EMOTIONAL INTELLIGENCE AND HAPPINESS IN THE
LEARNING PROCESS

Joan Guerra Bustamante
Universidad de Extremadura
España
joanguerrabustamante@yahoo.es

Benito León del Barco
Universidad de Extremadura
España
bleon@unex.es

Eloisa Guerrero Barona
Universidad de Extremadura
España
eloisa@unex.es

Abstract

The present study aims to know the factors of emotional intelligence predict happiness at participating adolescents. The sample consists of 646 students of Obligatory Secondary Education of Cáceres, aged between 12 and 17 years. The 47.5% of the sample were female and 52.5% male. Assessment instruments used were the TMMS-24 and the Oxford Happiness Questionnaire. The initial purpose of this investigation was to examine the predictive relationship between emotional intelligence and happiness in students of secondary school. These results provide support for claims of emotional intelligence to predict happiness in the sample.

Keywords: emotional intelligence, learning styles, happiness.
INTELIGENCIA EMOCIONAL Y FELICIDAD EN EL PROCESO DE ENSEÑANZA

Resumen

El presente estudio tiene como objetivo conocer los factores de la inteligencia emocional predicen la felicidad en adolescentes. La muestra se compone de 646 estudiantes de Educación Secundaria Obligatoria de Cáceres, con edades comprendidas entre 12 y 17 años. El 47,5% de la muestra eran hombres y mujeres y el 52,5%. Los instrumentos de evaluación utilizados fueron el TMMS-24 y la Felicidad de Oxford Cuestionario. El propósito inicial de esta investigación fue examinar la relación predictiva entre la inteligencia emocional y la felicidad en los estudiantes de la escuela secundaria. Estos resultados proporcionan apoyo a la idea de que la inteligencia emocional actúa como variable predictora de la felicidad en la muestra.

Palabras clave: inteligencia emocional, estilos de aprendizaje, felicidad

Introduction

Learning involves the full functioning of the organism as thinking, feeling, perceiving, and behaving (Da Fonseca et al., 2013). This article aims to highlight the relevance of emotional intelligence and happiness in the learning process. In that line, psychological well-being of emotional intelligence subscales proved to be the best predictor of satisfaction with life and personal protective factors (Mikulic et al. 2010).

1. Emotional intelligence during adolescence

The teaching and learning processes are influenced by different cognitive variables, important amongst them include students learning styles and emotional intelligence
Emotional intelligence was introduced by Salovey and Mayer (1990). One of the most accepted definition of emotional intelligence is that it is a construct that it refers to the ability of handling emotions and canalizing them in a positive and constructive way. We are interested in the study of emotional intelligence, defined as an ability to perceive, understand, take and regulate their own and others emotions. This is a skill that can help to guide their emotions and to improve their levels of well-being (Fernández-Berrocal and Extremera 2009).

The interest in emotional intelligence in groups of student of secondary education has increased the last years due to the evidence reported by several studies about its importance in different aspects of a person’s life (Ferrándiz et al. 2012). A good level of emotional intelligence helps for a healthy personal development during the stage of adolescence. In the same way, those teenagers with a higher variety of affective skills based on understanding, handling and regulating their own emotions, do not need to use other external types of regulators such as alcohol, tobacco or cocaine in order to repair their states of negative moods for stressing life event to which they are exposed in this critical age (Ruiz-Aranda et al. 2009).

Students learn in many ways, by seeing and hearing, reflecting and acting, reasoning logically and intuitively, memorizing and visualizing and drawing analogies and building mathematical models or steadily and in fits and starts (Felder and Silverman, 1988). However, there are growing evidences to build a solid education in emotional intelligence which consists in preparing the teenagers to be able to face in an intelligent emotional way their different options during this critical stage (Pomar and Fernández 2011).

A recent study (Mahasneh, 2013) shows that there is a significant positive correlation between the dimensions of emotional intelligence and learning styles, and also indicate that learning styles significantly explain emotional intelligence and learning styles predict all sub-dimensions of emotional intelligence. On the other
hand, a study about emotional intelligence and aggression done in United States, (Saadi et al. 2012) claimed that training in emotional intelligence reduces the aggression and increases the capacity of personal and social adaptation. This data support the need of carrying out programs to develop and improve emotional intelligence in a preventive way in order to avoid violent situations.

2. Happiness during adolescence

An efficient intervention begins when the teacher reduce the possibility of disagreements between teaching styles and learning styles, in this line it is necessary that the teacher knows the ways of approaching student learning, attitudes, values, cultural differences, skills and study habits (González, 2013).

Happiness is a psychological state of emotional and cognitive type in people. It is found to be independent of the level of development of the different countries (Moyano and Ramos 2007). It has a positive affective component in which the positive emotions and the subjective interpretation of well-being are the main pieces (Arita et al. 2005).

The adolescence is a critical stage in the process of building up the identity (Tesouro et al. 2013). During this important time, the awareness of the personal strength may have a key role in the determination of the identity and of the self-esteem (Giménez et al. 2010). Thus, encouraging knowledge and determining the personal strength is a potential resource for increasing the level of happiness. Similarly, there are other factors, such as family incomes, and individual demographic variables (age and health conditions) which are closely linked to happiness (Wang and Sunny 2014).

Learning in a structured educational is a two-step process, the reception step of external information and internal information (arising introspectively) become available to students, who select the material they will process and ignore (Felder and Silverman, 1988). Likewise, we start to appreciate the importance of a positive
education, which is understood as a conjunction of traditional techniques and happiness (Seligman et al. 2009). Education must pay more attention to the education in happiness and well-being during childhood and adolescence, being important for proper development of the person. If we learn to be happier, not only it is much better for us but it is also better for our partner, our family, our environment and for the general society (Lyubomirsky 2008).

3. Relation between emotional intelligence and happiness

With regard to the existing literature, the majority of previous studies confirm the correlation between emotional intelligence and happiness, or similar concepts (e.g. well-being, life satisfaction). So, BarOn (1997) claims that the emotional intelligence is a determinant factor to achieve success in life, having a direct impact in general well-being and emotional health.

The social interest caused by the inclusion of socio-emotional learning in adolescence has facilitated the implementation of programs of emotional education in the classroom. These programs of emotional literacy try to develop basic abilities in emotional intelligence such as a way to improve the psycho-social health among the teenagers. These teaching programs must be accompanied with pastime activities of social participations, activities in helping other people or addressed actions to the flow in personal development which would increase the levels of happiness (Rey and Extremera 2012).

Since Salovey and Mayer had created the construct of the emotional intelligence, most of their ideas were seen and coincided with some theoretical and practical contents tackled from Human psychology and Positive psychology, because they found several points in common, such as the human being unity; the interpersonal connections; the power of hope and positive thoughts (Dalmau and Rovira 2009).

The developing of the emotional intelligence is a necessary task in order to promote these skills which will contribute in a positive form to social and personal well-being
of students (Mikulic et al. 2010). After Ruiz-Aranda et al. (2011) the researches, which demonstrate that emotional intelligence is a determinate element in emotional adjustment, in personal well-being and interpersonal relationships, are variable. Learning in a structured educational is a two-step process, the reception step of external information and internal information (arising introspectively) become available to students, who select the material they will process and ignore (Felder and Silverman, 1988). That is why, an educational intervention to implement should be attractive for learner. we learn in different ways from each other and we often choose to use what has become known as a preferred learning style (Pritchard, 2013).

The components of the perceived emotional intelligence predict aspects related to personal well-being (more vital satisfaction and subjective felicity) and confirm positive correlation between vital satisfaction and subjective happiness (Rey et al. 2005). In that line, positive emotions benefit the adaptation of stress and adversity (Yánoz and Comino 2010).

Previous studies reported that emotional intelligence is associated with life satisfaction, with better social relationships and with negative associations of loneliness (Berrios et al. 2006; Ciarrochi et al. 2001; Ciarrochi et al. 2000; Dawda and Hart 2000; Palmer et al. 2002; Saklofske et al. 2003; Schutte et al. 1998).

One important finding of this study is that somebody can improve his happiness provided that this person wants to make an effort (Lyubomirsky 2008). This perspective makes it necessary training emotional competences, through activities in the teaching-learning process, to increases happiness. Emotional intelligence components, such as the understanding and regulation of one’s own emotions and of the emotions of the other person and therefore to set up a good emotional connection, help us to establish close and satisfactory connections which all go well with happiness. Likewise, in a recent study, Bhullar et al. (2013) identified that the participation in gratifying activities promote well-being in the individual.
It is a confirmed fact that the emotional competences of the student are predicted in his emotional intelligence and in the level of his psychological well-being, so the learning in emotional skills and competences during his school years is of vital importance (Recondo et al. 2011). After Pena et al. (2012), the emotional skills were associated to different dimensions of personal well-being, such as perception of the vital satisfaction.

4. Method

Within the broad approach to the problem of learning styles, we understand that the analysis of emotional intelligence and its relation to happiness in adolescents can provide new and suggestive lines research and enrich the work done so far with another perspective.

4.1. Participants

Participants in the study were 646 adolescents (307 women and 339 men). The age of the participants ranged from 12 to 17 years, being 5.9% of 12 years, 25.5% of 13, 28.5% of 14, 24.4% of 15, 11.2% of 16 and 5.5% of 17 years old. It was composed of students who belong to eight high schools. The selection of the samples was done by poly staged sampling by conglomeration and random selection of the groups from the 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd}, and 4\textsuperscript{th} years of Mandatory Secondary Education (ESO). The sampling by conglomeration was also carried out all random, choosing eight school centers in Cáceres. The students were shared out in 21.4\% of 1\textsuperscript{st} ESO, 33.5\% of 2\textsuperscript{nd} ESO, 26.7\% of 3\textsuperscript{rd} ESO and 18.4\% of 4\textsuperscript{th} ESO.

4.2. Measure instruments

Measure instruments (TMMS-24 and Oxford Happiness Inventory) utilize variables assessing happiness and emotional intelligence.

*TMMS 24. Trait Meta Mood Scale (Salovey et al. 1995; Spanish adaptation by Fernández-Berrocal et al. 2004).* It is used to assess the perceived interpersonal
emotional intelligence that evaluates the knowledge of each person about his own emotional states, a personal estimation about thoughtful aspects of our emotional experience (Salovey et al. 1995). The scale has three factors: Attention (e.g. “I pay much attention to my feelings”, “Usually I care much about what I´m feeling”), Clarity (e.g. “I am usually very clear about how I feel”, “I can sense out of my feelings”) and Repair (e.g. “When I am angry I don’t usually let myself feel that way”, “No matter how badly I feel, I try to think about pleasant things”). All statements are rated on a 5 point Likert scale where 1 corresponds to strongly disagree and 5 to strongly agree. It has an adequate internal consistency: Attention (α = .90); Clarity (α = .90); Repair (α = .86), giving a reliable and right test-retest.

Oxford Happiness Inventory (Argyle et al. 1989). Happiness was assessed using the 29 item self-report. Some of the questions, a number of statements about happiness, are phrased positively and others negatively. Specifically, it assesses subjective happiness (e.g. “I feel that life is very rewarding”, “I have very warm feelings towards almost everyone”, “I rarely wake up feeling rested”). All statements are rated on a 6 point Likert scale where 1 corresponds to strongly disagree and 6 to strongly agree. Lyubomirsky (2008), the lowest score which can be obtained with this questionnaire is 1 (if answered 1, that is, “I strongly disagree” in all statements) and the highest score is 6 (if answered 6, that is, “I strongly agree” in all statements). The studies done on this scale with people between 13 and 68 years checked a high reliability (α = .91).

4.3. Procedure

Prior to the data collection, participants were informed about the nature of the study, with guarantees of the participants’ voluntariness and anonymity. Then they completed the measures (TMMS-24 and Oxford Happiness Inventory). All of measures administered on paper. The assessment was carried out in classrooms during the normal school schedule, during 35 minutes. Once the data was collected, we proceeded to encode, manage and computer record the responses to the tools
in a database for subsequent statistical analysis.

4.4. Data analysis

Data analyses were conducted using the IBM Statistical Package for the Social Sciences (SPSS) version 17.0.

First of all, different subgroups of the sample were selected according to the happiness level of the participants. For this, the scores of the Oxford Happiness Questionnaire were used. Once obtained the happiness scores, the percentiles were calculated to establish the three happiness groups: the percentile 25 includes those participants who obtained a low happiness score, the percentile between 25 and 75 include the people with an average happiness score and the percentile 75 include the participants with a high happiness score.

Subsequently, a descriptive and a variable analysis were done using the test of Kruskal-Wallis. After that, we did a differential analysis with predictive finals. To this end, the groups made according of the happiness levels were used. A structure matrix is shown discriminated analysis. We tested which function had the best predictive capacity and discrimination power over the three happiness groups. In other words, we observed which function explains a superior variable percentage over the rest of the functions, which one shows a bigger canonic correlation and distance between the discriminated groups (Lambda de Wilks closest to 0) and the chi-square analysis and which one presents the most elevated level of significance. Similarly, we also wanted to know the averages in the sign of the centroides functions of the groups in order to interpret the connection of each factor within the different happiness groups.

5. Results

This study aims to analyze the predictive relationship between emotional intelligence and happiness in student of secondary school.
First, Figure 1 shows the descriptive analysis of the obtained averages for each factor of the different happiness groups. The data indicate that the average scores in the attention factor do not present significant differences in the three happiness groups (low happiness 24.05, average happiness 24.43 and high happiness 25.27). In contrast, we have found that in the clarity factor there is a difference between the means (low happiness 22.86, average happiness 25.64 and high happiness 28.97). In the same way, the same tendency was observed in the averages for the repair factor (low happiness 24.19, average happiness 27.20 and high happiness 30.61).

![Graph showing descriptive analysis](image)

Fig.1. Descriptive analysis

In Table 1, the descriptive statistics and the results of the variable analysis test of Kruskal-Wallis is shown, describing important differences in emotional intelligence variables within the different groups of happiness.
The data show important statistic differences in the emotional intelligence *clarity* and *repair* factors, but not in the *attention* factor. These results confirm the existence of a difference in the emotional intelligence of the different happiness groups.

Next, we made a differential analysis for predictive purposes. A structure matrix is shown discriminate analysis. Based on this matrix we can see which function presents a bigger discrimination power and a predictive capacity over the three happiness groups. Likewise, we also wanted to know the averages in the sign of the centroides functions of the groups in order to interpret the connection of each factor within the different happiness groups.

Once calculated the structure matrix which is created into the discriminate analysis, shown in Table 2, we see that function 1 presents a bigger discrimination power, so
this one will be used for the discrimination of the three happiness groups.

Table 2. Structure matrix. Discriminate function.

<table>
<thead>
<tr>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity</td>
<td>.85*</td>
</tr>
<tr>
<td>Repair</td>
<td>.81*</td>
</tr>
<tr>
<td>Attention</td>
<td>.16</td>
</tr>
</tbody>
</table>

*Bigger absolute correlation between each variable and the discriminate function.

We observe that function 1 explains a superior variable, a bigger canonic correlation and distance between the discriminated groups (Lambda de Wilks closest to 0) and the chi-square analysis which one presents the most elevated level of significance. So Function 1 (% of variable = 99.7, canonic correlation= .38, Wilks$\lambda= .84, \chi^2= 10, gl= 6, p=.00$) while function 2 (% of variable = .3, canonic correlation = .02, Wilks$\lambda= 1.00, \chi^2= .28, gl= 3, p=.86$). Function 1 shows as factors with a bigger predictive capacity the clarity factor (.85*) and the repair factor (.81*).

In order to interpret the connection of each factor within the different happiness groups we concentrate to know the averages in the sign of the centroides functions of the groups.
Table 3. Results of the classification using the discriminate function of the sample

<table>
<thead>
<tr>
<th>Counting</th>
<th>Low Happiness</th>
<th>Average Happiness</th>
<th>High Happiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Happiness</td>
<td>15</td>
<td>114</td>
<td>8</td>
</tr>
<tr>
<td>Average Happiness</td>
<td>8</td>
<td>283</td>
<td>25</td>
</tr>
<tr>
<td>High Happiness</td>
<td>3</td>
<td>121</td>
<td>52</td>
</tr>
<tr>
<td>Low Happiness</td>
<td>10.9</td>
<td>83.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Average Happiness</td>
<td>2.5</td>
<td>89.6</td>
<td>7.9</td>
</tr>
<tr>
<td>High Happiness</td>
<td>1.7</td>
<td>68.8</td>
<td>29.5</td>
</tr>
</tbody>
</table>

Correct classification of 55.6% of the original agrouped cases.

We find for the low happiness group= -.60, for the average happiness group= -.06, and for the high happiness group= .58. It is understood that the high scores in clarity and repair are related to a bigger perceived happiness level and the low scores should be related to a smaller perceived happiness level. The discriminated canonic function of the shown sample in Table 3, classifies correctly 89.6% of the average happiness group. Average results in the prediction superior to 33 % which we would get right by chance in the three groups of happiness.

Results show that clarity and repair factors of emotional intelligence predict happiness in teenagers. We have found a predictive capacity over the average happiness group in sample.
6. Conclusion

The initial purpose of this investigation was to examine the predictive relationship between emotional intelligence and happiness in students of secondary school. These results provide support for claims of emotional intelligence to predict happiness in the sample.

Learning style awareness should make an impact on pedagogy and should help teachers to a better understanding of the needs of learners (Pritchard, 2013). However, the learning process is well suited to nurture emotional intelligence and contribute to increase perceived happiness.

Two factors of emotional intelligence (repair and clarity) were significantly correlated with happiness. In this study, those who scored higher on a measure of clarity and repair had a scored higher of happiness. This result is in line with those studies previously reporting that perceived emotional intelligence components predict aspects such as vital satisfaction and more subjective happiness (Rey et al. 2005).

Previous literature has shown that the components of clarity and repair of emotional intelligence is a determined element of well-being and psychological health (Fierro and Fierro-Hernández 2005; Martín et al. 2008; Ferragut and Fierro 2012). In the same line, some studies (Fernández-Berrocal et al. 2001; Fernández-Berrocal et al. 1997; Salovey et al. 1999; Salovey et al. 1995; Salovey et al. in press) that reported relationships between trait emotional intelligence factors (clarity and repair) and psychological adjustment. In the same way, the results are in the line of the studies done on emotional intelligence (Liu et al. 2013) and they have found a positive correlation between emotional intelligence as a feature of life quality.

The students must learn these abilities (emotional repair and clarity) in the school. However teachers must understand that learning styles are not fixed traits which an individual will always display and learners are able to adopt different styles in
different contexts (Pritchard, 2013).

The findings of this study confirm the observations of other researchers on the higher important of emotional repair. It happens because life always includes setbacks and knowing how to repair feelings is essential in order to be happy. In that line, Hernández and Valera (2001) reported that happiness is a feeling which makes understand in a positive way different situations or difficulties in life. However, context plays a central paper in emotional regulation, thus it is a process wherein the individuals modify their emotional experiences, expressions and situations to produce answers which are well-fitted for environmental requests (Aldao, 2013).

Learning styles must be aimed at developing emotional intelligence as a means of increasing happiness. Currently, positive educational classroom program for the students to increase the happiness is being pursued, include teaching resilience in the classroom as one of the most important elements, as well as the others aspects such as positive emotions, flow and common sense (Seligman et al. 2009). On the other hand, previous studies that have examined the association between emotional intelligence, vital satisfaction and resilient potential, showing higher emotional intelligence is associated with higher vital satisfaction (Mikulic et al. 2010).

In other hand, obtained results showed that adolescent who presents a higher emotional clarity presents a higher happiness level. In other words, a teenager who knows his feelings presents a higher subjective happiness. Accordingly, Carr (2007) argues that a fundamental target of happiness and positive emotion studies consists in finding easily a way to distinguish clearly positive states from negative states, because positive affectivity is an important happiness aspect.

It is necessary to include training emotional intelligence in the teaching-learning process, and include identify and recognize emotion. Correct understanding of personal and others emotions is a factor that predicts happiness, because the
ability of understanding emotional information allows an adolescent to have a good perception of emotional reality.

Learning styles are comprised of cognitive, affective, and physiological aspects that show how individuals perceive, interact with, and respond to the learning environment (Da Fonseca et al., 2013). The different personal characters and the strategies of positive behavior are happiness predictors (Datu and Valdez 2013). Likewise, the classroom is a perfect place to development emotional abilities, which the aim of learning productive strategies for personal development and increasing their happiness and wellbeing. It is important emphasizing especially on emotional repair and clarity. On the other hand, training emotional competences is possible to development life quality on individual level and on social level.

7. Limitations and future directions

Several limitations of the current study should be noted. First, our sample size was small, limiting statistical power. Nevertheless, we don’t found an established difference having into account the variability in ages in order to find the differences between an early adolescence and a late adolescence. Second, the current study was cross-sectional and not a prospective, longitudinal investigation, which prevented us from drawing inferences regarding the direction of associations.

Despite these limitations, this study showed the analysis of emotional intelligence and its relation to happiness in adolescents can provide new lines research and enrich the work of learning-teaching process with a new perspective. The study helps one to understand the evidence abilities of emotional intelligence (emotional clarity and repair) may influence happiness among adolescents.

Future research needs to investigate the teaching-learning process in the emotional intelligence competences. Cause, emotional intelligence could be an important factor to determine the effectiveness of each learning style and the learning outcomes (Chirayath and Elizabeth, 2013).
References


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