

GENDER AND AGE DIFFERENCES ON EMOTIONAL INTELLIGENCE SCALES OF CHILDREN 10-12 YEARS OLD: PARENTS' REPORT

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ABSTRACT

The present study aimed at investigating the differences in age and gender on emotional intelligence total score and emotional intelligence scales at 10-12 years old children. It was hypothesized that there will be differences between girls and boys and between different ages in several scales. The sample included 236 children (123 or 52.1% boys and 113 or 47.9% girls), with a mean age of 11 years ($SD .835$) (range: 10-12 years). . 236 parents participated in the study, 92 of them or 39.0 % were mothers, while only 144 of them or 61.0 % were fathers. In the chi-square test, there were important differences reported in the distribution of the percentages of parent's gender and their employment rates. The TEIQue-Child Form questionnaire, contains 75 items responded to on a 5-point scale and measures five distinct facets. Descriptive statistics, chi-square test, Pearson correlation, T-test, and ANOVA were used to explore and analyse the differences, correlations of interest variables in the study on total EI and EI scales. Correlation analysis mostly indicated low significant relationship between EI scales. We did not found gender significant differences on EI total scores and EI scale scores. The ANOVA indicated significant differences in peer relationship and emotion perception scales. Younger children (10 years old) had a higher mean on peer relationship than older children (11 years old), $F(2) = 4.34, p = .019$. The ANOVA for emotion expression yielded significant differences the 11 years and 12 years old children. Older children had a higher mean score than younger children $F(2) = 3.017, p = .05$.

Keywords: Parenting styles, aggressive behavior, preschool children, differences, age, and gender.

INTRODUCTION

Emotional intelligence has been proposed as a separate type of intelligence marked by the intersection between the cognitive and emotional systems, and has been found to be separate from such intelligences as auditory intelligence, visuo-spatial ability, fluid, and crystallized intelligence (MacCann, 2010; Mayer, Caruso, & Salovey, 1999). The ability to recognize and moderate one's own and others' emotions, while simultaneously processing the information in order to make an informed decision about the present situation, can be defined as emotional intelligence (EI; Mayer & Salovey, 1993; Salovey & Mayer, 1990). EI is recognized as a trait and ability that can be under both conscious and unconscious control (Konrath, O'Brien, & Hsing, 2011; Petrides, Fredrickson, & Furnham, 2004).

Mayer et al. (1999) defined emotional intelligence using a theoretical model focusing on emotional skills that can be developed through learning and experience. Mayer et al. (1999) posited that emotional intelligence is comprised of three central abilities: 1) perceiving (i.e. the entering of affective information into one's perception), 2) understanding (i.e. the act of processing affective information), and 3) managing emotions (i.e. regulation and expression of emotions.) Emotional intelligence is recognized as a trait and ability that can be under both conscious and unconscious control (Konrath, O'Brien, & Hsing, 2011; Petrides,

Fredrickson, & Furnham, 2004). While some suggest that emotional intelligence is an innate trait that cannot be fostered (Petrides et al., 2004), others advocate that it is a fostered skill. Specifically, personal experiences can impact one's emotional intelligence by placing meaning and context to situations, which can be used in future scenarios (Mayer, Caruso & Solovey, 2000; Payton et al., 2000).

Research has shown emotional intelligence to be related to mental, social, and physical health in college students (Extremera & Fernandez-Berrocal, 2006). It has also been associated with stress (Mikolajczak, Petrides, Coumans, & Luminet, 2009), and life satisfaction (Ciarrochi, Chan, & Caputi, 2000). Our study aimed to: (1) to test the differences on emotional intelligence scales regarding the age and gender of children. It was hypothesized that there will be differences between girls and boys and between different ages in several scales.

METHODOLOGY

The study sample

The sample included 236 children (123 or 52.1% boys and 113 or 47.9% girls), with a mean age of 11 years (SD .835) (range: 10-12 years). 86 of them (36.4%) were in the fourth grade; 72 of them (30.5%) were in the fifth grade and 78 or 33.1 % from the total number of children were in the sixth grade. In the chi-square test, no important differences were reported in the distribution of the percentages of gender and grade representation in this study. From 236 parents participated in the study, 92 of them or 39.0 % were mothers, while only 144 of them or 61.0 % were fathers. In the chi-square test, there were important differences reported in the distribution of the percentages of parent's gender and their employment rates. The parents voluntarily completed the questionnaire.

Table 1: *Descriptive data for children by gender, grade, place living and by gender and employment status for parents*

	<i>Valid Nr.</i>	<i>Percentile</i>	<i>Chi-square test</i>
Male	123	52.1	
Female	113	47.9	$\chi^2 (1) = .424, p = .515$
Village	7	3.0	
City	229	97.0	$\chi^2 (1) = 208.831, p = .000$
Grade 4	86	36.4	
Grade 5	72	30.5	$\chi^2 (1) = 1.254, p = .534$
Grade 6	78	33.1	
Fathers	144	61.0	
Mothers	92	39.0	$\chi^2 (1) = 11.458, p = .001$
Father employment	173	73.3	
Mother employment	89	37.7	$\chi^2 (1) = 9.646, p = .002$

Table 2: *Mean and Standard Deviation for family income, member of family, number of children; parents age and level of education and childrens age.*

	<i>Mean</i>	<i>SD</i>
Children Age	10.97	.835
Parents age	40.36	5.89
Fathers education level	12.76	2.50
Mothers education level	11.61	2.81
Family income €	519.87	290.72
Family members	5.49	1.64
Children numbers	2.85	1.15

Instruments and data collection

The TEIQue-Child Form questionnaire, contains 75 items responded to on a 5-point scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *neither*; 4 = *Agree*; 5 = *strongly agree*), and measures nine distinct facets (Mavroveli, Petrides, Shove, & Whitehead, 2008). For our study we used five facets: *Adaptability* (flexible and willing to adapt to new conditions); *Emotion perception* (*self and others*; clear about their own and other people's feelings); *Emotion expression* (capable of communicating their feelings to others); *Emotion regulation* (capable of controlling their emotions); *Relationships* (capable of having fulfilling personal relationships). The Child Form that has been specifically developed for children aged between 8 and 12 years. The TEIQue scales have been shown to have a consistency of .760

The procedure of data analysis

The statistical package SPSS for Windows, version 19 was used to analyse the quantitative data collected. During the analysis a specific code was used for the identification of information for each child and parent. Descriptive statistics, chi-square test, Pearson correlation, T-test, and ANOVA were used to explore and analyse the differences, correlations of interest variables in the study on total EI and EI scales.

RESULTS

To characterize the sample population, the outcome variable was stratified by demographic variables. Table 3 shows the difference in number, mean scores and standard deviations by age, gender and parenting style

Table 3: *Number, Mean scores and standard deviations for EI scales by age, gender.*

	Gender	10 years			11 years			12 years			Total children		
		N	M	SD	N	M	SD	N	M	SD	N	M	SD
Adaptability	F	41	23.83	3.68	35	25.31	4.26	37	24.73	4.43	113	24.58	4.13
	M	45	24.22	3.28	37	24.95	3.78	41	25.51	4.21	123	24.87	3.77
	F+M	86	24.03	3.47	72	25.13	3.99	78	25.14	4.31	236	24.73	3.94
Emotion expression	F	41	24.61	4.13	35	23.43	4.93	37	25.14	4.41	113	24.42	4.50
	M	45	24.89	3.94	37	23.78	4.18	41	25.44	4.25	123	24.74	4.14
	F+M	86	24.76	4.01	72	23.61	4.53	78	25.29	4.30	236	24.58	4.31
Emotion perception	F	41	24.95	2.70	35	25.74	4.47	37	25.95	4.36	113	25.52	3.87
	M	45	25.84	4.25	37	25.65	3.90	41	26.68	5.16	123	26.07	4.46
	F+M	86	25.42	3.60	72	25.69	4.16	78	26.33	4.78	236	25.81	4.19
Emotion regulation	F	41	29.32	2.77	35	29.34	3.68	37	29.81	3.96	113	29.49	3.46
	M	45	29.40	3.58	37	30.14	3.69	41	29.37	4.21	123	29.61	3.81
	F+M	86	29.36	3.20	72	29.75	3.69	78	29.58	4.08	236	29.55	3.65

Peer relations	F	41	42.6 3	4.41	35	44.1 4	5.05	37	43.14	4.59	11 3	43.27	4.66
	M	45	41.2 0	4.18	37	43.8 6	5.06	41	43.56	5.76	12 3	42.79	5.12
	F+M	86	41.8 8	4.33	72	44.0	5.02	78	43.36	5.20	236	43.02	4.90
Total EI	F	41	260. 46	16.1 3	35	267. 97	21.4 7	37	262.7 6	21.7 1	11 3	263.54	19.8 6
	M	45	261. 40	16.8 0	37	263. 65	20.1 9	41	269.3 4	26.3 5	12 3	264.72	21.4 8
	F+M	86	260. 95	16.9 3	72	265. 75	20.7 9	78	266.2 2	24.3 3	236	264.16	20.6 8

Table 4: The inter correlation between EI scales and total EI.

		1	2	3	4	5
Total EI	Pearson Correlation	-				
	Sig. (2-tailed)					
Emotion regulation	Pearson Correlation	.553**	-			
	Sig. (2-tailed)	.000				
Peer relations	Pearson Correlation	.609**	.229**	-		
	Sig. (2-tailed)	.000	.000			
Emotion expression	Pearson Correlation	.376**	.036	.195**	-	
	Sig. (2-tailed)	.000	.579	.003		
Emotion perception	Pearson Correlation	.430**	.049	.244**	.227**	-
	Sig. (2-tailed)	.000	.453	.000	.000	
Adaptability	Pearson Correlation	.421**	.134*	.155*	.140*	.168**
	Sig. (2-tailed)	.000	.039	.017	.032	.010

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The t-test analysis did not revealed differences in EI and EI scales regarding the gender. The results obtained through ANOVA indicated significant differences in peer relationship and emotion perception scales regarding the age of children. As shown in the Table 3, younger children (10 years old) had a higher mean on peer relationship than older children (11 years old), $F(2) = 4.34$, $p = .019$. The ANOVA for emotion expression yielded significant differences the 11 years and 12 years old children. Older children had a higher mean score than younger children $F(2) = 3.017$, $p = .05$.

DISCUSSION

The study suggests that there will be gender and age differences regarding the total EI scores and EI scale. Our results did not show statistical differences between boys and girls of the EI scales or in total EI scores. There were significant different in ages in peer relationship and emotion perception in favour of younger children. Significant different were also present for emotion expression between 11 years and 12 years old children, in favour of older children, who showed a higher mean score than younger children. The results from table 1, shows that all children gain similar results in all other scales. From the results, specifically the correlations obtained, while statistically significant in the direction, were mostly low. It is unclear whether the low values are the result of weak associations between the constructs themselves.

The average values of total EI and EI scales are not markedly different to those found in other studies. The scores in this study are slightly higher, but consistent with previous research utilizing the same EI measure (Anari, 2012; Chan, 2004; Hildebrand et al., 2012). The lack of significant differences was unexpected.

Given the central role of emotions in everyday life, and taking into consideration Goleman's (1995; 1998) assertion that emotional intelligence is an alterable variable that can be taught and learned, and previous studies which suggest that effective coping skills can be taught and have a positive effect on adjustment (Thuen and Bru 2004), the current study provides practical implications for parents and teachers.

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