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## The Effectiveness of Teaching Problem Solving Skills on Emotional Safety of High School Female Students in Tehran

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### ABSTRACT

*This study was aimed to examine the effectiveness of teaching the problem solving skills on emotional safety and coping styles among the adolescents. From 700,000 female high school students in Tehran, 30 subjects were selected by a randomized clustered sampling from district 8 of education in Tehran and answered Emotional Safety Questionnaire - Short Form. For analysis of assumptions' information the multivariate analysis of covariance (MANCOVA) was used and the results showed that pretest scores for both control and experimental groups have statistically significant differences at a confidence level of 5% and therefore the problem solving skills has a significant impact on the emotional safety.*

**Keywords:** Problem solving skills, emotional safety

### INTRODUCTION

Our real world is full of people involved in the problems who face every day, or they can face us. Life can be considered a continuous trend of encountering problems and trying to solve its problems. The solving problems of human processing have a significant effect on building confidence and relaxation and gives a person special force to deal constructively with the problems and incentive gifts. The successful solving of life problems leads more confident and relaxed person while the solving incompletely or unopened nodes seriously threaten the individual's mental health. It seems that very often people can solve their problems without solving the problems of life skills taught formally or in life workshops. But very often the human beings cannot solve their problem such as problem-solving as a taught or untrained skill. To solve the problems in the view of scientists puts at the highest level of human cognitive activities and requires a series of special activities and having lots of problem-solving capabilities. The skill of problem solving is a cognitive-behavioral personality of the people through the effective strategies to deal with difficult or problematic situations in daily life to detect (Nezu, 1986). Teaching these skills to adolescents can help them to learn how to deal with different issues. Through expressing feelings and emotions such as fear, anxiety and uncertainty, etc. and guiding the adolescents in the right direction and development of ways to achieve fewer failures to achieve the objectives they use the coping styles in order to improve the lives of their family and their community and mental relaxation. Studies show that those who overcome the problems and people who have a little problem solving skills and abilities, as soon as they collide with an obstacle, they may exhibit impulsive behavior, frustration and be able to use appropriate strategies to deal with their problems (Shour, 2001), or

experience emotional insecurity in the family. Those who enjoy the sufficient social skills to deal with the issues, bring them under control (Naushad, 2007; Binertand Schneider, 1995). Many children have not get these skills and this has led to develop the psychological problems such as failed relationships of peers, anxiety, depression and aggression in childhood and higher ages (Garmaroudi and Khadaninia, 2006). In conflicts of parents, the vulnerability of adolescents with psychological problems gets more through weakening the sense of safety in the family (Thomson, 2000). To consider the life of people in different times asserts the essential point that human survival and progress is required to solve the partial and radical problems. The human is a thinking creature and the property makes him distinguished from other animals and one of the products of this distinction is thinking or problem-solving. Perhaps it could be said that as a whole, various other areas of human who is overshadowed by left facing the (Amin Ranjbar, 2001). Thus this study examines the emotional safety problem solving skills and coping styles in the junior high school girl students in Tehran. To teach the problem solving techniques is among cognitive - behavioral therapies in the treatment of psychological disorders that is widely applied in this technique is the need for a partnership approach in which therapists and patients to actively so the patient can work together using logical methods to overcome its current problems and have self-control behavior (Houghton, Kirk, SulcusChassis and Clark, translated by Ghasemzadeh, 1999).

#### **Relationship of problem solving skills and emotional safety**

Human has faced the situations that occur in the life to achieve your goals and intentions and one of the fundamental features of life in modern societies is the rapid use of the most effective ways to achieve them. They should try to provide the necessary conditions for achieving these goals. A research under the influence of training students' problem solving skills on depression among nursing students was conducted on 57 students who were randomly selected and divided into two groups of experimental (n=30) and control (n=27). Training sessions of abilities and problem solving skills were set up for experimental based on seven sessions twice a week for a specific and the control group did not receive any treatment. Then again a week later the Beck Depression Inventory had been performed for both groups. The data collection tools included demographic questionnaire and Beck Depression Test. Data were analyzed using chi-square and t-test and paired t-test statistical methods. Obtained results showed that using problem solving skills training reduces depression. However, in the control group, there is no significant difference before and after the intervention. The results of this study can be said that problem solving skills has a positive impact on reducing the severity of depression and these skills can lead to the promotion of mental health.

Zare, H., PirKhaefi, A. & Mobini, D. (2010) in this study entitled "The effectiveness of teaching problem-solving skills to enhance the creativity of engineers according to their personality type among engineers of industrial management company" fifty subjects were chosen by a sampling method and put them in two groups of experimental and control. Through the Torrance Test of Creative Thinking (visual form B) and the NEO Personality Test (short form) on the subjects, data analysis was done by the covariance test and it was concluded that teaching problem-solving skills as a technique can make the dynamic cognitive elements and creative personality.

Shahbazi, S., Hazrati, M., Moatari, M. & Heidari, M. (2008) in an article entitled "The impact of problem solving skills training on emotional intelligence among nursing students of Shiraz University of Medical Sciences", the number of 43 students, grade 4 from continuous graduate of nursing were selected by a semi-empirical sampling method. At the beginning the students were asked to complete questionnaires on demographic information and Baron standardized test for emotional intelligence evaluation. Then the volunteers randomly divided into two groups of experimental (n = 20) and control (n = 23). The experimental group was trained for 6 sessions of problem-solving skills of Dezorilla & Gold Fried. Emotional intelligence of students in both groups were determined and compared before, immediately after and two months after the intervention. In this study, it was found that teaching problem solving skills improves the emotional intelligence of students in the experimental group than the control and this effect did not only immediately occur after the intervention, but after two months, it also has survived.

Shadaei, A. (2013) in a study entitled "Adequacy of psychometric emotional safety in girl students of high school in Shiraz, among all students of high school in Shiraz, the number of 765 male and female students are sampled from restricts of 1 and 3 of educational areas in the city in academic year of 2012-13. To collect data the emotional safety scale was used. Results showed that emotional safety scale was the ability to measure emotional factors and the results show the load factor for changing emotional safety for all subjects, all factor loadings except for question 9 was higher than 0.3. These questions and variables are suitable for research.

Kazemi, A. (2013) in a study entitled "The relationship between parenting styles and children's mental health and emotional safety among all high school female students in Shiraz", the number of 200 subjects was randomly selected. The testees answered the Alabama Parenting Style Questionnaire and Psychological Health and Emotional Safety Scales. After data analysis of Pearson correlation and stepwise regression method it turned out that there was a direct and significant relationship between the positive parenting style and the participation of father with emotional safety and mental health and a reverse relationship emotional insecurity. There is a reverse relationship among corporal punishment, monitor, power (coercion) and lack of knowledge of each other and emotional safety and a significant and direct relationship with emotional insecurity. Corporal punishment and humiliation have a reverse relationship with all aspects of available mental health and mental health than somatic symptoms and social functioning. Also, the parenting styles are able to predict all aspects of mental health and emotional safety. In general improvement in the parenting styles will be effective on enhancing emotional safety and mental health.

Hajipour, H. (2013) in a study entitled "The relationship between family functioning and emotional safety and social adjustment of students in Shiraz", the number of 200 students from high schools in grade one was selected by a multistage cluster sampling method. After answering the participants to the questions of a California social adjustment (S.T.P) and emotional safety questionnaire (S.I.F.S) and family functioning questionnaire (F.E.D) using Pearson correlation coefficient and stepwise regression, it was revealed that family functioning has a direct and significant relationship with emotional safety and a reverse relationship with emotional insecurity. The family functioning and social adjustment has a significant and direct relationship to each other. There is a significant linear relationship between predictor variables (roles and problem solving) and the criterion variable (safety) and the roles are significantly able to predict the insecurity. There is a significant linear relationship among predictor variables (roles and expression of emotions) and the criterion variable (social harmony) and roles and expression of their emotions are significantly able to predict the social compatibility.

Yazdani, M. (2013) in a study entitled "Parent-child relationship with emotional safety and resilience of female students in Shiraz", the number of 263 subjects among all high school female students were chosen by a randomized cluster sampling method. Used tools are including the Parent-Child Relationship Inventory Questionnaire of Mark and his colleagues, Davidson Resilience Scale and Emotional Safety Scale in order to analyze the inferential statistics. Results indicated that there was a significant positive relationship among the parent-child relation, emotional safety and resiliency.

Bar Beery et al. (2006) studied a study on the impact of problem solving skills on cognitive rehabilitation among people with chronic mental disorders in Italy and the results showed that problem-solving skills training to persons with mental illnesses can help their neurological development and relieve symptoms.

## MATERIALS AND METHODS

Method of study was a quasi-experimental and among the junior high school girl students in district 8 of Tehran the number of 30 students of the junior high school were selected from one of the schools in district 8 of Tehran by a randomized sampling and were taught the problem solving skills based on the Houghton Cognitive - Behavioral Guidance (a weekly basis in a series of eight training sessions). The participants responded to Emotional Safety Questionnaires (Short Form) and the Calerbik Questionnaire of coping with stressful situations, with multivariate analysis of covariance (MANCOVA) and Univariate analysis of covariance (ANCOVA) for analyzing data and testing hypotheses. Method of study was a therapeutic intervention in female secondary schools. At first, 30 people were randomly selected by a clustered method and divided into experimental group (n = 15) and control (n = 15) and after learning session problem solving skills for experimental group and differences of its impact were compared through the pretest and posttest than control.

### Analysis of Assumptions

Problem solving skills training is effective on emotional safety. To test the hypothesis, according to pretest and posttest, the analysis of covariance should help, but before doing ANCOVA analysis of covariance the assumptions should be examined and in case of assumptions covariance analysis was done. Thus, six assumptions of covariance analysis were examined as follows:

1. **The independence of data:** Given that the data of different groups of people were separately obtained and the randomized test results can be seen, the assumption was satisfied for the studied data.

2- *Random replacement*: Replacement of the control and experimental groups were randomly done.

3- *Distribution of traits in the groups was normal*: To study normality of traits the Kolmogorov-Smirnoff Test was used.

Table 1-Test for both groups on the emotional safety variable

Variable	Measurement	Z	Kolmogorov- Smirnoff	Sig
Emotional safety	pretest		0.781	0.576
	posttest		1.210	0.107

As shown in Table 1, the test of normality were non-significant ( $\text{sig} > 0.05$ ) which means that the pretest and posttest variable distribution of emotional safety with normal distribution showed no any significant difference. Therefore, the assumption of normality was satisfied.

4. *The homogeneity of variances of the dependent variable in both groups of Table 2*: In this study the measured dependent variable in posttest was emotional safety. For studying the similarity among the variances of both groups, the Levin Test was used in the measuring tool.

Table 2- Levin Test (homogeneity of variances) in experimental and control groups for emotional safety variable

Variable	F	df1	df2	sig
Emotional safety	0.074	1	28	0.755

As you can see, the significance of this statistic is greater than 0.05. So there is no significant difference between the variances of both groups.

As shown in Table 3, there is a significant difference in both experimental and control groups between the mean scores for emotional safety and problem-solving style and this indicates that the training approach of problem solving can be significant on emotional safety among the subjects.

Table 3- Mean and standard deviation of variables based on the separated groups

Variable	Group	Mean		Standard deviation	
		pretest	posttest	pretest	posttest
Emotional safety	Control	2.83	2.58	0.40	0.34
	Experimental	3.10	4.03	0.42	0.25
Problem solving style	Control	18	18.40	3.68	3.68
	Experimental	16	27.60	2.50	3.01

**The homogeneity of regression coefficients**

Table 4-Results of analysis of variance for the homogeneity of regression slope

Changes source	SS	df	MS	F	Sig
Group	0.542	1	0.542	12.340	0.0001
pretest	1.348	1	1.348	3.655	0.0001
Group *pretest	0.129	1	0.129	2.944	0.098
Error	1.143	26	0.044		
Total	13.165	29			

According to the results of analysis of Univariate variance in order to study the homogeneity of regression coefficients it was showed that the statistic F, for interaction of group and pretest was equal to 2.944 that was not significant at the level of 0.05 with freedom degree of 1 & 1. These results mean that a significant difference is not observed among the coefficients; therefore, the homogeneity of coefficients was satisfied.

**The linearity of the relationship between the dependent and independent variables**

In this study, the dependent variable is pretest that has a linear relationship with posttest. According to the scatter plot diagram (1) and regression lines it can be seen that there is a linear relationship between the variables.

After confirming the established assumptions by the covariance analysis, the covariance test was done and the results were presented in the table below.

Table 5- Results of analysis of covariance for both experimental and control groups

Change source of index	SS	df	MS	F	Eta	sig
Pretest	1.309	1	1.309	27.783	0.507	0.0001
Difference of both experimental group in posttest & control in pretest	7.355	1	7.355	156.145	0.853	0.0001
Error	1.272	27	0.047			
Total	13.165	29				

Results of Table (5) show testing the analysis of covariance for studying pretest differences between experimental and control groups. According to the second row of table and control of pretest effect, it can be seen that both control and experimental groups are significantly different at posttest ( $\text{sig} < 0.05$  and  $F = 156.145$ ). As a result, the observed statistic value of 156.145 is greater critical value in confidence level 0.05 and degree of freedom 1 and 27. Then posttest scores for both control and experimental groups with controlling the pretest effect was statistically significant differences at a confidence level of 95% and the assumption of problem solving training was confirmed for the impact on the emotional safety of people.

### DISCUSSION AND CONCLUSION

The results of the analysis of assumption showed that the emotional safety skills training have a positive impact on problem solving. It means that the concept of problem solving skills lead to emotional insecurity and reduced emotional safety (obsession, withdrawal). The results obtained from the research is a part of the results related to the work of Gharabaghi and Aguilar-Vafaei (2007), Gharabaghi and colleagues (2009), Gharehbaghy, Aguilar-Vafaei & Allahyari (2009), Gharabaghi & Aguilar-Vafaei (2009), Kazemi, A. (2013), Hajipour, H. (2013), Yazdani, M. (2013), Kathleen, Kamings and Davis (2009), Christina, Christine and Mark (2008), Al-Sheikh, Cummings, Cruz and Elmore-Astaton (2008) researchers. Interventions of group education (problem solving skills) can improve the efficiency of teenagers. Education of the problem-solving skills in the experimental group leads to improve the performance of teenagers than the control group that did not receive any training. In case of bad performance of young families, teachers and friends, the insecurity appeared in teenagers as the resignation of obsession. As a result, their emotional insecurity will increase. Teenager due to the lack of secure attachment to reduce stress and insecurity in their relation selects ineffectively avoidance and emotion-focused coping styles and escaping from the knocks, the main source of anxiety disorders are an important source for the teenagers, angry and disturbed relationships and in fact children used to change their inefficient representation emotion-oriented coping strategies. As a result, retiring and preoccupied children have coping, personality and family problems than secure children. In explaining this hypothesis, it can be said that problem solving skills to help teenagers have a positive attitude towards their ability to solve the problem and have it. In fact, teenagers with learning problem-solving skills training operate properly with those around themselves, especially their parents achieved that they are more successful than others in contact with the emotional relation with others and thus it increases the emotional safety and adaptive functioning in them.

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