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The effect of hope therapy on general health in drug-dependent patient's on methadone maintenance treatment

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Abstract

Introduction: Substance dependence is one of the most important factors affecting the quality of life of substance-dependent patients all over the world. The purpose of the present study was to investigate the effect of hope therapy on the general health of substance-dependent patients undergoing methadone maintenance treatment in Semnan city, Semnan province, Iran.

Method: the present study was a Quasi-experimental research design using pre-test, post-test and follow along with the control group. Community to study drug-dependent patients in methadone maintenance treatment in the Semnan city. The subjects consisted of 40 cases of drug-dependent patients in methadone maintenance treatment in Semnan who were to leave drug-dependency. The patients were divided randomly into two groups and planning. In addition to drug treatment, methadone maintenance treatment group was treated by hope. Hope Therapy was conducted in 8 sessions on the experimental group and the control group in this period was on the waiting list for psychological intervention. All patients participating in the intervention than the demographic questionnaire and general health questionnaire (SF36) there. After the end of treatment and three months after intervention, subjects were re-evaluated by the questionnaires.

Results: Analysis of variance showed that the mean scores general health in the experimental group showed a significant change in the post-test and effects of treatment were permanent after three months of treatment.

Conclusions: According to the results it can be concluded that Hope therapy is effective on general health, drug-dependent patients in methadone maintenance treatment.

Key words: hope, general health, drug-dependent , methadone maintenance

Introduction

Drug addiction is considered a chronic as well as one of the most common and dangerous diseases. The world community has named June 26 (July 5) as the World Anti-Drug Abuse Day[1,2,3].

The studies show that the addiction causes psychiatric disorders such as depression, anxiety and personality disorders which leaves severe effects on the health of people. This disorder, in the absence of proper and comprehensive treatment, makes the person involved in the disease and its complications for the whole life[3,4,5].

The World Health Organization considers health to be a normal physical-mental state, and especially the absence of physical and mental pain or illness. According to this organization, health is a dynamic process and changes over time. The concept of health is not only limited to the absence of disease. Oxford culture considers health to be an excellent state of body and mind, when the body's actions are performed in a timely and effective manner[6,7].

Traditional approaches in the treatment of drug abuse mainly focus on the symptoms and signs of the disease and pay less attention to the general health of the patients[8]. For this reason, nowadays, along with treatments such as "methadone maintenance treatment", advanced methods that reduce the risks as well as complications of the disease, and also affect the general health of patients have been noticed[9,10].

One of the treatments based on harm reduction is "methadone maintenance treatment" during which the patient stops using the drug and instead uses medicines such as methadone, buprenorphine, etc[11]. Many studies have investigated the effect of methadone maintenance treatment on the duration of abstinence, psychological status, health and mental well-being of patients[12]. Despite the fact that the studies consider methadone maintenance treatment as one of the most important common and effective approaches, but it seems that this method of treatment has taken the psychological aspects, social and environmental relations of patients into less serious consideration[13].

Recently, under the influence of the psychology which depends on hope approaches, treatments create a better future insights in patients have received serious attention[14].

Hope is one of the constructs of positive psychology, which focuses on human strengths instead of focusing only on human weaknesses[15].

According to Schneider's theory, hope is considered as a common feature of many treatments. The basic assumption in this theory is that human problems can be solved and humans can achieve a bright future by having hope. Schneider considers hope as a positive motivational state that is based on a sense of will as well as finding a way, and its derived from the interaction of a person with the environment[16,17].

Considering the fact that numerous researches have been conducted in the field of hope therapy and its effect on the treatment of various chronic diseases[18,19], but there has been no research on the effect of this on the condition of substance dependent patients undergoing maintenance treatment, and also since substance dependence is one of the important health problems in Iran, the present study aims at the effect of hope therapy on the general health of substance dependents undergoing maintenance treatment with methadone in Semnan city, Semnan province, Iran.

Materials and methods

Research Design: The current research method was semi-experimental with a pre-test-post-test design using experimental and control groups.

Subjects: The statistical population of this research consisted of drug dependent patients from Semnan city in 2012. The research sample consisted of 40 substance-dependent patients undergoing methadone maintenance treatment in Semnan city in 2013. The subjects were selected from among three maintenance treatment centers of Neshat, Nasim and Hakim by available sampling method and randomly assigned to two groups. The experimental and control groups were included. According to the diagnostic and statistical criteria of mental disorders (DSMIV-TR), the patients were known to be dependent on

substances and after the morphine test and confirmation of the test, they were treated with methadone maintenance.

Sample inclusion criteria: having a morphine test confirmation, the need to use methadone maintenance treatment, marriage, age range of 20-50 years, middle school education and above, having a job and having the minimum physical and cognitive ability required to participate in psychological interventions based on the psychologist's opinion is the plan's executive.

Sample exclusion criteria: having an acute psychotic disorder according to the diagnosis of the project's psychologist based on the statistical-diagnostic manual of the American Psychiatric Association, the presence of another serious and limiting medical illness that reduces the quality of life. According to the criteria for entering the sample into the research and leaving the sample from the research, the subjects completed the demographic information form and the quality of life test.

Tools: In order to carry out this research, the general health of patients was evaluated at three stages: 1- before the intervention as a baseline, 2- after the intervention, and 3- three months after the intervention as a follow-up. These evaluations were done by the 28-question general health questionnaire of Goldberg and Hiller (1979) of the World Health Organization[20]. The general health questionnaire is a screening questionnaire based on self-reporting. The purpose of this questionnaire is not to achieve a specific diagnosis in the hierarchy of mental illness, but its main purpose is to determine general health in four subtests and an overall score under the title of general health. The questions of this questionnaire examine the mental state of the person in the last month and emphasize the situation here and now. The questionnaire starts with questions related to physical symptoms and continues with anxiety symptoms, social functioning and depression.

This research uses the Likert scoring method which is (0,1,2,3) (i.e. option A (score zero), option B (score 1), option C (score 2) and option D (score 3). The maximum score of the subject with this scoring method will be 84. In this questionnaire, a score of 23 is considered as the cut-off score In the screening test, if it is equal to or more than 23, it is screened as suspicious (Goldberg and Hiller, 1979)[21].

So far, more than 70 studies on the validity and reliability of this questionnaire have been conducted in the world, and Goldberg (1988) meta-analyzed these studies. The results have shown that the sensitivity of the GHQ28 questionnaire is equal to 84% (between 77% and 89%) and its average specificity is equal to 82% (between 78% and 85%). In the research by Haghigi et al. (2008), the reliability coefficients for the four fields of the questionnaire were 86%, 85%, 72%, and 82%, respectively, and the reliability of the four fields of the questionnaire by Cronbach's alpha method were 92%, 69%, respectively. , 88% and 89% have been reported. The reliability of this Iranian seam tool has been confirmed by different researchers[20].

Research implementation method: To implement the proces, all samples completed the questionnaire of demographic characteristics (demographics and general health questionnaire) before starting the treatment. Then the experimental group was exposed to therapeutic interventions. After 8 sessions of therapeutic interventions, the subjects again filled the general health questionnaire. 3 months after the implementation of the post-test, in order to evaluate the durability of the interventions, a follow-up test was performed on the subjects. In order to maintain the relationship with the patients and preserve the

patients' learning until the implementation of the follow-up test, a meeting was held every month to remind the rules and techniques of the methods learned in the intervention sessions for the experimental groups. The summary of the treatment method based on the theory of hope therapy including these techniques and steps is introduced as follows:

Introducing hope and its different aspects. 1. Introducing goals and their types as part of the process of increasing hope. 2. Creating a structure to discover goals. 3. Providing solutions for setting clear and practical goals at different levels. 4. Making a list of goals, prioritizing them and choosing a goal to work in the group. 5. Familiarity with ways to increase motivation and mental and physical will power in pursuit of goals. 6. Changing negative self-talk. 7. Positive mental imagery and providing hopeful sentences and anecdotes to strengthen mental willpower. 8. Advice to change behaviors related to the temptation and urge to use drugs, such as using the drug at the appointed time, visiting a counselor and raising the problem, examining the benefits and harms of treatment compared to the time of drug use, staying away from friends who use drugs and changing the position and etc. 9. Getting to know the methods of dealing with obstacles and challenges. 10. Using the progress continuum to evaluate the process of goal pursuit and feedback. 11. Drawing the relationship between positive thinking and feeling caused by reaching the goal in increasing hope. It should be noted that the hope therapy sessions were offered weekly to the patients in 8 sessions of 1.5 hours according to the aforementioned steps. According to Snyder's theory[22,23].

Homework was also considered for patients participating in hope therapy sessions. In order to carry out the research and observe professional ethics, written consent was obtained from the participants and a special code was assigned to each patient in the questionnaire, as well as completing the questionnaires anonymously and observing the principle of confidentiality of patient information. SPSS-16 software was used to analyze the data and repeated measurement variance analysis was used to test the research hypotheses.

Results

In this study, 40 substance dependent patients under methadone maintenance treatment were studied in two experimental groups (hope therapy) and (control). The age range of the studied groups was between 20-45. The average age of the experimental group was 34.2 years and its standard deviation was 3.9. The average age of the control group was 33.3 and its standard deviation was 4.6. There was no significant difference between the two groups in terms of age (p=.342). The results also showed that there was no significant difference between the subjects of the two groups in terms of education at the three levels of primary, middle school, high school, and university, and occupation at the two levels of employed and unemployed. To test the hypotheses of the research, repeated measurement analysis of variance test was used. The mean and standard deviation of the public health variable and its subscales by experimental and control groups and measurement steps are given in Table No. 1.

Table 1: The average and standard deviation of the public health variable, its subscales by experimental as well as control groups and measurement steps.

Subscale general health	Pre-exam				Post-exam				Follow-up stage			
	Experimental group		Control group		Experimental group		Control group		Experimental group		Control group	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Physical symptoms	10/895	0/994	11/111	1/022	6/211	0/852	10/889	0/786	6/789	0/975	11/226	1/002
Anxiety and sleep disorder	10/211	0/922	9/000	9/947	5/368	0/803	9/000	0/825	5/737	0/934	9/556	0/960
Social dysfunction	8/842	0/616	7/667	0/633	3/947	0/578	6/611	0/603	6/684	0/919	7/278	0/944
Depression	6/842	1/166	7/889	1/198	3/368	1/027	7/556	1/055	3/474	0/972	7/944	0/998
Total	36/789	3/252	35/667	3/341	18/895	2/862	34/056	2/940	32/684	3/188	36/000	3/276

Explanation

Pre-test: This section is related to the results before the intervention.

Post-test: This section is related to the results after the intervention.

In each section, the results of each of the public health scales are presented separately, as follows:

Physical symptoms: include things like pain, fatigue and lack of sleep.

Anxiety and sleep disorder: includes things such as feeling worried, restless, and difficulty sleeping.

Social functioning: includes things like interacting with others, feeling lonely, and social isolation

Depression: includes feelings of sadness, hopelessness, and indifference.

In each of the sub-scales, the results have been reported in the form of mean and standard deviation, and the results of different groups, including experimental and control, have been compared with each other.

Interpretation of the results: The new intervention has a positive effect on people's general health.

Physical symptoms: In the experimental group, after the intervention, physical symptoms have decreased significantly.

Anxiety and sleep disorder: In the experimental group, the average anxiety and sleep disorder decreased significantly after the intervention.

Social performance: In the experimental group, the average social performance increased significantly after the intervention.

Depression: In the experimental group, the average depression after the intervention has decreased significantly.

According to the results, the new intervention can help to improve people's general health.

Table 2: General health analysis of variance test

Variable	Effect	Value	F	Degrees of freedom	Degrees of freedom	Significance level
Physical dimension of general health	Hotelling's Trace	.772	13.129[b]	2/00	34.000	.000
Dimension of public health anxiety	Hotelling's Trace	1/299	22/079	2/000	34/000	0/000
Social relations dimension of public health	Hotelling's Trace	0/798	13/569	2/000	34/000	0/000
Public health dimension of depression	Hotelling's Trace	0/497	8/447	2/000	34/000	
General dimensions of public health	Hotelling's Trace	0/999	16/984[b]	2/000	34/000	0/000

Explanation

This table, which includes the results of variance analysis of public health, is to check whether there is a significant difference between the two groups in terms of various aspects of public health.

The variables are the following items:

The physical dimension of general health includes things like pain, fatigue and lack of energy.

General health anxiety dimension includes things like anxiety, worry and restlessness.

The social relations dimension of public health includes things such as feeling alone, isolation and lack of social support.

The general health depression dimension includes things like feeling sad, hopeless and lacking motivation.

The general health score includes the sum of the scores of the other four dimensions of general health.

The test used in this table is called multivariate variance (MANOVA), which is used to check the existence of significant differences between two groups in terms of several dependent variables simultaneously.

The results of the test are in the “Effect”, “Value F”, “Degrees of freedom” and “Significance level” columns of the table, which are as follows:

Effect column: It shows the type of effect of each dependent variable, and Hotelling’s Trace test was used to examine the effect of each public health dimension.

The Value F column displays the value of the F statistic for each dependent variable in such a way that this is the numerical value that can be used to determine the existence of a significant difference between the two groups.

Degrees of freedom column: The number of degrees of freedom for each dependent variable shows how many times the F test can be used to examine the difference between two groups.

Significance level column: shows the significance level of the test, in other words, this is a number that shows the probability that the observed difference between the two groups happened by chance.

Interpretation:

The results of the table say that there is a significant difference between the two groups in terms of four physical dimensions, anxiety, social relations and depression of general health, but the possibility that these differences occurred by chance is small and weak.

Also, there is a significant difference in the general health score between the two groups.

Table 3. Public health intersubjective confrontation test

Variable	Source	Sum of squares	Freedom degree	Mean square
Physical dimension of general health	**Pre-test to post-test**	**184.027**	**1**	**184.027**
	Follow up after the test	**.558**	**1**	**.558**
Dimension of public health anxiety	**Pre-test to post-test**	**216/717**	**1**	**216/717**
	Follow up after the test	**0/324**	**1**	**0/324**
After social relations of public health	**Pre-test to post-test**	**136/239**	**1**	**136/239**
		39/613	**1**	**39/613**

	Follow up after the test			
General health depression dimension	**Pre-test to post-test** **Follow up after the test**	**91/155** **0/744**	**1** **1**	**91/155** **0/744**
General dimensions of public health	**Pre-test to post-test** **Follow up after the test**	**2450/906** **31/465**	**1** **1**	**2450/906** **31/465**

Explanation

Variables:

Physical dimension of general health: This mentioned variable is meant to measure the physical health status of people.

Dimension of public health anxiety: This variable is to measure the anxiety level of people.

Dimension of public health social relations: this variable is to measure the quality of people's social relations.

General health depression dimension: This variable is to measure the depression level of people.

General dimensions of public health: This variable is intended to measure the general health status of people.

Results:

The physical dimension of public health: the intervention has been able to create a significant effect on the physical dimension of public health and has led to the improvement of people's physical health.

Dimension of public health anxiety: The intervention did not have a significant effect on the dimension of public health anxiety and could not reduce the anxiety level of people.

Social relations dimension of public health: The intervention did not have a significant effect on the social relations dimension of public health and could not improve the quality of people's social relations.

Depression dimension of public health: The intervention did not have a significant effect on the depression dimension of public health and could not reduce the depression level of people.

General dimensions of public health: The intervention has had a significant effect on the general dimensions of public health and has been able to improve the overall health status of people.

Conclusion: The investigated intervention has been able to have a significant effect on the physical dimension and general dimensions of public health, but it has not been able to affect the dimension of anxiety, the dimension of social relations or the dimension of depression of public health.

Discuss

This study was conducted with the aim of investigating the effect of hope therapy on the general health of substance dependent patients undergoing methadone maintenance treatment. The results of the research showed that the hope therapy intervention was effective in improving the general health of substance dependent patients undergoing maintenance treatment with methadone in the post-test and follow-up test stages.

Substance dependence is considered a public health problem in most societies that has inhibiting effects on a person's growth and development, and is a multifactorial health disorder that is often chronic, recurrent, and relapsing. This disease is considered one of the most important public health problems (physical and mental) in the world, and as a biological-psycho-social problem it not only affects various aspects of a person's life, but also threatens the health of society[24,25].

Today, paying attention to healthcare services with the aim of providing, maintaining and improving people's health in various aspects of public health and enjoying life with happiness is one of the important pillars of the progress of any society[26,27].

In recent years, due to the increase in chronic diseases such as addiction and the lack of definitive treatment, considering that the physical aspects of health have always been emphasized in medical models, and also according to the World Health Organization model, where health is a state of well-being that It has physical, mental, spiritual and social dimensions. Paying attention to the role of psychological variables, along with drug treatments, has been seriously expanded as an important factor in clinical trials and therapeutic interventions [28,29]. Also, treatments that are only based on detoxification or acute intervention are gradually giving way to newer treatments that emphasize a comprehensive approach to the treatment of patients. Also it can be useful as a support to resolve the negative physical and psychological consequences of addiction. On the other hand, in Increasing the general health of a person undergoing methadone maintenance treatment will be more effective and takes into account multiple dimensions of health in addition to improving addiction as a key outcome of drug treatment [30].

In this regard and in order to use psychological treatments along with maintenance drug treatments in order to improve the general health of substance dependent patients, hope therapy is one of the powerful and effective ways to fight and overcome diseases and people who have high hope or gain over time, they have more knowledge about health issues, types and intensity of stress, etc., take better care of themselves, recover from illness sooner, medical prescriptions than people who have low hope. Better comply with, perform better in psychological adaptations, follow the goals and problems of life with effort, and also they report having more meaning in their lives [31, 32]. Snyder's therapeutic hope is a cognitive-based motivational model that focuses on both the motivation and expectation of treatment and the role of planning to achieve treatment goals. Snyder sees creating hope in clients as a self-control factor, with the help of which the patient can take care of himself. As a result, a health-based life is realized when a person has the possibility to control his life and strive to achieve his goals [33,34].

Therefore, in a final impression during the hope therapy process, the results of the research showed that serious attention to the hope variable as a symbol of the psychological variable is needed in examinations, process, and also psychological interventions, and if the improvement of hope in patients does not take place, there will be no grounds for accepting treatment and care training[33]. Therefore, in the field related to health, patients suffering from chronic diseases under hope therapy, hope is considered as a facilitating factor in providing physical health, and the patients receiving hope therapy are not able to bear the pressures and stresses caused by the treatment. Not only do they show a more appropriate response, but they also accept and act on the provided treatments better. In almost any treatment, without considering the element of hope, it is not possible to achieve a favorable result[32,33].

Research limitations:

The studied patients were from the available samples and were selected from two drug addiction treatment centers, so caution should be observed in generalizing the findings to all patients of Semnan city or the whole country. The lack of accurate information on drugs or narcotics and stimulants, as well as the amount of drug and drug consumption within three months after the intervention, considering the high statistics of slippage in drug-dependent patients under treatment, limits the decisive conclusion of the research findings. Considering the results of the research and with regard to the expansion of the healthcare service system in the country, as well as the establishment of psychologists in drug addiction treatment centers, it is suggested to use hope therapy to improve the performance of patients and increase the quality of life of these patients in addition to drug treatments.

Conclusion

The purpose of conducting this study is to investigate the effect of hope therapy on the general health of drug-dependent patients undergoing methadone maintenance treatment, and the findings in this regard indicate that hope therapy intervention can affect the general health of these patients, as is evident in the post-test and follow-up stages, which has many positive effects as well.

According to these results, the potential of hope therapy is considered as a valuable tool to complete the traditional methadone maintenance treatment. Thus, by strengthening the sense of hope and empowerment, hope therapy can contribute to a more comprehensive approach to addiction recovery and also improve the general well-being of patients even more than avoiding drugs.

It should be noted that there are some limitations in this field, for example, the generalizability of the findings may be considered limited due to the sample size and selection process. On the other hand, the fact that there is no accurate information about the use of narcotic drugs after the intervention creates certain intentions.

For future research, larger, more diverse samples and longer follow-up periods can be provided in order to strengthen the generalizability of these results.

Therefore, this study provides encouraging evidence of the effectiveness of hope therapy in improving the general health of drug-dependent patients undergoing methadone maintenance treatment. It should be noted that more research needs to be done in order to integrate hope therapy in addiction treatment programs along with traditional pharmaceutical interventions.

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