The Effectiveness of Stress Management Training Program on Addicts' Quality of Life under Methadone Maintenance Treatment

Salman Zarei, Zahra Asadi, Khadija Zarei

Salman Zarei
Ph.D Student of Counseling
Allameh Tabatabai University
Tehran
Iran
E-mail: salman_zarei@yahoo.com

Zahra Asadi
M.A. Student in Educational Psychology
Islamic Azad University, Central Tehran Branch
Tehran
Iran

Khadija Zarei
M.A. Student in Family Counseling
Allameh Tabatabai University
Tehran
Iran

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Abstract

Objective: This study was an attempt to evaluate the effectiveness of stress management training program on addicts' quality of life under methadone maintenance treatment. **Method**: This study was conducted as an experimental one with pre-test and post-test along with control group. The study sample consisted of 30 addicts treated with methadone in MMT center of Pakdasht city who were randomly selected and assigned to two experimental (N=15) and control (N=15) groups. The experimental group received 10 two-hour treatment sessions of stress management training while the control group did not receive any special treatment. Quality of Life Questionnaire was used to collect data. **Results:** The results showed that the experimental group's mean score of quality of life was significantly higher than that of the control group. **Conclusion:** It can be concluded that stress management training program is effective in upgrading the addicts' quality of life under methadone maintenance treatment.

Key words

Quality of Life, Stress Management, Addiction

Introduction

Addiction is known as a physical and mental illness that endangers one's life, family, and community health aspects due to its progressive nature (Le moalc & Kooh, 2007). In fact, this is a major personal and social problem that threatens community health in terms of social, economic, political, and cultural aspects in addition to its physical and mental consequences for addicts and, like any other chronic illness, it needs longitudinal treatment management (Daley & Marlatt, 2005; Termorshuizen et al., 2005). In this regard, the results of some related studies have shown that mental disorders are more frequently found in patients suffering from substance abuse compared to healthy individuals. Such disorders mainly include anxiety and depression (Friedman et al., 2001). Wells, Golding & Burnam (1989) found that psychiatric life-time-related disorders (anxiety disorders, affective disorders) are evidently prevalent in substance abuse suferrers.

Lowe, Grafe, Ufer & Kroenke (2004) also argued that 35 percent of substance abuse patients suffer from mental disorders among which depression and panic disorder with15.9 and 10.4 percent had the highest frequency, respectively. These disorders had given rise to dysfunction and reduced quality of life in 17 to 61 percent of the patients. The above-mentioned mental disorders highten the severity of substance abuse and diminish the sufferers' quality of life. Quality of life is a complex set of individual responses to physical, psychological, and social factors that affects the normal life (Pais-Ribeiro, 2004). Frisch (2006) believes that high quality lives are usually manifested in the form of pleasure, satisfaction, happiness, contentment, and ability to overcome problems. In fact, quality of life is evaluated and described by the individual. Several studies have shown that substance abuse suferrers' quality of life lies at a low level (Kusek & et al, 1996). Robbins, Elias, Croog & Colton (1994) studied the quality of life of 315 patients suffering from substance abuse and found that the level of cognitive functioning, social activity, and sense of general health are lower in this group compared to healthy subjects and their physical health status is followed by physical symptoms and sleep disorder. Muller, Montoya, Schandry & Hartl (1994) concluded that patients suffering from substance abuse showed poorer mood, a higher number of somatic symptoms, and lower quality of life compared to their normal counterparts. Quality of life improvement as a broad sense has been currently regarded as one of the major therapeutic goals. In recent decades, many researchers have confirmed the urgent need to consider psychological interventions to improve the quality of life of substance abuse sufferers (Lash et al., 2006). Research has shown that the quality of life and psychological variables such as stress, social capital, and self-esteem are associated with each other and encountering stressful situations often causes harassment and reduces the sufferers' health and safety, and quality of life (Ghasemi Zad, Berenjian Tabrizi, Abedi, and Barzideh, 2010).

A wide range of psychological treatments, including cognitive-behavioral therapy, stress management, biofeedback, supportive psychotherapy, anger management, cognitive restructuring (D Davison, Neal, & Kring, 2004) and muscle relaxation, lifestyle change, meditation (Redford and Schneiderman, 2002) have been reported to be effective in the improvement of the quality of life and the promotion of mental health and also control of substance abuse in these patients. Cognitive-behavioral therapy of stress management is referred to as a family of stress management therapies that focus on cognitive-behavioral approaches. Stress management is one's ability to reduce stress and soundly cope with stressful situations (Linden, 2005). Stress management program via cognitive-behavioral method has combined different types of relaxation, imagery, and other stress reduction techniques with traditional cognitive-behavioral approaches, such as cognitive restructuring, coping effectiveness training, assertiveness training, and anger management (Antoni, Ironson & Schneiderman, 2007). Stress management through cognitive-behavioral method enjoys four types of advantages: The first advantage of this type of treatment is that the patient receives an attitude towards life that is followed by a greater ability to adapt to events that they cannot change. The second advantage is that it brings about positive changes in patients' self-concept so that they feel able to manage stress more than ever. Changes in these dimensions are probably the direct result of cognitive restructuring and coping skills training that lead to the generation of more adaptive cognitive coping strategies (Ltgendrof, Antoni, Ironson, Starr & Costelo, 2009). The third advantage of this treatment is relating to the changes in interpersonal relationships that entail stronger feelings in establishing relationships with friends and family members and also a higher degree of empathy with other people. These changes are likely to receive training and, then, are altered by means of the already-produced social support, expression of emotions, and group experiences (Bower & Segrestrom, 2004). Last but not least, the fourth advantage is that the patient will find a deeper sense of purpose in life and can focus more strongly on important goals and priorities. This dimension is the most advanced structure which comes into existence by means of stress management intervention and may share the highest association with the expression of emotions and cognitive processes generated by emotional experiences (Bower, Kemeny, Tayler, & Fahey, 2003). Due to the increasing number of patients suffering from substance abuse in Iran and the world and the negative impact of the disease on quality of life, these patients' quality of life has assumed substantial importance. Quality of life in patients is referred to a state of well-being that is reflective of their physical, mental, and social state; therefore, addicts' biological, psychological, social, and emotional needs are totally different from those of healthy subjects. Nevertheless, it is possible to help these patients improve their quality of life by the employment of appropriate strategies. Non-pharmacological interventions such as stress management training courses, being referred to in this study, increase their quality of life,

social functioning, and independence in addition to reducing the need to and dependence upon substance. Since most psychological treatments have not seriously taken into account the promotion of these patients' quality of life as the most important treatment goal, this study was aimed at determining the effectiveness of stress management training program on quality of life of the addicts treated with methadone maintenance.

Method

The present study was conducted as an experimental one which was followed by pretest-posttest and control group. The study population consisted of all addicts referring to Saba MMT Center located at Pakdasht City who held active medical records in the clinic in 2012. Then, 30 addicts were picked by simple random sampling and assigned to two experimental (N=15) and control (N=15) groups. The experimental group received 10 two-hour treatment sessions of stress management training whithin 10 weeks (one session per week) that are described in the following table. This training package, developed by Antoni et al (2007), includes a summary of the content of the 10 treatment sessions. Each session consists of psycho-educational information about stress management techniques and basic guidelines on relaxation exercises.

Table 1: Content of Stress Management Training

Sessions	*Content of Sessions*
First session	Administering a pre-test and understanding the significance of awareness of the visual and mental effects of stress and the importance of stress management, monitoring stress levels, and creating a list of stress-raising items (relaxation exercises).
Second session	Establishing the relationship between thoughts, and feelings; and learning evaluation process (relaxation exercises with diaphragmatic breathing).
Third session	Practicing how to identify different types of negative thoughts, and perceiving the effect of negative thoughts on behavior (relaxation exercises in visualization format).
Fourth session	Detecting rational and irrational self-talk, learning alternative steps of logical thinking (relaxation exercises in visualization format along with diaphragmatic breathing).
Fifth session	Learning coping types, identifying self-coping and effective coping styles (relaxation exercises in visualization format along with diaphragmatic breathing).
Sixth session	Learning and exercising effective coping steps, smoothly practicing to deal with stress-raising situations (relaxation exercises in visualization format along with positive self-induction, sunlight meditation practice with autogenic).
Seventh session	Learning anger management (practicing Mantra meditation).

Sessions	*Content of Sessions*
Eighth session	Learning interpersonal styles, practicing effective communications, and applying problem-solving skills (breathe counting meditation exercises, continuing sunlight meditation exercises).
Ninth session	Understanding the benefits of social support, identifying barriers to the maintenance of social support, learning stress management techniques to maintain social support (relaxation exercises in visualization format with diaphragmatic breathing).
Tenth session	Focusing on personal stress management training program, including a review of the whole program, planning for home relaxation exercises, creating a personal stress management program, administering post-test (practicing mantra meditation).

Instrument

Quality of Life Questionnaire (36-SF): This questionnaire is a useful tool for measuring individuals' perceptions of their health, which includes 36 questions categorized in eight subscales of physical functioning, role-physical, bodily pain, social functioning, role-emotional, general health, vitality, and mental health. As a whole, this questionnaire measures two physical and mental approaches (Ware, 1992; cited in Nejadnaderi, 2007). Item scoring was done within the range of 0 to 5 based on Likert scale. The number of 25 items that is reversely scored is as follows: items numbered 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 24, 25, 28, 29, 31, 32, 33, and 35. Related research shows that the quality of life questionnaire enjoys high reliability and validity indexes (Mac Horney, Ware & Raczek, 1993; Garratt, 1997). The reliability and validity measures for this questionnaire were reported in Iran by Montazeri for the first time on 4163 subjects aged 14 years and above (2005). Reliability coefficients were reported to lie in the range of 0.77 to 0.95 for eight dimensions. In the present study, Cronbach's alpha coefficient for the total scale was obtained 0.86.

Results

Descriptive statistics pertaining to quality of life are presented in the table below.

Table 2: Descriptive statistics pertaining to quality of life

groups	*Pre-test*		*Post-test*	
	Mean	*tandard deviation*	*Mean*	*Standard deviation*
Experimental	17.5	4.50	26.42	4.18
Control	18.6	5.36	15.93	3.54

Covariance analysis was used to evaluate the effectiveness of stress management training on quality of life, as follows.

Table 3: Results of covariance analysis regarding the effectiveness of stress management training on quality of life

Source	*Sum of squares*	*Df*	*Mean square*	*F*	*P*	*Effect size*	*power*
Groups	584.18	1	584.18	94.730	0.0005	0.732	1
Error	326.77	27	12.10				

As it is observed in the above Table, stress management training can be effective in improving the quality of life (F= 94.730, P< 0.001).

Discussion and Conclusion

The main objective of this study was to determine the effectiveness of stress management program on quality of life of addicts under methadone maintenance treatment. The findings showed that this training program has increased the experimental group's quality of life compared to the control group. This finding is consistent with the results of research carried out by (Robbins et al., 1994; Muller et al., 1994; Ltgendrof et al., 1998; Redford & Schneiderman, 2002; Davison, Neal and Kering, 2004; Pais-Ribeiro, 2004; Lowe et al. 2004; Lash et al., 2006 and Ghasemizadeh et al., 2010). To interpret the results, it is reasonable to state that vicious mood performance, which includes stress and depression symptoms, utterly affects different quality of life dimensions such as physical and mental health (Solgi, 2005). According to research conducted in this area, stressful events influence humankind in terms of emotional, cognitive, and physiological aspects; therefore, people need to be equipped with knowledge and skills that help them deal with stress in order to be enabled to self-adapt to the environment. It is so since human health will get endangered if stress is not curbed (Hall, 2009). Stress management techniques contribute to the reduction of stress by decreasing one's stress level and make patients develop an attitude towards life event that includes the ability to fit more things that are beyond control. In addition, cognitive-behavioral stress management attempts to promote one's sense of control, self-efficacy, self-esteem, coping, and social support. This reduces changes pertinent to negative mood states and social isolation and also improves quality of life (Antoni et al., 2007).

As well, the results of this study show that stress symptoms resulting from substance use significantly rose in patients by challenging negative automatic thoughts and attitudes related to methadone uses and by correcting them, training time management, and encouraging patients to increase pleasurable activities and planning activities which led to an increase in daily success. Furthermore, giving these patients proper communication style training (courage-raising styles and assertiveness) and useful skills training (how to listen, request, say no, etc.),

accompanied by behavioral exercises (playing some role in session) increases the level of desired social support. This is one of the factors that improve depressed mood and quality of life in these patients. Similarly, in line with the present results and findings of previous researchers (Bizzairi, Rucci & Vallotta, 2011), anger management training as one of the relevant stress management techniques makes patients aware of anger-raising situations and teaches them how to desirably show anger, self-experience anger, and take corrective actions. In this way, they can consequently have adaptive interactions and get an optimistic perception of these interpersonal relationships. This can be very effective in the promotion of their quality of life. Thus, as the final conclusion, it can be claimed that the studies conducted in this area are indicative of the low quality of life of addicts because addiction negatively affects quality of life in most cases. Families of addicts suffer great weaknesses in quality of life, substantial problems of such families get exacerbated, and the patients' families and relatives are also exposed to the consequent harmful effects. It is suggested that addiction treatment centers put into practice this therapy by the preparation of required facilities and the use of expert psychologists so that the clients' lives can get better as much as possible. It is further suggested that similar pieces of research be conducted on other psychological problems and larger samples to lead to a deeper understanding of this therapeutic treatment. It is noteworthy that there were two limitations in doing this study. First, the study sample was limited only to a medical center in Pakdasht City that leads to difficulty in terms of the generalizability of the results. Second, there was no possibility of a follow-up period due to time constraints.

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