Moderating Effect of Gender and Age on the Relationship between Emotional Intelligence with Social and Academic Adjustment among First Year University Students

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Abstract

This study examined whether emotional intelligence is significantly correlated with social adjustment and academic adjustment. It also explored the moderating effects of gender and age factors and their linked between emotional intelligence and social adjustment as well as academic adjustment among first year university students. 289 first year university students (148 males and 141 females) at the Irbid Govern Orate, North of Jordan, participate in the study and were categorized based on two age groups, younger students between the age of 18 – 25 and older students between the range of 26 and above. Two valid and reliable instruments were used to assess student's emotional intelligence, social adjustment and academic adjustment. Correlation and multi-group analysis using structural equation model were used to analyse these data. The result shows no significant relationship between emotional intelligence and of both social adjustment and academic adjustment. In addition, the moderating effect of gender was not found. However, the moderating effect of age on the relationship between emotional intelligence with social adjustment and academic adjustment were established.

Keywords: Emotional intelligence, Social adjustment, Academic adjustment, First year university student, Multi-group analysis, Structural equation modeling

1. Introduction

Researchers describe adolescents as a period of change not only in terms of individual's physical and cognitive development, but also in the adolescents' personal and social contexts (Rice, 1996). The subject of transition to university has been given attention by scholars and researchers namely because the transition often generates considerable stress and negative outcomes. The literature, however, has given evidence that students in this stage face adjustment difficulties and challenges (Tinto, 1996, Noor-Azniza, 2005). Haloren and Santrock (1997) define adjustment as "the psychological process of adapting in coping with, managing their problem, challenging tasks and requirements of daily life". Previous studies clearly state on the impact of student adjustment has on individuals and society. Positive adjustment can assist student to face challenges, pressures and overcome it to accomplish their goals (Wolfok, 2001), in contrast to negative adjustment in which it will lead to frustration (Al-Kfaween, 2010).

Several studies suggested that emotional intelligence skills are strong predictors of student's adjustment. Engelberg and Sjoberg (2004) identify that emotional intelligence predict student's social adjustment. Another study found a statistically significant correlation of both emotional intelligence and personal trait with satisfaction of their social relationships. Adeyemo (2003) conducted a study to look at the importance of emotional intelligence for student adjustment in which the results of the study showed the existence of relationship between emotional intelligence and overall student adjustment. In a study by Yip and Martin (2006) they identify that the ability to manage and regulate emotions is a positive contribution to personal sense of humor. Furthermore, the outcome showed that emotional intelligence contributes positively to social competence as well as, playing an important role in academic success. Abdallah et al. (2004) found a positive and significant relationship between student's level of emotional intelligence and academic adjustment among first year university students. Some researchers also established that emotional intelligence is positively correlated with students' adjustment and academic achievement but the results are mixed.

The primary purpose of the research is to empirically examine emotional intelligence as it relates to students adjustment. In addition, the current study purposed to explore the effect of moderating variables (gender and age) on the relationship between the independent variable and dependent variables. First, emotional intelligence and emotional intelligence models will be define, and then literature will relate emotional intelligence in assisting towards student's adjustment for the development of hypotheses.

2. Literature Review

2.1 Emotional Intelligence

Researchers (Goleman, 1995; Baron, 1997; Mayer & Salovey, 1990) defined emotional intelligence as awareness towards emotions and its importance in our relationships and our lives. Emotional intelligence is described as having four components which are: Self awareness, self management, social awareness, relationship management (Goleman, Boyatzis, & Mckee, 2002). Self awareness is when an individual has the ability to understand and to manage own emotions while self management is an ability to control or managed the feelings. Social awareness is defined as a person's ability to handle relationships and being conscious about the feeling of others and relationship management on the other is defined as the interpersonal and social skills or adeptness at inducing desirable responses in others (Goleman et al., 2002). Mayer and Salovey (1997) too, defined emotional intelligence having four branches which are: perceived emotion, assimilate emotion into thought, understand emotions, and finally regulate emotions in one self and others. However, researchers have argued that emotional intelligence cannot be measured and the validity for most emotional intelligence measurements is questionable. (Robbins & Judge, 2009). For this study, researchers will assimilate Goleman et al. (2002) definition of emotional intelligence.

2.2 Emotional Intelligence and Student Adjustment

In agreement with Nelson and Low (2003) model's assertion about relationships between emotional intelligence and student retention, research suggested that there are positive relationship between student adjustment and emotional intelligence (Adeyemo, 2003; Yip & Martin, 2006). However, Low and Nelson (2005) suggest that emotional intelligence plays a role as an important predictor that can help students to maintain the adjustment successfully during their transition. Despite the statement, Austin, Evans, Goldwater, and Potter (2005) states that, students require early emotional intelligence program in order to adjust their transition because emotional intelligence fuses a number of abilities related to the transition stage.

2.3 Moderating Effect of Gender and Age

Studies exploring the relationship between emotional intelligence and successful student's adjustment to university have produced mixed results. Although, some studies found positive relationship between those variables, other studies indicate the effect of individual differences as predictors for student's adjustment. Results showed that males have higher adjustment than females (Enochs & Reland, 2006). Along with the study, females were found to be more successful than males in terms of social relationship (Demir & Urberg, 2004). As a whole, studies show that researchers pay less attention on the roles of individual's characteristics for emotional intelligence and student adjustment. Exploratory studies in the past several years show that individual characteristics (gender and age) have become targets of much empirical investigation as supported by Abdallah et al. (2009). In which he stated that, as a group, male's demonstrated better adjustment than females. Later, it was sustain by other research that showed there is differences between males and females in the level of emotional intelligence (Sanchez-Ruiz, Perez-Gonzales, & Petrides, 2010). Likewise, concerning the level of adjustment and emotional intelligence, researchers also discovered that ages and genders do indicate significant differences between students, For example, Noor-Azniza and Jdaitawi (2009) found that older students have higher emotional intelligence than younger ones. As Pike, Schroeder, and Berry (1997) claims that student's adjustment according to gender and age differences do exist. Another study also established that students over the age of 21 scores significantly higher than those who are categorized lesser than 21.

However, according to literature search, the ability of gender and age to moderate the relationship between independent variables and student adjustment has received minimum direct investigation. For example, the moderating effects of gender and age are mixed as what has been discovered in the research of student's success. Gender has been described as a factor that moderates the relationship between independence from parents and lower levels of positivity in the feeling of separation. (Beyer & Goossens, 2003). In addition, research by Salami (2010) examined the relationship between emotional intelligence, career development and gender. Specifically, their research instigate whether gender can moderate the relationship between emotional intelligence and career development, in which it was strongly supported by the result, and finding by Shabani, Hassan, Ahmad, and Baba (2011) show that gender on other hand does not moderate the relationship between emotional intelligence, spiritual intelligence and mental health among adolescents. In terms of age, researchers suggested that age may have an affects as a moderating variable on academic performance (Farsides & Woodfield, 2003). Researchers Laidro, Pullman, and Allik (2007) reported that age is a contributing factor that moderates relationships with academic success, but as stated by Shabani, Hasan, Ahmad, and Baba (2010) age does not moderate other relationship such as spiritual intelligence, emotional intelligence and mental health among students.

Therefore, the literature has been used as a foundation to develop a conceptual framework for this study as shown in figure 1. Based on the framework, this study was primarily conducted to examine three major objectives: - first, relationship between emotional intelligence with social adjustment and academic adjustment. Second, effect of gender as moderating variable on the relationship between emotional intelligence with social adjustment and the academic adjustment and third, the moderating effect of age on the relationship between emotional intelligence with social adjustment and academic adjustment.

3. Methods

3.1 Participants

Participants consist of 289 first year university students from two universities in North Jordan. 51.2% of the sample (n=148) are males and 48.8% of the sample (n=141) are females. Participants are divided into two major age groups in which the majority of the sample were identified as younger students (141), and (108) as older students.

3.2 Procedures and Measurements

All participants completed the research surveys assessing their emotional intelligence and their adjustment to university. Surveys were administrated during the second semester (2009/2010) year.

3.2.1 Emotional Intelligence Appraisal (EIA, Bradberry & Greaves, 2004). Emotional intelligence appraisal consists of four dimensions which are: self awareness, self management, social awareness, and relationship management. 28 items have been adapted to assess emotional intelligence, and all items were obtained on six likert-scales ranged from (1-never to 6- always). For the current research, the reliability of coefficient emotional intelligence appraisal was indicated as good overall reliability (α= .79).

3.2.2 Student Adjustment to College Questionnaire (SACQ, Baker & Syrik, 1999). Student adjustment to college questionnaire consists of four scales, academic adjustment, social adjustment, personal-emotional adjustment,

and institution attachment/goal commitment. For this research two scales were adapted, they are academic adjustment and social adjustment, based on the importance of these two scales to evaluate student's adjustment (Baker & Syrik, 1999; Tinto, 1996). The total overall students adjustment items for the research is 39 items, comprises of 22 items from academic adjustment and 17 items of social adjustments. All responses were obtained on a 9 likert-scale ranging from (1- does not apply to me at all) to 9 (applies very closely to me). Composite scores were created by reserve coding for negative items. A reliability coefficients indicated acceptable scale reliability (social adjustment α= .92; and academic adjustment α=.93).

4. Results

The data were analysed using correlation and regression analysis by the method of structural equation modeling. The cor-relational analysis was applied to test the assumption whether there is a statistical relationship between the variables of emotional intelligence with student social adjustment and academic adjustment. Hence, a multi-group analysis using structural equation modeling was used to test the moderating effect of gender and age on the relationship between emotional intelligence with social and academic adjustment. In the first multi-group analysis the causal structure of both male and female were compared. In the second multi-group analysis, comparison of the age factor was made between the younger students (18-25 years) and older students (26 years and above).

4.1 Structural Equation Modeling

For further analysis and modeling exercise (SEM), the emotional intelligence and adjustment model have been adapted to test the relationship of constructs variables between exogenous (emotional intelligence) and endogenous variables (social adjustment and academic adjustment). Models tested are displayed in figure 2 in which it is presented by the relationship between exogenous and endogenous variables. The first results of structural equation modeling revealed a poor fit of proposed model. After checking the modification indices, some items seem to be problematic which showed low factor loading to their respective variables. Therefore, two items in EIA were deleted which are (items number 2 and 5), as well as 14 items on the social and academic adjustment scales found to be problematic because those items were negatively worded and researchers supported that negatively worded items have different response and different affect across culture (Lai & Yue, 2000). Therefore, all of the 14 items were deleted for further analysis.

Based on the second structural equation modeling results after the deletion of problematic items, the model indicated a good fit between the data and the model ($\chi2$/df= 1.701; CFI=.900; TLI=.894; RMSEA=.049) (Hair et al. 1998; Kelloway, 1998; Kline, 1998). The results of hypothesis model indicated that there are no significant relationships between emotional intelligence and social adjustment (β= 0.28, p=.461); and no significant relationship between emotional intelligence and academic adjustment (β= 0.78; p=.080) as indicate in table 1. Consequently the two hypotheses were not supported.

4.2 Moderating effect hypotheses

To test the effects of moderating variables, multi-group structural equation modeling analysis was used. Figure 3 and 4 shows the tested model of gender. Hypothesis in relation to moderating effect of gender are tested by comparing path coefficients between two groups (male and female) by using t-value over 1.96 (over .95% confidences). We concluded the coefficients have a moderating effect if t-value is more than 1.96. First, the initial model testing indicated a poor model fit and three items were identified to be problematic and were deleted (EI4, SA10, and AA17). The second model testing indicated slightly good fit between the data and the model as displayed in figure 3 ($\chi2$/df=1.448; CFI=.895; TLI=.889; and RMSEA=.040). In order to test gender as a moderating variable, table 2 shows that gender does not significantly moderates the relationship between emotional intelligence and social adjustment. Hence the finding that gender also does not significantly moderate the relationship between emotional intelligence and academic adjustment. Therefore, two hypotheses were not supported.

In the second multi-group analysis, we compared the path coefficients between two age groups, younger students (18-25 years), and older students (26 years and above) by using t-value over 1.96. Figure 5 and 6 shows the tested model, indicated a slightly good fit between the data and the model ($\chi2$/df=1.528; CFI=.862; TLI=.854; and RMSEA=.043). In order to test whether the age variable moderates the relationship between emotional intelligence with social adjustment and academic adjustment, table 2 indicates that age does show significant differences at a moderate level in the relationship between emotional intelligence and social adjustment, but do not indicate any significant between emotional intelligence and academic adjustment. It is concluded that the relationship between emotional intelligence and social adjustment are significant for older students but not significant for younger ones. Thus, hypothesis 2 was supported. Furthermore, the results showed that there were

significant differences of relationship between emotional intelligence and academic adjustment for older students but not for younger students. Thus hypothesis 3 was not supported.

5. Discussion and Conclusion

This research examined the relationship between exogenous variable (emotional intelligence) and endogenous variables (social adjustment and academic adjustment). Surprisingly, the results of the present study demonstrated that there were no significant relationships found between emotional intelligence with social adjustment and academic adjustment. One reason was identified, that stated relationships were not held between the variables because most of this research samples fall in the moderate and low levels through these researches instruments. Therefore, the results were in conflicts with previous studies (Yip & Martin, 2006; Adeyemo, 2003; Abdallah et al., 2004) which found a significant relationship between emotional intelligence with social adjustment and academic adjustment. The present study also tested the moderating effects of gender on the relationship between emotional intelligence and social adjustment as well as emotional intelligence and academic adjustment. The result suggested that gender is not an important moderating factor on the relationship between these research variables. Additionally, the present study also tested the moderating effect of age on the relationship between exogenous and endogenous variables, and the result suggested that age is an important moderating variable for the relationship between emotional intelligence with social adjustment, as well as for the relationship between emotional intelligence and academic adjustment. In other words, the findings supported that emotional intelligence effect on student's social adjustment is stronger in the older students group compared to the younger students group. Despite the fact, previous studies were followed to develop this study framework and this research has some limitation. Initially, this research collected data using a convenience sampling, which researchers hinder the ability to generalize the results into a broader sample. Furthermore, most of this research samples were students who are in their first semester at the university, and researchers (Baker & Syrik, 1999) caution to evaluate student's adjustment to university on their first year of study.

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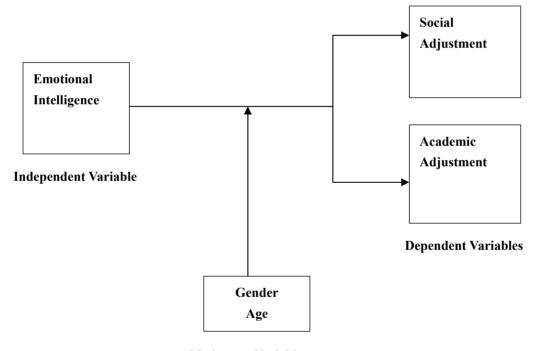Table 1. Standardized Regression Coefficients

Path	Regression Coefficient	t-value	sig
Emotional Intelligence -> Social Adjustment	.78	.737	ns
Emotional Intelligence -> Academic Adjustment	.28	1.754	ns
P-value 0.05 (two-tailed)			

Table 2. Results of Moderating Variables Effects

HHyp	Path	Effect	Gender						Age					
			Male					Female	Younger					Older
			β	t-	p	β	t-	p	β	t-	p	β	t-	p
3	EI→SA	Strength	.08	.50	.61	.85	.82	.41	.03	.29	.76	.42	1.96	.04
4	EI→AA	Strength	.04	.25	.79	.29	1.79	.072	-.07	-.54	.58	.51	2.34	.19

EI: Emotional Intelligence, SA: Social Adjustment, AA: Academic Adjustment

p- value is statistically significant at the 0.05 level (two-tailed)
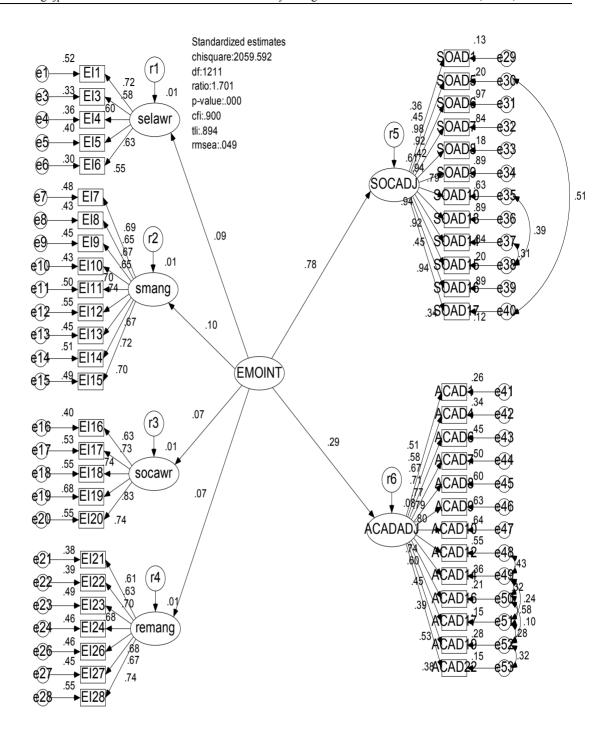

Figure 1. Conceptual Framework

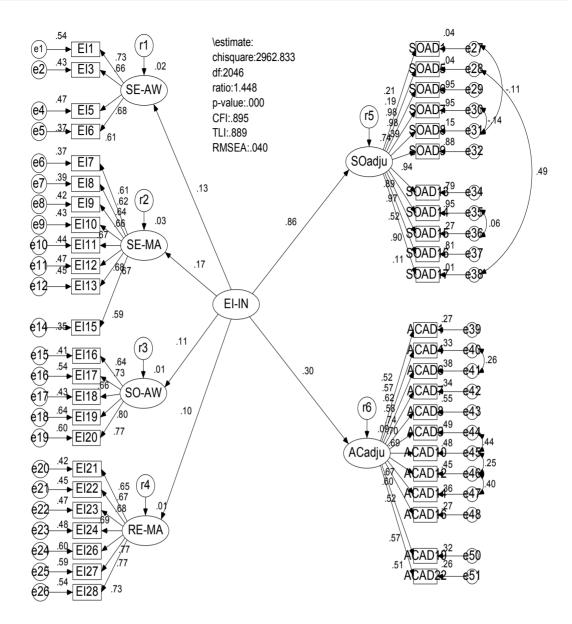Figure 2. Relationship between Exogenous and Endogenous Variables

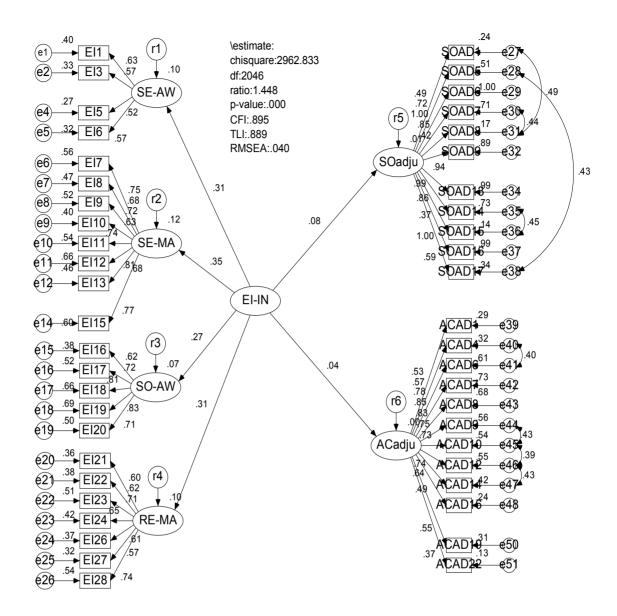Figure 3. Moderating effect of Gender (Male)
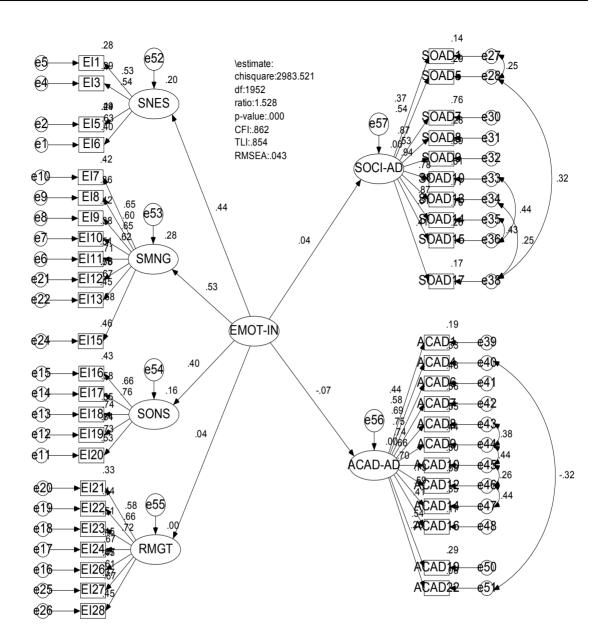
Figure 4. Moderating effect of Gender (Female)
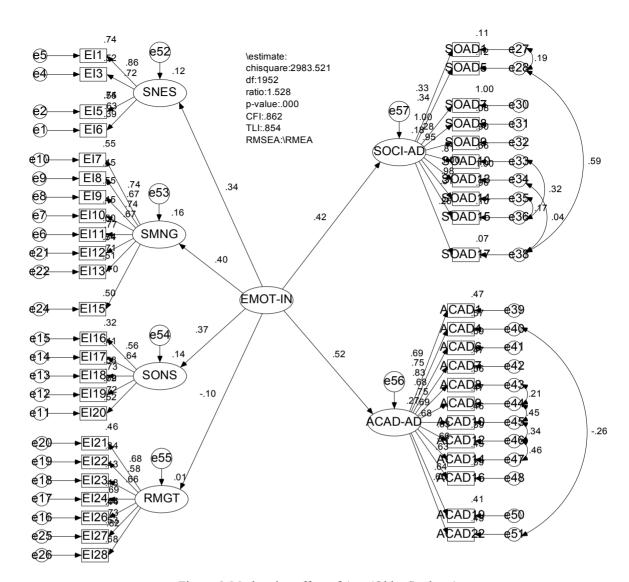
Figure 5. Moderating effect of Age (Younger Students)

Figure 6. Moderating effect of Age (Older Students)