

INVESTIGATING THE EFFECTIVENESS OF THERAPY BASED ON EMOTION REGULATION ON PSYCHOLOGICAL PROBLEMS OF THOSE WITH CHRONIC PAIN

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ABSTRACT

The present study is aimed at investigating the effectiveness of therapy, based on emotion regulation, on psychological problems of those suffering from chronic pain. It was done with a single-case experimental design. To do so, 30 people were selected among clients coming To Tajrish hospital. According to depression, tension and anxiety scales (DASS) they were categorized into 2 groups of severe and very severe. They were available when entered the research. Pretest was performed before intervention to determine base line, and condition of each person was considered in terms of regarded variables. Then, steps of intervention were performed during 8 sessions in a collective way on participants. Then, regarded variables were evaluated. Analysis of data shows that therapy based on controlling emotion regulation can lead to reduction of signs of tension and stress among those with chronic pain. From findings, it can be concluded that eight fold sessions of training strategies to regulate emotions can have a good effect on decrease in psychological problems of those with chronic pain.

Keywords: *Emotion Regulation, Chronic Pain, Mental Health*

INTRODUCTION

Although pain is necessary for survival of man, it's side effects have made it the second prevalent reason for using medical care (Turk and Wilson, 2010). Every day, there is an increase in the number of injured people due to accidents, incidences and surgical operations and some of them are exposed to chronic pain. From investigations related to pain it can be concluded that chronic pain and it's biological, mental health and social consequences causes severe damages to mental health and job performance of ill (Ebneshahidi and Mohseni, 2008). In fact, the thing that often results in injured people reference to special clinics is psychological aspects of understanding the pain and chronic pain makes problems for daily and professional performance (Nicholas *et al.*, 2003). Results from different studies show that 20 percent of world's total populations suffer from chronic pain. Pain can impact on many aspects of life. Surveys which have been conducted in this regard confirm this fact. According to various studies, continuous pain has eventually a negative effect on public, mental health, physical and social performances as well as roles that a person should psychologically and physically play in his life. It also leads to a decrease in life quality and welfare.

Findings show that those who are living with a chronic pain have depression, tension and anxiety, they are frustrated, their minds are always occupied with their pains so that they behave angrily with their family (Sternbach, 1979). The relation between chronic pain and behavioral disturbances was investigated during a study done by Farrell (1996). His findings have showed that higher level of pain can be accompanied with more severity and less activity. It should be noted that it can be observed in clinical observations and also in many experimental surveys that in chronic disorders there is a weak relationship between symptoms, disturbances, the degree of inability with observed pathophysiology (Magora and Showars, 1990).

Negative emotions and situations that develop them can lead to a person looking for a way to release. Excitements that deal with unhealthy ways can lead to tension. In this regard, findings of some researches (Jaffari, 2010) indicate a strong relationship between weakness of cognitive emotion regulation strategies and emotional problems. In fact, cognitive emotion regulation refers to processes that manage motivating emotional information. In the other words, it is the way of thinking after having a bad or negative

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experience (Hassani, 2002). In this research domain Structure of emotion regulation failure is considered as a multidimensional component:

- a) Lack of knowledge, understanding or accepting or emotions
- b) Lack of achievement in adaptive strategies to adjust the severity or the period of emotion regulation responses
- c) To avoid emotional experience as part of desirable goals
- d) Inability to control behavior during emotional disturbance (Gartz and Roemer, 2004).

In fact emotion regulation includes measures applied to change or adjust an emotional mood. In psychological texts, this concept is often used to describe negative emotion (Hassani, 2002). In fact, emotion regulation is a physical way to achieve goals (Vimz and Pina, 2010). Many documents show that emotion regulation has a relation with success or failure in different areas of life (Scuttle *et al.*, 2007). However, not many researches are allocated to study the relationship between emotion regulation and pain perception in people. Low level of emotion regulation which is due to inability to regulate or manage emotions has a role in initiation or severity of pain perception (Golman, 1995, Parker *et al.*, 2008).

Emotion regulation is one of the most important psychological therapies for emotion regulation treatment. In this regard, cognitive and behavioral treatments and on the other side emotional states such as tension (Niven, 1994) and dealing with stress. Apart from physical disorders could be effective in creating or exacerbating the pain (Craig and Calver, 1991).

So, as we can see emotional moods such as anxiety, depression and tension all have mutual interactions with pain. The way a person chooses to deal with pain depends on how he defines pain and available resources for him to deal with them it. Pain, as a threatening stimulant, calls for encountering methods (Porter *et al.*, 1991). A person can choose better methods by evaluating level of self-control on social system and situation (Bronon and Fisnet, 2000).

Interventions based on the methods of emotion regulation have been confirmed to be useful in solving psychological problems as prevention of depression relapse (Bear & Carmody, 2007; Segal *et al.*, 2002) overusing drugs and reduced negative physical and psychological responses against stress (Kabat-zinn, 2003) and attention-deficit/hyperactivity disorder AOHd (Zylowska *et al.*, 2007). In these Interventions, intrapersonal processes are emphasized and they help a person to alter his relationship with his emotions and thoughts and internal moods. In This case, there is an agreement among researchers that the physiological and *Physiological* psychology findings can help to manage chronic pain (Austin *et al.*, 2004).

In Yong *et al.*, (2007) reached similar conclusions in their studies on emotion regulation. In addition to the fact that guided visualization can be effective to reduce the pain of anxiety but 20 to 65 percent of remediable ills show a conditional reflection to the conditions made by this method. Menses (2006) conducted a research on people suffering from Fibromyalgia (a kind of Psychosomatic disease that leads to pain in different parts of a body). The researcher showed that using emotion regulation method can improve functional conditions of ills to manage and control pain or even to increase their will to do daily works. According to literature, therapy by emotion regulation is one of the effective methods against pain and it's side effects (Ilague, 1994). So, it can be said that emotion regulation can be an effective and low-cost method as well as one with less side effects to reduce mental and physical problems of those with chronic pain. Therefore, this paper has attempted to investigate effectiveness of emotion regulation therapy on mental health of ills suffering from chronic pain.

MATERIALS AND METHODS

Method

The method was semi-experimental, pretest and post test with control group.

Population, Sample and Sampling

Statistical population includes all ills with chronic pain that referred to Tajrish Shohada hospital during summer 2014. The sample includes 30 people with chronic pain who according to two specialists have standards to be inserted in this research (age range: 30 to 65, education: diploma, with Moral satisfaction).

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They were selected by random Sampling in two 15-person groups including experimental and control groups. Experimental groups were trained during 8 sessions. Each weekly session took 1 hour and 30 minutes, according to emotion regulation protocol (table 1).

DASS Depression Anxiety Stress Scales: This scale was prepared in order to recognize and analyze symptoms of depression, anxiety and stress in two short and long forms by Lovibond and Lovibond. It was performed on a normal case with 717 people and *Cronbach's alpha* coefficients are reported: 81% for depression, 73% for anxiety and 81% for stress (Nicholas *et al.*, 2003). In the present research the short – form DASS with 21 questions was used. It has been validated by Sahebi *et al.*, (2005) for Iranian population. it's *Cronbach's alpha* coefficients were reported: 94% for depression; 92% for anxiety, 82% for stress. The level of reliability of this scale for depression, anxiety and stress was 71%, 66% and 75% respectively, which reflects the proper reliability of this tool.

Table 1: Steps of Therapy Focused on Emotion Regulation

Step	Content of Sessions
1	Striking a relationship and commitment in therapy: explanation of depression nature, it's symptoms, conceptualization of therapy by emotion regulation, observation and evaluation of tests according to internal experiences.
2	Training about awareness of positive emotions including a brief review on the previous session, awareness of positive emotions and it's kinds (happiness, interest and love), training about how to consider positive emotions and necessity of its use.
3	Training about awareness of negative emotions including a review on the previous session, Training about awareness of negative emotions and it's kinds (anxiety, sadness, indignation and abhorrence), training how to consider negative emotions.
4	Training about acceptance of positive emotions without judging positive emotions and it's negative or positive consequences, asking the spouse or a close friend to judge about the level of positive emotions.
5	Identifying and controlling needs, interests and fundamental factors: in order to remove feel of inability among subjects and to investigate two various aspects of experience.
6	Training about reappraisal of emotions and positive emotions, including a review on previous session, training about mental experience of positive emotions as mental visualization (happiness, interest and love) and mental prevention and how to express them properly.
7	Training about reappraisal of emotions and how to express negative emotions including a review on previous session, training about mental experience of negative emotions (anxiety, sadness, indignation and abhorrence) inappropriate expression and how to prevent it
8	Conclusion of educational sessions and how to perform post test.

Table 2: The Mean and Standard Deviation of both Groups in Psychological Problems

Variable	M	SD	M	SD
Pretest Depression	10.63	2.41	10.86	3.37
Post Test Depression	9.53	2.64	9.53	2.82
Pretest Anxiety	15.93	1.83	14.60	3.15
Posttest Anxiety	15.00	1.88	12.60	2.69
Pretest Stress	15.2	2.49	15.73	1.90
Posttest Stress	14.2	1.69	13.46	1.24

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Table 2 shows that mean, standard deviation of the scores of depression, anxiety and stress of subjects in under therapy group focused on emotion regulation is different from those of control group.

Table 3: The Impact of Emotion Regulation Intervention on Depression Variable at Post-Test Level, Using Covariance Analysis Test

	Variance Source	Total Squares	of Freedom Degree	Mean of Square	F	Level of Significance	of Size
Depression	Intervention Impact	1.274	1	1.274	1.725	0.200	0.060
	Error	19.941	27	0.739			
	Total	2936.00	30				
Anxiety	Intervention Impact	14.616	1	14.616	7.058	0.013	0.207
	Error	55.912	27	2.071			
	Total	5908.00	30				
	Intervention Impact	6.788	1	6.788	6.014	0.021	0.182
	Error	30.474	27	1.129			
	Total	5807.00	30				

As it can be seen in Table 3, the results suggest that treatment focused on emotion regulation is effective on stress and anxiety in patients with chronic pain; however, there was no such effect on depression variables.

RESULTS AND DISCUSSION

In this study, we have investigated the effectiveness of therapy, based on emotion regulation, on psychological problems of those suffering from chronic pain. The results showed that emotion regulation can impact on improvement of stress and anxiety of those with chronic pain. One of the main features of intervention based on emotion regulation is making an attempt to accept negative emotions of ills without passing any judgment. Numerous studies have shown that acceptance of pain has a main role in reducing the pain and disabilities among people who suffer from chronic pain (Mmesgarian *et al.*, 2012). Emotion regulation has positive effects on anxiety, depression and pain (Ilkhani, 1991). Reducing anxiety is one of the characteristics and consequences of emotion regulation among those with chronic pain (Carroll and Bowsheer, 2014).

More explanation indicates that given that one of the main causes of the stab of pain, internal artery constriction and then dilation of the arteries is anxiety and stress; therefore, therapy by emotion regulation as one component contributing to reducing sensitivity can definitely be effective in reduction of anxiety and stress levels and so in controlling pain in a person. In fact, in the therapy methods used in this research it is generally supposed that individuals can learn to control their members. Those using these methods are prepared against anxiety and pains in an easier way.

Moreover, the result showed that therapy, based on emotion regulation has not been effective on improving depression in patients with chronic pain compared to it in control group. The results are in disagreement with results from studies conducted by Salehi *et al.*, (2012), Narimani *et al.*, (2012). Regarding this fact that subjects were selected among ills with chronic pain, their tempers may be affected directly or indirectly due to taking drugs. Furthermore, strategies to overcome depression can play the role of modifier in effectiveness of the adopted strategy.

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In general, findings of this research indicate main functions of emotion regulation in reducing the psychological problems of those with chronic pain. Emotional self-regulation is a new concept that can result in research and experimental development in the field of psychotherapy. Moreover, it highlights the importance of positive emotions in improving mental health. This method can be used personally or collectively for different clinical problems of those with chronic pain. It can also increase their health and adaptive reactions. Next point is that therapy by emotion regulation is a new remedy and it's different areas can reduce mental problems and it also can be considered in next researches. However, in this research, subjects were selected from one clinical center and it is not obvious if the method is effective for other groups such as women and various age groups. Among other constraints on the research are the effects of pretest performance on post test scores and not following investigation in order to make sure of the effectiveness of applied methods. Regarding obtained methods, we can suggest that methods mentioned in this research can be used for improvement in the psychological symptoms of those with chronic pain among different age groups.

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