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ARTÍCULOS DE INVESTIGACIÓN

Emotional intelligence and ADHD: A comparative analysis in students of Lima Metropolitan area

Inteligencia emocional y TDAH: Un análisis comparativo en estudiantes de Lima Metropolitana

Luciana M. Barahona[1a] & Alberto A. Alegre[1b*]

[1]Universidad San Ignacio de Loyola, Lima, Perú.

[a]Bachelor´s degree in Psychology granted by the Universidad San Ignacio de Loyola. Secondary school Psychologist at Antares school. [b]Bachelor´s degree in Psychology granted by the Universidad de Lima, Master in Neuroscience and PhD candidate in Psychology at the Universidad Nacional Mayor de San Marcos. Director of the Assessment, Integral Formation ad Competences of the Universidad San Ignacio de Loyola. Specialist in statistics and measurement in behavioral sciences.

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***Correspondencia**

Email: aalegrebravo@gmail.com

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Summary

The following study aims to identify statistically significant differences between adolescent students with and without Attention Deficit Disorder and Hyperactivity (ADHD) in emotional intelligence skills. The study sample was composed of 44 students with ADHD diagnosis and 192 students without ADHD; both groups were obtained by an intentional process. The participants were evaluated with the Emotional Intelligence Inventory of BarOn ICE: NA, Peruvian adaptation and standardization (Ugarriza & Pajares, 2003). The results showed that there are statistically significant differences in intrapersonal skills (U = 3306.50, z = -2.25, p = .024, r = -.15) and positive impression (U = 3369.00, z = -2.10, p = .036, r = -.14) of emotional intelligence between students with ADHD and students without ADHD. Thus, the first group got higher scores than the second one in both aspects.

Keywords: Emotional intelligence, attention deficit disorder, emotional skills, secondary school students.

Resumen

El presente estudio busca identificar diferencias estadísticamente significativas entre los estudiantes adolescentes con y sin Trastorno de Déficit de Atención e Hiperactividad (TDAH) en las capacidades de la Inteligencia emocional. La muestra del estudio estuvo compuesta por 44 alumnos con diagnóstico TDAH y 192 estudiantes sin dicho trastorno; ambas unidades de análisis se obtuvieron mediante un procedimiento intencional. Los participantes fueron evaluados con el Inventario de Inteligencia Emocional de BarOn ICE: NA, adaptación y estandarización peruana (Ugarriza & Pajares, 2003). Los resultados evidenciaron que existen diferencias estadísticamente significativas en la Capacidad intrapersonal (U = 3306.5, z = -2.25, p = .024, r = -.15) e Impresión positiva (U = 3369.0, z = -2.10, p = .036, r = -.14)

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de la Inteligencia emocional entre estudiantes con y sin TDAH, obteniendo mayores puntuaciones el primer grupo en ambos aspectos, a diferencia de sus pares sin dicho trastorno.

Palabras clave: Inteligencia emocional, Trastorno de Déficit de Atención, capacidades emocionales, estudiantes de secundaria.

Introduction

The Attention Deficit Disorder and Hyperactivity (ADHD) is identified as one of the most common disorders in childhood and adolescence (Lora & Moreno, 2010). This fact is evidenced with the high rates of pediatric consultations and subsequent diagnosis of it (Soutullo & Diez, 2007). Between 2% and 12% of the pediatric population worldwide is affected by the ADHD and it does not depend on culture or nationality since its diagnosis has a transcultural validity (Soutullo & Mardomingo, 2010). It is recognized as a psychological disorder characterized by a persistent pattern of attention deficit and/or hyperactivity-impulsivity that inteferes with the functioning and development in social, academic and work environment and reduces the life quality of the individual (American Psychiatric Association, 2014).

As to the characteristics of this disorder, Carballo (2011) considers that distraction can range from severe to moderate with short attention periods, emotional instability, motor restlessness and impulsive behaviors. According to Barkley (2002), the ADHD has as distinctive element an alteration of executive functions, given that such dysfunction has the following characteristics: difficulty in the attention management, in recognizing priority patterns and in executing an action plan; impediment to formulate an intention and inability to establish an objective achievement plan (Pistoia, Abad-Mas & Etchepareborda, 2004).

ADHD has biological origins due to genetic predisposition. The inheritability level of this disorder is between 60% and 80% (Faraone et al., 2005) and it is diagnosed worldwide in different countries and cultures, with a high comorbidity rate (Carballo, 2011). Its causes are also related to transmission and organization faults in functional circuits of the brain responsible for the behavior and information processing. Neuroimage studies show that these alterations are not limited to regions separated from the brain, but they occur in several areas that interact among them and form

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circuits, which include executive function, somatic motor, dorsal attention, visual and reward circuits (Catellanos & Proal, 2012).

On the other hand, one of the most common consequences of this disorder is the deterioration in the family, social and academic environment, which can limit the future of the child and adolescent if they do not receive the adequate treatment. Students who suffer from this disorder tend to have difficulties in their general performance (San Sebastián, Soutullo-Esperón & Figueroa-Quintana, 2010), and do not obtain satisfactory academic results mainly due to the poor organization of studies and ignorance of appropriate techniques and recourses to their profiles in order to do homework (Iglesias, Gutiérrez, John & Rodríguez, 2015).

The review and analysis of national and international studies about ADHD show a main and important trend to identify the cognitive aspects of this disorder for corrective and/or remedial intervention (Orjales, 1991; Barkley, 2002; Hinojo, Cáceres & Aznar, 2006). This shows the lack of research works that contribute to knowledge of affective and social experience of the individual who suffers from this disorder, as important and specialized as the studies about cognitive phenomena.

Based on the foregoing and the specialized literature reviewed, we can conclude that ADHD as a disorder affects the life quality of the person who suffers from it in the personal and social areas. Therefore, the emotional intelligence study in individuals with this diagnosis is important, since it refers to the ability to supervise one´s own and other people´s feelings and emotions, to distinguish among them and to use this information to guide the action and own thinking (Salovey & Mayer, 1997). That is, it implies the ability to monitor one´s own and other people´s feelings and emotions, to differentiate among them and regulate them, using this information to solve problems (Olvera, Domínguez & Cruz, 2002), necessary conditions for a positive development since they are related to happiness, social functioning

and welfare of children and adolescents (Fernández-Berrocal & Extremera, 2009).

Currently, emotional intelligence is an important and controversial psychological phenomenon, considering the vast research that is performing and its direct application to education, clinic and business fields. Although this psychological variable is still conceptualized in different ways by the authors, it is a new area of study about emotions and understanding of the adequate interaction between emotion and cognition that facilitates the development of strategies that allow the individual a functioning adapted to their environment (Salovey & Grewal, 2005). The study of ADHD has diverse perspectives with the same main idea, which lies in the fact that the main emotional skills are an important factor when explaining the functioning of the subject in all the vital areas (Mikolajczak, Luminet & Menil, 2006). The most thorough hypothesis with respect to this construct is that the emotional intelligence is not new, but a mix of personality characteristics studied by psychologists for decades (Lilienfeld, Lynn, Namy & Woolf, 2011).

As to emotional aspects in boys and girls with ADHD, Albert, López-Martin, Fernández-Jaén and Carretié (2008) state that they have difficulties in emotional skill and this affects the emotion recognition, regulation and expression skills. They also showed that children and adults suffering from this disorder, specifically the subtype of combined ADHD, have dysfunctions in the recognition of affective information. Fernández-Jaén et al. (2011) found that the symptomatic intensity of the ADHD showed an inversely significant relationship with social skills, according to parents. The attention deficit score was correlated in the same way with social and leadership skills, according to parents and teachers.

Lewis, Guzmán, Cardozo and Santiago (2004) found differences in the social and school adaptation between children with ADHD and children without ADHD. Children with combined ADHD had a greater maladjustment.

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Therefore, it is suggested that this diagnosis can affect the normal life of the individual since it jeopardizes behavioral aspects, education and work performance and social interaction. Moreover, Puentes Rozo et al. (2014) identified significant behavior differences between children with ADHD and children without ADHD with respect to levels of social and school adaptation. Children with combined ADHD had greater maladjustment.

Based on the foregoing, it can be deduced that some ADHD characteristics have a direct relationship with basic and necessary skills to achieve a good learning development. In a stage where adolescents goes to school, are surrounded by their classmates of the same age and expect to find a group which they can belong to, it is predictable that having bad grades and behavior problems cause them to feel inferior to others and they will end up isolated. In the same way, their classmates will get away from them and remove them from the group, leaving them alone (Russo, Arteaga, Rubiales & Bakker, 2015).

If all these difficulties develop, it is probable that many emotional aspects as well as the interpersonal relationships and stress management are directly affected. Thus, the probability to find differences between emotional intelligence of the adolescent with ADHD and the adolescent without ADHD increases.

Recognizing the importance of socio-affective processes in the experience of developing students, and given the very few empiric works and none of them identified in our country about emotional intelligence in individuals diagnosed with ADHD, this study is proposed, and following question is asked:

Are there significant differences in the emotional intelligence skills between students with ADHD and students without ADHD?

Hypothesis.

General Hypothesis.

There are statistically significant differences in emotional intelligence skills between adolescent students with ADHD and adolescent students without ADHD.

Specific Hypothesis.

H_1: There are statistically significant differences in the interpersonal emotional ability between adolescent students with ADHD and adolescent students without ADHD.

H_2: There are statistically significant differences in the intrapersonal emotional ability between adolescent students with ADHD and adolescent students without ADHD.

H_3: There are statistically significant differences in the emotional adaptability ability between adolescent students with ADHD and adolescent students without ADHD.

H_4: There are statistically significant differences in the emotional stress management ability between adolescent students with ADHD and adolescent students without ADHD.

H_5: There are statistically significant differences in the emotional mood ability entre between adolescent students with ADHD and adolescent students without ADHD.

H_6: There are statistically significant differences in the emotional ability of positive impression between adolescent students with ADHD and adolescent students without ADHD.

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Method

Type and Design of Research.

This research is quantitative, descriptive and comparative (Hernández, Fernández & Baptista, 2010) since it describes the differences between students with ADHD diagnosis and a group of them without this disorder, according to emotional intelligence skills. Besides, it is a quantitative research since constructs in question will be measured and statistical tests will be used to contrast the hypotheses.

The design used corresponds to a non-experimental, comparative and transversal research (Hernández et al., 2010). It is non-experimental since variables were not manipulated and causal inferences were not established. Since two analysis units will be characterized in the study variable at a unique time, this research is known as comparative and transversal (Sánchez & Reyes, 2002).

Variables.

Emotional Intelligence.

- *Conceptual definition*: Ability to monitor our own and other people´s feelings and emotions in order to distinguish among them and use this information to guide our thoughts and actions (Ugarriza & Pajares, 2003).

- *Operational definition*: Evaluated through a Peruvian adaptation of the Bar-On (I-CE) (Ugarriza & Pajares, 2003) Inventory. This inventory measures intrapersonal, interpersonal, adaptability, stress management and general mood skills through 5 scales:

  1. Intrapersonal scale: It measures the self-understanding, the assertiveness and positive self-visualization.

2. Interpersonal scale: It assesses the empathy skill, social responsibility skill, ability to maintain satisfactory social relationships and the ability to understand other people´s feelings.
3. Adaptability scale: It measures the problem-solving ability, change management and efficient coping with everyday problems.
4. Stress management scale: It estimates stress tolerance abilities, impulse control, work under pressure and response to stressors without becoming depressed.
5. General mood scale: It assesses happiness, optimism and positive appreciation.

Besides, the inventory provides a total emotional quotient that shows the way of coping with everyday demands, and a positive impression scale that measures the very favorable self-perception or self-worth.

Participants.

The sample of this research was composed of 236 secondary students of both gender aged between 12 and 18 (M = 14.07, $D.E.$ = 1.44). 44 of them studied at Antares school and had a (neurological or psychiatric) medical diagnosis of ADHD, while the other 192 students that studied at Pío XII School did not have this disorder. Both samples were obtained through an intentional non-probabilistic procedure.

Based on the reviewed medical reports of students with ADHD, those who had comorbidity with other disorders were excluded. Only students from Pío XII School with no psychological or psychiatric condition diagnosed established in a medical report that were informed or provided by parents and/or teachers participated. As per gender, men (79%) predominated in the group with ADHD, while women (54.2%) predominated in other group.

The criteria for selection in the sample of students include:

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Inclusion criteria

- People diagnosed with ADHD
- People not diagnosed with ADHD
- Secondary students from the Antares and Pío XII Schools
- Men and women aged 13 to 18

Exclusion criteria

- People diagnosed with ADHD
- People with comorbidity of *ADHD* or any type of diagnosed autism
- People with emotional disorders

Table 1 shows the characteristics of the participants with respect to gender, age and degree of belonging according to condition, with or without ADHD.

Table 1.

Composition of the Sample of Study.

Category	with ADHD		without ADHD	
	f	*%*	*f*	*%*
Gender				
Feminine	9	20.5	104	54.2
Masculine	35	79.5	88	45.8
Age				
12	2	4.5	33	17.2
13	9	20.5	49	25.5
14	12	27.3	47	24.5
15	6	13.6	29	15.1
16	9	20.5	29	15.1
17	5	11.4	5	2.6
18	1	2.3	0	0
Grade				
1	11	25	49	25.5
2	10	22.7	51	26.6
3	10	22.7	35	18.2
4	7	15.9	29	15.1
5	6	13.6	28	14.1
Total	44	100.0%	192	100.0%

Measurement.

The Emotional Intelligence Inventory of BarOn ICE: NA (Ugarriza & Pajares, 2003) is used as an instrument for data collection.

Technical Form.

Original Name	Eqi - YV BarOn Emotional Quotient Inventory
Author	Reuven Bar-On
Origin	Toronto-Canada
Peruvian adaptation and standardization	Nelly Ugarriza and Liz Pajares
Administration	Individual and collective
Form	Complete
Duration	An average of 25 minutes

Psychometric Goodness: Reliability and Validity.

Ugarriza and Pajares (2003) estimated the reliability of the scores achieved in a sample of Lima using the internal consistency method, and the reliability coefficients were very satisfactory ($\alpha > 0.77$) through different normative groups, according to gender, age and school management. Besides, the means of inter-item correlations were analyzed and it was discovered that they showed a similar transversal pattern in the different normative groups.

For the Peruvian normative sample, the authors of adaptation, validation and standardization of the instrument obtained evidences of validity referred to the inventory construct and multidimensionality construct of the several scales. The second order confirmatory factor analysis of I-CE components verified the factor structure 5-1 of the eclectic model of emotional intelligence proposed by BarOn. Consequently, it was concluded that the inventory show validity and its clinic use is recommended (Ugarriza & Pajares, 2003).

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Data Collection Procedure.

For the application of the inventory, the corresponding formal authorizations were coordinated and processed in the schools involved: Antares and Pío XII. Then, teachers and parents were explained about the scopes and objectives of the research. Besides, parents were requested the informed consent and the students were requested the informed assent, thereby ensuring the fulfillment of ethic conditions.

The assessments of the sample of the Antares school were carried out during tutorial classes in the first, second, third, fourth and fifth grades of secondary school. The assessment of the sample of the Pío XII School was carried out in the first academic hour in all classrooms. In both cases, the inventory was collectively applied, with a maximum time of 25 minutes. When the tests were given, the necessary instructions were explained. Besides, the assessor was present during the whole process to answer any questions that could arise.

Analysis Plan.

Data were analyzed using descriptive and inferential statistics. The first ones included mean (M), standard deviation (ED) and the average range.

The inferential analyses were based on the study of adjustment to the curve of variables in both groups of the sample through Kolmogorov-Smirnov and Shapiro-Wilk tests in order to determine the appropriateness of the use of parametric and non-parametric statistics (Field, 2009). In the analysis of the differences with respect to the study variables according to the type of sample, the two independent groups were compared through *U* of Mann-Whitney, and they were considered as criteria for the assessment of estimated effect sizes (*r*) (Rosenthal, 1991) .1, .3 and .5, as small, medium and large, respectively.

The data processing was carried out in the statistical package IBM® SPSS (Statistical Package for Social Sciences) version 22, at significance level of .05.

Results

The results of the psychometric analysis of the emotional intelligence test BarOn ICE: NA showed that the items of each scale had homogeneity indexes exceeding the criterion established by Kline (rit. > 0.20) (1995). The reliability quotient were estimated by using the internal consistency method for each scale and a Cronbach´s alpha value that ranges from 0.72 (intrapersonal) to 0.87 (positive impression) was obtained. Based on this, it can be concluded that the scores derived from the 6 scales of the emotional intelligence test are reliable.

The validity evidence was obtained by performing an internal structure analysis using the exploratory factor analysis. The Kaiser-Meyer Olkin (KMO) measure of sampling adequacy reaches a value of 0.753, and the Bartlett's sphericity test has a significant value (p = .000). The exploratory factor analysis through the main components´ method indicates that there is only one factor underlying all the scales, which explains the 54.87% of the total variance. Based on the foregoing, such test has validity evidences based on the internal structure.

With respect to the adjustment to the normal curve of scores in emotional intelligence skills, the emotional quotient has a normal distribution in both groups, that is, in students with (p = 0.170) and without ADHD (p = 0.200). The scores of the emotional skills: intrapersonal, interpersonal, stress management, adaptability, mood and positive impression had a normal distribution (p > .05) only in the sample of students with ADHD.

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Based on the foregoing, it is relevant to use the non-parametric statistics for the inferential analysis of hypothesis testing.

At the beginning, the general hypothesis was set out and it proposed that there are statistically significant differences in emotional intelligence skills between adolescents with ADHD and adolescents without ADHD. To test them, an analysis using the Mann-Whitney U Test was carried out.

Table 2 shows that there are only statistically significant differences ($p < .05$) in intrapersonal emotional skill ($U = 3306.50$; $p = .024$; $r = -0.15$) and in positive impression ($U = 3369.00$; $p = .036$; $r = -0.14$) between students with ADHD and students without ADHD. Therefore, hypotheses that establish this difference (H_2 y H_6) can be accepted, rejecting those that assume that there are such differences in emotional intelligence/emotional quotient ($U = 3835.50$; $p = .341$; $r = -.06$), interpersonal ($U = 4171.50$; $p = 0.898$; $r = -.01$), stress management ($U = 3614.00$; $p = 0.135$; $r = -0.10$) and adaptability ($U = 3622.00$; $p = .140$, $r = -.08$) skills. Students with ADHD have a higher average range than their peers without such disorder in the intrapersonal skill and positive impression skill ($n = 192$).

Table 2

Inferential Analysis of Differences in Emotional Skills between Students with ADHD and without ADHD.

Emotional skill	Type of sample	*n*	Average range	Sum of ranges	*U*	*z*	*p*	*r*
Emotional quotient	With ADHD	44	127.33	5602.5	3835.5	-0.95	0.341	-.06
	Without ADHD	192	116.48	22363.5				
Intrapersonal	With ADHD	44	139.35	6131.5	3306.5	-2.25	.024*	**-0.15**
	Without ADHD	192	113.72	21834.5				
Interpersonal	With ADHD	44	117.31	5161.5	4171.5	-0.13	0.898	-.01
	Without ADHD	192	118.77	22804.5				
Stress management	With TDAH	44	104.64	4604	3614	-1.49	0.135	**-0.10**
	Without ADHD	192	121.68	23362				
Adaptability	With ADHD	44	106.48	4685	3695	-1.30	0.195	-.08
	Without ADHD	192	121.26	23281				
General mood	With ADHD	44	132.18	5816	3622	-1.48	0.140	**-0.10**
	Without ADHD	192	115.36	22150				
Positive impression	With ADHD	44	137.93	6069	3369	-2.10	.036*	**-0.14**
	Without ADHD	192	114.05	21897				

*$p < .05$

As to ADHD as diagnosis ($n = 44$) or not ($n = 192$), it is evidenced that on both groups there are no statistically significant differences ($p > .05$) between men and women in emotional intelligence skills (Table 3).

Table 3

Inferential Analysis of Differences in Emotional Skills between Student with ADHD and Students without ADHD according to gender.

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Emotional skill	Gender	*n*	Average range	Sum of ranges	*U*	*z*	*p*	*r*
With ADHD (n = 44)								
Emotional quotient	Feminine	9	22.22	200	155	-.07	0.942	-.01
	Masculine	35	22.57	790				
Intrapersonal	Feminine	9	23.28	209.5	150.5	-0.21	0.838	-.03
	Masculine	35	22.3	780.5				
Interpersonal	Feminine	9	28.89	260	100	-1.68	.094	**-0.25**
	Masculine	35	20.86	730				
Stress management	Feminine	9	23.56	212	148	-0.28	0.782	-.04
	Masculine	35	22.23	778				
Adaptability	Feminine	9	19.72	177.5	132.5	-0.73	0.465	**-0.11**
	Masculine	35	23.21	812.5				
General mood	Feminine	9	23.89	215	145	-0.36	0.716	-.05
	Masculine	35	22.14	775				
Positive impression	Feminine	9	24.78	223	137	-0.60	0.550	-.09
	Masculine	35	21.91	767				
Without ADHD (n = 192)								
Emotional quotient	Feminine	104	92.44	9613.5	4153.5	-1.10	0.271	-.08
	Masculine	88	101.3	8914.5				
Intrapersonal	Feminine	104	94.27	9804	4344	-0.61	0.545	-.04
	Masculine	88	99.14	8724				
Interpersonal	Feminine	104	96.4	10026	4566	-0.03	0.979	.00
	Masculine	88	96.61	8502				
Stress management	Feminine	104	100.15	10415.5	4196.5	-0.99	0.322	-.07
	Masculine	88	92.19	8112.5				
Adaptability	Feminine	104	103.39	10753	3859	-1.87	.061	**-0.13**
	Masculine	88	88.35	7775				
General mood	Feminine	104	97.38	10127	4485	-0.24	0.812	-.02
	Masculine	88	95.47	8401				
Positive impression	Feminine	104	101.82	10589.5	4022.5	-1.45	0.149	**-0.10**
	Masculine	88	90.21	7938.5				

Based on the analysis of differences, according to gender of students with and without ADHD, there are only differences in impression positive skill of the emotional intelligence among male students (U = 1162.00; p = .034; r = -0.19). This characteristic predominates in the group with ADHD (Table 4).

Table 4

Inferential Analysis of Differences in Emotional Skills between Students with ADHD and Students without ADHD according to gender.

Emotional skills	Type of sample	*n*	Average range	Sum of ranges	*U*	*Z*	*p*	*r*
			Feminine (n = 113)					
Emotional quotient	With ADHD	9	63	567	414	-0.57	0.567	-.05
	Without ADHD	104	56.48	5874				
Intrapersonal	With ADHD	9	70.28	632.5	348.5	-1.27	0.204	**-0.12**
	Without ADHD	104	55.85	5808.5				
Interpersonal	With ADHD	9	72.22	650	331	-1.46	.146	**-0.14**
	Without ADHD	104	55.68	5791				
Stress management	With ADHD	9	46.11	415	370	-1.04	.298	**-0.10**
	Without ADHD	104	57.94	6026				
Adaptability	With ADHD	9	43	387	342	-1.34	0.181	**-0.13**
	Without ADHD	104	58.21	6054				
General mood	With ADHD	9	66.67	600	381	-0.92	0.356	-.09
	Without ADHD	104	56.16	5841				
Positive impression	With ADHD	9	68.94	620.5	360.5	-1.14	0.253	**-0.11**
	Without ADHD	104	55.97	5820.5				
			Male (n = 123)					
Emotional quotient	With ADHD	35	63.19	2211.5	1498.5	-0.23	0.816	-.02
	Without ADHD	88	61.53	5414.5				
Intrapersonal	With ADHD	35	69.87	2445.5	1264.5	-1.55	0.121	**-0.14**
	Without ADHD	88	58.87	5180.5				
Interpersonal	With ADHD	35	58.61	2051.5	1421.5	-0.67	0.506	-.06
	Without ADHD	88	63.35	5574.5				
Stress management	With ADHD	35	57.84	2024.5	1394.5	-0.82	0.414	-.07
	Without ADHD	88	63.65	5601.5				
Adaptability	With ADHD	35	61.8	2163	1533	-.04	0.969	.00
	Without ADHD	88	62.08	5463				
General mood	With ADHD	35	67.67	2368.5	1341.5	-1.11	0.265	**-0.10**
	Without ADHD	88	59.74	5257.5				
Positive impression	With ADHD	35	72.8	2548	1162	-2.13	.034*	**-0.19**
	Without ADHD	88	57.7	5078				

*$p < .05$

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Discussion

Based on the analysis of the results, there are statistically significant differences in the intrapersonal skill and positive impression skill among students with ADHD. Therefore, only hypotheses establishing such difference can be accepted.

The results obtained from the study performed by Lewis et al. (2004) and by the study performed by Puentes Rozo et al. (2014) show a greater social and school maladjustment in children who suffer from ADHD. On the other hand, the results of this research consider as statistically significant the intrapersonal skill in students with this diagnosis, which evidences the ability to understand own emotions and the expression of feelings. Based on both results found in different studies, it can be considered that the probabilities that a person with a high intrapersonal skill adapts adequately to a group or society are not determinant. So to achieve a good social adaptation, it is not only necessary to be able to establish a deep contact with oneself (intrapersonal skill), but, also, the person must have more skills that help them to better adapt to different contexts. Besides, the statistically significant relationship among the intrapersonal skill in students with ADHD may be related to the several programs in which the students participated throughout their school education and which provided them with strategies for recognizing their emotions and knowing how to understand and accept them.

As to positive impression skill, students diagnosed with ADHD showed a higher average range. Cuadros (2012) revealed that children with this disorder do not assess their self-concept in a general way, but they divide it and focus it to the area where they consider more competent. This evidence allows proposing the idea that there is a greater need to create and show an improved self-image. This could be due to the insecurity that results from knowing that they suffer from this disorder.

On the other hand, no significant differences were found in the interpersonal skill. One of the main components of the ADHD is impulsivity (López, Castro, Belchí & Romero, 2013), and, although it is considered that it can affect the interpersonal relationships of the adolescent, there is no evidence that there is a direct relationship with the diagnosis. Therefore, it is important to take into account that during the adolescence stage, certain oppositional and impulsivity behaviors appear and they must be identified so they cannot be associated with any type of disorder, such as ADHD.

No statistically significant differences were found between the adaptability skill and ADHD, since it is inferred that this skill varies in each person in relation to the environment they grow up and to their learning. If the person was raised in a strict and rigid education system where constant punishment is applied, it is probable that they do not adapt easily to new situations or new thinking. So, this disorder do not influence in the adaptability skill of the person.

No significant differences were found in between the stress management skill and the ADHD. Despite the possible relationship between the poor organizational ability perceived in this disorder and the stress generated as a result of not carrying out certain tasks, the results of this research reject such possibility. People with or without ADHD can be affected by stress, which can interfere in certain skills, such as organization, emotion management, interpresonal relationships, goal achievement, among others. Finally, it can be concluded that this can be learnt and controlled by learning and practicing psychological techniques.

No differences were found between the general mood skill and the ADHD, since such skill varies according to each person and depends on many individual and environmental factors, such as temperament, character, personality and health condition, and on many different environmental situations, such as family, group of friends, among others. Although some

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specialists have considered that the general mood skill can be affected in children with ADHD, no statistic evidences that confirm such idea have been found.

As to gender, no significant differences were found between men and women with ADHD in any emotional intelligence dimensions and areas. It is inferred that this result could be due to social skill and self-esteem workshops, in which all students of the Antares school have been participated throughout their school education, thereby generating advances that do not allow establishing accurate differences in both genders.

When comparing students with ADHD and students without ADHD according to gender, male students with this disorder have a higher average range in the positive impression skill. The results obtained from the research performed by Garza, Núñez and Vladimirsky (2007) indicate that scores in the self-concept test applied to children with and without ADHD were significantly lower in children with this disorder. It could be discussed that having a low self-concept generates their need to show an improved self-image. This could be due to the insecurity that could be caused by suffering from an uncommon disorder, to several critiques, to the fact that they are considered rude or little tolerant and to constant comparisons with their classmates or siblings. As to gender, this difference could be due to a mistaken perception of some male students when they think that they are subject to more demands due to the need to achieve an important place in society and stand out in the group they belong to.

On the other hand, in a study performed by Mejía, Rubiales, Etchepareborda, Bakker and Zuluaga (2012), an analysis was made about the importance of the role of the family as co-therapist in the treatment of people with ADHD. Based on this finding, it can be considered the idea of including parents in the development of emotional intelligence programs usually worked with students. This could be carried out in order to achieve a

more enriching results for both parts, expecting that knowledge and strategies taught can be guided and monitored in the school and at home, which are the two environments where adolescents spend most of their time.

It is worth mentioning that this study contributes to the identification of emotional intelligence skills that are directly affected in adolescents suffering from ADHD. However, it has certain limitations, as for example, the number of participant for each sample, being a smaller sample of students with ADHD. Besides, the test was applied to each sample in different years (2013 and 2014), and the background information related directly to the research topic was not easily found. On the other hand, the lack of control must be considered in some external variables, such as attendance of students with ADHS to self-esteem and social skill workshops, the time of stay in the specialized school and the support of psychological therapies received before or at the time of assessment.

Finally, this research is part of a contribution, since it is expected that these findings contribute to the psychology science by exposing new knowledge that help to fully understand one of the most common disorders in the children´s community worldwide (ADHD) (García et al., 2013). In addition, it is expected the collaboration in future programs aimed at children and adolescents with ADHD in order to provide more accurate information and better results.

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