

EFFECTIVENESS OF STRESS INOCULATION TRAINING ON RESILIENCY AND MENTAL HEALTH AMONG GIRL ADOLESCENTS

***Farah Tavakoli**

Department of Guidance and Counseling Azad University of Abhar & Teacher Education Abhar

**Author for Correspondence*

ABSTRACT

The present research was conducted aiming at determining effectiveness of stress inoculation training on resiliency and mental health among girl adolescents. Quasi-experimental research method and pre-test and post-test with control group have been used in the present research. 30 girl students with low resiliency and mental health have been selected from two high schools within Abhar and categorized in two experimental and control groups via random method. Seven stress inoculation training sessions were given to experimental group and no intervention was given to control group. Data were analyzed via covariance analysis, whereby the results indicated that stress inoculation training caused an increase in mental health among students at level (0.01). Stress inoculation training caused increasing resiliency at level (0.01). Results of this research can be effective in improving level of resiliency and mental health among girl adolescents.

Keywords: *Stress Inoculation Training, Resiliency, Mental Health*

INTRODUCTION

Concept of mental health refers to a general concept of health, attributed to all the practices that are used to prevent mental illness.

In recent years, Canadian Mental Health Association has defined this concept in three parts: the first part is about the attitudes towards oneself which include dominance on one's emotions, awareness from one's weaknesses and satisfaction with simple pleasures, the second part is about the attitudes towards other which include interest in the long and intimate friendship, a sense of belonging to a group and a sense of responsibility in human and material environment, the third part is about attitudes towards life which include acceptance of responsibilities, motivation to develop our facilities and interests, the ability to make personal decisions and the motivation to work properly (Garousi & Mani, 2004).

A majority of researchers have reported a negative significant relationship between resiliency and psychological problems and stated that such construct can be considered as a mediating factor between mental health and most of other variables, so that the person can resist against stressful factors and the factors which raise most of psychological problems and cope with them due to an improvement in his resiliency.

More specifically, the mental health of the person undergoes hazard under stressful factors and the factors which raise most of psychological problems, thus, resiliency assures individuals' mental health through adjusting these factors (Besharat, 2007).

Stress inoculation training has been invented by Mayknbam (1976). Stress inoculation training has been reported useful and effective to treat psychological problems. Stress inoculation training is not an individual technique but a method attributed to a therapeutic pattern composed of semi-structured training programs and clinically sensitive.

In this treatment, special training operations will be different in terms of the individuals under treatment. Stress inoculation training has been designed in line with growth of coping skills, affecting not just resolving the person's current problems but also future problems (Mayknbam, 2007).

Stress inoculation training can be compared with concepts of medical inoculation against immunization and biological diseases through changing attitude.

Stress inoculation training likewise medical inoculation has been developed to develop psychological antibodies or coping skills. This method increases individuals' resistance in this way and exposes them to

Research Article

the stimulants that have sufficient power for stimulation but are not severe to the sufficient extent to overcome them (Mayknbam, 2007).

With regard to experts' emphasis on learning resilience skills, it can increase level of mental and emotional health of individuals through training these skills to them and increase sense of life satisfaction in them (Weena, 2003; Sterenberg & Bry, 2004).

According to Sterenberg & Bry (2004), it can increase resiliency and health level of individuals through training the skills such as communication skills, stress management, assertiveness and self-expression (quoted from Samani *et al.*, 2007).

In the present research, the researcher intends to give response to this question “whether stress inoculation training affects resiliency and mental health among girl adolescents?”

Research Method

Quasi-experimental pre-test and post-test with control group has been considered as the research method, in which effect of independent variable (stress inoculation training) on dependent variables (resiliency and mental health) was examined.

Statistical Population, Sampling Method and Sample Size

Statistical population consists of all the girl high school students in Abhar during 2014-2015. The sample group consists of 30 students.

Clustering sampling has been considered as sampling method, such that firstly 2 schools were selected among the high schools within Abhar and three classes were selected from each school and then the questionnaires were performed on them.

After specifying the students with low mental health and resiliency, 30 individuals were selected in random and categorized to two control and experimental groups in random.

Research Instruments

1-general health questionnaire is based on self-reporting method which is used aiming at tracking those who have a mental disorder (Goldenberg, 1972, quoted from Fathi Ashtiani, 2010). Original version of general health questionnaire has been composed of 60 questions, yet some shorter versions have been prepared that the most important ones include GHQ-12, GHQ-28 and GQH-30 (Goldenberg, 1972, quoted from Fathi Ashtiani, 2010).

Form of general health questionnaire consisting of 28 items has been designed for all the individuals. This questionnaire has 4 sub-scales including somatic symptoms, anxiety/insomnia, depression and social dysfunction symptoms.

Validity coefficient of this test has been confirmed in different studies, that validity coefficient of this test has been obtained equal to 0.88 and validity coefficient of sub-tests has been obtained ranging from 0.50 to 0.81.

Connor-Davidson Resilience Scale (CD-RISC)

This questionnaire was prepared by Connor-Davidson through reviewing the research references in the context of resilience.

This questionnaire consists of 25 items scored ranging from totally improper to totally proper in Likert scale.

Minimum and maximum score equals to 0 and 100 (Mohammadi, 2006). A preliminary study on psychometric features of this scale among healthy individuals and patients indicated that these instruments enjoy internal consistency, re-test reliability, convergent and divergent validity.

Results from exploratory factor analysis indicated this scale as a multi-dimensional instrument and confirmed five factors including personal competence, tolerance of negative affect positive acceptance of change, control, spiritual influences for this scale (Connor-Davidson, 2003).

Mohammadi (2006) has normalized this scale to use in Iran. He has performed this scale on 248 individuals obtained reliability of this scale through measuring internal consistency of Cronbach's alpha equal to 0.89.

In Shafieezadeh's research (2012), reliability of questionnaire was obtained equal to 0.91 through Cronbach's alpha.

Research Article

Table 1: Indices of Descriptive Statistics of Resilience and Components of Mental Health among Control and Experimental Groups

Tests	Components	Experimental Group		Control Group	
		M	SD	M	SD
Pre-Test	Resilience	43/53	3/48	43/40	3/94
	Somatic Symptoms	13	2/13	12/40	2/26
	Anxiety/Insomnia	14/20	1/74	11/20	3
	Social Dysfunction Symptoms	14/20	1/56	12/60	3/04
	Depression	13/26	1/66	12/73	3/51
	Total Score of General Health	54/80	3/18	48/86	4/47
Post-Test	Resilience	58/40	3/58	43/53	3/61
	Somatic Symptoms	10/46	1/64	13/26	1/48
	Anxiety/Insomnia	11/40	2/32	11/33	2/71
	Social Dysfunction Symptoms	11/60	2/19	11/66	3/73
	Depression	10/26	1/62	12/66	3/73
	Total Score of General Health	43/53	4/25	48/93	4/19

According to table 1, descriptive statistics of resilience and components of mental health in pre-test and post-test among control and experimental groups including mean and standard deviation have been represented.

Table 2: Results of Levene Test to Test Equality of Variances

Tests	Components	F Ratio	DF	Sig
Pre-Test	Resilience	1/45	28	0/237
	Somatic Symptoms	0/065	28	0/801
	Anxiety/Insomnia	0/508	28	0/482
	Social Dysfunction Symptoms	3/25	28	0/082
	Depression	1/20	28	0/285
	Total Score of General Health	1/56	28	0/222
Post-Test	Resilience	0/435	28	0/515
	Somatic Symptoms	0/182	28	0/673
	Anxiety/Insomnia	0/30	28	0/588
	Social Dysfunction Symptoms	3/02	28	0/093
	Depression	1/67	28	0/206
	Total Score of General Health	0/127	28	0/724

Table 3: Kolmogorov–Smirnov Test to Test Normality of Distribution of Scores in Pre-Test and Post-Test of Resilience and Components of Mental Health

Pre-Test			Post-Test	
Components	Kolmogorov–Smirnov Test	Sig	Kolmogorov–Smirnov Test	Sig
Resilience	1/07	0/20	0/906	0/384
Somatic Symptoms	0/689	0/730	0/869	0/437
Anxiety/Insomnia	0/960	0/316	0/974	0/298
Social Dysfunction Symptoms	1/24	0/089	0/643	0/803
Depression	0/716	0/684	0/666	0/767
Total Score of General Health	0/657	0/782	0/513	0/955

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According to the results of table 3 and 4, none of the scores of pre-test and post-test have been significant at level ($P < 0.05$), i.e. equality of variances and normality of distribution of scores have been observed, that it can use parametric tests for these scores.

Table 4: Result from Studying Covariance Analysis on Effect of Stress Inoculation Training on Improving Resiliency among Girl Adolescents

Source of Variation	Sum of Squares	Freedom Degree	Mean of Squares	F-Ratio	Sig	Eta Square
Pre-Test	135/125	1	135/125	20/35	0/01	0/439
Group	95/78	1	95/78	14/42	0/01	0/357
Pre-Test × Group	15/44	1	15/44	2/32	0/133	0/16
Error	172/599	26	6/63			
Sum	171416	30				

Results of table 5 indicate that f-value obtained under intervention equals to 14.42, which is significant statistically at level (0.01), thus, it can deduce that mean of two groups in post-test differs after adjusting scores of pre-test with each other. Since homogeneity assumption for regression slope comes true, it can say that stress inoculation training affects improving resiliency among girl adolescents. In other words, stress inoculation training improves resiliency among girl adolescents.

The second hypothesis: stress inoculation training affects improving mental health among girl adolescents.

Table 5: Result from Studying Covariance Analysis on Effect of Stress Inoculation Training on Improving Mental Health among Girl Adolescents

Source of Variation	Sum of Squares	Freedom Degree	Mean of Squares	F-Ratio	Sig	Eta Square
Somatic Symptoms	61/46	1	61/46	28/21	0/01	0/520
Anxiety/Insomnia	24/60	1	24/60	6/13	0/01	0/360
Social Dysfunction Symptoms	19/09	1	19/09	6/70	0/01	0/367
Depression	18/51	1	18/51	5/99	0/01	0/357
Total Score of General Health	85/88	1	85/88	12/62	0/01	0/434

Results of table 6 indicate that f-value obtained under intervention equals to 14.42, which is significant statistically at level (0.01), thus, it can deduce that mean of two groups in post-test differs after adjusting scores of pre-test with each other. Since homogeneity assumption for regression slope comes true, it can say that stress inoculation training affects improving mental health among girl adolescents. In other words, stress inoculation training affects improving mental health among girl adolescents. Since mean of components of post-test for mental health in experimental group has reduced than control group with a significant difference statistically, thus, the hypothesis is confirmed. In other words, stress inoculation training affects improving mental health among girl adolescents.

Discussion and Conclusion

Results indicated that stress inoculation training affects improving resiliency among girl adolescents. This result is consistent with results of research below.

Momeni *et al.*, (2013) in their research deduced that high resilience and personality characteristics enable to predict a high level of psychological well-being. Arce *et al.*, (2008) in a research indicated that the

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individuals with high resilience tended to express positive emotions in exposure with emotional events with uncertain nature. From their point of view, this might be due to ability of these individuals for successful coping under facing difficult situations especially situations with inter-personal nature.

Longva's study (2002), quoted from Smith *et al.*, (2005), indicated that positive emotions predict resilience at age group 8-10 years old.

Samani *et al.*, (2007) reported a significant direct relationship between resilience and life satisfaction. The research by Block *et al.*, (2005) indicates that the resilient individuals have not self-defeating behaviors and have the ability to cope with adverse conditions. Carr (2004) indicated that high levels of resilience assist the person to use positive emotions to pass adverse experiences and return to favorable status. To determine this result, it can say that adolescence is an important phase of life and the start of being independence. new stressful problems occur for the adolescent during this period, that he will face problems if he fails to pass this period with success. Psychologists use the term "resilience" to respond on how some individuals can resist against their problems. Resilience implies that the individuals use their ability to adapt themselves with stressful conditions (Tarazi, 2012). Stress management techniques and relaxation practice can assist for reducing effect of stress through reducing individual's stress level. Stress management through behavioral and cognitive practice intends to increase sense of control, self-efficacy, self-esteem, efficient coping and social support in the person with stress. These changes reduce negative mood states and social isolation and improve quality of life (Antoni *et al.*, 2007). Behavior assists the person to meet his cognitive, emotional, social and physical needs. A behavior is considered problematic in case it disturbs the person and others and disrupts their life (Goldstein, 1995). Results of the second hypothesis indicated that stress inoculation training affects improving girl adolescents' mental health. Biranvandi (2013) in his research indicated that stress inoculation training causes increasing teachers' psychological well-being.

Azizkhani (2013) in his research indicated that stress inoculation training to students causes improvement of their assertiveness and social adjustment. Tugade & Fredrickson (2004) in their research deduced that positive emotion assists the individuals to return to their first psychological and physical state after stressful experiences. Tuttle (2006) indicated that training life skills in adolescents results in improving their decision making abilities, communications and increasing their self-confidence. To sum up, it can conclude that stress inoculation training has been reported effective to treat psychological problems in different studies. Stress inoculation training is not an individual technique but a method attributed to a therapeutic pattern composed of semi-structured training programs and clinically sensitive. In this treatment, special training operations will be different in terms of the individuals under treatment. Stress inoculation training has been designed in line with growth of coping skills, affecting not just resolving the person's current problems but also future problems.

With regard to experts' emphasis on learning resilience skills, it can increase level of mental and emotional health of individuals through training these skills to them and increase sense of life satisfaction in them. It can increase resiliency and health level of individuals through training the skills such as communication skills, stress management, assertiveness and self-expression. The present research has been conducted on students in Abhar via quasi-experimental method, found with limitation in generalizing the results to other individuals and groups.

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Research Article

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