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**A STUDY ON THE EFFECTS OF TRAINING THE COGNITIVE –
BEHAVIORAL STRATEGIC ON IMPROVING COPING STYLE IN SHY
STUDENTS OF SIXTH GRADE; CASE STUDY: SIXTH GRADE, 2 AREA,
YAZD PROVINCE)**

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ABSTRACT

One of existing problems in emotional and interpersonal relationships which has been the center of attention of psychologists and family consultants in the last few years is shyness. Since this problem has not been studied as a result of many factors and most ordinary people do not consider it as a problem, this research aims to study the efficacy of training of behavioral- cognitive strategies on improvement of styles among all students of sixth grade in region number 2 in some schools of Yazd in educational year of 2013-2014. Sample population included 30 students divided in to two 15-member groups. Group allocation was randomly done in to control and test ones. Test group received training of behavioral-cognitive strategies and control group was not intervened. After intervention, a coping –style questionnaire was carried out for both groups in order to assess the changes. To analyze data, statistical descriptive method was used and inferential statistical method of Co-variance analysis was used to test research hypotheses. The results indicate the fact that behavioral-cognitive training has a significant effect on increased dimensions of efficient coping style and the effect of this training has been preserved on improvement of coping style in follow up stage. Furthermore, the results show that training has not influenced reduction of inefficient coping style and increased dimensions of referring -to -others coping style.

Keywords: *Behavioral-Cognitive Strategies, Shyness, Inefficient Coping Style, Referring-To-Others Coping Style, Efficient Coping Style*

INTRODUCTION

In the last few years, shyness has been the center of attention of psychologists and family consultants. This phenomenon has been and is the problem of various types of people. In fact, this problem has not been studied due to a considerable number of reasons and the public do not call it a problem. Isolation and shyness in the society create many problems including inability to build up a relationship with others, leading to inability in learning, awareness, and different skills. One of the reasons that parents and even teachers do not pay attention to this problem is misinterpretation of shy people performance. The fact that shy children are polite, not creating any problems and their upbringings are easier has convinced parents not to consider shyness of social isolation as problems. Thus, they will neglect any possible future problems (Afrouz, 1997). Teenage years are changing and challenging period which can be stressful and difficult for teenagers. Effective coping is really important for teenagers. Lazarus and Filkman believe that coping means a collection of behavioral and cognitive efforts to cope with internal and external demands which are energy consuming and beyond resources in individual's point of view. In Lazarus point of view, coping is a mediator variable between negative life events and mental health. Health psychology has considered special attention for the role of coping methods on the way of physical and mental health. In Shuares and Chan point of view, (quoted from Samer and Makgh, 2000), coping styles are the most widespread field of study in contemporary psychology and it is one of the most important social-mental factors which is the link between stress and sickness (Yazdani, 2003). Isolation and withdrawal are one of problems intervening teenagers` optimum compatibility. In Islam`s point of view, shyness and bashfulness leading to human growth barriers are rejected. Therefore, discussing about teenagers` shyness and thinking to solve such issues are highly important and necessary. Educational

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authorities need to pay attention to this fact concerning future-generation rearing. Recognizing this problem and discovering its roots, correct and beneficial steps and planning need to be taken in to account to cure and prevent teenagers` shyness in order to eliminate growth barriers of teenagers, helping them reach social maturity and have healthy personalities, apply their talents and abilities, and solve their social and behavioral problems.

Behavioral-cognitive strategies: behavioral- cognitive treatments are intellectual-based approach on two fundamental principles: First, these indicators have controlling effect on our emotions and behaviors. Second, our performance method or behaviors have strong effect on our mental and emotional patterns (Wright *et al.*, 2012).

Coping style: refers to behavioral and cognitive efforts for preventing management and reducing stress (Lazrus and Folkman, 1984; quoted from Penelly and Tomaco, 2002) including efficient coping style, inefficient, and referring to others.

Shyness: self –exaggerated attention, mental occupation, emotions, and physical reactions, leading to at least from one weak social sadness to severe and preventive social fear (Henedrson, 2002). Another definition of Zimbardo says that bashfulness means individual`s hesitation concerning his abilities while social confrontation. The personal belief of being assessed negatively by others is formed.

Operational Definition

Behavioral-cognitive strategies: Running 10 weekly 1.5-hour training sessions concerning cognitive-behavioral strategies including changing and correcting thoughts, behavioral activation, solving, and etc.

Coping style: is the score obtained by test through teenagers` coping-style questionnaire.

Shyness: is the score obtained by the researcher through semi-structured interviews and observation as well as shyness questionnaire completion by subjects.

Conducted Studies

Neggi *et al.*, (1997) conducted a research on the relationship between coping styles and personality factors and in particular compatibility. Total number of 153 35-year-old female prisoners with minimum security werestudied. The results indicate that 13 theoretical coping styles have positive correlation with compatibility. Prisoners who had more styles for coping stress showed higher compatibility scores. Moreover, the results of this research revealed that training coping styles is effective.

Allan Menakar and Karoline.M conducted a research concerning coping style and self and coping styles of 457 top teenagers studying sixth to tenth grades. The default was that all children used to meet challenges. After data analysis, findings showed that 27% of self-variance among all participants was determined by six coping styles. Moreover, it is obvious that, of six coping sub-section, hard effort and reaching to success (problem orientation), problem-solving concentration, and significant self-forecasting protection are in relation with link between coping style and self (Quoted from Islami, 2002).

Fakhari (2000), in his research, studied the effect of behavioral- cognitive treatment using consultation on girls` anxiety reduction of pre-university. The results indicate that using behavioral-cognitive treatment method though consultation can reduce girls` anxiety among pre-university students.

Ghazanfari (2005), in his research, realized that a positive significant relationship exists between “efficient coping styles and referring- to -others” and “mental health and its components“ while studying 1832 boy and girl students in high school and pre-university.

Ahadi *et al.*, (2009) in his research entitled “the effect of training of social issues on social compatibility and educational performance of shy students“ showed that social solution training is an effective method to increase students` compatibility. Abolfathi (2011), in his research, studied the effect of game therapy concerning Maikenbam cognitive-behavioral approach on reduced shyness and social isolation of elementary students. The results showed that this method was approved on reduced shyness and the obtained results are significant at confidence level of 0.005 while it did not show a noticeable difference in pre-test groups and they were integrated. Hossein *et al.*, (2012) studied the effect of cognitive-behavioral therapy on addicts` anxiety that developed generalized anxiety disorder. The obtained results in the research showed that stress management using cognitive-behavioral method reduces anxiety and generalized anxiety among addicts with generalized anxiety disorder.

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Faramarzi *et al.*, (2013) studied the relationship between coping styles and depression among teenage boys and girls. The results indicate that the level of depression is higher among girls rather than boys. In addition, negative correlation was observed between problem-orientation coping styles with depression among both genders as well as between emotion-orientation coping style and depression among girls ($p < 0.001$). A positive correlation was also found between inefficient coping styles and depression among participants ($p < 0.001$). This research showed that problem-orientation, emotion-orientation, and inefficient coping styles have the capability of significant forecasting of teenagers' depression. Consequently, problem-orientation and emotion-orientation coping styles reduces teenagers' depression while using inefficient coping styles increase this depression.

Research Hypotheses

Since shyness is a social disability, if it is not diagnosed and cured on time, it might lead to unpleasant results, influencing individual's cognitive, emotional, mental, and social growth seriously (Irani, 1997). Thus, this study was conducted to answer four hypotheses including:

First hypothesis: Cognitive –behavioral training leads to increased dimensions of efficient coping styles among shy people.

Second hypothesis: Cognitive –behavioral training leads to increased dimensions of referring-to-others coping styles among shy people.

Third hypothesis: Cognitive –behavioral training leads to decreased dimensions of inefficient coping styles among shy people.

Fourth hypothesis: Cognitive –behavioral training is preserved on coping-style changes among shy girls during time.

Implementation Method

Due to frequent number of statistical population, two schools were randomly selected using cluster random sampling from female schools in the 2nd region of Yazd. Then total number of 30 students was randomly selected from sixth grade students of mentioned schools. They were randomly divided in to two groups of control and test. Test group received special therapy and training. Control group did not intake any intervention. After intervention on test group, mentioned questionnaires were used for both groups in order to assess the changes.

Statistical Population

Statistical population of this research included all sixth grade girl students in educational year of 92 [2013]-93[2014] in elementary schools of 2nd region in Yazd.

Measuring Tool

Following questionnaires were used to collect data:

Shyness Questionnaire

This questionnaire was designed with 44 five-choice (never, seldom, sometimes, often, always) questions. Responders were supposed to study the questions carefully, and select the most appropriate answer considering their mental-spiritual condition. Scoring pattern was from zero to four for positively contented questions and from four to zero for negatively contented questions. Obtained results are 0.83% for internal consistency using Alpha Cronbach method. Reliability was calculated 0.97 at confidence level of $p < 0.0001$ by test-retest type in three- week interval. Studying the results indicates the fact that shyness questionnaire enjoys appropriate psychometric quality and it is applicable in research goals as well as psychological aims.

Moreover, since this questionnaire was designed and tested for adults (Rahele Samouee), it was conducted on 30 sixth grade girl students in order to check the validity and reliability. Alpha Cronbach was reported 0.701 which is greater than pleasant limit of 0.7. Thus, it can be concluded that it has sufficient reliability. Furthermore, shyness content-related validity and criterion-related validity were approved by scholars and psychology authorities.

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Table 2-3: The results of internal consistency (Alpha Cronbach) about shyness questionnaire reliability

Number of participants	Number of questions	Alpha value
30	44	0.701

Coping Strategy Questionnaires of Teenagers

It has 79 5-choice questions. This form includes 18 scales. Each scale shows one different strategy. Eighteen coping strategies are divided in to three general classifications showing coping efficiency or inefficiency.

First style is called efficient coping style or problem-solving method, including eight strategies.

Second style is called referring to others, including four strategies being distinguished by referring to others, peers, specialists, or God`s forces for support.

Third style is called inefficient style, including eight strategies. Third style strategies are mixed ones of what is called as infertile avoidant strategy and they are related with inability with efficient and beneficial coping. Fraydnburg and Lvyys (1993) reported correlation between 0.44 to 0.84 after two weeks test-retest in 18 sub-sections of this test. Glay *et al.*, (1989; quoted from Dae, 1999) reported test-retest reliability of test as 0.60 after almost five months.

Descriptive Statistics

Research Descriptive Finding

Descriptive statistical indicators such as percentage, mean, standard deviation, and graphs were used. Inferential statistical method including co-variance inferential analysis test was used to omit uncontrolled variable.

Table (1) shows mean and shyness variable deviation in both groups. As it can be seen from this table, test and control groups do not differ much concerning descriptive means.

Table 1: Mean and shyness variable deviation in both groups

Group	Mean	Standard deviation
Control	78.07	12.848
Test	80.27	10.187
Total	79.17	11.447

Source: Research findings

The results of mean and variable deviation in pretest and posttest efficient coping style in two groups show that test and control groups differ much concerning descriptive means.

Table 2: Mean and follow up variable deviation of efficient coping style for test group

Group	Mean	Standard deviation
Test	523.6	73.745
Total	523.6	73.745

Source: Research findings

The results of table (2) show that mean and standard deviation are 523.6 and 73.745, respectively.

The results of means and variable deviation of pretest and posttest referring-to-others coping style show that means of control and test groups differ considerably concerning descriptive findings.

Table 3: Means and follow up variable deviation of referring-to-others coping style for test group

Group	Mean	Standard deviation
Test	300.4	42.842
Total	300.4	42.842

Source: Research findings

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Table (3) shows means and variable deviation of follow up for referring-to-others coping style in test group. As it can be seen from the table, mean and standard deviation were reported 300.4 and 42.842, respectively.

Means and variable deviation of pretest and posttest of inefficient coping style in both groups show that a considerable difference does not exist descriptively concerning means of test and control groups.

Means and variable deviation of inefficient coping style reveal that means and standard deviation are 403.93 and 69.358 in test group, respectively.

Research Hypothesis Test

First Hypothesis

Training cognitive-behavioral strategies are effective on dimension increase of efficient coping style among shy girls.

To test this hypothesis, co-variance method was used. Initially, necessary defaults for co-variance analysis; score conformity with normal curve, variance consistency hypothesis of scores between control and test groups, and consistency [integrity] hypothesis of regression trend line; were studied.

Since the necessary conditions for co-variance analysis existed, this method was used for testing this hypothesis.

Studying Posttest Score Conformity with Normal Graph

Table 4: The results of Kolmogorov–Smirnov test regarding posttest score conformity of efficient coping style variable with normal graph

Number	Mean	St. Deviation	Absolute value	Positive value	Negative value	Z	Level of significance
30	491	97.082	0.12	0.082	-0.12	0.657	0.781

Source: Research findings

The results show that level of significance for ZKolmogorov–Smirnov indicator is 6.657 which are greater than 0.05.

Thus, it is not significant, meaning that posttest scores of efficient coping -style dimension variable enjoys conformity with normal graph.

Therefore, this default, score conformity with normal graph, exists.

Studying Variance Consistency of Control Group Scores with Score Variance of Test Group

Table 5: The results of Levene test concerning posttest score variance consistency of efficient coping style dimension variable in control group compared to test group

Variable	Levene indicator	Freedom degree, Df1	Freedom degree, Df2	Level of significance
dimension variable Posttest of efficient coping style	3.815	1	28	0.061

Source: Research findings

The results reveal that significance level of Levene indicator is greater than 0.05. Thus, it is not significant, meaning that posttest score variances of test and control groups are similar in efficient coping-style dimension variable. Therefore, this default, consistent score variances of test and control groups, exists.

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Studying Regression Slope Conformity

Table 6: The results of Regression slope conformity method regarding significance of interaction effect of independent variables and variance (group variables and pretest)

Source	Sum of squares	Freedom degree	Square mean	F	Level of significance
Group					
Interaction and pretest	113599.681	2	56799.841	0.602	0.001
Error	159720.319	27	5915.567		

Source: Research findings

The results of slope conformity method show that level of confidence is less than 0.05. Thus, it is significant, meaning that the hypothesis of Regression slope conformity is not correct and interaction between independent variables and variance is significant. Results might affect co-variance analysis of results. To this end, in addition to co-variance analysis, independent t test is also used to compare control and test groups concerning dimension posttest of efficient coping style (Table 8 and 9).

Results of Co-variance Analysis

Table 7: Co-variance analysis of posttest scores of dimension variable of efficient coping style as function of group variable with variance scores of this variable pretest

Source	Sum of squares	Freedom degree	Mean of squares	F	Level of significance	Level of effect
Pretest(variance)	67084.912	1	67084.912	12.197	0.002	0.311
Group(control-test)	10878.616	1	10878.616	19.778	0.001	0.423
Error	148506.554	27	5500.243			

Source: Research findings

Above table of analysis results reveals that level of significance of co-variate variable effect (pretest) on dependent variable (posttest) is less than 0.05. Therefore, it is significant. Also, confidence level of independent variable effect (group) on dependent variable (posttest) is less than 0.05. Thus, it is significant, meaning that the effect of co-variate variable (pretest) is significant. After omitting the effect of variance variable, the effect of independent variable (cognitive-behavioral training) is still significant. In fact, it can be concluded that cognitive-behavioral strategy training is effective on improvement dimensions of efficient coping style among shy students.

The results of t test for comparing control and test groups in dimension posttest of efficient coping style: Independent t test, concerning control and test differences in dimension posttest of efficient coping style, is proposed due to the fact that regression slope was not consistent in co-variance analysis and this issue might affect the results making them invalid.

Table 8: Comparison table of descriptive indicators of efficient coping style dimensions for control and test groups in posttest

Variable	Group	Number	Mean	Standard Deviation	Standard error	Mean
Post Test	Control	15	447.13	107.284	27.701	
	Test	15	534.87	62.366	16.103	

Source: Research findings

The results of table (8) show that a considerable difference exists between dimension means of efficient coping style for control and test groups in posttest.

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Table 9: The results of independent t test concerning control and test groups in posttest of efficient coping style dimensions

Levene test about Variance conformity		T test about mean consistency						
F	Level of significance	T	Freedom degree	Level of significance	Mean difference	Standard error of difference	95 % level of confidence of difference	
3.815	0.061	-2.738	28	0.011	087.733	32.041	-153.37	-22.1

Source: Research findings

The results of independent t test show that level of confidence is less than 0.05. Thus, the zero hypothesis, lack of difference between two means ($H_0=M_1-M_2=0$) is rejected and research hypothesis ($H_1:M_1-M_2\neq 0$) is confirmed. Since test-group mean is more than that of control one as well as the fact that research hypothesis was approved, it can be concluded that means of efficient coping-style dimensions of test group in posttest is significantly greater than those of control group and this result can be the effect of experimental conditions (cognitive-behavioral training) on the subjects.

Second Hypothesis

Cognitive-behavioral strategy training is effective on dimension increase of referring-to-others coping style among shy girls.

Studying Posttest Score Conformity with Normal Graph

The results of Kolmogorov–Smirnov test concerning posttest score conformity of referring-to-others coping style is 0.58 which is greater than 0.05. Thus, it is not significant, meaning that posttest scores of referring-to-others coping -style dimension variable enjoys conformity with normal graph. Therefore, this default, score conformity with normal graph, exists.

Studying Variance Consistency of Control Group Scores with Score Variance of Test Group

The results of Levene indicator reveal that significance level of Levene indicator is 0.718 which is greater than 0.05.

Thus, it is not significant, meaning that posttest score variances of test and control groups are similar in referring-to-others coping-style dimension variable. Therefore, this default, consistent score variances of test and control groups, exists.

Studying Regression Slope Conformity

The results of slope conformity method concerning significant interaction between independent variables and variance (group variables and pretest) show that level of confidence is 0.118 which is less than 0.05. Thus, it is not significant, meaning that the hypothesis of Regression slope conformity is correct and interaction between independent variables and variance is not significant and they do not affect co-variance result analysis.

Results of Co-variance Analysis

Table 10: Co-variance analysis of posttest scores of dimension variable of referring-to-others coping style as function of group variable with variance scores of this variable pretest

Source	Sum of squares	Freedom degree	Mean of squares	F	Level of significance	Level of effect
Pretest(co-variate)	14642.367	1	14642.367	4.595	0.041	0.145
Group(control-test)	9255.078	1	9255.078	2.904	0.1	0.097
Error	86035.499	27	3186.5			

Source: Research findings

Co-variance analysis results reveal that level of significance of variance variable effect (pretest) on dependent variable (posttest) is less than 0.05. Therefore, it is significant. Also, confidence level of

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independent variable effect (group) on dependent variable (posttest) is greater than 0.05. Thus, it is not significant.

This result points out to the fact that co-variate variable is effective in co-variance analysis and the level of effect of co-variance analysis has been omitted. It is not significant any more after omitting the effect of co-variate effect, meaning that means of subject posttest of control and test groups in dimension variable of referring-to-others coping style does not differ much by omitting the effect of co-variate variable. In fact, experimental conditions (cognitive-behavioral training) did not lead to dimension increase of referring –to –others coping style.

So, in conclusion, training cognitive-behavioral strategies is not effective on dimension increase of referring-to-others coping style among shy girls.

Third Hypothesis

Training cognitive-behavioral strategy is effective on dimension reduction of inefficient coping style. Previous methods were used to study the third hypothesis.

Studying Posttest Score Conformity with Normal Graph

The results of Kolmogorov–Smirnov test concerning posttest score conformity of inefficient coping style is 0.627 which is greater than 0.05. Thus, it is not significant, meaning that posttest scores of inefficient coping -style dimension variable enjoys conformity with normal graph. Therefore, this default, score conformity with normal graph, exists.

Studying Variance Consistency of Control Group Scores with Score Variance of Test Group

The results of Levene indicator reveal that significance level of Levene indicator is 0.688 which is greater than 0.05. Thus, it is not significant, meaning that posttest score variances of test and control groups are similar in inefficient coping-style dimension variable. Therefore, this default, consistent score variances of test and control groups, exists.

Studying Regression Slope Conformity

The results of slope conformity method show that level of confidence is 0.316 which is greater than 0.05. Thus, it is not significant, meaning that the hypothesis of Regression slope conformity is correct and interaction between independent variables and variance is not significant and they do not affect co-variance result analysis

Results of Co-variance Analysis

Table 11: Co-variance analysis of posttest scores of dimension variable of inefficient coping style as function of group variable with variance scores of this variable pretest

Source	Sum of squares	of Freedom degree	Mean of squares	of F	Level of significance	Level of effect
Pretest(co-variate)	16427.089	1	16427.089	2.395	0.133	0.081
Group(control-test)	735.024	1	735.024	0.107	0.746	0.004
Error	185219.045	27	6859.965			

Source: Research findings

The results reveal that level of significance of co-variate variable effect (pretest) on dependent variable (posttest) is greater than 0.05. Therefore, it is not significant. Also, confidence level of independent variable effect (group) on dependent variable (posttest) is greater than 0.05. Thus, it is not significant. Thus, co-variate co-variance analysis is not effective and does not affect co-variate variable. Also, the effect of group variable is not significant as well, meaning that means of subject posttest of control and test group on dimension variable of inefficient coping style do not differ much. In fact, experimental condition (training cognitive-behavioral strategies) did not lead to dimension reduction of inefficient coping style.

In conclusion, training cognitive-behavioral strategies is not effective on dimension increase of inefficient coping style among shy girls.

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4-2-4 Fourth hypothesis: Cognitive –behavioral training is preserved on coping-style changes among shy girls during time. Since studying this hypothesis includes exploring the effect of training of cognitive-behavioral strategies on improvement of three coping styles (efficient, inefficient, and referring to others), this hypothesis is assessed by three sub-hypotheses.

4-2-4-1 Cognitive –behavioral training is preserved on coping-style changes among shy girls during time.

a- Descriptive Results

Table 12: Means and standard deviation of inefficient coping style variable in three stages on test group

Stage	Mean	Standard deviation	Number of subjects
Inefficient pretest	587.07	51.827	15
Inefficient posttest	442.2	77.93	15
Inefficient follow up	403.93	69.358	15

Source: Research findings

The results of table 12 show that obtained mean is less in any stage compared to previous part concerning descriptive [analysis]. In other words, posttest mean is less than pretest and follow up mean is less than pretest and posttest.

b- Results of Multivariate Four Tests

Table 13: The results multivariate four tests about significance levels of independent- variable subject (difference of three times running of inefficient coping style on test group)

Test	Value	F	Hypothesis freedom degree	Error freedom degree	Level of significance	Level of effect
Pilate effect test	0.69	14.486	2	13	0.001	0.69
Wilks' lambda test	0.31	14.486	2	13	0.001	0.69
Hotelling effect test	2.229	14.486	2	13	0.001	0.69
Roy's largest root test	2.229	14.486	2	13	0.001	0.69

Source: Research findings

The results of table 13 shows that significance levels of all four tests are less than 0.05, thus, they are significant, meaning that scores of inefficient coping style of subjects are significant in pretest, posttest, and follow up stages.

C-Studying Dependent Sphericity Test Hypothesis

Table 14: The results of Mauchly's test about dependent –variable sphericity (inefficient coping style)

Intergroup effect	Mauchly W value	Square Khi	Freedom degree	Level of significance	Correction coefficient Greenhouse-Jazer	Huyn Flat	Low limit
Test	0.608	6.46	2	0.04	0.719	0.778	0.5

Source: Research findings

Results of table 14 show that level of confidence is less than 0.05, thus it is significant, meaning that sphericity hypothesis is not true concerning this variable. So, one of correction coefficients needs to be used for correcting freedom degree (df).

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d- Studying the Intergroup Effects of Inefficient Coping Style Variable

Table 15: The effects of four test concerning intergroup effects of dependent variable (inefficient method)

Test	Test change resource	Sum of squares	Freedom degree	Mean of Square	F	Level of significance	Level of effect
Test	Sphericity hypothesis	51942.533	2	25971.267	10.104	0.001	0.419
	Green house – Jazer	51942.533	1.437	36141.262	10.104	0.002	0.419
	Huyn Flat	51942.533	1.557	33364.296	10.104	0.002	0.419
	Lower limit	51942.533	1	51942.533	10.104	0.007	0.419

Source: Research findings

Results of four tests show that Mauchly Sphericity hypothesis is not true so the Sphericity hypothesis is not taken in to account here and other three tests such as Huyn Flat need to be applied. Since the level of significance is less than 0.05, it is not significant. Thus, it can be stated that difference of means of three times running of inefficient coping style are significant and the level of effect of intergroup dependent variable (inefficient coping style) is 41.9%

e- Results of Comparisons of Intergroup Dependent Variable

Table 16: Intergroup comparison of dependent Variable: inefficient coping style

Source of change	Type of test	Sum of squares	Freedom degree	Mean of squares	F	Level of significance	Level of effect
Test	Linear	51833.633	1	51833.633	20.097	0.001	0.589

Source: Research findings

Table 16 shows that significance level is less than 0.05. It can be stated that difference of three times running inefficient coping style is significant and the level of effect of intergroup dependent variable is 58.9%.

f- Some Descriptive Estimations

Table 17: Descriptive estimations of dependent variable of inefficient style

Test	Mean	Standard measuring error	95% level of confidence	
			Lower limit	Upper limit
Pretest	487.067	13.382	458.366	515.768
Posttest	442.2	20.121	399.044	485.356
Follow up	403.933	17.908	365.524	442.342

Source: Research findings

Table 17 shows some other descriptive indicators of dependent variables in inefficient coping style.

g- Paired Comparisons

Table 18: Results of paired comparisons (posthoc) for accurate studying of existing differences between implementation stages of dependent variable: Inefficient coping style

Test (I)	Test (J)	Mean difference (I-J)	Standard measuring error	Level of significance	95% level of confidence of mean difference	
					Lower limit	Upper limit
Pretest	Posttest	44.867	22.976	0.213	-17.575	107.309
	Follow up	83.133*	18.544	0.002	32.735	133.532
Post test	Follow up	38.267	12.507	0.025	4.277	72.256

Source: Research findings

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Table 18 shows that significance level of score difference in third stage of the test is 0.05 less than other two stages, meaning that training cognitive-behavioral strategies leads to reduction of inefficient coping style of subject because scores of inefficient coping style among shy girls of test group in follow up stage is significantly less than those of scores of pretest and posttest.

4-2-4-2 The effect of training cognitive –behavioral strategies on increase of referring-to-others coping style among shy girls is preserved during time.

A-Descriptive Results

Table 19: Means and standard deviation of referring-to-others coping style variable in three stages on test group

Stage	Mean	Standard deviation	Number of subjects
Referring-to-others pretest	248.6	51.786	15
Referring-to-others posttest	284.73	56.464	15
Referring-to-others follow up	300.4	42.842	15

Source: Research finding

The results show that obtained mean is greater in any stage compared to previous part concerning descriptive [analysis]. In other words, posttest mean is greater than pretest and follow up mean is greater than that of pretest and posttest.

B-Results of Multivariate Four Tests

Table 20: The results multivariate four tests about significance levels of inter-subject of independent variable

Test	Value	F	Hypothesis freedom degree	Error freedom degree	Level of significance	Level of effect
Pilate effect test	0.429	4.882	2	13	0.026	0.429
Wilks' lambda test	0.571	4.882	2	13	0.026	0.429
Hotelling effect test	0.751	4.882	2	13	0.026	0.429
Test Roy's largest root test	0.751	4.882	2	13	0.026	0.429

Source: Research finding

The results show that significance levels of all four tests are less than 0.05, thus, they are significant, meaning that scores of inefficient coping style of subjects are significant in pretest, posttest, and follow up stages.

C-Studying Dependent Sphericity Test Hypothesis

Table 21: The results of Mauchly`s test about dependent –variable sphericity (referring-to-others coping style)

Intergroup effect	Mauchly W value	Square Khi	Freedom degree	Level of significance	Correction coefficient Greenhouse-Jazer	Huyn Flat	Low limit
Test	0.608	6.46	2	0.039	0.718	0.778	0.5

Source: Research finding

Results show that level of confidence is less than 0.05, thus it is significant, meaning that sphericity hypothesis is not true concerning this variable. So, one of correction coefficients needs to be used for correcting freedom degree (df).

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d- Studying the Intergroup Effects of Inefficient Coping Style Variable

Table 22: The effects of four test concerning intergroup effects of dependent variable (referring –to-others method)

Test	Test change resource	Sum of squares	Freedom degree	Mean of Square	F	Level of significance	Level of effect
	Sphericity hypothesis	21171.511	2	10585.756	4.742	0.017	0.253
	Green house – Jazer	21171.511	1.437	14733.174	4.742	0.03	0.253
	Huyn Flat	21171.511	1.557	13601.566	4.742	0.027	0.253
	Lower limit	21171.511	1	21171.511	4.742	0.047	0.253

Source: Research findings

As it can be seen Mauchly Sphericity hypothesis is not true so the Sphericity hypothesis is not taken in to account here and other three tests such as Huyn Flat need to be applied. Since the level of significance is less than 0.05, it is significant.

Thus, it can be stated that difference of means of three times running of referring-to-others coping style are significant and the level of effect of intergroup dependent variable (referring-to-others coping style) is 25.3%

e- Results of Comparisons of Intergroup Dependent Variable

Table 23: Intergroup comparison of dependent Variable: referring-to-others coping style

Source change	Type of test	Sum of squares	Freedom degree	Mean of squares	F	Level of significance	Level of effect
Test	Linear	20124.3	1	20124.3	8.492	0.011	0.378

Source: Research findings

Results show that significance level is less than 0.05. It can be stated that difference of three times running referring-to-others coping style is significant and the level of effect of intergroup dependent variable is 37.8%.

f- Some Descriptive Estimations

Table 24: Descriptive estimations of dependent variable: referring-to-others style

Test	Mean	Standard measuring error	95% level of confidence	
			Lower limit	Upper limit
Pretest	248.6	13.371	219.922	277.278
Posttest	284.733	14.579	253.464	316.002
Follow up	300.4	11.062	276.675	324.125

Source: Research findings

Table 24 shows some other descriptive indicators of dependent variables in referring-to-others coping style.

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g- Paired Comparisons

Table 25: Results of paired comparisons (posthoc) for accurate studying of existing differences between implementation stages of dependent variable: referring-to-others coping style

Test (I)	Test (J)	Mean difference (I-J)	Standard error	Level of significance	95% level of confidence of mean difference	
					Lower limit	Upper limit
Pretest	Posttest	-36.133	21.19	0.331	-93.723	21.457
	Follow up	-51.800*	17.776	0.034	-100.11	-3.49
Post test	Follow up	-15.667	11.31	0.563	-46.404	15.071

Source: Research findings

Table results show that significance level of score difference in third stage of the test is 0.05 less than other two stages, meaning that training cognitive-behavioral strategies leads to increase of referring-to-others coping style of subject in follow up stage. On the contrary, difference of referring-to-others coping style among shy students in test group in follow up and posttest stage are not significant. It is not also significant in pretest and posttest stages, meaning that the effect of training cognitive-behavioral strategies has not become significant in posttest stage but it becomes significant in follow up stage, leading to increase of referring-to-others coping style. Perhaps, the effect of these trainings will continue and will become significant in follow up stage.

4-2-4-3 The effect of training cognitive –behavioral strategies on increase of efficient coping style among shy girls is preserved during time.

A-Descriptive Results

Table 26: Means and standard deviation of efficient coping style variable in three stages on test group

Stage	Mean	Standard deviation	Number of subjects
Referring-to-others pretest	405.47	63.887	15
Referring-to-others posttest	534.87	62.366	15
Referring-to-others follow up	523.6	73.745	15

Source: Research finding

The results indicate that obtained mean is greater in posttest and follow up compared to pretest concerning descriptive [analysis]. In other words, posttest mean is almost greater than pretest.

B-Results of Multivariate Four Tests

Table 27: The results multivariate four tests about significance levels of inter-subject of independent variable

Test	Value	F	Hypothesis freedom degree	Error freedom degree	Level of significance	Level of effect
Pilate effect test	0.813	28.217	2	13	0.001	0.813
Wilks' lambda test	0.187	28.217	2	13	0.001	0.813
Hotelling effect test	4.341	28.217	2	13	0.001	0.813
Test Roy's largest root test	4.341	28.217	2	13	0.001	0.813

Source: Research finding

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The results show that significance levels of all four tests are less than 0.05, thus, they are significant, meaning that scores of efficient coping style of subjects are significant in pretest, posttest, and follow up stages. The level of effect is 81.3%

C-Studying Dependent Sphericity Test Hypothesis

Table 28: The results of Mauchly's test about dependent –variable sphericity (efficient coping style)

Intergroup effect	Mauchly W value	Square Khi	Freedom degree	Level of significance	Correction coefficient		
					Greenhouse-Jazer	Huyn Flat	Low limit
Test	0.564	7.446	2	0.024	0.696	0.749	0.5

Source: Research finding

Results show that level of confidence is less than 0.05, thus it is significant, meaning that sphericity hypothesis is not true concerning this variable. So, one of correction coefficients needs to be used for correcting freedom degree (df).

d- Studying the Intergroup Effects of Efficient Coping Style Variable

Table 29: The effects of four test concerning intergroup effects of dependent variable (referring –to-others method)

Test change resource	Sum of squares	Freedom degree	Mean of Square	F	Level of significance	Level of effect
Sphericity hypothesis	154133.911	2	77066.956	22.637	0.001	0.618
Green house – Jazer	154133.911	1.393	110672.334	22.637	0.001	0.618
Huyn Flat	154133.911	1.498	102866.732	22.637	0.001	0.618
Lower limit	154133.911	1	154133.911	22.637	0.001	0.618

Source: Research findings

Since the level of significance is less than 0.05, it is significant. Thus, it can be stated that difference of means of three times running of efficient coping style are significant and the level of effect of intergroup dependent variable (efficient coping style) is 61.8%

e- Results of Comparisons of Intergroup Dependent Variable

Table 30: Intergroup comparison of dependent variable: efficient coping style

Source of change	Type of test	Sum of squares	Freedom degree	Mean of squares	F	Level of significance	Level of effect
Test	Linear	104666.133	1	104666.133	18.517	0.001	0.569

Source: Research findings

Significance level is less than 0.05. It can be stated that difference of three times running efficient coping style is significant and the level of effect of intergroup dependent variable is 56.9%.

f- Some Descriptive Estimations

Table 31: Descriptive estimations of dependent variable: efficient style

Test	Mean	Standard measuring error	95% level of confidence	
			Lower limit	Upper limit
Pretest	405.467	16.496	370.087	440.846
Posttest	534.867	16.103	500.329	569.404
Follow up	523.6	190.41	482.762	564.438

Source: Research findings

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Table 31 shows some other descriptive indicators of dependent variables in efficient coping style.

g- Paired Comparisons

Table 32: Results of paired comparisons (post hoc)for accurate studying of existing differences between implementation stages of dependent variable :efficient coping style

Test (I)	Test (J)	Mean difference (I- J)	Standard measuring error	Level of significance	95% level of confidence of mean difference Lower limit Upper limit	
Pretest	Posttest	-129.400*	17.516	0.001	-177.003	-81.797
	Follow up	-118.133*	27.453	0.002	-192.744	-43.522
Post test	Follow up	11.267	17.359	1	-35.911	58.444

Source: Research findings

Table results show that significance level of score difference of posttest and follow up is less than 0.05, meaning that training cognitive-behavioral strategies leads to increase of efficient coping style of subject. This is because scores of efficient coping style among shy students in test group in posttest and follow up stages is significantly greater than pretest stage. Since the difference between scores in posttest and follow up is not significant, it can be stated that the effect of training cognitive-behavioral strategies has been continuous on increase of efficient coping style.

Conclusion

This study aims to study the efficacy of cognitive-behavioral training on improvement of coping styles among shy students of sixth grade in 2nd region in Yazd. This research is quasi-experimental. Statistical population which included 30 individuals of girl students in the 2nd region who obtained minimum shy score, was divided into two 15-member groups, one control and one test group. Tool used in this research was shyness questionnaire and teenager coping-style questionnaire. Research intervention included cognitive-behavioral training package of shy girl coping style presented during ten 90-minute sessions to test group. Co-variance test as well as follow up test was used to analyze data. The results indicate that cognitive-behavioral training has significant effect on increased dimensions of efficient coping style and the effect of this training on improvement of coping styles was preserved in follow up stage. Furthermore, the results reveal that this training did not influence on reduced dimensions of inefficient coping style and increased dimensions of referring-to-others coping style.

Efficient coping style depends on self-assessment of situation completely. Individual's cognitive framework from the condition and himself can be changed and promoted by training. Individual's belief to make effort to reach pleasant goals, according to positive feedback given after training sessions, can considerably influence this efficacy and the subject can increase his own coping style gradually through group effort experiences and positive feedback reception.

Referring-to-others style is one of important psychological methods concerning personality growth being changed during time as a result of learning experience and environmental factors and it has deep position in individual's personality, his attitudes, and his abilities. Social interaction, parents' attitude, social-economic conditions of society, family social –economic class, and etc. can noticeably influence on teenagers' referring-to-others style and in particular girls. Therefore, change in this style needs long and continuous training, parents' involvement on their attitude change toward subjects, and helping them concerning reduced shyness. According to special conditions of participants (last grade and nation-wide final exams), referring-to-others style can be changed considering the fact that family condition needs to be peaceful to be prepared for severe competition of sixth grade in order to obtain good grades to be accepted in certain schools such as prodigy schools. This change in referring-to-others style can be created by some sessions but this change will not be fundamental to affect the whole system. One of important factors on efficiency increase is parents and family. Any failure within family structure can enervate the training effects. Family restrictions, family class, lack of appropriate relationships, family

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correlation, and being carefree in terms of values can have devastating effects on teenagers and specially girls. According to many considerable effective factors which were not under control of the researcher as well as the fact that self-belief is formed during childhood, deeply being effective in mental representing, its change needs more and more continuous training along with time rather than inefficient style. Periodic training sessions can lead to some changes while this change will not statistically be significant.

Recommendations

- According to development and evolution trend of society, media, existence of maturity problems among students in this age including emotional instability and cognitive distortions, and considering the fact that teenagers and adolescents naturally face problems and new conditions, educational organization can provide various training packages for students, being taught in after-school programs.
- Family training is one of the most serious and fundamental measures psychologically which needs to be implemented in the society. Thus, it is recommended that family –consultation centers be established in all regions and provinces. All organizations including mosques, religion trainers, parents-teachers associations, radio, televisions need to be active for planning and managing such programs in order to provide unity in rearing policies. This is important because families can be under rearing training and direction from the beginning.
- Providing proper programs for students` leisure time and teaching communicative trainings for teenagers and young adults can play an important role in compatibility or lack of compatibility within the society.

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