

DIFFERENCES BETWEEN LEVEL TRAJECTORY AND ACADEMIC PERFORMANCE WITH EMOTIONAL SKILLS IN UNIVERSITY STUDENTS

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Abstract

Emotional intelligence is involved in the recognition process, use, understanding and management of its own and others' emotional states to resolve emotional problems and regulate behavior (Salovey, Brackett & Mayer, 2004). Emotional intelligence is taken up in this research, based in Salovey and Mayers's model (1990), to identify whether there were significant differences in emotional skills of students from health sciences, as a function of level of school trajectory and academic performance. 300 university students were included from three disciplines of the Institute of Health Science at the Autonomous University of the State of Hidalgo, México. The sample was selected based on a non-probabilistic sample by subjects type (García, 2009). Three instruments were administered to evaluate emotional understanding, perception and expression. A non-parametric analysis with Chi Square (X^2), did not detect differences statistically significant among students as a function of academic performance and levels of school trajectory for the three abilities of emotional understanding, expression and perception. Only subtest variable score for individuals emotional ability for emotion labeled love, sadness, happiness, anger and fear were related to the independent variables of academic performance and levels of school trajectory.

Keywords: Emotional intelligence, university students, academic performance, school trajectory

Introduction

Management of emotions is an essential skill in life. Salovey and Mayers's model (1990) distinguishes four abilities critical to employing the

information provided by emotions. These four basic skills compose the Emotional Intelligence (EI): (a) to perceive, and value expressed emotions adaptable; to access and/or produce feelings that expedite the thinking and the adaptively; (b) to access and/or produce feelings that expedite thinking and the adaptive action; (c) to understand emotions and the emotional knowledge; and (d) to regulate emotions promoting an intellectual and emotional growth.

From this point of view, the EI is a process that involves the recognition, use, comprehension, and the management of one's own and other's emotional status so as to solve emotional problems and control their expression (Salovey, Brackett & Mayer, 2004). It is integrated by the perception, understanding and the emotional expression, thinking facilities and emotional regulation (Sánchez, Retana & Carrasco, 2008). Sánchez (2010) also considers these as the precursor abilities or regulating sources to perform the regulation.

In the educational field it has been observed that these emotional abilities impact the student's functioning. Saucedo-Chinchay, Salazar-Flores and Díaz-Vélez (2010) mentions that schools that systematically develop the social and emotional abilities in their students improve the students' academic achievements, behavior, and interpersonal relationships.

Fernández-Berrocal and Ruiz (2008) infer that the lack of EI causes or expedites the emergence of behavior problems among students in four elemental areas: interpersonal relationships, psychological welfare, the emergence of disruptive behavior, as well as their academic performance. They report that the capacities to control or regulate their own emotions, to express their feelings clearly, and to be able to restore their positive moods affect decisively the mental health and psychological balance of students, which is in turn related to their final academic performance (AP).

Extremera and Fernández-Berrocal (2004) discuss contradictory results about the influence of the EI on the AP. They comment that English studies credited a direct relation between those two variables in the university students. For example Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim (1998) reported that the EI assessed at the beginning of academic course would predict the score obtained in the final average course grade. Other related studies like the Newsome, Day, and Catano (2000) failed to find positive relationships between the EQ-i- measured EI and the AP in Canadian University students, where neither the final score of the questionnaire nor its subscales predicted the grades when the course ended.

Fernández-Berrocal, Extremera and Ramos (2003) examined the functionality of the EI as an explanatory factor for the AP in secondary students; they found not a direct relation between EI and the academic

achievement, but rather a mediator effect through good mental health has on the average AP of the students. This study showed connections between the AP and EI, specifically, that the interpersonal EI affects the students' mental health. This psychological balance affects the final AP, and influences performance indirectly through other characteristics or variables in the students (Extremera & Fernández-Berrocal, 2004).

Others American investigations show that the EI could act as a regulator of the cognitive abilities that affects over the AP in the vulnerable groups (teenagers with learning problems or a low IQ) (Petrides, Frederickson & Furnham, 2004; cit. Extremera & Fernández-Berrocal, 2004).

Fernández-Berrocal and Ruiz' study (2008) shows that it is likely that the people with lack of EI experience stress and emotional difficulties during their studies, and as consequence, they will fail to adapt emotionally so as to allow them to face those difficulties. Additionally, these investigators indicate that the EI could act as a moderator of the cognitive skills' effects over the AP.

In support of this, Wong, D'Á, Maxwell and Meara (1995; in Parker, Summerfeldt, Hogan and Majeski, 2004) found that the social perception as a skill (ability to understand other's emotional states) is a moderated predictor of the AP in the university students.

Gil-Olarte et al. (2006) found that those who have a high EI are more prosocial and have a better AP. Drago (2004; in Segura, 2011) demonstrated that the EI is significantly related to the grade average, cognitive abilities and students age; they suggest that the academic achievement is related to the students' ability to recognize, employ, and deal their emotions.

On the other hand, the transition from one academic course to its successor course has also been considered as the context to examine the relation between the EI and academic performance (AP). Archer and Lamnin (1985; in Parker, Summerfeldt, Hogan and Majeski, 2004) reported that the younger students are more worried about course grades and being accepted by their partners, while the older students are more concerned about financial stress factors. Bar On (1997, 2000; in Parker Summerfeldt, Hogan and Majeski, 2004) reports that the levels of EI increase significantly in the young adults as they mature with age. This suggests that the levels of EI can be very different in the secondary just graduated students in comparison with the elder ones who attended to the university as a mature student.

Parker et al. (2004) point that it is possible to predict that emotional and social competences change during the school trajectory. The students that persist in the University have different levels of EI at the end of their course in comparison with the levels at the beginning of it. Jiménez and López-Zafra (2009) and Adell (2006) report that the affective aspects influence is

continuous during teaching-learning process and it has consequences during the professional education.

There is as yet little evidence that allow us to infer how the emotion changes over the university school trajectory that which exists is mainly directed to the relation between the EI and the AP. Thus, the current study's principal aim is to identify the differences between the level of school trajectory and their academic performance with emotional skills of the University students of health science with a focus on love, sadness, happiness, angriness and fear emotions.

Method

Participants

300 University students of the Institute of Health Science at the Autonomous University of the State of Hidalgo from the disciplines of Psychology, Dentistry and Medicine participated. They were selected according to the non-probabilistic sampling by subjects type (García, 2009), under the following requirements: being register during the semesters July-Dec 2012 and January-June 2013; being a 1st to 6th semester student.

Variables

The independent variables were: (a) academic performance (student's average course grades: low 7-7.9, medium 8-8.9 and high 9-10), and (b) levels of school trajectory (beginning semesters from 1st to 3rd and middle from 4th to 6th).

The dependent variables were three: Emotional skills as regulatory resources: (a) Emotional comprehension, (b) Emotional perception, and (c) Emotional expression.

Type of study and research design

Quantitative, descriptive-comparative study with a transactional design

Instruments

Three instruments validated in Mexican population were applied.

1) Emotional Comprehension Test (ECT: Sánchez, Retana and Carrasco, 2008). Family situations were identified as to the emotional experience of people, being able to give validity to the content as well as dependability a sensitive test for the measure of the emotional understanding in their three areas:

a) Ability to understand the ideal context for each emotion (Section1).

b) Ability to understand causes and consequences of each emotion (Section 2).

c) Capacity to understand more complex and more contradictory emotions (Section 3).

2) Test of Emotional Perception. To evaluate the emotional perception, the test of emotional perception (Sánchez, Carrasco and Retana, 2013) was used. It consists of two sections that evaluate the self-perception of five basic emotions (happiness, love, anger, sadness and fear) through vignettes self-descriptors, as well as the perception of the emotions in other that are evaluated starting from five pictures of men and five of women.

3) Graph-written battery of the emotional expression. This battery has 21 items to evaluate emotional expression (Martínez and Sánchez, 2011). Is applicable in different contexts for Mexican population with a Cronbach's Alpha (.86). It allows estimate the capacities that the individuals possess during their social exchanges labor, family, romantic, friendly.

Statistical analysis

The results were statistically analyzed with the non-parametric Chi Square test, with the objective of identifying significant differences in the emotional abilities as a function of academic performance and levels of school trajectory in students in the health sciences.

Procedure

The study began by notifying the coordinator of each discipline the objective, and requesting the authorization to work in schedules of class with the selected students. The details about the names, grade averages, and the students' schedules were obtained from the registrations of the academic areas. The authors then informed the professors about the work that was required from some students for participation; the students were informed about the importance of their participation, as well as of the freedom they had to decide whether to participate or not in this study. The students who freely accepted to participate in the study.

Were given instructions how to respond to the first part of the battery of tests. After this (which lasted approximately 20 minutes), the students were informed as to the date, hour and place of the second session, to conclude the battery of tests. The same procedure was followed on the second application of the battery of tests; this process had a duration of approximately 15 minutes.

Results

No statistically significant differences were found on the variables (academic performance and levels of school trajectory) and the three abilities

(emotional understanding, expression and perception). However statistically significant differences were observed with a $p \leq .05$ on each emotional ability for emotion (love, sadness, happiness, anger and fear) with regard to each independent variable (academic performance and levels of school trajectory).

Emotional Understanding

Significant differences were observed in the ability to understand causes and consequences of the emotions. The students with a middle academic performance (AP) understand causes and consequences of the emotions in comparison with the students of high and low AP. These differences were observed in the following emotions: anger ($X^2=24.761$, $p=.000$); happiness ($X^2=16.434$, $p=.002$); fear ($X^2=17.981$, $p=.001$). Also, in the capacity to understand more complex or more contradictory emotions, the significant differences were in the students with middle AP in comparison with those of high and low AP, in the emotions of love and fear ($X^2=11.265$, $p=.024$).

As for the level of school trajectory (LST), statistically significant differences were observed among the students of initial LST regarding those of middle LST, in the following abilities and emotions: Ability to understand the ideal context of the sadness ($X^2=4.652$, $p=.031$); ability to understand causes and consequences of the anger ($X^2=6.803$, $p=.033$); ability to understand complex and contradictory emotions in the love and anger ($X^2=6.530$, $p=.011$).

Emotional Expression

Statistically significant differences were found in the ability to express in a precise way one's own emotions. The students with an AP half show more understand in comparison with the students of high and low AP. These differences were observed in the following emotions: anger ($X^2=6.332$, $p=.042$); fear ($X^2=16.953$, $p=.009$); sadness ($X^2=10.095$, $p=.021$).

Regarding the LST, differences statistically significant were found in the students of LST initial in comparison with those of middle LST, in the following abilities and emotions: ability to express the own emotions of love ($X^2=4.327$, $p=.038$) and fear ($X^2=9.723$, $p=.045$). On the other hand, the students of the intermediate semesters express the anger with more frequency, ($X^2=11.179$ $p = .011$), and with more intensity (or reactivity).

Emotional Perception

Statistically significant differences were observed in the ability to perceive fear in others ($X^2=6.372$, $p=.041$), being the students with middle AP who report this ability with more frequency.

Lastly, also statistically significant differences were found in the ability to perceive love in others ($X=4.739$, $p=.029$), showing that it was the students of initial LST who more frequently perceive this emotion.

Discussion

Extremera and Fernández-Berrocal (2004) studies that don't find a direct relationship among the variables in question; in the same way, the present study, in a first analysis, didn't find differences statistically significant in the crossing of emotional abilities with respect to academic performance (AP) and level of school trajectory (LST). However, in a second analysis, it was detected that the students of middle AP possess a better handling of the abilities of perception, understanding and emotional expression regarding those that have high and low AP. It was also identified that the students of initial LST possess a better handling of the abilities of perception, understanding and emotional expression regarding those that have middle LST.

From the perspective of Salovey and Mayer's model (1990) it stands out that the ability of the students to use the information that provide the emotions considering the basic abilities: to receive, to value and to express emotions with accuracy and adaptation, to consent and/or to generate feelings that facilitate the thought and the adaptative action to understand emotions and the emotional knowledge and to regulate the emotions promoting an emotional growth and intellectual.

The results allow to suggest that the students of half AP and of LST initial are involved in a process on the recognition, use, understanding and administration of the own ones and of other emotional states, to solve emotional problems and to regulate the behavior like Salovey, Brackett and Mayer outline it (2004). Also, according to the results it can said that the students at the same time use the emotional abilities to level of the perception, the understanding and the emotional expression, facilitating the thought and the emotional regulation (Sánchez, Retana and Carrasco, 2008).

For the above-mentioned and coinciding with diverse authors (Castejón, Cantero and Pérez, 2008; Extremera and Fernández-Berrocal, 2002; Gil-Olarte et al.; 2006 Segura, 2011), a great necessity is observed of incorporating the emotional abilities, in an explicit way, in the university plan of studies, when being primordial the domain of these for the evolutionary and socio-emotional development of the pupil. These influence in the student's psychological adaptation in classes, in their emotional well-being, academic achievements and labor performance, demonstrating that emotionally expert people, have wide advantages in diverse aspects of the life, to the being able to know and to manage their feelings well, and to interpret and to face with effectiveness the feelings of the other (Morales,

2012). Extremera and Fernández-Berrocal (2004) highlight that if we seek to build full individuals and preparations for the society of the future, a complementary perspective should be adopted, integrating it with other personal and social aspects that have been related with the success in the educational context. It is necessary to continue with studies that enlarge regarding the behavior of the emotional abilities along the school trajectory.

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