

Abstract

Objective: At present, substance use disorders and its unpleasant consequences are among the major public health problems around the world. This study aimed to compare the effectiveness of treatments based on Levinson and Matrix's models in the psychological well-being of drug dependent people. **Method:** A quasi-experimental research design was employed for the conduct of this study. The sample size consisted of 45 male substance abusers who were selected via convenience sampling and were then randomly assigned to three groups, i.e. experimental group one (n = 15), experimental group two (n = 15), and control group (n = 15). For data collection purposes, Ryff Scales of Psychological Well-Being (short-form) was used in pre-test, post-test, and follow-up stages. **Results:** The results proved the effectiveness of both methods in promoting the psychological well-being scores ($P < .001$). After two months of follow-up, the stability of the results in the experimental groups was proved. **Conclusion:** According to the obtained results, it can be concluded that Levinson's Intervention Program has been more effective than Matrix's. Thus, it is recommended that psychologists and counselors working in substance abuse treatment centers use Levinson's Intervention Program rather than Matrix's treatment method in addition to using medication for the improvement of physical symptoms to psychological well-being.

Keywords: Levinson model, psychological well-being, Matrix therapy

On the Comparison of the Effectiveness of Treatments based on Levinson and Matrix's Models in the Psychological well-being of Drug Dependent People

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Research on Addiction Quarterly Journal of Drug Abuse

Presidency of the I. R. of Iran
Drug Control Headquarters
Department for Research and Education

Vol. 10, No. 37, Spring 2016

<http://www.etiadjohi.ir>

Introduction

Addiction is one of the most complicated and complex social problems. Addiction to substances leads to making changes into the thoughts, emotions, and behavior and, thereby, it is one of the most egregious psychosocial injuries that can easily destroy the foundation of one's individual, familial, and social life (Chaudhary, Pandya, Ghosh & Nadkarni, 2013). Today, addiction is considered among the most problematic injuries both at the international level and at the national level that threatens human society. The growing trend of addiction has affected the foundations of societies in various aspects, including economic, social, and cultural domains. For this reason, this issue has received the attention of many experts, officials, and the public. Drug use has become a widespread international problem although type of drugs being used and the way they are used vary from one country to another country. Many organizations of the United Nations have been mobilized to execute preventive programs against drug abuse and illicit use of drugs because this phenomenon is a threat to public health and can damage the economic and even political stability of nations (Smout, Longo, Harrison, Minniti, Wickes & White, 2010). Substance abuse has begun in the world long time ago and its consumption has witnessed an increasing trend among substance abusers in recent years (Reynolds, Mahajan, Aalinkeel, Sykes & Schwartz, 2011).

The main cause of addiction in some individuals is their inability to cope with the hardships and their lack of psychological well-being, which direct them to take refuge in addiction. Well-being deficiency is considered as the cause or effect of addiction and plays an important role in individuals' relapse into addiction (Hart, Morrison, Batty, Mitchell & Smith, 2010). Studies have shown that drug use among adolescents and young people is directly linked with wrong attitudes. The exchange of false information among peers as well as the advertising of drug market profiteers have made this wrong belief common among young people that drug use for fun is not addictive and, thereby, this problem causes drug use not to be considered problematic (Reback & Shoptaw, 2014). However, brain imaging techniques have shown that dopamine neurons still remain damaged in drug users even after three years and these damages are irreversible in many cases. Cognitive disorders, including deficits in attention functions process are among the serious complications of drug abuse that can emanate from the continuous use of drugs (Joe, Rowan-Szal, Greener, Simpson & Vance, 2010). On the other hand, drug use addiction is one of the most significant social trauma that can easily sabotage the foundations of individual, familial, social, and cultural life of a society, jeopardize the dynamism and activity of humans and labor as well as people's motivation and interest. In addition, addiction indirectly causes loss of human resources of the community, as well.

Substance abuse and addiction is a complex disorder that is followed by biological, psychological, social, and spiritual causes and effects (Hossein al-Madani, 2012). Substance abuse is the problem that about fifty million people worldwide are involved in at present and it affects the psychological well-being of addicted people. Substance abuse brings about certain problems that should be addressed directly in treatments. For example, drug users experience problems with memory and concentration, which make it difficult for them to have suitable planning for future activities and desired time management. Thus, they cannot avoid the situations that lead them toward drug use (Keoleian, Stalcup, Polcin, Brown & Galloway, 2013).

Matrix psychological treatment is currently the most effective method for drug dependence treatment that was introduced to the world of medicine for the first time by researchers at the University of California, America. This therapeutic method has been specifically considered for patients with substance abuse and is a kind of cognitive-behavioral therapy that has been presented by Department of Mental Health and Substance Abuse Services in the form of treatment packages. The Iranian matrix model has been presented by professors of Center for Addiction Studies with some changes made into its American version in line with social and cultural aspects of Iran in the second half of 2009 (Kafrahi, 2010).

Psychological and personality problems have a two-way relationship with addiction in such a way that the comorbidity of substance abuse and mental disorders has been reported. Several studies have reported the higher severity of substance abuse and a worse prognosis treatment in the comorbidity between substance abuse and other mental disorders. Indeed, one of the factors that leads to treatment failure and relapse is the ignorance of mental disorders before and after drug use abstinence (Dinas, 2011). Addiction is a biological, psychological, and social disease. Several factors are effective in the etiology of substance abuse that lead to the initiation of drug use in interaction with each other and then addiction emerges. Understanding all the underlying causes and factors leads to the purposeful planning of the prevention, detection, treatment, and follow-up programs (Kiluk, Nich, Babuscio & Carroll, 2010). Unfortunately, no effective treatment that can be useful for drug addiction is still known despite the efforts of the scientific community because addiction is among the diseases that actually represents three poles of human beings, i.e. biological, psychological, and social ones. This means that man has been composed of three dimensions and his growth and the fall is naturally influenced by these dimensions as well.

Therefore, treatment methods should cover different parts in order to successfully deal with diseases such as addiction; in other words, the psychosocial dimensions of human should receive attention as much as the biological dimension of human or even more than that. In recent years, great advances have been made in the area of treatment, such as medical,

psychological, and social interventions (Targher, Chonchol, Zoppini, Abaterusso & Bonora, 2011).

Researchers have reached the conclusion that the three-quarters of the individuals who have completed the treatment period have experienced relapse into drug use within one year after completion of the treatment (Witkiewitz, Bowen, Douglas & Hsu, 2013). Despite extensive research efforts to date, no proven medical treatment exists in connection with substance use. Some medications, such as disulfiram, naltrexone, baclofen, topiramate, and others have shown the preliminary evidence for their effectiveness. However, none of them have been confirmed by authoritative organization to be effective for the treatment of substance dependence (Abd-Elwahab & Amin, 2012).

Cognitive-behavioral therapy is among non-pharmacological treatment methods. This therapy has been used for addicts in numerous clinical studies and evidence suggests its effectiveness. The results clearly show that cognitive-behavioral approach has been effective in solving addiction problems and desperation issues and can be used in the treatment of addiction; it has also been effective in reducing addiction relapse and reducing drug use (Godley, Garner, Passetti, Funk, Dennis & Godley, 2010). In fact, one of the main goals of cognitive-behavioral therapies is to help addicts stay in abstention period and not relapse into addiction (Kennedy, Gross, Whitfield, Drexler & Kilsta, 2012). In recent years, the number of drug treatment methods has increased and the scientific evaluation of cognitive-behavioral therapies on random samples has lent support to the safety and efficacy of these interventions regarding the continued abstention periods (Khajeamiri, Faizi, Sohani, Baheri & Kobarfard, 2010). For example, Rathod, Wilcock, Brabban & Cromarty (2014) assessed the effectiveness of cognitive-behavioral therapy in the psychological health status of alcohol dependent participants and randomly assigned 73 patients to two groups, i.e. cognitive-behavioral therapy without naltrexone and cognitive-behavioral therapy with naltrexone. The results of their study showed that the patients who had completed the cognitive-behavioral therapy program experienced a significant improvement in their health status and psychological well-being. In addition, it was also revealed that the addition of naltrexone consumption did not make any changes into the improvement of psychological indicators of treatment. Similarly, Bahadorzade, Jajarmi, Jalalabad & Eydi-Baygi (2014) evaluated the effectiveness of cognitive-behavioral therapy in anxiety between two 20-participant groups of the addicts, i.e. the group with successful cessation of drug use and the group who had referred to Kosar residential institution for psychological rehabilitation. In that study, the experimental group received twelve 90-minute sessions of cognitive-behavioral therapy (once a week) while the control group did not receive any intervention. The results suggested no significant difference between the two groups in terms of anxiety.

Matrix model is known as one of the most efficient methods. Levinson's model is another psychological method that has been used less in the field of addiction. This study aimed to compare the effectiveness of treatment methods based on Levinson and Matrix's models in the psychological well-being of drug dependent people. In addition, there is higher prevalence of mental disorders among drug addicts than the general population and this is the reason for relapse into substance abuse. Hence, the type of treatment used for them should be different from the treatments of other mental disorders. Therefore, it seems necessary to conduct this study in order to compare and test the effectiveness of psychological treatments in the promotion of addicts' psychological well-being. This study aimed to evaluate and compare the effectiveness of Levinson's model and Matrix treatment method in the psychological well-being of drug-dependent individuals.

Method

Population, sample, and sampling method

A quasi-experimental research design along with pretest/posttest and control group was employed for the conduct of this study. All the substance dependent people who were under abstinence terms and who had presented to addiction treatment centers in Kermanshah in 2015 constituted the statistical population of this study. The sample size consisted of 45 male substance abusers who were selected via convenience sampling method and were then randomly assigned to three groups, i.e. experimental group one ($n = 15$), experimental group two ($n = 15$), and control group ($n = 15$). The inclusion criteria for participation in this study were: being male, being married, holding at least secondary school education degree, and aged in the range of 19 to 45 years whereas the exclusion criteria included suffering from certain mental and physical problems. It should be noted that the posttest was administered one week after the intervention and the follow-up was conducted two months following the posttest. The training workshop was also held for the control group after the research in order to observe justice.

Instruments

Scales of Psychological Well-Being: This scale was designed by Ryff in 1980. The original form contains 120 questions; however, 84-item, 54-item, and 18-item forms were proposed in further studies. In this study, the 18-item form was used. The items are responded based on a six-degree scale (from strongly disagree to strongly agree). The reliability and validity of this scale have been confirmed in numerous studies (Waldfoegel, Craigie, & Brooks-Gunn, 2010). Cronbach's alpha coefficients of this scale have been reported to range from .77 to .90. The correlation of Scales of Psychological Well-Being with Satisfaction with Life Scale, Oxford Happiness Questionnaire, and Rosenberg Self-Esteem

Scale was calculated and the coefficients of .47, .58, and .46 were obtained, respectively, which represent the validity of this test. Zanjani Tabasi (2004) obtained the reliability coefficients of .94 via internal consistency for the entire test of psychological well-being and coefficients of .63 and .89 for the sub-tests. The correlation coefficient obtained on the basis of the test retest reliability was equal to .76 for the whole test and .67 and .76 for the sub-tests, which was significant (.001). In this study, Cronbach's alpha of the questionnaire was obtained equal to .83 (Bayani, Koocheki & Bayani, 2008).

Procedure

In this study, there were two groups that each received one of the intervention methods. The first group received Levinson's model therapy. This program is a combination of Levinson & Gotlib's cognitive-behavioral theories (1995) and is performed in 12 sessions over 7 weeks. This program includes an increase in positive activities and training of social skills, speech skills, friend making, discussion, assertiveness, clear communication, and self-control treatment that entail: self-reinforcement and problem-solving therapy as well as relaxation training, cessation of negative thoughts and selection of realistic goals that are effective in treating depression. However, this method has not been conducted on non-patients (Argyle, 2013). The content of the sessions is presented in the table below.

Table 1: Summary of Levinson's therapy sessions

<i>Session</i>	<i>Content</i>
1	Familiarity and realistic skills training and avoidance of wishful thinking
2	Correction of false initial assessments
3	Familiarity with social skills (effective communication and assertiveness)
4	Facing the problem and familiarity with problem-solving skills
5	Familiarity with adaptive thinking skills (control of negative thoughts and replacement of positive thoughts)
6	Familiarity with the skill of rewarding the achievements
7	Effective use of support systems
8	Enhancing the sense of self-efficacy through the use of appropriate skills
9	Use of the sense of humor to get out of discomfort
10	Teaching of avoiding dependence and blame-casting
11	The encouragement of the others' positive responses
12	Self-entertainment through fun activities

The summary of content of cognitive-behavioral group therapy sessions (Matrix) is provided in the table below.

Table 2: Summary of Matrix therapy sessions

<i>Session</i>	<i>Content</i>
1	Introduction and familiarization of the members with each other and with the leader of the group, expression of the group rules, determination of the time and the venue and duration of the sessions, discussion and investigation of the importance of non-medical treatments of addiction, especially group therapy
2	Attention to the patient's perspective about addiction, the introduction of cognitive-behavioral model, providing a rationale for homework
3	Clarification and prioritization of goals, attention to patients' ambivalence about abstinence, identification, and coping with drug-related thoughts
4	Understanding of the patients' experience of desire for drug use, the transfer of nature of desire as a natural short-term and transient experience and examination of the ominous triangle of thought, consumption-temptation-drug use behavior, the identification of symptoms and incentives of tendency to drug use
5	Teaching and training of techniques of controlling drug use tendency
6	Assessment of the accessibility to drugs and taking the necessary steps to reduce drug use, review of strategies of disconnection with substance suppliers, learning and practicing the skills or refusal of drugs, review of the difference between passive and aggressive response and assertiveness
7	Checking homework, discussion about the communication methods of members, teaching of drug use avoidance skills, practical exercises in groups
8	Healthy decision making and work on irrational beliefs, replacement of rational beliefs, and submission of assignments to strengthen them
9	Prediction of future risky situations, development of a general coping plan
10	Introduction of the basic steps of problem-solving within the session
11	Design of an objective support program for patients, review and support of patients' efforts in running the program
12	Review of the program and treatment objectives, provision of feedback from patients about aspects of successful and unsuccessful treatment and receipt of feedback on progress

Results

The age range of the sample group was between 20 and 55 years where 63.66% of the participants were in the age range of 20 to 30 years, 23% were in the age range of 31 to 40 years, and 13.34% were above 40 years. In terms of education, 52.54% of them held diploma degree or below, 18.64% held associate's degree, 28.82% of them held bachelor's degree. The descriptive statistics of psychological have been presented in the table below for each group and test stage.

Table 3: Descriptive statistics of psychological well-being for each group and test stage

<i>Component</i>	<i>Stage</i>	<i>Pretest</i>		<i>Posttest</i>		<i>Follow-up</i>	
	<i>Group</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Autonomy	Levinson	14.72	2.9	18.54	2.69	19.15	2.25
	Matrix	16.83	2.88	18.91	2.99	17.83	2.91
	Control	16.27	3.52	16.54	3.17	16.05	3.17
Environmental mastery	Levinson	12.09	2.84	18.27	3.19	17.27	3.6
	Matrix	15.58	3.02	17.15	3.13	16.04	2.83
	Control	15.63	3.44	15.63	3.13	15.45	2.8
Personal growth	Levinson	14.04	3.69	19.68	6.57	18.13	4.24
	Matrix	14.37	6	16.75	4.2	15.95	3.89
	Control	13	3.35	13.4	3.4	12.13	3.21
Positive relations with others	Levinson	14.22	2.76	19.77	4.05	18.04	3.92
	Matrix	13.25	3.76	16	3.85	15.58	3.68
	Control	13.77	2.06	13.86	2.13	13.72	1.96
Purpose in life	Levinson	10.36	1.98	14.9	2.36	13.04	3.92
	Matrix	14	2.96	17.41	3.34	16.83	3.23
	Control	13.18	1.79	13	1.96	13.4	1.92
Self-acceptance	Levinson	10.45	2.43	13	1.59	12.9	2.31
	Matrix	10.12	2.31	12.33	2.26	12.54	2.5
	Control	10.04	1.31	10.54	1.78	10.46	1.64
Total Psychological Well-Being	Levinson	18.38	3.48	26	4.17	24.45	3.57
	Matrix	20.33	3.05	33.41	3.19	29.57	3.6
	Control	21.09	3.41	23.63	3.13	2.75	2.83

Multivariate covariance analysis (MANCOVA) should be used to compare the effectiveness of the two therapeutic methods. One of the assumptions of using this test is the equality of the slope of the regression line. The results of this assumption are presented in the table below.

Table 4: Homogeneity of the slope to regression line in the posttest of psychological well-being

<i>Variable</i>	<i>Sum of squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Autonomy	8.36	3	2.79	1.12	.39
Environmental mastery	3.43	3	1.14	.42	.73
Personal growth	.51	3	.17	.04	.98
Positive relations with others	.22	3	.07	.02	.99
Purpose in life	4.01	3	1.33	.05	.98
Self-acceptance	15.06	3	.02	.91	.47
Total Psychological Well-Being	3.89	3	1.29	.53	.67

As it is observed in the table above, this assumption has been met in all the components ($P > .05$).

In addition, Levene's test was used to examine the equality of variances and the results are presented in the following table.

Table 5. Levene's test investigating the equality of variances in posttest scores of psychological well-being

<i>Variable</i>	<i>F</i>	<i>Between-group df</i>	<i>Within-group df</i>	<i>Sig.</i>
Autonomy	.39	2	42	.67
Environmental mastery	.53	2	42	.59
Personal growth	.80	2	42	.45
Positive relations with others	.03	2	42	.97
Purpose in life	3.27	2	42	.051
Self-acceptance	3.26	2	42	.053
Total Psychological Well-Being	2.9	2	42	.07

As it is observed in the table above, this assumption has been satisfied in all the components ($P > .05$). Considering the satisfaction of all the assumptions, MANCOVA was performed and the results indicated the significance of the linear combination of psychological well-being components ($P < .001$, $F = 24.440$, Wilks' $\Lambda = .03$). Univariate analysis of covariance was used as follows to examine the difference patterns.

Table 6: Univariate analysis of variance for determining the differences in patterns of psychological well-being components

<i>Component</i>	<i>Sum of squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size</i>
Autonomy	500.98	2	250.49	55.53	.001	.704
Environmental mastery	289.91	2	144.95	61.11	.001	.809
Personal growth	245.88	2	122.94	42.84	.001	.660
Positive relations with others	209.19	2	104.59	37.75	.001	.837
Purpose in life	307.97	2	203.98	29.38	.001	.67
Self-acceptance	32.62	2	16.31	4.43	.02	.44

Bonferroni test was used to compare the three groups. The results of this test suggest that a significant difference exists between both experimental groups with the control group ($P < .001$). In addition, there was also a significant difference between the two experimental groups ($P < .05$). In other words, Levinson's therapy was more effective than Matrix treatment.

Multivariate covariance analysis on follow-up scores should be used to evaluate the effectiveness of the interventions. The results of the assumption of homogeneity of the regression slope line are presented in the table below.

Table 7: Homogeneity of the regression slope in follow-up scores of psychological well-being

<i>Variable</i>	<i>Sum of squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Autonomy	7.65	3	2.32	1.25	.41
Environmental mastery	4.05	3	1.95	.67	.65
Personal growth	.80	3	.18	.05	.82
Positive relations with others	.56	3	.04	.01	.87
Purpose in life	4.32	3	1.54	.08	.95
Self-acceptance	14.45	3	4.98	.85	.65
Total Psychological Well-Being	4.02	3	1.85	.68	.85

As it is observed in the above table, this assumption has been met in all the components ($P < .05$). In addition, Leven's test was used to assess the equality of error variances and the results are presented in the following table.

Table 8: Leven's test representative of the equality of error variances in follow-up scores of psychological well-being

<i>Variable</i>	<i>F</i>	<i>Between-group df</i>	<i>Within-group df</i>	<i>Sig.</i>
Autonomy	.41	2	42	.69
Environmental mastery	.57	2	42	.61
Personal growth	.76	2	42	.43
Positive relations with others	.05	2	42	.85
Purpose in life	4.02	2	42	.06
Self-acceptance	3.15	2	42	.056
Total Psychological Well-Being	2.46	2	42	.078

As it is observed in the table above, this assumption has been satisfied in all the components ($P > .05$). Considering the satisfaction of all the required assumptions, MANCOVA was performed and the results indicated the significance of the linear combination of psychological well-being components ($P < .01$, $F = 14.360$, Wilks' $\Lambda = .05$). Univariate analysis of covariance was used as follows to examine the difference patterns.

Table 9: Univariate analysis of variance for determining the differences in patterns of psychological well-being components

<i>Component</i>	<i>Sum of squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size</i>
Autonomy	495.84	2	264.69	54.43	.001	.68
Environmental mastery	293.81	2	146.67	63.09	.001	.82
Personal growth	238.65	2	117.87	40.35	.001	.64
Positive relations with others	198.56	2	101.13	34.95	.001	.69
Purpose in life	311.64	2	207.32	31.38	.001	.72
Self-acceptance	35.41	2	18.65	3.95	.01	.57

Bonferroni test was used to compare the three groups. The results of this test suggest that a significant difference exists between both experimental groups with the control group ($P < .001$). However, there was no significant difference between the two experimental groups ($P > .05$).

Discussion and Conclusion

This study aimed to compare the effectiveness of treatments based on Levinson and Matrix's models in the psychological well-being of drug dependent people and the research hypothesis stated that there is a significant difference between the two therapies, which was confirmed. The results showed that Levinson's model therapy is more effective in increasing the psychological well-being of drug-dependent individuals than matrix treatment. Considering the results, there was a significant difference between the experimental group receiving therapy sessions based on Levinson's model and the control group. This finding is consistent with those of the studies carried out by Bahadorzade et al. (2014), Ashoori, Mollazadeh & Mohamadi (2008), Grinman et al. (2010), Burns, Tong & Lewinsohn (2010), Chen (2010), Bickel, Jarmolowicz, Mueller, Gatchalian & McClure (2012).

Many of the studies conducted on this domain have supported the effectiveness of matrix treatment method in the improvement of behavioral symptoms among addicted people up to 50%, which can verify its suitability as a treatment method (Krank, Stewart, O'Connor, Woicik, Wall & Conrod, 2011). To explain these findings, we can argue that many health care practitioners mix important features of Matrix treatment method to create a useful way to change the behavior of addicts. These individuals lay emphasis on the clear goals to change addicts' interpretation from their situation by using this treatment. These therapists try to help clients distinguish serious problems from imaginary or exaggerated problems. They help clients change their perceptions of past events, current issues, and future possibilities. The change of attitude is considered an ability to control emotions and harness them. In this regard, Levinson's model training and matrix treatment method combine cognitive and behavioral techniques and, thereby, they can increase the cognitive ability to cope with risky situations in people and also provide behavioral skills necessary to encounter such situations.

In general, the results of this study are consistent with the findings of other studies. Based on this study and other pieces of research and the theoretical background of this study, it is possible to confirm the effectiveness of the interventions based on Levinson model and Matrix treatment method in the betterment of addicts' psychological well-being.

Some adolescents who turned to the continuous consumption of drugs before puberty state that they do not know any other way than drug use to counter feeling of anxiety, boredom, depression, fear of failure, and purposelessness in life. Skills training via Levinson's model can increase control over painful

emotions and focus on the techniques that identify craving for drug use and cope with them. These programs include an excellent model that teaches individuals how to bear other strong emotions, such as depression or anger that are associated with psychological well-being. On the other hand, along with this method, it is also possible to make use of self-control training and muscular relaxation therapy, which are constituents of cognitive-behavioral programs, in order to increase psychological well-being and reduce the tendency to addiction.

To interpret this issue, one can refer to this point that not only the irrational and exaggerated beliefs of individuals in therapy sessions of Levinson's model are challenged, but also they are armed with behavioral and coping skills techniques, such as muscle relaxation, problem-solving skills, and assertiveness. On the one hand, negative automatic thoughts are converted to the purposeful thoughts that are more compatible with objective reality; therefore, the cognitive processing of these thoughts becomes more logical and their exaggerative cognitive errors wane. On the other hand, people learn behavioral techniques and apply them in normal situations and environments by using organized homework.

It should be noted that the effectiveness of therapy interventions depends on various factors and conditions. The suitability and success of the programs do not follow the principle of "all or nothing" and the effectiveness of each program will be variable based on performance conditions, characteristics of participants, and presenters' level of expertise. Of course, the dominant principles of effective programs are almost the same and the programs whose theoretical bases enjoy greater strength are of a similar structure. However, many programs will become flexible in interaction with different situations. The interventions based on Levinson's model approach and matrix therapeutic approach have been established on relatively solid foundations; thus, the effectiveness of the current interventions is not beyond expectation.

This study was done in pretest and posttest stages and this helps to control for possible individual confounding factors between the measures. On the other hand, the time factor, environmental interactions, and socio-economic changes are among the confounding factors whose control needs to conduct randomized field trial studies. Another limitation of this study was lack of access to female participants in the study, which is suggested to be included in future research.

Based on the results of this study, it is suggested that psychologists and counsellors utilize the findings of this study for training and treatment in clinics in order to increase patients' psychological well-being, especially the clients with little education or the male and young patients who usually resist against any treatment wherein advice is given. In addition, the use of these findings in drug rehabilitation clinics can be taken into consideration with this intention that these clinics will not focus only and only on biological therapies and the treatment of physical factors but the psychological dimension is also assigned credit in treatment and recovery. The findings of this study indicate the importance of

Levinson's model therapy in the boost of addicts' psychological well-being and can bring about the supplementary aspect of medical treatment after abstinence and prevent addiction relapse.

Reference

- Abd-Elwahab, M.; & Amin, M.E. (2012). Sexual risk among substance users and its relation to personality profile. *Egyptian Journal of Psychiatry*, 33(3), 135-41.
- Argyle, M. (2013). *Cooperation (Psychology Revivals): The Basis of Sociability*. Routledge, Reissue edition.
- Ashoori, A., Mollazadeh, J. & Mohamadi, N. (2008). On the effectiveness of cognitive-behavioral therapy in the improvement of coping skills and relapse prevention in addicts. *Iranian Journal of Psychiatry & Clinical Psychology*, 14 (3), 281-88.
- Bahadorzade, M., Jajarmi, M., Jalalabadi, M. & Eydi-Baygi, M. (2014). Effectiveness of Cognitive-Behavioral Group Therapy on Anxiety in Addicts with Successful Cut off., *The Journal of Urmia University of Medical Sciences*, 25 (11), 961-67.
- Bayani, A., Koocheki, A. & Bayani, A. (2008). Reliability and Validity of Ryff's Psychological Well-being Scales. *Iranian Journal of Psychiatry and Clinical Psychology*, 2 (14), 146-151.
- Bickel, W.K.; Jarmolowicz, D.P.; Mueller, E.T.; Gatchalian, K.M.; & McClure, S.M. (2012). Are executive function and impulsivity antipodes? A conceptual reconstruction with special reference to addiction. *Psychopharmacology*, 221(3), 361-387.
- Burns, E.K.; Tong, S.; & Levinson, A.H. (2010). Reduced NRT supplies through a quit line: Smoking cessation differences. *Nicotine & Tobacco Research*, 12(8), 845-849.
- Chen, G. (2010). The meaning of suffering in drug addiction and recovery from the perspective of existentialism, Buddhism and the 12-step program. *Journal of psychoactive drugs*, 42(3), 363-375.
- Chaudhary, A.K.; Pandya, S.; Ghosh, K.; & Nadkarni, A. (2013). Matrix metalloproteinase and its drug targets therapy in solid and hematological malignancies: an overview. *Mutation Research/Reviews in Mutation Research*, 753(1), 7-23.
- Dinas, P.C.; Koutedakis, Y.; Flouris, A.D. (2011). Effects of exercise and physical activity on depression. *Iranian Journal of Medical Science*, 180(2), 319-25, DOI: 10.1007/s11845-010-0633-9.
- Godley, S.H.; Garner, B.R.; Passetti, L.L.; Funk, R.R.; Dennis, M. L.; & Godley, M.D. (2010). Adolescent outpatient treatment and continuing care: Main findings from a randomized clinical trial. *Drug and alcohol dependence*, 110(1), 44-54.
- Grinman, M.N.; Chiu, S.; Redelmeier, D.A.; Levinson, W.; Kiss, A.; Tolomiczenko, G.; & Hwang, S.W. (2010). Drug problems among homeless individuals in Toronto, Canada: prevalence, drugs of choice, and relation to health status. *BMC Public Health*, 10(1), 94-100, DOI: 10.1186/1471-2458-10-94.
- Hart, C.L.; Morrison, D.S.; Batty, G.D.; Mitchell, R.J.; & Smith, G.D. (2010). Effect of body mass index and alcohol consumption on liver disease: analysis of data from two prospective cohort studies. *Bmj*, 340, 1-7, doi:10.1136/bmj.c1240.
- Hossein al-Madani, A. (2012). *Resiliency, identity styles, and personality traits in addicts and opiate abusers, rehabilitated addicts, and non-addicts*. Doctoral Dissertation in Psychology (unpublished). Islamic Azad University, Science and Research.

- Joe, G.W.; Rowan-Szal, G.A.; Greener, J.M.; Simpson, D.D.; & Vance, J. (2010). Male methamphetamine-user inmates in prison treatment: During-treatment outcomes. *Journal of substance abuse treatment, 38*(2), 141-152.
- Kafrashi, S. (2010). *Matrix of the Outpatient Treatment of Substance Abuse Disorders*. Tehran: Teimoorzadeh Publication.
- Krank, M.; Stewart, S.H.; O'Connor, R.; Woicik, P.B.; Wall, A.M.; & Conrod, P.J. (2011). Structural, concurrent, and predictive validity of the Substance Use Risk Profile Scale in early adolescence. *Addictive behaviors, 36*(1), 37-46.
- Kiluk, B.D.; Nich, C.; Babuscio, T.; & Carroll, K.M. (2010). Quality versus quantity: acquisition of coping skills following computerized cognitive-behavioral therapy for substance use disorders. *Addiction, 105*(12), 2120-2127.
- Khajeamiri, A.R.; Faizi, M.; Sohani, F.; Baheri, T.; & Kobarfard, F. (2012). Determination of impurities in illicit methamphetamine samples seized in Iran. *Forensic science international, 217*(1), 204-206.
- Keoleian, V.; Stalcup, S.A.; Polcin, D.L.; Brown, M.; & Galloway, G. (2013). A cognitive behavioral therapy-based text messaging intervention for methamphetamine dependence. *Journal of psychoactive drugs, 45*(5), 434-442.
- Kennedy, A.P.; Gross, R.E.; Whitfield, N., Drexler, K.P.G.; & Kilts, C.D. (2012). Maintaining Clinical Relevance: Considerations for the Future of Research into D-Cycloserine and Cue Exposure Therapy for Addiction. *Biological psychiatry, 72*(11), 29-30, DOI: <http://dx.doi.org/10.1016/j.biopsych.2012.05.030>.
- Reynolds, J.L.; Mahajan, S.D.; Aalinkeel, R.; Nair, B.; Sykes, D.E.; & Schwartz, S.A. (2011). Methamphetamine and HIV-1 gp120 effects on lipopolysaccharide stimulated matrix metalloproteinase-9 production by human monocyte-derived macrophages. *Immunological investigations, 40*(5), 481-497.
- Reback, C.J.; & Shoptaw, S. (2014). Development of an evidence-based, gay-specific cognitive behavioral therapy intervention for methamphetamine-abusing gay and bisexual men. *Addictive behaviors, 39*(8), 1286-1291.
- Rathod, S.; Wilcock, S.; Brabban, A.; Cromarty, P. (2014). *Back to Life Back to Normality: Cognitive Therapy Recovery and Psychosis*. New York: Cambridge University.
- Smout, M.F.; Longo, M.; Harrison, S.; Minniti, R.; Wickes, W.; & White, J.M. (2010). Psychosocial treatment for methamphetamine use disorders: a preliminary randomized controlled trial of cognitive behavior therapy and acceptance and commitment therapy. *Substance abuse, 31*(2), 98-107.
- Targher, G.; Chonchol, M.; Zoppini, G.; Abaterusso, C.; & Bonora, E. (2011). Risk of chronic kidney disease in patients with non-alcoholic fatty liver disease: is there a link? *Journal of hepatology, 54*(5), 1020-9, DOI: 10.1016/j.jhep.2010.11.007.
- Witkiewitz, K.; Bowen, S.; Douglas, H.; & Hsu, S.H. (2013). Mindfulness-based relapse prevention for substance craving. *Addictive behaviors, 38*(2), 1563-71.
- Waldfoegel, J., Craigie, T.A., & Brooks-Gunn, J. (2010). Fragile families and child wellbeing. *Future child, 20*(2), 87-112.