Relationships between Family Functioning, Alexithymia and Emotional Intelligence among Early Adolescents in Tehran-Iran

Fataneh Naghavi[1], Marof Redzuan[2]

[1]School of Humanities and Social Sciences, Science and Research Branch, Islamic Azad University, Tehran, Iran.
[2]Department of Social and Development Sciences, Faculty of Human Ecology, University Putra, Malaysia.
[1]E-mail: ahlo_1359@yahoo.com, [2]E-mail: Marof@putra.upm.edu.my

Abstract: With respect to the relationship between family functioning, alexithymia, and the early adolescent's emotional intelligence construct is still being developed with empirical support. Hence, this research follows a specific objective for determination of the relationship between family functioning, alexithymia, and early adolescent's emotional intelligence (EQ). EQ is a set of abilities such as conception, emotion appraisal and expression, emotion management and regulation, and emotion utilization of emotion. The present study was carried out among 234 Iranian students in the second and grades of guidance schools (age 12-15) in Tehran, Iran. The students (girls and boys) were clustered through random and multistage sampling. Data were collected using the Schutte's (1998) Emotional Intelligence Scale and Rieffe's Children's Alexithymia Scale (2006), which are consistent with the original adult questionnaire for alexithymia (TAS-20) in the first stage and Family Assessment Device (FAD), based on McMaster's model in the second stage. Pearson correlation between subscales of total family functioning and alexithymia and emotional intelligence was statistically significant. Results of the multiple regression analysis, together with independent variables entered, simultaneously indicate that as a group, the independent variables significantly contributed to the prediction of emotional intelligence.
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1. Introduction

As emotional intelligence is acquisitive and of social origin (Goleman 1995, Mayer and Salovey 1990), parents and children, in their interactions, expose their emotions expression way to one another consciously or unconsciously. The family has the highest effect on the individuals and it can mould their behaviors at any moment. A behavior which is created in relation to other family members is not limited to a normal agreeable behavior. The family can form abnormal behaviors, too (Sanaei, 2000). Considering, alexithymia is not classified as a mental disorder in the DSM-IV. It refers to the difficultly to identify, describe feelings to other people and it is a dimensional personality characteristic that varies in severity from person to person thus, family as a first circumstance can create this kind of characters. In addition, the treatment by parents to their children and how they react to their interests and activities, as well as children treatment to one another, emotion and information exchange among them, emotional protection to one another, and the relationships of the family members' with outsiders may also influence the children's emotional intelligence (Naghavi, 2010).

The family functioning construct is a relatively new concept with little empirical research, particularly related to the link between seven specific sub-components of the family function (dysfunction) and their emotional intelligence's early adolescent.

There has been a growing interest in the family functioning and emotional functioning of early adolescence (Goodyer, & Herbert, 1998; Walsh, 1993, Patterson, 2002, Ozbaci , 2006) and the factors that influence it (Goleman 1996, Mayer and Salovey, 1990; Carlson, 1999; Palmer et al., 2007; Bar-On, 1997; Martinez-Pons, 1997; Schutte's, 1998) in order to develop more integrated theories of development (McMaster's, 1995; Epstein, Bishop, & Levin, 1960; Goleman, 1995). There are many assumptions about family functioning and emotional intelligence. Ozbaci (2006) has assessed the relationship between and family environment and emotional intelligence EQ. The sample of the study was selected as 274 parents who live in Istanbul including 152 female, 122 male. Data were collected by EQ-NED and "Family Environment Scale" to determine family characteristics and the EQ. The results of the study indicate that there was a relationship between family cooperation and EQ. Manuel (2002) has carried out a study on the effects of parents on emotional intelligence among 109 young people between the ages 11 and 15. Along with emotional intelligence, effects of families on some other dimensions like

responsibilities, social functions and symptoms of depression have also been studied. Upon the assessment carried out by Path analysis technique it has been determined that parent models with methods like encouraging, giving rewards and guiding have crucial effects on matters of emotional intelligence, social activities and symptoms of depression.

A conceptually similar emotional intelligence construct is alexithymia. A comparison of the definitions of emotional intelligence and alexithymia suggests that the two constructs are closely related (Parker *et al*., 2001). Meanwhile, the emotional intelligence construct emerged from an integration of an array of research findings on how people appraise, communicate and use emotion (Salovey & Mayer, 1989, 1990). Although psychological systems have negatively looked into emotions, the attention given to emotions and feelings can be regarded as the core and basis of psychology and one can therefore look for mental disturbances roots in emotional perturbations like fear, anxiety, depression and alexithymia (Naghavi et al., 2010). Moreover, there is empirical evidence indicating that alexithymia is associated with the difficulties in discriminating among different emotional states (Bagby *et al.,* 1993). In research studies by Salovey and Mayer (1989, 1990), the overlapping emotional intelligence and alexithymia constructs were acknowledges, and the researchers made attempts to empirically evaluate the relationships between the two constructs. One possible explanation for this is that these investigators have yet to introduce a standardized method for assessing emotional intelligence.

It is understood from the previous studies that emotional intelligence is associated with some factors, such as family function and some personality characters like alexithymia. This research studied the relation between family functioning and emotional intelligence so as to develop and expand the concept of emotional intelligence in the family. In other words, the importance of family functioning on alexithymia and emotional intelligence has been found to be very significant. It is expected that this research would identify different family functioning dimensions have influences on early adolescents' emotional intelligence. Although a body of relevant research literature is available, the findings of such research studies which investigated the effects of family functioning on early adolescents' emotional intelligence were derived mainly from western-based samples that are socially and culturally different from the Iranian sample.

2. Materials and Methods

The purpose of this study was to examine the relationship between family functioning, alexithymia and sub-components of the early adolescent's emotional intelligence among Iranian guidance schools students in Tehran, Iran. The schools were chosen based upon their location and programs of study. The population of research involved in this study consisted of all the Iranian students who enrolled in guidance schools of Tehran (234 students, academic year 2010-2011).

The data were collected using (Schutte, 1998) Emotional Intelligence Scale for assessing early adolescence's emotional intelligence and Rieffe's Children's Alexithymia Scale (2006), at the first stage and the Family Assessment Device (FAD) at the second stage.
In addition, the demographic questionnaire was also used to gather relevant background information of the subjects in this research.

The emotional intelligence scales used to assess emotional intelligence, i.e. Schutte's Emotional Intelligence Self-measuring Scale (introduced by Schutte and her colleagues in 1998 and Mayer and Salovey's original emotional intelligence model, 1990), was used to measure emotional intelligence, which includes emotional conception and appraisal, emotion regulation and emotion utilization. This scale includes 33 self-report items. The subject selected his/her degree of agreement or disagreement by any of these sentences in a five-point Likret scale, from strongly disagreed = 1 to strongly agreed = 5. In this study, the reliability for the emotional intelligence test was obtained by using Crombach's alpha, α= 0.84.

The Rieffe's Children's Alexithymia Scale (2006) Consistent with the original adult questionnaire for alexithymia (TAS-20; Bagby, Parker, & Taylor, 1994), the Rieffe's scale was used to assess alexithymia in children. This scale was introduced by Taylor in 1986, and further revised by Taylor, Bagby, and Parker in 1994. They made the alexithymia 20-question questionnaire by using the factors analysis method. Three current indicators of the questionnaire are: (1) difficulty in identifying feelings, (2) difficulty in describing feelings, and (3) thinking with external orientation. The higher the score on the Rieffe's scale, the higher the level of alexithymia. All the sentences were coded on 3 forms, from not true (a) to true (c). This instrument was developed by Rieffe *et al*. (2006). In this study, the reliability obtained for the alexithymia questionnaire using Cronbach's alpha was α= 0.73.

Family Assessment Device (FAD); This particular questionnaire was designed to measure family functioning based on McMaster's model. It contains 60 questions specifying six aspects of family functioning: problem-solving, communication, affective responding, affective involvement, control,

and the 7th subscale related to the overall family functioning. Every question presents a description of family and the subject chooses his/her agreement or disagreement with a sentence in a four-option scale (strongly agree = 1, agree = 2, disagree = 3, strongly disagree = 4). The FAD test is scored in a way that the score of each family shows its vulnerability degree; lower scores indicate sounder functioning and higher scores on the family functioning questionnaire indicate family's inefficiency. It means that the higher the score, the less healthy is the family functioning. In the current study for the family functioning questionnaire, the reliability obtained was α = 0.89.

Considering the questions and research hypotheses, the following statistical methods are use to analyze data: after normality test, Correlation techniques enable researchers to describe the relationship between two sets of measures (Pierson r). Pierson's Correlation and Regression for describing the relation between variables (e.g., correlation between family functioning and emotional intelligence or correlation between alexithymia and emotional intelligence), were conducted for analyses of this research hypothesizes. The multi regression analysis was used to predict the variables.

3. Results and Discussion
Description of the participants

The study was among 7150 girls and boys Iranian students. After determining the sample gathering, 4 regions selected random among Tehran's 19 educational regions. Then, among the guidance schools of each region, 2 schools are selected by simple random method: one girls' school and one boys' school. In each school, pupils are selected from grade 3 and grade 2 by simple random method. The sample (234) consisted of the guidance schools pupils (12-15 years old). The respondents (234) for this study were the early adolescence with 116 boys and 118 girls. The descriptive analysis of early adolescences' family functioning, emotional intelligence, alexithymia scores and its subscales are presented in Table 1, including, mean, standard deviations, highest and lowest scores of the all variables of study area.

The correlation coefficient between the subscales of emotional intelligence and family functioning, except for some cases, was found to be statistically significant, sig=.000, p<0.01. The range of Pearson correlation coefficient (r) for the subscales of emotional intelligence and family functioning was estimated from r=-0.21 to r=-0.89 (p<0.01 and p<0.05). also, In this study, the correlation coefficient between the subscales of emotional intelligence and alexithymia was found to be statistically significant (sig = .000, p<0.01). The range of Pearson correlation coefficient (r) between the subscales of emotional intelligence and alexithymia was estimated to be from r=-0.23 to r=-0.88 (p<0.01 and p<0.05).In addition, the purpose of these correlations is to make sure that multicollinearity is not issue in this study.

As reported above, relationship between pair subscales of emotional intelligence and alexithymia are significantly negative. It means adolescents with category of high factors of alexithymia displayed less factors of emotional intelligence. Moreover, the variables of alexithymia and emotional intelligence had significant negative relationship, which suggested that as alexithymia increased, emotional intelligence also tended to decrease. Difficulty in identifying feelings was related to emotional conception or appraisal. The result of this study was consensus with the findings in Parker et al. (2001) study which suggested that high emotional intelligence might be a protective factor for mental and physical health and low emotional intelligence, related to highly alexithymia individuals. These findings conform to results obtained by Akimoto and Ferkonishi (2003), Ciaruchi et al. (2000), Schutte et al. (1998), and Khosrow Javid (2008). According to Mayer and Salovey (1990), those who get high scores in alexithymia (particularly in thinking with external orientation) are weaker able to identify emotions by facial states and display weak empathy because they cannot understand and assess others' emotions (Ciaruchi et al., 2000). It seems that people struck with alexithymia are very weak in emotional self-consciousness and emotion expression based on emotional intelligence.

In the other word, early adolescents with category of high factors of family functioning displayed more factors of alexithymia. Overall, the variables of family functioning and Alexithymia had significant positive relationship, which suggested that as family functioning increased, alexithymia also tended to increase too, significantly. Dysfunctional family affective responsiveness was related to difficulty in describing feelings. Furthermore, findings of the previous research on family factors related to alexithymia indicated that general family pathology was associated with alexithymia. In particular, difficulty identifying feelings was related to dysfunctional family affective involvement (Lumley et al. 1996). Thus, early adolescent develop specific alexithymia characteristics as a result of family dysfunction in emotional or cognitive domains. This view agrees with theories of the social cognitive theory.

In this research regression analysis was used for studying the relationship between several predictors'

independent variables and dependent variable. The main purpose is to find precisely which independent variables predict the dependent variables. In this linear regression analysis, emotional intelligence was the dependent variable and family functioning and alexithymia were the independent variables. The independent variables were entered simultaneously into the regression analysis. Table 3, presents the result of the Pearson correlation between emotional intelligence, family functioning and alexithymia.

Table 1: Mean and Standard Deviation of Family Functioning, Emotional Intelligence, Alexithymia, and Their Factors

Descriptive indicators Variables	Frequency	M	SD	Up	Low
Family functioning	234	129.25	23.39	158	58
Problem-solving	234	11.52	3.08	86	34
Communication	234	15.47	3.52	190	16
Roles	234	19.85	4.23	64	23
Affective company	234	18.26	3.54	50	12
Affective involvement	234	17.47	4.76	47	19
Behavior control	234	19.68	4.02	35	6
General functioning	234	27.07	6.13	25	5
Emotional intelligence	234	122.36	16.93	32	10
Emotional conception & appraisal	234	35.84	7.96	22	1
Emotion regulation	234	50.27	6.75	27	2
Emotion utilization	234	36.25	5.71	31	3
Alexithymia	234	57.67	23.39	27	5
Difficulty in identifying feelings	234	21.54	6.23	28	2
Difficulty in describing feelings	234	14.96	3.77	30	1
Thinking with external orientation	234	21.17	4.39	48	4

Table 2: Correlation Coefficients Matrix for Subscales of Emotional Intelligence, Family Functioning and Alexithymia

Variables Correlation coefficients	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
X1:Emotional conception &appraisal	1												
X2:Emotion regulation	0.326**	1											
X3:Emotion utilization	0.421*	0.382**	1										
X4:Problem-solving	-0.602*	0.664**	-0.701*	1									
X5:Communicatio	-0.563*	-0.201*	-0.410**	0.478*	1								
X6: Roles	-0.578*	-.0681*	-0.805**	0.431*	0.472*	1							
X7:Affective company	-0.501*	0.261**	-.821*	-0.221*	0.110**	0.233	1						
X8:Affective involvement	-0.661**	0.097	-0.312*	-0.899*	0.177	0.053*	0.21**	1					
X9:Behavior control	-0.711**	0.005	-0.822**	-0.397*	0.104**	0.19**	0.31*	0.352	1				
X10:General functioning	-0.432**	-0.201*	-0.880**	-0.501*	0.304**	0.22**	0.08*	0.407*	0.053*	1			
X11:Difficulty in identifying feelings	-0.833**	-0.093	-0.671*	-0.782*	0.119**	0.72*	0.09	0.81**	0.779*	0.360**	1		
X12: Difficulty in describing feelings	-0.490**	-0.051*	-0.885*	-0.799*	0.440	0.37**	0.91*	0.23*	0.151*	0.382*	0.732*	1	
X13: Thinking with external orientation	-0.239*	-0.080	-0.814*	-0.597**	0.143*	0.222	0.482*	.495*	0.886*	0.080*	0.251**	0.777*	1

-DependentVariable:EmotionalEntellingence
Note: * P<0.05. ** p<0.005
* Correlation is significant at the 0.05 level (one tailed)
** Correlation is significant at the 0.01 level (two tailed

Table 3: Summary Information of Pearson correlation for Emotional Intelligence, Family Functioning and Alexithymia

Variables Correlation coefficients	Family functioning	Emotional intelligence	Alexithymia
Family functioning	1	-.764**	.663**
Emotional intelligence		1	-.868**
Alexithymia			1

P<.01

Multiple regression analysis

Result of multiple regression analysis with the independent variables entered simultaneously indicated that the independent variables as a group significantly contributed to the prediction of emotional intelligence. The independent variables were entered into the regression analysis as a group and all two independent variables (family functioning and alexithymia) were presented in the total score obtained on the respective measure. The independent variables predicted 82% of the variance in Emotional Intelligence (F=516.239, p<.01) table 4, The adjusted R square value suggests the percentage of variance in the dependence variable (Emotional Intelligence) that is likely to be explained by the set of predictors (family functioning and alexithymia) for the entire population. For this regression analysis the adjusted R square was 0.82. For the entire population, 82% of the variance in Emotional Intelligence is likely to be explained by family functioning and alexithymia.

The R square obtained on this sample is quite significant. Based on Cohen's (1988) guidelines, an R square on 0.26 is considered to be large. In the current sample, the very large R square suggests that the effects are not simply due to a large sample. The same effects would likely have been found even with a much smaller sample size. This indicates that the current study has much practical significance.

Table 4: Summary Information of ANOVA for Emotional Intelligence Regression on Family Functioning and Alexithymia

	SS	Df	MS	F	Sig
Regression	14023.93	2	7011.97	516.24	.000
Residual	3137.63	231	13.58	516.24	.000
Total	17161.56	233			

Table 5: Relative Effects of Family Functioning and Alexithymia to the Prediction of Emotional Intelligence

	B	SE B	Beta	T	Sig
Constant	293.24	7.15		41.04	.000
Alexithymia	-1.48	0.09	-0.64	-17.15	.000
Family functioning	-0.65	0.07	-0.34	-8.98	.000

4. Conclusion

Regarding to finding of this research, early adolescents with category of high factors of family functioning displayed more factors of alexithymia. Overall, the variables of family functioning and Alexithymia had significant positive relationship, which suggested that as family functioning increased, alexithymia also tended to increase too, significantly. Dysfunctional family affective responsiveness was related to difficulty in describing feelings. Furthermore, findings of the previous research on family factors related to alexithymia indicated that general family pathology was associated with alexithymia. In particular, difficulty identifying feelings was related to dysfunctional family affective involvement (Lumley et al. 1996).

Naghavi (2011), demonstrated that early adolescent develop specific alexithymia characteristics as a result of family dysfunction in emotional or cognitive domains in her study. These findings are well agreed with theories of the social cognitive theory. Due to according social cognitive theory early adolescents learn to express, understand, and regulate their emotions in interactions with their family, siblings. Family is strong shapers to early adolescent's behavior (Stover, 2003). In addition, parental emotion affect on early adolescent's emotion and social behaviors by its emotional regulation.

The important point is that, today in the Iran, Iranian families have started to take on roles vastly different from family of previous generations. Moreover, family takes on ever more responsibility for raising their early adolescents than in the generations that preceded them. Subsequently, the modern role of Iranian family would responsibly as several dimensions more now than ever at home with the family particular, with early adolescents and family is as emotional coachers of early adolescent's emotional intelligence and their social behaviors.

Corresponding Author:
Dr. Ma'rof Redzuan Department of Social and Development Science, Faculty of Human Ecology, University Putra Malaysia, 43400 Serdang, Selangor, Malaysia.   Tel: +600389467064
marof@putra.upm.edu.my

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