

## The Relationship between Family Functioning and Academic Achievement in Female High School Students of Isfahan, Iran, in 2013–2014

### Abstract

**Background:** Nowadays, the most important problem of the educational system is the vast spread of school failure. Therefore, detection of the factors leading to or preventing students' academic achievement is of utmost importance. Family function is considered to be a critical component of academic success. This study aimed to investigate the relationship between family functioning and academic achievement in high school female students in Isfahan. **Materials and Methods:** This descriptive correlational study was conducted through random sampling among 237 female high school students in Isfahan during school year 2013-2014. Data were collected by participants' personal characteristics and Bloom family function questionnaires. To analyze the data, descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation and linear regression analysis) were adopted and computed using SPSS software. **Results:** The results showed a significant correlation between family function (except lack of independence) and students' academic achievement ( $p < 0.05$ ). Further, among family function dimensions, expressiveness ( $\beta = 0.235$ ,  $p < 0.001$ ), family socialization ( $\beta = 0.219$ ,  $p = 0.001$ ), and cohesion ( $\beta = 0.211$ ,  $p = 0.001$ ) were more reliable predictors of academic achievement. **Conclusions:** The results of this study showed that students' academic achievement is highly correlated with the performance of their families. Therefore, to improve students' educational status in cultural and educational programs, which are specified for them, family function centered plans should be at the heart of attention.

**Keywords:** Adolescents, educational status, family, Iran, nurses

### Introduction

Progress of each society depends on its educational power, and function of any educational system is evaluated based on its elements, leadership, and management of the students' education. Factors such as family, teachers and professors, education and curriculum planners, educational environment, economic and cultural status, parents' job and education level affect students' academic achievement. Other factors such as parents' addiction, lack of parents, inability to pay education tuition fee, and so on lead to adolescents' academic failure.<sup>[1]</sup> In addition, high academic achievement and learning improvement help not only adolescents' scientific growth but their mental health as well. On the contrary, in case of academic failure and the mental pressure resulting from that, students' mental health is impaired, which imposes a burden on the students and the society. Therefore, paying attention to the factors leading to

high academic achievement and preventing academic failure is important.

Numerous studies have investigated several factors influencing students' academic achievement. Ding *et al.* showed that lower physical and mental health was correlated with poor academic achievement.<sup>[2]</sup> Park and Kim<sup>[3]</sup> and Pong *et al.*<sup>[4]</sup> reported an inverse association between children's academic achievement and dictatorial parental style while they reported no association between children's academic achievement and authoritarian style. Brian *et al.*<sup>[5]</sup> and Guay *et al.*<sup>[6]</sup> stated that parenting styles and progression motivation were effective factors for academic achievement. Family is the first environment that affects children's strategy and leadership, thoughts and training, and cultural, educational, social communication, and ethical aspects.

If family, as a social institution, plays its role well it not only delivers normal and healthy members to the society but it can

Abdollah  
Rezaei-Dehaghani<sup>1</sup>,  
Mahrokh Keshvari<sup>2</sup>,  
Somayeh Paki<sup>1</sup>

<sup>1</sup>Department of Community Health Nursing, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran, <sup>2</sup>Department of Community Health Nursing, Management and Ageing, Member of Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

### Address for correspondence:

Ms. Somayeh Paki,  
Department of Community Health Nursing, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.  
E-mail: [s\\_paki68@yahoo.com](mailto:s_paki68@yahoo.com)

### Access this article online

Website: [www.ijnmrjournal.net](http://www.ijnmrjournal.net)

DOI: 10.4103/ijnmr.IJNMR\_87\_17

### Quick Response Code:



**How to cite this article:** Rezaei-Dehaghani A, Keshvari M, Paki S. The relationship between family functioning and academic achievement in female high school students of Isfahan, Iran, in 2013–2014. Iranian J Nursing Midwifery Res 2018;23:183-7.

**Received:** June, 2017. **Accepted:** November, 2017.

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have the most positive effects on other social institutions such as education and training organization, government and judiciary, and economic systems. Family performance depends on its ability of coordinating with changes, resolving conflicts and differences, solidarity among members, success in applying disciplinary patterns, respecting the boundaries between people, and the implementation of provisions and principles of the institution that are aimed at protecting the entire system.<sup>[7]</sup> Walker and Shepherd reported that inappropriate family performance can lead to academic and educational and training failure, breakdown of social relations, social alienation, and alcohol and drug abuse.<sup>[8]</sup> Sun *et al.*<sup>[9]</sup> and Park *et al.*<sup>[10]</sup> reported that factors such as cultural adaptability of the family, parental involvement in school affairs and parents-adolescents attachment, religious education of parents towards their children, family education, appropriate monitoring and control, socioeconomic status, and family conflict were effective on adolescents' educational performance.

Reshvanlo stated that supporting family warmth and independent motivation directly affects academic achievement, whereas parents' conflict with children has no direct and significant effect on their academic achievement.<sup>[11]</sup> Aforementioned research showed that family emotional atmosphere, family members' communication, and interactions and parenting styles influence members' performance in different fields. Several studies showed various elements that are effective on academic achievement, although they did not consider all 15 dimensions of family function simultaneously in prediction of academic achievement. Nurses play a key role in the preservation and promotion of individuals', families', and societies' health. Adolescents, as a specific group, need special health nursing interventions.

Nurses enhance adolescents' and their families' capacity to achieve higher levels of health. As such a research aiming at family function and students' academic achievement has not been already conducted in Iran, the researcher decided to conduct a study on the relationship between family function different dimensions and family members' characteristics, and students' academic achievement in girls' high schools.

## Materials and Methods

This is a cross-sectional study. Study population comprised high school girls in Isfahan in school year 2013–2014. Sample size was calculated as 190 by confidence interval of 95% (1.96), power of 80% (0.84), and least correlation index of 0.2. Due to probable participant drop and to achieve more confidence, 25% was added to sample size yielding total of 237 participants. The inclusion criteria included lack of physical or mental health records, not facing new a crisis, living with parents, willing to participate, minimum age of 15 years, and average grade of 15 and above; exclusion criteria included failure to answer the questionnaire and unwillingness to cooperate.

In the present study, multistage random sampling method was used. During the first stage, a list of public high schools for girls from the 6 districts of the city was prepared, and then, by stratified random sampling method, 6 female high schools were chosen (one high school from each district). Then, by a simple and systematic random sampling, proportional to the population of each school, 237 female students were selected from the first, second, and third classes of Sharif Vaghefi, Behesht Ayein, Tarbiyat, Kardanpour, Maktabi, and Ameneh secondary schools.

Data collection tool contained participants' personal characteristics including school average, number of children and their rank of birth, and parents' education level and job, and Bloom family function questionnaires. This scale was developed by Bloom *et al.* in 1985 to evaluate performance within the family.<sup>[12]</sup> This scale consists of 75 questions and descriptive phrases about family features that Bloom classified into 15 areas, which are significant and independent of each other, by factor analysis. These areas included cohesion expressiveness, conflicts, cultural activities, active-recreational orientation, religious, organization, family socialization, external locus of control, family idealization disengagement, democracy, laissez faire family style, authoritarian family style, and lack of independence. Each question consisted of 5 options of strongly agree, agree, no comment, disagree, or strongly disagree, and each 5 questions belonged to one area. The questions were scored within a range of 1 to 5. Thus, the questionnaire had a total score of 75 to 375, and each of the 15 aspects had a score range from 5 to 25. After analyzing the questionnaire, the function of the family, based on the total scores, was classified into three groups of unfavorable (75–174), moderate (175–274), and favorable (275–375). The content validity of the family functioning test was approved by a group of professionals and family counselors. In the study by Karami *et al.*,<sup>[13]</sup> the reliability coefficient of the questionnaire using Cronbach's alpha was found to be 0.87. In the present study, by using the same method it was calculated as 91%.

The criterion for academic achievement in the present study was mean average of prior two semesters of the students, and as among the students, no one had failed, the students with mean average of over 15 were counted as those with academic achievement and those less than 15 as those with poor academic achievement. For data analysis, descriptive statistical tests (mean and SD) and inferential tests (Pearson correlation test and linear regression test) were done using SPSS20 (Inc., Chicago, IL) at a significance level of  $P < 0.05$ .

## Ethical considerations

Written permission was obtained from the research deputy of Isfahan University of Medical Sciences, Deputy of Health, and the Department of Education of Isfahan. The aims of the study were explained to the participants, and

they gave a written informed consent to participate in the study.

### Results

Results showed that most of the participants' mothers and fathers were homemakers (86.10%) and self-employed (54.90%), respectively. Participants had mostly high school education. Approximately 47.3% were the first child of the family. Their mean (SD) average was 17.70 (1.20). Mean (SD) score, obtained from family function, was 268.9 (28.90). Among the family function dimensions, the highest and the lowest means were for cohesion 20.60 (3.30) and lack of independence 14.60 (2.80), respectively [Table 1].

Pearson correlation coefficient test showed a significant association between mothers' job and parents' education and academic achievement ( $p < 0.05$ ). Meanwhile, there was no significant association between fathers' job and academic achievement. There was an inverse significant association between the number of children in the family and birth rank, with academic achievement ( $p < 0.05$ ). Correlation matrix table showed a significant correlation between family function dimensions (except for lack of independence) and academic achievement [Table 2].

To control variable overlap effect and to have a more accurate comment on the resulting associations, multiple linear regression test was conducted among the variables. Results showed a significant association between mothers' job, parents' education, family function 15 dimensions (except for lack of independence) and total family function and academic achievement ( $p < 0.05$ ) [Table 2]. Moreover, among these family function dimensions, expressiveness ( $\beta = 0.235$ ,  $p < 0.001$ ), family socialization ( $\beta = 0.219$ ,  $p = 0.001$ ), and cohesion ( $\beta = 0.211$ ,  $p = 0.001$ ) were more reliable predictors for academic achievement.

### Discussion

Results showed a significant association between parents' education and academic achievement, which is consistent with Spera *et al.*<sup>[14]</sup> In other words, parents' education and their positive attitude toward educational affairs can be efficient elements for students' academic achievement. In addition, there was a significant association between children's number and rank of birth and their academic achievement that is in line with the results obtained by Kavsyian *et al.*<sup>[15]</sup> In fact, in crowded families, mothers impose a tough control on children, especially girls. As the parents in crowded families cannot make as close relationship as those in low number families, there is less chance to directly support or supervise them. This sort of relationship in crowded families leads to more independence in children but less academic achievement.<sup>[15]</sup>

There was also a significant association between girls' academic achievement and their mothers' job. This finding

**Table 1: Mean (SD) of family function subscales and academic achievement**

Family function subscale	Mean (SD)
Cohesion	20.54 (3.25)
Expressiveness	19.52 (3.58)
Conflict	18.89 (3.20)
cultural activities	17.16 (3.83)
Active recreational orientation	17.80 (3.15)
Religiousness	16.88 (3.35)
Organization	19.80 (3.90)
Family socialization	20.24 (3.48)
External locus of control	18.44 (3.58)
Family idealization	15.90 (3.91)
Disengagement	17.86 (3.00)
Democracy	17.10 (1.89)
Laissezfaire family style	16.81 (2.67)
Authoritarian family style	16.34 (3.29)
Lack of independence	14.55 (2.84)
Total family function	267.91 (28.89)
Average	17.70 (1.19)

**Table 2: The relationship between investigated variables in a multiple regression model with the variable of academic achievement**

	Academic achievement					
	r	B	SEM	Beta	t	p
Cohesion	0.04	0.080	0.024	0.211	3.31	0.001
Expressiveness	0.05	0.081	0.022	0.235	3.71	<0.001
Conflict	0.01	0.047	0.025	0.122	1.89	0.050
Cultural activities	0.01	0.038	0.021	0.119	1.84	0.050
Active recreational orientation	0.03	0.074	0.025	0.190	2.96	0.003
Religiousness	0.04	0.075	0.023	0.204	3.19	0.002
Organization	0.01	0.338	0.020	0.122	1.88	0.050
Family socialization	0.04	0.077	0.022	0.219	3.44	0.001
External locus of control	0.03	0.067	0.022	0.196	3.06	0.002
Family idealization	0.02	0.046	0.020	0.148	2.28	0.023
Disengagement	0.03	0.078	0.026	0.190	2.97	0.003
Democracy	0.03	0.115	0.178	0.178	2.77	0.006
Laissezfaire family style	0.01	0.062	0.030	0.138	2.1	0.037
Authoritarian family style	0.01	0.045	0.024	0.120	1.85	0.050
Lack of independence	-0.004	0.011	0.028	0.025	0.378	0.706
Total family function	0.05	0.012	0.003	0.274	4.37	<0.001
Fathers' job	0.000	0.077	0.087	0.058	0.883	0.378
Mothers' job	0.02	0.294	0.119	0.159	2.46	0.014
Fathers' education	0.02	0.166	0.063	0.170	2.64	0.009
Mothers' education	0.04	0.225	0.063	0.228	3.59	<0.001
Birth rank	0.02	-.216	0.096	-.146	-2.260	0.025

shows that the children with mothers as homemaker are more closely in contact with them as they are always home, and consequently, have more interaction with them. Their



emotional and mental needs are more obviated, which leads to students' improved academic achievement.<sup>[16]</sup> There was a significant association between total family function and academic achievement which is in line with Reshvanloo *et al.*<sup>[11]</sup> and Parishani *et al.*<sup>[17]</sup> With regard to this finding, academic achievement never occurs spontaneously and does not depend on students' intelligence but on family environment, family members' interactions, family support and accompaniment, and other parameters play a role in individuals' mental peace, concentration, and attention.<sup>[18]</sup> In other words, family's performance is among the most important factors in students' educational behavior.

When family function is appropriate in all dimensions and family members' relationship is clear and frank, and with regard to members' roles, they have clear roles; in dimension of behavior control, instead of rough and inflexible control more flexible control is imposed, then, children's behavior can be predictable and productive in different environments including educational institutions.

There was a significant association between family function 15 dimensions (except for lack of independence) and academic achievement. Dimensions of expressiveness, cohesion and family socialization had the highest association with academic achievement. When children believe that their parents are their supports, they manifest more educational self-efficacy and a better professional carrier. Parishani quoting from Makoobi and Martin states that parents' over parenting and authority prevent children's academic achievement and merit, which is consistent with our findings.<sup>[17]</sup> Ghadam Pour concluded that there is a significant association between authoritarian parenting style and children's motivation and academic achievement,<sup>[19]</sup> which is in line with the present study. Religion is among other family function dimensions that is associated with academic achievement, which is consistent with the findings of Park *et al.*<sup>[10]</sup> External locus of control was also significantly associated with academic achievement. In fact, the more internal students' control source was, the more appropriate their disciplinary behavior was, which is consistent with Yoselyani *et al.*<sup>[20]</sup> Conflicts among family members, as another family function dimension, was significantly associated with academic achievement, which is in line with the findings of Ghamari *et al.*<sup>[18]</sup>

Linear regression test was adopted to predict academic achievement based on family function dimensions. Our findings showed that among 15 investigated variables, three variables of emotions and affection expressiveness, family socialization, and cohesion were the most reliable predictors for academic achievement. Therefore, if families respect and develop 15 investigated components, especially the abovementioned ones, adolescents can be expected to achieve academic achievement in different levels of education.

Findings of the study must be interpreted within its limitations, i.e., the psychological condition of the

participants during filling the questionnaire and their different motivations to complete the questionnaires.

## Conclusion

Based on the findings of this study, family function is effective on students' academic achievement. Effects of different family function dimensions on academic achievement clearly reveal the role and importance of family unit that should be closely considered by parents. The parents should also detect their children's needs and abilities. In practice, based on the findings, it is suggested that community health nurses, with regard to their mission and role in preservation and promotion of individuals' health, especially adolescents' as a vulnerable group, be aware of them and consider both adolescents and their families as a target group in socio-health planning. To improve students' educational status, family function centered planning should be specifically considered in students' educational and cultural programs.

## Acknowledgement

This article was derived from a community health nursing education master thesis with project no 393130. Researchers greatly appreciate all persons who helped them in this project.

## Financial support and sponsorship

Isfahan University of Medical Sciences.

## Conflicts of interest

Nothing to declare.

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