

The Effect of Cognitive-Behavioral Group Therapy on Social Coping of Crack Abusers

Fariborz Dortsaj,¹ Mansour Shakiba,^{*2} Javad Shakiba³

1. Department of Psychology, Faculty of Psychology, Alameatababaei University, Tehran, Iran
2. Department of Psychiatric, Zahedan University of Medical Sciences, Zahedan, Iran
3. Department of Psychology, Islamic Azad University, Zarand Branch, Zarand, Iran

Article information

Article history:

Received: 12 Nov 2011

Accepted: 23 Dec 2011

Available online: 28 Oct 2012

ZJRM 2013; 15(2): 59-63

Keywords:

Cognitive-behavioral therapy

Social adjustment

Substance abuse

Crack

*Corresponding author at:

Department of Psychiatric,
Zahedan University of Medical
Sciences and Health Services,
Zahedan, Iran.

E-mail:

mansoorshakiba@yahoo.com

Abstract

Background: Regarding the high prevalence of drug abuse in the society, the study aims at analyzing the effect of the group therapy on the social adjustment of the crack addicted patients who are under the maintenance treatment.

Materials and Methods: The semi-experimental study was conducted on 24 crack addicted patients who had been selected using random sampling method. They were divided into two 12-member groups of control and case. The general Health Questionnaire (GHQ-28) (as pretest and post-test) was used to homogenizing the two groups. Bell Adjustment Inventory was used to examine the impact of group therapy on subject's social adjustment. $p<0.05$ was considered significant.

Results: The control and case groups enjoy a similar condition before starting treatment process. The results showed that after the treatment the average scores of the case group in social adjustment and general health dimensions became less than that before treatment ($p=0.0001$). No significant relationship was found among history of crack abuse, times the patient had quitted the drug, education level, age, marital status and the social adjustment.

Conclusion: The group therapy as a psychological treatment is effective to improve crack addicted people social adjustment and also their general health condition.

Copyright © 2013 Zahedan University of Medical Sciences. All rights reserved.

Introduction

Addiction has been defined as getting used to or getting accustomed to a faulty habit. Addiction is defined as dedication of a person to a bad habit and the modern medicine refers to drug dependency [1]. Based on DSM-IV-TR criteria, addiction is a kind of dependency on the repetitive abuse of drug and/or a chemical substance with or without physical dependency, as quitting the drug/substance will cause a certain syndrome named "Denial Syndrome" [2]. The increased pace of new and industrial addictive substances their various combinations and components have brought about a vague perspective in the field of treatment and rehabilitation of addicted people the experts [3]. Besides incurring serious physical damages such as contagious infectious diseases such as AIDS, Hepatitis, etc., addiction has numerous psychological, social and economic problems and complications [4].

Crack as a new industrial substance is made of pure heroin in Iran and differs from the actual crack, which is taken from cocaine derivatives, in other parts of the world [5]. Simple abuse procedure, odorless and efficaciousness have made the substance a popular substance for addicted people in Iran. Besides euphoria, nervousness, aggressiveness, severe nausea and vomiting are other complications of abusing crack. Crack abusers cannot be controlled if the substance is not provided for them on time and consequently, they will show a very risky behavior which is not predictable [6]. These side effects

create numerous anomalies and irregularities in adjustment, especially in social adjustment, interpersonal and group relationships. Hence, addiction to crack is known as strong and weakening addiction [7].

A number of incentives and temptations of crack abuse are listed here: increasing physical and sexual ability, untreated psychiatric disorders, chronic physical pains, imitation of adults behavior, possessing a great deal of money and lack of appropriate strategy for spending money in order to prepare the drug, misconceptions about drug abuse, a particular emotion, taking membership in a subculture in order to be supported and incorrect methods to confront with stress, [1] which undoubtedly is followed by various social and cultural problems and challenges. Meanwhile, drug abuse especially among youth has been steered more towards industrial use of the drug especially crack [6].

Crack-dependent patients face numerous behavioral and family problems in their relationship with others such as significant changes in their personality, irregular sleep schedule, suspicion, depression, anxiety and restlessness and neglecting their appearance, adopting hostile behavior against their family and friends, etc. It requires conducting necessary psychological interventions necessary to adapt patients with the necessary adaptations. As a completely accepted psychological treatment, group therapy is applied to change non-adaptive behavior, guiding thoughts and feelings of individuals for attaining

better and most effective results. Since a few researches have thus far been conducted on the effect of group therapy on drug addicted people's health promotion, especially health of people who are addicted to the new industrial substances, we have studied effect of the group therapy on personal and social adjustment of individuals with the aim of training social skills, assertive training, prevention of recurrence, boosting self-esteem, training problem solving and training stress control methods on men addicted to drug abuse (crack) in Zahedan.

Materials and Methods

This quasi-experimental study was conducted comparatively before and after March 5, 2011 for a period of 63 days on 24 individuals addicted to crack (Iranian sample). The individuals addicted to crack were selected randomly. After matching in terms of age, education, history of dependency on crack, history of quitting crack, marital status and general health (using GHQ-28 questionnaire), they were divided into two groups of control and case, randomly. Individuals' dependency on crack had been approved by a psychiatrist or a trained physician in accordance with DSM-IV-TR criteria. The exclusion and inclusion criteria were as follows :

Hereunder are regarded as criteria for inclusion to the study: to be man (masculine), quitting drug for at least once, passing at least two weeks until a month from the treatment schedule, free of all physical or mental disorders which may affect the quality of patient's performance, receiving methadone maintenance therapy (MMT), full freedom to participate in group therapy sessions, and lack of simultaneous participation in another therapeutic health plan.

Hereunder are regarded as criteria for exclusion from the study: failure to cooperate with the therapist, leave the treatment center or drug relapse with due observance to the result of morphine test, being infected with serious physical diseases during implementation of the program.

In the beginning, 30 patients, who had been referred to the Drug Abuse Treatment Clinic of Zahedan, were selected based on the criteria of inclusion out of individuals who were dependent on crack abuse. They test was undergone on them after taking their written consent. These patients were matched in two 15-member control and case groups. In the last analysis of the study, three patients were excluded from each group due to their failure to participate in the plan. Thus, 12 patients participated in each group. Totally, 24 patients took part in the two groups of the study. Patients in the case group not only participated in the methadone treatment program, but also they received group cognitive – behavioral therapies with the predetermined objectives and contents and considering therapeutic factors identified by Yalom (1985) and Brown and Yalom (1977) (instillation of hope, universality, dissemination of information, altruism, repeated modification of early family, develop social skills, imitative behavior, interpersonal learning, group cohesion, drain emotional and existential factors) for a period of 10 sessions. The control group only received

methadone maintenance treatment (MMT). At the end of the study, the post-test study was tried and the two groups were studied through the scores they had obtained in post- and pretest phases.

At the end of the study, group therapy sessions were held for the control group in order to observe ethical issues.

The GHQ-28 questionnaire developed by Goldberg and Hiller was executed before and after the program in order to homogenize the two groups. Yaghoubi put sensitivity of this questionnaire and its specification at 0.86 and 0.82, respectively. Yaghoubi reported the total validity coefficient of the tool as much as 0.88. Moreover, he reported the coefficient of its subtests: 50 to 0.81. To date, this questionnaire has been scored in five ways. In the present study, simple Likert Model, considered a score from 0 to 3 for each option, was used. The low scores indicate good health while the high scores indicate disorder in all scoring methods compiled in this questionnaire [6].

Bell Adjustment Inventory, the Adult Form, includes 160 questions in five levels of separate measurement of personal and social adjustment. Social adjustment level has been used with 32 questions in this study. The questionnaire's validity initially has been obtained via putting each part at the limit in which their difference between the upper and lower 0.50% was evident in distributing the adults' scores. The coefficient of its validity, conducted on 200 patients randomly, has been reported by Bahrami as 0.89 using Cronbach's Alpha coefficient. Scoring of Bell inventory is obtained easily through key which is related to each of the adjustment backgrounds. The total scores, obtained from key questions, show adjustment situation of individual. (The question mark is not score). For the social adjustment, the above questionnaire considers the high score as an indicator which shows to avoid making social contact [6].

In this study, Fisher's exact test was used for matching both groups and the obtained information was evaluated using *t*-test. Also, the effect of group therapy was studied on social adjustment in pilot group based on factors such as history of dependency to crack, education, age and marital status and was analyzed using analysis of covariance and variance .

Results

In this study, which was conducted in Zahedan in 2010 with the aim of analyzing the effect of group therapy on social adjustment of individuals addicted to drug abuse (crack), a number of 24 patients addicted to drug abuse (crack) were studied. Age range the patients varied from 19 to 43 years old with mean age of 31 ± 6 years. Some demographic data of both groups are shown in table 1.

The statistical results related to the score of social adjustment, physical symptoms, anxiety, social functioning and depression of the group before and after 10 sessions of group therapy program are shown in Table 2.

Table 1. Frequency of two control and experimental groups in terms of marital status / age / terms of drug quit and education

Characteristics		Control group number (%)	Experimental group number (%)
Marital Status	Single	2(16.6)	6(50)
	Married	10(83.4)	6(50)
Age(y)	19-24	2(16.6)	2(16.6)
	25-30	3(2)	4(33.3)
	31-48	7(58.3)	6(50)
Terms of drug quit	1-2	3(25)	3(25)
	3-4	9(75)	6(50)
	5-6	0(0)	3(25)
Education	Illiterate	0(0)	1(8.3)
	Primary school	1(8.3)	3(25)
	Middle school	6(50)	4(33.3)
	High school	3(25)	4(33.3)
	University education	1(8.3)	1(8.3)

Table 2. Statistical indicators related to the score of social adjustment, physical symptoms, anxiety, social functioning and depression of studied patients before and after treatment in GHQ questionnaire

Indicators	Before Treatment		After Treatment	
	Mean \pm SD		Mean \pm SD	
Social adjustment	26 \pm 4		18 \pm 8.5	
Physical Symptoms	14 \pm 4		7.5 \pm 5	
Anxiety and sleep disorders	13.5 \pm 5		7.5 \pm 6	
Social functioning	17 \pm 4		10 \pm 6	
Depression	13 \pm 5		5 \pm 2	

Table 3. Results of Kolmogorov-Smirnov and Shapiro-wilk Test in Order to Study Normalcy of Social Adjustment

Test Results	Shapiro-wilk Test		Kolmogorov-Smirnov test	
	Variable	p-Value	Variable	p-Value
social adjustment (pre test)		0.184		0.20
social adjustment (post test)		0.155		0.179

Table 4. Results of Kolmogorov-Smirnov and Shapiro-wilk Test in Order to Study Normalcy of Different Aspects of Questionnaire -28

Variable	Shapiro-wilk Test		Kolmogorov-Smirnov test	
	Variable	p-Value	Variable	p-Value
Pre test	Physical Symptoms	0.199		0.086
	Anxiety and sleep disorders	0.308		0.055
	Social functioning	0.32		0.26
	depression	0.289		0.145
Post test	Physical Symptoms	0.072		0.101
	Anxiety and sleep disorders	0.84		0.114
	Social functioning	0.22		0.065
	depression	0.16		0.20

Table 5. Results of t-test Related to the Social Adjustment and Different Dimensions of GHQ-28

Variable	Depression p-Value	Social functioning p-Value	Anxiety and sleep disorders p-Value	Physical Symptoms p-Value	Aocial adjustment p-Value	
Variable	Mean	Mean	Mean	Mean	Mean	
Control group (Before)	0.543	12.3	0.256	15.9	0.791	13.5
Experimental group (Before)		13.3		17.9		14
Control group (After)	0.001	9.9	0.001	15.4	0.001	13
Experimental group (After)		0.6		3.3		2.6
Experimental group (Before)	0.001	13.3	0.001	17.9	0.001	14
Experimental group (After)		0.6		3.3		2.6

Similarly, the results of Kolmogorov-Smirnov test and Shapiro-wilk Test, in order to study normalcy of the data related to the social adjustment (Table 3) and dimensions of public health (Table 4), showed that the data have a normal distribution.

There was significant difference between social adjustment mean of the case and control groups after the execution ($p=0.0001$). Since score mean of social adjustment of experimental group is less than the control group mean after the treatment, the results indicate effect of group therapy in improving social adjustment of individuals addicted to drug abuse (crack). The effect of

the group therapy on social adjustment of individuals addicted to drug abuse (crack) varies due to their dependency and history of abusing crack, terms of drug quit, education, age and marital status. With due observance to the results of analysis of covariance and variance, history of dependency of individuals to crack abuse ($p=0.995$), number of drug quit terms ($p=0.697$), education ($p=0.426$), age ($p=0.837$) and marital status ($p=0.84$) did not affect the influence of group therapy on individuals' social adjustment. Likewise, the results of t-test showed that group therapy is effective in improving the physical symptoms of patients who are addicted to

drug ($p=0.0001$), symptoms of anxiety and insomnia ($p=0.0001$), social functioning ($p=0.0001$) and depression symptoms ($p=0.0001$) (Table 5).

Discussion

In the present study, the group therapy was effective to improve the social adjustment, physical symptoms, symptoms of anxiety and insomnia, social functioning, and symptoms of depression for individuals addicted to the drug (crack) abuse. Since drug addiction creates severe physical and psychological dependency, and the abovementioned people suffer from numerous behavioral, family, personal and social relationships problems, psychological follows-up along with medical interventions is inevitable. Drug dependency ruins the personal and social life of the addicted people, thus the useful treatment for such people is the treatment that not only tries to remove the patient's physical dependency, but also considers mental, psychological and social aspects of the addicted people's life [9].

The results of this study are consistent with the results of Marsden et al. Rudolph et al. Velasquez et al. Weiss et al. Vazirian, Ansari et al. and Taraghijah, who emphasized the need for interventions such as family therapy, teaching life skills, group therapy, etc [7-14].

Weiss et al. showed that the number of individuals, who had undergone group therapy treatment, had more clean days than the control group had [10].

The results of the present study showed that group therapy is effective to improve the social adjustment of individuals who are addicted to drug (crack) abuse. Our results are consistent with the results of the studies made by Liddle et al., Attari et al., Ghasemzadeh and Nezarat [14-16].

Lazaro et al. also showed positive effect of group therapy among people addicted to food and bulimia. LaRosa et al. [17] showed that the group therapy along with Methadone Maintenance Therapy (MMT) plays a positive role in treatment of addicts [18]. Similarly, significant difference has been found between the two groups in physical symptoms of caused by group therapy on improvement of physical symptoms, the result of which are consistent with the results of Navabinejad and Hasanabadi [20]. The group therapy also played an important role in reducing and even improving symptoms of social functioning of people addicted to crack, it verifies the results obtained by Liddle et al., Kaminer and Hofmann and Smits [14, 19, 21].

Depression, isolation, avoiding from making relations with others, irregular sleep program, lack of suitable relationship with family members and friends, changes in personality and behavior are of important features of people addicted to drug abuse (especially crack), as Navabinejad et al., Taraghijah and Hamdiyeh reported the influence of group therapy "positive" for these symptoms [14, 20].

In this study, factors such as history of dependency to drug (crack) abuse, frequency of drug quit; education, age and marital status were studied for social adjustment of the individuals. The results of statistical study showed

that these factors do not overshadow the effect of group therapy on the social adjustment.

Therefore, according to the abovementioned information, effect of group therapy is approved on social adjustment and different aspects of the public health (physical symptoms, symptoms of anxiety and insomnia, social functioning and symptoms of depression) for people addicted to drug (crack) abuse. In addition to pharmaceutical treatments, presenting such therapy (group therapy) can be effective in improvement of situation of patients and controlling and solving their problems

Since this study was conducted on people addicted to the drug abuse (especially crack), possibility of studying effect of group therapy on different aspects of adjustment of individuals (such as adjustment at home, sanitary adjustment, job and emotional adjustment) was not provided.

Some of the important issues which challenge the addiction treatment are: age, education level, marital status, number of drug quit terms, and history of drug abuse. In this study, the abovementioned factors did not overshadow effect of group therapy on social adjustment of individuals. In order to materialize the desirable objectives, studies should be carried out comprehensively and vastly in a lengthy period with the more number of samples. In the same direction, it should be studied that how much people can remain stable and persistent in cleanliness and establishment of healthy interpersonal and group relationship.

The small size of sample was another limitation of the abovementioned study, we had to select a small sample firstly, because we had to observe the standard level of the participants of the group therapy on the one hand and secondly, we had to prevent of nuisance and confounding variables in different groups (if the pilot group was divided into two or more groups) on the results of the study, on the other hand. Consequently, accumulating individuals with such conditions in a clinic, in order to participate in group therapy sessions, was impossible.

It was necessary to use such interventions in women addicted to drug (crack) abuse to make practical the aspect of the treatment. The mentioned study was not conducted on women abusing crack due to the limited number of participants on the one hand and their lack of satisfaction to participate in the group therapy sessions, on the other hand.

Due to its psychological and physical dependency, addiction is a chronic and recurrent disorder. Therefore, treating addiction is a process which requires conducting various measures such as detoxification, family therapy, teaching life skills, disseminating information in society to establish good conduct and relationship with addict as a patient, acquiring social support, etc. If various stages of treating addiction are not fully observed, drug quit will face debacle and failure and consequently, the disease will recur. Thus, it is recommended to take the following subjects into consideration in future studies in order to provide better results available to researchers and active therapists in the field of addiction.

Due to the existence of limitations such as failure in dealing with different aspects of adjustment with regard to the type of sampled study, small size of sample, short study time (2-month study) and problem ahead of generalizing results to women addicted to crack in this study, it is necessary to apply effect of this treatment in futures studies as follows: 1. It is necessary to study adjustment of individuals in different aspects of adjustment at home, sanitary adjustment, job and emotional adjustment. 2. It is necessary to follow up a lengthy and formulated treatment program after passing full course of the gradual treatment (detoxification). In the same direction, perseverance of individuals in establishing healthy interpersonal relations should be taken into consideration. It is advised to execute studies vastly and comprehensively in two or more clinics using

more experimental groups. Moreover, both sexes (males and females) should be selected as subject.

Acknowledgements

The present paper is excerpted from MA thesis of Mr. Javad Shakiba with the same name, coded 21120705892011, approved by the Islamic Azad University of Zarand Branch.

Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

No conflict.

Funding/Support

Zahedan University of Medical Sciences.

References

1. Azar M, Noohi S. Encyclopedia of drugs and addiction. Tehran: Arjomand Press; 2008.
2. Sadock BJ, Sadock VA. Kaplan & Sadock's Comprehensive Textbook of psychiatry. Philadelphia: Lippincott, Williams & Wilkins; 2009.
3. Sargolzai MR. Successful withdrawal. Mashhad: Ferdowsi University Press; 2004.
4. Atkinson RL, Atkinson RC, Smith EE, editors. Hilgard's Introduction to Psychology. 8th ed. New York: Harcourt; 1999.
5. Khodami A. Side effects of crack use. Tehran: Congress 60; 2007.
6. Fathi Ashtiani A, Dastani M. Psychological tests of personality and mental health evaluation. Tehran: Besaat Press; 2009.
7. Marsden J, Eastwood B, Bradbury C, et al. Effectiveness of community treatments for heroin and crack cocaine addiction in England: A prospective, in-treatment cohort study. *Lancet*. 2009; 374(9697): 1262-70.
8. Rudolph KD, Abaied JL, Flynn M. Developing relationships, being cool, and not looking like a loser: Social goal orientation predicts children's responses to peer aggression. *Child Dev* 2011; 82(3): 1029-1033.
9. Velasquez MM, Maurer GG, Crouch C and DiClemente CC. Group treatment for substance abuse: A stages-of-change therapy manual. New York: Guilford Press; 2001.
10. Weiss RD, Griffin ML, Kolodziej ME, et al. A randomized trial of integrated group therapy versus group drug counseling for patients with bipolar disorder and substance dependence. *Am J Psychiatry* 2007; 164(1): 100-7.
11. Vazeirian M, Mostashari G. Substance abuse treatment, practical guide for consumers. Tehran: Porshokoh Press; 2002.
12. Ansari M, Borjali A, Ahadi H, Hosseini A. Effect of cognitive - behavioral therapy (CBT) group of angry students. Proceeding of the 4th Student Mental Health congress. Tehran: Tarbiat Moalem University; 2008.
13. Torghijah S, Hamdeieh M. [The effect of group counseling, cognitive approach-reducing depressive behavior in female students]. Proceeding of the 4th student mental health congress. Tehran: Tarbiat Moalem University; 2008.
14. Liddle HA, Dakof GA, Parker K, et al. Multidimensional family therapy for adolescent drug abuse: Results of a randomized clinical trial. *Am J Drug Alcohol Abuse* 2001; 27(4): 651-688.
15. Atari Y, Shahni M, Boshlide K, Koochaki-Ashoor M. [Effect of group social skills training in personal adjustment-Social juvenile offenders in Gonbad-e-Kavus] Persian [dissertation]. Ahvaz: Shahid Chamran University; 2005.
16. Ghasemzadeh S, Nezari S. [Increase self-esteem of participants in the drug group, NA (Narcotics Anonymous)] Persian [dissertation]. Mashhad: Ferdowsi University; 2006.
17. Lazaro L, Font E, Moreno E, et al. Effectiveness of self-esteem and social skills group therapy in adolescent eating disorder patients attending a day hospital treatment programme. *Eur Eat Disord Rev* 2010. [Epub ahead of print]
18. LaRosa JC, Lipsius SH, LaRosa JH. Experiences with a combination of group therapy and methadone maintenance in the treatment of heroin addiction. *Int J Addict* 1974; 9(4):605-17.
19. Kaminer Y. Challenges and opportunities of group therapy for adolescent substance abuse: A critical review. *Addict Behav* 2005; 30(9): 1765-74.
20. Navabinejad S, Hasanabadi H. [Comparative efficacy of three treatment groups "rational - emotional existential - humanistic spiritual - religious" self-esteem in the male prison inmates] Persian [dissertation]. Mashhad: Ferdowsi University; 2006.
21. Hofmann SG, Smits JA. Cognitive-behavioral therapy for adult anxiety disorders: A meta-analysis of randomized placebo-controlled trials. *J Clin Psychiatry* 2008; 69(4): 621-32.