



The Effectiveness of Group Motivational Interviewing on Self-efficacy and Impulsivity of Patients Undergoing Methadone Maintenance

Vahide Parazaran^{*1}, Yahya Yarahmadi², Alireza Nazemi³

1. Department of Clinical Psychology, Islamic Azad University, Sanandaj Branch, Iran.

2. Assistant Professor of Clinical Psychology, Islamic Azad University, Sanandaj Branch, Iran.

3. Psychiatrist, Islamic Azad University, Sanandaj Branch, Iran.

A B S T R A C T

The purpose of this study was to investigate the effectiveness of motivational group interviewing on self-efficacy and impulsivity in male patients undergoing methadone maintenance therapy in Sanandaj. The design of this study is quasi-experimental with pretest-posttest with control group. Sampling was available using a sampling method. A total of 30 individuals referred to substance abuse treatment centers were selected and randomly assigned into two experimental and control groups (15 in each group). Then the Sherer (1986) (SGSES) and Barat Impulsivity (BIS (1995)) questionnaires were completed by two groups. The experimental group underwent group motivational interviewing for 8 sessions. At the end of treatment, both groups were re-tested. The results were analyzed by SPSS 21 software. Statistical methods included descriptive statistics (including mean, standard deviation, minimum and maximum scores) and inferential statistics (analysis of covariance). The results of analysis of covariance showed that there was a significant difference between post-test scores of self-efficacy and impulsivity of the two experimental and control groups ($P < 0.05$). The results showed that motivational group interviewing can be used as an effective treatment in reducing impulsivity and increasing self-efficacy of substance abusers.

Keywords: Motivational Interviewing, Impulsivity, Self-efficacy, Substance Abuse.

INTRODUCTION

Addiction and substance abuse is one of the most important problems of the modern era, which has found a global reach and is a subject of concern to clinical psychologists and psychiatrists, as it has long-term negative and negative consequences in different sections of society (Seddon, 2009). Substance Abuse Disorders is a serious clinical concern, with significant economic, social and personal costs, and its consequences include physical, mental, family, cultural, economic, and social disorders that threaten human health (Mueser, Bellack, & Blanchard, 1992; Wilens et al., 2004). Addiction is one of the factors that directly and indirectly disrupts the order and security of society (Keane, 2002) and has a profound impact on the legal, social, biological and financial domains of the world, both personally and socially. Has left. This phenomenon has consequences such as failure at work, education, family roles or situations and creates legal problems related to substance use (Townsend & Morgan, 2017).

*. Corresponding Author: Azaranmaede91@gmail.com

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Some experts believe that many addicts will die as a result of direct or indirect effects of the substances (Martin, Weinberg, & Bealer, 2007; Moak, 2008). Therefore, due to the effect of addiction on individual, family and social dimensions, it is necessary to identify the predictive and preventive factors in individuals and to develop protective factors against addiction.

Impulsivity is one of the variables that makes people vulnerable to drug addiction and abuse. Impulsivity can be explained by preference for immediate rewards, desire for adventure, search for new senses, finding simple ways to achieve rewards, lack of perseverance, and insistence on doing things as well as short individual reaction times (Kreek, Nielsen, Butelman, & LaForge, 2005; McCown, Johnson, & Shure, 1993). Impulsivity has a multidimensional structure that includes dimensions such as emphasis on the present, inability to postpone rewards, inability to deter, riskiness, seeking sensitivity, reward sensitivity, insecurity, pleasure, and inability to plan (Billieux et al., 2012; Whiteside & Lynam, 2001).

According to research, Heinz, Bui, Thomas, and Blonigen (2015), identified four personality dimensions in relation to different dimensions of impulsive behaviors: 1- lack of planning, 2- urgency, 3- excitement, and 4- lack of resilience. Difficulty keeping attention on task accomplishment and failure to tolerate fatigue. Accordingly, impulsivity is regarded as the basis for unplanned and rapid responses to internal or external stimuli without regard to negative consequences for oneself or others (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001).

Impulsivity plays a major role in the diagnosis of a variety of clinical disorders, such as substance dependence (Dawe & Loxton, 2004), and is associated with substance abuse disorders (Verdejo-García, Lawrence, & Clark, 2008). Also, impulsivity can be a very important target for empirical studies and clinical trials among individuals seeking treatment for substance abuse disorder (Stevens et al., 2014).

Research results have shown that low impulsivity reduces the likelihood of substance abuse and related problems (King, Fleming, Monahan, & Catalano, 2011). Because different aspects of impulsivity are associated with different aspects, different high-risk behaviors (Coskunpinar, Dir, & Cyders, 2013), and poor therapeutic outcomes in substance abusers (Loree, Lundahl, & Ledgerwood, 2015), emphasis is placed on reducing impulsivity in programs. Therapy can facilitate the treatment process for consumer patients.

On the other hand, self-efficacy is one of the characteristics that is particularly important in drug dependence and substance abuse (Romer & Hennessy, 2007). Self-efficacy includes beliefs and expectations that relate to individual tasks and needs (Weick, 1977). Self-efficacy beliefs influence how people think, how they deal with problems, emotional health, decision making, coping with stress and depression (Bandura & Locke, 2003).

This concept has been one of the most effective topics in theories and patterns of behavior change, especially Bandura's social cognition theory, and its effects have been repeatedly reported in a variety of fields, including drug use and abuse (Burlinson & Kaminer, 2005). Since substance abuse is one of the behaviors that are not under the control of the individual's complete will, the emphasis on self-efficacy that enables the person to control fearful situations

enables them to cope with problems, making them vulnerable to coping. By positioning the material, rely on its ability to control the position.

Research findings suggest that self-efficacy predicts the onset and continuation of addiction-free statuses and that interventions to treat people with substance use disorder will increase the effectiveness of treatment if self-efficacy is specifically considered (Hyde, Hankins, Deale, & Marteau, 2008). Therefore, according to Mark (2007), the most effective treatments for drug addiction are treatments that increase self-efficacy.

There are various pharmacological and psychological methods to treat addiction and abuse behaviors that, given the fact that drug maintenance therapies alone are not sufficient, there is a strong emphasis on psychological treatments and interventions today. Mental health professionals and educational institutions have developed, tested, and tested various theories, models, methods, strategies, and techniques in the prevention and treatment of addiction and preventing return after quitting. Motivational interviewing is one of these psychological intervention models in addiction treatment. Motivational interviewing is a method that has had the greatest impact on motivating addicts to treat or change behavior (Morgenstern, Morgan, McCrady, Keller, & Carroll, 2001; Velasquez, Crouch, Stephens, & DiClemente, 2015). This type of interview relies on counseling techniques and attempts to change the patient's attitude toward the benefits and harms of continuing unhealthy behavior. A review of recent research indicates that therapeutic programs in which the topic of client motivation is of particular importance are particularly needed in relation to the treatment of addicts and in this regard the motivational interviewing approach. It can be effective.

In their study, Moeller et al. (2001), reported numerous evidence regarding the relationship between substance abuse and impulsive behavior. They believe that impulsivity, while it can be a cause of abuse, is also a cause. According to the researchers, impulsivity can be a predictive measure of individuals' resistance to withdrawal or relapse rates.

Sterling et al. (2007), conducted a study on self-efficacy, beliefs, and attitudes about smoking in Texas, in which self-efficacy was found to directly affect attitudes toward smoking. It can be used as a useful strategy in preventing smoking as well as in quitting smoking. The most effective treatments for drug addiction are likely to be treatments that increase self-efficacy with self-regulation and self-efficacy. The results of Naar-King et al. (2006), study of the effectiveness of motivational interviewing on high risk behaviors including substance abuse on 64 young people aged 16 to 25 years with AIDS showed that motivational interviewing can reduce the risky behaviors and Drug abuse in the treatment group.

In the field of internal studies, Dehghani F, Ghasemi, Safari, Ebrahimi, and Etemadi (2013), conducted a study to determine the effectiveness of motivational interviewing group sessions on promoting self-esteem and self-efficacy in addicted women. The findings showed that motivational interviewing can be effective in increasing self-esteem and self-efficacy of the experimental group. The research of Heidari, Mohamadi, and Bahmani (2017), studied the effect of motivational interview on impulsivity reduction in methadone-treated substance abusers. The results indicate the effect of motivational interviewing on reducing cognitive, motor and non-programmatic impulsivity symptoms in the experimental group compared to the control group. Given the research findings and the importance and role of motivational interviewing in

improving patients' status, the present study seeks to answer the question whether motivational interviewing is effective on self-efficacy and impulsivity of methadone maintenance patients.

METHODOLOGY

The present study was a quasi-experimental research design with pre-test and post-test with control group. The study population consisted of all addicted men who referred to drug abuse treatment centers in Sanandaj (Iran) in 2015 who received methadone maintenance therapy. Sampling Method In this study, sampling was available. Thirty individuals were selected and randomly divided into two experimental and control groups. Impulsivity general self-efficacy questionnaires were administered to the two groups. Then, the motivational interview intervention, adapted from the treatment plan of Velasquez et al. (2015), was conducted for the experimental group consisting of 8 sessions, 90 minutes (1 session per week). Finally, after the treatment sessions, two groups were tested.

Scherer's General Self-Efficacy Questionnaire (SGSES): This scale was developed by Scherer in 1986 and has 17 questions, each rated on a Likert scale ranging from strongly disagree to strongly agree. Scale scoring is assigned to each item from 1 to 5 points. The maximum score a person can get from this scale is 85 and the minimum score is 17. In the present study, the reliability coefficient of general self-efficacy questionnaire using Cronbach's alpha was 0.85..

Barat Impulsivity Scale (BIS) (1995): The original version of this test was made in 1950 by Ernest Barat and has been revised several times since then. The questionnaire has 30 questions that are scored on a 4-point Likert scale and measures the multidimensional nature of impulsive the questionnaire has three subscales: Cognitive Impulsivity: Includes rapid cognitive decision making; motor impulsivity; In addition to the score for each individual subscale, a score is calculated for the whole impulsivity scale. In the present study, the reliability coefficient of impulsivity questionnaire was calculated 0.90 using Cronbach's alpha method.

The group-based therapeutic interventions used in this study consisted of 8 sessions in 90-minute of motivational interviewing based on the treatment plan of Velasquez et al. (2015), and performed for the experimental group. Was. A brief description of the topics of each session of these interventions is provided below.

Table1. Plan of motivational interviewing based on the Velasquez et al. (2015)

| | |
|---------|--|
| First | Introduction: Introductions, norms and processes of the group, Introducing motivational approach, Introducing stages of change, Performing staging exercise. |
| Second | Describing a Day in the Life: A daily description of substance use and its quantity. |
| Third | Expectations: To discuss addicts' expectations of alcohol and drug use. |
| Fourth | Self-temptation and temptation: Understanding motivators, recognizing trustworthy timelines, comparing temptation and trust. |
| Fifth | Rewarding Success: Recognizing Current Success, Creating Ideas for Rewarding Yourself. |
| Sixth | Effective refusal: Recognizing current consumers, practicing refusing to complain about substances, performing role plays. |
| Seventh | Temptation and Desire Control: Talk about temptation and desire control, new ways to enjoy life, and alternative activities. |

| | |
|--------|--|
| Eighth | Post-slip re-commitment: Recognizing useful ways in the past to change substance use, discussion Summary and Summary of Things to Do After a Slip. |
|--------|--|

RESULTS

Table 2 presents the indices of descriptive statistics for the sample under study including mean and standard deviation for self-efficacy and impulsivity variables.

Table 2. Descriptive variables of self-efficacy and impulsivity

| Variables | Statistical indicators | Control group | | Experimental group | |
|-------------|------------------------|---------------|-----------|--------------------|-----------|
| | | pre-exam | Post-test | pre-exam | Post-test |
| Efficacy | Mean | 66.33 | 53.46 | 13.33 | 33.38 |
| | Standard deviation | 28.8 | 13.9 | 63.7 | 59.8 |
| Impulsivity | Mean | 20.82 | 13.70 | 26.84 | 78 |
| | Standard deviation | 20.13 | 43.14 | 52.13 | 13.13 |

As shown in Table 2, the mean scores of subjects in the experimental group's self-efficacy variable increased in the post-test compared to the pre-test and decreased in the impulsivity variable. UNVRIATE covariance analysis was used to clarify how the experimental intervention affected each of the dependent variables. All of its assumptions were first tested for covariance test and covariance analysis was used.

Table 3 Results of Levin's homogeneity test between research variables in experimental and control groups.

Table 3. Results of Levin's homogeneity test between research variables in experimental and control groups

| Effect | dependent variable | Df1 | Df2 | F | P |
|--------|--------------------|-----|-----|-------|-------|
| group | Efficacy | 1 | 28 | 2.788 | 0.106 |
| | Impulsivity | 1 | 28 | 0.015 | 0.904 |

The results in Table 3 show that Levin test was not significant in self-efficacy (F = 2.788, P = 0.106) and Levin in impulsivity (F = 0.015, P = 0.904). Therefore, the variance of the two experimental and control groups in the dependent variables are not significantly different and the assumption of homogeneity of the variances is confirmed.

Table 4 Summary of covariance analysis results for comparing the post-test mean of dependent variables with pre-test control in experimental and control groups.

Table 4. Summary of covariance analysis results for comparing the post-test mean of variables dependent on pre-test control in experimental and control groups

| Source of Changes | Variables | SS | DF | MS | F | P |
|-------------------|-------------|---------|----|---------|--------|--------|
| group | Efficacy | 439.687 | 1 | 439.687 | 30.444 | 0.0001 |
| | Impulsivity | 251.114 | 1 | 251.114 | 19.161 | 0.0001 |

After controlling for the pre-test effect, the effect of motivational interview on post-test scores of the two experimental and control groups in self-efficacy and impulsivity variables was investigated. As the data in Table 3 show, there was a significant difference between the mean of the two groups in the variables of self-efficacy (F = 30.444 and P <0.05) and impulsivity (F =

19.116 and $P < 0.05$). This result means that motivational interview training on research variables was effective in experimental group in post-test.

CONCLUSION

The purpose of the present study was to investigate the effectiveness of motivational interviewing training on self-efficacy and impulsivity in methadone maintenance patients. The findings showed that after the motivational interviewing sessions, there was a significant difference between the experimental group and the control group in terms of self-efficacy and impulsivity, which confirms the effectiveness of motivational interviewing. Results indicated that the effect of group motivational interviewing was on increasing self-efficacy in methadone maintenance patients. Addiction and substance abuse are behaviors that are not completely under the control of the individual's will and are difficult to control because many internal and external factors can be effective in this behavior, such as self-efficacy such as structures. Effective tools in controlling behavior will increase the predictive power of behavior According to Bandura (1993), belief in the ability to perform behaviors and the expectations of the outcome of a particular action can lead to desirable behavior, which in the present study employ strategies such as rewarding successes and recognizing current successes as well as methods. The temptation and desire control in the interview process was motivational to increase self-efficacy. According to the sample surveyed who are drug users, most of these individuals are more likely to have low resistance or willpower and have a dual sense of decision making about change In contrast, motivational interviewing is a supportive and empathetic approach to reinforcing and enhancing intrinsic motivation and is used to change, discover, identify and resolve ambiguity and ambivalence. Motivational interviewing components such as being cooperative, client-centered, non-judgmental, building trust, decreasing resistance, increasing readiness for change and listening with empathy (Hettema, Steele, & Miller, 2005), perceive a warm relationship with acceptance and Respect the therapist and facilitate the process of healing. Therefore, given the nature of motivational interviewing, which is based on identifying and mobilizing the core values of clients with a view to changing behavior, enhancing self-awareness and increasing self-efficacy can be achieved by emotionally communicating with participants and enhancing their abilities

The results also showed the effect of motivational interviewing on impulsivity reduction, which was in line with the results of (Heidari et al., 2017), Evidence suggests that impulsivity is both a cause and a consequence of substance abuse disorders (Crews & Boettiger, 2009; De Wit, 2009), and features such as poor inhibition, inability to make decisions and planning can be a major obstacle to treatment. People with substance abuse disorders, especially those who start, follow and continue treatment Impulsivity is a wide range of behaviors that are less thoughtful, are unproductive to achieve a reward or pleasure, are at high risk, and have significant unintended consequences. Due to impulsive dimensions such as inability to delay rewards, inhibition of risky behavior failure, susceptibility to insecurity, enjoyment, and weak decision-making, the process of reducing this variable should emphasize treatment that enhances confidence and decision-making power. Increase in person In this regard, motivational interviewing focuses on one's mental state at moments of loss of momentum control and, by

increasing one's awareness of the process that produces these behaviors, leads to a permanent change in daily behaviors. In this treatment, the individual identifies his or her thoughts, feelings, behaviors, and the consequences of his or her actions, while recognizing the uncertainties and conflicts that he or she may have to spend more time before thinking of any action that, given limited thinking in people with impulsivity, Using the ways of categorizing thoughts and interpreting them has had a good effect on increasing logical thinking and reducing impulsivity. On the other hand, conducting motivational interviewing and being present in the group also provided the opportunity for individuals to see other members in situations similar to their own, with the feeling that their thoughts and rumors and unpleasant moods would be constantly harassed. Gives are not theirs alone, and many other people face the same issues as their situation, which has had a positive effect on recovery.

Limitations of this study include lack of women, caution in generalizing the results, difficulty in understanding some of the questions for low educated subjects, and the probability of biased responses of some subjects. It is suggested that motivational interviewing be conducted on women as well as in different cultures to increase the generalizability. It also aims to achieve long-term therapeutic goals for these patients, as well as to facilitate the conduct of addiction-related research, communication, and collaboration with relevant centers, such as the Medical Science Vice-President, the Narcotics Coordination Council, and the Wellbeing.

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