Effectiveness of Group Narrative Therapy on Depression, Quality of Life, and Anxiety in People with Amphetamine Addiction: A Randomized Clinical Trial

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Abstract

Background: Drug abuse is a major issue and one of the main causes of health, psychological, and social problems. Studies have shown the effectiveness of narrative therapy in reducing psychological symptoms of addiction. The present study aimed to assess the effectiveness of group narrative therapy on depression, quality of life (QoL), and anxiety among people with amphetamine addiction in Kermanshah, Iran.

Methods: A randomized clinical trial was conducted during 2015-2016 among patients (n=26) with amphetamine addiction in Kermanshah, Iran. The participants were randomly divided into intervention and control groups. The intervention group followed 10 sessions of narrative therapy, whereas the control group received routine psychiatric care. The data collection tools included a demographic data form, Beck depression inventory-II, quality of life questionnaire, and Beck anxiety inventory. The data were analyzed using SPSS software (version 22.0). P<0.05 was considered statistically significant.

Results: There was a statistically significant reduction in depression and anxiety scores between the pre- and post-intervention stages (P<0.001) in the intervention group. However, their QoL was unaffected by the therapy (P=0.487). These variables did not show significant change in the control group.

Conclusion: Group narrative therapy reduced the level of depression and anxiety in patients with amphetamine addiction. However, their QoL was unaffected by the therapy.

Trial Registration Number: IRCT2016010425442N2

What's Known

- Studies have shown the effectiveness of narrative therapy in patients with substance abuse (alcoholism). Positive results have also been reported on those indirectly affected by drug addiction (addicts’ spouses).
- Group narrative therapy has shown to reduce depression in women and anxiety in students prior to an examination.

What's New

- While group narrative therapy reduced the level of depression and anxiety in patients with amphetamine addiction, however, their quality of life was not improved.
- In parallel with other treatments, narrative therapy is recommended as a short-term, low-cost, and affordable method to treat depression and anxiety in patients with drug addictions.

Introduction

Drug abuse is a major issue in the twenty-first century and one of the main causes of health, psychological, and social problems. The growing trend of substance abuse, particularly among the youth, is a major concern of families and society as a whole.1 According to a 2004 report by the United Nations Office on Drugs and Crime (UNODC), the number of worldwide illicit drug users was estimated at 185 million; equivalent to 3% of the world's
Effects of group narrative therapy on depression, quality of life, and anxiety

population. According to the World Health Organization (WHO), drug abuse in Iran was estimated at 2.4% and the Iranian Drug Control Headquarter estimated the number at about 1.3 million in April 2013.2

According to the UNOCD, the use of amphetamine-type stimulants (methamphetamine) is the second most commonly abused substance after marijuana.3 Such stimulants are initially used for weight control or as performance-enhancing drugs by workers, students, or athletes.4 The use of methamphetamine results in euphoria, dysphoria, confusion, loss of appetite, anger; dilated pupils, nausea, vomiting, high blood pressure, change in social behavior; and increased awareness, physical activity, and heart rate.5

During the comedown phase, as the effect of the drug wears off, feelings of depression, restlessness, and fatigue set in and the users feel the urge to take more of the substance to overcome these negative effects.6 Chronic abuse of amphetamines leads to various physical and mental problems including weight loss, chronic skin lesions, ischemic colitis, cerebrovascular disease, myocardial infarction, and severely elevated blood pressure. Moreover, psychological symptoms include mood and anxiety disorders, confusion, insomnia, and aggressive behaviors.7 Not to mention the fact that drug users face financial problems, experience suicidal tendencies, and are at risk of getting involved in criminal behavior or exposure to sexually transmitted diseases (immune deficiency syndromes, hepatitis). Considering such harmful consequences on both the individual and society, authorities are forced to take measures against drug addiction.8

Previous studies have shown that, compared to pharmacological intervention, replacement therapy (naltrexone) combined with psychological and social interventions (cognitive-behavioral therapy) is only effective when treating a case of substance abuse.9 It has been shown that various behavioral therapies could reduce methamphetamine dependence. However, additional treatments are required to provide a comprehensive set of clinical tools to effectively treat drug-dependent individuals.10 Short-term, low-cost, and affordable intervention should be considered as a method to improve the mental health of methamphetamine addicts.

Narrative therapy, based on postmodern philosophy, has been recently proposed as a relatively new approach to lessen the impact of a problem on individuals as well as their families.11 It refers to the human desire of building a story (a narrative) of the events in life. Therefore, narrative therapy is also viewed as “re-writing” or “re-storytelling”. According to this theory, people tend to view life as a continuous and logical narrative in order to advance their future goals and expectations.12, 13 White and Epston extended the framework of the theory by allowing individuals to include their cultural, social, and political experiences.14 Accordingly, individuals can distance themselves from their problems and externalize, rather than internalize, an issue. Subsequently, they gain a new perspective, learn to identify the root cause of a problem, and adopt a new approach to resolve an issue. Based on the acquired new set of skills, beliefs, and values, they can re-write their life story and in turn, reduce the impact of a problematic event on their lives.

Several studies, with encouraging results, have been conducted on narrative therapy. In some studies, the main phases of the therapy were externalizing the problem, evaluation by the therapist, re-writing the story, and solidifying the story.15, 16 It is shown that the therapy has been effective in improving depression, delinquency, the perception of body image, marital issues, and psychological rehabilitation of cancer patients.17-19 Other studies have reported the benefits of the therapy for substance abusers and their families, alcoholics, and in improving aggressive behaviors.20, 21

To the best of our knowledge, few studies have been conducted on the effectiveness of narrative therapy on variables associated with methamphetamine addiction. Hence the present study aimed to assess the effectiveness of group narrative therapy on depression, quality of Life (QoL), and anxiety among people with methamphetamine addiction in Kermanshah, Iran.

Patients and Methods

A randomized clinical trial was conducted during 2015-2016 at Farabi Hospital and a few private addiction treatment centers in Kermanshah, Iran. Initially, a total of 60 methamphetamine-dependent patients were assessed for eligibility to participate in the study. The inclusion criteria were low depression score (between 14 and 19), age 20-55 years, high school education level (as a minimum), and willingness to participate. The exclusion criteria were patients with physical health problems that could hinder the psychotherapy, suicidal tendency, and undergoing concurrent psychiatric treatment. Subsequently, 20 patients were excluded from the study.

In accordance with a similar study22 and based on the convenience sampling method,
the sample size of 26 was determined. However, considering the probability of lost to follow-up or unwillingness to continue with the study, all patients (n=40) were recruited in the study. The participants were randomly allocated to a control group (n=20) and an intervention group (n=20). The allocation sequence was generated using a list of random numbers by an independent researcher. During the intervention, 14 individuals discontinued their participation or were unreachable. Subsequently, data analysis was performed on 26 participants (control group=13, intervention group=13). The CONSORT flow diagram of the process is shown in figure 1. The intervention group followed 10 sessions of group narrative therapy (table 1), whereas the control group received routine psychiatric care. However, in compliance with ethical requirements, the participants in the control group also received group narrative therapy upon completion of the study.

The study was approved by the Research Committee of Kermanshah University of Medical Sciences, Kermanshah, Iran (code: KUMS.REC.1394.201) and registered in the Iranian Registry of Clinical Trials (code: IRCT2016010425442N2). Written informed consent was obtained from the participants.

**Data Collection Instruments**

The data collection tools included a demographic data form, Beck depression inventory-II (BDI-II), quality of life questionnaire (SF-36) and Beck anxiety inventory (BAI). Demographic characteristics included age, education level, employment, and marital status. The questionnaires were completed by all participants pre- and post-intervention.

**Beck Depression Inventory-II**

BDI-II is a 21-item self-report questionnaire that measures the severity of depression in adults. It is the revised edition of the Beck depression inventory, which was reviewed to be more consistent with the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV). BDI-II measures the physical, behavioral, and cognitive symptoms of depression. Each item is scored on a 4-point scale ranging from 0 to 3; corresponding to the severity of depression from mild to severe. The total score can range from 0 to 63.

The validity and reliability of BDI-II have been examined in various studies. Beck and colleagues reported good internal consistency (Cronbach's alpha ranging from 0.73 to 0.92, mean=0.86). Additionally, they reported Cronbach's alpha for

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**Figure 1:** The CONSORT flow diagram of the selection process.
Effects of group narrative therapy on depression, quality of life, and anxiety

Table 1: Group narrative therapy intervention guide

<table>
<thead>
<tr>
<th>Session</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>First session</td>
<td>Introduction; handing out self-assessment tests and hearing participants’ life story; providing the necessary information about the narrative therapy; homework assignment (to determine participants’ objectives, willingness to change, and commitment to work on their depression during amphetamine addiction).</td>
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<tr>
<td>Second session</td>
<td>Externalization of problems and review the effects of a significant event in the participants’ life (the so-called “my life story”); identification of the first self-assumption; teaching the principles of review and record the ABCs (activating events, belief, emotional consequences) on a daily basis; homework assignment (each member asked to make a diary of ABCs).</td>
</tr>
<tr>
<td>Third session</td>
<td>Homework review; mind and body relaxation exercises; improve eye contact skills; a reminder to keep daily accounts of ABCs; homework assignment.</td>
</tr>
<tr>
<td>Fourth session</td>
<td>Homework review; identification of the basic assumptions about addiction and group discussion; training on how to create a new internal voice related to the basic assumption; continue with mind, body relaxation, and other exercises (e.g., describe and name assumptions about addiction); homework assignment (daily recordings of ABCs related to the basic assumptions).</td>
</tr>
<tr>
<td>Fifth session</td>
<td>Homework review, training on how to identify addiction and group discussion; teaching corrective thinking and adding D (disputing) and E (effective philosophy) to ABCs; homework assignment (relaxation and other exercises, making a new diary with a fresh mind on ABCDE, and practicing self-reward).</td>
</tr>
<tr>
<td>Sixth session</td>
<td>Homework review; training on how to change problematic behavioral patterns; practicing exposure and response prevention techniques; practicing elimination, obstruction, and procrastination of preoccupation with drug addiction linked depression through techniques such as procrastination, diaphragm respiration; homework assignment (using the new behavioral techniques in different situations).</td>
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<tr>
<td>Seventh session</td>
<td>Homework review; building a satisfying relationship with oneself (e.g., writing an apology letter to oneself, writing down positive points about oneself, performing health and fitness activities to stimulate the five senses, and activities related to physical appearance); homework assignment (keep on recording ABCDE experiences on a daily basis, physical and tactile activities to create the self-image of a person without a drug addiction).</td>
</tr>
<tr>
<td>Eighth session</td>
<td>Group discussion about the individual’s feelings, desires, and dreams about themselves; homework assignment (to build a story around the best version of yourself, rewrite your life story from past to future).</td>
</tr>
<tr>
<td>Ninth session</td>
<td>Homework review; rewrite the life story from the present to the future and rename it; relaxation session; training on how to create a new story; homework assignment (review of all sessions and indicating the best and worst elements).</td>
</tr>
<tr>
<td>Tenth session</td>
<td>Homework review; group discussion about the achieved transformations due to sessions; secondary analysis of the self-assessment tests; identification of attitudes; training on assertive reaction strategies against those having a negative attitude toward drug addicts; homework assignment (implementation of the acquired strategies in everyday life).</td>
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 Patients (0.86) and non-patients (0.81). Another comparable study reported Cronbach’s alpha for outpatients (0.92), students (0.93), and test-retest reliability over 1-week (0.93).25 The results of a survey among 125 university students in Tehran (Iran) showed a desirable Cronbach’s alpha (0.78) and test-retest reliability over 2 weeks (0.73). The reported correlation between BDI and the Hamilton rating scale for depression (HRSD) was $r=+0.71$ and 0.93 for test-retest reliability over 1-week. Another study among 94 Iranian people reported a good Cronbach’s alpha (0.91), split-half correlation coefficient (0.89), and re-test coefficient (0.94).23,25

Quality of Life Questionnaire (SF-36)

SF-36 is a 36-item self-report questionnaire that measures both the physical and mental QoL. It includes eight dimensions, namely physical function, physical role functioning, bodily pain, general health perceptions, vitality, social role functioning, emotional role functioning, and mental health. Higher scores indicate higher quality of life. The Persian version of SF-36 was validated by Montazeri and colleagues using the known-groups technique as well as assessments of convergent validity. They reported good internal consistency for all dimensions (Cronbach’s alpha ranging from 0.77 to 0.90), except for vitality (0.65). Based on the results of the known-groups technique, they showed that the Persian version of SF-36 could distinguish demographic subgroups by age and sex. The range of variation in convergent validity coefficients was between 0.58 to 0.95. In another study, Asghari Moghadam determined the coefficient of sub-scales to vary between 0.43 and 0.79. They also reported a desirable internal consistency (Cronbach’s alpha ranging from 0.70 to 0.85).25

Beck Anxiety Inventory (BAI)

BAI is a 21-item self-report questionnaire that measures the severity of anxiety in adolescents and adults. Each item of the questionnaire is scored on a 4-point scale ranging from 0 to 3; corresponding to the severity of anxiety from mild to severe. The total score can range from 0 to 63.

Beck and colleagues confirmed the internal consistency (Cronbach’s alpha 0.92) and test-retest reliability over 1-week (0.75) of the
questionnaire. They reported moderate internal consistency for all dimensions (Cronbach’s alpha ranging from 0.30 to 0.76). The Persian version of the questionnaire was validated by Gharai using a test-retest over 2 weeks (0.8). Moreover, Kaviani and Mousavi examined the psychometric properties of this questionnaire in a sample Iranian population. They confirmed the validity of the questionnaire; correlation coefficient (0.72), test-retest over 1-month (0.83), and Cronbach’s alpha coefficient (0.92).25

Data Analysis
The data were analyzed with descriptive and inferential statistics using SPSS software (version 22.0). Quantitative variables (mean and standard deviation) were analyzed using descriptive statistics. Qualitative variables were analyzed using the Chi-square test and Independent Samples t test (to compare independent groups), paired samples t test (to compare pre- and post-intervention) the Kolmogorov-Smirnov test (to determine normal distribution of data), and Levene’s test (to check the homogeneity between groups). P<0.05 was considered statistically significant.

Results
The demographic characteristics of the participants in both groups were similar (table 2). The results of the Kolmogorov-Smirnov test showed a normal distribution of both pre- and post-test variables (P=0.20). Moreover, the Levene’s test showed data homogeneity of variables (P=0.31).

There was a statistically significant difference in the average depression score between the pre- and post-intervention stages (P<0.001) in the intervention group. Whereas the difference in the control group was not significant (P=0.08). As shown in table 3, the effect of group narrative therapy on the intervention group was notable. Difference between pre-test and post-test in two groups was significant (t=5.47, P<0.001). Hence, it can be stated that narrative therapy lead to improvement of depression in the intervention group than the control group (table 3).

A statistically significant difference in the average anxiety score was observed between

<table>
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<tr>
<th>Table 2: Demographic characteristics of the participants in the intervention group (n=13) and control group (n=13)</th>
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<tr>
<td><strong>Variables</strong></td>
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<tr>
<td>Marital status</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Married</td>
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<tr>
<td>Divorced</td>
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<tr>
<td>Education</td>
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<tr>
<td>High school</td>
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<tr>
<td>University</td>
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<tr>
<td>Occupation</td>
</tr>
<tr>
<td>Unemployed</td>
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<tr>
<td>Employed</td>
</tr>
<tr>
<td>Age (years)</td>
</tr>
<tr>
<td>20-30</td>
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<tr>
<td>31-55</td>
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</tbody>
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<table>
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<tr>
<th>Table 3: Qualitative analysis of the variables in both groups.</th>
</tr>
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<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Post-test</td>
</tr>
<tr>
<td>Difference between post-test and pre-test</td>
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<tr>
<td>t test &amp; P value</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>Post-test</td>
</tr>
<tr>
<td>Difference between post-test and pre-test</td>
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<tr>
<td>t test &amp; P value</td>
</tr>
<tr>
<td>Quality of life</td>
</tr>
<tr>
<td>Post-test</td>
</tr>
<tr>
<td>Difference between post-test and pre-test</td>
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<tr>
<td>t test &amp; P value</td>
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</tbody>
</table>

*Significant level of the Paired Samples t test; **Significant level of the Independent Samples t test
the pre- and post-intervention stages (P<0.001) in the intervention group. Whereas the difference in the control group was not significant (P=0.06). It indicated a notable effect of group narrative therapy in the intervention group. Difference between pre-test and post-test in two groups was significant (t=2.32, P=0.02). Hence, it can be stated that narrative therapy lead to improvement of anxiety in the intervention group than the control group.

In terms of the QoL, we found no significant difference in the average score between the pre- and post-intervention stages (P=0.48) in the intervention group. Similarly, the difference in the control group was not significant (P=0.65). It indicated that the group narrative therapy had no effect on the intervention group and was similar to the QoL in the control group (table 3).

Discussion

The results of the present study showed that group narrative therapy reduced the level of depression and anxiety in patients with amphetamine addiction. However, their QoL was unaffected by the therapy. These findings were confirmed by other similar studies. A study conducted in Khomeini Shahr (Iran) reported the effectiveness of the narrative therapy in improving the mental health of the addicts’ spouses.15 Another study also reported the effect of group narrative therapy in reducing depression levels, negative automatic thoughts, and dysfunctional attitudes in women with depression in Marvdashat, Iran.22 Lopes and colleagues indicated the effectiveness of narrative therapy in reducing depression symptoms in people with mild depression.26 In addition, Lepore showed that narrative therapy reduced the symptoms of depression among students prior to an examination.27 Common symptoms of depression are the feelings of worthlessness and self-blame. Narrative therapy enables such patients to re-discover their abilities and improves their sense of self-value and empowerment.22 The majority of the psychological treatments for patients with depression focus on dealing with negative emotional experiences and less on highlighting their positive experiences.28 Whereas narrative therapy emphasizes on the positive emotions to help patients to identify potential resources and opportunities. As a result, such patients regain self-esteem and ability to deal with depression.22

We found that group narrative therapy reduced the symptoms of anxiety in the intervention group compared to the control group. The findings of various similar studies confirmed our results. Chadwick and colleagues concluded that the combination of narrative therapy and cognitive behavioral therapy was effective in increasing self-esteem and reducing the symptoms of anxiety in women with Turner’s syndrome.29 Two other studies reported that narrative therapy had a positive impact on children and female students with social anxiety disorder by improving their self-esteem and feelings of fear.30, 31 Some other studies also reported the benefits of narrative therapy for patients with post-traumatic stress disorder.32-34 Narration alters one’s perspective on mental experiences and provides an ideal opportunity to review and study them in the context of cultural and social relationships.18, 35 Narrative therapists believe that the story people tell about their experience is a reflection of their mental pattern, based on which realities are understood and created. Talking about personal experiences and life events allows individuals to formulate a logical sequence, in the form of a timeline, and to review and process their memories, feelings, and thoughts. Consequently, they can rationally reconsider past experiences and present events, and re-define the future.15, 18 Group intervention facilitates the interpersonal learning of participants, the practice of new behaviors, and the use of confrontational techniques (if necessary) by creating a sense of universality and coherence between the group members.36

The results showed that group narrative therapy did not improve the QoL of amphetamine addicts. A comparable study also reported no improvement on QoL among cancer patients.37 A previous study compared the effect of cognitive narrative therapy and cognitive behavioral therapy (CBT) on QoL of adolescents and young people with depression. They showed that CBT was more effective than cognitive narrative therapy in improving QoL.38 A meta-analysis reported that narrative therapy had an average and low impact on non-clinical and clinical populations, respectively. They concluded that long therapy sessions were more effective, however, it would not affect the QoL of terminally ill patients (e.g., cancer, chronic diseases).39

The main drawback of narrative therapy was the re-experiencing of past memories and emotions, which could cause unpleasant flashbacks and exacerbate the symptoms of an illness.11 Therapists are therefore advised to provide more support and warn against possible flashbacks before the healing process begins. As a result, patients can adjust their expectations and better adhere to the treatments.26 Compared to other psychotherapeutic approaches, narrative
therapy is an effective and low-cost approach in treating patients with amphetamine addiction. However, additional therapies should be sought to prevent the recurrence of substance abuse.

The main limitations of the present study were associated with inhomogeneity and variation of confounding variables (personality, physical, and psychological factors) as well as the diversity of social, economic, and cultural variables. In addition, the findings of the present study could not be generalized due to the low sample size.

**Conclusion**

Group narrative therapy reduced the level of depression and anxiety in patients with amphetamine addiction. However, the QoL was unaffected by the therapy. Attention should be paid to their psychological trauma, but considering the risks associated with substance abuse and dependence, non-pharmacological methods are the preferred approach to treat such patients. In parallel with other treatments, narrative therapy is recommended as a short-term, low-cost, and affordable method to treat depression and anxiety in patients with addiction. It is recommended that future studies examine the effectiveness of narrative therapy on different populations, evaluate the long-term effect of the therapy, and address the limitations of the present study.

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**Conflict of Interest:** None declared.

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