



Effect of hope therapy on general self-efficacy among substance abusers

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Abstract

The variety and prevalence of substance abuse are growing and its consequences on physical and psychological health, as well as, on global social and economic concerns are heavy. General self-efficacy is a critical factor underlying substance abuse and its successful treatment. The present study was aimed to investigate the effect of hope therapy on general self-efficacy among substance abusers. This study was quasi-experimental with pretest-posttest and control group. The statistical population comprised all of the substance abusers who referred to addiction treatment centers. Convenience sampling method was used to select 40 participants among volunteers. The participants randomly were assigned into the experimental and control groups. The experimental group received eight sessions of two-hour of hope therapy. Both groups responded to general self-efficacy scale before and after the treatment. There was a significant improvement in general self-efficacy of substance abusers after hope therapy sessions. According to research findings, using of hope therapy could have important role in increasing the general self-efficacy of substance abusers and thereby can lead to successful treatment programs and other positive outcomes in the treatment of substance abuse.

Keywords: Hope, Self-Efficacy, Substance Abuse

Introduction

Substance use and abuse is a serious public health problem. The consequences of untreated substance abuse are clearly harmful [1]. Substance abuse has been associated with financial problems, legal problems, crime, domestic violence, interpersonal conflict, and disruptions to personal relationships. Drug use also poses serious health risks not only to the individual user, but also to society at large because drug use is a major source of

transmission for infectious diseases such as AIDS and hepatitis [2].

Although several cognitive-behavioral approaches in the treatment of substance abuse have yielded positive effects in studies [3-5] so the crucial agent's underlying successful treatment must be recognized. The causes of substance abuse are numerous and factors such as attitudes, beliefs, goals and expectancies play important roles [6]. Furthermore, there

is an urgent demand to improve the short and long-term treatment outcomes of addiction [7]. Self-efficacy is a critical factor underlying the substance abuse and also its successful treatment. Self-efficacy is described as beliefs in one's ability to organize and accomplish courses of action to execute designated behavioral goals [8], features as a key resource in Bandura's social cognitive theory and is a valued resource for most people in a broad array of situations. Self-efficacy beliefs are described as the main component behavior, particularly the behavior modification [9]. Bandura mentioned that individuals with high self-efficacy would consider the threatening conditions as challenges, set high goals and maintain a strong commitment to them, and sustain their efforts in the face of defeats or obstacles. In turn these trends, raise the personal fulfillments and reduce vulnerability to lowered well-being [9].

Following Bandura, most investigators have conceptualized and perused the self-efficacy as either task-specific or domain-specific [10]. An example of a task-specific self-efficacy is abstinence self-efficacy. Abstinence self-efficacy is a cognitive process demonstrating patients' reliance in their ability to abstain from substance use in high-risk conditions [7]. The Abstinence self-efficacy has been readily used in the research and treatment of substance abuse behaviors. Researchers have shown the role of abstinence self-efficacy in achieving successful treatment outcomes and abstinence [11,12], predicting for quitting smoking [13] and the consumption of alcohol and marijuana [14] and increasing of abstinence over time [15].

However, researchers have suggested that self-efficacy beliefs can be generalized across tasks and situations [8,16]. General Self-Efficacy (GSE) is described as individuals' perception of their ability to accomplish during kinds of different situations [16]. Though the previous researches commonly supported the results that abstinence self-efficacy is important in onset, continuity, abstinence and relapse of substance abuse; however, amazingly there have been little-published studies about the

role of GSE in substance abuse and addiction. In particular, the addicts' self-efficacy in various fields of life such as family, social, occupational and educational situations can be more successfully led to improved treatment outcomes. Moreover, rejecting the substance abusers from community and failure to abstinence and treatment can decrease self-efficacy for treatment [16].

Hope therapy is treatment protocol which focused on Snyder and colleagues' cognitive conception of hope [17]. The hope therapy is one of many generic of cognitive-behavioral group treatments [18]. This treatment offers psycho-education, skills training, and group process components. Snyder [19,20] has described hope as a process throughout that individual; set goals and foster specific strategies by which to attain those goals, and make and hold the motivation to execute those strategies. These three elements of the hope respectively are mentioned to as goals, pathway's thinking, and agency thinking. Goals include of something that individual wish to acquire, perform, to be, experience, or produce [21]. Pathway's thoughts describe a person's perceived ability to know and extend routes to goals [19]. People involve in pathways thinking whereas they plan out ways to attain their goals. Since some plans cannot succeed, high-hope people also make many pathways in order to circumvent likely obstacles. High-hope people are belike to develop more alternatives with more important goals and higher probability of being faced with obstacles [17,22,23]. Agency thinking described as the thoughts that individuals have concerning their ability to begin and keep the action on chosen pathways toward those goals [24]. Agency thoughts stimulate people to begin and hold action along pathways into their goals [24].

Studies have found that hopeful people report fewer symptoms of depression and anxiety [25], more academic achievement [26,27], more active coping [28,29] and problem solving [29]. Few studies have investigated the role of hope and hope therapy in substance

abuse. The results from a study imply that higher rates of hope play a significant role in specifying the treatment retention in drug use treatment [30]. Mathis et al. [31] noted that hope agency and hope pathways predicted substance abstinence at an eight-month follow-up. In another research, results showed hope therapy could decrease depressive symptoms in amphetamine users and enhance their hope. Hope therapy may keep substance abusers from relapsing to substance and withdraw from unfinished treatment period [32]. However, some studies have found conflicting results. For example, one study found that people who had higher levels of hope were less likely to enter treatment. This result was explained by high rates of hope which can serve as a sign of extreme self-reliance and underestimation of the demand for professional treatment [33]. In general, according to importance of GSE in vulnerability and successful treatment of substance abuse, as well as limited and sometimes contradictory research on the effectiveness of hope therapy on GSE in substance abusers, we decided to investigate the effectiveness of hope therapy on GSE among substance abusers. The main question of this study is that whether hope therapy increases GSE in substance abusers?

Method

This study was quasi-experimental with control group and pretest and posttest. The statistical population included of all substance abusers who referred to addiction treatment centers in 9, 10, 11 districts of Mashhad city, Iran in winter 2015. The participants consisted of 40 substance abusers who were selected by using convenience sampling method. They randomly were assigned into the experimental and control groups (In each

group, 20 participants). Before the first session, each of the groups responded to GSE scale and pretest was held. Then the experimental group received eight sessions the hope therapy, meeting once per week for 2 hours for a total of eight sessions; while the control group individuals received no intervention for the duration of this study and were in waiting list for the same therapy program in another time. At the end of the treatment, members of both groups filled out the GSE scale at the same time for the posttest. To hold all the information secret but also feasible for applying in the pre–posttest design, the participants were aware prior to the study that their identifiers would be eliminated from the information prior to its analysis, and their names would not be identified in any form of the study report. Inclusion criteria of research were as follows; willingness to participate, at least 6-month had addiction or drug dependence, reading and comprehension level higher than ninth grade and being 20 to be 40 years old. Furthermore, exclusion criteria included having psychiatric or medical condition that could interfere with therapy, twice absence from hope therapy sessions and refusal to consent for either randomization to treatment conditions. The therapy of the experimental group was administered by the first author of this research who holds a doctorate in psychology and had counseling experience in conducting the substance abuse treatment. We hypothesized that, compared to the control group; the experiment group would have higher increasing in GSE. The treatment protocol was outlined to enhance hopeful thinking and increase goal-pursuit activities as declared in hope theory [18]. A summary of the hope therapy protocol is presented in Table 1.

Table 1 Summary of protocol and session content of hope therapy

First session	Introducing of hope theory to participants and guidelines for participation
Second session	Working on the life stories of members and identifying the components of hope: goals, pathway’s thinking, and agency thinking in these stories
Third session	Identifying appropriate goals and set significant, achievable, and measurable goals
Fourth Session	Expanding multiple pathways to work toward goals
Fifth session	Identifying sources of motivation and prevent any drains on motivation
Sixth session	Increasing the agency thinking by using positive thinking and positive duplicate words
Seventh session	Identifying the obstacles and learning to deal with them by providing alternative pathways
Eighth session	Observing progress toward goals, and modify goals and pathways as needed

This intervention is administered in a group setting because it has been hypothesized that hopeful thinking reflects a transactional process [34]. Cheavens et al. [35] have founded acceptable internal consistency for the state hope therapy with Cronbach's alpha ranging from 0.79 to 0.95. In the present study, the following questionnaire was used to collect data:

General Self-Efficacy (GSE): Sherer et al [36] developed the GSE to measure self-efficacy that was defined as a set of expectations which the people take into new situations. GSE is a 17-item self-reporting scale (example of items includes: "When I make plans, I am certain I can make them work," "I give up easily," "I am a self-reliant person," "I avoid facing difficulties") and applies 5-point Likert scale ranges from strongly disagree to strongly agree [37]. The total of item scores ranges from 17 to 85 [38]. The sum of item scores implies the GSE. The higher the total score implies the more self-efficacious the respondent. Chen et al. [16] showed internal consistency reliabilities of GSE high (0.76 to 0.89). In two of their researches by using participants of university students and managers, Chen et al. [16] found

high internal consistency reliability for GSE (0.88 to 0.91 respectively). They reported high test-retest reliability ($r= 0.74$ to $.90$). In this study, reliability of the GSE was assessed by using the Cronbach's alpha and its rate was 0.79. The data were analyzed by using univariate analysis of covariance (ANCOVA) SPSS-22 software ($p>0.05$).

Results

The mean and standard deviation age of participants in the experimental group was 31.6 and 5.62 respectively. Furthermore, the mean and standard deviation age of participants in the control group was 31.45 and 5.64, respectively. In addition, almost the participants of the experimental and control group have the same level of education. In the experimental group, 20% had high school education; 40% had an associate degree, and 40% had bachelors and higher education. Moreover, in the control group, 22% had high school education; 38% had associate degree, and 40% had bachelors and higher education. The mean and standard deviation score of the experimental and control group in the pretest and posttest of GSE is presented in Table 2.

Table 2 Mean and standard deviation of general self-efficacy in the experiment and control groups through pretest and posttest

Group	Pretest	Posttest
Experiment	39.65 ± 10.59	68.50 ± 11.02
Control	41.05 ± 11.52	41.20 ± 12.06

According to Table 2, the mean scores of GSE in the experiment group increased after

the intervention compared with the control groups.

Table 3 Results of analyzing the assumptions of ANCOVA in present study.

Assumption	Statistical test	Value	Level of significance
Normality	Kolmogorov-smirnov Z	0.74	0.65
Independence of covariate	T-test	1.20	0.23
Homogeneity of variances	Levene's Test	0.54	0.46
Homogeneity of regression slopes	F test	5.48	0.07

Before performing the main analysis of covariance assumptions was examined (Table 3). As it can be seen in Table 3, the normality assumption was examined by using the kolmogorov- smirnov Z and results showed that p-value is not significant ($p>0.05$),

therefore, this assumption was established. Independence of covariate was assessed by using the t-test for equality of means and result not showed the significant difference between the pretest mean of GSE in the experiment and control group ($t=1.20$, $p>0.05$). Levene's

test for homogeneity of variances showed that p-value is not significant ($F=0.54, p>0.05$) and therefore this assumption was established. The assumption of homogeneity of regression slope was calculated by using the F test, and results showed the p value is not significant ($p>0.05$) and therefore, that was met this assumption.

Moreover, in order to examine the linearity assumption, were drawn the scatter plot of dependent variable and results not showed the non-linear relationship. The result of testing the hypothesis by using univariate analysis of covariance (ANCOVA) is summarized in Table 4.

Table 4 Results of ANCOVA on general self-efficacy in the experiment and control groups with controlling the pretest

Variable	Source	SS	df	MS	F	p-value	Eta
General self-efficacy	Pretest	1840.14	1	1840.14	43.15	0.001	0.54
	Group	10454.64	1	10454.64	245.12	0.001	0.87

Table 4 shows that after controlling the impact of the pretest, significant differences were observed between the mean scores of GSE in the experiment and control groups ($F= 245.12, p<0.001$). Moreover, a major portion of the self-efficacy variance (0.87) in the posttest was related to the effect of hope therapy. The statistical power was higher than 0.8, which shows the adequacy of the sample size. This results show that hope therapy is effective in increasing the GSE among substance abusers.

Discussion

The results showed that hope therapy increases the GSE of substance abusers. This finding is consistent with results of previous research such as Hampton et al [30] regarding of the effectiveness of hope therapy in determining treatment retention, and Mathis et al [31] about the role of hope in predicting of drug abstinence. Furthermore, other studies showed that hope therapy can prevent substance abusers from relapse to substance and give up the unfinished treatment period [33].

Induction of hope in hope therapy sessions is an active process which focuses on mobility, change direction and activities rather than waiting passively. Hope therapy is a creative process that is associated to the formation of a different perspective from the previous perspective of people [39]. Substance abusers who by the hope therapy have gained a higher degree of hope, Showed more creativity in achieving the goals, more motivated to pursue their goals, considers the obstacles as challenges and believing that are able to learn

from past successes and failures to achieve future goals. They were more confident about skills and goals and focus on them. It seems that all these changes have been achieved through hope therapy and by increasing the self-efficacy.

Prominent part in the effectiveness of hope therapy on self-efficacy returns to the high relationship between agency thinking and motivation [21]. Agency thinking is an important motivational factor to drive the person in the pathways of which is to achieve the intended purpose. In fact, agency thinking is a sense of confidence about success and goal-oriented than this sense of confidence creates a force within the person who knows himself impacting on conditions, and it is motivational. In other words, people who have high hopes feel that they have control over events in their life. In result, considers being actively that is capable of self-regulation and adjusts their behavior and this sense of control creates the basis for motivation, well-being and individual achievements in all areas of life. Moreover, increased hope creates a significant incentive and the person who is suffering and difficult situations. It gives energy required for a deal with hardships to reach the target and compatibility with situations [40].

The limitation of this research was the lack of follow-up. It was not investigated the increased increasing of people’s self-efficacy of people who in this study were undergoing the hope therapy sessions, finally, to what extents were associated with successful quit

and treatment of addiction. Furthermore, it was not investigated that how was the relapse rate in those who received the hope therapy, in compared comparison of with the control group. It is suggested that future research to examine this issue that increased the self-efficacy of people who receive hope therapy ultimately, to what extents are associated with successful quit and treatment of addiction. In addition, addition, it's recommend to investigating investigate the relapse rate of substance abusers who have received the hope therapy.

Conclusion

The results present study indicated that hope therapy increases the GSE of substance abusers. Based on these findings, using the principles of hope therapy in the treatment and rehabilitation centers by psychologists and other specialists is very important in treatment programs. Because it can play an influential role in increasing the self-efficacy of substance abusers; and hereby can be followed the success of treatment programs and other positive health outcomes.

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Authors' contributions

Study design: ZS, TRP, AME

Data collection and analysis: ZS, TRP

Manuscript preparation: AME, TRP

All authors have read and approved the final version

Conflict of Interest

"The authors declare that they have no competing interests."

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Availability of data and materials

The datasets used and/or analyzed during this

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