A cross-national study of the emotional intelligence of young adults in the Middle East

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Abstract
Purpose – This study aimed to assess emotional intelligence (EI) among young adults across three Arab countries: Egypt, Jordan and the United Arab Emirates.
Design/methodology/approach – A total of 1884 university students participated from the three countries and completed the Schutte Self Report Emotional Intelligence Test (SSEIT). Data were validated by confirmatory factor analysis using SPSS AMOS version 29. Path analysis, t-tests and analyses of variance were performed to understand the influence of background variables on the EI of the study participants.
Findings – The results provide theoretical support for the SSEIT and the hypothesized relationship between managing personal and others' emotions. Although significant differences were found between participants in terms of gender and grade point average (GPA), no difference was found between participants based on nationality. The results of this study indicate the need to prioritize EI in young adults and other implications.
Originality/value – The importance of EI in individuals' daily lives cannot be overemphasized. However, scholarly insights into the state of EI in the Arab context are scarce.
Keywords Cross-nations study, University students, Middle East, Arab countries, Emotional intelligence (EI), Gender, Grade point average (GPA)
Paper type Research paper

Introduction
Emotional intelligence (EI) is defined as the ability of individuals to evaluate, express, regulate and utilize emotions on their own or others' behalf to solve complex problems or address situations and has a critical impact on individuals' ways of thinking, relationships and emotions (Aranda et al., 2014; Zhoc and Chung, 2018). The concept of EI was first introduced in the 1990s, and since then, it has been widely researched and acknowledged as a critical component of success and well-being, influencing human behavior (Salovey and Mayer, 1990). Given the critical impact of EI on individuals' success in life, researchers have focused on understanding and enhancing the EI of various populations, including children and adolescents (Passer and Smith, 2001; Deighton et al., 2019). Researchers have investigated the role of EI in specific contexts, such as leadership, healthcare and multicultural settings (Arokiasamy and Kim, 2020). Furthermore, the impact of EI on interpersonal relationships has been extensively studied. Individuals with higher EI are more likely to have satisfying relationships, effective communication skills and the ability to navigate conflicts successfully (Suleman et al., 2020). EI also impacts undergraduate students, including higher levels of life satisfaction, positive attitudes toward life and improved moral, social and intellectual development performance (Ordun and Akun, 2017).
Culture plays a significant role in understanding and evaluating EI (Lopez-Zafra et al., 2019). In the Arab context, EI is particularly important due to the collectivist nature of Arab cultures. In these cultures, people are expected to be aware of the emotions of others and to respond to them in a sensitive and supportive way. EI helps Arab students and professionals to build strong relationships, resolve conflicts and navigate the complex social landscape of Arab societies (Halimi et al., 2020). Arab societies prioritize strong interpersonal relationships. EI allows individuals to understand and empathize with the emotions of others, fostering trust and building meaningful connections. By demonstrating sensitivity and support, Arab students and professionals establish rapport and strengthen their relationships with colleagues, clients and peers (Naeem et al., 2014). Arab societies have intricate social dynamics, including hierarchies, cultural norms and customs. EI equips individuals with the ability to navigate this complex landscape effectively. By being aware of and sensitive to the emotions and expectations of others, Arab students and professionals adapt their behaviors, communicate more effectively and avoid misunderstandings or cultural faux pas (Alferaih, 2017).

Clearly, the current understanding of EI is incomplete without considering cultural impacts on affective processes that underlie various components of EI abilities. Cultural differences substantially influence how emotions are perceived, understood and regulated, impacting the three components of EI abilities - emotion perception, understanding and regulation (Huynh et al., 2018). Cultural norms also influence the emotions considered appropriate or desirable in different situations. The study finds that collectivism, uncertainty avoidance and long-term orientation positively affect the various dimensions of EI (Gunkel et al., 2014). Another study found that cultural values such as uncertainty avoidance and long-term orientation influence preferences for specific conflict-handling styles through EI. Specifically, collectivism has a direct negative impact on the preference for a dominating style, while power distance has a direct positive effect on the preference for both an avoiding and a dominating style (Gunkel et al., 2016). Also, societies that encourage emotional expression tend to have individuals with higher EI, while cultures that discourage it tend to have individuals with lower EI as they struggle to identify and regulate their emotions effectively (Gökçen et al., 2014).

On the other hand, despite the increasing interest in EI worldwide, research in the Middle East region is limited (Gribble et al., 2017). A few studies have investigated EI in the Middle Eastern context, but these studies have been relatively small in scale and have focused primarily on the general population or specific professions such as nurses or teachers (Halimi et al., 2020; Thomas et al., 2021). Moreover, most studies have been conducted in one country (Al-Busaidi et al., 2019; Alshammari et al., 2020) and cross-cultural studies comparing EI across the Middle East region are lacking. As such, there is a need for more research in this area, particularly in understanding the EI of undergraduate students in the Middle East. Therefore, the current study was designed to investigate cultural influences on EI in undergraduate students across three Middle Eastern countries, Egypt, Jordan and the United Arab Emirates. The findings of this study will contribute to our understanding of EI in the Arab context. This expands our knowledge and understanding of EI beyond Western cultures and highlights the importance of considering cultural factors in assessing and developing EI. However, the study also has some implications for the development of EI interventions and programs that could help Arab students and professionals to succeed in their academic and professional lives.

**Literature review**

*Models of EI*

There are multiple models of EI. The ability model, presented by Mayer and Salovey (1997), focuses on cognitive aspects (Petrides et al., 2004). This model describes EI as a novel form of intelligence characterized by the capacity to perceive, integrate, understand and regulate emotions to foster personal development. This model acknowledges four distinct abilities within
EI, namely emotional perception, use of emotion, understanding emotions and managing emotions (Caruso et al., 2015). The trait model introduced by Petrides and Furnham (2001) represents the latest approach to EI. Unlike the ability-based models, this model proposes that individuals possess specific emotional self-perceptions and traits as part of their personalities. Trait EI focuses on people’s self-perceptions of their emotional abilities, distinguishing them from previous models. It emphasizes the importance of understanding emotional traits and their role in shaping individuals’ responses to different situations, making it a valuable tool for personal and professional development (Petrides, 2010). The Mixed Model of EI, developed by Daniel Goleman (1995), defines EI through multiple competencies that influence leadership performance. The model identifies five crucial constructs: self-awareness, self-regulation, social skill, empathy and motivation. It is commonly utilized in corporate and professional settings to develop and assess management skills and potential (Livesey, 2017).

In addition, various factors, such as hereditary traits, maturation, health, intelligence, family relations, social environment, and emotional control, influence the development of EI. While these factors impact EI, individuals may also improve it through training and minor changes in their daily routines (Esnaila et al., 2017). The development of EI is also believed to be context-specific or influenced by the environment in which individuals find themselves. According to Cherniss (2010), it depends on the interaction between feelings and thoughts, and this interaction shows the importance of the role of emotion, whether in making wise decisions or providing individuals with the opportunity to think clearly. Such an application may improve individual and institutional performance, with increased productivity at all levels (Machera and Machera, 2017). It is separated from other intellectual abilities and intelligence, involving careful thinking about emotions and using emotions to enhance thinking (Mayer et al., 2008a, b). Developing EI is an ongoing process, and individuals improve their EI skills with practice and time. Some effective methods for developing EI skills include cultivating self-awareness through mindfulness, managing emotions, increasing motivation, developing empathy and improving social skills (Goldsworthy, 2002; Ubago-Jiménez et al., 2019).

EI of individuals
A study by Ellala et al. (2022) aimed to compare the degree of EI among high achievers’ College of Education students in the UAE (Al Ain University) with their peers at Princess Nora University, Saudi Arabia. The sample consisted of 77 students selected from the two universities: 41 males and females from Al Ain University and 36 female students from Princess Noura University. The findings of this study revealed high to very high levels of EI among students at the two universities. Notably, the EI model is widely used in management and other scientific fields (Livesey, 2017). Moreover, EI traits vary greatly according to different social groups or countries, and their research aimed to investigate the quantitative differences in EI traits between Khazakh and Russian teachers working in higher education institutions. The sample consisted of 700 teachers (350 subjects from each country) with roughly equal distribution of the variables of gender and age. The Mann–Whitney U test and Fisher transform were used as statistical procedures. The results of the Hall test indicated significant differences in the level of EI between teachers from the two countries.

Other studies have explored the influence of background variables on EI; in particular, studies have examined gender differences in EI. However, such findings have been complex and often conflicting. In general, the differences between male and female EI scores differed from country to country. In the United States, females showed better emotional and interpersonal skills than males (Van Rooy et al., 2005). In addition, female Spanish adults (Cabello et al., 2016), female graduates in Tamil Nadu, India (Chandra et al., 2017), and female undergraduate medical students in Sri Lanka all had higher average scores for EI than males (Ranasinghe et al., 2017). In contrast, a study by Ahmad et al. (2009) found that males had...
higher EI than females. In other studies, no significant difference in EI has been found between the sexes (Brackett et al., 2006). A British study (Arteche et al., 2008) used a sample of employees and found no statistically significant relationship between total EI and gender. Another study conducted in Myanmar found no significant difference between the EI of male and female teachers (Myint and Aung, 2016). Likewise, a survey conducted by Mishkat and Najati (2017) using undergraduate students showed no significant difference between males and females in their EI or emotional self-awareness scale scores. Moreover, although females scored higher than males on emotional self-awareness, interpersonal relationships, self-esteem, and empathy, there were no significant differences between genders in the previously mentioned psychological constructs. Similarly, Salavera et al. (2017) and Sudan showed no statistically significant differences between the EI scores of male and female university students (Al Dau, 2020).

**Impact of EI on students’ academic development.**

EI plays a crucial role in student learning and significantly impacts academic achievement by helping students cope with stressors such as assessment, group collaboration dynamics and the social and emotional demands of academic life (Rupande, 2015). By fully integrating academically and socially within the educational setting, students adept at understanding and managing their emotions tend to perform better in school than their less skilled peers, as evidenced by grades and standardized test scores (Preeti, 2013). A study conducted in Tehran city found a positive correlation between EI and students’ academic performance in high schools. The study identified key components of EI, such as self-motivation, self-awareness, self-regulation, social consciousness, and social skills, that were related to academic success. Interestingly, the study also highlighted a gender difference in EI among male and female students (Joibari and Mohammadtaheri, 2011). A study conducted in Turkey further supports the significance of EI in student academic achievement. In addition to EI, the study identified age, gender and self-efficacy as significant predictors of academic achievement. The sub-factors of EI were also analyzed, with “being aware of emotions” and “continuing to the behavior” proving to be significant contributors. However, other sub-factors were not found to be significant. The variables explained 19% of the total variance, with a notable interaction effect between academic achievement and socio-economic status. Furthermore, the research revealed that female students outperformed male students in academic achievement scores (Yazici et al., 2011). On the other hand, results of another study conducted on China show that students’ academic achievement did not affect directly by their EI (Chang and Tsai, 2022). In the same direction, Nayeem (2022) indicted that there is no connection between students’ EI and their academic success.

From the Middle Eastern context, a study explored the relationship between EI and academic success among undergraduate students in UAE universities. The findings indicated that while academic success was not directly related to EI, there was a positive association between perceived academic success and EI among the participants (Ahammed et al., 2011). Another study in Egypt investigated the correlation between EI, academic achievement and gender among university students. The study found that EI, particularly self-emotional appraisal, regulation of emotion and use of emotions, positively correlated with academic achievement. There was no significant difference in EI between male and female students. The results also showed that only two dimensions of EI (regulation of emotions and self-emotional appraisal) could predict academic achievement (Ali and Ali, 2016). A separate study conducted in Saudi Arabia found that EI significantly impacted the academic performance and employability of female engineering students. Interestingly, the study also found significant variation in EI among students of different engineering disciplines (Rizwan et al., 2019).

Generally, the studies presented indicated conflicting results about the relationship between EI and the variables of gender and academic level. Therefore, some results indicated that females have a higher level of EI, but other results indicated that males have higher EI than females, and other results showed that there is no statistically significant relationship between the gender of students and their level of EI. In addition, contradictory results have
been found regarding the relationship between students’ academic achievement and their EI. In general, the aforementioned studies highlighted the significant role of students’ level of EI in predicting their academic success by improving their ability to manage their emotions in a better way, which may also positively affect their level of well-being.

Measuring EI
Findings from the literature indicate that evidence supports the validity of the EI scale. Schutte et al. (1998) suggested that EI scale scores were strongly based on higher or lower awareness of others’ emotions and more precise or suppressed expressions of one’s emotions. Another study pointed out that emotional assessment scale scores were associated with other EI scale scores (i.e. EQ-I) (Brackett and Mayer, 2003). Moreover, significant associations were found between the emotions scale and EQ-I scores. Further, in their study Bastian et al. (2005) found that scores on the emotions rating scale were correlated with attention to emotions, clarity of feelings and fixation of emotions. However, they indicated no significant relationship between the scores on the emotional assessment scale and the scores on the MSCEIT, a performance test of EI.

Further, Early findings indicated that the emotion rating scale is associated with a higher level of optimism, greater ability to control impulses, lower levels of depression (Schutte et al., 1998), greater self-control in social situations, more empathetic perspective-taking, increased marital satisfaction and increased closeness and warmth in relationships (Schott et al., 2001). Moreover, scores on the EI scale correlated with students’ adjustment to university (Schutte et al., 1998) and improvement in mood after pessimistic induction of mood (Schutte et al., 2002). A meta-analysis indicated associations between EI and psychological variables in 14 diverse participants (Van Rooy and Viswesvaran, 2004). More research has examined the relationship between Emotional Assessment Scale scores and outcomes for different domains; for example, greater life satisfaction was associated with greater scores (Wing et al., 2006), fatigue (Brown and Schutte, 2006) and depression (Oginska-Bulik, 2005).

Research objectives
This study mainly aims to measure and compare the overall degree of EI in three countries in the Middle East: Egypt, the United Arab Emirates and Jordan, based on some demographic and cultural variables. Specifically, the current study aims to:

1. Assess the validity of the SSEIT in the Middle Eastern context by examining its factor structure and psychometric properties.
2. Examine the relationship between background variables, such as gender, age and cultural factors and EI among undergraduate students in the Middle East.
3. Identify the predictors of EI among undergraduate students in the Middle East, including personal factors such as self-awareness and self-regulation and contextual factors such as social support and cultural norms.
4. Investigate the relationship between personal EI and the emotional well-being of others among undergraduate students in the Middle East, including factors such as empathy and prosocial behavior.

Methods
Study participants
The study utilized a multi-stage cluster random sampling method to select undergraduate students of humanities and practical disciplines from three middle eastern countries, namely
UAE, Egypt and Jordan. The selection of these countries was based on their diverse cultural and linguistic backgrounds, which allowed for a better understanding of the research questions. The multi-stage cluster random sampling method is a widely recognized technique used in qualitative research to increase the reliability and validity of the results obtained. This method ensures that the sample is representative of the population of interest, minimizes the likelihood of bias and improves the generalizability of the findings (Baffetta et al., 2007). The United Arab Emirates University Ethics Review Board approved the ethical requirements before data collection. Only currently enrolled students in the said disciplines were requested to participate in the survey. However, graduated or alumni students were excluded from the sample. This was done to ensure that the sample was not biased toward any particular group of students. The exclusion of graduated or alumni students from the sample also helped to ensure that the results obtained were relevant to the current student population. The data of the enrolled students were obtained from the respective university Admissions Office. This was done to ensure that the data collected was accurate and up-to-date. A total of 1884 students finished the survey out of 2,356 requests sent representing 80% of the total requests which is an acceptable level for the reliability of the results.

The sample comprises 1884 university students; 59.2%, from students at humanities colleges and 40.8% from students at practical colleges selected through a multi-stage cluster random sampling method. The sample was selected from three countries: 20.4% from the UAE, 33.7% from Jordan and 46% from Egypt. The participants’ ages ranged from 18 to 24. Males accounted for 47.6% of the participants and 52.4% were female. All were undergraduate students.

Instrument

The Schutte self-report emotional intelligence test (SSEIT) devised by Schutte et al. (1998) is a method of measuring general EI, using four sub-scales: emotion perception, utilizing emotions and managing personal and others’ emotions. The SSEIT is based on the EI model by Salovey and Mayer (1990) and is closely associated with the EQ-I EI model. The SSEIT has 33 self-report items using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for all items except items: 5, 28 and 33, which are scored in reverse order. The total scale score is calculated by converting the respondents’ responses into numeric codes and adding the scores for all items. Schutte and her colleagues report a reliability rating of 0.90 for their EI scale. EI scores are reliable for adults and adolescents (Ciarrochi et al., 2001). It is prudent to add that the items were translated into Arabic, so validating them was necessary.

Procedure

A questionnaire survey was conducted through Google Docs and distributed to undergraduate students in the targeted countries via email in March 2022. The survey comprised three phases. The first phase involved obtaining the participant’s agreement through a consent form before responding to the questionnaire. This step was necessary to ensure that the participants fully understood the study’s objectives and agreed to participate voluntarily. The second phase focused on gathering demographic information about the participants. This information is important to help determine the extent to which the sample is representative of the population of interest. The study’s main aims were also explained to the participants in this phase. In the final phase of the survey, participants were requested to respond to 33 items of the SSEIT instrument, which were divided into four sub-themes. These items aimed to measure the participants’ EI levels. The questionnaire was developed in English and Arabic languages to ensure that all participants could understand and respond
to the items without difficulty. Participants were instructed to apply the EI scale to express their responses honestly and validly. They were also assured of confidentiality, as the data collected would only be used for scientific purposes. The use of Google Docs for data collection ensured that the responses were recorded accurately and promptly. The responses were collected through Google Docs live portal and saved as .csv files for further analysis. The use of an electronic platform for data collection also helped to eliminate the possibility of manual errors during data entry. The data gathered from the survey will be analyzed using statistical software to identify patterns and trends that will help to answer the research questions. The survey’s robust design, including the use of a consent form, clear instructions and confidentiality assurance, helps to ensure the data collected is reliable and valid.

Data analysis
As the sample size was large, we assumed normality based on Field’s (2013) argument that data with at least 200 participants are normally distributed based on the central tendency theorem.

With regard to the selected data analysis methods for the current study were based on their alignment with research questions. To answer Research Question 1, confirmatory factor analysis (CFA) was performed using SPSS AMOS version 29. Structural validity was ascertained using the following model fit indices: chi-square of less than 5, CFI and TLI greater than 0.90, RMSEA and SRMR between 0.03 and 0.08 (Byrne, 2016; Schumacher and Lomax, 2016). Additionally, a regression weight of at least 0.50 for each of the items was deemed appropriate for inclusion in this study. In the event of a poorly fit model, the model was subjected to modifications to improve the fit indices. According to Byrne (2016), modifications are appropriate for removing items with erroneous correlations affecting the model. The correlation between the latent variables was noted using the following criteria: small (0.10–0.30), moderate (0.31–0.50) and large (at least 0.51) (Pallant, 2020).

To answer Research Question 2, structural equation modeling was used to compute a path analysis to ascertain whether managing one’s emotions could influence managing others’ emotions. Similarly, for Research Question 3, a path analysis was used to estimate the contribution of demographic variables to the variance in EI. The fit indices discussed above were used to ascertain the appropriateness of the model (Byrne, 2016).

To answer Research Question 4, t-tests and F-tests were used to examine the relationship between demographic factors and EI (Pallant, 2020). Whereas t-tests were computed for demographics with two levels, ANOVA was computed for demographics with at least three levels (Pallant, 2020). The assumption of homogeneity of variances was checked to ensure that it was not violated (Pallant, 2020). In addition, the magnitude of the weight of the result was checked using the output of the effect size, which was interpreted as follows: small (0.01–0.29), moderate (0.30–0.50) and large (at least 0.51) (Pallant, 2020).

Results
The 33-item SSEIT was subjected to CFA. However, the initial computation showed that six items were below 0.30, and thus, they were removed from the equation. Further inspection of the fit indices revealed a poor-fit model: chi-square = 12.34, CFI = 0.64, TLI = 0.63, RMSEA = 0.06 and SRMR = 0.07. Given this, there was the need to assess the items impacting negatively on the model. Modification indices were used to identify erroneous items whose covariance negatively affected the model. After iterating the deletion of items, the fit indices improved to acceptable levels. Most importantly, the fit indices improved significantly (chi-square = 6.43, CFI = 0.93, TLI = 0.91, RMSEA = 0.05 and SRMR = 0.05; Figure 1). The final model showed 14 item SSEIT with the following subscales: perception
Figure 1. Summary of Confirmatory factor analysis

Note(s): Perception = perception of emotions; utilization = utilization of emotions; MSE = Managing self-emotions; MOE = managing others’ emotions

Source(s): Author’s own creation/work
(n = 3), utilization of emotions (n = 3), management of self-emotions (n = 4) and management of others’ emotions (n = 4).

Furthermore, the CFA also showed a large correlation between the subscales (perception and utilization of emotions, \( r = 0.69 \); management of personal and others’ emotion management, \( r = 0.84 \); perception and managing personal emotions, \( r = 0.65 \); managing others’ emotions and utilization, \( r = 0.81 \); perception and managing others’ emotions, \( r = 0.80 \); and managing personal emotions and their utilization, \( r = 0.80 \).

Additionally, the reliability of the 14-item SSEIT was assessed using Cronbach Alpha. The total scale yielded a score of 0.82, and the sub-scales were as follows: perception (0.60), emotion utilization (0.62), personal emotion management (0.66) and managing others’ emotions (0.60).

Association between background variables and emotions.

The total mean score of the SSEIT was calculated, which yielded a score of 3.91 (SD = 0.47). The subscales were perception (M = 3.57; SD = 0.61), utilization (M = 4.02; SD = 0.64), managing personal emotions (M = 3.91; SD = 0.64) and managing others’ emotions (M = 4.15, SD = 0.57) (see Table 1).

In addition, t-tests and ANOVA were performed to understand the association between demographics and emotions (see Table 2). The relational t-test found differences between the sexes and all measures. Regarding total emotions, females had higher scores than males, \( t(1882) = -4.53, p = 0.001 \), with a considerable effect size (Cohen’s d = 0.21). The same trend was observed for all the subscales.

Concerning ANOVA, differences were observed between participants concerning their grade point average (GPA). For total emotions, a difference was observed between participants, \( F(4,1883) = 15.58, p = 0.001 \), with a very small effect size, \( partial \eta^2 = 0.03 \). Post-hoc comparisons using Tukey’s HSD test showed that participants who indicated that they had high and very high GPA appeared to have more favorable emotions than those with average to very low emotions. As the students’ GPAs increased, their emotions seemed to increase in the same direction. Similar trends were observed in the other subscales.

<table>
<thead>
<tr>
<th>Item</th>
<th>Means</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perception</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I18</td>
<td>3.57</td>
<td>0.61</td>
</tr>
<tr>
<td>I19</td>
<td>3.88</td>
<td>0.91</td>
</tr>
<tr>
<td>125</td>
<td>3.65</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Utilization of emotions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I17</td>
<td>4.02</td>
<td>0.64</td>
</tr>
<tr>
<td>I20</td>
<td>4.24</td>
<td>0.83</td>
</tr>
<tr>
<td>I27</td>
<td>4.18</td>
<td>0.84</td>
</tr>
<tr>
<td>I28</td>
<td>3.64</td>
<td>0.87</td>
</tr>
<tr>
<td><strong>Managing personal emotions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2</td>
<td>3.91</td>
<td>0.64</td>
</tr>
<tr>
<td>I12</td>
<td>3.91</td>
<td>0.91</td>
</tr>
<tr>
<td>I14</td>
<td>3.64</td>
<td>1.00</td>
</tr>
<tr>
<td>I13</td>
<td>4.19</td>
<td>0.88</td>
</tr>
<tr>
<td>I23</td>
<td>3.89</td>
<td>0.84</td>
</tr>
<tr>
<td><strong>Managing others’ emotions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I4</td>
<td>4.15</td>
<td>0.57</td>
</tr>
<tr>
<td>I6</td>
<td>4.03</td>
<td>0.86</td>
</tr>
<tr>
<td>I5</td>
<td>4.28</td>
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<tr>
<td>I13</td>
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<td>0.85</td>
</tr>
<tr>
<td>I30</td>
<td>4.29</td>
<td>0.84</td>
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</table>

Source(s): Author’s own creation/work

Table 1. Summary of mean scores
Moreover, a Path analysis was performed to determine the predictors of emotions. Demographics were used as independent variables, and the SSEIT subscales were used as dependent variables (see Tables 3 and 4). First, sex emerged as a significant predictor of the three outcome variables (perception, $b = 0.76, p = 0.001$; utilization of emotions, $b = 0.37, p = 0.003$; and managing personal emotions, $b = 33, p = 0.001$). Second, specialization only predicted using emotions, $b = 0.33, p = 0.007$. Third, GPA influenced three outcome variables: Perception, $b = 0.57, p = 0.002$; utilization of emotions, $b = 0.87, p = 0.001$; and managing personal emotions, $b = 0.94, p = 0.001$. Although nationality did not predict emotions, none of the demographic variables predicted the management of others’ emotions.

In addition, according to the results of Table 4 the model does not fit the data. However, the main goal of the current study was not to establish casual relationships between the variables used. On the other hand, the results obtained, whether through path analysis or other methods, were sufficient to achieve the research objectives.

The relationship between understanding one’s emotions and helping others to regulate their emotions was assessed using path analysis. The results showed that the ability of one’s
emotions (perception, $b = 0.38, p = 0.001$; utilization, $b = 0.22, p = 0.002$; managing personal emotions, $b = 0.42; p = 0.001$) to predict managing others' emotions (see Figure 2).

**Discussion**

The study aimed to validate the 33-item SSEIT through confirmatory factor analysis (CFA) and identify predictors of emotions among demographics. The initial CFA revealed a poor fit model, and six items were removed to improve the fit indices. The final model included 14 items and four subscales: perception, utilization of emotions, management of self-emotions and management of others' emotions. The study found significant differences in emotions between genders and GPA levels. Path analysis showed that sex, specialization and GPA were predictors of emotions, and personal EI was positively associated with the management of others’ emotions. Overall, the study provides valuable insights into EI and its predictors in a diverse sample of participants. The SSEIT was confirmed in an Arab context. While the

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**Table 3.** Summary of path analysis

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of emotions</td>
<td>0.76</td>
<td>0.001**</td>
</tr>
<tr>
<td>Utilization of emotions</td>
<td>0.37</td>
<td>0.003**</td>
</tr>
<tr>
<td>Managing personal emotions</td>
<td>0.33</td>
<td>0.001**</td>
</tr>
<tr>
<td>Managing others’ emotions</td>
<td>0.62</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of emotions</td>
<td>0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>Utilization of emotions</td>
<td>-0.06</td>
<td>0.58</td>
</tr>
<tr>
<td>Managing personal emotions</td>
<td>0.02</td>
<td>0.80</td>
</tr>
<tr>
<td>Managing others’ emotions</td>
<td>0.16</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Specialization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of emotions</td>
<td>0.22</td>
<td>1.04</td>
</tr>
<tr>
<td>Utilization of emotions</td>
<td>0.33</td>
<td>0.007**</td>
</tr>
<tr>
<td>Managing personal emotions</td>
<td>0.03</td>
<td>0.72</td>
</tr>
<tr>
<td>Managing others’ emotions</td>
<td>0.38</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>GPA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of emotions</td>
<td>0.57</td>
<td>0.002**</td>
</tr>
<tr>
<td>Utilization of emotions</td>
<td>0.87</td>
<td>0.001**</td>
</tr>
<tr>
<td>Managing personal emotions</td>
<td>0.94</td>
<td>0.001**</td>
</tr>
<tr>
<td>Managing others’ emotions</td>
<td>0.67</td>
<td>0.07</td>
</tr>
</tbody>
</table>

**Note(s):** **$p < 0.001$**

**Source(s):** Author's own creation/work

---

**Table 4.** Model fit summary in path analysis results

<table>
<thead>
<tr>
<th>Model</th>
<th>NPAR</th>
<th>CMIN</th>
<th>DF</th>
<th>$P$</th>
<th>CMIN/DF</th>
<th>NFI Delta1</th>
<th>RFI rho1</th>
<th>IFI Delta2</th>
<th>TLI rho2</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default model</td>
<td>75</td>
<td>13123.902</td>
<td>519</td>
<td>0.000</td>
<td>25.287</td>
<td>0.256</td>
<td>0.243</td>
<td>0.264</td>
<td>0.251</td>
<td>0.264</td>
</tr>
<tr>
<td>Saturated model</td>
<td>594</td>
<td>0.000</td>
<td>0</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Independence model</td>
<td>66</td>
<td>17643.474</td>
<td>528</td>
<td>0.000</td>
<td>33.416</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Source(s):** Author’s own creation/work
Figure 2. Predictors of others' emotions

Note(s): Perception = perception of emotions; utilization = utilization of emotions; MSE = Managing self-emotions; MOE = managing others’ emotions
Source(s): Author’s own creation/work
factor structure of the SSEIT scale has been assessed elsewhere, and its psychometric properties are high (Aniemeka et al., 2020; Craparo et al., 2014; Gong and Paulson, 2018; Naeem and Muijtjens, 2015), this is the first time it has been validated across three Arab countries. The computation of CFA and numerous validation thresholds underscore the tool’s robustness for studying EI in the Arab context. This study further confirmed the four-factor structure that emerged in a previous study (Gong and Paulson, 2018). Specifically, a large correlation was found between four subscales: perception of others’ emotions, perception of personal emotions, management of others’ emotions and management of personal emotions. Although the intention is not to assume causation, it is fair to posit that these subscales may be interrelated within the current context. For instance, as the perception of emotions increases, the management of personal emotions may also be appreciated in the same direction and vice versa. Similarly, as the management of personal emotions increases, the management of others’ emotions can improve in the same direction and vice versa. Therefore, a validated SSEIT can be used to understand others’ EI in a similar context.

Furthermore, the results showed that the participants were neutral when they experienced general emotions. The results of this study are inconsistent with those of other studies that have reported high EI among students (Kant, 2019; Shahin, 2020). This possibility underscores the fluidity of the EI. In the present study, this finding could be attributed to a lack of interest in developing EI among students in the Arab region. It is possible that there might not be a priority given to the development of EI among students. There is a lack of specific courses or curricula that discuss feelings, their importance and how to deal with them. This could negatively affect participants concerning their inability to make correct decisions in the future, as well as the inability to act logically in situations that require EI. Moreover, this may negatively affect participants’ job performance as they struggle to establish good social relationships with others. Thus, countries in the Arab context need to pay attention to the issue of EI and highlight its primary role in society by integrating such areas into the curriculum in schools, colleges and universities.

In this study, differences were found between participants based on gender. Specifically, females were found to have higher EI than their male counterparts. This finding is consistent with previous studies that found that females have higher EI than males (Cabello et al., 2016; Chandra et al., 2017; Ranasinghe et al., 2017; Van Rooy et al., 2005). On the contrary, this finding does not agree with previous studies that found that males have higher EI than females (Ahmad et al., 2009) as well as no difference between females and males (Al Dau, 2020; Alkhadher, 2007; Meshkat and Nejati, 2017; Myint and Aung, 2016; Salavera et al., 2017; Yadav et al., 2020). In the Arab context, this may be due to several reasons, including the social upbringing of females and males. For instance, mothers increase their passion, tenderness and gentleness, unlike males, who are raised to be strong, masculine and strict regarding decision-making. In addition, society’s culture is based on males assuming responsibilities related to spending, working and providing shelter for the family. In contrast, women play the role of caring for or raising children and showering them with love and care. Hence, EI develops more naturally in females who grow up with positive EI than in males. Therefore, educators must prioritize males’ EI development by providing tailored training programs. Moreover, parents can be educated on the development of EI in male children, which could facilitate their inclusion in society.

Another interesting finding was the influence of the student’s GPA on their EI. The GPA of the students increased. EI moved in the same direction. This finding is consistent with previous studies that reported the influence of GPA on EI (Codier and Odell, 2014; Schutte et al., 1998). Students with high GPAs may have a way of regulating their EI. Students with high GPAs may be able to handle pressure, meet challenges and comfort themselves. In addition, in the Arab context, intelligence is appreciated, as people are always associated with those with high cognitive abilities. Students with high GPAs may be consulted by their
colleagues to explain concepts in some subjects, which will help them develop or build healthy relationships with others. Recognition of the ability and capacity to always come into contact with other people would enable those with high GPAs to improve or develop better EI. Unfortunately, those with low GPAs would not receive such an opportunity, which could have a negative effect on their EI. The findings reported here suggest that in universities in the Arab region, there is a need to pay attention to students who are struggling or have low GPAs to improve EI.

Additionally, The nationality variable did not have any relationship with EI. In the current study, there was no difference in EI between students in Egypt, Jordan and the UAE on EI. Although a previous study found a relationship between EI and nationality (Dewia et al., 2018), another study agreed with our findings, reporting no association between EI and nationality (Shahin, 2020). The trend identified in the study reported here may be that EI depends on the individual’s personality, beliefs, behavior and way of thinking, regardless of nationality. Given this, in the Arab context, EI may be similar because of shared culture and language. However, the mean scores showed students’ ambivalence and, as such, the need to pay attention to improving their EI. Less attention has been paid to developing students’ EI in all countries, which could explain the findings reported here. This underscores the need for teacher educators to develop measures geared toward the development of EI among students across countries.

Further, the results of the current study show a relationship between managing personal emotions and managing the emotions of others. Specifically, the results showed that managing personal emotions significantly contributed to the variance in managing others’ emotions. This appears novel, as previous studies have not explored the relationship between managing others’ and personal emotions. This finding is logical because, without the ability to manage personal emotions, it becomes nearly impossible to support others. This finding could help students at both the micro- and macro-levels. At the micro level, the capacity to manage emotions could help maintain order or peaceful coexistence at home. For instance, they can solve domestic problems and promote harmonious relationships at home. Second, because students are prepared to work, managing their emotions could be useful. When students are competent in managing their emotions, they are more likely to help colleagues. The importance of managing personal emotions is enormous, and thus, there is a need for educators in the Arab context to consider developing students’ EI.

**Conclusion and study implications**

The study provides theoretical support for SSEIT in the Arab context. The instrument was validated and yielded appropriate psychometric properties. In addition, the results of our current study showed that the participants generally had low EI; however, females had higher EI than males. Moreover, there was a significant relationship between the following subscales: perception, utilization of emotions, managing personal emotions and managing others’ emotions. Furthermore, this study found a relationship between the students’ GPA and EI. Another interesting finding is the contribution of managing EI to variance in managing others’ emotions. This groundbreaking study provides useful insights into the EI of young adults in the Arab context.

Moreover, the findings of this study will provide useful guidelines for policymakers in these three countries. First, based on what the current study showed, we find that young adults who took part in this study have a low level of EI, which probably necessitates universities to develop curricula that address the relevance of EI, its importance and the need to enjoy it. This can be achieved through workshops, seminars and presentations that address the essence of EI in youth development. Outside the university, youth centers could pay great attention to developing EI by presenting institutionalized seminars, lectures and
The emotional intelligence of young adults

training and addressing EI-related issues. Second, the study revealed that females have higher EI than males, possibly necessitating awareness programs targeting especially males to enhance their EI. Third, the study findings showed a relationship between EI and students’ GPA, with students with higher GPAs being more positive about EI than those with low GPAs. This finding underscores the need for universities and families to promote the EI of students with low GPAs to enhance their psychological well-being. Fourth, the current study showed that individuals who could manage their own emotions would also be able to help manage others’ emotions. As students can manage their emotions, this could go a long way in enabling them to regulate others’ emotions in the future. Thus, policymakers should develop seminars or workshops to help students rediscover or understand how to manage their emotions. There are several theoretical and practical implications that can be derived from the results of the current study. At the theoretical level, the results of the current study enrich the literature related to the topic of EI, whether in terms of its relationship to the variables of gender, students’ academic achievement, or nationality. The theoretical importance of this study is also highlighted by the fact that its sample represents three societies in the Middle East, as it addressed a topic that has not been adequately covered - from the researchers’ point of view - and by providing extremely important information about this topic directed to decision makers. From a practical standpoint, the importance of this study lies in the fact that it was conducted within societies that focus on mental intelligence more than EI. Unfortunately, in the context of the Middle East in most cases, emotional intelligence is not taken into account for the purposes of recruitment or admission to universities. Even in the field of advertising commercial products, the focus is often on convincing the consumer of the benefit of the product without paying attention to their psychological and social characteristics. The results of the current study may also prompt researchers to address this vital topic from other aspects. One might be the impact of EI on the family; in this context, insufficient attention to EI may be one of the possible reasons for the accelerating rate of marital separation or divorce in the three societies which has negative social, economic and security impacts on those communities.

Study limitations
This study has a few limitations. First, the data were collected online; thus, participants could select responses randomly without reading. This may have affected the findings. However, there was a detailed information statement explaining the study and the importance of participation. There is likelihood that participants will provide accurate responses reflecting their EI. Second, the research team did not have direct contact with the participants to provide detailed explanations of the study or their contributions. Nonetheless, the Arabic version was used for data collection, allowing participants to use their proficient language. Third, like all quantitative studies, detailed insights from participants—that is, the opportunity to elaborate on their experiences—were not obtained in this study. The current study aimed to determine the structural validity of the SSEIT across three countries in the Arab context. Future studies should consider using qualitative methods to delve more deeply into students’ experiences regarding EI. Data were collected from three public universities in three countries. This means that the interpretation of the data should be limited to the institutions where the study was conducted. However, since there is free movement of people within these countries, participants who took part in this study could reflect on students from other universities. Future studies could consider expanding this study and comparing the responses across public and private universities.

Recommendations
Based on the current findings, this study recommends that future research should:
(1) Include longitudinal studies that follow participants over an extended period that will provide valuable insights into the development and changes in EI among young adults in the Arab context.

(2) Investigate how cultural values, social norms and cultural practices impact the different components of EI that will provide a more comprehensive understanding of the cultural influences on EI.

(3) Further investigate the specific mechanisms and processes through which EI influences academic performance in the Arab context.

(4) Investigate the relationship between EI and job performance, career success and workplace well-being among Arab professionals to provide insights into the relevance and applicability of EI in the workplace within this cultural context.

References


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