

The Effectiveness of Group Therapy on the Family Functioning of Individuals under Methadone Treatment: A Clinical Trial

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Original Article

Abstract

Background: A significant number of opioid-dependent patients in Iran are now being treated by methadone maintenance therapy (MMT). One of the social complications of substance dependency is family disorganization and a decrease in marital satisfaction. This study aimed to determine the effect of group therapy based on the transtheoretical model of change on family functioning of the patients under MMT.

Methods: In this open clinical trial, 48 married people who were between the ages of 19 and 40, and under methadone maintenance therapy had been assigned to two random groups of test and control. In the intervention group, group therapy was held based on the transtheoretical model of behavior change, for 29 sessions (two times a week). To assess the overall health and pathology of the family, the two questionnaires Family Assessment Device (FAD) and Marital Conflict Questionnaire (MCQ), both with approved reliability and validity, were used.

Findings: A total of 24 patients in the control group and 23 patients in the intervention group (one person withdrew from the study in the early meetings) were evaluated. The mean \pm SD of age of the control and intervention groups, respectively, were 33.9 ± 4.8 and 32.8 ± 4.3 ($P = 0.40$). Before the intervention began the average score of FAD and MCQ questionnaires between the two groups was comparable. After the intervention was over the score of each of the two questionnaires, with the adjustment of the baseline score, was lower in the treatment group than the control group, the difference was marginally significant ($P < 0.10$).

Conclusion: The family functioning of the MMT treated patients showed improvement. Therefore, with the use of stage-of-change and group therapy, steps can be taken for improving family functioning of these patients. Due to the relatively long duration and frequency of treatment sessions the feasibility of this intervention needs further research.

Keywords: Behavior change, Marital satisfaction, Drug dependence, Transtheoretical model

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Introduction

Iran is one of the countries with a high prevalence of opioid use.¹ In the neighboring Afghanistan, having a young population, and a rapid modernization of the society are important factors in the prevalence of opioid use.² Addictions to drugs or drug-related impairments, due to their biological, psychological, and social natures, have certain complexities. Drug dependence, in addition to, causing various physical and psychological complications, also leads to adverse social complications, one of which is family disorganization and decreased marital satisfaction.³ Using group therapy with an emphasis on family therapy, using different approaches, has been increased in the recent years.⁴ Besides the therapeutic aspects, group therapy also helps develop social skills and create some sort of immunity against predisposing factors for psychiatric disorders.⁵

In a controlled clinical trial, group psychotherapy, based on the cognitive-behavioral principles, was used for drug addicts under methadone maintenance treatment. It was shown that the group under group psychotherapy used less medications compared to the control group; in a follow-up of 6 months the difference was significant. This study highlights group psychotherapy in subjects under methadone maintenance treatment.⁵ Woody et al. used three groups of medication, psychotherapy, supportive psychotherapy, and psychotherapy with a cognitive-behavioral approach to understand the impact of psychotherapy on the drug dosage of opium-dependent individuals under methadone treatment. They came to the conclusion that all three groups showed a partial remission after seven months, but the group that received psychotherapy in addition to being under methadone maintenance treatment showed more improvement. The results of the studies by Woody et al. suggest that psychotherapy can certainly be used effectively with drug therapy.^{6,7}

To our knowledge, the transtheoretical model of change (TTM) has not been used in group psychotherapy of the patients and the families of the opioid-dependent patients. TTM model provides an integrated framework for understanding, measuring, and planning behavior intervention. In this model, change is considered as a progress through a five-step

sequence. It includes pre-contemplation stage, in which the subject does not think about change, contemplation, preparation, action, and the fifth stage being the maintenance, at this stage the subject maintains a long term change.⁸ Major studies using transtheoretical approach in the field of addiction have been done on quitting cigarettes.^{9,10} The current study aimed to determine the effectiveness of group psychotherapy based on the transtheoretical model on the family functioning of the subjects under methadone maintenance treatment.

Methods

This study was done on patients under methadone maintenance treatment in Shahid Beheshti Hospital (Kerman, Iran) in 2010. The study was approved by the Ethics Committee of Kerman University of Medical Sciences. This was an open trial study. First, a list of all the married subjects under methadone maintenance treatment between the ages 19 to 40 was prepared. Then, 48 patients were randomly selected from this population and the subjects of the sample group were randomly divided into experimental and control groups. All the participants were assured of the confidentiality of the information and wrote an informed consent. A sample size of 24 in each group was calculated considering type I and II errors, which respectively were 0.05 and 0.2, and a 20% change in family functioning scores. Subjects were assigned to two groups of intervention and control using random numbers at the beginning of this study. Family Assessment Device (FAD) and Marital Conflict Questionnaires (MCQ) were completed by the participants of both groups.^{11,12}

FAD includes 60 questions; each question is scored 1 to 4 (1 for strongly agree, 2 for agree, 3 for opposed, and 4 for strongly opposed). This questionnaire was used to assess the overall health and pathology of the family.¹¹ MCQ consists of 42 questions about different aspects of marital conflicts, such as decrease in sexual intercourse frequency and a decrease in family relations with spouse's relatives. The questions are answered based on a five-point Likert scale; from Always (score 5) to Never (score 1). In this questionnaire higher scores indicate the worse family health conditions. The group therapies of the intervention group based on the transtheoretical approach were held for 29 sessions (2 times a week).¹³ The subjects of this group were divided into 2 groups of 12

people for holding the meetings. The first 14 meetings included early stages of change (pre-contemplation, contemplation, and preparation) and the next 15 meetings were for later stages of change (action, and maintenance).^{8,13}

Trainings were given by the second author of the article. The meetings always began with a brief group supervision, and later the main title of each meeting was introduced. The main titles of the meetings, respectively, were as follows: stages of change, one day of life, physiological effects of alcohol, physiological effects of drugs, expectations, stipulation of insights, values, benefits and flaws, communications, reliability and temptation, problem solving, setting goals and preparing for change, identifying the triggers, stress management, reward of my successes, effective communication, effective refusal, criticism management, thoughts management, fad and temptation management, new ways to enjoy life, developing a practical program, the commitment after slip, social support, identifying needs and resources, review and conclusion. After distributing the manuscripts of each meeting, a group discussion was carried out about these activities. The meetings were always finished after a brief supervision and briefing. Upon completion of the course (about 4 months), the subjects completed the questionnaire again. No special measures were taken for the control group (no treatment group). In order to

compare the mean age between the two groups, Student's independent t-test, and Fisher's exact test were used. For comparison of the questionnaire scores after intervention, analysis of covariance was used.

Results

A total of 24 patients in the control group, and 23 patients in the intervention (a patient withdrew from the study in early meetings of group therapy) were evaluated. The mean \pm SD of age of the control and intervention groups were 33.9 ± 4.8 and 32.8 ± 4.3 years, respectively ($P = 0.40$). Other background variables are compared in table 1.

The mean score of FAD and MCQ questionnaires between the two groups was comparable before the intervention began (Table 2). The mean score of both questionnaires after intervention, with adjustment of the baseline, was lower in the treatment group than the control group (Table 2), and this difference was marginally significant ($P < 0.10$).

Discussion

The overall goal of group therapy is to increase the awareness of the individuals, of themselves and the others, help them to start making changes they want to achieve in life, and also to provide the necessary tools to accomplish these changes. Group therapy is concerned with the unconscious factors of the individuals' past and rehabilitation

Table 1. Comparison of demographic variables between treatment and control groups

Demographic characteristics		Treatment group n = 23	Control group n = 24	P
Age (mean \pm SD)		33.9 \pm 4.8	32.8 \pm 4.3	0.40
Gender	Male	21 (91.3%)	21 (87.5%)	0.99
	Female	2 (8.7%)	3 (12.5%)	
Education	Illiterate	1 (4.3%)	1 (4.2%)	0.82
	Dropouts	10 (43.5%)	8 (33.3%)	
	Diploma	8 (34.8%)	12 (50.0%)	
	Academic	4 (17.4%)	3 (12.5%)	

Table 2. Scores for Family Assessment Device (FAD) and Marital Conflict Questionnaire (MCQ) in the intervention and control groups before and after intervention

Demographic characteristics		Control group n = 24	Treatment group n = 23	P
FAD	Before intervention*	129.7 \pm 25.3	126.1 \pm 16.3	0.54
	After intervention**	130.2 \pm 23.5	118.0 \pm 12.0	0.08
MCQ	Before intervention	74.9 \pm 20.4	79.6 \pm 12.3	0.28*
	After intervention**	80.4 \pm 11.0	76.7 \pm 9.4	0.06

* using Student's independent t-test; ** using ANCOVA; FAD: Family assessment device; MCQ: Marital conflict questionnaire
Cronbach's alpha coefficient for FAD and MCQ questionnaires were 0.88 and 0.60, respectively

of the main aspects of their personalities.¹³ On the other hand, the impact of using TTM on interventions of family therapy for treating drug-dependent individuals has been well proven.¹⁴ However, its impact on family functioning of opioid-dependent individuals, who are under MMT, has not been evaluated yet.¹⁴ This study showed that group therapy of opioid-dependent patients, who are under MMT, based on TTM can increase health and family functioning of married patients.

In this study the portion of women in the study sample (approximately 10%) was low, therefore, we were unable to study the impact on gender. Although some studies expressed doubts about the efficacy of TTM, especially on complex behaviors, this study showed the effectiveness of this model on decreasing the challenges of the family of a patient under MMT (Table 2). However, it should be also noted that the P value was a little more than the conventional value of 0.05, and thus it was considered marginally significant. As mentioned, the intervention consisted of two phases. In the first phase, (consisted of three phases; pre-contemplation, contemplation, and preparation) with the objective of raising consciousness, the number of individuals' conscious about themselves and family challenges increased. Gradually they were shown the best course of action in order to prepare for entering the second phase, action and preparation. In the second phase, which lasted 15 days, stimulus control and avoiding potential triggers of unhealthy family relationships were highlighted. Finally, anger management techniques followed by helping relationships were practiced. They were always reminded of the fact that "making a change, however, does not

guarantee that the change will be maintained".¹⁵ Thus, to stabilize the maintenance stage of the transtheoretical model, the relapse prevention methods were given. In the interpretation of these results two points should be kept in mind. First, although the efficacy of the transtheoretical model of change in behavior is questionable in some complex behaviors, this study showed that using this model can lead to behavior control in individuals and their healthier functioning in the family. Second, interventional treatments on families and also couple therapy are not always associated with promising results, and only half of these interventions have been associated with positive effectiveness.⁴

It should be kept in mind that this was an efficacy study, and the impact of intervention on ideal conditions was evaluated. We must see to what extent the client is willing to fully participate in 29 meetings under usual conditions, and whether they are able to pay the fees. However, in this study, family functioning of the patients under MMT showed improvement despite the two mentioned facts. This is an important finding which indicates that, by using stage-of-change and group therapy, steps can be taken to improve family functioning of this group of patients.

Conclusion

The family functioning of the MMT treated patients based on the transtheoretical model of change showed beneficial effects. Due to the relatively long duration and frequency of treatment sessions the feasibility of this intervention warrants further research.

Conflict of Interest

The Authors have no conflict of interest.

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اثر بخشی گروه درمانی بر عملکرد خانواده افراد تحت درمان نگهدارنده با متادون: یک کار آزمایی بالینی

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مقاله پژوهشی

چکیده

مقدمه: هم‌اکنون در ایران تعداد قابل توجهی از بیماران وابسته به مواد اپیویدی تحت درمان نگهدارنده با متادون (MMT) یا (Methadone maintenance therapy) می‌باشند. یکی از این عوارض اجتماعی وابستگی به مواد، از هم گسیختگی خانواده و کاهش رضایت زناشویی است. این مطالعه با هدف، تعیین تأثیر گروه درمانی مبتنی بر تغییر رفتار ترانس تئوریک بر عملکرد خانواده بیماران تحت درمان MMT انجام شد.

روش‌ها: در کار آزمایی بالینی حاضر، ۴۸ فرد متأهل ۱۹ تا ۴۰ ساله تحت درمان نگهدارنده با متادون به صورت تصادفی در دو گروه آزمایش و شاهد قرار داده شدند. در گروه مداخله، درمان گروهی بر اساس مدل تغییر رفتار ترانس تئوریک شامل ۲۹ جلسه (۲ بار در هفته) صورت گرفت. برای ارزیابی آسیب‌شناسی و سلامت کلی خانواده از دو پرسش‌نامه FAD (Family assessment device) و MCQ (Marital conflict questionnaire) که روایی و پایایی آن‌ها مورد تأیید بود، استفاده شد.

یافته‌ها: در مجموع ۲۴ نفر در گروه شاهد و ۲۳ نفر در گروه مداخله (یک نفر در جلسات اولیه گروه درمانی از شرکت در مطالعه انصراف داد) مورد ارزیابی قرار گرفتند. میانگین (\pm انحراف معیار) سن گروه مداخله و شاهد به ترتیب $4/8 \pm 33/9$ و $4/3 \pm 32/8$ سال بود ($P = 0/40$). میانگین نمره پرسش‌نامه FAD و MCQ بین دو گروه قبل از شروع مداخله معنی‌دار بود ($P > 0/05$). نمره هر دو پرسش‌نامه بعد از اتمام مداخله با در نظر گرفتن اثر نمره پایه در گروه درمان از گروه شاهد کمتر بود که این اختلاف قابل توجه می‌باشد ($P < 0/10$).

نتیجه‌گیری: عملکرد خانواده افراد تحت درمان MMT بهبود نشان داد؛ بنابراین، می‌توان با استفاده از گروه درمانی در جهت بهبود عملکرد خانواده این گروه از بیماران گام برداشت. با توجه به طولانی بودن نسبی طول درمان و تعدد جلسات، امکان انجام این مداخله نیاز به پژوهش بیشتری دارد.

واژگان کلیدی: تغییر رفتار، رضایت زناشویی، وابستگی به مواد، الگوی فرانتزری

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