

## Prediction of Cognitive Emotion Regulation Strategies Based on Early Maladaptive Schemas and Alexithymia

Mahta Damavandi

Islamic Azad University, South Tehran Branch,  
Tehran, Iran

Saeed Sadeghi✉

Islamic Azad University, South Tehran  
Branch, Tehran, Iran

The present study aimed to investigate the relationships between early maladaptive schemas, alexithymia and cognitive emotion regulation strategies. The research method was descriptive-correlational. The statistical population was comprised of all the students of the Science and Research Branch of the Islamic Azad University of Tehran, in the second semester of the 2019-2020 academic year (N = 10,000). Of this population, 380 students ( $n=204$  females;  $n=176$  males) were selected by using the convenience sampling method. For data collection, the Toronto alexithymia scale, the Young's early maladaptive schema questionnaire, and the cognitive emotion regulation questionnaire were used. The data were analyzed using the matrix regression procedure in SPSS 26. The results demonstrated that there is a significant positive association between early maladaptive schemas, cognitive emotion regulation strategies, and difficulties in emotion regulation. Based on these findings, it was concluded that early maladaptive schemas that are formed in childhood led to alexithymia in individuals, which in turn affects the strategies that individuals use for cognitive emotion regulation.

*Keywords:* Early Maladaptive Schemas, Alexithymia, Cognitive Emotion Regulation Strategies

Today, the world is facing huge and constant changes and developments that require new knowledge and generate novel needs. The needs, on the one hand, contribute to the greater welfare of societies and on the other hand add to their problems, causing some diseases as well as mental disorders and weakening human relationships and values. The fact is that human problems have become more complex and diverse. All human beings experience a wide range of emotions and feelings in their lives, and it is quite natural for them to show different emotions in the face of different situations, but intense negative emotions and feelings are unusual and not only are they not constructive, but they also have destructive and harmful ramifications (Kaviani, Poor Naseh & Golfam, 2014).

✉ Correspondence should be addressed to Dr. Saeed Sadeghi, PhD in Psychology, Islamic Azad University, South Tehran Branch, Tehran, Iran; Email: [dr.saeedsadeghi2018@gmail.com](mailto:dr.saeedsadeghi2018@gmail.com)

© 2022 by Mahta Damavandi, Saeed Sadeghi is licensed

under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/) 

Successful emotion regulation plays an essential role in human life (Gross, 2007). Psychological, cognitive, physiological and behavioral functions are all dependent on people's success in emotion regulation (Alaqeband, Kamali, Tavakkoli & Alaqeband, 2012). Emotion regulation is an innate characteristic that is also manifested in infants and is greatly influenced by the environment, especially by the educational and parenting practices. Emotion regulation develops in the environment that helps growth; otherwise, it acts in a maladaptive way (Zare' et al., 2013).

While there are many different definitions of emotion regulation, different theories agree that effective emotion regulation includes skills related to a) awareness and evaluation of emotions, b) regulation of emotions, and c) adaptive use of emotions (Berking et al., 2008). Awareness of verbal and non-verbal emotions and evaluation thereof in an individual or others can lead to voluntary response tendencies to modify and use emotions (Gross & John, 2003). Emotion regulation requires the management of positive and negative emotions in oneself and others based on the current

situation (Cole, 2009). Finally, the use of emotion is defined as an individual's use of mood to solve personal and interpersonal problems (Kahn, Blaise, Gepitani, Urban, & Dimitrovich, 2010).

One of the most obvious constructs studied in order to investigate the problems related to emotion processing and emotion regulation is alexithymia (Walter & Scheidt, 2006). Alexithymia is a Greek term that means the absence of a word for the expression of emotions (Vingerhoets, Nyklícek, & Denollet, 2008). Sifnos (1973) first used the term "alexithymia" to describe a set of cognitive and emotional characteristics that were observed among individuals with psychosomatic disorders (Besharat, Haddadi, Rostami, & Sarrami Froushani, 2011). Alexithymia is a multidimensional construct consisting of four distinct features: a) difficulty identifying and describing emotions and feelings, b) difficulty distinguishing between emotions or feelings and bodily sensations, c) inability to experience, describe or express fantasies and dreams, and d) an inclination toward thinking externally as opposed to internally (Taylor, Bagby & Parker, 1997).

Alexithymia refers to a difficulty in emotional self-regulation and, in other words, the inability to cognitively process emotional information and regulate emotions. The affected people face problems in recognizing, detecting, processing, and regulating emotions and have difficulty distinguishing between inner and outer feelings (Besharat, 2008; Swart, Kortekaas & Aleman, 2009). Alexithymia is applied to a failure to experience, express, and regulate emotions. It is a multifaceted construct consisting of difficulty identifying feelings, describing feelings to others, distinguishing between feelings and bodily sensations related to emotional arousal, limited visualization power that is defined in terms of the inability to express fantasies and dreams, and cognitive and objective (non-visual), pragmatic and fact-based style or objective thinking (Besharat, 2008). People with alexithymia magnify normal bodily sensations, misinterpret the physical symptoms of emotional arousal, show emotional helplessness through physical complaints, and seek treatment for physical symptoms in therapeutic measures (Taylor & Bagby, 2000). Alexithymia manifests itself in various forms such as the inability to conceptualize emotions, the inability to

distinguish between emotions, and the inability to consciously experience emotions and describe psychological stress (Frauli & Smith, 2001). People with alexithymia are unable to express their needs to others and have difficulty coping with interpersonal challenges in social situations (Besharat, 2009).

Alexithymia is also considered by some to be equivalent to difficulty in emotional self-regulation or inability to cognitively process emotional information and regulate emotions (Stasiwicks et al., 2012; Besharat, 2009; Besharat et al., 2014; Besharat & Shahidi, 2014; Isalzadegan et al., 2013; Karami, Zakiei & Mohebbi, 2012; Weinbermohl et al., 2012). Negative cognitive emotion regulation, including rumination, catastrophizing, self-blame and other-blame, greatly increases emotional problems (Samani, Sohrabi & Mansouri, 2011). According to the studies conducted, people with high levels of alexithymia seem to be grappling with problems in cognitive processing and emotion regulation (Taylor & Bagby, 2000).

Those with alexithymia cannot process, perceive, and evaluate emotional information properly. This disability makes the person distressed and helpless emotionally and cognitively and disrupts the organization of his/her emotions and cognitions. This disorder, moreover, creates interpersonal problems at the level of social interactions. By disrupting the cognitive processing of emotions, Alexithymia can increase the likelihood of using maladaptive emotion regulation strategies (Besharat, Mahmoudi, Hosseini Nezhad, & Lavasani, 2014). People with alexithymia, on the other hand, attribute their unacceptable and personal emotions to others and, in the face of failure, blame others, holding them responsible for their own mistakes. Further, these people sometimes blame themselves when they fail; therefore, self-blame and other-blame are considered as maladaptive emotion regulation strategies that are seen in people with alexithymia (Besharat et al., 2014).

Another dimension of alexithymia is the cognitive dimension of this construct. A cognitive component that is partly associated with alexithymia is the concept of schema and especially early maladaptive schemas. Jeffrey Young (1999) calls those schemas that lead to the development and persistence of psychological problems in the individual early maladaptive schemas. These schemas are the cognitive and emotional patterns of

self-harm that are formed in the early stages of a person's development, persist throughout his/her life (Young, Klosko & Weishaar, 2003), and serve as the framework within which individuals build the meaning of their life (Leahy, Beck & Beck, 2005). In a general sense, schema means construction, framework, or design. In the ancient Greek philosophy of Stoic logicians, especially Chrysippus (206-279 BC), the principles of logic are referred to as inference schema (Young, Jeffrey, Klosko, Jannet, & Weishaar, 2003).

According to the maladaptive schema model, maladaptive schema (negative core beliefs) refers to inefficient cognitive frameworks for seeing oneself and others, which are created primarily in response to harmful childhood events and later develop throughout one's life (Young et al., 2003). In fact, early maladaptive schemas are applied to the hypothetical mental structure for presenting general concepts stored in memory which are important not only for interpreting information but also for deciphering the information that is provided (Young et al., 2003). Young (2003) stated that early maladaptive schemas are the result of negative interpersonal experiences during the first years of life inside and outside the family. These basic beliefs essentially determine a person's evaluation of the world in relationships with others (Carles, Douglass, Cacciapaglia, & O'Brien, 2004).

The source of early maladaptive schemas includes the core emotional needs, early life experiences, and emotional temperament of the child, and as a "reference structure or framework", which affect the individual's perception of himself/herself, the world, and others like lenses (Young, 1999). Young et al. (2003) introduce fifteen early maladaptive schemas that are organized into five domains of disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness and over-vigilance and inhibition (Young, Klosko, & Weishaar, 2003). Early-formed schemas usually have greater durability and power (Young, 1999). Early maladaptive schemas persist through cognitive distortions, self-defeating patterns in life, and maladaptive coping techniques and also, directly and indirectly, cause psychological distress and personality disorders (Thimm, 2010).

In various studies, the relationship between early maladaptive schema and alexithymia has been

evaluated in some groups of individuals with mental disorders. For example, in a study of women with eating disorders, schemas in the domain of entitlement/grandiosity were related to difficulty identifying feelings, and schemas in the domain of abandonment/instability were correlated with difficulty describing feelings in alexithymia (Lawson, 2008). Alexithymia and early maladaptive schemas have both been identified as constructs related to interpersonal problems (Tamin, 2013; Van Hool et al., 2007). Numerous studies (Swart, Kortekaas & Stasiwicks, 2012; Aleman, 2009; Welde & Gorman, 2014) have indicated that people with alexithymia are more likely to use the defense strategy of suppression and less likely to use the strategy of reappraisal compared to normal individuals. These reports suggest an association between early maladaptive schemas and alexithymia; however, other studies have denied the existence of such a relationship (Welde & Van Tool, 2014) and this indicates the need for further research to confirm or deny this relationship. Therefore, the present study was conducted to answer the question as to whether there was a relationship between early maladaptive schemas and alexithymia with cognitive emotion regulation strategies.

## Method

### Participants

The statistical population of this study was comprised of all the students of Azad University, Science and Research Branch in Tehran, in various fields of study in the academic year 2019-2020 (N = 10,000). The sample included 380 male ( $n = 204$ ) and female ( $n = 176$ ) students of the Islamic Azad University, Science and Research Branch, who were selected by using the convenience sampling method.

### Measurement Instruments

*Twenty-Item Toronto Alexithymia Scale.* is a self-report measure developed by Bagby, Parker, and Taylor (1994). Items are rated on a 5-point Likert scale (1: Strongly disagree to 5: Strongly agree). Five items of this scale are scored in reverse, which are: 4, 5, 10, 18, 19. The total Alexithymia score can be calculated as sum of the three subscales called Difficulty Identifying Feelings (DIF), Difficulty Describing Feelings (DDF), and

Externally Oriented Thinking (EOT). DIF measures the people's difficulty in identifying their own inner emotional states; DDF measures people's difficulty in describing their feelings to others; and EOT measures people's tendency to focus on the concrete details of external events rather than of feelings, fantasies, and other aspects of one's own inner experience. The twenty-item Toronto Alexithymia Scale has previously shown excellent psychometric properties (Taylor & Bagby, 2000; Parker, et al., 2003; Taylor, et al., 2003).

*The Schema Questionnaire (SQ)* (Young, 1991). is a 205-item self-report questionnaire designed to measure 16 different early maladaptive schemas. Young (1991) based on his own clinical experience with chronic and/or difficult psychotherapy clients and the experiences of other practicing therapists designed the Items for the SQ. Each item is rated on a 6-point Likert scale (1 = completely untrue of me, 2 = mostly untrue of me, 3 = slightly more true than untrue, 4 = moderately true of me, 5 = mostly true of me, 6 = describes me perfectly). Young (1995) found that SQ shows excellent psychometric properties.

*Cognitive Emotion Regulation Questionnaire (CERQ)*; Garnefski et al., 2001). is a 36-item self-report instrument developed to assess the individual's cognitive regulation of emotions in response to threatening or traumatic life events. The instrument assesses nine separate dimensions: Selfblame, Blaming others, Acceptance, Refocusing on planning, Positive refocusing, Rumination, Positive reappraisal, Putting into perspective, and Catastrophizing. Responses are scored on a 5-point Likert scale ranging from 1 "(almost) never" to "(almost) always."

## Procedures

This study is a descriptive-correlational cross-sectional research design and it is an applied research in terms of purpose. For data collection, the sources related to the literature were first examined. Then, after coordination and obtaining permission from the university, the field method was used to

administer the questionnaires. After a brief statement about the research objectives and obtaining the consent of the students to participate in the research and observing the ethical principles, the questionnaires were provided to them and they were asked to express their views carefully. The research inclusion criteria were as follows: 1) the students of Azad University, Science and Research Branch, 2) the age between 20 and 35, and 3) the willingness to participate in the research. The research exclusion criteria were as follows: 1) the reluctance to participate in the research and 2) the incompleteness of the questionnaires. The research information was collected individually, on-site, and with the presence of the researcher.

## Data Analysis

Data analysis was performed by using the matrix regression procedure in SPSS 26 software.

## Results

Table (1) provides a statistical description of the scores for early maladaptive schemas, including skewness and kurtosis, mean and standard deviation of the scores.

Table (2) and Table (3) show the results for the inter-correlations between early maladaptive schemas and cognitive emotion regulation strategies, and the inter-correlations between alexithymia and cognitive emotion regulation strategies, respectively.

**Table 1.**  
*Statistical Description of the Participants' Scores*

<b>Measures</b>	<b>Dimensions</b>	<b>Skewness</b>	<b>Kurtosis</b>	<b>Mean</b>	<b>SD</b>
<b>Early Maladaptive Schemas</b>	Disconnection and rejection	-0.253	0.312	59.37	9.926
	Impaired autonomy	-0.499	0.503	44.63	6.414
	Impaired limits	-0.020	0.795	31.44	4.775
	Other-directedness	-0.619	0.646	26.35	3.242
	Over-vigilance	0.129	-0.678	29.31	6.833
<b>Alexithymia</b>	Difficulty identifying feelings	0.493	0.591	14.16	2.859
	Difficulty describing feelings	-0.793	1.264	18.90	2.169
	Externally oriented thinking	-0.612	0.489	25.18	4.791
<b>Cognitive Emotion Regulation Strategies (CERQ)</b>	Positive cognitive emotion regulation strategy	0.999	1.219	52.34	10.546
	Negative cognitive emotion regulation strategy	-0.630	0.894	65.92	9.496

**Table 2.**  
*Correlation Matrix for the Early Maladaptive Schemas and Cognitive CERQ*

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1- Disconnection/rejection	1						
2- Impaired autonomy	0.512**	1					
3- Impaired limits	0.587**	0.528**	1				
4- Other-directedness	0.558**	0.565**	0.585**	1			
5- Over-vigilance	0.170**	0.223**	0.120*	0.244**	1		
6- Positive CERQ	-0.511**	-0.497**	-0.487**	-0.553**	-0.232**	1	
7- Negative CERQ	0.559**	0.549**	0.545**	0.597**	0.270**	-0.541**	1

**Table 3.**  
*Correlation Matrix for Alexithymia and Cognitive CERQ*

Variables	1	2	3	4	5
1. DIF	1				
2. DDF	0.295**	1			
3. EOT	0.313**	0.671**	1		
4. Positive CERQ	-0.315**	-0.492**	-0.520**	1	
5. Negative CERQ	0.366**	0.526**	0.548**	-0.541**	1

Four separate regression models were run to test four different questions:

If the participants' early maladaptive schemas significantly predicted their ratings of positive-CERQ?

If the participants' early maladaptive schemas significantly predicted their ratings of negative-CERQ?

If the participants' ratings of alexithymia significantly predicted their ratings of positive-CERQ?

And finally, If the participants' ratings of alexithymia significantly predicted their ratings of negative-CERQ?

In next few paragraphs the results of these four different regression models are reported separately:

*Maladaptive Schemas and Positive-CERQ.* The results of linear regression indicated that the dimensions of maladaptive schemas altogether explained 40.5% of the variance in positive-CERQ ( $R^2 = .405$ ,  $F(5,374) = 30.677$ ,  $P < .0001$ ). It was found that all different dimensions of maladaptive schemas including disconnection/rejection ( $\beta = -.195$ ,  $P < .0001$ ), impaired autonomy ( $\beta = -.168$ ,  $P < .01$ ), impaired limits ( $\beta = -.124$ ,  $P < .05$ ), other-directedness ( $\beta = -.256$ ,  $P < .0001$ ), and over vigilance ( $\beta = -.084$ ,  $P < .05$ ) could significantly and negatively predict participants' positive-CERQ.

*Maladaptive Schemas and Negative-CERQ.* The results indicated that the dimensions of maladaptive schemas explained 48.9% of the variance in negative-CERQ ( $R^2 = .489$ ,  $F(5,374) = 71.586$ ,  $P < .0001$ ). It was found that all different dimensions of maladaptive schemas including disconnection/rejection ( $\beta = .207$ ,  $P < .0001$ ), impaired autonomy ( $\beta = .190$ ,  $P < .0001$ ), impaired limits ( $\beta = .162$ ,  $P < .01$ ), other-directedness ( $\beta = .252$ ,  $P < .0001$ ), and over vigilance ( $\beta = .111$ ,  $P < .01$ ) could significantly and positively predict participants' negative-CERQ.

*Alexithymia and Positive-CERQ.* The results also indicated that the dimensions of alexithymia altogether explained 32.7% of the variance in positive-CERQ ( $R^2 = .327$ ,  $F(3,376) = 60.811$ ,  $P < .0001$ ). It was found that all different dimensions of alexithymia including difficulty identifying feelings ( $\beta = -.146$ ,  $P < .01$ ), difficulty describing feelings ( $\beta = -.238$ ,  $P < .0001$ ), externally oriented thinking ( $\beta = -.315$ ,  $P < .0001$ ) could significantly and negatively predict participants' positive-CERQ.

*Alexithymia and Negative-CERQ.* Finally, the results showed that the dimensions of alexithymia altogether explained 37.8% of the variance in negative-CERQ ( $R^2 = .378$ ,  $F(3,376) = 76.296$ ,  $P < .0001$ ). It was found that all different dimensions of alexithymia including difficulty identifying feelings ( $\beta = .191$ ,  $P < .0001$ ), difficulty describing feelings ( $\beta = .258$ ,  $P < .0001$ ), externally oriented thinking ( $\beta = .315$ ,  $P < .0001$ ) could significantly and positively predict participants' negative-CERQ.

## Discussion

The aim of this study was to investigate the relationship between early maladaptive schemas and alexithymia with cognitive emotion regulation strategies. The results demonstrated that there was a positive correlation between early maladaptive schemas and alexithymia. This finding is consistent with the limited results published in this regard (Lawson et al., 2008; Phillips, Wright & Kent, 2013; Saariaho et al., 2015; Thimm, 2013; Vanheule et al., 2007) and is explained as follows based on several possibilities. Due to the child's inability to effectively regulate emotions associated with childhood injuries, he/she will experience severe turmoil in the face of stress and difficulties in adulthood and most likely the individual

expresses his/her emotional distress and suffering in indirect and ineffective ways. For example, he/she may show impulsive and aggressive behavior or substitute physical cues for the correct expression of these emotions, and these behaviors are all signs of alexithymia (Kench & Irwin, 2000). Taylor and Bagby believe that the roots of alexithymia are in early childhood when the cognitive processes of emotions are disrupted by adverse environmental factors such as neglect and abuse or an adverse social event (Tylor & Bagby, 2000). In addition, as stated previously, schemas are created during a person's childhood experiences (experiences that are often shocking or repetitive) and affect the individual's response to the environment (Young, 1999).

Furthermore, the results suggested that there is a positive correlation between early maladaptive schemas and cognitive emotion regulation strategies. Maladaptive schemas of disconnection and rejection, impaired limits and over-vigilance, and inhibition had the greatest contribution to predicting the difficulty in emotion regulation. These findings are consistent with the results of the research by Simard et al. (2011), the only available research related to the present study, and are explained as follows based on several possibilities. In fact, it can be theoretically explained that a person's emotional processing is subject to cognitive effects, so his/her complex behaviors are subject to the interaction of his cognitive and emotional processing. According to Young, Klosko and Weishaar (2003), early maladaptive schemas distort information about the relationship between the individual and the environment and activate negative automatic thoughts. Abnormal cognitive attitudes and processing, in turn, will lead to difficulty regulating emotions.

According to Young, the fifth domain of early maladaptive schemas, i.e. over-vigilance and inhibition, relates the loss of joy, pleasure, self-expression, and calm in interpersonal relationships by suppressing spontaneous emotions and impulses and following strict and inflexible rules. The families in which these people grew up were often punitive, demanding, perfectionist, and suppressors of emotions. Negativity/pessimism, emotional inhibition, unrelenting standards/hyper-criticalness, and punitiveness fall into the category of over-vigilance/inhibition, which is a domain

characterized by a constant and pervasive focus on negative aspects of life (death, loss, guilt, and betrayal), excessive inhibition and suppression of natural emotions and impulses and difficulty in freely expressing feelings and needs, perfectionism and strict criteria that deprive the individual of the opportunity to gain pleasure, peace, and self-confidence (Young, 1994).

The results also indicated that there was a positive relationship between cognitive emotion regulation strategies and alexithymia. Since alexithymia is considered by some to be equivalent to difficulty in emotional self-regulation or inability to cognitively process emotional information and regulate emotions, this finding is consistent with the results of previous studies (Besharat & Shahidi, 2014; Besharat, 2009; Stasiwicks et al., 2012; Pandey, Saxena & Dubbi, 2011; Besharat et al., 2013; Taylor & Bagby, 2000; Swart, Cortkas & Aleman, 2009; Schipper & Peterman, 2013; Fekri et al., 2015). Emotion management and regulation are achieved through the use of cognitive coping strategies (Ridder & Schreurs, 2001; Folkman & Moskowitz, 2004). These strategies may be adaptive or maladaptive including self-blame, other-blame, rumination, and catastrophizing (Garnefski, Kraaij & Spinhoven, 2011). Maladaptive cognitive emotion regulation strategies undermine a person's ability to control and manage emotions. The inability to cognitively process emotional information and regulate emotions is a hallmark of alexithymia (Taylor & Bagby, 2000; Conley & Danny, 2007); thus, the relationship between difficulty in emotion regulation and alexithymia is justified.

In line with these results and in the form of the studies conducted in the country, Esmaili et al. (2011) report that emotional responses provide important information about a person's experience in relation to others. With this information, people learn how to behave in the face of various emotions, how to express emotional experiences verbally, what strategies to use in response to emotions, and how to treat others in the context of specific emotions (Esmaili et al., 2011).

## Conclusion

Maladaptive schemas are cognitive and emotional patterns of self-harm that are formed in the early stages of a person's development and

persist throughout his/her life (Young, Klosko & Weishaar, 2003) and serve as the framework within which people build the meaning of their life (Leahy, Beck & Beck, 2005). Some people try to create maladaptive schemas in order to deal with the negative and harmful problems and events of childhood. Although these schemas and coping strategies work well for them in childhood, their use in adulthood leads to maladaptive coping with problems and their activation causes the individual to negatively evaluate and interpret environmental events and stimuli and consider them threatening (Penley & Tomaka, 2002), and to experience a wide range of negative and disturbing emotions (Young, Klosko & Weishaar, 2003). These dysfunctional cognitive and emotional patterns (early maladaptive schemas) complicate the process of controlling and managing emotions (difficulty in emotion regulation) and pave the way for the formation or persistence of alexithymia. The inability to cognitively process emotional information and regulate ones' emotions, which is a feature of alexithymia (Conley & Danny, 2007; Taylor & Bagby, 2000) is the common focus of early maladaptive schemas. Emotion regulation strategies and alexithymia, thus, connecting all three.

The theoretical and practical achievements of the present study can be explained as follows: at the theoretical level, the findings of this research can confirm the results of previous studies and theories concerning the relationship between early maladaptive schemas, cognitive emotion regulation strategies, and alexithymia and can as such raise new questions and hypotheses. One of these questions is "What other variables may play a mediating or moderating role in the relationship between early maladaptive schemas and cognitive emotion regulation strategies?" In order to answer such questions, the ground is prepared for future research in this field, which further enriches the theoretical knowledge of psychopathology. Considering the effects of factors related to childhood experiences on the occurrence of symptoms related to emotional problems and schemas in individuals, at the practical level, the findings of this study can be used as a good theoretical basis for developing programs and educational-therapeutic interventions in relevant organizations in order to teach methods of emotion

regulation, management, and emotional interventions as well as to teach parents how to properly deal with the needs and the demands of their children.

### Limitations

Limitations were concerned the fact that the research sample was limited to the students of the Islamic Azad University, South Tehran Branch, which affects the generalizability of the research findings thus alerting the researchers to take caution in generalizing the results to other samples and that characteristics of subjects such as gender, education, age, etc. make it difficult to generalize the results to include other groups of participants.

### Author Note:

All the authors actively participated in conceptualization, methodology, editing and review.

### Statements:

There is no conflict of interest. No funds. This study was approved by the scientific and ethical committee of Islamic Azad University, South Tehran Branch. All the participants read and approved the informed consent forms.

### References

- Alagband, M., Kamali Zarch, M., Tavakoli, S., Alagband, L. (2012). The relationship between communication skills and emotional intelligence of second grade female high school students, *Social Psychology Research Quarterly*, 2(7), 42.
- Berking, M., Wupperman, P., Reichardt, A., Pejic, T., Dippel, A., & Znoj, H. (2008). Emotion-regulation skills as a treatment target in psychotherapy. *Behavior Research and Therapy*, 46, 1230-1237.
- Besharat Muhammad Ali. (2000) Emotional dyslexia and interpersonal problems. *Educational and psychological studies.*;10(1):129-145. :



- Besharat, M. (2008). Relations between Alexithymia, Anxiety, Depression, Psychological Distress, and Psychological Well-being. *Journal of Modern Psychological Researches*, 3(10), 17-40. (Fa)
- Basharat, M.A. (2008) Mood dyslexia and defensive styles, *Journal of Principles of Mental Health*. 10(3), 181-190.
- Besharat, M., (2009). "Alexithymia and interpersonal problems, *Studies in Education and Psychology*, 1, 129-145. (Fa)
- Besharat, M., Zaheditajrishi, K., & Noorbala, A., (2014). (Alexithymia and emotion regulation strategies in patients with somatization, anxiety disorders, and normal individuals: A comparative study, *Contemporary Psychology*, 8 (2), 3-16. (Fa)
- Besharat, M. A., & Shahidi, V. (2014). Mediating Role of Cognitive Emotion Regulation Strategies on the Relationship between Attachment Styles and Alexithymia. *Europe's Journal of Psychology*, 10, 352- 362.
- Carels, R. A., Douglass, O. M., Cacciapaglia, H. M., & O'Brien, W. H. (2004). Anecological momentary assessment of relapse crises in dieting. *Jornal Consult Clinical Psychology*, 72, 341– 34
- Esmailinasab, M, A. Andami Khoshk, H. Azarmi, A. Samar Rakhi, (2014). The Predicting Role of Difficulties in Emotion Regulation and Distress Tolerance in Student's Addiction Potential, *Research on Addiction*, 8(29), 49-63.8.
- Essazadeghan, A., Hassani, M., Ahmadian, L., & Amani, J., (2013). Comparison of Cognitive Emotion Regulation Strategies and General Health Characteristics of Individuals with and without Alexithymia, *Psychological Research*, 16 (1): 65-83. (Fa)
- Frawley, W., & Smith, R. N. (2001). A processing theory of alexithymia. *Cognitive Systems Research*, 2, 189-206.
- Gross, J. J., & Thompson, R. A. (2007). *Emotion Regulation: Conceptual Foundations*. In J. J. Gross (Ed.), *Handbook of emotion regulation* (p. 3–24). The Guilford Press.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.
- Karami, J., Zakie, A., & Mohebi, Z., (2013). Relationship between Alexithymia and Beliefs about Emotion with Renal Patient's, *Mental Health*, 1 (4): 19-29. (Fa)
- Kaviani, H., Pournaseh, M., Gulfam, A. (2013). Comparison of the words emotion and cognition in Persian language dictionaries. *Cognitive science news*, year 7, number 2.
- Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and emotion*, 23(1), 4-41.
- Kun, B., Balazs, H., Kapitany, M., Urban, R., & Demetrovics, Z. (2010). Confirmation of the three-factor model of the Assessing Emotions Scale (AES): Verification of the theoretical starting point. *Behavior Research Methods*, 42, 596-606.
- Lawson, R., Emanuelli, F., Sines, J. & Waller, G. (2008). Emotional awareness and core beliefs among women with eating disorders. *European Eating Disorders Review*, 16, 155-159.
- Leahy, R. L., Beck, J. & Beck, A. T. (2005). *Cognitive Therapy for the personality Disorderz*. Hoboken, NJ, US: John Wiley & Sons Inc.
- Samani, S., Sohrabi Shegefti, N., Mansori, S. (2011). Mediating Role of Cognitive Emotion Regulation for Parenting Style and Emotional Disturbances. *Journal of Psychological Models and Methods*, 1(3), 119-133. (Fa)
- Sifneos, P. E. (1973). The prevalence of 'alexithymic' characteristics in psychosomatic patients. *Psychotherapy and psychosomatics*, 22(2-6), 255-262.
- Stasiewicz, P. R., Bradizza, C. M., Gudleski, G. D., Scott, F. C., Schlauch, C. R., Bailey, S. T., Bole, C. W., & Gulliver, S. B. (2012). The relationship of alexithymia to emotional dysregulation within an alcohol dependent treatment sample. *Addictive Behaviors*, 37, 469-476.

- Stasiewicz, P. R., Bradizza, C. M., Gudleski, G. D., Scott, F. C., Schlauch, C. R., Bailey, S. T., Bole, C. W., & Gulliver, S. B. (2012). The relationship of alexithymia to emotional dysregulation within an alcohol dependent treatment sample. *Addictive Behaviors*, 37, 469-476.
- Swart, M., Kortekaas, R., & Aleman, A. (2009). Dealing with feelings: characterization of trait alexithymia on emotion regulation strategies and cognitive-emotional processing. *PloS one*, 4(6).
- Taylor, G. J., Bagby, R. M., & Parker, J. D. A. (1997). Disorders of affect regulation: Alexithymia in medical and psychiatric illness. New York: *Cambridge University Press*.
- Taylor, G. J., & Bagby, M. (2000). An overview of the alexithymia construct. In R., bar-On, & J. D. A., Parker (eds). *The handbook of emotional intelligence* (pp. 263-276). San Francisco: Jossey Bass.
- Thimm, J. C. (2010). Mediation of early maladaptive schemas between perceptions of parental rearing style and personality disorder symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 41, 52-59.
- Thimm, J. C. (2013). Early maladaptive schemas and interpersonal problems: A circumflex analysis of YSQ-SF. *International Journal of Psychology & Psychological Therapy*, 13, 113-124.
- Vanheule, S., Desmet, M., Meganck, R., & Bogaerts, S. (2007). Alexithymia and interpersonal problems. *Journal of Clinical Psychology*, 63, 109-117.
- Velde, J. V. D., Gromann, P., Swart, M., Wiersma, D., Haan, L. D., Bruggeman, R., Krabbendam, L., & Aleman, A. (2014). Alexithymia influences brain activation during emotion perception but not regulation. *Social Cognitive and Affective Neuroscience*, 10, 285-293.
- Vingerhoets, A. J., Nyklícek, I., & Denollet, J. (2008). *Emotion Regulation*. New York. The Springer press.
- Wingbermhühle, E., Theunissen, H., Verhoeven, W. M. A., Kessels, R. P. C., & Egger, J. I. M. (2012). The neurocognition of alexithymia: evidence from neuropsychological and neuroimaging studies. *Acta Neuropsychiatrica*, 24, 67-80.
- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy :a practitioners guide*. New York :Guilfor.
- Young, J. E., & Brown, G. (1999). Young schema Questionnaire-L3a. *Cognitive Therapy of New York: Authors*. - Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*: New York: Guilford Publication.
- Zare, M., Latifian, M., Fouladcheng, M. (2013). Causal model of attachment dimensions and emotion regulation strategies mediated by social self-efficacy and self-disclosure, *Social Psychology Research Quarterly*, 3(11), 13.

Received	September 15, 2021
Revision received	April 13, 2022
Accepted	November 10, 2022