

The Effect of Life Skills Training in Group and Behavior Change on Affective Health of People Addicted to Methamphetamine Crystal

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Article information	Abstract
<p>Article history: Received: 23 Dec 2012 Accepted: 21 Jan 2013 Available online: 25 May 2013 ZJRMS 2014; 16 (5): 6-10</p> <p>Keywords: Training Behavior modification Substances abuse Crystal methamphetamine</p> <p>*Corresponding author at: Hatef Center for Substance Abuse, Educational Development Center, Zahedan University of Medical Sciences, Zahedan, Iran. E-mail: dr.shakibam@yahoo.com</p>	<p>Background: Although various medical and psychological interventions have been used to treat addiction, addiction particularly methamphetamine addiction as a social, health and medical issues is still jeopardizing the human community. This study is aimed at determining the impact of teaching life skills and changing behavior on the emotional well-being of the individuals addicted to crystal methamphetamine.</p> <p>Materials and Methods: This study was carried out using before-after plan with participation of 28 crystal methamphetamine addicts. In addition to receiving medical treatment, the intervention group patients obtained necessary trainings required for developing life skill and changing behavior during 15 sessions, whilst the control group received only the routine pharmacotherapy treatments and primary interventions. Then pretest and posttest scores of the two groups were compared.</p> <p>Results: The mean score on emotional well-being by the intervention group is lower than that in control group after treatment (10.71<18.78) which was statistically significant. The history of dependence on methamphetamine, age, education, the times of quits, and the marital status had no impact on the extent of the influence of teaching life skills and behavior changes on the individuals' emotional well-being.</p> <p>Conclusion: Notwithstanding that addiction could influence various aspects of mental and emotional health of dependent people, teaching life skills and behavioral changes may lead to enhancement in their emotional well-being. Hence it is necessary to encourage these individuals to participate in group sessions of changing behavior and teaching life skills.</p> <p>Copyright © 2014 Zahedan University of Medical Sciences. All rights reserved.</p>

Introduction

Addiction which has been affecting the human communities from old times, and according to some people addiction has been born with human being, today it has gone beyond medical and health boundaries and as a social, health and medical condition has jeopardized the health, safety, economy and in general the family structure and the human society in all human communities. Emergence of new and industrial addictive substances and a variety of compounds used in their contents has created numerous challenges in the way of treatment and rehabilitation of dependent individuals [1]. Crystal methamphetamine, also known as glass and ice, is one of the illicit drugs similar to amphetamine with a stronger devastative effect [2]. This drug is regarded among stimulant substances which are used by inhaling, smoking, and intravenous injection, which can increase alertness and excitement as immediate impacts. Consuming amphetamine in different combinations is aimed at numerous purposes including weight control, sleep disorder, improved performance, improved sexual activity and the hyperactivity [3]. The impact of this substance start at first consumption which will cause enhanced mood, exaggerative feelings of oneself,

paranoia, hyperactivity, and recurring competitive behaviors [4]. Reduced stimulating effects lead to a period of compensatory collapse which the consumer feels depressed, restless and fatigued. All of these characteristics force the individual to use more to overcome his/her problems [5]. In this stage the individual begins abusing this drug, with mental dependence and psychological devastative effects being one of the immediate impacts of the drug, as consuming methamphetamine may cause chronic anxiety syndromes as well as acute emotional disorders in the users just as sympathomimetic drugs (such as amphetamine, cocaine and caffeine) do [2]. In 2008, Mimiaga investigated the individuals using crystal methamphetamine. The results of his study indicate that 95% of individuals will lose their emotional health if they depend on this drug and hence become depressed, suffer from anxiety, phobia, anger, feeling guilty and shame, and no enjoyment in daily life activities [6]. Unfortunately the consumption pattern particularly among the youth and the juveniles has changed toward abusing this substance which is possible to be produced in illegal local laboratories. The results of a study on the students in US showed that a decade ago,

the amount of using crystal methamphetamine by juveniles was 5%, which rose by 2.1%. Various studies show that appropriate medical interventions could remarkably reduce the hazard of high risk behaviors and drug abuse such as addiction. In this regard, researchers have investigated cognitive and personality characteristics in drug abusers to provide effective interventions and came to the conclusion that factors such as lack of skills to face the problem, inability to solve the problem, hopelessness, weakness in having relationships with others are important factors to individuals dependency [7]. Teaching life skills to help the individual gain control of his/her life, self-assertion, and self-confidence as well as alter the individual's motivation is highly beneficial, and is helpful to prepare the individual to make substantial changes in addictive behavior in order to reach balance in his life. Life skills consist of a big group of social and interpersonal mental skills that could help the individuals make their decisions with alertness, make relationships effectively, expand their personal management and encountering skills and have a healthy and fruitful life [8]. Rezaei et al. showed that teaching life skills has led to controlling stress in the juvenile [9]. Furthermore, in another research, the impact of teaching life skills on mental health and juveniles source of control has been studied, which the results were significant in both levels of mental health and control source and a meaningful relationship has been observed in this regard [10]. According to the results of various studies, teaching life skills has proven to be effective in lessening stress, preventing risky behaviors, increasing social adaptability and mental health, preventing suicidal attempts, and alcohol and drug abuse, altering attitude toward addiction and improving mental health [10-12].

Based on searching the internet resources and printed materials, limited studies have been found in relation with interventions like life skills and change in behavior on crystal methamphetamine users. The authors conducted this study to determine the impact of team training of life skills and changing behavior on the emotional well-being of crystal methamphetamine users. The underlying hypotheses of this research include team training of life skills increases emotional well being of drug addicted individuals and team training will promote change in behavior and the way of tackling mood problems in the individual. The main question in this research is that whether team training of life skills and behavior change has any impact on the emotional well being of crystal methamphetamine dependent individuals.

Materials and Methods

This study used semi-experimental design, which was conducted using the before-after plan. The sample consists of 28 individuals who abuse crystal methamphetamine and were selected non-random and were then matched to be randomly divided into two groups of witness and intervention. Dependence of these individuals on crystal methamphetamine had been confirmed by psychiatrist and trained MMT physician

according to DSM-IV-TR standards as well as methamphetamine test. The inclusion criteria's were being male, having no severe physical or mental disorder that might affect the quality of patient's performance, having active medical files, no limitation for participation in the sessions and not participating in other medical programs at the same time. The exclusion were lack of cooperation with therapist, abandoning the medical program provided by the center or recurrent use as evidenced through methamphetamine test, suffering severe physical condition or diagnosis of prominent psychiatric disorder symptoms during treatment. Based on the criteria established for participation in the study, 50 patients who were referrals to Hatef and Loghman drug abuse treatment center in Zahedan, were selected from crystal methamphetamine-dependent users after giving written consent and were then matched into two witness and intervention groups. Regarding the probability of arising conditions that might cause these individuals withdraw the study, 50 patients were selected at the beginning of project. This is whilst in the final analysis, 14 patients from each group totally making 28 patients for the sample were included in the program. In addition to receiving medical treatment, the patients in intervention group received required trainings for acquiring life control skills and changing risky behaviors, self assertion, the strategies for compatible control of stressful situations, increase in self-control and self-sufficiency feeling. The control group received only the routine pharmacotherapy treatments and the primary interventions. In the end, posttest was administered and two groups were investigated based on the score they gained in pretest and posttest. For ethical considerations at the end of study, such sessions were also provided for control group. The tools used in this study consist of demographic information questionnaire and Bell adaptability questionnaire. From Bell adaptability questionnaire, the adults' form that comprises 160 questions in 5 separate measurement levels of personal and social adaptability, the emotional adaptability level with five questions was used. The reliability of the questionnaire has been gained through choosing each one of parts in a range where their difference was evident between upper and lower 50% in the Adults' Scores Distribution. Previously, the validity of this questionnaire was well established [13]. In the present study we administered this questionnaire on 200 individuals who had been selected randomly, and gained a reliability of 89% by Cronbach's α (alpha) method through 80 questions that provided all scales of the said questionnaire. Scoring the questionnaire is possible through the key related to each of the adaptability contexts of the individual. The sum of scores gained from the questions key indicates the status of test conformity. In the context of emotional adaptability, a high score means emotionally unstable while a low score indicates emotional stability. The information gained by the two groups was assessed using Wilcox test. This study has been confirmed by the Ethics Committee of Zahedan University of Medical Sciences wherein the provisions of

the Ethics Committee concerning the experimental plans have been observed.

Results

In this study which was conducted with the aim of the impact of team training of life skills and behavioural change on the emotional health of crystal methamphetamine abuse dependent individuals in the Zahedan city in 2011 and 2012, 28 drug abusers were examined. These individuals aged between 22 and 45 years with an average of 33 ± 6 . Some of the demographic information has been presented in table 1. The statistical results related to emotional health score of intervention group before and after 12 sessions of educational program on life skills and behavioral change showed that the average emotional health score was 23.11 with a standard deviation of 4.97 before implementation of psychological interventions. On the contrary, the emotional health mean score was 14.75 with a standard deviation of 5.58 after psychological interventions. The degree of the impact of team training of life skills and behavioral change on the emotional well-being in methamphetamine abuse dependent individuals is different concerning the history

of their dependence on this drug, education, the number of cessation and marital status. Regarding the results obtained from variance analysis and (*t*-test administered independently regarding marital status of samples) it was found that the history of their dependence on crack, age, education, the number of quits, and marital status had no effect on the result of teaching life skills and behavior change on the individuals' emotional well being. Also the results of Kolmogorov-Smirnov test and Shapiro-Wilk test aimed at investigating the normality of data relating to emotional well being (Table 2) showed that distribution of data on the individuals' health was not normal before training but distribution of data relating to the individuals' well being after training and also the emotional well being difference before and after training is normal. There was significant difference between the intervention group and witness group regarding their mean score on emotional well being upon receiving the training ($p=0.0001$). Regarding that the mean score on emotional well being of intervention group is lower than the mean score of witness group after treatment ($10.71 < 18.78$), the results indicate the impact of teaching life skills and behavior change in improving the emotional well being of crystal methamphetamine abuse dependent individuals (Table 3).

Table 1. Frequency distribution of the individuals based on study variables

	Category	N(%)
Marital Status	Single	9(32)
	Married	19(68)
Age (years)	22-27	7(25)
	28-33	8(29)
	34- 39	7(25)
	40- 45	6(21)
Education Status	Primary	4(14)
	guidance	10(36)
	School	2(7)
	Diploma	8(29)
	Super Diploma Licience	2(7) 2(7)
Quit number	1 time	3(11)
	2 times	9(32)
	3 times	1(39)1
	4 times	2(7)
	5 times	3(11)
Dependency history	Less than 2 years	5(18)
	2-4 years	14(50)
	4-6 years	9(32)

Table 2. The results of Kolmogorov-Smirnov test and Shapiro-Wilk test for study of normality of data

	Mean \pm SD	Kolmogorov-Smirnov test <i>p</i> -Values	Shapiro-Wilk test <i>p</i> -Values
Emotional well being pre-test	23.11 \pm 4.97	0.037	0.016
Emotional well being post-test	14.75 \pm 5.58	0.2	0.45
Emotional well being test difference		0.119	0.058

Table 3. The results of Wilcoxon test related to emotional well being

Main variables test result		Mean of emotional well being	<i>p</i> -Value
Before intervention	Control group	23.21	0.777
	Intervention group	23	
After intervention	Control group	18.78	0.001
	Intervention group	10.71	
Before intervention	Intervention group	23	0.001
	Intervention group	10.71	

Discussion

In spite of recent advances in medical and psychological treatments, addiction is still one of the most challenges facing the human generation. Numerous psychological interventions have been made to improve the problems of drug dependent individuals, which the present study is also one of them [7]. As concerns the past studies, the present research project was conducted with the aim of determining the extent of team training of life skills and behavioral change on the emotional well being of crystal methamphetamine dependent individuals using the before-after plan.

The results of this study well showed that the emotional well being of dependent individuals improves through behavioral therapy and team therapy. The emotional well being in this study was studied using Bell adaptability questionnaire in the emotional adaptability aspect. Promotion of interpersonal relations, social adaptability, positive attitude toward life, the individual's way of controlling mood problems, acquiring life control skills and changing risky behaviors, self assertion, adaptive control of stressful situations and increasing self-control feeling were among life skills that were focused in this study. These skills were taught to the individuals who were addicted to crystal methamphetamine stimulant substances in the form of team training of behavior change. As mentioned in results, the score gained on emotional health after applying these skills was less than the scores gained before intervention measures (lower score is indicative of higher emotional well being) which proves enhanced emotional well being of these individuals. The difference of emotional health was statistically significant before and after intervention measures to change the behavior. This significance has been shown in table 2. Based on the statistical analysis using Wilcoxon test which its results are summarized in table 4, teaching life skills and changing behavior was effective in improving emotional well being. Teaching life skills was highly helpful to prepare the individual gain control of life, self assertion and gain self confidence and also change motivation. These trainings are also contributive to prepare the individual based on substantial changes in the addictive behavior in order to achieve balance in life. Various studies investigated the impact of training life skills on specific aspects of the issues relating to psychological status. For example Sajedi et al. conducted a study under the title "the impact of teaching life skills on interpersonal relations, self esteem and self assertion in blind girls". The results of the study proved that teaching these skills could be effective in improving self esteem and self assertion in these individuals, but the trainings left no impact on enhancing interpersonal relations [14]. Rezaei et al. investigated the impact of teaching life skills on stress and the methods of fighting stress in juveniles in pseudo-family centers, and came to the conclusion that teaching life skills could boost ways of controlling stress, excitement-based coping, avoidance-based coping and problem-based coping in intervention

group [9]. Refahi made a study to define strategies to prevent social traumas of juveniles by means of teaching life skills. He taught the skills- facing the problem, solving the problem, decision making, communication skills and self-awareness to the parents and the juveniles for 4 months. The results of his study proved that teaching these skills will lessen negative self-image and suicidal thoughts in the juveniles with a history of committing suicide but there will be no outcome concerning escaping thoughts in the juveniles with experience in escaping [15]. Group therapy is used as a psychological treatment to change non-conforming behavior, direct the thoughts and feelings in the individuals in order to achieve better and more effective results. In this relation, Dortaj et al. conducted a study under the title of "the impact of cognitive behavioral group therapy on social adaptability of crack abuse dependent individuals". In this study, social skills, the impact of narcotic substances, improving courage and self assertion, methods of preventing the recurrence and solving the problem were taught. The results of the study indicated that group therapy is effective in social adaptability of crack dependent individuals and also promoting their general health [16]. Although no similar study of the same kind in this research was found, the abovementioned studies found it effective to teach life skills for promotion of emotional well being and social adaptability. In general terms it could be asserted that the present study is similar to the results of the mentioned studies. This is whilst the research methods applied in the conducted studies were different.

In the present study, a before-after plan was used to carry out the research, which is considered a limitation taking into account the weaknesses of this type of study in assessing the mental-personality characteristics. Of course this study paves the way to commence double blind clinical trial to make research in this area. In this study, the characteristics related to research sample such as the history of dependence on amphetamines, the number of quits, education, age and marital status were specified, which none of these variables influenced the emotional health of the individuals under study. As many investigations support the effectiveness of the method of teaching life skills on numerous psychological problems of drug dependent individuals, we can conclude that this educational method beside medicine could help improve the patients' situation and control and solve their problems, and this proves generalizability of this therapeutic method. This study could be used as a guide for more research on the issue of emotional well being in the drug dependent individuals, and also as a basis for more investigations on the methods of teaching life skills and its impact on addiction to other substances. Although addiction and abuse could influence various aspects of mental health such as emotional well being of the dependent individuals [17], teaching life skills and behavioral change could lead to their emotional health enhancement. Therefore it is necessary to encourage these

individuals to participate in team sessions of changing behavior and training life skills.

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Authors' Contributions

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

Conflict of Interest

The authors declare no conflict of interest.

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