Original Article

The influence of group stress management skills training on ambiguity tolerance of parentless or poorly parented adolescent girls

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Abstract

Introduction: The present study examines the Influence of group stress management skills training on ambiguity tolerance on parentless and poorly parented adolescent girls.

Materials and Methods: This clinical study is implemented by pretest, post-test design and a control group. Statistical community included all of the parentless and poorly parented adolescent girls that are under the support of Mashhad Welfare Organization. Among them, 30 girls were selected through multiphase cluster sampling. They were divided in two groups randomly: experimental group (15 girls) and control group (15 girls). We used Ahmadpour's Ambiguity Tolerance Questionnaire in order to collect the data. The experimental group attended in 12 sessions of stress management skills training that lasted 100 minutes; while the control group had no training program. The data were analyzed through covariance analysis by SPSS software.

Results: Our findings showed that group stress management skills training has a significant positive influence on ambiguity tolerance (total score and 5 subscales of 7 subscales) of parentless and poorly parented adolescent girls. The influence of training program on avoidance of aesthetic ambiguity and avoidance of anarchy wasn't statistically significant.

Conclusion: It seems that group stress management skills training has a significant influence on the ambiguity tolerance of parentless and poorly parented adolescent girls.

Keywords: Adolescent girls, Ambiguity, Group training, Stress management

Introduction

Adolescence is a difficult and scrimmage period of transfer of childhood dependency to maturity and youth independency and having responsibility. As adolescent faces with fast physical and sexual maturity and on the other hand, the family and society expect them to behave independently. They should accept and adopt these changes and try to have a coherent identity. They should find clear answers for these old and difficult questions such as: "who am I?"(1).meanwhile the parentless and poorly parented adolescents who have no suitable supportive network of family and peripheral, suffer from behavioral and emotional disorders and disturbances. These adolescents don't learn problem solving skills in order to decrease the tensions and manage the life problems (2). Krain and Gotimer believe that ambiguity intolerance is the main characteristic factor of psychological disorders among adolescents (3). According to Pickett's definition, ambiguity refers to any situation that has more than one explanation, interpretation and conception; or any uncertain and indecisive subject (4). Elsberg defines the ambiguity as: lack of necessary information for understanding the situation or assessment of possible results(5).ambiguity tolerance means that how person process, interpret and act while he encounter with vague and unclear information. Reaction intense toward understanding the ambiguity, show the person's ambiguity tolerance level. Lack of information cause the stress and anxiety and it is the start of person's attempt to eliminate the ambiguity (6). Budner, Mcdonald,

Furnham and Ribchester believe that people who have low ambiguity tolerance level, while encounter with lack of information, they try to avoid and recede the ambiguity situation because it is difficult for them to measure the level of danger and to make the correct decision. They treat these situations as threat and annoying resources and they react to them in form of stress, avoidance, pause, suppression or denegation(5).life always accompany with mane ambiguity and stress, so having low level of ambiguity tolerance can make problems for people encountering to stress resources. Psychologists such as Budner try to enforce person's conflict with life's stress and problems by reinforcing the person ambiguity tolerance (7).

By reviewing the previous researches, it appears that although the ambiguity tolerance is important, yet the way of improvement of this constitute is one of the researcher's ambiguity and it is a research suggestion. So, based on the mentioned subjects, this research tries to examine this question that can group stress management skills training influence on ambiguity tolerance of parentless and poorly parented adolescent girls?

Materials and Methods

The research's plan is applied and it uses the experimental method of pretest, post-test and control group. Its Statistical community includes all of the parentless and poorly parented adolescent girls who are under support of 20 care centers of Mashhad Welfare Organization. Sample content calculate based on Kohen formula. In order to calculate the sample content of each group, the amount of content or expected difference was Δ=50%, meaning level was α=05% and test power was (1-β) =80%. By referring to prepared tables, as selecting these numbers of person for each research group, we can gain test power that equal to 80%. So 30 girls selected by cluster multi stage sampling. At first based on accidental sampling, we selected two care centers among 20 care centers of parentless and poorly parented adolescent girls of Mashhad Welfare Organization. Then 30 girls selected accidentally among adolescents of these 2 centers. They have the research inclusion criteria such as tendency for participation in research, age range between 12 to 18 years old, attending in hostelry centers at least for 1 year, having the score higher than 64 of ambiguity tolerance questionnaire. They divided in two groups accidentally: control and experimental groups with 15 girls for each. After receiving justification and recommendation of welfare organization and giving it to manager of

Imam Reza Parto-e-Mehr institution and the manager of Ali Golestan institution No.3, and their agreement. We start research implementation. In both institution, ambiguity tolerance test accomplish among adolescents who were 12 to 18 years old and attending in care center for 1 year. Then among those who gain the score higher than 64 from ambiguity tolerance questionnaire, 15 girls put in experimental group and 15 girls put in control group accidentally. Experimental group receive 12 sessions of group training for stress management that each session last 100 minutes and they were from March to May 2016 and this program was based on Sara McNamara's practical program, but there was no interference in control group. After these training sessions, again ambiguity tolerance test accomplish for both groups. Finally, based on suitable statistical methods, data were analyzed.(it should be note that because of obeying the ethical values, according to accomplished coordination, this training sessions accomplish for control group). The research plan approve by research council of Azad university of Quchan.

Research instruments

- *Ambiguity Tolerance Questionnaire:* This questionnaire was prepared by Ahmadpour in 2010 in Iran and it has credibility and normalized (7). This measurement contain 33 questions and 7 factors such as emotional ambiguity, avoidance of complexity, avoidance of anarchy, being weak in daring, avoidance of challenging and avoidance of aesthetics ambiguity and un predictability. Each participant ask to select these options: completely agree (4 score), agree (3 score), having no idea (2 score), disagree (1 score), completely disagree (0 score). The score that gain from questionnaire shows the situation of the participant based on standard score Z and percentage grade. Gaining higher scores (64 and up) of this questionnaire show that Ambiguity tolerance is average and low. The ranges of scores of this questionnaire are between 0 to 132. In order to examine the validity of initial questionnaire, we use the statistical analysis of factors method. Total amount of value of specific measurement with 33 questions equal 14.37, KMO (Shows the sampling adequacy) equal 86% and Kruit Bartlet test equals 3795.18 ($P<0.001$). To examine the validity simultaneously we use MacDonald's measurement with 20 questions that the gaining validity coefficient equal 57% ($P<0.01$). We use Cronbach's alpha and retesting to examine the validity of measurement. The coefficients that gain from these methods for total measurement are 77% and 75% respectively ($P<0.001$).

In this study, group stress management skills training is based on Sara McNamara's applied program (8).this didactic pack is the result of several years of research and experiences about stress and anxiety control. The base of this pack is Dr. Masood Janbozorgi's research that assess 2000 people in form of didactic group and Sara Mcnamara's research in Canada that assess 1500 people during a year. This pack includes 6 sessions that last 90 minutes and it is as follow:

Each session has special time and structure that is designed to provide some theoretical information in order to improve the people insight and then it follows by applied practices. Based on the member's need and creativity, the number of session can be increase to 12 sessions (8).

Session 1: acquaintance with stress and the ways of how to act with stress: stress process

Session 2: don't be indifferent against stress: mental methods for conflict with stress and gain the skill of problem solving.

Session 3: adapt yourself with life: physical methods for conflicting with stress

Session 4: use: study skills, preparation for exam and time management

Session 5: group power: social and personal communication skills

Session 6: honor yourself: self confidence improvement and honor yourself; avoidance of depression and anxiety and effective conflict with them

It is necessary to mention and explain two notes about accomplishment of this program in the present research: the first note is that in this research, there were 12 training sessions, in other word, for some of training sessions of this program, there were more sessions. For example, the second session has three sessions instead of 1 session and fifth and sixth sessions separately last for 2 sessions. By adding the initial and final sessions, the number of sessions was 12 sessions. The second note is that: in Sara McNamara's applied program, the time of each session is 90 minutes and there is a rest time that last 10 minutes (between minute 40 to minute 50), but in the present research, each session last 100 minutes and between minute 40 to minute 60, participants did UNICEF games and practices that design in order to accomplish in group training sessions. Suitable games and practices can arouse participants to convey their idea, and they arouse their emotion and curiosity, they increase their energy and alacrity, jocundity and they cause their calmness. They also make diversity, creativity and consequently they cause that participants become active (9).

Data analysis accomplished in two parts. We use described data analysis in order to explain and describe gathering data and these data were summarized and classified by using of frequency distribution tables. We use described statistical indexes such as mean, standard deviation, frequency and percentage. In inferential statistics, we use covariance analysis for examination of research hypothesis.

Results

To describe the sample data, at first we describe the sample based on age, education grade, time of attending in care center, and type of tutelary, then we calculate the central indexes and diffusion of research variables that are as follow:

Table 1. Sample frequency distribution based on age, education grade, time of attending in care center

Control	Experimental	Time of attending in care center	Control	Experimental	Education grade	Control	Experimental	Age
2	2	1 year	3	2	5	2	2	12
0	1	2 years	3	2	6	2	2	13
1	1	3 years	1	1	7	3	2	14
4	4	4 years	3	5	8	3	1	15
4	3	7 years	2	3	9	3	3	16
1	2	11 years	1	1	2nd high school	3	4	17
3	2	12 years	2	1	3rd high school	1	1	18 years old
15	15	Total number	15	15	Total number	15	15	Total number

Total number of group members is 15 girls that 5 of them were parentless and 10 girls were poorly parented. As researcher tries to examine the influence of group stress management skills training on ambiguity tolerance (total number and 7 subscores) of parentless and poorly parented adolescent girls and she uses pretest and post-test with control group to accomplish her research, so we should control the influence of pretest. In these conditions, the best statistical method is covariance analysis. The main hypothesis of covariance analysis is: "sameness of variances" and "homogeneous of regression gradient (line correlation among variables)". The results of hypothesis examination are as follow:

Table 2. Levene test for sameness of variances

Variables	F	Numerator	Denominator	Mean level
Ambiguity tolerance (total number)	2.069	1	28	0.161
Unpredictability	.084	1	28	0.775
Avoidance of aesthetic ambiguity	2.481	1	28	0.183
Avoidance of making challenge	2.647	1	28	0.275
Being weak in daring	0.014	1	28	0.906
Avoidance of anarchy	0.010	1	28	0.920
Avoidance of complexity	3.589	1	28	0.069
Emotional ambiguity	0.510	1	28	0.481

As the meaning level of Levene test is higher than 0.05, so, variances of two groups are equal with each other in dependent variable.

Table 3. Test among groups

Change resources	Dependent variables	Total of squares	Degree of freewheel	Squares mean	F	Mean level
Mutual reactions between pretests and groups	ambiguity tolerance (total number)	1.850	2	0.925	0.127	0.881
	unpredictability	1.530	2	0.765	0.404	0.674
	Avoidance of aesthetic ambiguity	0.683	2	0.341	0.181	0.836
	Avoidance of making challenge	0.426	2	0.213	0.168	0.847
	Being weak in daring	1.783	2	0.891	0.695	0.512
	Avoidance of anarchy	2.206	2	1.103	0.510	0.609
	Avoidance of complexity	0.696	2	0.348	0.297	0.747
	emotional ambiguity	12.977	2	6.489	2.779	0.089

As the meaning level of mutual reaction between pretests and groups is higher than 0.05, so the interaction between test conditions and pretest variable is not meaningful. It means that the gradient of regression line is same for all variables. So we can use the Covariance analysis. Now we examine the influence of group stress management skills training on each variable, by using of single variable of covariance analysis.

Table 4. Single variable test of Covariance analysis

Dependent variable	Change resources	Total squares	Degree of freewheel	Squares' mean	F	Meaning level	Square of parabola data
Ambiguity tolerance (total number)	Error factor	3776.679	1	3776.679	540.897	0.000	0.966
		132.663	19	6.982			
Unpredictability	Error factor	49.168	1	49.168	26.840	0.000	0.586
		34.806	19	1.832			
Avoidance of aesthetic ambiguity	Error factor	6.683	1	6.683	3.660	0.071	0.162
		34.694	19	1.826			
Avoidance of making challenge	Error factor	54.633	1	54.633	44.552	0.000	0.701
		23.299	19	1.226			
Being weak in daring	Error factor	130.597	1	130.597	101.035	0.000	0.842
		24.559	19	1.293			
Avoidance of anarchy	Error factor	1.349	1	1.349	.627	0.438	0.032
		40.890	19	2.152			
Avoidance of complexity	Error factor	166.471	1	166.471	147.396	0.000	0.886
		21.459	19	1.129			
Emotional ambiguity	Error factor	360.031	1	360.031	136.997	0.000	0.878

Based on the tables, as the meaning level of F test in pretest of ambiguity tolerance(total number), unpredictability, avoidance of making challenge, being weak in daring, avoidance of complexity and emotional ambiguity is lower than 0.05, so we can conclude that group stress management skills

training has positive influence on these variables. But as the meaning level of F test in post-test of avoidance of aesthetic ambiguity and avoidance of anarchy is higher than 0.05, we can conclude that group stress management skills training has not positive influence on avoidance of aesthetic ambiguity and avoidance of anarchy of parentless and poorly parented adolescent girls. Based on this fact that Covariance analysis fixes the influence of pretests and it calculates the adjusted means, so adjusted means of groups are as follow:

Table 5. Adjusted means of groups

Variables	Groups	Mean	Standard error
Ambiguity tolerance (total number)	experimental	66.184	0.768
	control	93.950	0.768
Unpredictability	experimental	5.049	0.393
	control	8.217	0.393
Avoidance of aesthetic ambiguity	experimental	4.983	0.392
	control	6.151	0.392
Avoidance of making challenge	experimental	10.664	0.322
	control	14.003	0.322
Being weak in daring	experimental	6.285	0.330
	control	11.448	0.330
Avoidance of anarchy	experimental	10.404	0.426
	control	10.929	0.426
Avoidance of complexity	experimental	10.152	0.309
	control	15.981	0.309
Emotional ambiguity	experimental	18.647	0.471
	control		

Based on adjusted mean of control and experimental group on post-test of dependent variables, there is significant difference among variables of ambiguity tolerance (total number), unpredictability, avoidance of making challenge, being weak in daring, avoidance of complexity and emotional ambiguity, but this difference is significant for variables such as avoidance of aesthetic ambiguity and avoidance of anarchy. In other word, group stress management skills training has significant and positive influence on ambiguity tolerance (total number), unpredictability, avoidance of making challenge, being weak in daring, avoidance of complexity and emotional ambiguity and coherence sense of parentless and poorly parented adolescent girls, but This influence isn't significant on variables such as avoidance of aesthetic ambiguity and avoidance of anarchy statistically.

Discussion

The result of covariance analysis shows the

positive influence of group stress management skills training on ambiguity tolerance (total number), unpredictability, avoidance of making challenge, being weak in daring, avoidance of complexity and emotional ambiguity of experimental group.

Training program of stress management skill that we use in the present research is a multidimensional program that consist of training of varied criteria, so its positive influence on increasing the ambiguity tolerance of parentless and poorly parented adolescent girls can be explain in this way that when an adolescent confront with ambiguities and problems, and she/ he doesn't have effective knowledge and power to solve them, he/she feels that it is hard for him/her to solve the problem, so she/he feels stress, anxiety, mental involvement and finally he/she can't tolerate the ambiguity and try to avoid of these situations. If a person learns the techniques of training program of stress management skill, he can react positively in ambiguity situations. According to Budner (7,11) and McLin (5) definitions; Stress management and effective conflict with ambiguity problems are signs of person's high ambiguity tolerance. Tiufu (10) also defines the ambiguity tolerance as person's ability to react positively toward ambiguity situations.so the person's ability for positive encounter with ambiguity situations, show the person's power in ambiguity tolerance. This result is accordant with the result of some researches (3,4,11,13-16). In specifying the positive influence of group stress management skills training on unpredictability, it can be said that people learn that the negative thoughts and ultraism cause stress and they learn to replace these negative and ultraism thoughts that usually introduce as ought and ought not, with realistic and hopeful thoughts and control themselves while reacting to stress. Also, by doing some practices, they learn to replace the negative self sayings with some directional positive and rational thoughts and they familiarize with cognitive errors. One of the cognitive errors is predicting the future negatively or having negative predicted thoughts. It seems that predication in ambiguity situations cause stress and anxiety. An adolescent learns through training program and practices to replace the negative self sayings and mental imagination with directional self sayings and mental imagination, so he/she can decrease his/her unpredictability in ambiguity and unpredictable situations. In specifying of the positive effect of group stress management skills training on avoidance of making challenge, it can be said that uncertainty is one of the eight characters that Norton

defines for ambiguity situations. But when people learn the skill of stress management, they can improve their style of contemplate about challenges and learn effective encountering with stress while they confront with challenging events. They change their thoughts, feelings and behavior by increasing their self confidence. A person with low self confidence, involve with the thoughts such as " I can't", " I don't have the skill to do this action", and these thoughts cause stress, anxiety and fear of uncertain situations and his behavior appears as avoiding of making change in life or avoidance of accepting different and challenging conditions . In specifying of the positive effect of group stress management skills training on being weak in daring, it can be said that, being decisive often means that to contemplate differently and try to replace common self sayings with decisive sentences. For example: self saying like:"I shouldn't make a mistake" replace with this decisive sentence: "I can make mistake". Perhaps, one of the effective factors in avoidance of facing with new people or situations and having doubt in making decision is the stress of these negative self sayings. Also, a person learns that being decisive means that making balance between your need and people's need; it means selecting the daring behavior among three kinds of passive, daring and aggressive behaviors; because by daring behavior, person can ask for his need and also object with other people's idea politely and say "no" and meanwhile he can feel calm. This didactic program that also includes the skills such as: training the negotiation skill and conflict solving skill; social and interpersonal communication skills; problem solving skill and self confidence and self regard improvement skill, can decrease being weak in daring of parentless and poorly parented adolescents effectively. The results of the present research are accordant with the results of some researches (15,17,18).Yamagishi also(19) examines the influence of training of daring skill on stress management of nurses in Japan, and he concludes that training of daring skill can decrease the stress level of nurses' job and their mental stress. The positive influence of group stress management skills training on avoidance of complexity of experimental group can be specify in this way; Mclean(20)says that people with low level of ambiguity tolerance accept the available and fast answers for different questions because ambiguity situations or stimulants such as new or complex stimulants are threatening for them. So we can say that by stress management skills training, adolescents can confront with complex situations and problems. At first, he

decreases his agitation that result from stress in himself by using of calmness techniques and then he uses his problem solving skill. By using of thought inducing method, people can determine, invent and discover effective and adaptive solutions for their complex routine problems so that they can select the best one. This person uses the best solution, because he/she has many different solutions in his/her mind. The results of the research show the positive influence of group stress management skills training on emotional ambiguity. It means that when a person encounter with ambiguity stimulant, he feels much emotional stress and anxiety (15).in specifying this assumption, it can be said that people with low level of ambiguity tolerance, treat the ambiguity situations as threats and they react to them in form of stress, avoidance, pause, suppression or denegation (5). All of the criteria of the multidimensional didactic program of the present research help people to manage their stress well while they processing the information in ambiguity situations and then they can react to these processed information by set of cognitive, emotional and positive and adaptive behavior. The result of this assumption is accordant with the results of some researches (15, 21-25). In specifying the fact that group stress management skills training doesn't influence on avoidance of aesthetic ambiguity, it can be said that by examining the questions that related to this factor and participants' answers, it seems that adolescents of the present research have almost high level of aesthetic ambiguity tolerance. It may relate to improvement of abstract thoughts among adolescents. An adolescent who reaches to stage of nominal thoughts, can draw supposed different alternatives of present facts in his mind (1). Paying attention to all of possible alternatives, in other words, examining the results of each assumption and approving or rejecting these results, is the base of nominal thought process. In this stage, a person can argue completely symbolic (26). In stage of nominal process (11 years old or high), adolescents think abstractly and they exceed from objective.

They can use metaphoric and symbolic sayings as a symbol for symbol and finally they can reach from fact to possibility and think about odds (27). In specifying the fact that group stress management skills training doesn't influence on avoidance of anarchy of parentless and poorly parented adolescent girls, we can conclude that one of the characteristic things of adolescence is being anarchy. He/she occurs in an age that sometimes accompany with anarchy and messy; in other word, being messy, anarchy and disheveled is a suitability

of adolescence age (28). In fact, the reason of this anarchy is that adolescents' thought and mind is in another place. Mental involvement is one of the main sign of nominal process stage in adolescence age (29). One of the research limitations is lack of foreign and Persian studies about dependant variable of the research and lack of existence of similar research so that it provide a possibility of comparing findings and having elaborative conclusion for researcher. Researches mainly focus on the correlation of research variables and there isn't an interfering study in this subject. Although this limitation is a strong point of the present research because of its new and innovative aspect. By the way, this research accomplished only on one gender group of parentless and poorly parented adolescents. And it is possible that gender influence on the results. Also the using questionnaire has the self reporting aspect, so it is possible that there is a bias in its answering in order to gain the social confirmation and also because of time limitation, there isn't prosecuting research for researcher to examine the influence of interference in long period. Based on this fact that in previous researches, correlation between ambiguity tolerance and different variables (such as :upper cognitive believes, cognitive creativity, invention; language competence and second language learning; lesson scores; universal anxiety disorders; basic depression; practical thought fantasy) was examined and approved and it shows the importance of this psychological component; and the conclusion of the present research also shows the positive influence of group training skill of stress management on ambiguity tolerance; so using of didactic program of the present research suggest for education centers and consultant clinics. Because of the importance of this psychological component, it suggests that some interfering researches accomplish to examine the way of improving this component. As the adolescents welcome and enjoy from UNICEF practices and games and they make much energy among adolescents, it suggests that researchers use these games and practices in their group training. It also suggests that this research accomplish on wider and different societies than parentless and poorly parented adolescent girls and their results pursue in long period.

Conclusion

It seems that group stress management skills training has a significant influence on the ambiguity tolerance of parentless and poorly parented adolescent girls.

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