

Prediction of Alexithymia on the Basis of Attachment Style and Early Maladaptive Schemas in University Students

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ABSTRACT

Objective: Alexithymia is recognized as a disability in explaining or understanding emotions and manifests at emotional and functional levels. This study was conducted with the aim of clarifying the role of early maladaptive schemas and attachment style in alexithymia disorder.

Methods: This research was a correlational study. In this study, 220 students of Tabriz University were selected by stratified random sampling. Then, The Toronto Alexithymia Scale questionnaire (TAS-20), Adult Attachment Questionnaire (AAQ) of Hazan and Shaver, and the Young Schema Questionnaire-Short Form (YSQ-SF) were conducted to them. Data were analyzed using Pearson correlation and simultaneous regression analysis. Statistical analysis were performed using the SPSS 20.

Results: The results showed that components of early maladaptive schemas, 'Impaired Autonomy' and 'Over-vigilance' and among attachment styles, avoidance could positively predict the alexithymia.

Conclusion: Accordingly, early maladaptive schemas and attachment style are essential to predict and treat people with alexithymia.

1. Introduction

Alexithymia is a known syndrome in the field of emotional disorders. The term alexithymia was coined in 1973 by Sifneos and derived from the Greek root of Alexi (Lack of words) and thymus (emotion) and show an inability to express emotions (Lesser, 1985). Features of alexithymia comprise inability of symbolic thinking, lack of imagination, emotional coldness, objectively words and thoughts related to external events (Gunzelmann, Kopfer, Braehler, 2002). People with alexithymia interpret normal bodily agitation as big, physical symptoms of emotional arousal as bad, show emotional distress through bodily complaints and with regard to thera-

peutic interventions, they are also seeking treatment for physical symptoms (Tylor, Parker, Bagby, Acklin, 2002, cited in Besharat et al., 2008).

People with this trait have problems in understanding the emotional states of others and in interpersonal relationships, demonstrate limited empathy (Bern Baum & Prince, 1979; Hashemi et al., 2012). Childhood experiences with those who fail to show and express their emotions, or do not recognize the evolving and shaping the child's emotions and behave poorly with the emotions of a child can have a profound effect on emotion regulation in the next stages of life (Meins, Harris, Waller, Lloyd, 2008; Humphreys, Wood, Parker, 2009). Accordingly, it can be assumed that alexithymia is associated

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with attachment style. Attachment is the emotional bond between the mother and the growing child that develops from birth but the effect is not limited to childhood rather extends to all periods of life, even old age (Ainsworth, Blehar, Waters, Wall, 1978). Attachment style as a stable trait determines how people communicate with each other and how to manage the threatening situations and what strategies are employed (Bowlby, 1982, cited in Davies, Macfarlane, McBeth, Morris, and Dickens, 2009). Bowlby (1980, 1973, 1969) described the formation process of attachment, mother-infant bond, and showed how the emotions and behaviors of the attachment system determine the nature of an individual's perceptions and experiences of interpersonal relationships and emotional bonds (Besharat et al., 2003). Researchers have identified 3 attachment styles; secure, avoidant, and ambivalent (Feeney & Kirkpatrick, 1996, Ainsworth et al., 1978). Individuals with a secure attachment style, feel comfortable with intimacy and emotional attachment, ensure that the responses of others, and their viewpoints about love is positive and true (Pakdaman & Khanjani, 2011). Avoidant attachment style is combined with cold, exclusion, and without support care and thereby increases the feeling of self-reliance. Also, ambivalent attachment style is associated with the unstable and non-uniform care caused by anxiety and anger (Ahadi et al., 2008).

Magai, Distel, and Liker (1995) found in a their study that individuals with a secure style in decoding the negative emotional states of other people's faces are more successful than people with an avoidant style, and men with anxious-ambivalent style are careless in decoding anger, while the ambivalent women are more accurate. Bekendam (2001) showed that secure people are more sympathetic in interpersonal relations and have more appropriate manner in regulating their emotions. In contrast, insecure individuals have more emotional turmoil, way less efficient with poorer empathy. Simpson, Collins, Tran, and Haydon (2007) conducted a study to examine the relationship between emotional expressiveness and attachment style in romantic relationships. The results showed that, people who were known for their secure attachment in infancy, in mid-childhood, had merit and greater social competence among peers. Also, in adolescence and early adulthood, they showed more appropriate emotional expressions in their close relationships with friends and partners in romantic relationships.

On the other hand, Aaron T. Beck (1967, 1976), more than 30 years ago, in his theory about emotional disorders emphasized on cognitive schemas functions as the most basic factors. According to this theory, schemas

play a major role in creating and sustaining mental and emotional problems and also recurrence of disease (Riso, Toit, Stein, Young, 2007: 221-223; Translator, Mouloudi, Ahmadi, 2011). Martin and Young (2010) believed that schemas are the major determinants of people's thinking, feeling, behaving, and socially interacting. One of the proposed theories in the field of schemas, is Young's early maladaptive schema theory. According to Young (2003), early maladaptive schemas are pervasive and deep-rooted patterns. They are themes of memories, emotions, cognitions, and feelings about the body and communicating with others, which are formed in childhood and adolescence and are also highly inefficient.

Early maladaptive schemas are formed due to the failure to satisfy the basic emotional needs in childhood (For example, secure attachment, freedom of expression needs, realistic constraints, autonomy, and spontaneity) and through ongoing patterns of adverse experiences with family members and peers, the mismatch between parents behavior, and the child's innate temperament (Thimm, 2010). Young with respect to 5 basic emotional needs that were mentioned, grouped schemas into 5 areas: 'Disconnection and Rejection,' 'Impaired Autonomy and Performance,' 'Impaired Limits,' 'Other-directedness,' and 'Over-vigilance/Inhibition' (Bosmanns, Breat, Vleirbergh, 2010).

Early maladaptive schemas act at the deepest level of understanding, and generally act out of consciousness and psychologically vulnerable people to depression, anxiety, dysfunctional relationships, drug addiction, childhood Trauma, social phobia, eating disorders, personality disorders and psychosomatic Disorders. (Thimm, 2010, Young, 1999; Young et al., 2003; Waller, Kennerly, Ohanian, 2007: 139-175; Jovev, Jackson, 2004; Hedley, Hoffart, Sexton, 2001; Riso, Maddux, and Santorelli, 2007).

This research was conducted to examine the relationship between alexithymia and early maladaptive schemas, however, in the background, we also examined the relation between the schema and some of the factors associated with emotional distress. Waller and Barter (2005) in their study reported that activation of the schemas of abandonment leads to increased food intake as a way to avoid the negative emotions associated with that. Rijkeboer and De Boo have expressed that people who have used the compatible scheme, have a better ability to cope with the stress and when encountered with stressful event were less likely to experience mental health problems. Ball and Young (2000) in an experimental research studied the relationship between emotional

arousal and irrational thinking with life satisfaction between male and female students. The results showed that people who have highly irrational thinking, report more emotional distress and lower life satisfaction. Because of the clinical and theoretical significance of alexithymia, more research is needed in various fields. Also due to the interaction between attachment style and maladaptive schemas with alexithymia and the lack of research in this area, this study was conducted to determine the relationship between alexithymia and attachment style as well as maladaptive schemas more precisely. In addition, in this study, we attempted to determine the possibility of prediction of alexithymia using the early maladaptive schemas and attachment styles.

2. Methods

The research is a descriptive study. The research population comprised all undergraduate students of Tabriz University who were enrolled in 2013-14 academic year. Using Morgan table and considering the number of undergraduate students, 220 students were selected through stratified random sampling. Because of incomplete responses to the questionnaires, 20 subjects were excluded from statistical analysis, thus the final sample was reduced to 200 male and female students. After explaining the purpose of the study and assuring the confidentiality of the research, Toronto Alexithymia Scale (TAS-20) questionnaire, Adult Attachment Questionnaire (AAQ) of Hazan and Shaver, and the Young Schema Questionnaire-Short Form (YSQ-SF) were distributed among them. Data were analyzed using Pearson correlation and simultaneous regression analysis.

Instruments

Young's early maladaptive schema questionnaire (short form): This questionnaire has 75 questions, and was designed to measure the 15 early maladaptive cognitive schemas, including emotional deprivation, abandonment, mistrust, defectiveness, social isolation, dependence, vulnerability, undeveloped self, self-sacrifice, failure, insufficient self-control, entitlement, subjugation, emotional inhibition, and unrelenting standards.

Each of 75 items of the questionnaire is scored on a 5-point Likert scale from completely false to completely true. The person's score in each schema will be calculated by adding the scores of 5 questions pertaining to the same scheme. High score indicates a strong presence of dysfunctional schemas and the minimum score for each schema is 5 and maximum is 25 (Kameli et al., 2011). Ahi (2006) translated and administered this question-

naire in Iran. The internal consistency has been reported by Cronbach α in females as 0.97 and in males as 0.98 (Yousefnejad and Peivastegar, 2011).

Toronto Alexithymia Scale (TAS-20): It is a 20-question test and measures 3 subscales of difficulty in identifying feelings, difficulty in describing feelings, and externally oriented thinking with a 5-point scale (Score 1 for strongly disagree and 5 for strongly agree). Total score is calculated as the sum of 3 subscale scores for alexithymia (Bagby, Parker, and Tylor, 1994). In Farsi version of the Toronto Alexithymia Scale (TAS-20), (Besharat, 2007), Cronbach α coefficients were calculated for total alexithymia and its 3 subscales of difficulty in identifying feelings, difficulty in describing feelings, and externally oriented thinking as 0.85, 0.82, 0.75, 0.72, respectively, indicating good internal consistency of the scales.

Adult Attachment Questionnaire: This instrument was used for measuring attachment styles. This scale was built using Hazan and Shaver attachment testing materials (1987) and the standardization done on students of Tehran University (Besharat, 2012). It is a 15-question test and measures 3 attachment styles of secure, avoidant, and ambivalent. A 5-point Likert scale (Score of 1 for very low to 5 for very high) rates the answers. Cronbach α was calculated for each subscale questions of secure, avoidant, and ambivalent in a student sample (1480 students, including 860 girls and 620 boys). Its values were 0.86, 0.84, 0.85 for 3 subscales of secure, avoidant, and ambivalent, respectively regarding all students. Whereas, for female students, they were 0.86, 0.83, 0.84 and for male students 0.84, 0.85, 0.86, indicating good internal consistency of adult attachment scale (Besharat, 2011).

3. Results

This study was held among students of Tabriz University at the undergraduate level and demographic data of the participants are shown in Table 1.

Table 1. Demographic data of the study's participants.

Gender	Frequency	%	Age
Male	103	51.5	25
Female	97	48.5	24.67
Total	200	100	24.85

Table 2. Simple correlation of component attachment styles and early maladaptive schemas with alexithymia.

Component	Mean	SSD	11	22	33	44	55	66	77	88	99
1.Alexithymia	56.68	10.60	1								
2.Disconnection and rejection	51.65	16.95	0.42**	1							
3.Impaired autonomy and performance	38.62	12.63	0.28**	0.77**	1						
4.Other/Directedness	44.20	6.49	0.42**	0.52**	0.52**	1					
5.Over vigilance/Inhibition	28.80	6.90	0.44**	0.51**	0.47**	0.45	1				
6.Impaired limits	26.84	7.52	0.44**	0.57**	0.59**	0.40	0.66**	1			
7.secure attachment	12.60	3.01	0.22**	0.38**	0.36**	0.34	0.23**	0.35**	1		
8.Avoidant attachment	12.27	3.30	0.37**	0.40**	0.42**	0.39	0.32**	0.47**	0.36**	1	
9.Ambivalent attachment	13.45	3.05	0.27**	0.26**	0.32**	0.19	0.16**	0.26**	0.28**	0.31**	1

**Significant at P<0.01

*Significant at P<0.05

Before examining the role of alexithymia independent variable in the regression model, we searched the correlation of the variables. As it can be seen in Table 2, among the components of attachment styles, avoidant and ambivalent styles have a positive relationship. Also, secure attachment has a significant negative relationship with alexithymia. Besides, among the components of early maladaptive schemas, 'Disconnection and Rejection,' 'Impaired Autonomy and Performance,' 'Impaired Limits,' 'Other-directedness,' and 'Over-vigilance/Inhibition' have a significant positive relationship with alexithymia.

Before performing a separate regression analysis to examine the assumptions of this study, we evaluated the independence of independent variables by multiple linear assumptions. Software acquired tolerance and variance inflation. Variable tolerance was in the range of 0.65 to 0.93 and the variance inflation factor was in the range of 1.2 to 1.67. Hence, we can assume that the predictor variables are independent of each other and the multiple linear did not happen. In addition, the natural diagram showed no deviation from normality. In order to determine which variables are maladaptive schemas and

Table 3. Regression analysis to predict alexithymia through maladaptive schemas and attachment styles.

Variable	Index									
	B	β	t	P	R	R ²	RΔ ²	E.S	F	P
Model					0.52	0.31	0.28	8.96	10.04	0.0001
Disconnection and rejection	0.03	0.059	0.55	0.57						
Impaired autonomy and performance	0.17	0.20	1.90	0.04						
Other/Directedness	-0.09	-0.05	0.73	0.46						
Over vigilance/Inhibition	0.30	0.19	2.24	0.02						
Impaired limits										
Secure attachment	0.13	0.09	1.01	0.32						
Avoidant attachment	-0.14	-0.04	0.55	0.58						
Ambivalent attachment	0.54	0.16	2.20	0.02						

Predictors: Component of attachment style and maladaptive schemas
dependent variable: alexithymia

whether attachment styles are predictors of alexithymia, we used simultaneous regression analysis.

Information of Table 3 shows that multiple correlation for the regression model is equal to 0.52 and its square is equal to 0.31. Also, the correction coefficient is 0.28. In other words, 0.28 of the change in alexithymia is explained by early maladaptive schemas (Impaired Autonomy and Performance, Over vigilance/Inhibition) and component attachment styles (avoidant style). Other components of the study had no significant role in predicting alexithymia.

4. Discussion

The results showed that secure attachment relationship with alexithymia is negatively significant and the relationship between alexithymia and avoidant as well as ambivalent attachment style is positive and significant. These results correspond with the findings of previous researches (Besharat, 2009, 2012; Trisi, D-Argenio, Peracchio, and Petti, 2001; Fonagy, Gergely, Jurist, and Target, 2002; Kooiman, Vellinga, Spinhoven, Draijer, Trijsburg, and Rooijmans, 2004; Montebanocci, Codispoti, Baldaro, and Rossi, 2004).

Maternal sensitivity and responsiveness (or those who are responsible for primary care of the child) to the child's emotional state, is the main determinant of learning how to regulate emotions and relationships with others (Bowlby, 1969; Bretherton, 1985; Tennant, 1988; cited in Besharat, 2009). Evidence suggests that after 3 months, infants become sensitive to the sign of the external bias, including responses of facial and vocal of the caretakers; these signs play an important role in the regulation of infant distress (Gergely and Watson, 1996). Safe Kids will experience improved and integrated responsiveness from primary care and learn that balanced expression of emotions has positive consequences, so the child is able to regulate emotions (Ainsworth et al., 1978). This ability can explain the negative relationship between secure attachment style and alexithymia, which is characterized by impairment and disability in emotional self-regulation (Kreitler, 2002).

On the other hand, people with insecure attachment styles, compared with those with a secure attachment style, experience lower levels of positive emotions and are powerless to manage stress, anxiety, depression, and other negative emotions (Besharat, 2010; Hesse, Floyd, 2011). Consistent with these findings, childhood emotional experience plays a crucial role in emotional sideways action or insufficient action. Original context of

this impact is person's attachment style, which is shaped by experience and through the patterns of work, internally and continuously (Berman, Sperling, 1994). Thus, secure attachment is associated with emotional capabilities and insecure attachment styles with emotional disabilities (Besharat, 2012).

Likewise, in this study avoidant attachment style could explain alexithymia. These results are consistent with the findings of Besharat (2009). According to the 4-category model of attachment (Bartholomew, Horowitz, 1991), people with avoidant attachment styles, are divided into two categories: those who have a positive attitude towards themselves and negative towards others and those who have negative attitudes toward themselves and others, negative attitude to others is the common for people who have avoidant attachment style. In other words, having a negative attitude towards others prevents a person with avoidant style to describe her own feelings and emotions.

Findings of our study suggest that areas of 'Disconnection and Rejection,' 'Impaired Autonomy and Performance,' 'Other-directedness,' 'Over-vigilance/Inhibition,' and 'Impaired Limits' have significant positive correlations with alexithymia. This means that, Whatever be the schema of these areas more incompatible, alexithymia is more. Young et al. (2003) argued that schemas arise due to failure in satisfying basic emotional needs of children and act as a filter to prove or confirm the experiences of children. For this reason, the negative schemas in individuals who have experienced a difficult childhood cause negative emotions, in contrast, optimistic view calls positive emotions and improves a person's quality of coping with stress.

In addition, regression analysis shows that areas of 'Impaired Autonomy and Performance,' and 'Over-vigilance/Inhibition' are important predictors of alexithymia. 'Impaired Autonomy and Performance' domain contains 4 exclusive schemas: vulnerability, failure, undeveloped self, and dependence. People who have difficulty in these schemas, their expectations of self and environment interfere with their concrete ability to separate, function or survive independently, and successfully complete tasks. Typically, schemas of this domain form in households that reduce a child's self-esteem, is overly protective of children or not to encourage children to do things outdoors (Young et al., 2011).

Another area that has the ability to predict alexithymia is 'Over-vigilance/Inhibition' area. This field contains the schema of negativity, emotional inhibition, unrelent-

ing standards, and punitiveness (Zolfagari et al., 2008). According to Young et al. (2011), people who have these schemas have a superficial relationship, and are distant and cold towards others. Also negativism, (ignoring the positive aspects of life, not to express excitement, affection and love) can lead to problems in their lives. For example, in interpersonal relations, they are afraid of allowing to express their emotions, lest completely lose control of theirs.

On the other hand, patients with alexithymia have characteristics such as difficulties in processing emotional information (Suslow and Junghanns, 2002), difficulty in understanding facial expressions (Parker, Taylor, and Bagby, 1993) and less capacity for empathy (Guttman and Laporte, 2002). This feature troubles the people with alexithymia in interpersonal relationships because of apathy and indifference to others (Besharat, 2009; Vanheule, Desmet, Rosseel, Verheaghe, and Meganck, 2006). They have difficulty in expressing their needs to others and unable to deal with interpersonal challenges in social situations (Besharat, 2009; Vanheule, Desmet, Meganck, and Bogaerts, 2007). This study confirms the findings of Weinryb, Gustarsson, Hellstrom, Andersson, Broberg, and Rylander (1996) about the relationship between alexithymia and difficulties in interpersonal relations as a key feature of the 'Over-vigilance/Inhibition.' And given that the scope of the scheme has many common features with alexithymia, it can be a good representation for the alexithymia.

In summary, the results of this study showed that, there is a correlation between alexithymia with early maladaptive schemas as well as attachment styles. Also, avoidant attachment style and 'Impaired Autonomy and Performance,' and 'Over-vigilance/Inhibition' schemas have the greatest ability to predict alexithymia. Accordingly, there are two sets of theoretical and practical implications for this study. In practical level, we can enhance the ability of normal subjects with respect to their emotional experience and inform them of the existence of probable maladaptive schemas and attachment styles. Ask them to inoculate against mental disorders, and take necessary measures such as training interventions. The theoretical implications of research findings provide new insights about the predictors of alexithymia. These predictors (maladaptive schemas and attachment styles) not only enrich theoretical models of addiction, but also lead to the strengthening of relations among the 3 theories: the theory of alexithymia, maladaptive schemas, and attachment styles.

The population and sample pose some restrictions on the findings, interpretations, and attributions of cognitive variables that should be considered. Also the study sample was a student sample, so one must be cautious in generalizing the findings to other populations.

In future researches, it is recommended that larger samples be examined and research be done on people with psychological disorders, personality disorders, or emotional problems.

References

- Ahadi, B., Azizi Nejad, F., Narimani, F., Berahmand, A. (2008). [Explanation of obsessive-compulsive disorder in terms of attachment styles and defense mechanisms (Persian)]. *Journal of Behavioral Sciences*, 2(4),339-343.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of Attachment: A psychological study of the strange situation*. New York: Lawrence Erlbaum Associates
- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia Scale:I. Item selection and cross-validation of factor structure. *Journal of Psychosomatic Research*, 38(1),23-32.
- Ball, S. A., Young, J. E. (2000). Dual focus schema therapy for personality disorders and substance dependence: Case study results. *Cognitive and Behavioral Practice*, 7(3),270-281.
- Bartholomew, K., & Horowitz, L. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of personality and social Psychology*, 61(2), 226-244.
- Bekendam, C. (2001). Dimensions of emotional intelligence: Attachment, affect regulation, alexithymia and empathy. *Dissertation Abstract International*, 58(4-B), 09-21.
- Berman, W. H., & Sperling, M. B. (1994). *The structure and function of adult attachment: Clinical and Developmental Perspectives*. New York, London: The Guilford Press.
- Besharat, M. A. (2007). [Reliability and factorial validity of Farsi version of the Toronto Alexithymia Scale with a sample of Iranian students (Persian)]. *Psychological Reporters*, 101(1), 209-220.
- Besharat, M. A. (2008). [Attachment style and alexithymia (Persian)]. *Psychological Research*, 12(4), 63-80.
- Besharat, M. A. (2009). Alexithymia and interpersonal problems. *Studies in Education and Psychology*, 63(1), 5-129.
- Besharat, M.A. (2010). Relationship of alexithymia with coping styles and interpersonal problems. *Procedia Social and Behavioral Sciences*, 17(5), 614-627.
- Besharat, M. A. (2011). Development and validation of Adult Attachment Inventory. *Procedia-Social and Behavioral Sciences*, 30, 475-479.

- Besharat, M. A. (2012). The mediating role of defense mechanisms in the relationship between attachment style and alexithymia. *Journal of Applied Psychology*, 6(1), 7-22.
- Besharat, M. A., Golinejad, M., Ahmadi, A. E. (2003). [Investigate the relationship between attachment style and interpersonal problems (Persian)]. *Thought and Behavior*, 8(4), 74-81.
- Besharat, M. A., Karimi, M., Gorbani, N., Rahiminejad, A. (2009). [Compare alexithymia and emotional intelligence in Gifted Students (Persian)]. *New Cognitive Science*, 11(4), 18-28.
- Besharat, M.A., Zebardast, A., Nadali, H., Salehi, M. (2008). [Emotional intelligence, alexithymia and interpersonal problems (Persian)]. *Journal of Psychology and Educational Sciences*, 1(2), 101-123.
- Bosmanns, G., Breat, C., & Vleirberghe, L. (2010). Attachment and symptoms of psychopathology: Early maladaptive schemas as a cognitive link. *Clinical Psychology & Psychotherapy*, 17(5), 347-385.
- Davies, K. A., Macfarlane, G. J., McBeth, J., Morriss, R., Dickens, C., (2009). Insecure attachment style is associated with chronic widespread pain. *Journal of Pain*, 14(3-24), 200-205.
- Feeney, J. A., Kirkpatrick, L. A., (1996). Effects of adult attachment and presence of romantic partners on physiological response to stress. *Journal of Personal Social Psychology*, 70(2), 255-270.
- Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. New York: other Press.
- Gergely, G., & Watson, J. S. (1996). The social biofeedback theory of parental affect-mirroring: The development of emotional self-awareness and self-control in infancy. *International Journal of Psychoanalysis*, 77(Pt 6), 1-31.
- Gunzelmann, T., Kopfer, J., & Brahler, E. (2002). Alexithymia in the Elderly General Population. *Comprehensive Psychiatry*, 43(1), 74-80.
- Guttman, H., Laporte, L. (2002). Alexithymia, empathy, and psychological symptoms in a family context. *Comprehensive Psychiatry*, 43(6), 448-455.
- Hashemi, T., Khalilzade, S., Mashinchi, N, (2012). [Gender, alexithymia, and theory of mind in students (Persian)]. *Journal of Social Cognition*, 1(2), 6-13.
- Hedley, L. M., Hoffart, A., & Sexton, H. (2001). Early maladaptive Schema in patients with panic disorder with agoraphobia. *Journal of Cognitive Psychotherapy*, 15(2), 131-142.
- Hese, C., & Floyd, K. (2011). Affection mediates the impact of alexithymia on relationship. *Personality and Individual Differences*, 50(4), 451-456.
- Humphreys, T. P., Wood, L., M., & Parker, J. D. A., (2009). Alexithymia and satisfaction an in intimate relationships, *Personality and Individual Differences*, 4(6), 43-47.
- Jovev, M., Jackson, H. J. (2004). Early maladaptive schema in personality disorder individuals. *Journal of Personality Disorders*, 18(5), 467-478.
- Kameli, Z., Ganbari, B., A., Mohamadian, H. A., (2011). Effectiveness of cognitive therapy group focused on schema to modify the early maladaptive schemas orphans and irresponsible girls. *Clinical Psychological Research and Consulting*, 1(1), 83-89.
- Kooiman, C. G., Vellinga, S., Spinhoven, P. H., Draijer, N., Trijsburg, R. W., & Rooijmans, H. G. M. (2004). Childhood adversities as risk factors for alexithymia and other aspect of affect dysregulation in adulthood. *Psychotherapy and Psychosomatics*, 73(2), 107-116.
- Kreiler, S. (2002). The Psychosemantic approach to alexithymia. *Personality and Individual Differences*, 33(3), 393-407.
- Lesser, I. M. (1985). Current concepts in Psychiatry. Alexithymia. *New England Journal of Medicine*, 312(11), 690-692.
- Magai, C., Distel, N., Liker, R. (1995). Emotion socialization, attachment and patterns of adult emotional traits. *Cognition and Emotion*, 9(5), 461-481.
- Martin, R., Young, J. E. (2010). *Schema therapy in K.S. Dobson (Ed), Handbook of cognitive-behavioral therapies*. (3rd ed). London: Guilford Press.
- Meins, E., Harris, W., J. & Lloyd, A. (2008). Understanding alexithymia: Associations with peer attachment style and mind-mindedness. *Personality and Individual Differences*, 45(12), 146-152.
- Montebarocci, O., Codispoti, M., Baldaro, B., & Rossi, N. (2004). Adult attachment style and alexithymia. *Personality and Individual Differences*, 36(3), 499-507.
- Pakdaman, S. H., Khanjani, M. (2011). [The role of perceived parenting in the relationship between attachment style and collectivism in students (Persian)]. *Journal of Social Psychology Studies*, 1(4), 81-103.
- Parker, J. D. A., Taylor, G. J., Bagby, R., M. (1993). Alexithymia and the recognition of facial expression of emotion. *Psychother Psychosom*, 59(3-4), 197-202.
- Riso, P.L. du Toit, D., J., Stein, & Young J. E. (2007). *Cognitive schema and core beliefs in Psychological problems*. A scientist-practitioner Guide, Washington, Dc. American Psychological Association.
- Rykeboer, M. M., & Deboo, G., M. (2009). Early maladaptive schemas in children: Development and validation of the schema inventory for children. *Journal of consulting and clinical Psychology*, 41(2), 102-109.
- Simpson, J. A., Collins, A., Tran, Haydon, K. C. (2007). Attachment and the experience and expression of emotion in romantic relationships: A development perspective. *Journal of Personal and Social Relationship*, 99(2), 355-367.
- Suslow, T., Junghanns, K. (2002). Impairments of emotion situation priming in alexithymia. *Personality and Individual Differences*, 32(3), 541-550.
- Thimm, J. C. (2010). Personality and early maladaptive schemas: A five-factor model perspective. *Journal of Behavior Therapy and Experimental Psychiatry*, 41(4), 373-380.
- Troisi, A., Dargenio, A., Peracchio, F., & Petti, P. (2001). Insecure attachment and alexithymia in young men with mood symptoms. *Journal of Nervous and Mental Diseases*, 189(5), 311-316.
- Vanheule, S., Desmet, M., Meganck, R., Bogaerts, S. (2007). Alexithymia and interpersonal problems. *Journal of Clinical Psychology*, 63(1), 109-17.
- Vanheule, S., Desmet, M., Rosseel, Y., Verhaeghe, P., Meganck, R. (2006). Relationship patterns in alexithymia: A study using

- the core conflictual relationship theme method. *Psychopathology*, 40(1),14-21.
- Waller, G., Barter, G. (2005). The impact of subliminal abandonment and unification cues on eating behavior. *International Journal of Eating Disorders*, 37(2),158-160.
- Waller, G., Kenerly, H., & Ohanian,V. (2007). *Schema-focused cognitive behavioral therapy for eating disorder*. In: L.P. Riso, P. L. du & Toit. D, J., Stein, & Young, J, E., *Cognitive schemas and beliefs in psychological problems. A scientist practitioner guide*. Washington, Dc: American Psychological Association.
- Weinryb, R. M., Gustavsson J. P., Hellstrom, C., Andersson, E., Broberg, A., Rylander, G. (1996). Interpersonal problems and personality characteristics: Psychometric studies of the Swedish version of the IIP. *Personality and Individual Differences*, 20(1),13-23
- Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach* (3rd ed). Sarasota, FL: Professional Resource Press.
- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioners guide*. New York: Guilford press.
- Young, J. E., Klosko, J. S., & Weishaar, M, E. (2003). [*Schema therapy (A practical guide for clinicians) (Persian)*]. Translator: Hamidpour, H., Andouz, Z. (2011), Tehran, Arjomand Press.
- Yuosef Nejad, M., Peivaste Gar, M. (2011). Relationship between life satisfaction and primary maladaptive schemas in students. *Knowledge and Research in Applied Psychology*, 12(4),55-65.
- Zolfagari, M., Fatehizade, M., Abedi, M, R (2008). The relationship between early maladaptive schemas and dimensions of marital intimacy among couples in Esfahan. *Journal of Family Studies*, 4(15),247-261.