

Study the Effectiveness of Two Methods, Interpersonal Cognitive Problem Solving and Relaxation on Anxiety and Depression of Coronary Heart Disease Patients

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ABSTRACT

This research aims to determine the effectiveness of two methods of interpersonal cognitive problem solving (ICPS) and relaxation on anxiety and depression of Coronary heart disease patients. This is a semi-experimental research and its statistic population includes 35 individuals of Coronary heart disease patients which attended in heart recovering center of Shahid Rajaei Hospital in 2012, Spring. Measuring tools include: Cattell Test, Beck Depression Inventory (BDI), one-way variance for data analyze on submission points of pre- and post-test of anxiety and depression and finally Tukey's test was used. Result show low up to high level of anxiety in patients. The effect of intervention methods in reducing anxiety and depression was meaningful.

KEY WORDS: Anxiety, Depression, Coronary heart disease, interpersonal cognitive problem solving (ICPS), relaxation.

►INTRODUCTION

Heart always has been an important and resuscitative organ for human and its healthiness is very important. In recent years, cardiovascular disease has been increased significantly, and is estimated to be on top of non-contagious diseases until 2020. It is so anguishing that has led to special attention and serious planning to prevent, control and cure such non-contagious diseases all over the world. (Azizi et al, 2000).

Disease Psychology is one of the issues that is focused on while considering Coronary heart disease. Psychological therapies and training reduces anxiety of patients and prevent depression. These treatments, also, check and control the behavioral and characteristic problems of the patients and finally omit wrong mental beliefs in their mind due to disease and replace correct ones. (Ghalamghash, 2007) Psychological therapies have wide ranges, such as cognitive – behavioral treatment. Rachman and Philips (1975) believe that psychologist must extend their work field beyond psychological matters and attend in other general medicine too. Even consider cognitive subtle analyzes about peoples' attitude toward their healthiness and their deduction about medical cares. These psychological interventions can change peoples' emotions and behaviors via affecting their mind patterns, increasing health level , balancing risky behavior which boosting heart disease, also decrease patients' disability and finally provide more compatibility with situation caused by disease. Coronary heart diseases are among those fields that clinical psychologists can try to prevent and treat psychological consequences such as anxiety and depression and increase sense of ability and efficiency in these patients, thus decrease other risk factors. (Klark and ferioon, 1997, Tranlation by Kaviani, 2001)

In 2001, 16.6 million (about 30%) of death all over the world were due to heart vascular disorders, which 7.2 million for Ischemic heart disease, 5.5 million for brain vascular disease and 3.9 million due to high blood pressure and etc. (Atabaki, 2003) anxiety, depression, type A behavior, anger and acute mental stresses are risk factors in emerging Coronary heart disease. Also psychological disorders such as anxiety, depression, delirium and cognitive disorders are common in patients with heart diseases. Researches on heart disease outpatients with fixed heart disease show that anxiety disorder happens about 5-10% while mood disorder is 10-15% and basic depression disorder is 15-20% following heart infarction. (Kaplan & Sadook, 2003). Totally, mental stresses play role in beginning and progression of Coronary Heart Disease (CHD). Current research is done in prevention and rehabilitation center of heart and vascular researchers in Shahid Rajaei hospital.

According to importance of Rehabilitation programs, it seems that research and cognitive –behavior treatments can lead to favorite and fixed mental and psychological changes in patients. These treatments are useful in changing psychological moods and situations (such as high excitation, susceptible behaviors of Coronary heart disease, pain and disturbance with diseases) and prevent it to come back. (Clark & fairburn, 1997; translated by Kaviani, 2001). Relaxation, as a behavior technique, is an active exercise which all main muscle groups experience tension and relaxation, also effectively reduces stress and anxiety, thus it is very important to be taught to heart disease patients due to its effect on reducing heart beating in relax time, decreasing frequency of chest pain in patients with myocardial infarction history or those with rib cage stable

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angina, reducing st-depression or delay in its happening time, decreasing heart rhythm disorders, anxiety, risk of new heart pathology and accelerating patients coming back to work.(Chatrou et al, 2004).

Recent researches show that relaxation is effective in reducing body side effects of heart disease, thus the importance of these treatments are expressed. (Lamen et al, 2008)

► Research theories

1. Relaxation therapy reduces anxiety of Coronary heart disease patients.
2. Relaxation therapy reduces depression of Coronary heart disease patients.
3. Interpersonal cognitive problem solving therapy (ICPS) reduces anxiety of Coronary heart disease patients.
4. Interpersonal cognitive problem solving therapy (ICPS) reduces anxiety of Coronary heart disease patients.
5. There is a difference between relaxation and interpersonal cognitive problem solving (ICPS) therapy in reducing anxiety of Coronary heart disease patients.
6. There is a difference between relaxation and interpersonal cognitive problem solving (ICPS) therapy in reducing depression of Coronary heart disease patients.

► Theoretical Definition of Relaxation

Relaxation is a situation in which excitements, especially those such as fear, anger, anxiety, depression and etc, are in low level, i.e muscle came back to natural relax mode (Chapiyan, translated by Gharche daghi, 2002). Muscle tension and stretch is related to reduction of anxiety, thus how to control muscle stretch is the base of learning relaxation (Williamson et al, 2005)

► Operational Definition of Relaxation

In this research, by relaxation we mean Edmund Jacobson method

► Theoretical Definition of Interpersonal Cognitive Problem Solving (ICPS)

It is one of the various techniques of cognitive-behavior therapy focused on interpersonal problem solving in multi-steps. ICSP include: problem sensitivity, continual thinking, goal-object thinking, consecutive thinking and causal one.

► Operational Definition Interpersonal Cognitive Problem Solving (ICPS)

In this research, by (ICPS), we mean Shure & Spivack method.

► Research Variables:

Independent variable of this research (treatment method) performed in two levels include: relaxation and interpersonal cognitive problem solving (ICPS). Dependent variables are anxiety and depression.

► Statistic population:

Statistic population includes those patients with myocardial Infarction (MI) or Coronary Artery Bypass Graft Surgery (CABG) sent to Shahid Rajaei Hospital by specialists.

► SAMPLE AND SAMPLING METHOD

In his research, using available sampling method and considering conditions (domination on Persian), patients attended in Coronary heart disease center were invited. 33 out of 35 were influent in Persian. First, pre-test was performed include proper communication with patients and recording his/her situation, filling Cattell Test and Beck Depression Inventory by patients in a one-hour session. Then patients were selected randomly and divided into two test and control group(each on 11 individuals). Following psychological interventions were used in this research:

1. Relaxation group not only attended in rehabilitation programs but also were trained applicative relaxation.
2. (ICPS) group not only attended in rehabilitation programs but also were trained interpersonal cognitive problem solving method of Shure & Spivack.
3. Group control just get normal programs (such as medical training, exercise and nutrition) without any psychological interventions

► Research Tools

Cattell Test and Beck Depression Inventory (BDI) were used in this research.

► Research Implementation Method

After coordination with author of Rehabilitation center via hospital president, suitable patients were selected and pre-test was done and they were divided in two groups (test and control) randomly.

All patients, not only received nutrition, medical and training programs but psychological interventions one. Notice that physical space was provided by Rehabilitation center.

Psychological interventions were performed in 8 session (each one 30 mins) weekly and except those, one session at the beginning and one at the end was for evaluating patients. A brief brushier was given to individuals to familiar them with relaxation and interpersonal cognitive problem solving (ICPS) methods.

► Analyzing method

According to the goals and variables, descriptive statistic method, one-way variance, Tuki test and t-test for small independent group was used.

► Theories Test

1st Theory: relaxation therapy reduces anxiety of Coronary heart disease patients

2nd theory: relaxation therapy reduces depression of Coronary heart disease patients

Table1. Show t-test results of anxiety and depression post-test in control and relaxation group

Post Test		N	\bar{X}	SD	Df	T
Anxiety	relaxation group	9	29.06	12.21	16	*1.975
	control group	9	38.44	8		
Depression	relaxation group	9	9.22	7.39	16	**2.156
	control group	9	16.66	7.34		

*P<0.05

**P<0.02

According to Table1 and 1st theory, results show that there is meaningful difference about 0.05 between post-test points of test and control group and relaxation therapy has reduced anxiety in test group. Thus, 1st theory is confirmed.

While studying 2nd theory, table 1 show that there is a meaningful difference about 0.02 between test and control group, relaxation therapy reduces depression in test group. Thus, 2nd theory is confirmed.

3rd theory: interpersonal cognitive problem solving (ICPS) therapy reduces anxiety of Coronary heart disease patients

4th theory: interpersonal cognitive problem solving (ICPS) therapy reduces depression of Coronary heart disease patients.

Table2. Show t-test results of anxiety and depression post-test in test group of interpersonal cognitive problem solving and relaxation group.

Post Test		N	\bar{X}	SD	Df	T
Anxiety	(ICPS) group	9	28.55	7.73	16	*2.680
	Control group	9	38.44	8		
Depression	(ICPS) group	9	6.77	3.07	16	**3.746
	Control group	9	16.66	7.34		

*P<0.05

**P<0.005

According to Table2 and 3rd theory, results show that there is meaningful difference about 0.01 between post-test points of (ICPS) test and control group and interpersonal cognitive problem solving (ICPS) therapy has reduced anxiety significantly. Thus, 3rd theory is confirmed.

According to Table2 and 4th theory, results show that there is meaningful difference about 0.05 between post-test points of (ICPS) test and control group. Thus, 4th theory is confirmed.

5th theory: there is a difference between relaxation and interpersonal cognitive problem solving (ICPS) therapy in reducing anxiety of Coronary heart disease patients.

Table 3. Show results of one-way variance analyze of pre- and post-test of cattle anxiety test in groups.

Source of changes	SS	df	MS	F
Between groups	745.86	2	372.93	*11.43
Inter-groups	782.89	24	32.62	
Total	1528.75	26	-	

*P<0.01

Table4. Tuki test result on difference of pre- and post-test of anxiety in groups

Groups	(ICPS)	Relaxation	Control
(ICPS)	-	0.88	*6.26
Relaxation		-	*5.40
Control			-

* P<0.01

According to Table4 and 5th theory, results show that there is no meaningful difference between treatment groups in reducing anxiety. Thus, 5th theory is rejected. So there is no difference between these two groups in reducing anxiety of Coronary heart disease patients. **6th theory:** there is a difference between relaxation and interpersonal cognitive problem solving (ICPS) therapy in reducing depression of Coronary heart disease patients.

Table5. show results of one-way variance analyze of pre- and post-test of Beck Depression Inventory in groups.

Source of changes	SS	df	MS	F
Between groups	153.4	2	76.7	*5.137
Inter-groups	358.46	24	14.93	
Total	511.86	26	-	

*P<0.05

Table6. show results of Tuki test of pre- and post-test of Depression in groups.

Groups	(ICPS)	Relaxation	Control
(ICPS)	-	0.88	*3.99
Relaxation		-	**3.90
Control			-

*P<0.01

**P<0.05

According to Table6, 6th theory which express that there is a difference between relaxation and interpersonal cognitive problem solving (ICPS) therapy in reducing depression of Coronary heart disease patients, is rejected. So there is no difference between these two groups in reducing anxiety of Coronary heart disease patients. There a correlation between this research and previous ones in symptoms of anxiety and depression in heart disease patients following heart infarction and coronary heart bypass surgery.(Kafman 1986,Kawachi, I. et al 1994, Stansfeld, S. A., Marmot, G. M. 2002, Kaplan & Sadook, 2003)

High level of Points average indicate that there is a necessity to serious attention psychological aspects in treatment of heart disease patients, especially direct and indirect effects can lead to better treatment of the patients and reduces cardiac events .(Braun Vald et al, 2008)

Study the total post-test points of patients show that significant reduction in average points of anxiety test $\bar{X}=31.96$ and depression test $\bar{X}=10.88$ is due to effective psychological intervention in heart rehabilitation patients and is in correlation with previous studies.(White, 2001,Hartford et al 2002, Kaplan & Sadook, 2003, Braunwald's. ,et al 2008)

Study the 1st and 2nd theories, about relaxation effects on anxiety and depression of Coronary heart disease patients, 1st theory (effect of relaxation on anxiety) confirmed in level of 0.05 and 2nd theory (effect of relaxation on depression) confirmed in level of 0.02. These results are in correlation with previous research about muscle relaxation in treatment of anxiety and depression (Boohawchik, 1984,Smith ,et al 1984,White, 1994,Eliot ,1994,Wilk & Thurkoski ,2001)

Study the 3rd and 4th theories, about interpersonal cognitive problem solving effects on anxiety and depression of Coronary heart disease patients, 3rd theory was confirmed in level of 0.01 and 2nd theory in level of 0.05. These results are in correlation with previous research about affects of behavior-cognitive therapies in treatment of anxiety and depression (Scott, Williams, Beck, 1989, Ogden, J. 2001,Guck ,et al, 2001.)

Study the 5th and 6th theories, which express that there is difference between interpersonal cognitive problem solving and relaxation method in reducing anxiety and depression of Coronary heart disease patients, findings show that there is no such difference, thus they both were rejected.

Generally, research findings show that psychological aspects of heart disease patients must be considered seriously in all periods, because evaluation and control of psychological factors of can control and reduce side effects of heart disease. Psychological intervention can effect directly or indirectly on heart disease patient and references all focused on it(Bath,et al,2009 ,Shure2009).

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