Academic Engagement As A Mediator In The Relationship Between Parental School Involvement and Academic Achievement

1Elham Dehyadegary, 2Siti Nor Yaacob, 3Rumaya Bte Juhari, 4Mansor Abu Talib

1Department of Human Development and Family Studies Faculty of Human Ecology, University Putra Malaysia (UPM), Malaysia.
2Department of Human Development and Family Studies Faculty of Human Ecology, University Putra Malaysia (UPM), Malaysia.
3Department of Human Development and Family Studies Faculty of Human Ecology, University Putra Malaysia (UPM), Malaysia.
4Department of Human Development and Family Studies Faculty of Human Ecology, University Putra Malaysia (UPM), Malaysia.

Abstract: Factors influencing students' achievement or failure have always been a basic issue in education. However, despite the extensive line of research conducted and heavy budgets spent, there are still huge numbers of students who perform poorly in academic achievement. Thus, the present study aimed to examine the relationships between parental school involvement, academic engagement and academic achievement among high school students in Iran. This study involved 382 adolescents (131 males and 251 females), aged 15-18 from selected high schools in Iran. The scales used to measure variables in the present study were Paulson's Parental School Involvement (Paulson, 1996) and Short and Fleming’s Academic Engagement Scale (Short & Flemming, 2002). The results of Multiple Regression Analysis showed that parental school involvement \( (B = .44, p<.01) \) and academic engagement \( (B = .67, p<.01) \) were significantly correlated with academic achievement. Parental school involvement was also significantly related with academic engagement \( (B = .43, p<.01) \). The findings of the present study confirmed the mediating role of academic engagement in the relationship between parental school involvement and academic achievements. Based on the present findings, it is suggested that programs targeted to improve academic achievement among school going adolescents should emphasized academic engagement and parental school involvement.

Key words: Parental School Involvement, Academic Engagement, Academic Achievement.

INTRODUCTION

The quality of school achievement of youth in Iran has long been an issue of national concern (Yousefi, 2010). From early adolescence, schools “begin to dictate many consequences for the present and future lives of young people” (Elmore, 2009). Academic success is important for children and adolescents to grow up as adults who can contribute in the economic, social and community activities in contemporary society. Unfortunately, the years marking the transition to early adolescence involve a decline in many young people’s academic success; this trend is often continued throughout the rest of their educational careers. Given the significant consequences of such negative trends among adolescents, it is important to identify factors that may promote academic achievement. Academic achievement can be defined by a student's grade point average, completion of school grades or the individual's academic performance when compared to a standard to determine an individual's level of success or accomplishment on standard tests (Eccles, 2004).

Understanding how to promote academic achievement among adolescents is a complicated and challenging task. In general, efforts aimed at enhancing academic achievement have focused on capitalizing on adolescents’ positive social relationships, believing that students will do better in contexts where their psychological needs are met (Fredricks, Blumenfeld and Paris, 2009). Studies have shown that family is an important predictor for various domains of adolescent development, including academic outcomes (Hughes, Luo, Kwok and Loyd, 2008; Leventhal and Brooks-Gunn, 2000). For instance, youth whose parents are more involved in their education gain better grades in school (Woolley and Grogan-Kaylor, 2006). Also, a variety of studies have shown the importance of parental involvement and how well high school children could perform when they realize that their parents are involved in their learning (Gonzalez-De Hass, Willems and Holbein, 2005; Pomerantz and Moormann, 2007).

Epstein (2009) defined parental involvement as the devotions of resources by the parent to the child. Parental participation includes activities conducted at the school and those that are outside of the four school walls such as finishing homework, volunteering and tutoring at school. Parental involvement has also been defined as
different forms of participation by parents in the education of their children, as well as with the schools (Cotton and Wikelund, 2006).

Hoover-Dempsey and Sandler (1997) found that parents involved in the education of their children because of their perceptions that (a) they should be involved, (b) their involvement will have a positive impact in the academic achievement of their children, and (c) their involvement is wanted, needed, expected, invited, and valued by the school. Even with the benefits known, research continues to report that when teachers invite parents to participate in the education of their children, the parental school involvement increase (Walker et al., 2004). Studies have also found that when parents are more involved in their children’s lives and education, children show more signs of becoming responsible for their own learning. They are more likely to limit risk-taking behavior, pursue challenges, and feel satisfied with the tasks they have accomplished (Gonzalez-Deltas, 2005).

It is very beneficial and positive when a child is exposed to a family that is constantly encouraging them to get a good education, telling them how important education is, praising them for their accomplishments, and showing they have high expectations for their child (Marjoribanks, 2005). Spera (2005) found parental involvement in homework results in how much time adolescents spend on their homework. There have also been findings that there is a positive relationship between parents monitoring the completion of homework and the adolescents actually completing homework (Spera, 2005; Fallon, 2010; Rogers et al., 2009; Stewart, 2008; Jeynes, 2007).

It has been shown that middle and high school students with parents who are highly involved in their education have higher levels of achievement on average than those with less engaged parents (Fan, 2001; Jeynes, 2007).

School engagement has been examined as the independent variable (Wang and Holcombe, 2010; Fallon, 2010; Haney, 2010; Sbrocco, 2009; Flower and Flower, 2008) and mediator (Easton, 2010; Hedvat, 2008 and Chen, 2005) in explaining academic achievement among adolescents. School engagement has been measured in various ways. An extensive literature review conducted by Fredricks, Blumenfeld and Paris (2009) identified three primary categories of academic engagement: behavioral, emotional and cognitive. Behavioral engagement refers to students’ behavior in school, such as homework completion, absence of disruptive behaviors (skipping school or tardiness), paying attention in class, and contributing to class discussion. Emotional engagement refers to students’ feelings about school, their interest in the school activities. Cognitive engagement refers to students’ investment in learning, such as their desire to go beyond requirements, preference for a challenge and use of learning strategies.

There is an abundance of literature exploring the relationship between school engagement and academic achievement of students of all ages. Researchers have consistently found a positive relationship between academic engagement and adolescents’ academic achievement (Sirin and Sirin, 2004; Sbrocco, 2009; Wang and Holcombe, 2010). Students with high academic engagement obtained higher academic achievement scores compared to those with lower academic engagement. Adolescents’ academic engagement has also been related to parental involvement. Past studies highlighted that there is a positive relationship between parental involvement, especially concerning completion of homework and attitude about school, and high school students’ academic achievement (Vahedi, 2010; Hill, 2010; Marks, 2000; Steinberg, et al., 1992). In conclusion, past studies suggested that parental involvement is directly related to academic achievement and academic engagement. Academic engagement is also significantly related to academic achievement. Thus, taking academic achievement into account, does the relationship between parental involvement and adolescents’ academic achievement still exist?

Objective:
The objectives of the present study are to:
1. Examine the relationships between parental involvement, academic engagement and academic achievement engagement among adolescents in Sirjan, Iran.
2. Examine the mediating effect of academic engagement on the relationship between parental school involvement and academic achievement.

3. Methodology:
3.1 Sample and Data Collection:
Respondents of the present study are high school students in Sirjan, Iran. A total of 382 (65.6% were female and 34.4% male) high school students were selected using a stratified random sampling procedure.

3.2 Measures:
Academic Achievement:
Academic achievement refers to cumulative grade point average (CGPA) that calculated by the average all coursework grades for one year. Higher scores mean higher levels of academic achievement.
Parental School Involvement:

Parental school involvement was assessed using the 22-items Paulson’s Parental Academic Involvement (PAI) (1996). The scale was designed to identify support and participation of parents at home and at the school site that directly and positively affect the educational performance of all children. This scale (PAI) has three dimensions such as achievement values (8 items), interest in schoolwork (9 items), and Involvement in school function (5 items). Scores for the total were by summing all the item scores. The response format for the items consisted of a 5-point from 1=very unlike to 5=very like. The total scale score is between 22 and 110. Higher scores indicate higher parental school involvement. The reliability of the scale in the current study is quite high with Cronbach alpha of .70.

Academic Engagement:

Academic Engagement Scale (Short and Fleming, 2002) was utilized to measure respondents’ academic engagement. The scale is a 40-item self-report inventory developed to assess students’ willingness to participate in routine school activities, such as attending class, submitting required work, and following teachers’ directions in class. Respondents respond to items using a five Point scale ranging from 1=very unlike to 5=very like. The total scale score is 40 to 200. High scale score indicates high academic achievement. In this study Cronbach’s alpha score for the scale was 0.86.

Data Analysis:

The Statistical Package for Social Sciences was used in data analysis. Descriptive statistics and bivariate correlations were utilized to describe the data. The 3-step multiple regression analyses and Sobel-test were used to assess the mediating effect of academic engagement on the relationship between parental school involvement and academic achievement among adolescents.

According to Baron and Kenny (1986), conditions for mediation are as follows: independent variable (parental school involvement) should be associated with mediator variable (academic engagement) and dependent variable (academic achievement). When mediator variable (academic engagement) is included in the regression model, the influence of the independent variable (parental school involvement) on the dependent variable (academic achievement) should be attenuated. Then, researcher calculated Sobel- test to examine whether a mediator variable (academic engagement) significantly carries the influence of an independent variable (parental school involvement) to a dependent variable (academic achievement). In other words, the Sobel-test examines whether the indirect effect of the independent variable on the dependent variable through the mediator variable is significant (Dudley, Benuzillo and Carrico, 2004). Sobel test was calculated by the following formula:

\[
\text{Sobel test} = \frac{a \times b}{\sqrt{(a^2 \times Seb^2) + (b^2 \times Sea^2)}}
\]

Where a: The regression coefficient for the relationship between the independent variable and the mediator
Sea: The standard error of the relationship between the independent variable and the mediator
b: The regression coefficient for the relationship between the mediator variable and the dependent variable
Seb: The standard error of the relationship between the mediator variable and the dependent variable

RESULTS AND DISCUSSION

Respondents in this study were students of Sirjan’s high schools between 15-18 years old (Mean= 16.2, SD= 1.00). As depicted in Table 1 majority of the respondents were female (65.6%) and obtained high academic achievement (77%). In order to assess normal distribution of parental school involvement, academic engagement and academic achievement score, researcher used skewness and kurtosis. Skewness (-2<.66>2) and kurtosis (-2<.559>2) for parental school involvement, academic engagement and skewness (-2<.53>2) and kurtosis (-2<.26>2) for academic engagement scale suggested reasonably normal distributions. The mean score for academic engagement was 147.23 (SD=27.39), for parental school involvement was 84.32 (SD=12.98) and for academic achievement was 17.28 (SD=2.32). The research outcome showed more than half of respondents reported high parental school involvement, academic engagement, and academic achievement.

To examine associations among variables, researcher carried out bivariate correlations. These correlations are shown in Table 2. Results of the Pearson product–moment correlation coefficients indicated that parental school involvement was positively associated with academic engagement and academic achievement.
Table 1: Percentage, mean, SD, Skewness, and Kurtosis of Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent (%)</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Achievement</td>
<td></td>
<td>17.28</td>
<td>2.32</td>
<td>0.66</td>
<td>-1.56</td>
</tr>
<tr>
<td>High=17-20</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium=15-16.99</td>
<td>9.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak=10-14.90</td>
<td>13.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental School Involvement</td>
<td></td>
<td>84.32</td>
<td>12.98</td>
<td>-0.53</td>
<td>0.26</td>
</tr>
<tr>
<td>Low≤84.32</td>
<td>46.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High&gt;84.32</td>
<td>53.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Engagement</td>
<td></td>
<td>147.23</td>
<td>27.39</td>
<td>-0.37</td>
<td>-0.55</td>
</tr>
<tr>
<td>Low≤84.32</td>
<td>42.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>57.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Correlation matrix for all variables of the study.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Y</th>
<th>X1</th>
<th>X2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>.64**</td>
<td>.69**</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>1</td>
<td>.44***</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: ** p ≤ .01

In order to examine the mediating effect of academic engagement on the relationship between parental school involvement and academic achievement, a 3-step multiple regression analysis was conducted. The results of the analysis are presented in Table 3. Academic engagement is to mediate the relationship between parental school involvement and academic achievement. The direct effect of parental school involvement on academic achievement, (c path) is significantly (β=.447, SE=.008, t=9.750, p≤.05). In addition, the direct effect of parental school involvement on academic engagement (a path) is significantly (β=.433, SE=.096, t=9.377, p≤.05). Finally, the relationship between mediating and outcome (b path) is significantly (b=.676, SE=.003, t=17.874, p≤.05) noted.

Table 3: Relationship between parental school involvement and Adolescents’ Academic Achievement Mediated by Academic Engagement.

<table>
<thead>
<tr>
<th>Step</th>
<th>Iv</th>
<th>Dv</th>
<th>β</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parental school involvement</td>
<td>Academic Achievement</td>
<td>.447**</td>
<td>9.750</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>Parental school involvement</td>
<td>Academic Engagement</td>
<td>.433**</td>
<td>9.377</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>Academic Engagement</td>
<td>Academic Achievement</td>
<td>.676**</td>
<td>17.874</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>Parental school involvement</td>
<td>Academic Achievement</td>
<td>.19**</td>
<td>4.652</td>
<td>.000</td>
</tr>
</tbody>
</table>

As depicted in Table 3, the relationship between parental school involvement and academic achievement in presence of academic engagement is significant which means academic engagement has partial mediate effect on the relationship between parental school involvement and academic achievement (Z = 8.618, P ≤ .05).

![Description of mediation design](image)

**Fig. 1:** Description of mediation design, based on Preacher and Hayes (2004), parental school involvement affect academic achievement via academic engagement. The value presented is unstandardized regression coefficient. **p<.05.  

727
Discussion and Conclusion:
The first purpose of this study was to examine associations among parental school involvement, academic engagement and academic achievement among Iranian students. Results of bivariate correlations reflected a strong significant association academic achievement and academic engagement (r=.69, P<.05). This indicated that students with high school engagement had better GPA. This result concurs with the previous studies: for example, Sirin and Sirin (2004), Stewart (2007), Sbrocco (2009), Wang and Holcombe (2010) found correlation between academic engagement and academic success.

In addition, significant positive correlation was found between parental school involvement and academic achievement (r=.44, P<.05). This result is in accordance with the findings of other studies that have shown that parental school involvement has positive relationship on academic achievement (Lee and Bowen, 2006; Jeynes, 2007; Stewart, 2008; Fallon, 2010). There are several advantages to parents becoming involved in their children’s educational careers. Studies have found that when parents are more involved in their children’s lives and education, they show more signs of becoming responsible for their own learning. They are more likely to limit risk-taking behavior, pursue challenges and feel satisfied with the tasks they have accomplished (Gonzalez-Deltas, 2005). It is very beneficial and positive when a child is exposed to a family that is constantly encouraging them to get a good education, telling them how important education is, praising them for their accomplishments, and showing they have high expectations for their child (Marjoribanks, 2005).

The second and main purpose of the current study was to examine the mediating effect of academic engagement on the relationship between parental school involvement and academic achievement. The analysis fits the conditions suggested by Baron and Kenny (1986) for mediation. It was found that parental school involvement has an association with the mediator variable (academic engagement) and dependent variable (academic achievement), and when the mediator variable (academic engagement) was included in the regression model, the influence of parental school involvement on academic achievement was increased. The Sobel test indicated that academic engagement significantly (p<.05) increase the positive effect of parental school involvement on academic engagement. This finding runs parallel with the results of a study by Li (2010), Easton (2010), Hedvat (2008) and Chen, (2005) demonstrated that academic engagement mediated relationship between parental school involvement and academic achievement, which found relationship between parental school involvement and academic achievement were mediated by academic engagement.

The findings of the present study provide empirical evidence and add to the research literature showing the positive beneficial and roles of academic engagement and parental school involvement on the academic achievement of students. Academic engagement is an important resource in the student’s life as it improves their academic achievement. Based on the present findings, it is suggested that programs targeted to improve academic achievement among school going adolescents should emphasized academic engagement and parental school involvement.

REFERENCE


Yousefi, F., 2010. Relationship between depression and test anxiety with memory and academic achievement among adolescents in Iran. (Doctoral dissertation, University of Putra Malaysia).