

# The Effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) Group Oriented on Reducing Male Patients' High Risk Behaviors

Somayeh Mehri, Sara Shokri\*

*Department of Clinical Psychology, Islamic Azad University, Iran.*

\*Corresponding author. Tel: 989015121920; E-mail: sara.shakari@yahoo.com

**Citation:** Mehri S, Shakari S. The Effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) Group Oriented on Reducing Male Patients' High Risk Behaviors. *Electronic J Biol*, 12:4

**Received:** June 09, 2016; **Accepted:** July 13, 2016; **Published:** July 20, 2016

## Case Report

### Abstract

Risk behaviors are behaviors which endanger people's health and wellbeing. The aim of this study was to determine effectiveness of mindfulness-based cognitive therapy group oriented on reducing male patients' high risk behaviors. The research design was quasi-experimental study with pretest-posttest control group. The population consisted of all men substance abusers referred to substance abuse treatment Kermanshah Central Prison are treated with methadone, that after implementation of high-risk behaviors, 40 clients that score they were chosen above average and placed randomly into two experimental and control groups (20 patients) and the experimental group received intervention program of 10 sessions of cognitive therapy based on mindfulness-based model. After training both experimental and control groups were tested again. Data analyzed were by using descriptive statistics (mean and standard deviation) and inferential statistics, covariance analysis with SPSS-19. Results showed that mindfulness-based cognitive therapy leads to reducing high-risk behaviors in the experimental group compared to the control group. Based on the study findings, it can be concluded that mindfulness therapy can be useful as a treatment to reduce high risk behaviors.

**Keywords:** High-risk behaviors; Cognitive therapy; Mindfulness.

### 1. Introduction

Addiction or drug dependence is one of the biggest health problems in the present world that causes serious threat to social, economic and cultural structures that one of the issues that are important psychological dimension of drug-dependent persons in their interaction with the environment, which is adaptive mechanisms of behavior that some of them are kind of cause and effect is addiction. Behaviors that the consequences could be very unpleasant for them or bring other people and are known as high-risk behaviors and actions such as violence, self-

mutilation, tattoos, joint injections, unprotected sexual behavior can be understood from this category [1].

Technological changes, the rapid social and cultural societies, can cause many problems, physical, psychological, social and risky behavior and social damage. Survey conducted by the Center for Disease Control of the Ministry of Health, the speed is increased risky behavior [2]. Risky behavior in terms of injuries and irreparable damage, educational, psychological, medical, social, legal, health and economic, risk of unusual behavior and high-risk sexual contact and increase the risk of sexually transmitted diseases, especially AIDS and cost of time and money behavior is remarkable [3-5]. Mindfulness of consciousness moment by moment, continuously and non-evaluative and refers to mental processes include continuous awareness of physical sensations, perceptions, emotions, thoughts and imaginations. Mindfulness-based cognitive therapy aims to establish different relationship with attitudes or thoughts, feelings and emotions that including maintaining full attention and having non-judgmental attitude and acceptance [6]. Studies have shown that mindfulness by promoting acceptance and understanding leads one experience drug abuse is prevention of recurrence and range of problems such as borderline personality disorder, substance abuse, trauma and depression has positive effect [7].

Mindfulness in treatment of generalized anxiety disorder and alcohol rehabilitation prisoners as important part of people who quit addiction problems and results it has proven useful [8].

Previous research showed that pattern of AIDS harm reduction and drug therapy based on behavioral counseling in treatment and prevention of relapse is effective in controlling of HIV [9]. The conscious mind is knowledge and insight into cognitive processes and their own capabilities and effective strategies deal with tasks and the skills. Increased knowledge and awareness of conditions careful individual learner has to be able present in all circumstances in present time and have the advantage of position [10].

Mindfulness training reduced psychological distress and symptoms of anxiety and depression followed and improved psychological well-being, physical, emotional and spiritual, improve sleep quality and physical symptoms can be reduced [11-14]. The role of affect and mood mindfulness suggests that self-regulation behavior and positive emotional states and by combining vitality and clear viewing experience can create positive changes in happiness and well-being [15].

Baer defined mindfulness as observation without judgment than current progress in internal and external stimuli and their incidence [16]. Mindfulness does not judge and fosters emotional or physical difficulties when person is confronted with situation, not judgments of experience, more than what who sees, and what it should be and becomes aware. However, this acceptance of pleasure and painful experiences caused not accept again what is not morally acceptable to admit but behave differently at reception. Each purposefully and consciously practice can increase capacity information processing system.

Mindfulness-based cognitive therapy is promising new approach in explaining. Mindfulness training involves learning new cognitive and behavioral strategies to focus attention, prevention of mental ruminations and trend is worrisome responses as well as development of new ideas and reduces unpleasant emotions.

Today one of the most important risk behaviors are important factors endangering public health and due to problems such as HIV and other health issues that can be caused by high-risk behaviors and need for prevention and risk behaviors except for fact that suicide is higher in men than women and by taking large number of drug addicts in world and Iran. This study seeks to use new treatment approach called mindfulness and its possible effect on emotions and behavior and role of these skills in more appropriate interventions to reduce high-risk behaviors and prevention and treatment of addiction and risky behavior is reduced. By reducing physical and psychological consequences of risky behaviors and these consequences will decrease costs of treatment. Mindfulness approach in study of psychology recently entered and psychotherapists in Iran have little in this field of medical education and little research has been used. The aim of this study was to determine effectiveness of mindfulness-based cognitive therapy group oriented on reducing male patients' high risk behaviors.

## 2. Method

The research design was quasi-experimental with pretest-posttest control group.

The population consisted of all males with substance abuse in Kermanshah Central Prison who used methadone treatment. According to research static

population with entry criteria including: education (at least cycles), age (18-40), gender (male), lack of dependence on drugs and psychological services and medicine (psychiatry), minimum prison duration (3 months). After separating patients from clinical interviews and questionnaire survey of risky behaviors of who received high marks in high-risk behaviors selected and randomly assigned to two experimental and control groups of 15 people (mindfulness intervention and control) groups [17]. The experimental group received mindfulness-based cognitive therapy (with duties and responsibilities in ward during meetings and group discussions) in 10 sessions (each session lasting 60 to 90 min) in Kermanshah Central Prison and then post-test was taken. Meetings instructions was based on mindfulness-based cognitive therapy for depression guide books of Teasdale et al. [18] and Narimani et al. [19]. After running test data were analyzed by using descriptive statistics (mean and standard deviation) and inferential statistics, covariance analysis with SPSS 19.

### 2.1 Risk behaviors scale

This scale was designed by and information about person and number of risky behavior, include running away from home, smoking, drugs and psychotropic substances, alcohol and gender and early in person's arrest [17]. The questionnaire included 11 items that show individual risk behaviors. Each question has five options that can be scored based on a 0 to 4 and degrees to determine risk behaviors. The maximum score on this questionnaire 44 and the minimum is zero. Reliability of 0.71 obtained using high-risk behaviors.

## 3. Results

Most of the experimental group aged 26 to 35 years (35%) and high school graduates (45%) and those frequently disengagement has yet to divorce have not (50%) and about 45% of them due to pressure of family (family) were treated in terms of drugs, people who have used tramadol. Most people in the control group aged 18 to 25 years (45%) and education cycle (55 %) and 35 percent of them due to health complications for treatment with the drugs, most of them (45 %) of heroin and hashish. Of the economic situation both in average and in terms of employment were unemployed.

As can be seen in Table 1, F for test and pretest group interaction was not significant at 0.05. This means that there is significant difference between coefficients is established as result of assumption of homogeneity coefficients.

The results of above Table 2 showed that by eliminating effect of pretest variable and calculated according to F factor (11.08) observed that there is significant difference in post-test between adjusted mean scores of high risk behaviors of participants in terms of membership groups (experimental and control)

**Table 1.** Results of analysis of variance to the same slope of the regression line.

	Sum of squares	Df	Mean of squares	F	Sig.
Group interaction and pre-test of smoking	49.67	2	24.83	1.95	0.18
Group interaction and pre-test of unsafe sexual activity	10.17	2	5.08	2.17	0.14
Group interaction and pre-test of running away from home	25.63	2	12.81	1.22	0.25
Group interaction and pre-test of drug and psychotropic substances	2.67	2	1.33	1.04	0.36
Group interaction and pre-test of high risk behaviors in general	45.63	2	22.81	2.17	0.38

**Table 2.** Results of analysis of covariance to determine the effect of mindfulness-based cognitive therapy (MBCT) on reducing risk behaviors.

Variable	Statistical Indicators	SS	DF	MS	F	Sig.	Size effect
High risk behaviors	Pre-test	12.28	1	12.28	3.97	0.053	0.097
	Group	34.22	1	34.22	11.08	0.002	0.23
	Error	114.26	37	3.08			
	Total	4092.00	40				

( $P < 0.05$ ). Thus, according to results concluded use of teaching mindfulness-based cognitive therapy is effective in reducing risk behaviors.

The results of above Table 3 showed that by eliminating effect of pretest variable and calculated according to F factor (26.39) observed that there is significant difference in post-test between adjusted

according to F factor (10.83) observed that there is significant difference in post-test between adjusted mean scores of unsafe sexual activity of participants in terms of membership groups (experimental and control) ( $P < 0.05$ ). Thus, according to results concluded use of teaching mindfulness-based cognitive therapy is effective in reducing unsafe sexual activity.

**Table 3.** Results of analysis of covariance to determine the effect of mindfulness-based cognitive therapy on reducing smoking.

Variable	Statistical Indicators	SS	Df	MS	F	Sig.	Size effect
Smoking	Pre-test	19.98	1	19.98	19.37	0.001	0.34
	Group	27.22	1	27.22	26.39	0.001	0.41
	Error	38.16	37	1.03			
	Total	2891	40				

mean scores of smoking of participants in terms of membership groups (experimental and control) ( $P < 0.05$ ). Thus, according to the results concluded the use of teaching mindfulness-based cognitive therapy is effective in reducing smoking.

The results of the above Table 4 showed that by eliminating effect of pretest variable and calculated

The results of above Table 5 shows that by eliminating effect of pretest variable and calculated according to F factor (17.21) observed that there is significant difference in post-test between adjusted mean scores of drug and psychotropic substances of participants in terms of membership groups (experimental and control) ( $P < 0.05$ ). Thus, according to results concluded use of teaching mindfulness-

**Table 4.** Results of analysis of covariance to determine the effect of mindfulness-based cognitive therapy (MBCT) on reducing unsafe sexual activity.

Variable	Statistical Indicators	SS	df	MS	F	Sig.	Size effect
Unsafe sexual activity	Pre-test	0.63	1	0.63	0.84	0.36	0.022
	Group	8.1	1	8.1	10.83	0.002	0.22
	Error	27.66	37	0.74			
	Total	2168	40				

**Table 5.** Results of analysis of covariance to determine the effect of mindfulness-based cognitive therapy (MBCT) on reducing drug and psychotropic substances.

Variable	Statistical Indicators	SS	DF	MS	F	Sig.	Size effect
Drug and psychotropic substances	Pre-test	34.36	1	34.36	1.82	0.18	0.047
	Group	24.02	1	24.02	17.21	0.001	0.46
	Error	27.58	37	0.74			
	Total	3133	40				

based cognitive therapy is effective in reducing drug and psychotropic substances.

The results of the above Table 6 showed that by eliminating effect of pretest variable and calculated according to F factor (32.22) observed that there is significant difference in post-test between adjusted mean scores of running away from home

risky behaviors such as smoking, alcohol and drug use, unsafe sexual relations, truancy, running away from home or find other delinquent behavior that is harmful to their physical and mental health is a high-risk behaviors in terms of results for life, health and mental and social growth brings people such as mental diseases such as depression, illness and

**Table 6.** Results of analysis of covariance to determine the effect of mindfulness-based cognitive therapy (MBCT) on reducing running away from home.

Variable	Statistical Indicators	SS	df	MS	F	Sig.	Size effect
Running away from home	Pre-test	1.36	1	1.36	1.82	0.18	0.047
	Group	24.02	1	24.02	32.22	0.001	0.46
	Error	27.58	37	0.74			
	Total	3133	40				

of participants in terms of membership groups (experimental and control) ( $P < 0.05$ ). Thus, according to results concluded use of teaching mindfulness-based cognitive therapy is effective in reducing running away from home.

#### 4. Discussion and Conclusion

Today, studies show that people with multiple stress factors, such as fear and anger, addiction, depression, low self-esteem, anxiety, frustration and conflict sooner or later in severe abnormalities, mental and physical fall social [20]. Tendency to

even death, AIDS and sexually transmitted diseases, leaving education, truancy, lack of educational and career success and involvement in various crimes is important [21-23]. Drug addicts are a high risk group. Knowing how to do high-risk behaviors and factors affecting them as well as short-term or long-term factors that can be of great help to society is reduced [24]. Naturally, accurate and practical prevention or treatment of addiction reduce risky behavior and what treatments will be more stable and longer and is more scientific further reduction of risk behaviors with physical and psychological consequences of

these measures and the related costs of treatment to reduce the consequences [25].

Teaching other subjects is one of ways that can reduce high-risk behaviors. Mindfulness training is good choice that can be used. MBCT focuses on changing relationship between person with thoughts to thoughts that explicitly target content [18].

Mindfulness skills emphasizes observer and monitoring could desire than to treating patients with range of inner experiences even bad experience [26].

Practice mindfulness may serve as method of exposure that vigilance and observer disturbing thoughts and feelings without judgment leads to reduction reaction and loss avoided. Zgierska et al. studied found that mindfulness-based methods are effective and safe [27].

In fact, many therapists, important feature of mindfulness therapy were combined to create useful way to change behavior drug-dependent individuals.

The people using this treatment aimed to change interpretation of situation, stress. These therapists try to help distinguish serious problems from imaginary problems or exaggerated. The change of attitude ability to control emotions and harness them to be considered by combining techniques of mindfulness, cognitive therapy and behavioral techniques can provide cognitive ability to deal with dangerous situations raise and behavioral skills necessary to deal with such situations. Practice mindfulness teach people to make change and live events for automatic guidance it also allows them to reduce harmful cognitive processes that constantly repeated and unwanted. The problem of drug abuse is problem of psychological, social and family has become global scope. Treatments that used to be effective, sustainable and inclusive and valid to guarantee early recovery of patient are required to maintain positive effects. Mindfulness-based cognitive therapy group method can solve this crisis have special place.

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