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Impact of Emotional Intelligence Course on Students' EQ

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Abstract: This quantitative research demonstrates the necessity of teaching Emotional Intelligence (EI) courses to undergraduate students and to assess the development of major psychosocial skills necessary for their interpersonal success in the university, workplace, and other life domains. The EQ-i test was used as the measurement tool and a quasi-experimental method, one-group, pre-test, post-test group design was adopted to study the impact of the EI course on students' EQ (Emotional Quotient) by measuring the mean differences of the variables for experimental groups. A paired "t" test was used to find the effectiveness of the Emotional Intelligence course on EQ. Independent "t" test and one-way ANOVA test were used to compare EQ and its dimensions based on gender and age. The findings of this study indicate that students who took the EI course had significant improvement in their overall EQ at the end of the semester. The current research also points to the importance of teaching EI course to students at the undergraduate level in order to develop appropriate psychosocial competencies

Keywords: *Emotional Intelligence, mental well-being, adaptability, psychosocial skills, Emotional Quotient, undergraduate students*

Introduction

The transition from high school to college or university can be a stressful time for freshmen students, demanding a number of social, academic, physical and emotional adjustments. When students enter university as freshmen, they need to steer through new social circles, teaching styles, increased autonomy, and new academic and systems processes, among other things. These novel physical and social environments require a range of skills and capabilities which enable students to manage change successfully. Parker, Summerfeldt, Hogan and Majeski (2004) have inspected the relationship between academic success and social competencies using Bar-On (2001) which shows that the important factors in successful transition from high school to university include: high scores on "intrapersonal dimension", an ability to distinguish and label

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feelings and guide behavior. The "adaptability dimensions" include the ability to use realistic and flexible coping strategies while the "stress management dimension" is seen as the ability to be productive and creative in stressful conditions. Thus, students' ability to adapt to the university environment, considering and valuing their student roles in the educational process seriously (Chemeres and Garcia, 2001) is considered to be one of the most important psychosocial competencies. The ability of young students to understand and manage emotions, and as a result, to self-regulate their behavior consists of a set of emotional and social competencies, referred to as Emotional Intelligence or EI.

This study posits that EI training is especially crucial for young people to tackle the challenges posed by an uncertain future. Higher education has a vital role to play in developing the knowledge and skills to close the gap in the inequities experienced by young adults in education and gainful employment. Across the board, employers are looking to offer opportunities to candidates who are able to demonstrate good psychosocial competencies, such as empathy, self-regulation, and self-awareness. These are key EI skills and are associated with greater mental well-being and self-help. The purpose of education is to draw out the innate tendencies, capacities, and inherent powers of students and to develop them to the full, through formal, informal and non-formal agencies. Most difficult life situations whether childhood or adolescent problems, marital issues, as well as work situations stem from the inability to handle emotions appropriately. Emotions are a fundamental human tendency and can lead to many complications, including having the potential to interfere in academic and career performance. Given the challenging external environment, EI must become a basic and complementary part of the educational process, such that teaching EI becomes a regular part of the undergraduate student's curriculum.

Through this study, the researchers explore the impact of teaching EI as a general education course at the undergraduate level and examine the outcomes for students who take a 13-week elective course in EI. The course was taught systematically through an investigation of the five core areas of EI identified by Goleman (1998): self-awareness, self-regulation, motivation, empathy and social skills, through a combination of theory, modelled practice and self-practice. In sum, these the three pillars guided the course framework and pedagogy. The theoretical aspect was important to establish the credibility of the course, particularly to demonstrate the research underpinning the study of EI; modelled practice was necessary to demonstrate how to engage in situations which require self-management, empathy, social skills, etc. and the self-practice served to allow students to work on the skills so as to be able to add them to their life skills repertoire. The emphasis was on empowering students to develop some sense of mastery and achievement in the skills. Thus, the course aimed to build confidence in using the skills outside the classroom and in real world situations.

Even though EI is a relatively new field, a number of studies have been conducted among high school and university students to assess various aspects of EI. Research on students' ability to properly label, understand and regulate their emotions, as well as how to manage emotions in a

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social setting has been conducted by a number of academics, including Saarni, 1999; Jensen et al., 2007; Low & Nelson, 2005; Goleman, 1998; Mayer & Salovey, 1997; Chan, 2003; Vela, 2003. Other studies show that emotional abilities allow students to perform effectively under stress (Baumeister, Heatherton, & Tice, 1994); that emotional abilities can result in positive prosocial behavior (Brackett & Mayer, 2003); studies done by Chan, 2003 show a correlation between EI and social adjustment; another study shows that having EI skills can result in a positive mood and higher self-esteem (Schutte, Malouff, Simunek, & Hollander, 2002), and Abdallah, Elias, Mahyuddin, & Uli, 2004 show a positive relationship between EI and academic achievement. Lastly, studies conducted by Lopes, Brackett, Nezlek, Schutz, Sellin & Salovey, 2004; Paulo, Croucher, Sohanpal, Muirhead, & Seymourk, 2004 show that emotional abilities have positive impact on students' quality of social interactions. High scores on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), considered to be a highly reliable and valid instrument in this field, administered to college students as well as adults, show a positive correlation to social competence (Brackett, Rivers, Shiffman, Lerner & Salovey 2006), academic performance (Gil-Olarte Márquez, Palomera & Brackett, 2006) and better quality of interpersonal relations (Brackett, Warner and Bosco, 2005). Furthermore, lower scores demonstrate negative correlation with social relations and risky behaviors, including violence, drug and alcohol use (Omori, Brackett, Rivers & Salovey, 2006).

The field has also seen a growing number of studies that suggest that EI competencies can be taught (Goleman, 1998) formally and systematically (Ogunyemi, 2008), and can result in improvements in students' EI skills (Pasha & Golshekoh, 2008).

Two studies conducted by Chang in 2007 and 2008 have particularly important ramifications for the present study. The 2007 study conducted among undergraduate students who underwent a semester of intensive EI training shows that they showed significant EI improvement compared to a control group who received no training. The instruments used in this study were the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), The Emotional Quotient Inventory (EQ-i) and The Emotional Competency Inventory (ECI).

In their study of emotional self-efficacy through a teaching intervention for university students, Dacre Pool and Qualter describe a program designed by Nelis in 2007 to teach EI skills to undergraduate students which was tested on two separate groups. Based on the Mayers-Salovey model of EI, the program consisted of theory-based classes, delivered over 10 hours per week, utilizing a mixture of discussions, lectures, readings and role plays. Impact of the training was measured using a combination of ability and trait measurements, showing improvements in two of the four dimensions being assessed, and when re-assessed six months later, these improvements held steady. Building on Nelis's work, Dacre Pool and Qualter designed a formal course entitled Emotional Intelligence which was delivered as an open elective to second- and third-year undergraduate students. The syllabus centered around 11 weeks of 2-hour classes per week designed around the Mayer-Salovey Four Branch Model of EI. Using a pedagogic

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approach of theory, practice and self-reflection, the course consisted of lectures, role plays, discussions, videos, case studies and a field trip to an art gallery. This study showed an increase in students' abilities to understand and manage emotions, but no significant improvements in perceiving or using emotions. These studies point to the idea that a formal program of teaching theory-based skills leading to an experiential discovery of one's emotional abilities can increase EI skills.

Closer to the geographical and cultural context of the present study, is research conducted among freshmen university students in Jordan (Jdaitawi, Ishak, Taamneh, Gharaibeh and Rababah, 2011). This study aimed to examine whether EI training could result in increased levels of social and academic adjustment. Results of the study showed that a systematic training program lasting 10 days (approximately 15 hours) increased levels of EI variables (self-management, social skills, self-awareness) and an increase in social and academic adjustment for freshmen students. The training program included lectures, discussions and role-play.

Furthermore, parents have begun to support teaching EI skills to students (Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003) and there is more awareness of the positive impact that learning emotional and social skills can have on student learning and academic performance, as well as the quality of relationships (Brackett & Salovey, 2004; Mayer, Salovey & Caruso, 2004; Sutton and Wheatley, 2004). At a 2005 meeting of the American Psychological Association, Durlak and Weissberg presented their meta-analysis of programs designed to develop social and emotional learning, demonstrating the success of such programs in enhancing competencies in these domains as well as improving academic performance.

Brackett and Katulak (2006) describe the Emotional Literacy program designed for middle school students and adopted by schools throughout the United States. The multi-year program is based on the Mayers-Salovey Four Branch Model of Emotional Intelligence which incorporates EI lessons in the regular curricula. Teachers undergo a corresponding training which allows them to become knowledgeable about the emotional and social intelligence skills being taught. The weekly lessons are accompanied by student activities. As a result of the Literacy Program, teachers report several positive outcomes: for example, students are more self-confident in expressing themselves, have more positive interactions with their peers, demonstrate more prosocial behavior, and are able to incorporate vocabulary about emotions into several curriculum areas. An experiment reported by Brackett, Rivers & Salovey (2005) showed that students who participated in the Emotional Literacy Program were described by their teachers as being less anxious and hyperactive, and more adaptable, whilst also exhibiting stronger social, study and leadership skills following their participation in the programs for just four months.

On the other hand, when the SEAL (Social and Emotional Aspects of Learning) program implemented across secondary schools in the UK was evaluated, it showed little impact on the social and emotional skills of students, particularly in the areas of mental health and behavior

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(Humphrey, Lendrum and Wigelsworth, 2010).

The aim of higher education is to gain academic success, but to date, little attention has been focused on the expectation gap, and where the expectation gaps have been discussed, the evidence is anecdotal and general in nature focusing on training students with EI and examining their academic achievement. Hence, further investigation is critical in such a rapidly evolving field to identify and systematically examine the fit between a course that has been designed purposefully to teach EI at the foundation level and the academic success of students who take this course. Moreover, a further limitation of prior studies has been that most of the studies (described above) focus solely on students in the Western context. Although further studies, particularly of a longitudinal nature, need to be conducted, there is some evidence to support introducing formal program of EI training to students, particularly university students who are preparing to enter the workforce upon graduation. The significance of the current study is three-fold: first is that it focusses on a structured, semester-long undergraduate general education course. The second is that this the study is conducted in a non-Western context, and in this case, students are primarily from Arab and South Asians cultures. Thus, this study adds significantly to the existing research on building EI skills among university students. From the review of existing literature, it appears that this is the first time this kind of research has been done in the current context to understand how formal learning can influence development of EI skills. The third significance is that this study also expands on previous research conducted in understanding whether age and gender have any significant impact on the acquisition of EI skills, since age has been identified as one of the sociodemographic variables most relevant to the evolution of EI, as well as to the progress of other types of intelligence (Mayer et al., 1999). The theoretical model of EI (Mayer & Salovey, 1997) argues that EI increases with age and experience (Extremera et al., 2006; Kafetsios, 2004). We have also included gender as a variable to understand whether gender differences impact the acquisition of EI skills. Previous studies that analyzed gender differences in cognitive abilities such as verbal, numeric and visuospatial skills show that these differences can appear, disappear, and reappear (Halpern, Benbow, Geary, Gur, Hyde, & Gernsbacher, 2007). Thus, this study investigated the differences between EQ scores of male and female students, along with their varying ages. Further, we sought to assess the combined impact of gender and age as independent dimensions, both related to prediction of EI skills. Whilst other studies have centered on evaluating the effectiveness of the EI construct in various arenas, the current research focuses on the possibility of developing EI as a major psychosocial competency among undergraduate students to elevate their emotional and social skills.

As the world moves towards an uncertain future dominated by technology and shifting social and economic realities, students are increasingly feeling a sense of anxiety about their future careers. Unless they are adequately skilled to meet the demands of a future job market, external forces are likely to hinder their sense of well-being. This leads us to posit that there is an urgent need for individuals to develop their emotional intelligence skills in order to optimize personal competencies and mental well-being and that university courses related to emotional intelligence

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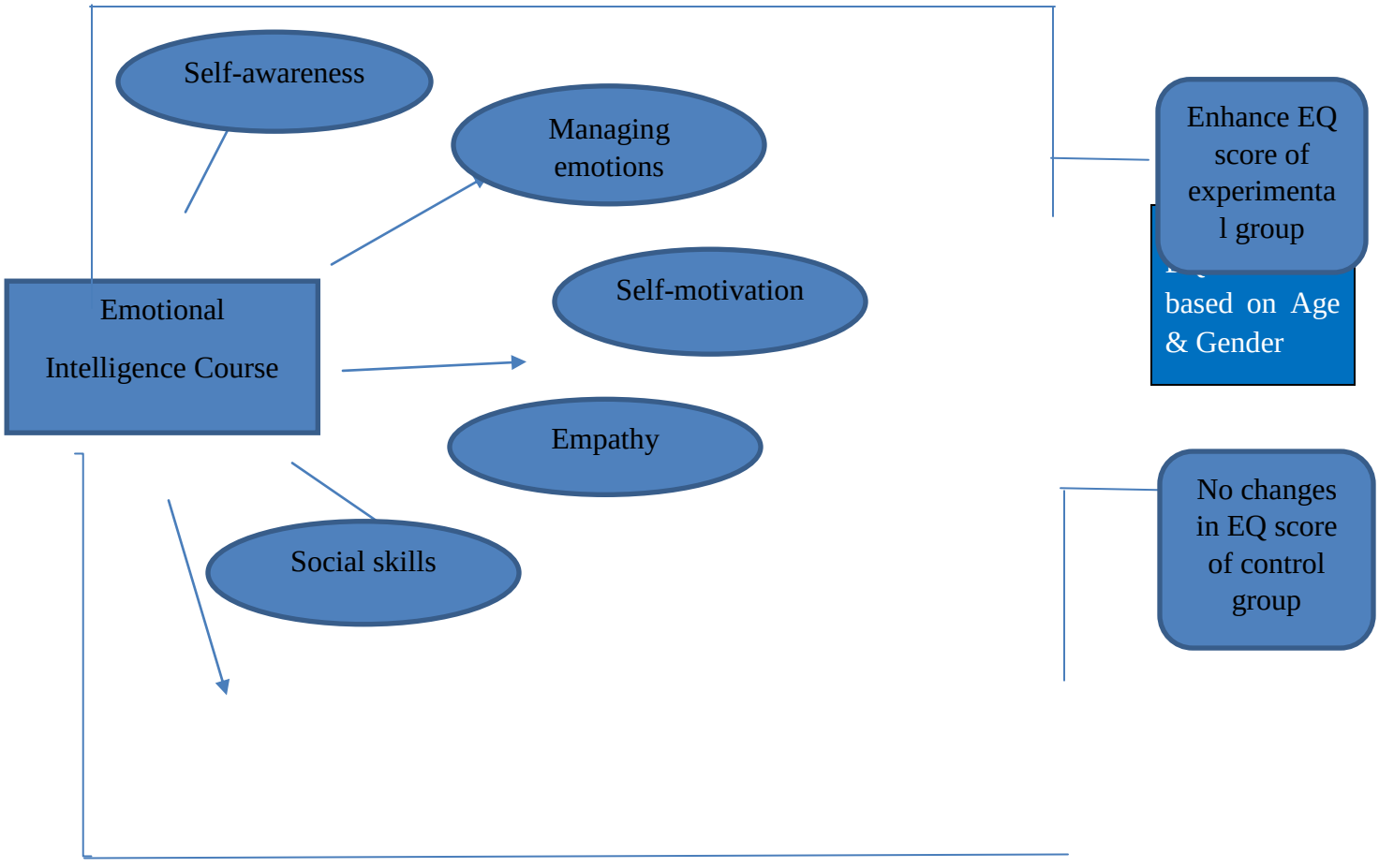
can play a very important role in enhancing students' future success

This study posits that it is beneficial for universities to understand empirically the value of teaching a foundation course on EI, bearing in mind the following hypotheses, which were formulated for this study:

- There is a significant difference in the EQ scores of students who attended the EI Course, compared to students who did not attend the EI Course.
- There is a significant difference in the scores of self-awareness, self-management, motivation, empathy, and social skills dimensions from students who attended the EI course, compared to students who did not attend the EI course.
- There is a significant association between the variable EQ scores, age and gender.

Theoretical Framework



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Methodology

Research Design

A " Two group Pre-test- post-test non- equivalent group design'' (See table 1) was used in this study. In such a design, a double test group is selected and the depended variable is measured both before and after the introduction of the treatment/intervention. The dependent variable is measured for both the groups. The effect of the treatment should be equal to the EQ scores of the students after the treatment minus the EQ scores of the students before the treatment, i.e. the difference in the measurement of dependent variable, if any, is computed and is taken as the amount of change as a result of the application or treatment variable.

The researchers randomly assigned participants to experimental and control groups. Only the experimental group attended the EI courses. The experimental group was also called the variable group and the group to whom the independent variable was applied. In this study, the experimental group were Group A (N=105) who attend the EI course.

The control group is the group in the experiment that does not get the independent variable, but which is used as a point of comparison in order to assess the impact of the independent variable. The control group is 'Group B' who were enrolled and attended General Education courses, but did not attend the EI course.

Table 1

Two groups, Pre-test, Post-test non- equivalent group

Group (Students=R)	Pre-test	Treatment	Post-test
Experimental group = E (Students attended EI course)	O1	X	O2
Control Group = C (Students did not attend EI course)	O1	---	O2

R= Random assigned group

O1, O2, O3 = Pre-test, and Post- test

X = Treatment (EI course)

Sampling (Experimental group)– The source of the data was made available through the University's learning management system, Blackboard, and applied stratified random sampling was applied to extract data.

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In the United Arab Emirates, only one university, currently offers an EI course as an elective to undergraduate (UG) students. Two campuses of the University offer this course during a regular semester. During Fall 2019-2020 semester, a total of 500 students enrolled for this course across two campuses (Abu Dhabi and Al Ain). As part of the course assessment, students submitted a portfolio in the 12th week of the semester, which comprised of all the activities they had completed throughout the semester to enhance their EQ. The pre-test and post-test score sheets and interpretation were also included in the portfolio. Out of the 500 students who took the course, the researchers identified three subgroups: students who scored low on the EQ scores (during the pre-test conducted at the beginning of the semester), female students and male students. Of the students with low EQ scores, 200 were male and 300 were female. From these subgroups, the researchers randomly selected the EI portfolios of 52 male students with low EQ scores and 53 female students with low EQ scores. A random number table was used to select the sample. Further, the researchers controlled the subgroups to ensure all of them were represented in the sampling. Demographic data such as age and gender were collected from all these students, and the EI inventory was utilized for initial screening. IRB (Institutional Research Board) approval was obtained for this study. The test was administered in the classroom in a group setting after giving clear instructions on how to complete the test

Control Group- The control group were the first-year students who did not opt to take the EI course as an elective. The questionnaires were administered to the entire sample of 500 students. 105 students who scored low on EQ were selected for this study. These students attended four general education courses like English, Math, UAE Society and Academic Skills for Success. A post-test was administered towards the end of the semester to all students in the control and experimental groups.

Table 2

Distribution of the sample according to age and gender

		Case		Control		χ^2	p
		Count	Percent	Count	Percent		
Gender	Male	52	49.5	53	50.5	0.019	0.9
	Female	53	50.5	52	49.5		
Age	18 - 20	36	34.3	47	44.8		
	20 - 22	35	33.3	58	55.2	41.14	$p<0.01$
	22 - 24	34	32.4	0	0.0		

The above table describes the percentage of demographic variables of the participants such as

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gender and age, which was 49.5% male and 50.5% female in experimental group and in control group 50.5% were female and 49.5% were male. Participant ages ranged from 18 to 24, where 34.3% were aged between 18-20, 33.3 were between 20-22 and 32.4% were between 22-24 in experimental group and 44.8% and 55.2% were in the age group of 18-20 and 20-22 respectively. The chi square test ($p<0.01$) shows that the two groups (experimental and control) of students do not differ significantly based on gender but differ based on age. We conjecture that may be due to the fact that although young people do have some things in common because of their social divisions and geographical location have the effect of placing young people (18) in close proximity to adults (24) who share the same social circumstances.

Tool

The current test is an adapted and modified version of Bar-On's EQ scale (Bar-On Emotional Quotient Inventory, 1997: A Measure of Emotional Intelligence). The researchers modified the test to suit the current needs of the study.

A five-point Likert's scale with 50 items was constructed to collect data from students to measure their EQ. The scale assessed respondents' EQ, including their empathy, social skills, self-awareness, emotional management and self-motivation levels. A score above 200 was considered high or above average EQ, scores between 150 – 200 were considered to be good or average, and scores below 150 indicates that the EQ is below average.

Validity and Reliability

Standardizing the questionnaire including the validation and evaluation was a long process, which included statistical analyses and discussions with the experts and based on their input, modifications were made.

The EI scales have concurrent validity. This was given to the same sample of 25 female students and then the modified test was administered to the same sample of 25 male students. The coefficient of correlation between the scores of the two tests was found using product moment correlation. The correlation was found to be 0.84. This shows that the test has concurrent validity.

Reliability

The test-retest reliability of the scale is reported to be +0.92, on a sample of 25 students, with a .time interval of one month. The odd-even reliability was found to be +0.95 after correlation for alternation, calculation on a scale of 60 students. From a strictly theoretical point of view the EI scale measure the ‘‘same’’ phenomenon, which is supported by the experts in the discussion panel.

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Teaching Strategies used in this study to Enhance EI Skills Relevant to Higher Education

Pedagogical literature on teaching strategies focus for the most part on teaching EI to pre-primary or primary school age students. Identifying appropriate teaching strategies for young adults or university students can be challenging. However, the following teaching strategies have been identified and can be used and modified according to classroom context. 2 strategies for each of the following EI components are described below and were utilized to enhance the overall EQ of undergraduate students: self-awareness, self-management, and 1 activity for motivation, empathy and social skills competencies. The strategies range from individual activities to small group and large group activities and are largely aimed towards self-discovery of their authentic selves.

Group activities require the instructor to establish a safe space where students can talk relatively openly without the threat of judgement. Best practices suggest that such activities are best conducted during the latter part of the course, once students have established comfort with each other and the instructor has had sufficient time to build rapport with students and established safe space for open communication. The goal of these activities is to model them with the students, such that they become skills that they can master and apply as needed at various life-stages. The table below summarizes some of the activities utilized.

Table 3

Skills	**Activity**	**Description**
Self-Awareness Activity 1	Self-Measurement Matrix	Goal: to enhance students' self-awareness and increase self-introspection leading them to identify five key strengths, weaknesses, opportunities for growth and threats. Most students are unlikely to have undertaken such a self-study or may be fearful to face a realistic self understanding and may benefit from an overall self-assessment rather than focusing on negative elements. This approach suggests a positive approach to building resilience.

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Self-Awareness Activity 2	Discovering the Inner Me	Goal: students should develop a deeper understanding of their personality through a series of questions around several categories, designed to elevate a different aspect of self-understanding. Starting from a simple level, the questions progress to a meta-cognitive level. This exercise can be executed through writing, sketching, drawing, role play, creating dialogues in pairs, a Ted-Talk style talk, or a talk-show simulation that features interviews with a `TV host', and can have a powerful impact if the pedagogy is carefully aligned to the students' needs.
Self-Management Activity 1	Icebreakers to Regulate Emotions	Goal: through a series of role plays, encourage students to name, express, recognize and acknowledge their emotions; and to model emotion self-regulation and engage in positive self-talk. This kind of activity also allows students to engage in problem-solving in a safe space, with the onus being on the instructor to create a non-judgmental environment.
Self-Management Activity 2	Self-Affirmations	Goal: to engage in positive self-talk. This activity can be a stand-alone or an extension of other activities. Self-affirmations are positive statements that are repeated to have an uplifting impact on the person. They can repeat this statement daily to feel empowered. The value of doing this exercise comes from both modelling positive self-talks, and also in teaching students how to write their own self-affirmation statements which can be included in their personal journals.
Motivation Activity	Goal Visualization	Goal: students explore the idea of energy and motivation and are called on to reflect upon their energy by expressing it physically and in writing. Students need to visualize a goal that they have foregone and to reflect on why they may have lost sight of their goal and to discuss how they can use this energy activity to re-motivate themselves to pursue a goal that has lapsed because of lack of motivation

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Empathy Activity	Empathy Circles	Goal: to encourage students to empathize with other students and with the conflict that they are experiencing. The idea is for students to share a conflict they are currently experiencing or may have experienced earlier by writing on a card, which is then redistributed to someone else in the room who gives feedback on how to handle the problem. The students are then asked to reflect on how it felt own a peer's conflict.
Social Skills Activity	Active Listening	Goal: to demonstrate the consequences of not listening and to encourages students to practice better listening skills.

Several of the activities described above may be used interchangeably with some minor adjustments so as to meet different objectives. The suggested activities have been recommended because they are designed for cognitive, affective and social impact, and each one influences two or three of these domains simultaneously.

Analysis and Interpretation

Categorical and quantitative variables were expressed as frequency (percentage) and mean ± SD respectively. Paired "t" test was used to find the effectiveness of the EI course on EQ. Independent "t" test and one-way ANOVA test were used to compare EQ and its dimensions based on gender and age. $p<0.05$ was considered the threshold for statistical significance. Statistical analyses were performed by using a statistical software package SPSS, version 20.0.

The below tables explain the impact of the EI course on EQ and its sub dimensions.

Table 4

Distribution of the sample according to pre-intervention Emotional intelligence and its sub dimensions based on group

Group	Pain	Experimental		Control	
		Count	Percent	Count	Percent
Emotional intelligence	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0

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	High	0	0.0	0	0.0
Awareness	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0
	High	0	0.0	0	0.0
Emotions	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0
	High	0	0.0	0	0.0
Motivation	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0
	High	0	0.0	0	0.0
Empathy	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0
	High	0	0.0	0	0.0
Social Skills	Low	105	100.0	105	100.0
	Average	0	0.0	0	0.0
	High	0	0.0	0	0.0

As per the pre-test results, 100% of students (both control and experimental) had low EQ before taking the EI course.

Table 5

Comparison of pre-intervention Emotional intelligence based on group

Group	Mean	SD	N	t	P
Experimental	86.4	7.7	105	0.06	0.949
Control	86.4	7.5	105		

As per table 5, we did not observe any significant difference between experimental and control

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group during pretest.

Table 6

Comparison of pre-intervention sub dimensions of Emotional intelligence based on group

		Mean	SD	N	t	p
Self-Awareness	Experimental	16.2	2.4	105	0.2	0.838
	Control	16.3	2.3	105		
Self-Management	Experimental	18.4	2.8	105	0.55	0.586
	Control	18.6	2.7	105		
Motivation	Experimental	17.0	2.4	105	0.37	0.711
	Control	17.2	2.4	105		
Empathy	Experimental	16.5	2.8	105	1.48	0.140
	Control	17.1	2.8	105		
Social Skills	Experimental	17.1	2.0	105	0.48	0.635
	Control	17.2	2.1	105		

The above table did not show any significant difference in EQ scores or it sub dimensions between experimental and control group before intervention.

Table 7

Distribution of the sample according to post intervention Emotional intelligence and its sub dimensions based on group

Group	Pain	Experimental		Control	
		Count	Percent	Count	Percent
Emotional intelligence	Low	12	11.4	103	98.1
	Average	91	86.7	2	1.9
	High	2	1.9	0	0.0
Self	Low	0	0.0	18	17.1

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Awareness	Average	70	66.7	85	81.0
	High	35	33.3	2	1.9
Self-Management	Low	2	1.9	12	11.4
	Average	57	54.3	92	87.6
	High	46	43.8	1	1.0
Motivation	Low	0	0.0	18	17.1
	Average	59	56.2	86	81.9
	High	46	43.8	1	1.0
Empathy	Low	5	4.8	19	18.1
	Average	60	57.1	79	75.2
	High	40	38.1	7	6.7
Social Skills	Low	0	0.0	14	13.3
	Average	80	76.2	90	85.7
	High	25	23.8	1	1.0

Table 7 indicates that, there is a difference observed in the EQ scores and it sub dimensions of experimental group however, the study did not observe any significant difference in the EQ scores or sub dimensions of control group.

Table 8

Comparison of post intervention Emotional intelligence based on group

Group	Mean	SD	N	t	p
Experimental	166.6	14.5	105	18.49	$p<0.01$
Control	137.8	6.7	105		

There is a significant difference ($p<0.01$) observed between the mean scores of experiment group and control group before and after taking the EI course. The mean of experimental group was 166.6 and control group is 137.8.

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Table 9

Comparison of post intervention sub dimensions of Emotional intelligence based on group

		Mean	SD	N	t	P
Self-Awareness	Experimental	33.2	4.0	105	12.6	p<0.01
	Control	27.0	3.0	105		
Self-Management	Experimental	34.0	3.7	105	12.44	p<0.01
	Control	28.3	2.9	105		
Motivation	Experimental	33.6	4.1	105	11.81	p<0.01
	Control	27.4	3.4	105		
Empathy	Experimental	33.4	5.6	105	8.22	p<0.01
	Control	27.9	4.0	105		
Social Skills	Experimental	32.4	3.2	105	13.04	p<0.01
	Control	27.1	2.6	105		

The study also observed a significant difference in the sub dimension scores of experimental and control groups during posttest.

Association of emotional Intelligence and its sub dimension based on age and gender

Table 10

Comparison of pre-intervention Emotional intelligence based on gender

Gender	Mean	SD	N	t	p
Male	86.0	8.4	105	0.79	0.430
Female	86.8	6.7	105		

There is no significant association between the pre-intervention EQ scores of male and female students.

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Table 11

Comparison of pre-intervention sub dimensions of Emotional intelligence based on gender

		Mean	SD	N	t	P
Self-Awareness	Male	16.0	2.7	105	1.55	0.122
	Female	16.5	1.9	105		
Self-Management	Male	18.8	3.2	105	1.7	0.091
	Female	18.2	2.3	105		
Motivation	Male	17.3	2.6	105	0.89	0.376
	Female	17.0	2.2	105		
Empathy	Male	16.1	2.8	105	4.08	$p<0.01$
	Female	17.6	2.6	105		
Social Skills	Male	17.4	2.3	105	1.85	0.066
	Female	16.9	1.7	105		

The study observed a significant difference between the empathy levels of female and male students; it is observed that female students are more empathetic than male students. However, in the other sub dimensions the study did not observed any significant difference.

Table 12

Comparison of pre-intervention Emotional intelligence based on age

Age	Mean	SD	N	F	p
18 – 20	85.5	7.6	83	1.14	0.323
20 – 22	86.8	8.1	93		
22 – 24	87.5	5.9	34		

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Table 13

Comparison of pre-intervention sub dimensions of Emotional intelligence based on age

		Mean	SD	N	F	P
Self-Awareness	18 - 20	16.3	2.7	83	0.5	0.606
	20 - 22	16.3	2.1	93		
	22 - 24	15.9	2.2	34		
Self-Management	18 - 20	16.7	2.8	83	0.58	0.561
	20 - 22	16.7	2.7	93		
	22 - 24	17.3	3.1	34		
Social Skills	18 - 20	17.2	2.1	83	0.71	0.491
	20 - 22	17.2	2.0	93		
	22 - 24	16.8	1.8	34		

Table 14

Comparison of pre-intervention Self- Management based on age

Age	Mean	SD	F	p	Scheffe Multiple Comparisons		
					Pair	F`	p
18 – 20 (A)	18.8	2.6	3.57*	0.030	A & B	0.1	0.896
20 – 22 (B)	18.6	2.6			A & X	3.4*	0.036
22 – 24 (X)	17.4	3.4			B & X	2.6	0.075

Further to that, the study did not observe any differences in the EI scores of students with varied ages. However, we observed a significant difference in the self-management of students

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between the age groups of 18-20 and 20-24. Ability for self-management was high during the age of 18-20 and slightly reduced during 22-24.

Table 15

Comparison of pre-intervention motivation based on age

Age	Mean	SD	F	p	Scheffe Multiple Comparisons		
					Pair	F`	p
18 – 20 (A)	16.5	2.8	4.44*	0.013	A & B	4.3*	0.015
20 – 22 (B)	17.6	2.1			A & X	1.3	0.277
22 – 24 (X)	17.3	1.8			B & X	0.2	0.845

The study observed a significant difference in the motivation level of students with different ages. Here it is observed that 20-22 age group have high motivation comparing with other groups of students.

Discussion and Conclusion

The findings of this study indicate that students who took the EI course had significant improvement in their overall EQ at the end of the semester. None of these students had taken EI course earlier, and therefore, there was clearly a novelty factor. The researchers hypothesized that, there is a significant difference in the EQ scores of students who attended the EI Course and the students who did not attend the EI Course. The results of this study confirm that EQ scores had improved during post-test of experimental group. The study also observed a significant difference in the post-test scores of students in experimental group in the domains of self-awareness, self-management, motivation, empathy, and social skills. One key reason why there was substantial difference between the pre- and post-tests is that, in the post-test, students had a better understanding of the domains of EI, which they did not have during the pre-test phase and all class activities done during the semester were relevant to enhance their overall EQ scores. This shows that scores are most likely underpinned by their theoretical and practical understanding of the course materials, as much as their personal advancement in these areas.

Previous studies have shown a positive correlation between formal courses on EI and improvement in emotional and social skills. Our results continue this trend. Overall, our study shows significant difference in students' aptitudes in five areas of EI: self-awareness, self-management, motivation, empathy, and social skills of students before and after taking the EI

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course. As Table 2 shows, 100% of students' self-report low EQ scores prior to the course, and 86.7% self-report average EQ during the post-test. Within the different domains of EI, the areas of empathy and self-awareness saw the highest levels of increase, particularly as students began to investigate these two dimensions of themselves. Students also took much value from the classes on managing emotions, specifically as they related to their ability to regulate and manage anger, recognize the signs and roots of stress and anxiety. Our experience in teaching the course demonstrated that only some students are introspective, whereas others have to be taught the skills of introspection and self-reflection. Where the students were pre-inclined towards self-reflection, there seems to have been greater receptivity to the activities undertaken to build these skills. Students were also particularly interested in validating their self-perceptions against an objective tool such as a self-measurement matrix, which helped them to investigate their areas of strengths and growth methodically. Whether the self-measurement matrix analysis helped to entrench or move self-perceptions was not investigated.

Students were also very interested in self-assessing their levels of motivation, particularly as it has a direct correlation to grades, and overall success. Conversations in class around theories of motivation were very involved, eliciting a lot of interest and debate. This may be attributed to the newness of the materials being taught, but there was also clearly a desire for students to be self-reflective and assess their own responses to reinforcers and punishers.

Whilst we predicted that there would be a significant association between the variable EI, age and gender, our study observed a significant difference in the empathy levels of female and male students. It is observed that the female students are more empathetic than the male students. Many previous researches had supported that females were more empathic than male. On the other hand, the current study did not observe any significant association between other variables like self-awareness, self-management, motivation and social skills and gender. This could be because all these skills, except for empathy, are gender-neutral and are equally applicable to all people, regardless of gender.

The study observed a significant difference in the self-management of students between the age group of 18-20 and 20-24. Self-management is high among students between the ages of 18-20 but is slightly reduced for students aged 22-24. This is the first time the researchers observed that the 18-20 age group had better ability in managing themselves, this could possibly be due to parental and peer support during their early years of university. Only two empirical studies (Law, Kelly, Huey and Summerbell, 2002) mentioned that self-management improves with age and experiences, which is contradictory to this finding. Whereas this study did not observe any significant association between other variable like self-awareness, motivation, empathy and social skills based on age.

The skills taught in this course can be enhanced, depending upon the need of the individual. As with other skills and competencies taught in any educational program, EI skills also need to be utilized regularly, with practitioners seeking to build upon existing knowledge and honing the

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skills on their own or through professional training opportunities. EI competencies are a set of competencies, which are highly valued in professionals, and many companies put their employees through EI training programs.

Overall, it appears that the course had a significant impact on building students' emotional and social competencies, considered to be important aspects of life skills and essential for their psychological well-being. Possessing high levels of EQ is associated with numerous positive outcomes, such as achievement and overall academic success, being able to build and sustain strong relationships with peers, colleagues, family and friends, and success at work. For students in particular, the course was able to create a strong impact because of the conceptual nature of the course as well as its practical aspect. As previously mentioned, the course content was prefaced by strong theoretical content, situating the study of EI within the context of modern approaches to psychology. Each topic within the course was supported by significant research and theories, so for example, in the topic on motivation, students studied behavioral theories such as classical conditioning and operant conditioning; the topic on empathy differentiated between cognitive empathy and affective empathy and looked at the research of Martin Hoffman, etc. In addition, each topic also included the demonstration and practice of EI exercises that could build competencies in the different EI domains. Here, there was a strong emphasis on skills that promoted reflection, analysis as well as ensuring that the exercises could be adapted to a variety of contexts, so this also implied portability of these skills. At the end of the semester, the students reflected stronger confidence in social skills, as well as the ability to assess and regulate emotions, and they appeared to be very confident that these will be useful during their student, personal and professional lives.

EI is a growing field of research and much more needs to be done to assess EI competencies among students. Other avenues for future research could also include studying the impact of the EI course on freshmen students vs. upperclassmen, as this would yield rich data on the optimum timeframe for students to take an undergraduate EI course. Future studies could also undertake longitudinal studies of students who have taken formal courses in EI to assess the long-term impact of the courses and associated to this research one could also look at the utility of skills taught during the course and how these were used in different contexts. It would also be useful to undertake a comparative study of students who have taken the course and those who did not do the course and see the impact of the course on student achievement based on specific parameters.

Implications of the study

This study fills a gap in the literature since most studies of this nature have been conducted in Western contexts: this is the first study of its kind and size to be conducted in the United Arab Emirates with a population of mixed cultures- Emiratis, pan-Arab as well as a large South Asian population. The student cohort at Abu Dhabi University, consists of approximately 48 different nationalities. The current research also points to the importance of teaching EI course to students at the undergraduate level in order to develop appropriate psychosocial competencies. It

suggests that teaching an EI course to freshmen students in their first semester will be useful in helping students to adapt to their new learning environments, which has an impact on retention rates. The EI course helps students understand the importance of EI in their daily lives, and specifically their social interactions. The end of semester feedback on the course from the students revealed that they learned about the importance of being self-aware, the need to regulate emotions and investigate self-motivation, all of which can contribute to overall academic success. These skills benefit students during their student years, with the advantage of being able to carry them into their professional lives upon graduation. Notwithstanding this, the skills of EI are generally considered to be important in everyday life for managing relationships, navigating friendships, and overall having a deeper understanding of oneself. The current education curriculum needs to expand its offerings to provide students with life skills so as to do more than prepare them for the world of work, instead it needs to equip students with the skills they need to succeed in the workplace, and also to become proactive, responsible and engaged citizens who can contribute to the betterment of society. These include, among others, competencies to work with diverse groups of people, to be self-motivated, to able to read and understand other people, be self-aware and have positive attitudes which bring value for employers.

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