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**THE RELATIONSHIP BETWEEN THE FAMILY'S EMOTIONAL
ATMOSPHERE AND CREATIVITY OF THE SECONDARY SCHOOL
STUDENTS IN THE SOUTHERN CITIES OF KERMAN
PROVINCE, 2011-12 SCHOOL YEAR**

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ABSTRACT

The present study examines the relationship between family's emotional atmosphere and creativity of students in public secondary schools in the southern cities of Kerman province in the 2011-12 school year, based on gender factor. Correlation method is used in this study and the sample used in the current study included all of the students in public schools in the southern cities of Kerman province (Jiroft, Roudbar, Anbarabad, Kahnouj, Faryab, Ghaleh Ganj and Manojan), the study performed on 210 participants. Creativity of students was evaluated using Torrance Creativity Test (60 questions), and family's emotional atmosphere was evaluated using the researcher's made family's emotional atmosphere questionnaire along with demographic information. To evaluate correlations and differences between parenting style that favors the principles of democracy, dictatorial and absolute freedom styles, Pearson correlation between two variables is used, and to measure the mean difference between male and female students' creativity, the independent t-test was used, and to compare the parents' mean level of education, the students' total creativity scores was used. The study showed that there is a significant positive relationship between family's emotional atmosphere that favors the principles of democracy on the creativity of the students, however, no relationship was observed between the family's emotional atmosphere which is dictatorial oriented and absolute freedom, and according to independent t-test, there is a significant difference between the average creativity of female students and male students, where the difference is in favor of girls; in addition, there is a significant correlation between education level of parents and creativity of students. Because as parents' education level goes higher, the rate of creativity in students increases. Since mothers spend most of their time at home with their children, and fathers spent more hours to work outdoors, therefore the creativity level of students has more correlation with mother's education level.

Keywords: *Creative, Student's Creativity, Emotional Atmosphere of Family, Divergent Thinking*

INTRODUCTION

Family is the first and the most fundamental institution that plays a fundamental role in forming the human personality. Human begins his life in family, where his character is shaped and values and standards are established.

These initial effects impact his or her behaviors, relationships with others and adaptation to the environment in future, and altogether have a decisive role on his or her whole life. The child's personality always takes the pattern of emotional environment of family.

Although the relationship between parental attitudes and child's behavior is an obvious truth, it is not a long while before we recognized its importance. One of the distinctive features of human thinking is creativity. In recent years, both in research institutes, and in the educational centers, the concept of creativity and the characteristics of a creator are widely discussed.

Of environmental factors affecting the growth of creativity, is family environment or parenting style. Kagan (1971) believes that "there are many ways to persuade creativity through parenting practices that may emerge or repress creativity." The way of training and use of a variety of parenting techniques and styles, and in general, emotional atmosphere of the family, in a way or another, fosters or suppresses creativity (Kefayat, 1994).

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On the other hand, in our current society, the need for creative children to serve as the human resources of tomorrow is something evident. Raising creative and motivated children in order to overcome existing bottlenecks and to create techniques and methods leading to self-sufficiency and freedom from dependence, is crucial (Narimani, 2001). This requires a suitable environment and such an environment can be achieved through recognition and acquisition of new educational methods.

Without any doubt, family has the most important role in controlling and guiding imagination as well as emerging creativity. If families provide opportunities for children to ask questions, do curiosity and discover environment, and never punish and threaten them, then the infrastructure for growth is provided. Repeated threats and punishments lead to loss of mental creativity. In many families, parents despite their internal desire, unknowingly and sometimes unintentionally do things that generally lead to depression and mental and psychological retardation of their children, and prevent the growth of their children's creativity. Therefore, the communication and relationships with among the family members and its relationship with children's creativity is a fundamental issue that must be addressed (Davoud *et al.*, 2008). Therefore, the question that arises here is that what kind of relationship the emotional atmosphere of the family can have with children's creativity? This study, like other researches seeks the goals described as follows:

General purpose of the research: Determining the relationship between the family's emotional atmosphere and creativity in students.

Upon the general purpose of the research, detailed objectives include:

1. Determination of the level of relationship between tendency of family toward democratic principles and the creativity.
2. Determination of the level of relationship between the inclinations toward absolute freedom in family with creativity of the students.
3. Determination of the level of relationship between the tendencies of family toward authoritarian principles with creativity of the students.
4. Determination of the relationship between family's emotional atmosphere and creativity in female students.
5. Determination of the relationship between family's emotional atmosphere and creativity in male students.
6. Determination of the relationship between fathers' education in families with students' creativity.
7. Determination of the relationship between mothers' education in families with students' creativity.

Research Design

This is a descriptive – correlational study in which the correlation between two variables is evaluated. The statistical population of this study consisted of all male and female secondary school students in the southern cities (Jiroft, Kahnuj, Anbarabad, Manojn, Ghale Ganj, Roudbar and Faryab) in Kerman province in 2011-12 school year. Sampling method in this research is random multistage cluster sampling. The sample size was 210 people that for each city 30 people (15 girls and 15 boys) were selected. The tool used to measure students' creativity was Torrance creativity test (60 questions) and for the family's emotional atmosphere a researcher's made questionnaire was used. The way the study was performed is that in each public schools in southern cities of Kerman province and in a working-hour of the class, after an explanation on how to respond to the test, the test is performed among groups of students, and then the family's emotional atmosphere questionnaire was delivered to the parents of the same students, and we provide a detailed information about how to answer to the questions and the time of the test, and 30 minutes we collect the answer sheets and the data are calculated using spss software.

Data Collection Tool

Creativity Test: This test is a selection of authentic Torrance tests of creativity and consists of 60 multiple-choice four option questions, which discovers capabilities such as fluency, innovation, flexibility and development. Questions related to the fluency were questions number 1- 7- 6- 5- 10- 12- 17- 18- 45- 35-27 -26 -25- 24- 22- 19 and questions about the originality were questions number 9- 8- 2- 11- 13- 21- 20- 15 -31- 30- 29- 23- 41- 39- 38- 37- 36- 34- 33- 32. Questions relating to flexibility were questions

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number 14- 59- 58- 49- 48- 47- 43- 42- 40- 28- 16, and the questions that measured the ability of elaboration were questions number 51- 50- 46- 3- 60- 57- 56- 55- 54- 53 -52.

Questionnaire Reliability: In 1984, the original form was conducted on 650 students in Tehran.

At the same time, on a group of 200 of the same students in addition to this test, the Torrance Creativity test was also performed, and the in correlation between the total score of the Torrance test and the total score of the test was 46%.

On current form (60 questions) which was built by professors of the University of California (Abedi, O'Neill, Spielberg), two different methods (classical correlation between this test and standard tests) were used by professors of Dusto University and then, using confirmatory factor analysis method, Correlation coefficient s were calculated.

Correlation coefficient between the quadruplet creativity test scores and course scores were are all statistically significant at 1% level, and was fluctuating between the maximum of 215% (between the mathematical and the originality scores) and at least 54% (between mathematical and flexibility scores). Reliability: In order to measure the reliability coefficient of creativity tests (60 questions), a research was performed on 30 secondary school students two weeks after the second test.

The coefficient obtained was 82 percent in fluency section, 85 percent in originality section, 88 percent in flexibility section, and 76 percent in the elaboration section (Dortaj, 2008).

Family's Emotional Atmosphere Questionnaire: This questionnaire is researcher's made and consists of two parts.

The first part is about the student's personal information such as age of the parents, occupation and education level of parents, family size and birth order of the student in question, and the second section is about how family members communicate with each other.

The second part consists of 45 multiple-choice (four option) questions, which questions number 1 to 15 evaluates the democratic family characteristics, questions number 16 to 30 evaluates the characteristics of dictatorial family and questions number 31 to 45 evaluates the characteristics of absolute freedom family.

Validity and Reliability of The Test: The reliability of test is measured by Cronbrash's alpha, where the reliability of test was approved through the test-retest reliability for two weeks interval.

To do this, the emotional atmosphere test was performed for the second time on 30 students and the correlation coefficient between scores on the family's emotional atmosphere between the first time and the second time was 78%.

Validity of the test was determined and approved through content validity and face validity based on the judgment of experts in the field of educational sciences and psychology.

Demographic Questionnaire: This questionnaire included demographic characteristics of parents and children, such as age, gender, education, economic status, birth order and family size of the student in question.

RESULTS AND DISCUSSION

Findings

Data from questionnaires obtained from public secondary school students were studied separately based on southern cities of Kerman province. Because parenting practices and children's creativity components are both in interval scale, PearBoy correlation was used for analysis of the assumptions.

In the below table (4.1), there is a significant positive relationship between democratic parenting style and a variety of creativity components. No relationship was found between Dictatorial style (as well as absolute freedom style) and any of the creative components.

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Table 4-1: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Jiroft city

Family's emotional atmosphere		Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democracy Style	Correlation coefficient	0.450*	0.510**	0.398*	0.462*
	Significant level.	0.013	0.004	0.029	0.010
	Number	30	30	30	30
Dictatorial Style.	Correlation coefficient	-0.073	0.060	0.047	-0.037
	Significant level.	0.702	0.753	0.807	0.845
	Number	30	30	30	30
Freedom Style	Correlation coefficient	-0.132	0.008	0.027	-0.156
	Significant level.	0.485	0.967	0.888	0.412
	Number	30	30	30	30

Table 4-2: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Roudbar city.

Family's emotional atmosphere		Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.035	0.262	0.135	0.157
	Significant level.	0.856	0.163	0.476	0.406
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	-0.179	0.007	-0.170	-0.253
	Significant level.	0.343	0.970	0.371	0.177
	Number	30	30	30	30
Freedom style	Correlation coefficient	0.084	-0.085	0.050	0.105
	Significant level.	0.659	0.655	0.795	0.580
	Number	30	30	30	30

In the above table there is a significant relationship between Democratic style parenting and originality, flexibility and elaboration types of creativity. No relationship was found between dictatorial and absolute freedom style with any type of creativity components.

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Table 4-3: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Anbarabad city.

Family's atmosphere	emotional	Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.066	0.197	0.035	0.135
	Significant level.	0.730	0.298	0.854	0.477
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	-0.080	0.002	-0.031	-0.344
	Significant level.	0.675	0.990	0.871	0.063
	Number	30	30	30	30
Freedom style	Correlation coefficient	0.232	-0.177	0.116	-0.059
	Significant level.	0.217	0.537	0.543	0.755
	Number	30	30	30	30

In the above table there is a significant relationship between democratic parenting style and originality and elaboration types of creativity. There is no significant relationship between dictatorial and absolute freedom styles with any of the creativity components.

Table 4.4: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Faryab city.

Family's atmosphere	emotional	Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.390*	0.250	0.337	0.034
	Significant level.	0.033	0.183	0.069	0.857
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	0.006	0.203	-0.024	-0.125
	Significant level.	0.973	0.282	0.900	0.510
	Number	30	30	30	30
Absolute Freedom style	Correlation coefficient	0.144	-0.201	0.034	0.092
	Significant level.	0.447	0.286	0.860	0.629
	Number	30	30	30	30

In the above table there is a significant relationship between democratic parenting style and originality and flexibility types of creativity. No significant relationship was observed between dictatorial and absolute freedom styles with any components of the creativity.

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Table 4-5: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Ghaleh Ganj city

Family emotional atmosphere		Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.248	0.213	0.293	0.126
	Significant level.	0.187	0.258	0.115	0.506
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	-0.207	-0.375*	-0.528**	-0.281
	Significant level.	0.273	0.041	0.003	0.133
	Number	30	30	30	30
Freedom style	Correlation coefficient	-0.317	-0.192	-0.117	-0.023
	Significant level.	0.088	0.310	0.536	0.905
	Number	30	30	30	30

In the above table there is a significant relationship between democratic parenting style and all the components of creativity. There is no relationship between dictatorial and absolute freedom styles with any of the creativity components of the students.

Table 4-6: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Ghaleh Ganj city

Family's atmosphere	emotional	Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.100	0.005	0.003	0.223
	Significant level.	0.598	0.980	0.987	0.235
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	-0.192	-0.053	0.018	-0.071
	Significant level.	0.309	0.779	0.923	0.709
	Number	30	30	30	30
Freedom style	Correlation coefficient	-0.358	-0.205	0.093	-0.373
	Significant level.	0.052	0.277	0.626	0.042
	Number	30	30	30	30

In the above table there is a significant relationship between democratic parenting style and fluency and elaboration types of creativity. No relationship was found between dictatorial and absolute freedom styles and any components of creativity.

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Table 4-7: The correlation matrix between democratic, dictatorial and absolute freedom parenting styles with types of creativity in students of Manujan city

Family's atmosphere	emotional	Children's creativity			
		Fluency	Originality	Flexibility	Elaboration
Democratic style	Correlation coefficient	0.380*	0.347	0.314	0.457*
	Significant level.	0.038	0.065	0.091	0.011
	Number	30	30	30	30
Dictatorial style	Correlation coefficient	0.128	-0.054	0.099	0.026
	Significant level.	0.501	0.775	0.601	0.892
	Number	30	30	30	30
Freedom style	Correlation coefficient	-0.604**	-0.534**	-0.324	-0.678**
	Significant level.	0.000	0.002	0.080	0.000
	Number	30	30	30	30

In the above table there is a significant relationship between democratic parenting style and all types of creativity. No relationship was found between dictatorial and absolute freedom styles and any components of creativity.

Table 4.1.1: Comparison of creativity components in the boys and girls of Jiroft city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	38.26	7.19	20.59	14	0.000
	Girl	15	42.66	8.11	20.37	14	0.000
Originality	Boy	15	22.60	3.96	22.10	14	0.000
	Girl	15	23.20	3.23	27.78	14	0.000
Flexibility	Boy	15	33.46	5.93	21.82	14	0.000
	Girl	15	41.20	7.12	22.40	14	0.000
Elaboration	Boy	15	21.73	3.26	25.80	14	0.000
	Girl	15	22.20	2.78	30.89	14	0.000

According to independent t test creativity of girls in a variety of creativity components is significantly higher than boys. More differences can be seen in mean in girls compared with boys. This means that the fluency and flexibility types of creativity are significantly higher in girls than boys.

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Table 4.1.2: Comparison of creativity components in the boys and girls of Roudbar city

	Gender	Number	Average	Standard deviation	T	Degrees of freedom	Significant level.
Fluency	Boy	15	32.60	5.70	22.13	14	0.000
	Girl	15	35.06	2.60	52.15	14	0.000
Originality	Boy	15	42.80	6.79	24.39	14	0.000
	Girl	15	43.20	4.79	34.86	14	0.000
Flexibility	Boy	15	23.26	4.19	21.45	14	0.000
	Girl	15	24.80	1.97	48.72	14	0.000
Elaboration	Boy	15	24.66	4.09	22.94	14	0.000
	Girl	15	23.26	3.33	27.51	14	0.000

According to the above table, fluency, originality and flexibility components of creativity are significantly higher in girls, compared with boys; however, there is no difference between elaboration component of creativity between boys and girls.

Table 4-1-3: Comparison of creativity components in the boys and girls of Anbar Abad city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	35.26	5.09	26.82	14	0.000
	Girl	15	37.86	11.46	12.79	14	0.000
Originality	Boy	15	25.46	4.03	24.45	14	0.000
	Girl	15	26.26	5.81	17.50	14	0.000
Flexibility	Boy	15	36.80	9.74	14.62	14	0.000
	Girl	15	35.66	12.22	11.29	14	0.000
Elaboration	Boy	15	25.66	3.24	30.64	14	0.000
	Girl	15	28.20	3.68	29.61	14	0.000

According to the above table, fluency, originality and elaboration components of creativity are significantly higher in girls compared with boys; however, there is no difference between flexibility component of creativity between boys and girls.

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Table 4-1-4: Comparison of creativity components in the boys and girls of Faryab city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	40.20	5.15	30.18	14	0.000
	Girl	15	38.33	9.04	16.41	14	0.000
Originality	Boy	15	21.60	3.37	24.77	14	0.000
	Girl	15	23.13	2.69	33.23	14	0.000
Flexibility	Boy	15	40.00	4.50	34.39	14	0.000
	Girl	15	33.46	10.14	12.78	14	0.000
Elaboration	Boy	15	22.33	6.89	12.54	14	0.000
	Girl	15	25.66	1.83	54.06	14	0.000

According to the above table, originality and elaboration components of creativity are significantly higher in girls compared with boys; however, there is no difference between mean fluency and flexibility components of creativity between boys and girls.

Table (4-1-5) Comparison of creativity components in the boys and girls of Ghaleh Ganj city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	38.26	7.19	20.59	14	0.000
	Girl	15	42.66	8.77	20.37	14	0.000
Originality	Boy	15	22.60	3.96	22.10	14	0.000
	Girl	15	23.20	3.23	27.78	14	0.000
Flexibility	Boy	15	33.46	5.93	21.82	14	0.000
	Girl	15	41.20	7.12	22.40	14	0.000
Elaboration	Boy	15	21.73	3.26	25.80	14	0.000
	Girl	15	22.20	2.78	30.89	14	0.000

In the above table, significant difference was demonstrated between total creativity of boys and girls. In other words, mean creativity of girls is significantly higher in girls, compared to boys.

Table (4-1-6) Comparison of creativity components in the boys and girls of Kahnouj city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	32.13	5.97	20.83	14	0.000
	Girl	15	41.13	5.93	26.82	14	0.000
Originality	Boy	15	23.66	3.67	24.92	14	0.000
	Girl	15	23.60	2.99	30.51	14	0.000
Flexibility	Boy	15	36.66	4.63	30.61	14	0.000
	Girl	15	46.20	5.85	30.54	14	0.000
Elaboration	Boy	15	24.26	1.38	67.76	14	0.000
	Girl	15	24.86	3.39	28.33	14	0.000

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According to the above table, flexibility and fluency components of creativity are significantly higher in girls compared with boys; however, no difference between mean elaboration and originality components of creativity between boys and girls was observed.

Table (4-1-7) Comparison of creativity components in the boys and girls of Manojan city

	Gender	Number	Average	Standard deviation	t	Degrees of freedom	Significant level.
Fluency	Boy	15	38.26	7.19	20.59	14	0.000
	Girl	15	42.66	8.11	20.37		
Originality	Boy	15	22.60	3.96	22.10	14	0.000
	Girl	15	23.20	3.23	27.78	14	0.000
Flexibility	Boy	15	33.46	5.93	21.82	14	0.000
	Girl	15	41.20	7.12	22.40	14	0.000
Elaboration	Boy	15	21.73	3.26	25.80	14	0.000
	Girl	15	22.20	2.78	30.89	14	0.000

The above table shows significant differences in total creativity between boys and girls. Mean creativity in various components of creativity is higher in girls than boys, and more difference was seen between mean fluency and flexibility components of creativity among girls than among boys.

Table (4: 2-1) Comparison of the mean creativity components and education levels of students' parents of Jiroft

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	12	112.87	Illiterate	9	111.88
Elementary and secondary school	8	114.50	Elementary and secondary School	8	114.25
Diploma	6	118.00	Diploma	7	118.00
Associate's degree and Bachelor's degree	4	121.50	Associate's degree and Bachelor's degree	6	118.28

According to data gathered from parents' education, parents' education is divided into 4 general categories (1- Illiterate, 2- Elementary and secondary school, due to the large number of parents in this category, we divided them into two subcategories, 3-Diploma, and 4 - Associate's degree and Bachelor's degree and because of the small number of parents in this group, we placed them in one group). The number of parents are classified into lower than diploma, diploma and higher than diploma respectively. The number of illiterate fathers constituted 40%, elementary and secondary school 26.6%, diploma 20% and associate and bachelor degree 13.3% of the total population of fathers, and the number of illiterate mothers constituted 30%, elementary and secondary school 26.6%, diploma 23.3% and associate and bachelor degree 20% of the total population of mothers. What is obtained from creativity scores indicates that as the parents' education goes higher, the mean creativity of children also increases.

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Table (4: 2-2) Comparison of the mean creativity components and level of parents' education in students of Roudbar city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	4	121.50	Illiterate	10	119.10
Elementary and secondary school	10	124.10	Elementary and secondary school	6	125.00
Diploma	12	125.83	Diploma	5	125.80
Associate's degree and Bachelor's Degree	4	132.00	Associate's degree and Bachelor's Degree	9	130.88

In Table (4.2.2) the number of illiterate fathers 13.3% , primary and secondary school 33.3% , diploma 40%, associate's degree and bachelor's degree was 13.3% of the total population of fathers, and the number of illiterate mothers 33.3% , primary and secondary school 20% , diploma 16.6%, associate's degree and bachelor's degree was 30% of the total population of mothers. In this group as the parents' education goes higher, the mean creativity of children also increases.

is illiterate fathers and mothers 33.3 % , and the initial cycle of 20% , diploma 6.16% to undergraduate and 30% of all mothers make up. In this group also the higher levels of parental education is associated with increased creativity scores.

Table (4: 2-3) Comparison of the mean creativity components and level of parents' education in students of Anbarabad city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	8	112.62	Illiterate	9	121.25
Elementary and secondary school	9	125.62	Elementary and secondary school	7	123.28
Diploma	6	127.00	Diploma	6	131.33
Associate's degree and Bachelor's Degree	7	134.57	Associate's degree and Bachelor's Degree	8	134.12

In Table (4.2.3) the number of illiterate fathers 26.6% , primary and secondary school 30% , diploma 20%, associate's degree and bachelor's degree was 23.3% of the total population of fathers, and the number of illiterate mothers 30% , primary and secondary school 23.3% , diploma 20%, associate's degree and bachelor's degree was 26.6% of the total population of mothers. In both group the level of creativity goes higher by increasing the education level of parents. Still no considerable difference was observed between parents' level of education and the average creativity of children.

Table (4: 2-4) Comparison of the mean creativity components and level of parents' education in students of Faryab city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	9	109.11	Illiterate	10	108.40
Elementary and secondary school	5	120.00	Elementary and secondary school	7	114.28
Diploma	10	135.20	Diploma	6	139.50
Associate's degree and Bachelor's Degree	6	149.66	Associate's degree and Bachelor's Degree	5	153.20

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In Table (4.2.4) the number of illiterate fathers 30% , primary and secondary school 16.6% , diploma 33.3%, associate’s degree and bachelor’s degree was 20% of the total population of fathers, and the number of illiterate mothers 33.3% , primary and secondary school 23.3% , diploma 20%, associate’s degree and bachelor’s degree was 16.6% of the total population of mothers. In this group the level of creativity goes higher by increasing the education level of parents, too.

Table (4: 2-5) Comparison of the mean creativity components and level of parents’ education in students of Ghaleh Ganj city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	7	124.28	Illiterate	10	124.50
Elementary and secondary school	9	125.88	Elementary and secondary school	9	125.40
Diploma	5	131.60	Diploma	5	129.44
Associate’s degree and Bachelor’s Degree	9	132.88	Associate’s degree and Bachelor’s Degree	6	143.20

Table (4-2-5), the number of illiterate fathers 23.3% , primary and secondary school 30% , diploma 16.6%, associate’s degree and bachelor’s degree was 30% of the total population of fathers, and the number of illiterate mothers 33.3% , primary and secondary school 30% , diploma 16.6%, associate’s degree and bachelor’s degree was 20% of the total population of mothers. In this group, like the previous tables, the level of creativity goes higher by increasing the education level of parents, too.

Table (4: 2-6) Comparison of the mean creativity components and level of parents’ education in students of Kahnouj city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	5	122.83	Illiterate	9	118.77
Elementary and secondary school	9	121.11	Elementary and secondary school	8	122.25
Diploma	10	126.30	Diploma	7	128.00
Associate’s degree and Bachelor’s Degree	6	138.66	Associate’s degree and Bachelor’s Degree	6	138.66

Table (4: 2-7): Comparison of the mean creativity components and level of parents’ education in students of Manujan city

Father's education			Mother's education		
Education	Number	Average	Education	Number	Average
Illiterate	12	116.60	Illiterate	11	124.54
Elementary and secondary school	7	116.40	Elementary and secondary school	6	127.20
Diploma	7	129.00	Diploma	8	115.25
Associate’s degree and Bachelor’s Degree	4	131.00	Associate’s degree and Bachelor’s Degree	5	128.00

Table (4-2-6), the number of illiterate fathers 16.6% , primary and secondary school 30% , diploma 33.3%, associate’s degree and bachelor’s degree was 20% of the total population of fathers, and the

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number of illiterate mothers 30% , primary and secondary school 26.6% , diploma 23.3%, associate's degree and bachelor's degree was 20% of the total population of mothers. The results obtained from the data shows that the level of creativity goes higher by increasing the education level of parents.

Table (4-2-7) , the number of illiterate fathers 40% , primary and secondary school 23.3% , diploma 23.3%, associate's degree and bachelor's degree was 13.3% of the total population of fathers, and the number of illiterate mothers 36.6% , primary and secondary school 20% , diploma 26.6%, associate's degree and bachelor's degree was 16.6% of the total population of mothers. In this group the level of creativity goes higher by increasing the education level of parents, too.

Discussion and Conclusion

The findings of the current study indicated that there is a significant relationship between the democracy-oriented emotional atmosphere of the family and each of the components of creativity. The result of this study conforms to Milgram's research (1991); Gortzel and Gortzel (1962); Getzels and Jackson (1972); Bamrynd *et al.*, (1991); Gohari (1998); Roshandel (1999); Mehrafza (2005) and Javidi Kalateh Jafarabadi (2009) researches. In their researches, they found children whose parents have a reasonable view of power, were more creative compared to children whose parents have dictatorial and freedom attitude.

In addition, there is no significant relationship between the emotional climate inclining toward absolute freedom and dictatorship in family and other creativity components. The result of this study conforms to the researches of Maccoby and Martin (1983); Dorenbach *et al.*, (1987); Huck (2000); Bamrynd (1991); Guildford (1998); Mach (2000); Mitchell (2002) ; Brayer and Elliott (2003) and Seifourian and Arasi (2004).

In this context, the greatest amount of creativity is seen among children who were trained according to a decisive and confident style, and the lowest amount of creativity was seen in children who have been trained in authoritarian style. This can be explained as follows:

(A) Paying attention to the child needs, adoption and two-way communication between the parents based on warmth and respect, giving the freedom to the child, fostering a sense of responsibility, respect for interests and choices of the child will altogether lead to grow in self-confidence and the resulting innovative characteristics and creativity in child.

(B) In this context, democratic environments are effective factors to encourage children to explore the curiosity in his environment. In authoritative style, parents are warm to their children, and at the same time they are controller and authoritarian. This method helps children to better adapt to social norms. These children are competent, realistic, self-confident, active, self-regulatory and responsible.

To investigate the relationship between the family' emotional atmosphere and creativity of female and male students, the results of statistical analysis showed that girls have noticeably higher levels of creativity. The results of this study conforms to the research results of Akin boye (1982); Amabile (192); Kim and Michael (1995); Sheykhoh Eslami (2000); Mirlohi (2007); vahedi (2009). In this case, several researches are performed, some of which have confirmed the existence of gender differences in creativity (Kim *et al.*, 1995) while others have not confirmed this difference (Gonen , 1993). Boye (1982) evaluated creative talent in 30 male and female high school student. The results showed that boys are superior to girls only in flexibility. Kim and Michael (1995), using a group of male and female high school students, studied the relationship between creativity, academic performance, and sexuality. The findings revealed that girls are more creative than boys.

In a research performed by Amabile (1982), in an early study about the amount of creativity used in making crafts, came to the conclusion that girls build more creative crafts compared to boys (Shariatmadari, 2006).

Also, in a study which was performed by R. Shaykhoh Eslami (2000) under the title of A review of creativity and its relationship to family and gender variables in male and female students in Shiraz city, the level of creativity was compared between the male and female students and the effects of Family relationships in terms of emotional relationship on male and female students was evaluated. The research sample consisted of 203 second year students (100 girls and 103 boys). This study showed that female students are superior to boys in both the originality and elaboration aspects of creativity. In contrast, male

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students outpaced the girls in both flexibility and fluency aspects of creativity. About superiority of creativity scores in female students than the males, it can be said that female students with regard to their particularistic view, they have been able to provide new and innovative responses to outdo boys. In general, based on the total score of the study, females have significantly higher creativity than the boys.

In a survey performed by Mirlohi (2007) under the title The relationship between family's emotional atmosphere and creativity of students in the fourth and fifth grades in Isfahan in the school year 2005-06, sample groups were selected by simple random sampling with 90 girls and 90 boys. To measure creativity, a researcher made vocabulary test, and to measure family performance, the Family Functioning Scale was used. The results showed that creativity in girls is significantly higher than in boys.

In a study performed by Vahedi, Sh. (2009) about the relationship between parenting styles and family's emotional climate to creativity of children in preschool centers of the Tabriz city, a sample size was 320 (156 boys and 164 girls), which was that done in the random multistage cluster sampling method. The results of the study using t-test show that there is no significant difference in originality aspect of creativity between boys and girls, and the fluency aspect of creativity and the elaboration aspect of creativity are higher in female children than the male children. The study concluded that this difference is probably due to cultural issues where girls usually have more mental abilities in focusing to the components of a subject, or in other words, they have analytical and local thinking (Gallagher, 1988).

In addition, studying the correlation between education level of parents (father and mother) in family and creativity of students using the statistical data obtained from the comparison of total amount of creativity and the education level of parents of students in the present study showed that there is a significant relationship between the level of parents' education, specially mothers, and the creativity of students. The strong influence of mother's education is explained by more hours of her interacting with the child through the day. On the other hand, in early growth stages, which have the highest impact in developing creative abilities in children, mother has more contact with the children than father. Therefore the effect of maternal education and knowledge is better shown. In general, as the education level of parents' education goes higher, the creativity of students increases, and vice versa, lower education of parents, due to negative and wrong attitude of parents and their irrational parenting methods lead to decrease and depletion in creativity of children.

These findings are consistent with the studies of Katamy and Alkasy (1995). In the researches done by Katamy and Alkasy (1995) Yazdchy (2000) about the relationship between creativity, academic status and socio - economic conditions, it was concluded that there was a significant difference between creative and non-creative people in terms of some socio – economic factors, academic and grade aspects.

Also in another study, under the title of the effect of family and school factors on student creativity, by Abolghasem Nouri (2003) on high school of Abadan city students during school year 2000-01, where 300 students (163 girls and 137 boys) were selected as statistical sample in random multistage cluster sampling. The tools of this research include creativity measurement questionnaire, socio- economic status questionnaire, family type questionnaire, and teacher's teaching method questionnaire. The correlation between education level and the fluency and elaboration elements was significant. Only the relationship between education level and fluency element was significant, and correlation coefficient between mother's education level and fluency element was significant, however, the relationship between mother's education and originality was not significant. The data of this research showed that the factor of parents' education and fluency, elaboration, flexibility and the total creativity have significant relationship.

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