

The Impact of Family Functioning and of Some Other Aspects of Parental Involvement in Education, in Adolescents' Academic Achievements

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Abstract The aim of the study is to determine the relationship between family cohesion and family adaptability (flexibility), some aspects of parental involvement in education, of the adolescents' academic achievement in language, mathematics and the average grade in the main subjects (GPA)¹. The study also aimed at determining the degree of variability of student's academic achievements (average grade in main subjects) that could be explained by family cohesion, family adaptability (flexibility) and parent-teacher relationships. For this purpose, it was administered a self-report measure of family functioning (Olson, Bell, & Portner, 1982), (N=714) for students at the 9th grade level from 9th grade public schools in Tirana, during the academic year 2010-2011, two measuring instruments, "Parent-teacher and teacher- parent relationship scale" (Vickers, & Minke, 1995) in order to define the level of the relationship parent-teacher (N=714) and teacher-parent (N=170), that include the dimensions of joining and communication; as well as an instrument (Robinson, 2008) intended to measure some aspects of parental involvement in education such as: parents' self-assessment concerning their skills in helping children with their lessons, parental involvement in homework, the creation of an environment that supports learning, parental beliefs, attitudes and expectations in relation to children's achievements in mathematics and language (N= 369). Furthermore, it was kept a rigorous report of students' grades during the academic year 2010-2011. The study indicated a positive relationship between family cohesion, family adaptability and students' academic achievements. Though statistically significant, these relationships were weak. Furthermore, the study identified weak positive to moderate correlations among various aspects of parental involvement in education and student results. Regarding the relationships of teacher-parent, they were positive and substantial. The data also indicate that family cohesion is responsible for 1% of academic achievements variability, whereas family adaptability (flexibility) doesn't result statistically significant.

Keywords: Academic achievements, Albanian language homework, mathematics homework, parents' beliefs, parents' self-efficacy, family cohesion, family adaptability (flexibility), teacher-parent relationships.

Literature review

Adolescence is characterized by numerous changes, not only physical and emotional ones but also in the context of school and family relations. These changes affect the rapport of adolescents with their parents and are often accompanied by a decrease in academic achievement (Barber & Olsen, 2004; Eccles, 2004; Gutman & Midgley, 2000). Family functioning and its role in supporting the teenager in this transition period are considered as a very important factor by researchers in the sciences of education.

Family functioning is intertwined with three dimensions of family life: cohesion, adaptability (flexibility) and communication. The concept of cohesion reflects the emotional relationship among family members, in other words, their emotional closeness or distance, the time they spend together, the way they take decisions, their interests and entertainment. The assessment of the above factors helps determining the level of family cohesion. Families with a low level of cohesion are characterized by "emotional separation," whereas families with a high level of cohesion have as their basic quality "emotional bonding" and are considered as families with "high consensus" (Olson, 1993).

Adaptability (flexibility) is the ability to adapt, the ability of the family system for change in the functioning of roles, relationships, rules established to maintain the relationship in response to stress. It has been noticed that excessive flexibility leads to a chaotic family, whereas low flexibility leads to a very rigid relationship (Olson, 1993).

¹ Grade point average

Family communication is measured by considering the family as a group in relation to the ability to listen, to converse, to be open and clear, respect and to pay attention to others. Concerning this dimension of family life, (Olson,1993) provides less definitions in the characteristics, by defining it either good or poor. The dimension of cohesion and adaptability determine the type of family, whereas the dimension of communication is considered as critical (important) in facilitating the first two dimensions (Olson, 1993).

A considerable number of studies have focused on the influence of family environment on academic achievement and the wellbeing of adolescents. It is proved that family cohesion is an indicator of social support which connects positively the level of family functioning with the reduction of adolescents' problematic behaviors, which appear to have a negative relationship with academic achievement (Barber & Buehler, 1996; Barnes,1990; Barrera & Li, 1996;. Farrell & Barnes, 1993). Steven (1991) emphasizes the positive relationship between family environment and school performance. When adolescents perceive their families as functional and have personal freedom in decision making, the academic performance increases. Family conflict, on the other hand, affects negatively academic performance. When adolescents experience more anger, criticism and debate in the families, their academic achievements decrease (Bernard, 1991). The role of the family, the level of family-school relationship and parental involvement in education are considered as important factors regarding children academic achievement throughout the years of basic education. (Fan & Chen, 2001; Hill & Chao, 2009; Seginer, 2006). Fullan, (2001) emphasises the idea that the closer parents are to their child schooling, the greater is the impact on the development and academic achievement of the child.

Some research studies have discovered that various aspects of parental involvement in education correlate positively with students' academic achievements. Some of these aspects are: teacher-parent relationship (Fan & Chen, 2001; Hill & Chao, 2009; Seginer, 2006; Allen, 2007; Blankstein,2010; Epstein et al., 2008; Sanders, 2006; Izzo, Weissberg, Kaspro, & Fendrich, 1999); parent-child discussion about school-related problems, family environment that supports learning, parents' beliefs and attitudes about the importance of specific subjects as well as parents' self-efficacy concerning their skills in supporting their children's learning (Catsambis, 1998).

Parental involvement in homework (orientation, leadership, not just supervision) is an important factor that affects academic performance (Carter, 2002). Parents' involvement in learning activities at home is a strong predictor concerning achievements in reading and mathematics. (Izzo, Weissberg, Kaspro, & Fendrich, 1999). Also some other researchers have come to the conclusion that the involvement of parents at home, especially parent child discussion about school problems and their assistance, seems to have a major impact on academic achievements. (Ingram, Wolfe,& Lieberman, 2007; Sui Chu & Willms, 1996, Van Voorhis, 2003). According to Catsambis (1998) the most effective types of parental involvement are those which focus on monitoring the behavior, but those related to adolescents' counselling and guidance.

Various studies point out that parental expectations have a strong positive relationship with children's academic performance. (Amato & Ochlilree, 1986; Hess & Holloway, 1984). In one of their studies, (Entwisle and Hayduk,1988) found that parents' evaluation of their children's abilities in specific subjects has long-term effects on children's academic achievements. Studies conducted in the field of education in Albania, have not focused on adolescents' academic achievements, on the influence of family functioning or on the aspects of parental involvement in these achievements. Although there have been several studies on parental involvement in education, none of them has investigated these aspects in relation to students' academic achievements

The objective of the study

This study aims:

- To determine the relationship between the two dimensions of family functioning: family cohesion and adaptability with students' academic achievements
- To determine the relationship between academic achievements and some aspects of parental involvement such as teacher-parent relationship, parent-child discussion, frequency of communication with teachers, family environment that supports learning, parental involvement in homework, parental expectations in children's performance in mathematics, beliefs and attitudes of parents about the importance of math and language-reading as well as parents' self-efficacy in supporting children in mathematics and language.
- To determine the relationship between teacher-parent relationships (joining and communication) upon students academic achievements
- To determine to what extent is the variability in students' academic achievements can be explained by family cohesion, adaptability (flexibility) and teacher-parent relationship (joining and communication)

Methodology

The population of the study consists of students at the 9th grade level from 9th grade public schools in Tirana, their parents and their teachers who taught language and mathematics during the academic year 2010-2011. The sample of this study consisted of 714 students who were selected randomly from 21 schools out of 66 public schools in Tirana. After the random selection of students, in the study were involved 369 parents who were contacted on purpose during parent-teacher meetings. They were asked to complete a questionnaire that measured several aspects of parental involvement in education. The 22 language teachers and 24 mathematics teachers at the 9th grade level of 21 schools were also part of the study.

To measure the level of cohesion and family flexibility was used a self-report questionnaire "My Family", administered to adolescents (Olson, Portner, Bell, & Filsinger, 1982). The questionnaire consists of 30 items in Likert scale, where 1 corresponds to what never happens in the family, whereas 5 describes what happens more often. 16 items are intended to measure cohesion and 14 items measure flexibility. Factor analysis of the data from this study confirmed the factor of cohesion and flexibility. Reliability for cohesion is $\alpha = .76$. Reliability for flexibility is $\alpha = .88$.

In order to measure the level of parent-teacher relationship was used the questionnaire "The Parent-Teacher Relationship Scale" (Vickers, & Minke, 1995) which was administered to teachers (N = 714). The factor analysis confirmed these factors: cooperation (19 items) and communication (5 items). Reliability for cooperation is $\alpha = .92$ and reliability for communication is $\alpha = .66$.

In order to measure parental involvement in education was used the questionnaire "Parent's involvement in education" (Robinson, M. R, 2008) which was administered to parents (N = 369). The factor analysis of data from this study confirmed that the factors were consistent with those of the original scale. Reliability for each factor is as follows: "Parental involvement in language and reading" (Cronbach $\alpha = .91$), "Parents' skills in supporting learning in mathematics" (Cronbach $\alpha = .84$), "Parents' skills in supporting their children's learning in language-reading" (Cronbach $\alpha = .84$), "Parental involvement in mathematics homework" (Cronbach $\alpha = 0.82$), "Expectations regarding progress in mathematics" (Cronbach $\alpha = .74$) and "Parent-child Discussion" (Cronbach $\alpha = .72$).

Students' grades were taken from school records of the relevant classes. Statistical data were processed through the SPSS program. To determine the relationships between variables in the study, correlational analysis was used. To determine the factors that have the highest impact on students' academic achievements stepwise multiple regression was used. The relationship of variables included in regression was linear. The Durbin –Watson statistics of 1.90 indicated that the problem of autocorrelation did not exist. The examination of plots of the standardized residuals as a function of standardized predicted values pointed out that the problem of heteroscedasticity did not exist. Consequently all the assumptions were met and the data were suitable for multiple regression analysis. In this paper are reported only those results that are significant from the statistical point of view.

Results

The data in table 1 indicate that there is a positive relationship between cohesion, adaptability and students' academic achievements (grades). Though weak, this relationship is statistically significant.

Table 1. The relationship between the dimensions of family functioning (cohesion and adaptability) and academic achievements (students' grades)

| Grades | Family functioning | | |
|--------------------------------------|--------------------|--------------|--------|
| | Cohesion | Adaptability | Total |
| 1. Final grade in language | 0.18** | 0.17** | 0.20** |
| 2. School leading exam in language | 0.16** | 0.21** | 0.21** |
| 3. Final grade in mathematics | 0.19** | 0.14** | 0.20** |
| 4. School leading exam mathematics | 0.18** | 0.21** | 0.22** |
| 5. GPA | 0.20** | 0.18** | 0.22** |
| Note: * $p < 0,05$. ** $p < 0,01$. | | | |

The data in table 2 indicate the existence of positive relationships between different aspects of parental involvement and students' results. In general, relationships, though statistically significant, are weak to moderate, with the exception of the relationship between students results and parental expectations regarding progress in mathematics, which is a strong relationship ($r = .79$, $p < 0,01$).

Table 2. The relationship between some aspects of parental involvement in education and students' academic achievements (grades) in mathematics, language and reading

| Parental involvement in education | Grades | |
|---|-------------|--------------------|
| | mathematics | language / reading |
| 1. Parent-child discussion | 0.21** | 0.23** |
| 2. Homework in general | 0.35** | 0.33** |
| 3. Frequency of parent-teacher meetings | 0.27** | 0.24** |
| 4. Family environment supporting learning | 0.25** | 0.24** |
| 5. Parental involvement in mathematics homework | 0.36** | 0.27** |
| 6. Parents' expectations regarding progress in mathematics" | 0.79** | 0.66** |
| 7. Parental involvement in language and reading | 0.28** | 0.34** |
| 8. Parents' beliefs and attitudes about mathematics | 0.38** | 0.39** |
| 9. Parents' beliefs and attitudes about language and reading | 0.26** | 0.30** |
| 10. Parents' efficacy in supporting learning in mathematics | 0.29** | 0.26** |
| 11. Parents' efficacy in supporting their children's learning in language-reading | 0.10 | 0.15** |

Note: * $p < 0,05$. ** $p < 0,01$.

The data on table 3 indicate the correlations between joining, communication and students' academic achievements. School-family joining has a positive substantial relationship with the final grade and School leading exam in language and a very strong relationship with final grade in mathematics as well as with School leading exam in mathematics and the average grade in general. Furthermore, communication has a positive correlation with students' academic achievements, but with lower levels than joining.

| | Joining | Communication |
|-------------------------------|---------|---------------|
| 1. Final grade in language | 0.64** | 0.23* |
| 2. Language exam grade | 0.50** | 0.16* |
| 3. Final grade in mathematics | 0.82** | 0.60** |
| 4. Mathematics exam grade | 0.70** | 0.53** |
| 5. GPA | 0.80** | 0.61** |

Note: * $p < 0,05$. ** $p < 0,01$.

In order to define the proportion of variability for students' academic achievements, (GPA) that can be explained by family cohesion, family adaptability (flexibility) and teacher-parent relationship (joining and communication) a multiple regression was used. Using the Stepwise method a significant model emerged: F change (1, 668)=10.35, $p < .001$, $R^2 = .57$. The important variables are shown below:

| Table 4. Predictor variable | Beta | P |
|---|------|------|
| Teacher-parent relationship (joining) | .65 | .000 |
| Teacher-parent relationship (communication) | .11 | .001 |
| Family cohesion | .09 | .001 |

The above model explains 57% of the variation of students' academic achievements. The most influential factor in this model is teacher-parent relationship (joining) (beta=.65) followed by teacher-parent relationship (communication) (beta=.11) and family cohesion that explains nearly 1% of the variation of students' academic achievements. 038, P=.35) Family flexibility did not result a significant factor from the statistical point of view (beta = .25 P = .40)

Conclusion

The findings of this study highlighted that there is a weak, positive but significant correlation between the two dimensions of family functioning: cohesion and flexibility and academic achievement of teenage students. Weak to moderate positive correlations were also found between different aspects of parental involvement and academic achievements, with the exception of the aspect of parental expectations that had a strong positive correlation with students' results in mathematics.

Meanwhile between the two dimensions of teacher-parent relationship, joining and teacher-parent communication there are strong positive correlations with students' academic achievement in main subjects (GPA) and in specific subjects like mathematics and moderate with the subjects like language.

The data from the regression analysis showed that family cohesion explains a small percentage of variation in students' academic achievements, whereas family flexibility did not result a significant variable from the statistical point of view. Meanwhile, the two dimensions of teacher-parent relationship resulted as strong predictable of students' academic achievements, in particular the variable of teacher-parent relationships. These findings are in tune with those of other researchers who evaluated teacher-parent relationships as the key to success for high academic achievements (Allen,2007; Blankstein, 2010, Epstein et al., 2008; Sanders, 2006). In this context, the intensification of concerning teacher-parent relationship (in Albanian schools) in order to improve parent-teacher relationship (joining and communication) as well as the increased parental involvement in education would affect in the improvement of students 'academic achievement.

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