

Academic Engagement as a Mediator in Relationships between Emotional Intelligence and Academic Achievement among Adolescents in Kerman-Iran

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Abstract: The aim of the present study is to determine the relationship between emotional intelligence, academic engagement and academic achievement in Kerman, Iran. The respondents comprised of 382 students (191 boys and 191 girls) in the age range of 15-18 years old that were randomly selected from nineteen high schools. A self administered questionnaire was used for data collection which includes a Schutte's Emotional Intelligence, Short, Feleming, Guiling, and Ropper's Academic Engagement, and Grade Point Average (GPA) score. Results of the study indicate that academic engagement mediates the relationship between emotional intelligence and academic achievement. It is recommended that academic achievement be improved in school settings with support strategies such as educational guidance, seminars, workshops, counseling.

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1. Introduction

One of the vast crises of the educational system in many countries, especially third world countries is the problem of low academic achievement. According to Fouladi (2007), low academic achievement has become the main focus of educational officials. He indicated that academic achievement is the most important issue in education which as many educators, sociologists and psychologists have given due consideration. Experts have different perspectives and definitions when looking into the problem of educational failure. The issue of educational failure is related to the deficiency of educational opportunity, where potential students are unable to progress in their pursuit of educational achievement.

Education is essential for every country in the world, and Iran is no exception. Low academic achievement is one of the major problems encountered by many families, societies and the government of Iran. Like any other developing country, Iran, also suffers from many problems associated with low academic achievement. Therefore, this problem has to be solved since education, is a major agent of development (Fathi, 2006). The

Government of Iran has invested a lot of money to guarantee the efficiency and effectiveness of the country's educational system, and also improve academic achievement among students.

The importance of academic performance among adolescents is evidenced in different past results, including those by Ellefsen and Beran (2007), Fallon and Illinois (2010), Speight (2009), and Stewart (2007), which noted that high and low academic achievement is different depending on effect factors such as parental and personal factors. Low academic achievement has been linked with joblessness and reduced income, welfare dependency, high levels of depression, social loneliness, and criminal behavior (Parkhurst & Asher, 1992). While, high academic achievement was found to relate to affecting and psychological health, being hopeful about academic potential, lower depression, and better personal adjustment (Whitlock, 2006). Review of the literature indicates that there are many factors that affect on student academic achievement. The factors may fall into one of three general categories, which are the home and family environment, the school and its environment, and the child's beliefs and actions (Christenson & Sheridan, 2001;

Grace & Thompson, 2003; Bandura & Locke, 2003; Brown & Evans, 2002). Personal factors such as emotional intelligence, and academic engagement were noted to have significant positive relationships with adolescent's academic achievement (Multon, Brown, & Lent, 1991; Fredrik, Blumenfield, & Paris, 2004).

1.1. Emotional Intelligence and Academic Achievement

Emotional intelligence refers to the ability to recognize different emotions that one is feeling and to identify feeling that is influencing their thought processes. Emotional understanding means the ability to understand complex emotions (such as feeling two emotions at same time) and the ability to distinguish transitions from one emotion to another emotion. Emotional management is the ability to connect or disconnect an emotion depending on its usefulness in a certain situation. Bar-On (2002) introduced five components about emotional intelligence: Intrapersonal ability, interpersonal ability, adaptability, stress management, and general mood. According to Bar-On emotional intelligence can develop every time and it can improve through training, programming, and therapy (Bar-On, 2002). Bar-On future found out that individuals with high EQ are more successful in environmental pressures. He also asserted that a deficit in emotional quotient intelligence can create lack of success and emotional problems. Goleman (1990) model in Matthews et al., (2002) proposed consisting four main components. The first component is self-awareness that relates to persons' ability to read one's emotions and recognize their impact. Second, Self-management that means ability to control one's emotions and to adapt with changing situation. Social awareness is third component that includes the ability to sense, understand, and react to other's emotions while comprehending social network. Finally, relationship management is fourth component that consist of ability to inspire, influence, and develop others while managing conflict. Emotional intelligence is a new concept. It is a recent area of research, especially with regard to testing emotional intelligence and the role of emotional intelligence during adolescence. It is important to know the benefits of recognizing emotional intelligence among adolescents and understand that how EI may impact on adolescents' growth and development (Kaur & Jaswal, 2006). Liau et al. (2003) argued that emotional intelligence is vital for the healthy psycho-social development in adolescents. Literature shows that the lack of EI can be associated with problem behavior. Liau et al. (2003) indicated that EI is a potential risk factor in behavior problem in adolescent. Emotional intelligence in adolescents plays an important role in successful transition from adolescence to adulthood (Parker et al, 2004). There has been an increasing interest in the construct of emotional intelligence within a school context. Some studies in the field of education have been focused on the emotional intelligence of students and the role of emotional intelligence on academic achievement. Students with higher emotional intelligence are more success at school (Di Fabio and Busoni, 2007; Parker et al., 2004). Intrapersonal skills such as communication, negotiation and relating with other are necessary skills for the success in the life and academic achievement. Adolescents experience changes in their ability to perceive, understand and utilize emotional information and these abilities may have significant contribute in intellectual growth (Mayer and Salovey,

2000). Lam and Kirby (2002) found that adolescents with high EI are able to recognize and manage emotions, and make decisions that can contribute to academic performance.

Past findings revealed that students that have high emotional intelligence gained high academic achievement (MacCan, Fogarty, Zeidner, and Roberts, 2011; Tamannai, Sedighi, & Salami ,2010; Di Fabio & Busoni, 2007; Besharat & Abedi, 2006; Marquez, 2006; Parker et al., 2006; Fannin, 2001). A number of other studies (Newsome, Day, & Catano, 2000; O'Connor & Little, 2003; Bastian, Burns, and Nettelbeck, 2005) did not find significant relationships between emotional intelligence and academic success. Considering the mixed nature of literature on the relationship between emotional intelligence and academic performance, the concept warrants further research. Perhaps the studies that did not find a significant relationship between emotional intelligence and academic performance did not examine the sub-factors of emotional intelligence or perhaps it was due to the scale that was utilized. The mixed findings in the study called for the need to fill this gap.

1.2. Academic Engagement and Academic Achievement

School engagement is an important predictor of academic outcomes and to prevent school drop-out (Kindermann, 2007). There is a consensus that school engagement is a multifaceted construct, encompassing multiple components, for example, behavioral, emotional and cognitive characteristics (Fredricks et al., 2004; Glanville & Wildhagen, 2007). Behavioral engagement often refers to involvement in school-based activities or to the absence of disruptive behaviors (Fredricks et al., 2004). Emotional engagement entails positive emotional reactions to the school, the teacher, and schoolmates (Stipek, 2002). These two concepts of school engagement are likely to be predictive of different outcomes and to be influenced by different variables. For instance, researchers have found that intensively disliking school is the primary reason for a student to leave school (Finn, 1989). In turn, participation in school activities leads to positive academic outcomes (Marks, 2000). Emotional bonds with school prevent negative developmental outcomes among adolescents, such as delinquency (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004). Also, Cognitive engagement involves internal indicators such as becoming a self-regulated learner (Fredricks et al., 2004).

In participation-identification model, Finn (1989) has postulated that active participation (behavior) leads to an increased sense of belongingness and to a commitment to learning in students. However, as suggested by Fredricks et al. (2004), it is also possible that emotional engagement leads to increases in behavioral engagement, or in other words, when students feel more attached to school, they are more likely to be involved in school-based activities. Although the direction of the relationships between behavioral and emotional engagement are yet to be determined, it is hypothesized that adolescents, as experienced students, need to experience positive feelings toward school to, at least, maintain effort. In other words, positive emotional engagement may lead to increased behavioral involvement.

A positive association between school engagement and academic outcomes is well established (Fredricks et al., 2004). For instance, Finn and Rock (1997) reported that disengagement behaviors such as being inattentive and disruptive, predicted lower grades. Sirin and Sirin (2004) investigated middle school engagement among 336 African-American students between 12 and 19 years of age by National Longitudinal Study of Adolescent Health data (ADD Health). Their academic performance was monitored and evaluated for a year using school grades in mathematics and English. A nine-item index of school engagement was structured to show students' sense of attachment (Fine, 1991; Voelkl, 1997), and behaviors in school and activities in the classroom (Finn, 1993). The results of the study showed that students with high academic engagement obtained high academic performance and achievement. Booker (2004) conducted a study on African-American adolescents, and investigated various issues pertaining to school belonging, identification, and engagement. It was found that these factors had a significant impact on academic performance and successful completion of high school. A sense of school belonging has been linked to teacher support, peer relations, motivation, engagement, and academic performance.

Sirin (2005) examined how various components of school engagement contribute to the academic performance of African American adolescents among 499 African American adolescents in Grades 9 to 11. Results of the study showed that components of school engagement predicted a significant portion of academic performance even after controlling for these background variables as well as their grade level. In examining the components of school engagement, school participation and school expectations emerged as significant predictors of academic performance.

Stewart (2007) explored the significance of school and individual factors on educational performance among 11,999 tenth grade students using a comprehensive national probability study that included students, teachers, schools, and families financed by the National Center for Education Statistics (NCES). The school efforts of students consist of three variables: attachment to school, commitment to school and extracurricular activities. The results of the study indicated that students with higher GPA are those who are attached and committed to their schools. This indicates that students who have a sense of attachment and are more committed to their school show better academic performance. Also students who are aware of their academic ambitions and are prepared to invest time and effort in pursuing their goals show more commitment to their education (Carbonaro, 2005).

Flowers and Flowers (2008) studied the reasons that affected the performance of 15,362 urban African-American school students' achievement in reading by analyzing the data from the Educational Longitudinal Study of 2002 (ELS 2002). The findings showed that these students' performance was affected by the amount of time they devoted to their homework. Thus, although some researchers contend that the relationship between homework and achievement is immaterial (Trautwein & Köller, 2003). The findings of this research study indicate that engaging in homework influences the school achievement of African-American high school students. This particular finding confirms

previous research (e.g. Peng & Wright, 1994; Cooper et al. 2006) concerning engaging in homework and achievement of students.

Sbrocco (2009) examined the relationship between white and black 8th graders' levels of academic engagement and their academic achievement among 779 students. Students' perceptions of their engagement, based on the academic engagement model, were calculated based on their responses to the survey, which included 24 items specifically corresponding to academic engagement. GPA score was created for all students by averaging their grades in the core subject areas of math, language arts, science, social studies, and reading. Results of the study showed that academic engagement and GPA are positively and significantly correlated. It makes sense that students who are behaviorally engaged in school (i.e. do their homework, participate in class discussion) would consequently achieve better on academic performance. The strongest relationship exists between behavioral engagement and the student's grade point average. On the other hand, students who feel safe in their school and report that they enjoy coming to school are more likely to be academic achievers.

A more recent, longitudinal study by Wang and Holcombe (2010) shows similar association. Wang and Holcomb investigated perceptions of school environment, engagement, and academic achievement in middle school among a sample of 1,049 United State students. The results of the study indicated that school engagement (school participation, school identification and self-regulation strategies) was positively associated with GPA, meaning that students with high academic involvement attain high grades in school. There was also indication that such academic involvement mediated the relationship between school environment and academic performance.

Fallon and Illinois (2010) investigated school engagement that promotes academic success among 150 urban Latino high school students' grades from 9 to 12. The result of the study indicated that the relationship between academic involvement and academic achievement was positive and significant; meaning that students who are actively involved with school in various ways show high academic achievement, fostering the belief that school engagement leads to educational achievement. Such engagement was also seen as mediating factor between positive academic belief and students' educational achievement. All this demonstrates that schools that encourage student engagement have a greater likelihood of producing academically resilient students who have faith in their teachers and believe the teachers care about them, and appreciate the importance of completing their high school education and enjoying school. Haney (2010) investigated the relationship of school engagement to the academic achievement of 269 high school students in the ninth grade. The SSRA (Search Institute, 1998) is a self-report, paper/pencil survey designed for adolescents in grades 6 through 12. The SSRA has 143 items, with 4 items specifically designed to measure school engagement. The responses from the 4 questions were combined to obtain an average score for school engagement for each student. Results of the study indicated that students with high academic engagement have high academic achievement.

In contrast to findings by researchers discussed above, Schreiber and Chambers (2002) posit that involvement in extracurricular activities in school is not related to GPA to any significant extent. They explain that this could be because such involvement takes away time they would otherwise devote to other more important and valuable pursuits that enhance their academic achievements

1.3. Academic engagement as a mediator

There are increasingly accumulating evidence about the significant role of personal factors in academic competence and achievement. However, with only a few notable exceptions (Hughes & Kwok, 2006), little research has been devoted to understanding how and why factors lead to variations in academic competence and achievement. It seems reasonable to postulate that parental and personal factors exert influence via underlying psychological processes.

School engagement can be influenced by factors within and outside of the school (Shernoff & Schmidt, 2008). It can also result from variations within the person (Fredricks et al., 2004). Many self-variables can also effect on school engagement. Self or internal variables emotional intelligence are characteristics of an individual (Skinner, Wellborn, & Connell, 1990). Self-variables directly influence students' level of engagement. Identification of psychological variables (self-variables) of individuals that facilitate or hinder adolescents' levels of school engagement would contribute greatly to the understanding of how to increase adolescents' psychological well-being and their achievement motivation and associated school engagement.

It is assumed that students will be more engaged when classroom contexts meet their needs for relatedness, which is likely to occur in classrooms where teachers and peers create a caring and supportive environment. Students who had higher perceived relatedness, conceptualized as the emotional quality of relationships, were more engaged, as rated by teachers (Connell & Wellborn, 1991). Similarly, Furrer and Skinner (2003) found that perceived relatedness to teachers, parents, and peers uniquely contributed to emotional engagement. Connell et al. (1995) found that perceived quality of relationship with others (one component of emotional intelligence) positively influenced student engagement.

Duran, Extremera, Fernandez-Berrocal, and Moltalban (2006) investigated the role of emotional intelligence and general self-efficacy as predictors of academic engagement among sample of 373 Spanish students aged 18 years old and above. The results of the study indicated that students with high emotional intelligence were more engaged in academic activities. Following the Schaufeli and Bakker (2004) research model for engagement, EI abilities might be thought as a relevant student' individual resource and according to this view, one might hypothesize that EI abilities would be related to various dimensions of engagement.

School engagement has been identified as a mediational construct that links personal resources and children's academic competence and achievement (Fredricks, Blumenfeld, & Paris, 2004; Hughes et al., 2008; Hughes & Kwok, 2006), because it

not only predicts student success (Newmann, Wehlage, & Lamborn, 1992), but also responds to variations in context and the person (Fredricks, et al., 2004). A small but growing number of empirical studies support the mediational role of school engagement. For instance, Hedvat (2008) found that children's school engagement mediated the effect of the parental school involvement on academic achievement.

2. Objectives

1. To describe personal (age and gender) and family (parent's age, education, job, and family income) characteristics of the respondents.
2. To describe the emotional intelligence, academic engagement, and academic achievement of the respondents.
3. To determine the relationships between age, family income, emotional intelligence, and academic engagement with academic achievement of the respondents.
4. To determine the mediating effect of academic engagement on the relationship between emotional intelligence with academic achievement.

3. Method

3.1. Research Design

This study used a descriptive and correlational research design to examine the relationships between emotional intelligence, academic achievement, and academic achievement. The present study, it is a cross-sectional study which involves collecting data over a short period of time in order to search for the answer for the outlined research questions.

3.2. Population and Sample

The total number of students in two districts is 24,500, with 10,860 of the population in south district high schools and 13,640 in north district high schools (Ministry of Kerman Education, 2010). Table 3.2, shows that the number of students aged 15-16 years old in two districts is 12,000 while the number of students aged 17-18 years old in two districts is 12,500. Also, Based on Cochran formula (1977), the number of respondents required to represent the population of the present study is 2246.

4. Measures

4.1. Emotional Intelligence

Schutte et al. (1998) Emotional Intelligence Scale (EIS) is used in the present study. The EIS by Schutte et al. was based on Salovey and Mayer's (1990) original model of emotional intelligence. This scale is consisting of four subscales. The four factors were described as follows: perception of emotions (10 items), managing emotions in the self (9 items), social skills or managing others' emotions (8 items), and utilizing emotions (6 items). So, the total item for EIS is 33 items. Each item in the scale was rated on a five-point Likert scale from 1= strongly disagree, 2= somewhat disagree, 3= neither agree nor disagree, 4= somewhat agree and 5= strongly agree. The score for

emotional intelligence was calculated by summing the scores for the 33 items after reversing the scores for 3 items (items 5, 28, and 33). The total scale score ranged from 33 to 165, with high score indicating high emotional intelligence in respondents. Shutte et al. (1998) reported high reliability results for the EIS with Cronbach coefficient alpha values of EIS has been used .87. In the current study, alpha reliability for the scale was .73.

4.2. Academic Engagement

Academic engagement was measured using Academic Engagement Scale (AES) by Short, Fleming, Guiling, and Roper (2002). The AES was developed by Short, Vowels, and Robinson (2002). The AES has 40 items with three subscales. The subscales are cognitive engagement (10 items), behavioral engagement (15 items), and affective engagement (15 items). A five-point Likert scale from 1= never, 2= seldom, 3= sometimes, 4= often and 5= always was used to rate the items. The score for AES was obtained by summing up the scores for the 40 items after reversing 11 items (items 7, 8, 12, 14, 15, 18, 19, 20, 26, 29 and 34). The total scale score ranged from 40 to 200, with high score indicating high academic engagement among respondents. The AES has demonstrated respectable psychometric properties ($\alpha = .94$). In the current study, alpha reliability for the scale was .87.

4.3. Academic Achievement

Student's academic achievement was measured by using cumulative grade point average (CGPA) obtained by students' in the academic year of 2009-2010. According to the rules of the Ministry of Education in Iran, the range of academic achievement (GPA) is from 0 to 20, which can be categorized into four levels: fail (scores of 0-9), weak (scores of 10-14.99), moderate (scores of 15-16.99), and excellent (scores of 17-20). In the present study, the cumulative grade point average (CGPA) was utilized in differently. High scores mean high academic achievement.

5. Data Analysis

Data from the current study were processed and analyzed by using Statistical Package for Social Science (SPSS) version 16. Three statistical procedures i.e. exploratory data analysis, descriptive analysis, and inferential statistical analysis were utilized for the data analyses. Descriptive statistics such as mean score, standard deviation, percentage and frequency distribution were used to describe the demographic profiles of the respondents. Inferential statistics that was used in the data analysis were Pearson Correlation Analysis and Multiple Regression analysis.

6. Results

6.1. Descriptive findings

Respondents in this study were high school students in Sirjan, Iran. Table 1, displayed the age and gender of the respondents.

There were equal number of male (50%) and female (50%) students who were involved as respondents of the study. The mean age of the respondents was 16.50 years ($SD = 1.11$). As shown in Table 1, over half of the respondents reported high emotional intelligence (57.9%), high engagement in school activity and homework (57.1%) and high academic achievement (62.5%).

Table 1: Gender, Age, and Levels of Variables

Variables	n	%
Gender (N=382)		
Female	1123	50
Male	1123	50
Age		
15 Years	581	26.9
16 Years	546	24.2
17 Years	556	24.7
18 Years	563	25.2
Emotional intelligence		
<i>Low</i>	161	42.1
<i>High</i>	221	57.9
Academic engagement		
<i>Low</i>	170	44.5
<i>High</i>	212	55.5
Academic Achievement		
<i>Low</i>	164	42.9
<i>High</i>	218	57.1

6.2. Bivariate analysis

The Pearson correlation analysis was used to examine the relationships between, emotional intelligence, academic engagement and academic achievement.

6.2.1. The Nature of Relationship between Emotional Intelligence and Academic Achievement

As shown in Table 2, the result of the study indicates that there was a significant positive relationship ($r = .59$, $p < .01$) between emotional intelligence and academic achievement of adolescents. This means that respondents who reported higher scores in emotional intelligence also reported higher academic achievement scores. The strength of correlation between emotional intelligence and academic achievement is strong.

6.2.3. The Nature of Relationship between Emotional Intelligence and Academic Engagement

The result of the study showed that there was a significant positive relationship ($r = .59$, $p < .01$) between emotional intelligence and academic engagement of adolescents. This

means that respondents who were higher in emotional intelligence, reported higher academic engagement. The strength of correlation between emotional intelligence and academic engagement is strong

6.2.4. The Nature of Relationship between Academic Engagement and Academic Achievement

As shown in Table 2, the result of the present study show that there was a significant positive relationship between academic engagement and academic achievement of adolescents ($r=.69$, $p<.01$). This means that respondents who were highly engaged in school activities, reported higher academic achievement. The strength of correlation between academic engagement and academic achievement is strong.

Table 2: correlation analysis

	Variables	X1	X2	Y
X1	Emotional Intelligence	1		
X2	Academic Engagement	.59**	1	
Y	Academic Achievement	.596**	.690**	1

6.3. Mediating Analysis

A series of Multiple Regression analyses were conducted to explore the mediating effect of academic engagement on the relationships between parental and personal factors with academic achievement. The mediation test examines the indirect effect of predictor (X) on the outcome (Y) variable through mediator variable (Z). The present study follows the guideline proposed by Baron and Kenny (1986) to test the mediation effect of a mediator on the relationship between the independent and dependent variables. According to Baron and Kenny (1986), there are four steps in establishing mediation:

Step 1: There must be a significant relationship between the predictor and the outcome variable.

Step 2: The relationship between the predictor and the hypothesized mediator is significant.

Step 3: The hypothesized mediator is significantly related to the outcome variable when both the IV and the mediator are treated as predictors and DV as the outcome variable.

Step 4: When the assumptions at step1 to 3 are fulfilled, the mediation test is conducted (step 4). The IV and mediator are treated as predictors and DV as the outcome variable. To establish that the mediator variable completely mediates the relationship between IV and DV, the unstandardized coefficient (path c') should be zero.

At step 4, if there is a mediation effect, the strength of relationship between the predictor and the outcome is reduced after controlling for the effect of the mediator. Figure 4.1 shows the mediation model of the relationship between the independent

variables and the outcome variable. Path a indicates the relationship between the independent variable and the mediator. Path b refers to the relationship between the mediator and the outcome variable. Path c' indicates the relationship between the independent variable and the outcome variable after controlling for the mediator. According to Baron and Kenney (1986), it is preferable to used unstandardized coefficients in mediating analyses. This is supported by Dugerd, Todman, and Strains (2010).

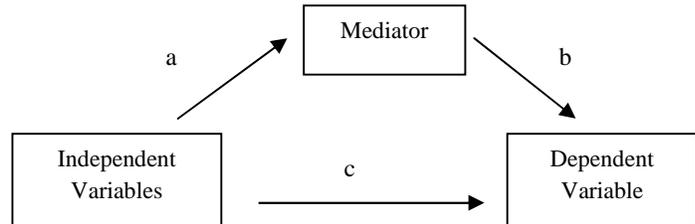


Figure 1 Mediation Model (Center)

When the results shown are consistent with the mediation model (partial or complete mediation), Sobel test was conducted to confirm the significant effect of the mediation. Partial mediation means that path b (relationship between the mediator and the outcome variable) is significant after controlling for independent variable; and path c' is still significant. Complete mediation means that the measured effect in path c' (relationship between independent and the dependent variable after fixing the mediator variable) is zero or at least non-significant (Dugerd, Todman, & Strains, 2010).

6.3.1. Academic engagement mediates the relationship between emotional intelligence and academic achievement among adolescent.

Table 3, shows that there was a direct significant effect of emotional intelligence on academic achievement ($B=.080$, $SE=.006$, $t=14.477$, $p<.05$) and academic engagement ($B=.953$, $SE=.065$, $t=14.597$, $p<.05$). The relationship between academic engagement (mediator) and academic achievement was also significant ($B=.059$, $SE=.003$, $t=19.053$, $p<.05$).

The results of multiple regression analysis at Step 4 comply with partial mediation model. The indirect relationship between emotional intelligence and academic achievement after fixing the academic engagement is significant ($Beta=.037$, $SE=.006$, $t=6.340$, $p<.05$). The summary of the results is presented in Figure 4.6.

The amount of mediation was obtained by subtracting the regression coefficient (Emotional intelligence → Academic achievement) in the fourth regression (when academic engagement controlled) from the regression coefficient (Emotional intelligence → Academic achievement) in the first regression (with academic engagement not controlled). The subtracting was $0.080 - 0.037 = .043$. Sobel test was performed to

check the significance of the indirect effect of the emotional intelligence on academic achievement after fixing academic engagement. The results of the Sobel test indicated that the indirect effect of the emotional intelligence on the academic

achievement through the academic engagement is significant ($Z=8.4548$, $p<.05$). The result support that academic engagement is a mediator variable that partially carries the influence of emotional intelligence to academic achievement.

Table 3: Relationship between Emotional Intelligence and Adolescents' Academic Achievement Mediated by Academic Engagement

Step	I V	D V	B	SE	Beta	t
1	Emotional intelligence	Academic Achievement	.080**	.006	.596	14.477
2	Emotional Intelligence	Academic Engagement	.953**	.065	.599	14.597
3	Academic Engagement	Academic Achievement	.059**	.003	.699	19.053
4	Emotional Intelligence	Academic Achievement	.037**	.006	.277	6.340
	Academic Engagement		.045**	.004	.533	12.218

Note: B= Unstandardized coefficient; Beta= Standardized coefficient

** $p<.05$

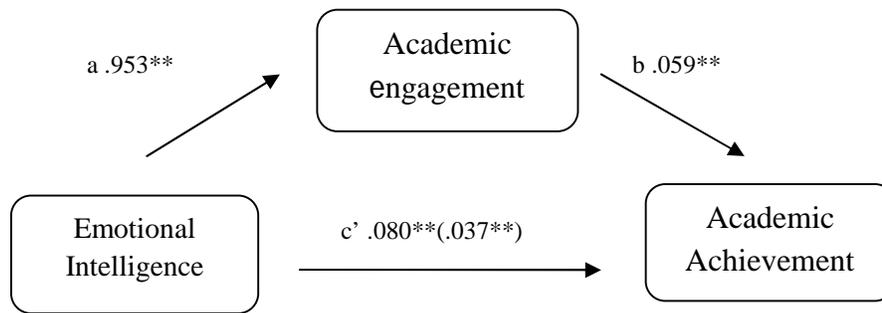


Figure 2: Mediation model

7. Discussion and conclusion

Respondents were adolescent females and males aged between 15 and 18 years old. Majority of the respondents' parents were in their middle aged and had diploma degree. Also, more than half of the respondents reported high emotional intelligence, academic engagement and academic achievement.

Results of the study indicated that there were positive relationships between emotional intelligence and academic achievement. The present finding is consistent with the findings of past studies (MacCan et al., 2011; Tamannai et al., 2010; Di Fabio & Busoni, 2007; Besharat & Abedy, 2006; Marquez et al., 2006; Parker et al., 2004; Fannin, 2001) which concluded that high emotional intelligence is related to high levels of student's academic achievement. Academic success is usually due to a competent level of emotional intelligence that enables a student to self-regulate, handle problem-solving as well as practice intrapersonal and interpersonal skills. Emotional competency allows a student to handle emotional management and with it,

manage stress and anxiety that are often associated with test-taking and examinations. Having interpersonal skills also allows a student to search for academic assistance, advice, help from educators, friends and peers. According to Goetz, Frenzel, Pekrun, and Hall (2005), there are many ways that academic performance may be impacted by emotional intelligence. Firstly, students who are able to control their negative emotions would not be so affected by them when they have to take assessment and learning tests. If a student has a high degree of control over negative emotions, he/she may even have positive emotions that actually enhance his/her performance in these testing situations (Pekrun et al., 2002). Secondly, there is a need to excel in group work and presentations in order to succeed academically. Emotional intelligence, especially control of emotion, has been associated with improved social interactions and individuals who have high emotional intelligence would enjoy better interpersonal relationships when they work with other team members in a group (Lopes et al., 2003). Thirdly, it is important to be able to connect with others and have the ability to maintain such connections socially not only to excel in group activities

but also to enjoy social support, and personal good feeling within the educational arena (Wang & Holcomb, 2010; Parker et al., 2004).

Also, the results of the study utilized that there was a positive relationship between emotional intelligence and academic engagement. In the academic context, students with high emotional intelligence are likely to take cognizance of the positive values about academic activities and school expounded by their teachers. Such internalization of beliefs and values has the possibility to be redirected to other academic situations. In this way, students acquire the skill to act in certain academic situations and generally develop the ability to cope academically in various ways (Ryan & Deci, 2000).

Finally, results of the Pearson Correlation indicated that there was a significant positive relationship between academic engagement and academic achievement of adolescents. The present finding is consistent with the finding of past studies (Fallon, 2010; Haney, 2010; Wang & Holcombe, 2010; Sbrocco, 2009; Flower & Flower, 2008; Stewart, 2007; Sirin & Sirin, 2005) which concluded that school engagement is closely related to academic performance. Children feel that they have the attention and support of teachers and parents in their academic and school activities, they will naturally develop a special sense of belonging and attachment to both school and school-related activities, including academic activities. Thus, there is a tendency for such children to achieve higher grades and generally show better academic achievements. Also, students who value their education and have clear ideas about goals they wish to achieve will exhibit a desire for status attainment and be higher performing students (Carbonaro, 2005).

Result of the mediation analysis indicated that emotional intelligence mediate relationship between emotional intelligence and academic achievement. There is no any evidence that support mediating effect of academic engagement in relationship between emotional intelligence and academic achievement. Based on Golman' (1995) emotional intelligence theory, children who cannot control themselves in classrooms or their seats have little chance of concentrating on their school work, and children and adults who do not get along with others or cannot communicate effectively have little hope of doing well even if they know their material (Gazzard, 2002). EI, particularly emotion management, has been correlated with better social relationships, such that high EI individuals may be better able to maintain the social relationships required for effective group work and leads to higher academic achievement (Lopes et al., 2003). The ability to make connections and maintain social relationships may be important not only for gaining high grades on group assessments, but more generally for maintaining social support and well-being in the educational environment (Parker et al., 2004; Wang & Holcomb, 2010).

8. Implications

Considering the significance of academic performance for adolescents, parents, teachers and the society, results the appropriate and useful techniques to prevent low academic

achievement is vital. Based on the findings of the present study emotional intelligence, academic engagement is related to academic achievement among high school students. In other words, adolescent students who have low emotional intelligence and low academic engagement are to be expected to drop out from school. consequently, implying that interventions designed to increase emotional intelligence and school involvement that may positively affect students levels of academic achievement, need to obtain guidance about their education and occupational from teacher and parent must be devised in order to reduce the students' academic failure rate and raise their academic achievement. It is further assumed that the information learned in this study has main implications to the Iranian Ministry of Education to better recognize the factors which have great influence on adolescent's academic achievement. It can also be potential input for improving educational policy.

The results of the present study can also be used by the Ministry of Education must in holding seminars to motivate and improve students' emotional intelligence and academic engagement. The results of the present study will be a useful input to the organizations aimed at promoting family and adolescent development.

The present findings provide empirical basis for future research in academic achievement among adolescents in Iran. This study explains academic achievement in relationship to family and personal factors. Future study may venture into other unexplored phenomenon in academic achievement.

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