

## Predicting Aggression in High School Students in Shiraz (16 and 17 Year Old Students) based on Cognitive Emotion Regulation and Resilience

*Seyyed Faredah Tagavi - Nadereh Sohrabi Shegefti*

### Abstract

The main aim of this research was prediction of the aggression for teen girls and boys (17-18) at high schools in Shiraz based on emotion cognitive regulation (ECR) and resilience. The statistical sample contains 300 male and female students of second and third grades of high school in academic year 2016-2017 that were selected by multi-stage cluster sampling. For collecting data, aggression questionnaire, resiliency scale, and emotion cognitive regulation questionnaire were used. Pearson correlation coefficient and multiple regression analysis was run to check the research hypotheses. The results of multiple regression analysis showed that variables of emotion cognitive regulation and resiliency significantly predict the aggression among youth girls and boys. Also, the results of Pearson correlation coefficient showed a significant relationship between (ECR) and resiliency with aggression for high school students.

**Seyyed Farideh**

**Taghavi:**

M.A in General  
Psychology

**Nadereh Sohrabi**

**Shegefti :**

Dep. Psychology,  
Marvdasht Branch,  
Islamic Azad  
University.(Correspon  
ding Author).  
samanisiamak@gmail.  
com

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### Introduction

Aggression and violence are very prevalent among children and teenagers; therefore, these factors play an important role in determining psychiatric symptoms in children and teenagers. Aggression and violence are among the common social pathologies that are shown by individual or collective operants against themselves (suicide or sadism) or others (murder). Violence is recognized as a social phenomenon and mostly is observed in inter-person and inter-group interactions. Violence occurs when someone threatens a person and causes fear in that person in order to gain control which in turn

endangers the social security of the individuals in a society. (Smith & MacKay, 1995) Atkinson and Hilgard (1985) defined aggression as a behavior that is intended to injure another person (physically or verbally) or to destroy property. Intention is the key concept in this definition. Brown defined aggression as any form of behavior or action aimed at doing harm to individuals who do not wish to be harmed (Sadeghi and Moshkbid Haghighi, 2006). It is believed that the culture of a society is partly responsible for the aggressive behaviors of individuals. In general, mismanaging emotions such as anger affects the social interactions of teenagers. Cognitive

emotion regulation refers to a process by which we influence emotions we have and the way in which we experience and express them (Gross, 1998; 275).

According to Garnefski & Kraaij (2006) cognitive emotion regulation strategies are the way to manage emotions after the experience of stressful events. An individual's cognitive ability to evaluate a situation and analyze his thoughts, and his increasing problem solving skill that can in turn optimize resilience are key factors in anger management program. Arce et al., (2008) suggested that resilient individuals recover effectively in times of stress through using positive emotions; in the same way, resilient teenagers can identify stressful situations and avoid aggressive behaviors. Not only is childhood aggression followed by adolescence aggression, but it also has other negative consequences; Aggressive teenagers are more likely to display delinquency, conduct disorder, maladjustment at school and addiction (Lochman and Don, 1993). Investigating aggression based on psychological and sociological factors is an exhaustive work. For this reason, the present paper only investigates aggression in teenagers based on cognitive emotion regulation and resilience. Many factors have been contributed to forming individuals' routines and habits, namely their ability to control their emotions and their anger management skills (Cheng and Furnham, 2003). When

teenagers behave aggressively, they aren't able to control their behaviors, to understand other people's approaches, to interpret emotional signs and to manage anger. They also lack conflict resolution skills (Quoted by Hedayati, 2011). Cognitive emotion regulation plays a significant role in optimizing the quality of life and managing emotions (Sarni, 2010). Applying various strategies of emotion regulation goes a long way towards recovering from stressful events. Over the last two decades, resilience, factors which can promote resilience and those which can inhibit resilience have been the focus of clinical studies on children and teenagers. Resilience is the process in which at risk teenagers gain control over their behaviors and avoid aggressive thoughts and actions (Mizaeen, Sepehri Shamloo, Kazerooni Zand, 2013).

Findings on resilience suggest that the biggest threats to children are situations in which protective systems for evolving are distorted (Mohammadi, 2005). In a study Carelsoon et al., (2012) showed that individuals who apply re-evaluation strategies to regulate their cognitive emotions are more resilient to stress. People with high emotional intelligence are usually very self-aware. It has been shown that individuals high on emotional intelligence are less likely to report negative interactions such as aggression with close friends. (Lomas et al., 2012). Beck (2013) proposed that cognitive emotion

regulation strategies affect the relationship between anger and self-defense mechanisms. Recent studies by Castillo et al., (2014) have shown that programs to improve emotional intelligence decrease aggressiveness significantly. The development of emotional skills reduces the frequency of aggressive behaviors significantly (Stan and Beldean, 2014). Programs on various emotion regulation strategies improve resilience and lead to anger management eventually (Stan and Beldean, 2014). It has been suggested that problem solving and self-expression skills as an individual's investments in resilience lead to anger management (Brooks, 2014). Siblings of individuals with Down's syndrome have been reported to show more resilience in response to programs to improve resilience (Shojaee and Behpazhuh, 2014). According to the studies done by Geravand and Manshaee (2014) emotion regulation and social skills training have been shown to have a mitigating effect on relational and overt aggression and to increase the prosocial behaviors of teenagers with aggressive. Gholami and Vahedi (2014) showed the effectiveness of resilience training in decreasing maladaptive cognitive emotion regulation strategies. According to Ghasemi and Benrazee Ghabeshi (2014) there is a positive relationship between adaptive cognitive emotion regulation

strategies and physical health and a negative relationship between these strategies and aggression. Hesar Sorkhi et al., (2015) found out that emotional competence training has an effect on increasing emotional intelligence, emotional regulation and decreasing aggression in children. Rezaee et al., (2015) suggested that improving and modifying cognitive emotion regulation strategies and paving the cultural way for altering disagreeable gender beliefs can be effective in mitigating negative emotions such as anger.

Aggression in teenagers has been recognized as a major problem in recent years. Therefore, the present study aims at predicting aggression in high school students in Shiraz (16 and 17 year-old students) based on cognitive emotion regulation and resilience. Two preliminary hypotheses can be generated concerning the relationship between cognitive emotion regulation and aggression:

H1: It was hypothesized that predicting aggression in teenagers would be associated with using cognitive emotion regulation strategies.

H2: It was hypothesized that predicting aggression in teenagers would be associated with resilience.

### **Research method**

Participants in this study were students from high schools (second-graders) in Shiraz in the academic year 2015-2016. The sample consisted of 320 students

ranging from 16 to 17 years old. They were selected by cluster random sampling. In every area one all-girls high school (second-graders) and one all-boys high school (second-graders) were picked. Out of every school one class of second graders and one class of third graders were chosen randomly and the questionnaires were distributed among the participants. Out of the questionnaires collected, 20 questionnaires were rejected due to incomplete information. Therefore, the final sample consisted of 300 subjects.

### Materials

#### Conner-Davidson Resilience Scale

The Conner-Davidson Resilience Scale consisted of 25 items, each rated on a 5-point scale (0 'not true at all' to 4 'true nearly all of the time') with greater scores reflecting greater resilience. There are five subscales or factors, namely: 'personal competence, high standard and tenacity, trust in one's instincts, tolerance of negative affect and strengthening effect of stress, positive acceptance of change and secure relationships, control and spiritual influence.

Persian reliability: The Persian version of the Conner-Davidson Resilience Scale has been validated by Mohammadi (2004). The internal consistency reliability of this scale was assessed using Cronbach alpha and a correlation coefficient of 0.89 was reported.

Persian validity:

The correlation between each of the subscale scores (except for 3<sup>rd</sup> expression) with total score was calculated and then factor analysis was used; correlation coefficients of 0.41 and 0.64 were obtained. Scale expressions were analyzed using principle component analysis. Then, KMO and Bartlett's Test were calculated and the results were as follows: KMO=0.87, K<sup>2</sup>=28.5556. The results indicated appropriateness of applying factor analysis.

Cognitive emotion regulation questionnaire:

Garnefski et al., constructed this 36-item questionnaire.

Scoring: positive cognitive regulation: questions 13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28. Negative cognitive regulation: questions 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28.

Factors of positive cognitive regulation

1. Positive refocusing/ planning: questions 13-14-16-17-18-19-20-21-11
2. Positive reappraisal/ putting into perspective: questions: 15-23-24-25-26-27

Factors of negative cognitive regulation

1. Self-blame: questions: 1-2-4
2. other-blame: questions: 34-35-36
3. Rumination: questions: 3-9-10-11-12
4. Catastrophizing: questions: 29-30-31-32
5. Acceptance: questions: 5-6-7-8

Reliability and validity: Cronbach's coefficient alpha of subscales ranges from 0.71 to 0.81 (Garnefski et al., 2002). Depression, Anxiety, Stress Scale was used to assess convergent and divergent validity of this questionnaire in Iran. This 21-item scale focuses on the three traits of depression, anxiety and stress. The rating scale ranges from 'Applied to me very much' or 'most of the time' to 'did not apply to me at all'. Exploratory factor analysis was used to analyze psychometric properties of cognitive emotion regulation questionnaire. First the suitability of KMO and Bartlett's test coefficient was confirmed using explanatory factor analysis and principal component analysis and then the questions of cognitive emotion regulation questionnaire were evaluated.

Reliability: The Persian version of this questionnaire has been validated by Samani and Jokar (2006).

Aggression Questionnaire: Buss-Perry Aggression Questionnaire was designed by Arnold Buss and Mark Perry in 1992. It comprises of 30 items. It is a self-report, paper-and-pencil instrument where participants rank certain statements along a 4-point continuum from "always" to "never". The items are scored on a four-point scale (0, 1, 2, 3). Item number 18 is a reverse scored item. The total score of this questionnaire is 90 and it is the

sum of these subscales scores. It has been shown that Individuals with lower scores than the mean display less aggression.

Construct validity:

Psychometric properties of this scale are as follows: test-retest coefficients among subjects' scores (test and retest) for all the test subjects (N=91), female subjects (N=48), male subjects (N=38) were  $R=0.70$ ,  $R=0.64$  and  $R=0.797$  respectively. In AGQ scale, Cronbach's alpha coefficients (internal consistency) were as follows: for all the test subjects (ALPHA=0.874), female subjects (ALPHA=0.86) and male subjects (ALPHA=0.89). correlation coefficients among Pd subscales scores and AGQ scale for all test subjects were reported as follows:  $N=105$ ,  $R=0.58$  and  $N=0.001$  and correlation coefficients of BDVI questionnaire, Buss-Durkee hostility inventory (1975) and AGQ scale for all the test subjects were reported as follows:  $N=250$ ,  $r=0.56$ ,  $p=0.001$ .

The psychometric properties of this scale were obtained by Zahedi Far and Shokr Kon (1379) and was validated by Allahyari in Iran.

### Findings

First descriptive indices of the studied variables were calculated. Table 1 shows means and standard deviations of variables and tables 2 to 6 display correlation matrices between variables.

**Table 1. presents means and standard deviations of the studied variables.**

	variables	No	Mean	Standard deviation
Aspects of Cognitive emotion regulation	Positive refocusing	300	27.10	5.42
	Positive reappraisal	300	18.85	4.10
	Self-blame	300	9.22	2.25
	Other-blame	300	8.74	2.44
	Rumination	300	14.93	3.38
	Catastrophizing	300	12.77	3.20
	Acceptance	300	13.23	2.81
Aspects of resilience	Personal competence	300	27.60	5.49
	Tolerance of negative affect	300	23.37	4.82
	Positive acceptance of change	300	17.32	3.55
	Control	300	10.38	2.78
	Spiritual influence	300	7.42	2.15
	Aggression	300	46.60	14.70

**Table 2. presents Pearson correlation coefficients between the studied variables of cognitive emotion regulation and aggression in teenagers.**

Variable	factor	1	2	3	4	5	6	7	8
1 Positive refocusing	Correlation coefficient	1							
	Significance level								
2 Positive reappraisal	Correlation coefficient	0.620	1						
	Significance level	0.000							
3 Self-blame	Correlation coefficient	0.332	0.247	1					
	Significance level	0.000	0.000						
4 Other-blame	Correlation coefficient	0.446	0.387	0.283	1				
	Significance level	0.000	0.000	0.000					
5 Rumination	Correlation coefficient	0.544	0.297	0.455	0.488	1			
	Significance level	0.000	0.000	0.000	0.000				
6 Catastrophizing	Correlation coefficient	0.480	0.510	0.218	0.380	0.319	1		
	Significance level	0.000	0.000	0.000	0.000	0.000			
7 Acceptance	Correlation coefficient	0.552	0.512	0.400	0.362	0.327	0.395	1	
	Significance level	0.000	0.000	0.000	0.000	0.000	0.000		
8 Aggression	Correlation coefficient	-	-	0.212	0.216	0.213	0.029	-	1
	Significance level	0.075	0.044	0.009	0.007	0.000	0.619	0.087	0.134

According to Table 2, there is a significant relationship between aggression and self-blame, other-blame and rumination.

Table 3 shows Pearson correlation coefficient between resilience and aggression in teenagers.

**Table 3. Pearson correlation coefficients between resilience and aggression in teenagers**

Variable	factor	1	2	3	4	5	6	7	8
1	Personal competence	Correlation coefficient Significance level	1						
2	Tolerance of negative affect	Correlation coefficient Significance level	0.593 0.000	1					
3	Positive acceptance of change	Correlation coefficient Significance level	0.616 0.000	0.565 0.000	1				
4	Control	Correlation coefficient Significance level	0.639 0.000	0.508 0.000	0.511 0.000	1			
5	Spiritual influence	Correlation coefficient Significance level	0.450 0.000	0.382 0.000	0.502 0.000	0.451 0.000	1		
6	Aggression	Correlation coefficient Significance level	- 0.279 0.000	0.093 0.109	0.242 0.000	0.172 0.003	0.179 0.002	1	

As it is shown in table 3, there is a significant relationship between aggression and personal competence, positive acceptance of change, control and spiritual influence. Regression analysis was used to predict aggression based on

cognitive emotion regulation. The results are presented in Table 4.

Table 4: The results of regression analysis used to predict aggression based on cognitive emotion regulation.

**Table 4: The results of regression analysis used to predict aggression.**

Variable	Beta	T	sig	R2	F	Df	P
Positive refocusing	0.095	1.10	0.268				
Positive reappraisal	0.069	0.895	0.372	0.137	3.78	297-7	0.001
Self-blame	0.251	3.18	0.007				
Other-blame	0.241	2.60	0.010				
Rumination	0.256	3.41	0.001				
Catastrophizing	0.065	0.940	0.348				
Acceptance	0.157	2.14	0.033				

Table 4 depicts that in total, self-blame, other-blame, rumination and acceptance predicted 13.7% of aggression's variance in teenagers. Regression analysis was used to predict aggression based on

resilience. The results are presented in Table 5.

Table 5 presents the results of regression analysis to predict aggression in teenagers based on resilience.

**Table 5: the results of regression analysis to predict aggression in teenagers.**

Variable	Beta	T	sig	R2	F	df	P
Personal competence	-0.271	-3.25	0.001				
tolerance of negative affect	0.164	2.23	0.026	0.149	6.75	294-5	0.000
Positive acceptance of change	0.182	-1.96	0.041				
Control	0.018	-0.238	0.812				
Spiritual influence	0.051	0.765	0.445				

According to Table 5, in total, personal competence, tolerance of negative affect and positive acceptance of change predicted 14.9% of aggression's variance.

**Conclusion**

Resilience is the capacity to bounce back from difficult situations. It even makes an individual to grow in the face of adverse experiences and to improve his social, academic and job competence. Resilience in teenagers is a shield against mental issues and their safety against adverse effects of stressful situations (Izadee Niya et al., 2010). Resilience lets an individual to rebound from adversity as a strengthened and more resourceful person. Individuals who are low in resilience react aggressively in the

face of difficult situations. Resilient teenagers can identify their positive experiences and strengths (Vening, 2011). In other words, individuals who demonstrate resilience are able to regulate their negative emotions and to effectively counter negative emotions with positive emotions. They also demonstrate less emotional behaviors in stressful or adverse situations. Fostering resilience requires family environment and patterns. Resilience components that are deeply associated with psychological capital make an individual reacts to stressful situations more effectively. Aggression is a risk factor which can easily lead to aggressive behaviors in the absence of resilience. The results of this study



suggested that resilient people control their emotions such as anger more effectively. All in all, programs on cognitive emotion regulation training and resilience should be introduced in order to deal with aggression in teenagers which is identified as a serious problem in our society.

### References

- Carlson, D., Kacmar, K. M., Zivnuska, S., & Ferguson, M. (2011). Work-Family enrichment and job performance: a constructive replication of affective events theory. *Journal of Occupational Health Psychology, 16*, 297-312.
- Cheng, H. & Furnham, A. (2001). attribution style and personality as predictors happiness and mental health. *Journal of Happiness Studies, 2* (3):307–327.
- Garavand, P. Manshaee, Gh. (2013). The effectiveness of emotional regulation training and social skills training on relational aggression and social desirable behaviors in teenagers with aggression in Khoramabad. *Journal of disability studies. Volume 5* , Number , 2015. (In Persian).
- Gholami, S. Vahedi, Sh.(2016). The effectiveness of resilience training on cognitive emotion regulation in depressed individuals. *Urmia Medical Journal. Volume 26, Number 12*, pp: 1019-1027.(In Persian).
- Granefski; N. & Kraij, V. (2006). Cognitive Emotion Regulation Questionnaire: Developments of a short 18 item version. (CERQ-short). *Personality and Individual Differences, 41*, 1045-1053.
- Gross, J.J. (1998). The emerging field of emotion regulation: and integrative review. *Review of General Psychology, 2*, 271-299
- Hedayati, M. (2011) . *Philosophy for children and controlling aggression*. Volume 2, Number 3, spring and summer, pp: 109-134. (In Persian).
- Hesarsorkhi, R., Asghari Nakah, M., Bagheri, N. (2016). The effectiveness of emotional competence training on improving emotional knowledge, emotional regulation and decreasing aggression in orphans and abandoned children . *Journal of Clinical Psychology, Volume 8*, Number 3 (33).( In Persian) .
- Kazeroonizand, B., Sepehrishamloo, Z., Mirzaeeyan, B. (2012). The study of Psychometric features for Child and Youth Resilience Measure (CYRM-28) in Iranian Society: *Validity and Reliability. Third article, Volume 2, Number 3, winter*, pp: 15-22.(In Persian).
- Luchman, john/e/ dunn, Sunsanne .e.(1993). An intervention any supply chain flexibility. *International Journal of Production Research, 43(13)*, 2687–2708.
- Nolen-Hoeksema, Susan, Fredrickson, Barbara L., Loftus, Geof. (2009). "Atkinson & Hilgard's *Introduction to psychology*, 15th".

Sadeghi, A., Moshkbid haghghi, M. (2006). *Aggression management*. pp: 155-232.(In Persian).

Shojaee, S., Behpazhuh, A., Shokoohi yekta, M., & Ghobaribonab, B. (2012). Predicting mental health symptoms based on resilience in siblings of children with mental disability in Shiraz. *Second article, Volume 2, Number 6*, summer, pp: 21-46.(In Persian).

Smith, E. R.& Mackie, D .M. (2000). *Social psychology*. Philadelphia, Psychology press.

Stan, C. & Beldean , I.G. (2014). “The Development of Social and Emotional Skills of Students-ways to reduce the Frequency of Bullying-type Events. Experimental Results”. *Procedia of Social and Behavioral Sciences*, 114, 735-743.