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# Students' Perspectives on University Experiences; The Role of Protective Factors in Students' Lives

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**Abstract**

This study examined the relationship between protective factors and students' university experiences among 289 first year university students. The study made use of exploratory and confirmatory factor analyses to reveal initial support for the research variables. In addition, path analysis was utilized to investigate the relationship among the variables. The moderating effects of the variables were tested simultaneously, through multi-group analysis of Structural Equation Modeling. The final part of the study discussed the empirical findings and their implications.

**Keywords:** emotional intelligence, academic adjustment, social adjustment, first year university student and factor analysis

## 1. Introduction

### *1.1 Introduce the Problem*

The students' transition from high school to university is characterized by many challenges because following their admission to the university, the student's growth development requires significant effort in varying adjustment forms. In the context of Jordan, the first year university students have notably increased to current total number of 225,000 students. Moreover, student adjustment entails social factors that are known to influence students including stress, social support, campus environment, work involvement, family variables and academic environment (Russell & Petrie, 1992). Previous studies in literature concerning the issue reveal that first year university students are notably slower in adjusting socially compared to their counterparts (Leafgrau, 1989) as evidenced by Tinto (1996) when he revealed that university student's adjustment has become challenging. Consequently, most students who get admitted to the university generally lack the required skills to cope and succeed in their scholastic objectives. Student's transition to university has been studied for a long time but the main concern is the fact that most researchers think that students need skills and competencies to undergo a smooth transition (Low & Nelson, 2003).

Literature concerning first year student's transition to university is extensive and generally and hence researchers managed to identify many academic and non-academic factors which may influence the stated transition. For example, according to Richardson (2000), the adolescent's ability to cope, and develop emotional autonomy and to behave in a social context in a suitable and responsible manner, allow them to easily acknowledge the social transition issues. He recommended the employment of emotional intelligence to solve the issues related to the transition. Moreover, several researchers are of the consensus that the relationship between emotional intelligence and student's university adjustment should be investigated (Goleman, 1998; and Low & Nelson, 2003). This is compounded by the fact that the lack of understanding of the issue stems from the scarcity of empirical studies dedicated to the relationship between emotional intelligence and student's adjustment, particularly in the context of Jordan (Kracher, 2009; and Parker, Summerfeldet, Hogan & Majeski, 2005). Additionally, only a small number of empirical research has explored the roles of the moderator variable on the relationship between emotional intelligence and student's adjustment (Movroveli, Petrides, Sangareall & Fumham, 2009). Hence, the present study attempts at addressing the overlooked issue of student's university adjustment through the investigation of the moderating role of variables.

Emotional intelligence is defined as knowing one's emotions and handling them in a manner that develops self awareness, motivates self emotion or emotional self-control and acknowledges others emotions (Goleman, 1995). Researchers contended that individuals having high emotional intelligence are in control of their emotions and they can manipulate them in promoting their well-being and in enjoying higher levels of happiness (Baron, 2005; Furnham & Petride, 2003). Along the same vein, other researchers linked emotional intelligence with factors like life satisfaction, psychological well-being, occupational success and job performance (Baron, 1997; Baron, 2005; and Salovey & Mayer, 1990). Emotional intelligence has also been considered to be related to the academic achievement of the student, his/her behavior and attitude and his/her social adjustment (Kracher, 2009; and Chan, 2003). These empirical studies revealed that emotional intelligence may have a positive influence upon student's adjustment. It can be noted that the research on the issue has not been concluded and efforts to explore such an issue should continue as there is still a need for future research to explore the emotional intelligence-student social adjustment relationship.

Furthermore, the association between emotional intelligence and critical thinking has been studied and documented by researchers. To begin with, Elder (1997) revealed that critical thinking is the core of emotional intelligence indicating that emotional intelligence and critical thinking factors are cognitive and emotional based constructs that have the potential of advancing adjustment competencies. Critical thinking is considered as a required mental tool which enables the individual to comprehend the workings of right logic and how emotions, feelings and wants can be controlled. Similarly, Scott & Markert (1994) and Jenkins (1998) stressed that critical thinking influences student's university successes. In the present study, it is expected that critical thinking has a moderating impact on the emotional intelligence-student's successful adjustment relationship.

In other words, the present study aims to conduct an examination of the relationship between the study variables and to examine the moderating influence of critical thinking on the relationship between emotional intelligence and student's social adjustment.

*1.2 Study Objectives*

The objectives of the present study are listed as;

1) To examine the relationship between emotional intelligence and social adjustment.
2) To examine the relationship between emotional intelligence and academic adjustment.
3) To determine the moderating effect of critical thinking on the relationship between emotional intelligence and social adjustment among first year university students; and finally,
4) To determine the moderating effect of critical thinking on the relationship between emotional intelligence and academic adjustment among first year university students.

## 2. Method

The present study employs a survey research design for data collection from the university students in an attempt to examine the relationships detailed above.

*2.1 Participants Characteristics*

Data is collected from 289 first year students comprising of 148 (51.2%) male and 141 (48.8%) female, who were chosen randomly from two Irbid governorate universities in Jordan. The students' ages ranged from 18-30 years.

*2.2 Measures and Covariates*

Bradberry & Greaves (2004) proposed emotional intelligence appraisal is used for data collection in the present research and it consists of four dimensions namely self-awareness, self-management, social awareness and relationship management. The instrument covers a total of 28 items measured from a scale of 1 to 6 with 1 being never and 6 being always. The exploratory factor analysis is utilized to check whether the variables reflect the underlying structures in the data set and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.81 which shows EFA's appropriateness for the sample. The principle components analysis test revealed that the entire items have factor loadings that go over 0.30 except Item 25 (manage change effectively) which revealed an insufficient loading on a single factor. Moreover, results from confirmatory factor analysis showed that factor loadings for all items are over 0.30 (as recommended by Hair et al., 1998). Table 1 presents the overall goodness-of-fit indices with chi-square/df. Lower than 5.0, comparative fit indices (CFI), Tucker and Lewis index (TLI), and root mean square error of approximation (RMSEA).

Reliability - reliability reveals the internal consistency of the indicators that measure a specific factor. Reliabilities for all constructs are more than 0.7 for emotional intelligence which meets the general requirement of reliability. With regards to convergent validity, the significance of factor loading is examined and all factor loadings are more than 0.30 (the acceptable threshold). In addition, the composite reliability scores for items of emotional intelligence ranges from 0.55-0.82 with the total composite reliability scores for the construct as 0.74 (as recommended by Hair et al., 1998). Furthermore, discriminant validity evaluates the average variance extracted (AVE) and in this study, the total AVE for emotional intelligence construct is revealed to be 0.75 and therefore meeting the success value of 0.50. Table 2 presents the results of the reliability and validity tests.

Student Adjustment to College Questionnaire – data is collected through this questionnaire for the evaluation of students' adjustment to college (Baker & Syrik, 1999). The present researcher adopted a social and academic adjustment subscale in an attempt to measure student's social adjustment to college as researchers supported the significance of both scales to evaluate the construct (e.g. Baker & Syrik, 1999). The academic and social adjustment subscales comprise of 41 items measured by a nine point Likert scale ranging from 1 (does not apply to me at all) to 9 (applies very closely to me). Also, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is revealed in 0.90 which shows that EFA is suitable for the sample. The results of the principle components analysis test revealed that every time has a factor loading that is above 0.30. Following the confirmatory factor analysis of the items, the results showed a good fit to the data. The overall goodness-of-fit indices presented in table 1 (chi-square/df. smaller than 5.0, CFI, TLI, and RMSEA) indicates the satisfactory fit of the models. All constructs' reliability exceeds 0.70 for social adjustment which satisfies the general requirement of reliability of research instruments. The summarized results of reliability and validity are presented in Table 2.

Academic Adjustment Scale – the same methods above are employed on the academic adjustment scale. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.86 which indicates EFA's appropriateness for the sample. The principle components analysis test results reveal that all the items' factor loadings are above 0.30. When the confirmatory factor analysis is performed, the results show that all factor loadings are above the acceptable threshold of 0.30. In addition, the composite reliability scores for academic adjustment items range from 0.38-0.77 with the total composite reliability score at 0.63 (as recommended by Hair et al., 1998). The summarized results of the reliability and validity for this construct are presented in Table 2.

Critical Thinking Survey – the present study made use of the summarized version of critical thinking disposition survey (CTDI) proposed by Thayer (2006). The CTDI was developed on the basis of Facione and Facione's (1992) study and is distinct from other critical measures as it is often used in the study of first year university students. As such, it has been translated into many languages. It has a five point Likert scale that ranges from 1 (strongly agree) to 5 (strongly disagree). Additionally, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is found at 0.78 which indicates that EFA is suitable for the sample. The principle components analysis test results reveal that all items' factor loadings are above 030. Following the confirmatory factor analysis testing of the model to assess the fit of the proposed model to the data, the results revealed that all 26 items exceed the recommended value of the factor loading on a critical thinking scale of 0.30 but the results reveal a poor fit of measurement. Consequently, 7 items (CT5, CT6, CT7, CT9, CT11 and CT15) are deleted. Through the covariate between two items, the result revealed a good fit to the data. Table 1 lists the overall goodness-of-fit indices (chi-square/df. smaller than 5.0, CFI, TLI and RMSEA) which all exceeded the values indicating the satisfactory model fit. Constructs reliability exceeds 0.70 for critical thinking and hence, meeting the general requirement of reliability of research instruments.

Convergent Validity – the entire factors loadings exceeded the recommended threshold of 0.30 while the composite reliability scores of critical thinking times range from 0.27-0.77. Meanwhile, the total composite reliability score for the construct is 0.91 (recommended by Hair et al., 1998). With regards to discriminant validity, the total AVE for critical thinking is 0.66 which shows that the test is successful in generating the suggested value of 0.50. Table 2 contains the summary of the reliability and validity results.

Table 1. Summary of goodness-of-fit and model evaluation indices

| Constructs | RMSEA | CFI | TLI |
|---|---|---|---|
| Emotional Intelligence | .051 | .920 | .911 |
| Social Adjustment | .100 | .962 | .947 |
| Academic Adjustment | .099 | .909 | .878 |
| Critical Thinking | .099 | .856 | .812 |

Table 2. Validity and reliability test for measurement models

| Constructs | Alpha | Reliability | Validity |
|---|---|---|---|
| Emotional Intelligence | .79 | .74 | .75 |
| Social Adjustment | .92 | .77 | .72 |
| Academic Adjustment | .91 | .63 | .42 |
| Critical Thinking | .88 | .91 | .66 |

## 3. Results

This study uses the Structural Equation Modeling (SEM) for model testing development. The effectiveness of this model was reinforced by Mackenzie (2001) who listed its effectiveness along with the key issues as capable of taking random and systematic measurement into consideration. Moreover, based on Byrne (1998) and Kline (1998), the building process of the model consists of two models namely a confirmatory measurement model and a structural model. The first three hypotheses of this study are examined through SPSS 15.0, while the fourth hypothesis is examined through CFA and SEM using 7.0. The reason for the latter is because SEM has been utilized to develop a more superior measurement model with confirmatory factor analysis that was never utilized in the context of Jordan, and the structural model had to be analyzed.

### *3.1 Hypotheses Testing*

Following the collection of data, it is analyzed through path analysis to establish the relationship between the independent and dependent variables. Moreover, the researcher makes use of a multi-group moderating analysis to test the moderating variable through SEM. Upon comparing all fit indices with their corresponding recommended values, an evidence of good model fit is presented in figure 1 ($\chi 2$= 2059.592, ration= 1.701, CFI= .90, TLI= .894, and RMSEA= .049).

According to Table 1, the result of the hypotheses model shows no significant relationship between emotional intelligence and social adjustment ($\beta$ = 0.28). Hence, the first hypothesis is rejected. The result for hypothesis two also showed no significant relationship between emotional intelligence and academic adjustment ($\beta$ = 0.78) and hence rejecting hypothesis two. Figure 1 and Table 3 present the summary of the results for the first and second hypotheses.

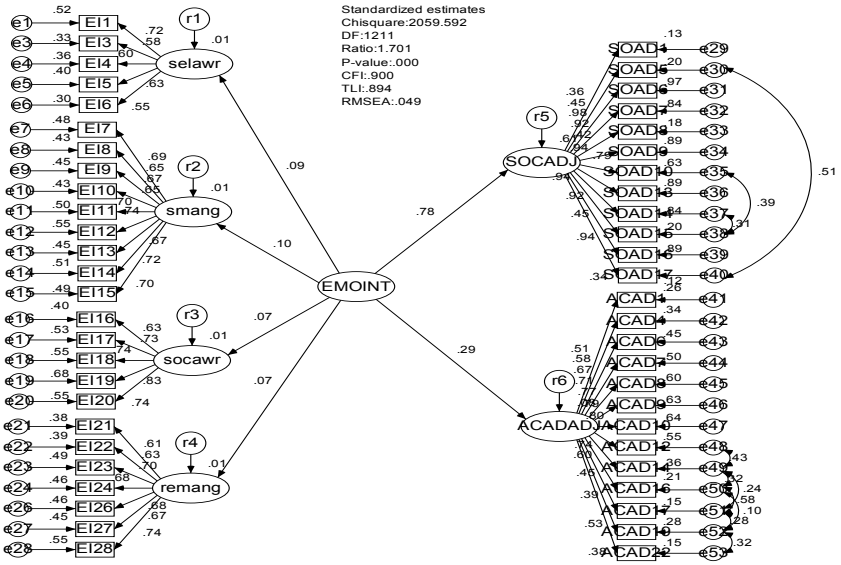


Figure 1. *Hypotheses Model Results*

Table 3. Standardized Regression Coefficients

| Path | Regression | t.value |
|---|---|---|
| Emot-Intell → Acad-Adju | .78 | .737 |
| Emot-Intell → Soc-Adjus | .28 | 1.754 |

*3.2 Statistics and Data Analysis*

For hypothesis testing, a multi-group analysis as opposed to hierarchical regression is employed as researchers including Hair, Black, Babin, Anderson and Tatham (2006) contended that hierarchical regression causes issues with convergence model and it distorts standard error. Cluster analysis of critical thinking is made use of to identify students and SPSS software is utilized to perform two step cluster analysis. The cluster solution resulted in a group of 148 students categorized as having high critical thinking while 141 students as having low critical thinking. These clusters represent as grouping variables for multiple group analysis as cluster analysis and multiple group Structural Equation Modeling analysis are performed.

Meanwhile, the hypotheses concerning moderating effects of critical thinking are examined by comparing path coefficients between the two clusters for each moderator using t-value over 1.96 (over 0.95% confidence). It can therefore be concluded that the coefficients have moderating impact. Additionally, according to Hair et al. (1995), there are many statistical tests that can be utilized to reveal the fit of SEM. The critical thinking significant moderating role in the relationship between emotional intelligence and social adjustment is presented in Table 4. On the basis of a series of modelling tests presented in Figure 2 and 3, the two groups reveal differences in path co-efficiency among the variables indicating that high critical thinking is higher than low critical thinking. Also, high critical thinking path coefficients are significant while that of its counterpart is insignificant. Therefore, hypothesis 4 is supported.

Moreover, critical thinking significantly moderates the relationship between emotional intelligence and academic adjustment. On the basis of a series of modeling tests, the two groups revealed different path co-efficiency among variables which means high critical thinking is better than low critical thinking. In other words, the path coefficient of high critical thinking is significant while that of counterpart is insignificant. Hypothesis 4 is hence supported.

Table 3. Results of moderating effects of critical thinking

| Path | High Critical Thinking | | | Low Critical Thinking | | |
|---|---|---|---|---|---|---|
| | B | t | P | B | t | P |
| Emot-Intell → Acad-Adju | .52 | 2.104 | .035 | .34 | 1.481 | .141 |
| Emot-Intell → Soc-Adjus | .50 | 2.229 | .026 | .41 | 1.471 | .139 |

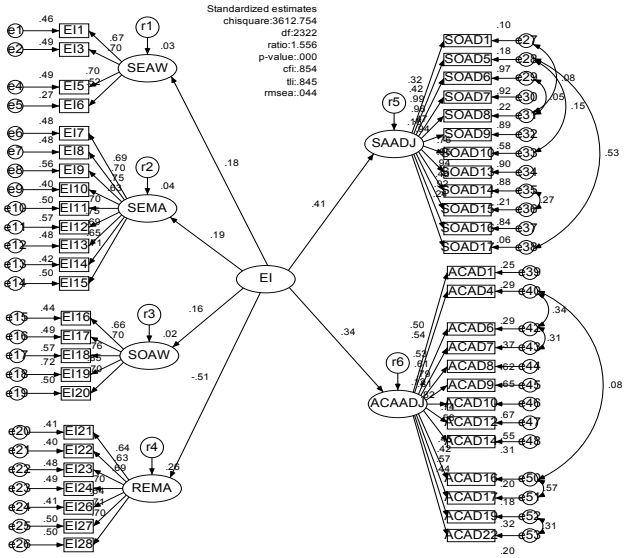


Figure 2. Hypotheses Model Results for Low Critical Thinking Level

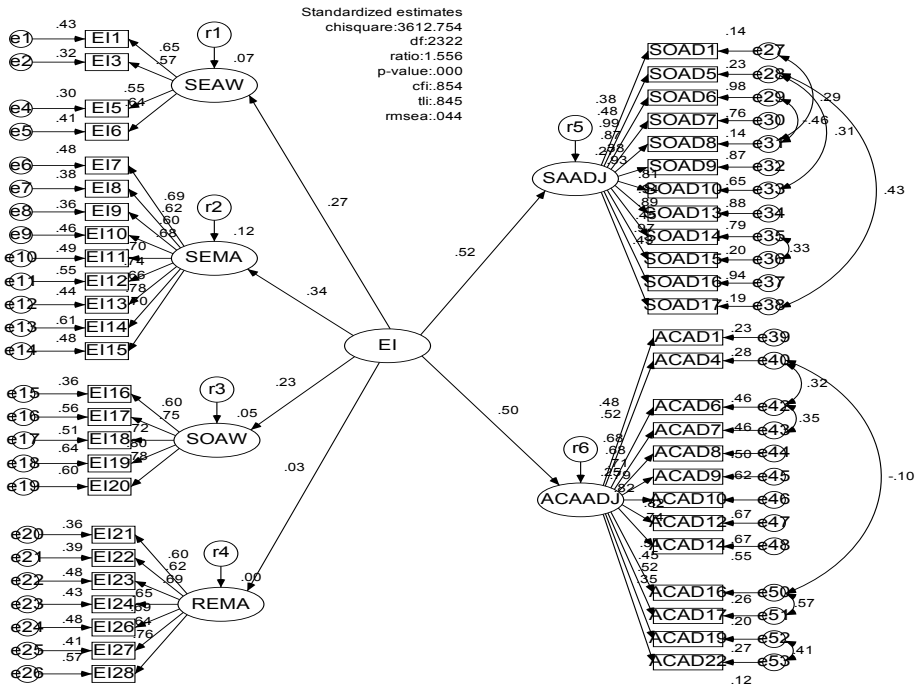


Figure 3. Hypotheses Model Results for High Critical Thinking Level

## 4. Discussion

The present research investigated the relationship between emotional intelligence, social adjustment and academic adjustment. The study findings showed no significant relationships between emotional intelligence and social adjustment, and academic adjustment. Literature review reveals that researchers had inconclusive results of the said relationship (e.g. Abdallah, Elias, Mahyuddin, & Uli, 2009; Gumora & Arsenio, 2002; Newsome, Day & Catano, 2000; Bastian, Burns, & Nettlebeck, 2005).

This prompted researchers to address the conflicting results particularly focusing on the fact that prior studies focused on emotional intelligence in general as opposed to its specific components (Qualter, Gardner, & Whiteley, 2007). For example, researchers showed that specific components of emotional intelligence predict academic success of university students (e.g. Parker, Summerfeldt, Hogan and Majeski, 2004). In addition, according to Lopes, Salovey and Straus (2003), the ability to positively manage emotions correlate with the quality of social interactions. As such, if the above study concentrated on emotional intelligence in general, the insignificant findings could stem from it. Moreover, the emotional intelligence level among the sample of the above research is only moderate. Qualter, Whitely, Morley and Dudiak (2009) and Parker et al. (2005) surmised the possibility of a threshold level of emotional intelligence that acts as a protection against the negative impact of transition. They added that students with high emotional intelligence seem to be protected against withdrawal. And because in this study, the study sample showed moderate to low level of emotional intelligence, this may be the cause of the insignificant results for student adjustment (Engelberg & Sjoberg, 2004).

The results of the study concerning moderating effects of critical thinking are also unique to student adjustment. The present study confirms the major implications of moderating effects (H4 and H5). The most likely reason for the results is because the strength of the relationship between emotional intelligence, social adjustment and academic adjustment is higher for students possessing higher critical thinking. The present study's findings support that of Mavroveli et al.'s (2009) contention that moderator variable may impact the relationship between emotional intelligence and academic success at university. Hence, according to the finding of this study, students with high critical thinking lead to stronger/significant relationship between emotional intelligence, and social and academic adjustment. It appears that emotional intelligence is more effective on both variables (social and academic adjustment) with students having higher critical thinking compared to those with low ones.

On a final note, the present study has its own limitations. These include; sample constraints as the sample study was selected only from two Jordanian universities; area of study as the study mainly measured student social and academic adjustment – this affects the results as stated by Baker and Syrik (1999). Baker and Syrik (1999) also

expounded on the drawbacks of evaluating student adjustment to university in their first year of study while the majority of this study's participants is comprised of students in their first semester at the universities.

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