



# Comparing the Lifestyle and Sexual Satisfaction of Patients Received Methadone Maintenance Therapy with Those of Patients Received and Narcotics Anonymous

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## Abstract

**Background:** The objective of this study was to compare the lifestyles and sexual satisfaction of patients who received Narcotics Anonymous with patients who received methadone maintenance therapy.

**Methods:** In this cross-sectional study, 50 patients who received Narcotics Anonymous were compared with 50 patients who underwent methadone maintenance treatment (MMT). The participants were chosen from the city of Ghazvin (Iran) in 2016 and they completed the lifestyle questionnaire and Larson sexual satisfaction questionnaire.

**Results:** The results of multivariate analysis of variance showed significant differences between the 2 groups in the components of lifestyle so that the MMT group achieved higher scores in the subscale of weight control and nutrition, disease prevention, mental health, social health, drug prevention, accident prevention, and environmental health ( $P < 0.05$ ). However, the difference between the 2 groups in components of health, exercise and fitness, and mental health was not significant. Furthermore, independent t-test results showed that the 2 groups have no significant difference in sexual satisfaction ( $P = 0.000$ ).

**Conclusions:** The findings indicated the higher effectiveness of methadone maintenance therapy in MMT group compared to Narcotics Anonymous. It can be stated that the lifestyle was partly modified due to the avoidance of substance abuse in methadone maintenance treatment.

**Keywords:** Lifestyle, Sexual Satisfaction, Methadone, Iran

## 1. Background

Life style is strongly affected by various chronic diseases such as addiction (1). Hence, one of the goals of world health organization is to enhance the healthy lifestyles in the community (2). According to Adler, childhood life style leads to neuroticism development in adulthood (3). Lewis and Watts indicated that Adler life style issues predict repeated behaviors associated with alcohol more than any other variable (4). As addicts have an emphasis on immediate satisfaction of the personal needs (5), their addiction causes sexual satisfaction problems, which is the latest stage of the sexual response cycle of the person; therefore, it leads to mental disorders, marital conflicts, as well as recurrence (6). Consequently, life style and sexual prob-

lems in addicted people are among the issues, which require paying much attention. The prevalence of this phenomenon has been reported up to 85.7% (7, 8). Addiction is one of the most complex diseases, in which the person can use common methods of treatment, if he wants to be treated. Joining self-help groups and methadone maintenance treatments are the most common treatments, with completely different therapeutic areas, in which the patient leaves using drugs, social, mental, and family complications; he is re-born by using them. These methods differ in terms of success rates, recovery speed, the severity of symptoms, and the course of treatment. In each method, an individual is adapted to his own program and he adapts his life style and life quality to new conditions. Using 12-

step spiritual programs, strengthening the spirituality of people, providing social support for people to avoid using the drugs, and changing the attitude of people to solve life problems, membership in Narcotics Anonymous (NA) group can improve the physical and mental conditions of members (9). On the other hand, the effectiveness and efficiency of methadone in the treatment of using heroin, psychiatric status, and social compatibility have been found frequently in backward-looking and future-oriented studies (10).

Methadone maintenance treatment (MMT) for substance dependence continues for many years in many patients. The long-term nature of this type of treatment necessitates the evaluation of the quality of life and quality of life of patients. However, there is conflicting research evidence on the effectiveness of methadone maintenance treatment as well as membership in Narcotics Anonymous Association (11); thus, it is necessary to pay attention to other criteria that make the efficacy on NA and methadone treatment clinics for clients. On the other hand, conducted studies have compared the psychological functions of addicted people with those of the normal population. In addition, a few studies have compared the patients in terms of treatment methods. Accordingly, the objective of this study is to compare the life style and sexual satisfaction of patients treated by MMT and NA.

## 2. Methods

### 2.1. Population, Sample, and Method of Sampling

The current study is a cross-sectional type of study, which was approved by the local Ethics Committee of Zanjan Islamic Azad University (Registration code: 6262070194252). The population of the study included all male adults, recovered in the city of Ghazvin (Iran) in 2016. They were selected by the Narcotics Anonymous association as well as public centers of methadone maintenance treatment by using cluster sampling. Each of the groups received treatment at least for 6 months and were monitored in terms of the possibility of recurrence. Accordingly, the sample size was calculated to be 97 people by using 1 qualitative trait estimating formula in the community (0.8) with a different acceptance value before the prevalence (0.08) (12). Due to the possibility of a recurrence in the treatment with methadone in the methadone group, 70 people were treated for 5 months, which 20 people experienced a recurrence during the treatment, which were excluded from the study. Finally, 50 people in the Narcotics Anonymous Association as well as 50 people in the methadone maintenance treatment group were selected. They were informed that their information

would remain confidential. After obtaining their consent to participate in the study, they completed the considered questionnaire. All participants of the 2 groups were matched in terms of age, marital status, level of education, and type of drug used. The inclusion criteria of the study included the male gender, being married, age between 20 and 40 years, and history of drug abuse. People with the history of using the stimulant and severe depression symptoms were excluded from the study. Finally, the data were analyzed using the SPSS software.

### 2.2. Statistical Analysis

To describe continuous and qualitative variables, mean (standard deviation (SD)) and frequency (percentage) were used, respectively. The Kolmogorov-Smirnov test was used to check the normality of distribution of numeric variables. In case of skewed distributions, median and interquartile range (IQR) was used for descriptive reports. Independent t-test or Mann-Whitney U-test was used to compare the mean values or mean ranks of the normally or non-normally distributed numeric variables in 2 groups. P value of < 0.05 was considered as significant level. All analyses were performed using SPSS software version 20.

### 2.3. Tools

#### 2.3.1. Lifestyle Questionnaire

This questionnaire was developed by Laali, Abedi, and Kajbaf (2012). It includes 70 questions, which were scored based on the 4-point Likert scale. The considered tool includes 10 components of physical health, exercise and wellbeing, weight control, nutrition, prevention of diseases, mental health, spiritual health, social health, avoiding drugs, alcohol and drug, prevention of drugs, and environmental health. A high score in each of the components and in the entire questionnaire indicates an appropriate life style. If the person obtains a higher score in the subscales, he will have a better life style. Developers of this scale evaluated the content validity of this questionnaire using the view of 10 experts. In addition, the reliability coefficients were reported to be between 0.76 and 0.89 using Cronbach's alpha method. In addition, test-retest reliability coefficients were reported to be between 0.845 and 0.94. In the study conducted by Ghasemi et al. (2014), the internal consistency coefficient was reported to be 0.85 (13, 14).

#### 2.3.2. Larson Sexual Satisfaction Questionnaire

This questionnaire was developed by Larson et al., (1998) to assess the sexual satisfaction of couples with 25 items. Responses are scored based on 5-point Likert scale. In a study conducted by Bahrami et al. (2016), Cronbach's alpha for positive and negative questions was obtained

0.7. Exploratory factor analysis using principal component analysis and varimax rotation led to the extraction of 3 latent factors, which explained 42.73% of total variance. In the above study, confirmatory factor analysis confirmed the final model of Larson's sexual satisfaction structure (15).

### 3. Results

The population of this study included married male people with the age range of 20 - 40 years, without any history of positive hepatitis and HIV, having a history of chronic depression and chronic abuse of opioid derivatives for at least 6 months before entering treatment. Using Kolmogorov-Simonov, it was found that the research data were normally distributed (Tables 1 and 2).

**Table 1.** Demographic Characteristics of Participants, N = 60

| Variables                          | Characteristic     | NA | MMT |
|------------------------------------|--------------------|----|-----|
| Personal and social characteristic | Age                |    |     |
|                                    | > 30               | 28 | 19  |
|                                    | < 30               | 32 | 41  |
|                                    | Employment         |    |     |
|                                    | Employed           | 55 | 58  |
|                                    | Unemployed         | 5  | 2   |
|                                    | Education          |    |     |
|                                    | > 12 year          | 10 | 15  |
|                                    | < 12 year          | 50 | 45  |
|                                    | Marital statute    | 60 | 60  |
|                                    | Living with spouse | 60 | 60  |

Abbreviations: MMT, Methadone Maintenance Treatment; NA, Narcotics Anonymous.

Studying the difference between lifestyle and sexual satisfaction of patients receiving MMT and NA and comparing the scores of 2 groups by t-test showed significant differences in lifestyles of patients treated with methadone at the significance level of 5% ( $P = 0.00$ ), however, there was no significant difference found between them in terms of sexual satisfaction ( $P = 0.32$ ) (Table 3).

Based on the results of Table 3, it was found that the difference between the 2 groups of MMT and NA in the life style is significant, except for in subscales of physical health, exercise and wellbeing, as well as mental health. MMT group received higher scores in subscales of weight control and nutrition, disease prevention, spiritual health, social health, drug use prevention, prevention of events,

environmental health, and lifestyle score compared to the NA group. In other words, they had a more appropriate lifestyle (Table 4).

### 4. Discussion

Satisfaction of patients in methadone maintenance treatment is one of the key options in the quality of treatment. In addition, an individual desire to be treated at these centers can contribute to his satisfaction and better social performance (16). The drug strongly affects the metabolism of the body due to the fact that it leads to malnutrition in people (17, 18). Several studies have reported reduced food intake and malnutrition in addicted individuals (19, 20). Using opiates and heroin in short term leads to dryness of the mouth, and a feeling of heaviness in the limbs, nausea, vomiting, and severe itching (21). All these symptoms can affect the nutrition of the person, leading to weight loss and malnutrition in the long-term.

Malnutrition among drug addicts varies from 5% to 30% (20). In addition, it is reported that treatment with methadone (MMT) is useful in the treatment of dependence on opiates. Many of its effects are similar to those of other drugs such as heroin and morphine with a longer duration of effect. Drug addicts are at risk of malnutrition and now, there is little information regarding the nutrition state in these patients during methadone maintenance treatment. However, taking methadone in people leaves a good physical effect on them (22). The lack of treatment of alcohol and drug abuse is the major cause of metabolic abnormalities and changes in the life style of people. In a study conducted in 1991 to examine the effects of nutrition treatment added to a traditional rehab program based on the 12-step alcoholics anonymous program, the results showed that the group received nutrition treatment, based on the individual nutrition advice and improved menus, and showed less symptoms of low blood sugar, blood sugar, and craving of alcohol use. Therefore, the inclusion of a therapeutic nutrition program can be effective in improving the process of NA addiction treatment process (23).

Although in methadone maintenance treatment the drug is effective in reducing the use of heroin and other behaviours, a number of clients leave the MMT prematurely. In fact, patients who are under the monitoring system control their behaviour (24). Furthermore, conducting drug tests regularly and the presence of laws prevent the communication of the person with other offenders and will cause the person to not be viewed equally with other offender addicted people, which improves the social health of the person (23). In 2011, a study was conducted to examine the impact of 12-step treatment on heroin-addicted

**Table 2.** History of High-Risk Sexual Behavior Protection and Psychological Disease

| Illness History                | Type               | Results   |    |    |
|--------------------------------|--------------------|-----------|----|----|
| Depression                     | No depression      | 46        |    |    |
|                                | Minor depression   | 14        |    |    |
| Serology of infectious disease | HIV                | Negative  |    |    |
|                                | HBV                | Negative  |    |    |
|                                | HCV                | Negative  |    |    |
| Sexuality                      | Number of partners | 1 partner | 60 | 60 |
|                                |                    | More      | 0  | 0  |
|                                | Condom use         | Yes       | 16 | 42 |
|                                |                    | NO        | 44 | 18 |

Abbreviations: HBV, Hepatitis B Virus; HCV, Hepatitis C Virus; HIV, Human Immunodeficiency Virus.

**Table 3.** Descriptive Indices of Lifestyle and Sexual Satisfaction in 2 Groups

| Variables           | Groups, Mean (SD) |                |
|---------------------|-------------------|----------------|
|                     | MMT               | NA             |
| Life style          | 138.74 (22.22)    | 110.70 (20.95) |
| Sexual satisfaction | 64.88 (11.62)     | 67.12 (10.88)  |

Abbreviations: MMT, Methadone Maintenance Treatment; NA, Narcotics Anonymous.

people, who were treated with methadone. Results showed that people achieved a sense of self-efficacy and were motivated to change their life style (25). Spirituality changes in people who are treated with NA improve their control in the treatment of drug use. Although the results of the studies have shown that a significant correlation was found between spirituality and mental health of the people in the treatment stages using AA method, this process requires people completing the 12-steps treatment so that they can advocate it for others (26). Therefore, this case could be one of the weaknesses of the study, since this study was conducted on people who received NA, in which people were treated for 6 months. Studies have also suggested that during treatment with methadone, spiritual interventions should be long enough to have the necessary effectiveness, because addiction is a chronic disease and spirituality of the person needs to be improved through his family and community interventions (27).

The results of various studies on these anonymous groups confirm the importance of these groups in providing guidelines for life, increasing social support network, and reducing the harms related to AIDS and its related risks (28, 29). A few studies have been conducted so far on the presence of this group of people in NA groups. Poverty,

homelessness, and infections such as AIDS and hepatitis, low appetite, and the desire to withdraw from treatment are major obstacles in the treatment of NA. Therefore, therapist professionals should provide the conditions for participation of the people with AIDS in 12 sessions (30, 31). MMT is currently widely performed in Iran, and it is expected to be effective in various aspects such as improving the physical health of the clients (32). Some studies found this expectation. In addition, from the point of view of customers, this treatment has various successes, such as reducing the incidence of HIV, hepatitis C and other blood diseases, improved family life, finding jobs, and more support of their children. Giacomuzzi et al., showed that public health increased significantly after 6 months by using methadone (10). In the study conducted by Kheradmard et al., in Iran in 2010 to examine the effect of maintenance treatment on the physical health of clients, results showed that improved appetite and weight is one of the beneficial effects of methadone maintenance treatment in some customers. In addition, if the patients experience reduced appetite and weight loss at the beginning of treatment, it can be due to side effects of depression and other psychiatric problems, which will be resolved by referring to a psychiatrist and prescribing a drug (22). The reduced harm caused by the drugs is the most important goal of leaving methadone, and if it is used in an appropriate way, non-pharmaceutical side effects of MMT could reduce environmental damage and prevent accidents and diseases. Several studies have reported the role and effects of MMT on increasing the quality of the life style of patients (33). Significant improvement will be seen in addicted patients at least 3 months after the completion of treatment (34). Reduced harm, reduced dependency on drugs, reduced impact of diseases, and reduced use of syringes, needles, as well as injections, in order to prevent the progression of

**Table 4.** Multivariate Variance Analysis Results of Lifestyle

| Variable/Index               | Groups, Mean (SD) |              | Degree of Freedom | F Value | P Value |
|------------------------------|-------------------|--------------|-------------------|---------|---------|
|                              | MMT               | NA           |                   |         |         |
| Physical health              | 11.48 (3.87)      | 10.56 (2.61) | (98, 1)           | 1.93    | 16.0    |
| Exercise and health          | 10.28 (3.15)      | 10.29 (4.28) | (98, 1)           | 0.001   | 0.99    |
| Weight control and nutrition | 11.04 (3.89)      | 8.92 (3.75)  | (98, 1)           | 67.77   | 0.007   |
| Prevention of disease        | 15.98 (2.63)      | 10.16 (3.43) | (98, 1)           | 90.23   | 0.001   |
| Mental health                | 14.04 (3.93)      | 13.22 (4.38) | (98, 1)           | 0.96    | 0.32    |
| Spiritual health             | 14.08 (2.91)      | 10.80 (3.26) | (98, 1)           | 28.05   | 0.001   |
| Social health                | 15.62 (3.23)      | 12.24 (4.40) | (98, 1)           | 19.15   | 0.001   |
| Avoiding drug use            | 13.04 (4.62)      | 9.38 (3.54)  | (98, 1)           | 90.15   | 0.001   |
| Prevention of events         | 18.40 (5.20)      | 12.40 (4.29) | (98, 1)           | 39.51   | 0.001   |
| Environmental health         | 15.60 (4.11)      | 12.68 (5.50) | (98, 1)           | 9.04    | 0.003   |

Abbreviations: MMT, Methadone Maintenance Treatment; NA, Narcotics Anonymous.

AIDS, are the main non-pharmaceutical goals of treatment with methadone (35). Therefore, drug treatment programs pave the way for treatment of addicted people suffering from HIV infection (36). Morata et al., analysed the impacts of needle and syringe, and methadone maintenance treatment on the prevalence rate of AIDS in Europe for 16 years. Their results indicated that participation in MMT program not only protects the human rights and health of people, but also enhances the health and wellbeing of the communities, leading to a reduced rate of the AIDS virus (37). Changing the environment is the most important factor reducing the addiction recurrence. The addicted person uses the drug with his friends, while in methadone treatment, he uses it in the presence of the therapist and this change in the environment changes the personality and environment health of the person dramatically. Reduced physical harm, returning to normal life, job stability, and the prevention of injection are the most important benefits of environmental health in treatment with methadone. Low sexual satisfaction in 2 groups can be caused by a variety of factors, including the negative long-term impact of prolonged use of opiates on an individual's libido, which can play a key role in reducing sexual satisfaction, which requires more treatments such as drug treatment and involvement of the couple in psychological interventions (38). In addition, studied patients may experience lack of sexual satisfaction at the beginning and their sexual satisfaction may reach a lower level due to exposure to these groups. On the other hand, these people may be at the initial stage of a membership in this group (Narcotics Anonymous and methadone treatment), therefore, we cannot report this result definitely, due to the weak-

ness in collecting demographic information. The strength of this study is comparing 2 successful drug-leaving methods in the world. However, its weaknesses and limitation included lack of controlling the effect of confounding factors, for example addiction history, cultural and economic differences of the addicted people, as well as using only male participants in this study.

#### 4.1. Conclusion

Poverty, homelessness, and infections such as AIDS and hepatitis, as well as low desire to withdraw from treatment are the major obstacles in the NA treatment. Results of the study suggest the higher effectiveness of methadone maintenance, compared to a membership in the Narcotics Anonymous association. It could be stated that lifestyle is improved in subscales of weight control and nutrition, disease prevention, spiritual health, social health, drug prevention, accident prevention, and environmental health during methadone maintenance treatment, due to avoiding using the drug.

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## Footnote

**Conflict of Interest:** There is no conflict of interest in this study.

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