

Survey of Combined Medication and Motivational Interviewing Effect on Reducing Drug Craving

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ABSTRACT

Present study aims the influence of medication and motivational interview and combination of motivational interview and medication in reduction of drug craving in addicts. For this purpose we select randomly 20 persons who have admitted in Addiction clinic in Karaj, in two groups, one group received only medication and second group receive both medication and motivational interview. For data handling we used descriptive statistics and covariance analysis. Data was collected by DDQ questioner. The results showed that both methods: medication and medication + motivational interviewing in terms of craving are significant differences at 1% statistical level. Also mean comparison of the two methods showed that medication plus motivational interviewing method in reducing drug craving in addicts was more effective than other method. Therefore, choosing the proper treatment can lead to reduced drug craving.

KEYWORDS: Medication, Motivational Interview, Drug Craving.

1. INTRODUCTION

Addiction, the plague of the twentieth century, encompasses human communities so that not only is associated with social, cultural, psychological and health problems but also imposes many economic and political problems on states. Addiction not only attacked to individuals of the community and completely become them to the disabled and the consumer people who do not solve any issues of the society, but also by disassembling the system of family and consequently corrupt society as a macro and thereby damage hugely to the body of communities. According to that the drug addiction takes young age mostly, and this age group is socio-economic wheels of society, and they make irreparable losses on society. About addiction, it always has been faces with two aspects of prevention and treatment, and these two dimensions can interactively help each other, but unfortunately, in the field of addiction treatment despite the measures taken, the results are disappointing and in other word, in addiction treatment we failed [1]. In the field of addiction treatment, biological treatments are usually used which have most effectiveness. But other treatments such as acupuncture and slowly tapering off the drug, is also used. Studies show that drug craving as an important mediator between drug abuse and return to the drugs after its discontinuation is necessary. Tiffany and Drabz [2] have defined craving as a term which covers a broad range of phenomena, including the expectation of reinforcing effect of drugs and the strong tendency of the drugs. Hormes and Rozin [3], in a study on the 20 kinds of language have found that the words such as love, desire, wish, longing and addiction used as the words associated with craving. Drug craving generally occurs in dealing with symptoms associated with pleasurable experiences or fantasies of a patient from terms of fun taking drugs. Makri et al. [4], in their research concluded that there are significant relationship between psychological treatments and drug craving. The research result of Field [5] also showed that there is a causal link between respect and a desire to use drugs. Moreover, there is a significant relationship between drug and overall cognitive functioning of drug consumers and their consumption. Studies have shown that some of people show more reactions to the causing symptoms of drug craving.

In the meantime, psychologists believe that motivation is an important factor in the process of addiction treatment and one of the psychosocial- social treatment goal is to increase the client's motivation (20). Motivational interviewing is one of the things in the meantime should be seriously considered. Strategies of motivational interviewing are more encouraging and supportive. The main purpose of the method is to increase intrinsic motivation of clients, so that the change comes from within a person, not that superficially be imposed on him from outside. Goal of motivational interviewing is not to impose a change that is inconsistent with one's beliefs and opinions [6]. Motivational interviewing is a way that has the greatest impact on creating motivation for treatment of addicts or changing their behavior. Motivational interviewing considers role of disease of addict then the family in the treatment process, and the therapist does not impose any pressure on the addict. Often physical therapists, clients who have lost their motivation to quit or when before end of treatment refuses to participate in it, blame her, not treatment plan.

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Therefore, this study seeks to answer the question of whether combined pharmacotherapy and motivational interviewing can be effective in reducing the craving addicts.

2. MATERIALS AND METHODS

The present study is an experimental investigation with plan of the pretest-posttest by control group along with the track. Research population consisted of all addicts who over months referred to centers of addiction treatment in the city of Karaj. In this study, among the population, 20 individuals with substance abuse, which included (10 cases for group of drug therapy and 10 cases for pharmacotherapy group and motivational interviewing) were selected using a sampling random method. Inclusion criteria were a history of substance abuse and the drug craving and impulsivity in the cut-off point of the study test. Well as those treated with methadone, were selected in the same manner. Then the pre-test was administered to both groups. People of the test group were trained by five sessions of motivational interviewing according to Table 1, but the control group did not receive any training. Upon completion of training, post-test for people of each two groups were conducted and finally, in order to follow up after a month, the subjects in both groups again completed the test questions.

Table 1. Summary of motivational interview sessions

| Meeting | Subject | Objective / Strategy / assignments between sessions |
|---------|--|---|
| First | A. Attend to reduce behavior or lack of conflicts from now to future. | Strategy: Self-reporting on how much was involved in the behavior last time. Objective: To prepare the client to motivational interviewing. |
| Second | (B) Evaluating and determining the phase of change, effect of behavior and estimate the level of commitment and confidence to change behavior. | Strategy: Attendance at the orientation session before entering the motivational groups. Complete all initial training. Objective: help to client to move from necessity and external need toward internal desire for change. |
| Third | C: Increase awareness of risk of behaviors and self-efficacy for change. | Strategy: attend fourfold sessions of motivational groups. Complete all exercises and assignments, and completion of the final training session. Objective: is based on ambivalence of the client in regard to the behavior. |
| Fourth | D: the re-evaluation of changes steps and the level of commitment and confidence to change behavior and create a vision of change, and improvement in various aspects of life. | Strategy: Complete the final assessment practices and provide insights and future prospects Objective: To clarify, identify and acknowledge the value of clients. Create an internal desire for change. Increased authority to change the argument. |
| Fifth | E: The collaboration and planning next steps. | Strategy: contact the professionals who have been referred to him, after the full completion of group therapy sessions. Objective: re- assess this commitment, the level of confidence and motivation for change. |
| Sixth | F: Tracking | Strategy: re- implementation of questionnaire and Evaluation of the motivational states of addicts on attitudes to drug Objective: To determine the effectiveness of therapy in reducing craving in addicts and motivation of the person to keep changes in therapy sessions |

The questionnaire used in this study is a questionnaire with 13 questions has been made by Franken et al [7]. The questionnaire is derived from the questionnaire of the desire for alcohol that was used for heroin dependence. But due to the global assessment of drug, later have been used in the assessment of other drugs craving. The tools have three sub-scales, drug craving, negative reinforcement and perceived control over its abuse. The questionnaire is based on Likert seven bits scale (completely disagree to completely agree) that scored from one to seven. The answers of completely disagree gives a score of 1 and the answer of completely agree receives a score of 7. The questionnaire was adapted from the questionnaire of DAQ designed by Lewis et al. [8].

Franken et al. [7], the overall reliability of the questionnaire by the Cronbach's alpha has been reported 85% and for its subscales, 77%, 80% and 75%, respectively, eventually data were analyzed by software SPSS-18 and using analysis of covariance.

3. RESULTS

In order to analyze the data SPSS statistical software has been used, and data using descriptive statistics has been set and summarized, and the data were described by charts and tables of information. Test of research hypotheses has been done using one-way covariance analysis.

According to Table 2, most frequency is for the occurrence of associate degree or less diploma and only one of the subjects had Bachelor degree and one person also was an associate degree.

Table 2. Distribution of samples In terms of education level

| Education | Pharmacotherapy and interview group | | Drug group | |
|------------------|-------------------------------------|---------|------------|---------|
| | Frequency | Percent | Frequency | Percent |
| Degree | 3 | 30 | 4 | 40 |
| Diploma | 5 | 50 | 6 | 60 |
| associate degree | 1 | 10 | 0 | 0 |
| Bachelor | 1 | 10 | 0 | 0 |
| Collect | 10 | 100 | 10 | 10 |

Table 3 Show that the minimum age for participants is 26 years, maximum age is 38 years and mean age of sample group is 31/10 years. In pharmacotherapy group, age ranging is from 26 to 38 years and mean age of the group is 30.70. In pharmacotherapy and interview group also the age range is between 26 and 37 and mean age average of this group is 31.5.

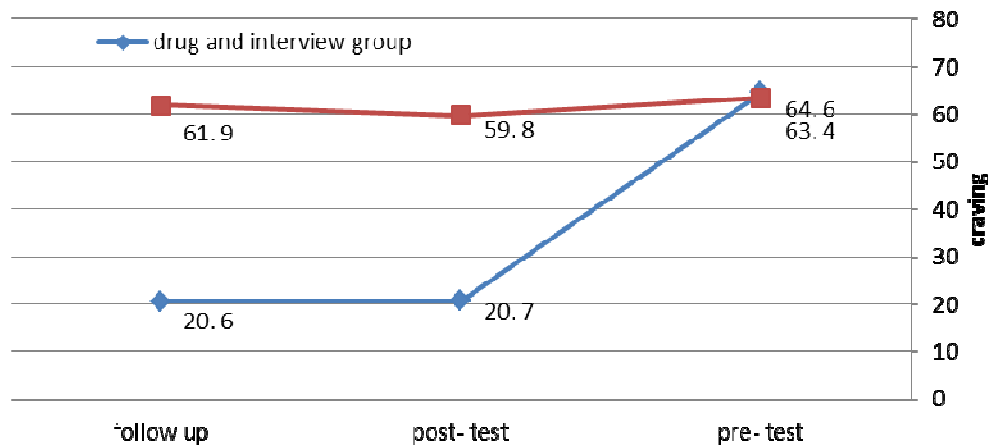
Table 3. Distribution of sample group by age

| Group | Minimum | Maximum | Mean | The standard deviation |
|-------------------------------------|---------|---------|-------|------------------------|
| Pharmacotherapy group and interview | 26 | 37 | 30.70 | 3.23 |
| Pharmacotherapy group | 26 | 38 | 31.5 | 17.4 |
| Collect | 26 | 38 | 31.10 | 3.65 |

As indicated in Table 4 and Figure 1, the mean of drug craving has been declined quite subtle in post-test of pharmacotherapy group, however the decreasing trend in the track, has been reversed that indicates craving recurrence in this group of subjects. Reduction of craving in post- test of drug therapy and motivational interviewing group shows a 299% reduction than the pre- test. These cuts still has been kept in the process of tracking which indicate being effectiveness of the medication and motivational interviewing in reducing the craving.

Table 4 . Mean and standard deviation of the pretest and posttest craving

| Variable | Test innings | Drug and interview group | | Drug group (control) | |
|----------|--------------|--------------------------|------------------------|----------------------|------------------------|
| | | Mean | The standard deviation | Mean | The standard deviation |
| Craving | Pretest | 64.6 | 14.1 | 63.4 | 8.2 |
| | Posttest | 20.7 | 6/2 | 59/8 | 7.4 |
| | Follow-up | 20.6 | 5/7 | 61/9 | 7.9 |

**Figure 1.** comparison of the mean craving among study groups at the steps of pretest, posttest, and follow-up

In the study of significance of differences between the groups (Pharmacotherapy and interview group and pharmacotherapy group) at posttest and follow-up steps of craving scores, in order to control the effect of pre-test (for post- test) and control the effect of post- test (to follow), the one-way analysis of covariance was used. Considering that normality of distribution of data and homogeneity of variance of the groups are basic presuppositions of covariance analysis, before presenting the results of the analysis of covariance, the Kolmogorov-Smirnov test was used to examine the normal distribution of data, and the Leven's Test of Equality of Error Variance was utilized to evaluate the assumption of equality of error variance for the dependent variables.

According to the data in Table 5, the Leven's test of equality of error variance shows assumption of equality of variance in groups because F ratio observed has not been significant.

As seen in Table 6, assumption of Normality of Data distribution on craving is established in each three times of the test.

The Table 7 shows that the comparison of effects of two interventions on craving is statistically significant There is ($F_{(1 \text{ and } 17)} = 191, p = 0.001$). Accordingly, we can conclude that there is significant difference between the effect of drug therapy and the combination of pharmacotherapy and motivational interviewing in craving. On the other hand two groups in the pretest have no significant differences. So it can be concluded that pharmacotherapy along with motivational interviewing is more effective in reducing drug craving singly.

Table 5. The results of Leven's test of equality of error variance of groups in the dependent variable

| Variable | Test innings | F ratio | Degree of freedom for the numerator | Degree of freedom for the denominator | Significance Level |
|----------|--------------|---------|-------------------------------------|---------------------------------------|--------------------|
| Craving | Post- Test | 0.227 | 1 | 18 | 0.639 |
| | Follow-up | 1.766 | 1 | 18 | 0.200 |

Table 6. Kolmogorov-Smirnov test to investigate the data normality

| Variable | Test innings | Kolmogorov-Smirnov Z | Significant | Results |
|----------|--------------|----------------------|-------------|---------|
| Craving | Pretest | 0.470 | 0.980 | Normal |
| | Test | 1.145 | 0.145 | Normal |
| | Follow-up | 1.148 | 0.143 | Normal |

Table 7. Results of analysis of covariance for the effect of drug therapy and motivational interviewing

| Source | Degrees of freedom | Mean Squares | F | Significant |
|--------|--------------------|--------------|-----|-------------|
| Group | 1 | 7739 | 191 | 0.001 |
| Error | 18 | 40.5 | - | - |

4. DISCUSSION AND CONCLUSION

The research results showed that drug therapy along with motivational interviewing in reducing drug craving is more effective than drug therapy alone. According to research findings, motivational interviewing can be an important factor in reducing the craving addicts. Therefore, according to this aspect can lead to the selection of appropriate treatment to reduce craving. Within a standard treatment, patients not be treated only with medication. Well as, the success rate in treatment centers cannot be increased just by prescribe a medication. A successful drug treatment should along with a combination of the other treatments, which may include individual or group counseling, perform the regular urinalysis, and examine the psychological and psychiatric disorders. Ideally, methadone clinics should be as a multi-purpose center cover all the needs of patients [9]. Meanwhile, motivational interviewing is a manner that has had the greatest impact on the creation of the motivation for addict or change behavior. In fact, the approach that firstly proposed by Miller [10] and Rollnick et al. [11] have a method of guidance counseling through identifying potential problems and detect resolving feelings of hesitation and uncertainty (with the aim of change behavior) help the patient. Indeed, the main objective of therapeutic approach, addressing the feelings of the vacillations of the visitors and encourage them to express their own concerns and their reasons for changing the addictive behavior. Studies have shown success rates in consuming methadone as a treatment for drug addiction, depends on the patient's motivation and compliance. Trying to treat addiction, regardless of the motivation is not perfect. According to Prochaska et al. [12], the treatment of addictive behaviors, if that the client and therapist focus on a period of change, can go smoothly. These results are consistent with the results of Miller [10] and Rollnick et al. [11]. Studies have shown that medication or non-medication treatments if is provided with the patient together, will be more effective and reduce craving [7]. Thus, to treat drug addiction in the country can encouraged therapists that use this approach for the treatment of addiction.

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