Lower group	5	134.2	2.49	11.893	8	0.05
	Upper group	5	152	2.236			

The arithmetic mean of the lower group was (134.2) and a standard deviation of (2.49), while the arithmetic mean of the upper group was (152) with a standard deviation of (2.236). While the t-test for the significance of the differences between the two groups was (11.893) at a significance level of (0.05) and a degree of freedom of (8); meaning that the family climate scale has the ability to discriminate between the upper group and the lower group, as the statistical index was (sig = 0.00).

As for the stability of the scale, it was calculated using Cronbach's alpha coefficient. After analyzing the results, we found that the value of the stability coefficient reached (0.675), which indicates a considerable reliability of the scale.

Thus, the scale can be applied to the study sample due to its appropriate psychometric properties.

3.4 Statistical techniques:

We processed the data using the Statistical Package for Social Sciences (SPSS) program, through the following techniques:

- Test (t) to detect differences between the averages of two groups (high and low) to ensure the discriminant validity of the scale.
- Cronbach's alpha coefficient to measure the reliability of the scale.
- Pearson's correlation coefficient to detect the relationship between the study variables, by answering the general question and the sub-questions of the study.

4. Results:

4.1 Results of the first sub-hypothesis:

The first hypothesis stated that: There is a statistically significant correlation between the level of family security and academic excellence of schooled adolescents.

Table (06): Correlation between the level of family security and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Family security	0.31	0.197	0.01	0.002
Academic superiority				

It is clear from the previous table that the value of the calculated correlation coefficient between the family security and the academic superiority of sample members reached (0.31), which is a value greater than the value of the tabulated correlation coefficient (0.19), which means that the relationship between family security and academic superiority is a positive relationship, such that the more the schooled adolescent feels family security, the more he excels in his studies, and the result of this relationship was statistically significant at the significance level (0.01), and from this we conclude that the first sub-hypothesis has been achieved.

4.2 Results of the second sub-hypothesis:

The second hypothesis stated that: There is a statistically significant correlation between the level of sacrifice and family cooperation and academic superiority of schooled adolescents.

Table (07): Correlation between the level of sacrifice and family cooperation and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Sacrifice and family cooperation	0.354	0.197	0.01	0.000
Academic superiority				

According to the previous table, the value of the calculated correlation coefficient between sacrifice and family cooperation and academic superiority of the sample members reached (0.354), which is greater than the value of the tabulated correlation coefficient (0.19), which means that the relationship between sacrifice and family cooperation and academic superiority is a positive relationship, and the result of this correlation was statistically significant at the significance level (0.01), and from this we conclude that the second sub-hypothesis has been achieved.

4.3 Results of the third sub-hypothesis:

The third hypothesis stated that: There is a statistically significant correlation between the level of clarity of roles and the definition of family responsibilities and academic superiority of schooled adolescents.

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Table (08): Correlation between the level of clarity of roles and the definition of family responsibilities and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Level of clarity of roles and the definition of family responsibilities	0.309	0.197	0.01	0.002
Academic superiority				

The previous table shows the value of the calculated correlation coefficient between the level of clarity of roles and the definition of family responsibilities and the academic superiority of the sample members reached (0.309), which is greater than the value of the tabulated correlation coefficient (0.197), which means that the correlation between the two variables is a positive correlation, and the result of this correlation was statistically significant at the significance level (0.01), and from it we conclude the realization of the third sub-hypothesis.

4.4 Results of the fourth sub-hypothesis:

The fourth hypothesis stated that: There is a statistically significant correlation between the level of control and the family life system and academic superiority of schooled adolescents.

Table (09): Correlation between the level of control and the family life system, and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Level of control and family life system	0.244	0.197	0.05	0.015
Academic superiority				

It is clear from the previous table that the value of the calculated correlation coefficient between the level of control and the family life system and the academic superiority of the sample members reached (0.244), which is greater than the value of the tabulated correlation coefficient (0.197), which means that the correlation between the two variables is a positive correlation, and the result of this correlation was statistically significant at the significance level (0.05), and from this we conclude that the fourth sub-hypothesis has been achieved.

4.5 Results of the fifth sub-hypothesis:

The fifth hypothesis stated that: There is a statistically significant correlation between the level of needs satisfaction within the family and academic superiority of schooled adolescents.

Table (10): Correlation between the level of satisfaction of needs within the family and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Level of satisfaction of needs within the family	0.273	0.197	0.01	0.006
Academic superiority				

The previous table shows the value of the calculated correlation coefficient between the level of satisfaction of needs within the family and the academic superiority of the sample members reached (0.273), which is greater than the value of the tabulated correlation coefficient (0.197), which means that the correlation between the two variables is a positive

correlation, and the result of this correlation was statistically significant at the significance level (0.01), and from this we conclude that the fifth sub-hypothesis has been achieved.

4.6 Results of the sixth sub-hypothesis:

The sixth hypothesis stated that: There is a statistically significant correlation between the level of spiritual life and academic superiority of schooled adolescents.

Table (11): Correlation between the level of spiritual life and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Level of spiritual life	0.192	0.197	0.05	0.56
Academic superiority				

It is clear from the previous table that the value of the calculated correlation coefficient between the level of spiritual life and the academic superiority of the sample members reached (0.192), which is smaller than the value of the tabulated correlation coefficient (0.197), which means that the correlation between the two variables among the sample members, although it is a positive correlation, is not statistically significant, and from this we conclude that the sixth sub-hypothesis is not achieved.

4.7 Results of the general hypothesis:

The general hypothesis stated that: There is a statistically significant correlation between family climate and academic superiority of schooled adolescents.

Table (12): Correlation between family climate and academic superiority of schooled adolescents

Variables	R calculated	R tabulated	Significance level	Statistical indicator (sig)
Family climate	0.378	0.197	0.01	0.000
Academic superiority				

The previous table shows the value of the calculated correlation coefficient between the family climate and the academic superiority of the sample members reached (0.378), which is greater than the value of the tabulated correlation coefficient (0.197), which means that the correlation between the two variables is a positive correlation, and the result of this correlation was statistically significant at the significance level (0.01), and from it we conclude the realization of the general hypothesis.

5. Discussion:

5.1 Discussion of the first sub-hypothesis results:

The first sub-hypothesis was achieved; that is, there is a statistically significant correlation between the level of feeling of security among schooled adolescents and academic superiority.

In this regard, (Khalil, 2000, pp. 28-29) indicates that the individual who enjoys security and reassurance within his family, which represents for him a force that drives him to move forward and interact with family members in a healthy and sound manner, which builds confidence, ambition, optimism and motivation in himself, to achieve success, unlike the family that is dominated by conflict, discord and disorder, lacks psychological, social and economic security, and this family turns from a motivating force to a force that hinders his progress and makes him distracted from his interests, so that he spends his effort in resolving conflicts within the family, which he is supposed to exert in adapting to life and succeeding in it.

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This is what was reached by a study of Hazil (2017), where he found that there are statistically significant differences between the scores of excellent adolescents and the scores of non-excellent adolescents in the level of family security. This indicates a clear difference between the individuals of the two groups in the level of family security, which confirms the importance and role of this dimension in all its aspects in academic superiority. The results of our study were consistent with Bayoumi's study, where we concluded that academically outstanding students belong to families that enjoy family security factors, providing a suitable climate that helps them achieve excellence and good academic achievement.

5.2 Discussion of the second sub-hypothesis results:

The second sub-hypothesis was achieved; that is, there is a statistically significant correlation between the level of sacrifice and family cooperation of schooled adolescents and academic superiority.

As families that are dominated by a spirit of sacrifice and cooperation among their members, to achieve the general interest of the family, away from the spirit of selfishness and personal gain, make the schooled adolescent capable of entering the areas of life and overcoming its problems, and achieving his ambitions in studying through the cooperation he receives in his family environment, while selfishness leads to conflict and negative interaction with others. This is what the study of Aliouat Malha (2010) reached, that there are statistically significant differences between the scores of excellent adolescents and the scores of non-excellent adolescents in the level of security, sacrifice and family cooperation, as the calculated Chi-square value estimated at (107.70) reached greater than the tabulated Chi-square value estimated at (3.84) significance level 0.05, which means that there are statistically significant differences in academic achievement among students according to the degree of their feeling of the existence of sacrifice and family cooperation, and the correlation value between the two variables: sacrifice and family cooperation and academic superiority is positive and reached (0.59). As previously indicated in the study of Sharma (2014), that in a cohesive family there is a degree of commitment, assistance and support from each individual to the other, which leads to the development of a positive concept of the self. All this leads to better academic achievement, and it has been observed that a supportive, encouraging and cooperative environment contributes to helping the adolescent discover and develop his potential.

5.3 Discussion of the third sub-hypothesis results:

The third sub-hypothesis was achieved; that is, there is a statistically significant correlation between the level of roles and the definition of responsibilities among schooled adolescents and academic superiority.

In this regard, Bayoumi Khalil (2000) points out that the clarity of roles and the definition of responsibilities creates a standard family climate, through which each member of the family recognizes his role and practices it without disruption or disorder. Therefore, the family is committed to performing its various functions in a way that creates a healthy atmosphere, dominated by commitment to duties and responsibilities among its members. On the contrary, the disorder of roles within the family and their lack of clarity lead to

disorder in family relationships and escaping from obligations, which creates loose personalities marred by negligence and domineering personalities that cancel the roles of the rest of the members within the family. The nature of the relationship between parents is measured by the bilateral participation of both in all matters and issues related to the family, as the father involves the mother in all the decisions he makes regarding the family. The more the roles of the parents are harmonious and keen to follow up and encourage the children, the more they contribute positively to excellence and success, and push them to form future ambition and strive to develop their capabilities.

On the contrary, the failure of parents to perform their assigned roles, the more this is reflected in the children's achievement and the formation of their personality and behavior, and this is what the results of our study reached, as the more the roles are defined within the family, the more the schooled adolescent achieves excellence in his studies. The researcher Fayrouz Zerarka (2009) indicated that parental relationships that are characterized by love, understanding, harmony and cooperation lead to a healthy family atmosphere, which makes the interest of both parents focus on caring for and following up on their children academically and behaviorally. In her study, which included a sample of (35) families of superior students in the city of Setif, she concluded that (64%) of families have both the father and mother participating in decisions. This proves that the roles and responsibilities in these families are defined and controlled, as the role of the children, their personalities and ideas are also respected, and they are given a space of freedom and spontaneity in expressing their ideas and ambitions without fear or feeling of hesitation, which contributes to motivating them and stimulating their motivation to succeed and excel academically. Also, the participation of parents in sharing and defining roles contributes to following up on children academically and behaviorally.

5.4 Discussion of the fourth sub-hypothesis results:

The fourth sub-hypothesis was achieved; that is, there is a statistically significant correlation between the level of control and family life of schooled adolescents and academic superiority.

The concept of control within the family refers to moral commitment, based on advice, guidance, direction and role modeling, which ultimately leads to discipline and self-control. As for the concept of order within the family, it refers to planning, programming and setting goals, which is evident through respecting appointments and obligations within the family and with others. (Khalil, 2000, p. 23) In this regard, researcher Samira Oundjen (2017) concluded through her study on the family members of the sample of high achievers that the adolescent is going through a critical age stage, which prompts many families to tighten control over them, whether directly or indirectly, regarding the times they go out and enter the house, and choosing their friends and companions. Guardians who follow up on their children have become very keen to check their electronic accounts, and even their social media sites. And try to advise the son to bear responsibility and exercise self-control. Other studies have also indicated the importance of having a control system within the family through parental follow-up, including the study of Hafidha Belkhir (2015). Through the presence of a control method and internal system, the adolescent learns to comply with the

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rules through self-control and the acquisition of good behaviors that prevent him from deviating. He also acquires and learns the method of time management and the use of free time to accomplish activities that he prefers to practice. There is no doubt that this will push him to develop his abilities and capabilities and strive to achieve superior academic performance.

5.5 Discussion of the fifth sub-hypothesis results:

The fifth sub-hypothesis was achieved; that is, there is a statistically significant correlation between the level of satisfaction of needs within the family among schooled adolescents and academic superiority.

Bayoumi Khalil (2000) refers to three levels of satisfaction of children's psychological needs within the family. There is excessive satisfaction, which results in Laziness, indolence, lack of resistance and disturbed level of aspiration. This also leads to dependency and Inability to assume social responsibility. There is also negligence in satisfaction, which results in feelings of frustration, tension, anxiety, and inferiority among children, while moderation in satisfaction leads to a feeling of psychological comfort.

In the same context, Ayad and Al-Khadri (1993) believe that the family environment is one of the most important factors that influence talent and excellence. This is represented in the extent to which the parents and the family as a whole provide the necessary tools to develop the child's readiness, stimulate his thinking, and invest his latent energies and talents in practicing activities that are appropriate to his psychological needs.

In this regard, researcher Mohamed Gouareh (2013) from the University of Laghouat (Algeria), in his exploratory study that he conducted on a sample of university students numbering (440), which aimed to identify the economic, family, social, and psychological reasons for the low achievement of university students, where he concluded that the percentage of students who expressed that the existence of disintegration within the family as a result of divorce or otherwise affects academic achievement reached (87%), and the percentage of students who expressed that harshness and leniency in treating family members affects academic achievement reached (62%), and the percentage of students who expressed that the existence of disputes within the family affects academic achievement reached (89.5%). Through the results obtained, we conclude that satisfying psychological and material needs together in moderation makes the schooled adolescent responsible and self-reliant. Also, satisfying material needs to a reasonable extent, such as providing tools, supplies and media that help him continue his studies, contributes to motivating him towards excellence and success. We should also not ignore the role that entertainment means play from time to time in stimulating motivation and eliminating boredom and daily routine in the adolescent's life.

However, achieving the satisfaction of material needs depends on the economic level of the family, as a family with limited income cannot achieve these mentioned needs. As for psychological needs, they must be met in moderation. An adolescent who is deprived of the feeling of belonging to the family as an independent entity, and obtaining the required psychological satisfaction in a family environment that may be authoritarian, or one of the parents is absent due to separation or death, may negatively affect his self-perception, and

he is overcome by a feeling of frustration. He does not see any future on the horizon, but rather looks at himself in an inferior way, with no value in society. On the contrary, an adolescent who grows up in a family environment that satisfies his psychological needs without a reasonable limit, grows up without controls on his behavior, relies on excessive protection and lacks a sense of responsibility, which affects his level of academic achievement. In our field study, we found that the economic level of most families of high achievers is average at a rate of (86%), which supports the findings of the aforementioned results.

5.6 Discussion of the sixth sub-hypothesis results:

The sixth sub-hypothesis was not achieved; that is, there is no statistically significant correlation between the level of spiritual life of schooled adolescents and academic superiority.

However, this does not mean that there is no relationship between the level of spiritual life and academic superiority of schooled adolescents; rather, the relationship exists between the two variables but lacks statistical significance.

In this regard, Bayoumi Khalil (2000) indicates in his study that moral and religious commitment and adherence to its teachings within the family leads individuals to embrace life through optimism, and belief in God will lead to not despairing and being patient in the face of all life's problems and situations. In addition, adherence to the teachings makes the individual keen to stay away from forbidden things and all their forms.

Through the results of our study, we have reached the existence of a weak, statistically insignificant correlation between the level of spiritual life within the family and academic superiority of schooled adolescents. This does not detract from our study, since the results in descriptive studies are not fixed, as there are studies that support what we have reached.

The factor of religious commitment may be present in the family, but to a lesser degree. This does not absolutely negate the absence of a correlation between the level of spiritual life in the family and academic superiority among adolescents. Because academic excellence is the result of many factors related to the individual or the social environment, as an adolescent may be an excellent person living in a poor family or in a family that is not religiously committed or in a family with a limited educational and cultural level, we conclude that academic superiority is the result of the overlap of all these factors, and that the absence of any of them does not necessarily have an absolute effect on academic superiority.

5.7 Discussion of the general hypothesis results:

The general hypothesis was achieved; that is, there is a statistically significant correlation between the family climate of schooled adolescents and academic superiority.

Through our current research, we have concluded that the academically superior individuals who constitute the sample of our study belong to families that provide factors of security, a spirit of sacrifice, cooperation, control, and the performance of roles and responsibilities, with moderate satisfaction of human needs, and religious commitment that prevails in the family, and this is what the results of our field study confirmed, as all these factors contribute to the adolescent achieving success and excellence in his studies.

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6. Conclusion:

Based on the results of the field study, we arranged the axes of the family climate scale in terms of the strength of the relationship between each dimension and the academic superiority of adolescents, where the arrangement was as follows:

01. Sacrifice and family cooperation came in first place, with a correlation coefficient value of $R = 0.35$

02. Family security came in second place, with a correlation coefficient value of $R = 0.31$

03. Clarity of roles and definition of responsibilities came in third place, with a correlation coefficient value of $R = 0.30$

04. Satisfying the needs of family members came in fourth place, with a correlation coefficient value of $R = 0.27$

05. Control and family life system came in fifth place, with a correlation coefficient value of $R = 0.24$

06. Family spiritual life came in last place, with a correlation coefficient value of $R = 0.19$

Based on the sequential arrangement of the axes of the scale, we can conclude the following:

- The adolescent's sense of sacrifice and cooperation within the family is considered the most important factor contributing to academic excellence, The interest of the family in general and parents in particular in the academic matters related to their children, motivates them to advance in their academic level by overcoming the academic difficulties they may face in their path.

- The adolescent's feeling of security within the family is considered a contributing factor to achieving academic excellence, as the adolescent who lives in a stable family, where psychological, economic and social security prevails, supports him in achieving ambition and success.

- Clarity of roles and defining responsibilities within the family is an important factor that helps the adolescent achieve academic excellence, as the family in which the roles are defined and clear, where each individual is committed to performing his role and responsibilities, provides a family climate that helps in academic excellence, by learning the principle of bearing responsibility, commitment and facing daily problems, the adolescent learns to perform his responsibility represented in studying and diligence.

- Satisfying the needs of family members is an important factor that contributes to achieving academic excellence. This is achieved by the family satisfying the moral and material needs of their children, from tools and supplies that help them study. From a moral perspective, parents are keen to provide love, tenderness and attention that guarantees them psychological satisfaction.

- Control and order in family life is an important factor that contributes to academic superiority of adolescents. The presence of order within the family helps the adolescent learn to respect time and arrange his activities according to priority. All of this contributes to achieving his goals by planning and programming them in advance.

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- The spiritual life of the family is a factor that helps the adolescent achieves excellence. A religiously committed family works to raise children on values, morals and the pursuit of knowledge. It is worth noting that the results of our study regarding this axe led to a lesser correlation compared to other axes, which means that it has less impact on adolescent's academic superiority.

From the above, we conclude that the family climate has a correlation with academic superiority. The more appropriate and helpful the family climate is, the more able the adolescent is to achieve academic superiority.

Based on the results of our study, we suggest the following:

- Conducting more studies that address the subject of the family climate and its relationship to other variables.

- The necessity of parents taking care of their children psychologically, socially and economically, and taking care of them academically through follow-up.

- The necessity of parents paying attention to the abilities and potential of their children and encouraging them to develop and exploit them in the best way.

- Emphasizing the importance of communication between the family, school and society in caring for and motivating academically outstanding children, and valuing their academic results.

- The necessity of the state's interest in academically outstanding students, and providing the conditions that help develop their abilities, as they represent future human energy and capital in which governments invest in order to benefit from this category.

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References:

- Al-Ghassani, Fatma bent Ahmed. (2012.) *Family structure and its impact on academic achievement*, Oman: Dhofar Educational Community Symposium from March 4 to 6, 2012.
- Aliouat, Malha. (2010). *Family climate and its relationship to academic excellence among schooled adolescents*. A thesis for a master's degree in school psychology. Faculty of Arts and Humanities, Algeria: University of Tizi Ouzou
- Ayad, Mawaheb Ibrahim. and Al-Khadri, Laila Mohamed. (1993). *Guidance and direction of the child in the family and nurseries*. Cairo: Dar Al-Maaref for Publishing.
- Belkhir, Hafidha. (2015). *Family backgrounds of academically superior students: A comparative study between academically superior and non-superior students*. PhD thesis, Faculty of Social Sciences, Algeria: University of Oran.
- Gouareh, Mohamed. (2013). Factors leading to low academic achievement (an exploratory study from the perspective of a sample of university students). *Journal of Humanities and Social Sciences*, Algeria: University of Laghouat, (11), pp. 115-127.
- Khalil, Afra Ibrahim. (2006). Family climate and its relationship to children's mental health. *Journal of Basic Education*. (49), Baghdad: Al-Mustansiriya University.
- Khalil, Mohamed Bayoumi. (2000). *Psychology of family relations*. Cairo: Quba House for Printing, Publishing and Distribution.
- Kiwan, Adel and Hamza, Mohamed. (2013). The reality of high achievers in Lattakia secondary schools and the factors that led to their excellence: Ghassan Harfoush School, Ezz El-Din Al-Zarf School as a model. *Tishreen University Journal for Scientific Research and Studies*, Syria: Tishreen University. 35(1).
- Lahzil, Mohamed. and Gharib, Hocine. (2017). The relationship between family climate and academic superiority among a sample of secondary school students: A field study in the secondary schools of the city of Mas'ad - Djelfa Governorate. *Haqaiq Journal for Psychological and Social Studies*, 4(14), pp. 232-245
- Mansour, Abd-Sabour Mohamed. (2003). *Introduction to special education*. (1st ed.). Egypt: Zahraa Al-Sharq Library for Publishing and Distribution.
- McDaniel, Linda Marie. (1997). *Family background and structure of high academic achievers*, PHD thesis, USA: University of North Texas. <https://www.proquest.com/openview/7e88063c898f24bcb4d7c4333d48082b/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Melhem, Sami Mohamed. (2000). *Research methods in education and psychology*. Amman: Dar Al-Masirah for Printing, Publishing and Distribution.
- Mohamed, Nahed Amine Helmi. (2003). *Educational, social and economic factors affecting academic superiority among secondary school students in Beni Suef Governorate - Egypt*. PhD thesis. Institute of Educational Studies and Research, Cairo University
- Onatsu-Arvilommi, Tiina. (2003). *Pupil's achievement strategies, family background and school performance*. Research reports, department of psychology, Finland: University of Helsinki. <https://www.jstor.org/stable/23420049>
- Oundjen, Samira. (2017). *The educational contribution of the family to the academic excellence of children: A field study on a sample of families of high achievers in the middle schools of the city of Biskra*. A thesis for a doctorate in the sociology of education, Faculty of Humanities and Social Sciences, Algeria: University of Mohamed Kheider - Biskra.
- Sharma, Shuchi. (2014). Effect of family environment on academic achievement of Adolescents. *International research journal of management sociology and humanities* (Electronic version), 5(3) 384-391. <http://www.irjmsh.com/abstractview/4512>
- Sillamy, Norbert. (2010). *Dictionary of psychology*. Paris: Larousse
- Uwaifo, Victor. (2008). The effects of family structure and Parenthood on the academic performance of Nigerian university students. *Studies on home community science*, 2(2) pp. 121-124 <https://scite.ai/reports/the-effects-of-family-structure-NlAWza9>
- Zerarka, Fayrouz. (2009). The social environment of the family and its relationship to children's academic excellence. *Journal of Prevention and Ergonomics*. Algeria: University of Ferhat Abbas, Setif. 3 (1), pp. 51-73.