

The effectiveness of mindfulness based on cognitive therapy on impulsivity in individuals with drug dependency under maintaining treatment with methadone

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Abstract: This research was conducted to investigate the effectiveness of mindfulness based on cognitive therapy on impulsivity in individuals with drug dependency under maintaining treatment with methadone was performed. The research sample was consisted of 30 patients under drug treatment associated to methadone in the methadone maintenance treatment centers. The samples were selected randomly and in the two groups (experimental and control) and with the Semi-experimental method and pretest and posttest with control group were investigated. The experimental group was provided mindfulness training based on cognitive therapy but was not provided any training in the control group. collection tool of data was included the Barratt Impulsiveness questionnaire. Data by using the statistical test analysis of covariance was analysis. The results showed that the mindfulness training based on the cognitive therapy have a significant impact on Impulsivity variable ($P < 0.05$). The results showed that to reduce impulsivity in the individuals undergoing drug treatment with methadone maintenance can be used mindfulness training based on the cognitive therapy.

Key words: mindfulness, cognitive therapy, impulsivity, methadone.

Introduction

The substance abuse in the form of addiction nowadays has become to one of the most serious problems of human society (Afroz and Vasimeh, 2002). Addiction are involve the all aspect of individual and social health. Addiction in addition to the physical aspects severely affected the mental aspect of individuals. Dysfunctional thoughts, behavior change and even the hallucinations and delusions is the result of addiction (Doostian, Bahmani, Azamy and Godini, 2014).

In the recent years, various treatment programs for addiction treatment has been introduced, programs are include medical and nonmedical program. The medication schedule are including the maintenance with Methadone and Buprenorphine drug. In the consumption of opioid the medical treatment is the use of methadone medical (Kamarzin, Zarey and Brooke Milan, 2012).

But the research has shown that the medication treatment alone cannot be the complete and comprehensive treatment (Marmany, 2007; quoted in Sayfi Gandomani, Saffarinia and Kalantari Meybodi, 2013). For this reason psychological treatments as the associated therapy for these patients in the treatment centers are used. Among psychological treatment, cognitive-behavioral approaches as an effective approach in the treatment of this disease has been demonstrated in the many researches (Cheragi-2011).

The third wave of psychotherapies that are known to the postmodern treatment age, it is believed that cognition, and emotions should be considered in the context of phenomena conceptual. For this reason, rather than approaches such as cognitive – behavioral that it corrected the dysfunctional cognition and beliefs up to the emotions and behavior is corrected, here to the patients is trained that the first step is to accept own emotions and live here and now get the more psychological flexibility. For this reason in these traditional treatments of cognitive behavioral techniques combined with mindfulness (Johnson, Tom and

Frybirek, 2015). The method mindfulness due to attention to the concepts such as the acceptance, raise awareness, desensitization, the presence of the moment, observer without judgment, confront and release can realize while reducing the symptoms and consequences of exclusion, the effectiveness of treatment and prevention of dysfunctional behaviors (Vitkio otiz, Marl and Akers, 2005; Kiani, Ghasemi and Pourabbas, 2013).

Impulsivity is the major axis in the diagnosis the kind of clinical disorders such as substance dependency. Impulsivity is refers to "the behavior is done with low and inadequate caution". Impulsivity generally refers to the dysfunction trait and is associated with acts such as suicide that it may be was the criminal or angry in terms of physical harm to the oneself or is inappropriate with the accepted social standards (Sai Naha, 2011).

Findings of studies show that the cognitive-behavioral therapy based on the mindfulness on the psychological dimensions of substance dependent individuals are effective (Jandaghi, Neshat dost, Kalantari and Jabalameli, 2013, Kiyani, Ghasemi and Pourabbas, 2013; Kamarzarin, Zareh and Milan, 2013). According to the mentioned cases the purpose of this research are the cognitive-behavioral therapy based on the mindfulness on the efficacy in individuals under treatment with methadone.

research methodology

investigate method: this research in terms of purpose is the kind of applied research and in terms of implementing is the research semi experimental plan with pre-test - post-test.

That the diagram plan is as follows:

GROUPS	PRE-TEST	INDEPENDENT VARIABLE	POST-TEST
G _E	T ₁	X	T ₂
G _C	T ₁	-	T ₂

Statistical population: Statistical population are consisted of all individuals under treatment with the methadone in the Islam abad garb city in the first half of 1394 year.

Sampling method: sampling method in this research were the available sampling method. The lack of people's willingness to participate in this research were used of the alternative methods. The sample size were selected 30 individual according to previous studies that randomly assigned into two groups of 15 individual the experimental and control groups.

Performance methods: Considering that this research is the semi-experimental study (pretest - posttest) and the type of the training workshop, that 30 individual were selected randomly these 30 subjects randomly were divided into two groups of 15 individual, including 15 individual experimental group and 15 individual to control group. Before the training workshop from both groups were asked to respond to research questionnaires (pre-test). In the following only for experimental group were held the training courses.

Method of treatment: experimental intervention was as follows.

Session	Session goals
first	Mindfulness is cause exit of automatic guidance, training, raisins and focus on it.
second	exercises thoughts and feelings, sitting meditation exercises, exercises of physical check.
Third	exercises of seeing and hearing, exercises of walking with presence of mind, physical checking, focusing on breathing.

Fourth	exercises the meditation of breathing, body, meditation noise and thoughts.
Fifth	allowed to attend to experience as they are without judgment about them, meditation.
Sixth	Behavior and the negative thoughts are limited our contact with experience although not the truth.
Seventh	If they can learn to practice and do care of yourself. Doing meditation.
Eighth	Mindfulness helps to have a balanced life, doing meditation.

Research Tools

1: Barratt Impulsiveness Questionnaire

This questionnaire was created in 1959 by Barat. The current version is a review of the Eleventh of this scale. This test is the scale with 30 question That all options with four-point Likert scale are scores and three factors of cognitive impulsivity, motion impulsivity and non-planning are investigate, the internal reliability for this scale is estimated 0.83 for the entire test. The validity of this questionnaire with the test method of retest in the study of Kabal et al (2010) 0.84 reported. Cronbach's alpha coefficient of this questionnaire on the many researches has been reported top of 0.80 (Patton et al., 2010). in Iran Ekhtiari (2010) have normalization this questionnaire and obtain the alpha coefficient for this scale 0.78.

Data analysis method

To analyze the data was used the descriptive statistical indexes such as mean, standard deviation and dedicational statistical tests such as analysis of covariance.

Findings

As in Table 1 descriptive index are shown the average of impulsivity in the experimental group the pre-test and post-test 72.46 and 74.46 and control group the pretest and posttest is 73.60 and 74.

Table 1: Mean and standard deviation impulsivity

variable	Group	Stage	number	mean	standard deviation
impulsivity	Experimental	Pre-test	15	72.46	7.42
		Post-test	15	74.46	6.35
	control	Pre-test	15	73.60	7.52
		Post-test	15	74	6.72

To analyze the data related to this hypothesis from the ANCOVA analysis of covariance was used.

In this analysis the average of post-test in the experimental group was compared with the average of the control group and the pre-test scores were used as covariates variable. Of course observing the homogeneity condition is necessary for the slope of the regression the results of which are reported in the following.

Table 2: the results of variance analysis the variable to investigate the homogeneity regression slopes in the impulsivity post-test in the experimental and control groups

Source	SS	Df	MS	F	Sig
Indicators					
groups	8.863	1	8.863	1.537	0.226
Pre-test	1044.39	1	1044.39	181.133	0.000
impulsivity					
Group x pre-test	3.311	1	3.311	0.574	0.455
Error	149.913	26	5.766	-	-

As	Total	166307.00	30	-	-	-
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well as can be seen in Table 2 the interaction between group and impulsivity pre-test is not significant. In other words, the data support the hypothesis of homogeneity of regression slopes ($P=0.455$ and $F=0.574$).

Table 3: Test Levin variances homogeneity in the experimental and control groups

Variable	F	df2	df1	Sig
Impulsivity	1.7	28	1	0.350

The results forth in Table 3 show that the Levine test is not significant in the impulsivity. Thus the variance between two groups the experimental group and the control group were not different significantly in the impulsiveness and the assumption of homogeneity of variances is confirmed.

Table 4: Results of the covariance analysis of the variable to investigate the differences of impulsivity post-test of the experimental and control groups

Source Indicators	SS	Df	MS	F	sig
Pre-test impulsivity	1046.242	1	1046.242	184.360	0.001
group	139.534	1	139.534	24.588	0.001
Error	153.225	27	5.675	-	-
Total	166307.00	30	-	-	-

As the seen in Table 4 there is a significant difference after adjusted the impulsivity pre-test scores between the two groups of experimental and control. Given the amount of F and significance level we can say that the null hypothesis based on the lack difference between the two groups is rejected.

Minor square Beta 0.47 show that there was the strong relationship between the score of before and after the intervention in the impulsivity tests that is shown with slight amount 0.47. In fact, the pre-test variable are explain the 47% of the variance in the dependent variable.

Discussion and conclusion

For investigate this hypothesis that mindfulness based on the therapy cognitive in reducing impulsivity of individuals with medicinal dependence under treated with methadone maintenance is effective was used from analysis of covariance that the results of this test showed that this effectiveness is significant. These results were consistent the result of Bakhtiari and Abedi (2013), Shahrestani, Ghanbari, Nemati and Rhahbardar (2013), Ridet, Biret, Dimmiyer, Goloon, Reese, Visser et al. (2012) and Lo oas and Barski (2010). All of these studies in their investigation showed that mindfulness based on the therapy cognitive can be followed. Analysis the covariance of the present study data also was speaks about this topic the mindfulness based on the therapy cognitive has a significant impact on reducing impulsivity individuals with medicinal dependence under treatment methadone.

To explain these results can say that the individuals with chemical dependent is always under a certain psychological pressure and this makes always impulsivity is evident in the their behavior. Impulsivity cause can was the loss of the present time and the problems arising of the past. Mindfulness based on cognitive therapy (MBCT) and with emphasis on the presence in the moment and the presence of in the present time and get away from the past and damage through the past memories and mental ruminations can cause to be reduced impulsivity. A hasty judgment, and judgments, including other factors that could lead to impulsivity. Mindfulness-Based Cognitive Therapy (MBCT) with training the arbitration without judgment are cause to setup the impulsivity cycle. Meditation and relaxation that is from the foundation of

mindfulness can be mastered the individuals in the present time and are cause to reduce the impulsivity. The cognitive aspect of mindfulness-based cognitive therapy education, with the influence the type of commentary on ABC cycle can be reduced the impulsivity.

Acknowledgment

My grate gratitude goes toward all of dear persons who helped me such as mu respected supervisor and all honor participants of this study.

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