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Research Article

INFLUENCE OF RATIONAL-EMOTIVE BEHAVIORAL THERAPY TO INCREASE RESILIENCY OF AIDS PATIENTS IN RAZI HOSPITAL IN RASHT

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ABSTRACT
This research provides and compiles Rational-Emotive Behavioral Therapy plan for HIV patients and evaluates influence of this plan on changing the patients' resiliency. Methods: 20 patients, who tend to cooperate, were selected from HIV patients of Razi Hospital in Rasht and classified randomly in 2 groups of 10 patients (Test group and Control group). During ten 90-minute sessions, Rational-Emotive Behavioral Therapy plan compiled by the researcher was taught to test group and control group was not taught in this regard. Before and after teaching (at the beginning of the first session and at the end of tenth session) level of patients' resiliency in test group and also in control group was measured using Conner-Davidson Resilience Scale (CD-RIS). One month later, tests were conducted on both groups and statistical data analyzed through repeated measurement mixed statistical model. Data of A 4 Step multivariate Testing Process (Pillai's Trace, Hotelling's Trace, Wilks' Lambda Roy's Largest Root) showed that there is a meaningful relation (a=0.01) among levels of depended variable of resiliency, emphasizing on two groups of test and control in three levels of pre-test, post-test and follow-up test.
Rational-Emotive Behavioral therapy plan was effective on "resiliency".

Key Words: *Rational-Emotive Behavioral Therapy, Resiliency, AIDS*

INTRODUCTION
AIDS is one of the economic, social, political and cultural problems in the present era. Prevention and control AIDS enjoys from a special sensitivity and requires an exact executive planning (Afsar Kazerooni, 2005).
28 million people have died due to AIDS in the world up to know and more than 70 million people suffer from this patient. According to estimation, 14,000 people get into HIV daily in the world and it means that now that you likely are spending a few second to read this article, a person got into HIV. Unfortunately, 95% of the new contaminations occur in 3rd world countries (Zamani *et al.,* 2006). According to the collected statistics from the State Universities of Medical Sciences and official announcement by Ministry of Health, 19774 HIV patients have been known in Iran until June 22, 2009.
Psychologically, HIV diagnosis for these patients is often full of stress and influences their life quality and mental health (Okdon, 1996 sayin from Curtis, 2000, Sohrabi, 2003). Serious social and psychological consequences causing by AIDS in such patients, is one of the important factor of spreading this infectious (Douaihy, 2001).
Golden Berg *et al.,* (2000) have shown in research that psychological pressure in AIDS patients is the leading cause of fast death. Natural response to stress which is seen in a definite time, exposes through disbelief, torpidity and denial in patients and following them anger, aggression, acute distress, anxiety and depression occur which are threats for their mental health. He believes that de-stigmatization and changing patient believing system is a solution to decrease stress.
As the most health problems have a close relation with human behavior, cognitive theories and patterns could be applied to understand how to prevent from health problems such as HIV-AIDS (Ghaffari *et al.,* 2008). In this regard, resiliency enjoys from a particular status especially in evolutionary psychology, psychology of family and health and mental health areas (Campbell-sills *et al.,* 2006). Resiliency is defined as the ability process or consequences of successful adaptation despite challenging and

threatening condition (Garmezy and Masten, 1991). It not only encompasses invincibility during anxiety conditions but it includes higher abilities to re-control disasters (Garmzy, 1991).

Regarding resiliency, Shate says "This is the style of thinking which determines one's resiliency – more than inheritance, more than intelligence and more than any single thing". Therefore, this is a reasonable theory that rational-emotive behavioral therapy which conducts on people's way of thinking could be effective on their resiliency.

Rutter (1987) stated that resiliency stems from believing in individual self-sufficiency, ability to face challenges and skills to solve problems. Although resiliency is an individual particular to some extent but it is also concluded from environmental experiences. However human is not the victim of his environment or inheritance. Human can be educated in order to increase his capacity of resiliency through learning some technics. Interaction against stress, unpleasant events and difficulties could be changed so that overcome problems and negative effects (Korhonen, 2007). Kordich-Hall and Pearson (2003) believe that some techniques which help person to increase his resiliency should be learned. Krauss and Seltzer (1993) mentioned that self-confidence, having a goal and rational thinking style are main factors for resiliency.

Non-resiliency thinking style make person depended to his false believes related to the world and false approaches to solve problem which waste mental energy and worthy resources of resiliency (Reivich and Shate, 2002).

Style of thinking could facilitate person ability to resiliently respond to inevitable irregularities and impacts during life or it could perform as a barrier against them (Seligman, 1991). Korditch-Hall and Pierson (2003) say that this is obvious that people should learn technics so that firstly think resiliently and then perform when face problem and stressful condition. Interference of educational rational-emotive behavioral therapy of this research, aimed to influence thinking process, affected on resiliency.

In a research, Estihard and Dolbir (2008) revealed that resiliency increase plan for students in test group including cognitive-behavioral therapy, rational-emotive therapy and psychological training, increases more effective coping strategies, positive emotions, self-confidence, self-leadership, decreasing negative emotions, stress and depression. Korhonen (2007) believes that training could enhanced capacity of resiliency and help people to face life unpleasant events positively and effectively.

As in meta-analysis study conducted by Haaga and Davison on conclusion of rational-emotive therapy, effect of this strategy is not directly mentioned and as some resiliency technics are learnable and resiliency has meaningful relation with mental and physical health (Goldstein and Brooks, 2005) and regarding to the importance of AIDS, this study attempts to provide and compile rational-emotive behavioral therapy plan for HIV patients and to evaluate effectiveness of this plan on change of resiliency in order to achieve goals of positive psychology to change behavior and increase resiliency.

In the main hypothesis of the present study, it is predicated that learning interventional plan of rational-emotive behavioral therapy could increase resiliency of HIV-AIDS patients. Therefore, independent and dependent variables of this study are rational-emotive behavioral therapy and resiliency respectively.

The purpose of rational-emotive behavioral therapy in this research is a plan which is gathered, compiles and teaches by the researchers using principles and data of Dr. Albert Ellis's strategy in rational-emotive behavioral therapy and the purpose of resiliency in this research is a score which a HIV-AIDS patient obtains in CD-RISC scale (2003). In addition, HIV-AIDS patients are those who their blood test shows existence of HIV (Number of their CD4 is under 300) whether entered into AIDS level or not (Ministry of Health, Treatment and Medial Education, 2002).

MATERIALS AND METHODS

In the present research, pre-test and post-test were used in control group. Test subjects were randomly selected and replaced in test group and control group. Then, after and before conducting independent variables, test subjects of two groups evaluated through pre-test and post-test.

Regarding limited access to HIV-AIDS patients and unwillingness to cooperate in the patients due to stigma and discrimination in society, 20 HIV-AIDS patients were selected from Razi hospital in Rasht

and randomly divided in 2 groups of test and control. During ten 90-minut sessions, rational-emotive behavioral therapy plan compiled by the researcher and concept of resiliency was taught along with excerpts of positive psychology to test group. Control group was not taught any education in this regard but safe sexual relation, commonly educated in this center, was educated to them. Educating rational-emotive behavioral therapy included ten 90-minute sessions which had 4-step structure: 1. Feedback of last session assignments; 2. Presenting information; 3. Performing a practice related to the information presented at that session and 4. Giving assignments for the next session.

Statistical society in this research was included all 20-50 years old men and women got into HIV-AIDS living in Rasht. Statistical sample included 20 people, 20-50 years old men and women got into HIV-AIDS (4 women and 16 men) referred to Razi hospital in 2011 living in city of Rasht and willing to participate in the test. They were divided in 2 groups of ten people (test group and control group). Method of sampling in this research is convenience sampling with random replacement.

Before and after educating (at the beginning of the 1st session and at the end of the 10th session), participants' level of resiliency was evaluated using CD-RIS and through conducting pre-test and post-test. Also, pre-test and post-test were conducted for control group after 1 session training about safe sexual relation, commonly educated in this center. One month later, pre-test conducted for both groups as follow-up test.

In the present research, in order to collect data, CD-RIS scale was used to evaluate resiliency variable. Connor and Davidson (2003) provided this questionnaire reviewing research resources about resiliency of 1979-1999. The major copy of this scale was received from the providers and written permission was received from Ms. Connor in order to use the questionnaire (Mohammadi, 2005). This questionnaire has 25 items which grades between Zero (Completely false) and four (Always true). Even the score is bigger, resiliency is higher and even the score is closer to 0, resiliency is lower (Mohammadi, 2005).

In order to analyze data and respond the research question, statistical model of mixed repeated measurement was used due to repeated measuring of test issues (Pre-test, post-test, follow-up).

Data Analysis

This research has dealt with the compilation of rational-emotive behavioral therapy plan and its effect on

Table 1: Statistical index related to survey about the variable "resiliency".

Group	Steps	Index of Central Tendency			Index of Dispersion			Index of Distribution		
		Mode	Median	Mean	Range	Variance	Standard Deviation	Standard Error	Coefficient of Skewness	Coefficient of Kurtosis
Test	*Pre-Test*	17	20	23.00	25	70.89	8.41	1.88	0.37	0.79
	Post-Test	33	31	29.70	21	77.90	8.82	1.97	- 0.26	- 0.80
	Follow-Up	23	23	34.60	43	46.13	6.79	1.51	0.47	- 0.44
Control	*Pre-test*	18	24	25.30	34	110.23	10.49	2.34	0.57	- 0.39
	Post-test	21	24	24.40	24	54.89	7.40	1.65	0.83	0.50
	Follow-up	27	27	27.00	33	39.10	6.25	1.39	0.20	- 0.17

resiliency of HIV-AIDS patients. Therefore, at first table of statistical index related to the research variable (resiliency) is described and inside it mode, median and mean computed as central tendency index, ranges, variance and standard deviation computed as index of dispersion and standard error, coefficient of skewness and coefficient of kurtosis computed as distribution index.

Regarding to the above table and emphasizing that there is a little difference among mode, median and mean and as coefficient of skewness and coefficient of kurtosis is less than 1, it could be stated that the above distribution could be considered normal and mean could be applied as reagent of Index of central tendency. In addition, parametric statistical model could be used.

Through 4-Step multivariate Test (Pillai'sTrace, Hotelling's Trace, Wilks' Lambda, Roy's Largest Root), it was revealed that there is a meaningful relation (a=0.01) among levels of dependent variable "resiliency", emphasizing on two groups of test and control in three levels of pre-test, post-test and follow-up test (Table 2).

Table 2: Multivariable tests related to dependent variable "resiliency".

Effect	Multivariable Tests	Amount of F	Meaningful Level
Group	Pillai's Trace	4.03	0.003
	Wilks' Lambda	4.03	0.003
	Hotelling's Trace	4.03	0.003
	Roy's Largest Root	4.03	0.003

With regard to Mauchly's Test of Sphericit, it could be stated that amount of Mauchly w is (0.91) and by referring to Chi-square logarithm of approximate theoretical distribution which is (2.92) it could be say that Mauchly's Test is not meaningful in level of ($\alpha = 0.05$) and multivariable normal distribution has been observed, therefore it could be say that normal distribution is observed in above tests and repeated measurement test could be applied (Table 3).

Table 3: Mauchly's Test of Sphericit.

	Mauchly's Test	Approximate Chi-Square	Degree of Freedom	Meaningful Level	Geezer Green House	Hoveen Feldet	Low Level
Within-Subject	0.91	2.92	2	0.238	0.91	1	0.50

Regarding to the following table (Table 4) and emphasizing on obtained amount of F in resiliency in test and control groups which is meaningful at the level of $\alpha = 0.01$, we could mentioned that by emphasizing on descriptive statistic of table 1, there is a significant differences among resiliency in pre-test, post-test and follow-up emphasizing on group (test, control).

Finally, Ita square which is at the last column of the above table, represent, impact of rational-emotive behavioral therapy plan on medium resiliency which amount of its severity is from 0 to 1. Therefore, when Ita square increased toward 1, its impact increases too and vice versa.

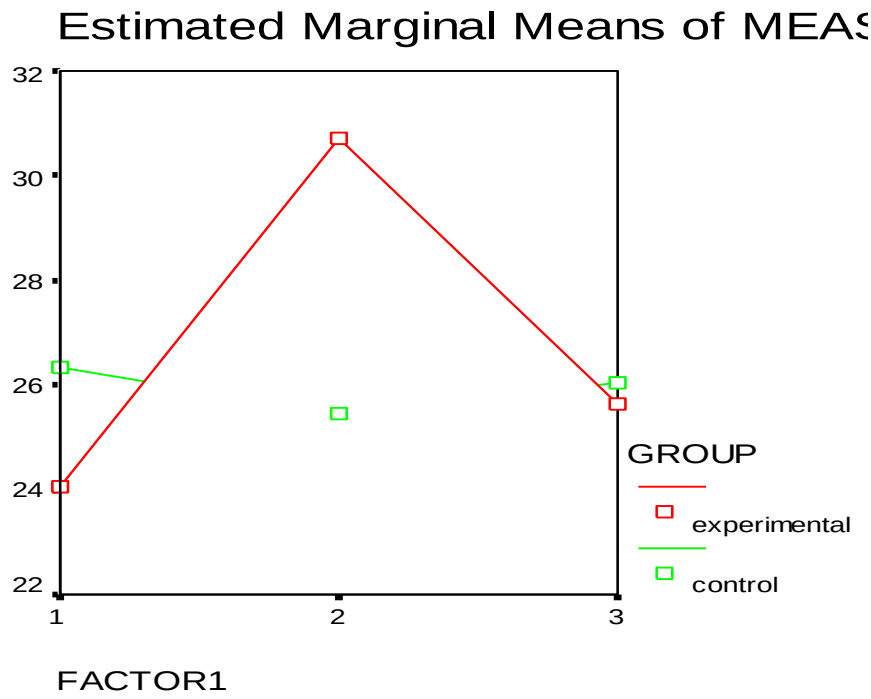
Table 4: Tests of within-subject effect Comparative survey on resiliency in three stage (Pre-test, Post-test and follow-up).

Resources of Changes	Total Squares	Degree of Freedom	Mean of Squares	Amount of F	Meaningful Level	Ita Square
Group	337.33	2	168.67	3.11	0.03	0.13
Error	1954.28	36	54.28			

And finally, regarding to Table 5 and emphasizing on amount of F in resiliency and emphasizing on group (0.07), we could mention about within-subject effect that there is not any meaningful differences in level of $\alpha = 0.05$ between resiliency of two groups and its reason is little number of test subjects.

Table 5: Tests of between-subject effect.

Effect	Total squares	Degree of freedom	Mean of squares	Amount of F	Meaningful Level	Ita square
Group	21.67	1	21.67	0.07	0.93	0.01
Error	5601.11	18	311,17			



DISCUSSION AND CONCLUSION

As data of 4-step multivariable tests (Pillai'sTrace, Hotelling's Trace, Wilks' Lambda, Roy's Largest Root) showed, it was revealed that there is a meaningful relation (α =0.01) between levels of dependenent variables "resiliency" emphasizing on two groups (test and control) in three stages pf pre-test, post-test and follow-up and rational-emotive behavioral therapy plan was effective.

Obtained result was consistent with what has come in the literature of this research. As it was mentioned, learning some technics could be effective to increase resiliency.

Alice stated that concepts of her rational-emotive strategy could be changed from unreasonable beliefs to more reasonable beliefs and concluded in reduced anxiety, depression and sadness and finally in long happiness (Quoted by Firoozbakht, 2004).

Obtained results are as the same as results obtained from Antonovsky, (1978), Lazarus (2004), and Silliman (1994) researches.

They showed in a research that changing beliefs is effective on resiliency increase and on life satisfaction. Shek (2004) showed in a research that people's beliefs and system of believing have relation with life satisfaction, more resiliency and less behavioral problem when face unpleasant and stressful condition of life. In a research conducted by Rahimian Boogar (2008) in Iran, the relation among changing beliefs and changing level of resiliency in unpleasant condition and disasters such as earthquake has been explained which is in the same direction with conclusions in this research.

Estihard and Dolbir (2008) revealed that resiliency increase plan for students in test group including cognitive-behavioral therapy, rational-emotive therapy and psychological training, increases resiliency, more effective coping strategies, positive emotions, self-confidence, self-leadership, decreasing negative emotions, stress and depression. In the present research we observed that learning interventional plan of rational-emotive behavioral therapy could increase resiliency of HIV-AIDS patients.

Kertez *et al.,* (2005) showed in a research that HIV-AIDS patients announce more mental pressure in daily life in compare with healthy people and the illness stigma and amount of negative event create such stress that they could be important factors to predicate stress disorder after event and depression which threat their mental health. They divided test subjects in 3 groups and offered them an special treatment separately such as physical, behavioral and cognitive treatments. Results of the research showed that the group which received cognitive treatments showed less depression, anxiety and aggression which is similar to the present study.

Conclusion of this research is in same direction of the conclusion of Samani *at al.,* (2007). They found that increasing resiliency through decreasing emotional problems and increasing mental health, increase satisfaction of life.

Conclusion

Obtained data showed that rational-emotive behavioral therapy plan was effective on resiliency.

As the literature of the present research says and as conclusions of mentioned research showed, it could be found that changing beliefs is effective on resiliency but no research was found in Iran- in the present research its effectiveness is obtained- to say that belief changing is effective when concepts of rational-emotive behavioral therapy is taught or even tested on HIV-AIDS patients.

The present research had many problems to access HIV-AIDS patients. This research only surveyed one psychological feature (resiliency) in very few (20 people) HIV-AIDS patients from 20 to 50 years old which most of them were male drug abusers and it was limited to the city of Rasht. Although conducted researches of psychological studies on HIV-AIDS patients inside Iran is very limited.

More researches should be conducted about other psychological features of HIV-AIDS patients and even other chronic diseases in other countries and other cities on more numbers of samples among other age group.

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