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Comparing sexual dysfunction in maintenance therapy with Methadone and Buprenorphine in married male

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ABSTRACT

Background and aims: Sexual dysfunction is a common complaint among drug abusers in the treatment with Methadone and Buprenorphine. The aim of this study was to assess sexual dysfunction in patients undergoing Methadone or Buprenorphine for maintenance therapy.

Methods: This research was a cross-sectional study. A 3-parts questionnaire (demographic questions, international index of erectile function questionnaire (IIEF) and Beck Depression Inventory (BDI-II)) was used for data collection.

Results: Overall, 3.5% reported no Erectile Dysfunction (ED), 79.9 % reported mild to moderate ED, and 10% reported severe ED. There were no statistical differences in the components of the IIEF questionnaire between Methadone maintenance treatment (MMT) and Buprenorphine maintenance treatment (BMT) group. Statistical analysis show that depressed subjects has a higher sexual dysfunction (r= -0.435, P<0.001). The results showed no significant relation between drug dose and sexual function (r= 0.031, P= 780).

Conclusions: Based on our findings, sexual dysfunction was relatively high among males who received MMT and BMT and the disorder was more prevalent in depressed people. As the results, the problem needs more attention and should be offered the right solution to solve it.

Keywords: Sexual Dysfunction; Maintenance Therapy; Methadone; Buprenorphine.

Original article

INTRODUCTION

So any disorder that leads to disharmony and therefore consent to sexual relations, may be associated with sexual dysfunction.[1,2] Sexual dysfunction influences the life quality of millions of men and their partners in the world and most of them prefer to suffer in silence.[3] Sexual issues in marriage are primarily important and compatibility in sex is an important factor affecting happiness.[4] Optimally,

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satisfying the sexual desires play a pivotal role in the development of the human personality, individual and social health, and achieving peace and comfort.[5] In most cases, sexual dysfunction and lack of sexual satisfaction will lead to the collapse of the family foundation.[6] Sexual dysfunction in men is the inability to achieve sexual satisfaction in a sexual relationship, and may be due to insufficient erections, difficulty poured semen into prostatic urethra or ejaculatory difficulty.[7] Many patients who suffer from erectile dysfunction aren't able to share this problem with their consultants and on the other hand, many clinical care providers and counselors feels discomfort and embarrassment when dealing with patients having sexual problems.[3] Most common sexual dysfunction in 18 to 59 years old men, includes: Premature ejaculation, loss of libido, anxiety about sex and not to enjoy sexual contact.[8] Today, the pharmaceutical composition of drug maintenance therapy (particularly methadone and buprenorphine) as one of the most common and most valuable therapy to reduce the risk of drug using.[9] In the United States of America, over 150,000 drug-dependent patients are treated with methadone.[10] Erectile dysfunction is a common side effect of heroin abusers and the prevalence in patients undergoing maintenance treatment between 7 to 33% have been reported.[9,11-13] Sexual dysfunction is one of the biggest obstacles to the continuation of conservative therapy, especially in patients with increased duration of treatment, and high dose.[14]

Although sexual dysfunction, a common complaint among drug abusers in methadone maintenance treatment is beginning in the world, few studies exist regarding sexual function of addicts in Iran and the world. Bliesener et al. studied a group of heroin abusers, indicating the significant prevalence of the disorder among patients starting treatment. A research in which 201 male drug abuser undergoing methadone maintenance treatment were randomly assigned to 7 clinics, found that 24% of the patients had disorders of mild-moderate sex and 18% of them suffered from severe disorders of sex.[15] Similar studies regarding the prevalence of sexual dysfunction in drug users occurred in which the researchers found that patients had severe sexual dysfunction, especially erectile dysfunction.[16] Hanbury et al, in the study of 50 patients treated with methadone maintenance found that 33% of the participants have suffered from serious impairment of sexual function.[17] Another study in Kermanshah on 177 opioid dependent patients indicates the presence of significant sexual dysfunction in 70% of patients.[18]

Given that sexual dysfunction is a serious problem in patients undergoing methadone and buprenorphine maintenance treatment, determining the extent of the disorder is necessary. The present study aims to assess the sexual dysfunction in patients undergoing methadone and buprenorphine maintenance therapy in Tehran (Rahe Roshan and Farabi hospital addiction treatment center). Because of socio-cultural limitations in Iran, our study focused on evaluating sexual dysfunctions in married men.

METHODS

The cross-sectional study was conducted to evaluate the sexual dysfunction on married men who referred to addiction treatment centers, substance abuse and dependence in Tehran in 2014. Using similar studies, the sample size of the study

was determined at 110. Finally, 85 people that completed the questionnaires entered in the data analysis (N= 52 in Methadone and N= 33 in Buprenorphine).

The inclusion criteria of the study was being married male, having at least 18 years old, a history of drug dependence, and written informed consent to participate in the study. Participants who had a chronic disease and psychological disorders excluded from the study.

A3-parts Questionnaire (demographic questions, international index of erectile function questionnaire (IIEF) and Beck Depression Inventory (BDI-II)) was used for data collection. IIEF has 15 questions, including: Erectile Function (6 questions), Orgasmic Function (2 questions), Sexual Desire (2 questions), Intercourse Satisfaction (3 questions) and Overall Satisfaction (2 questions). The maximum score is 75 that represent the best sexual function. Based on Erectile Function score, the participants categorized as follows; No erectile dysfunction (score 26-30), Mild erectile dysfunction (score 22-25), Mild to moderate erectile dysfunction (score 17-21), Moderate erectile dysfunction (score 11-16), and Severe erectile dysfunction (score 6-10).[19]

The BDI-II contains 21 questions, each answer being scored on a scale value of 0-3. The cutoffs use differs from the original; 0-13: minimal depression, 14-19: mild depression, 20-28: moderate depression, and 29-63: severe depression.[20]

Descriptive statistics were presented by mean and standard deviation for quantitative data, and frequency for qualitative data. The distribution of data was checked by Kolmogorov-Smirnov test. For investigating the relations between variables, T-test, Chi-square and Pearson correlation coefficient were used. The significance level was considered in 0.05. All data analysis was done using SPSS.

RESULTS

In this study, 110 addicts were studied that information about the 85 of them was completed. The response rate in Methadone group was 74% and in Buprenorphine group was 82.5%. Basic characteristics of patients are presented in Table 1.

Table 1: Basic characteristics of patients

Characteristics		N0. %	Mean ± SD
Age			
Education	≤12 years	76(71.8)	33.7 ± 4.6
	>12 years	24(28.2)	
Economic Status	Weak	22(25.9)	
	Moderate	45(52.9)	
	Good	18(21.2)	
History of sexual disorder	Yes	9(10.6)	
	No	76(89.4)	
Employment	Employed	79(92.9)	
	Unemployed	6(7.1)	

Table 2 shows the distributions of the erectile function scores for patients in methadone and buprenorphine maintenance treatment. Overall, 3.5% reported no ED, 79.9 % reported mild to moderate ED, and 10.6% reported severe ED. The median score was 17, and the mean ± SD was 17.07±2.6.

Table 2: Score of the erectile function of patients in methadone and buprenorphine treatment

Erectile dysfunction	Methadone patients, no. (%)	Buprenorphine patients, no. (%)	Total, no. (%)	P
Severe (score 6-10)	5 (9.6)	4(12.1)	9 (10.6)	0.909
Moderate (score 11-16)	17(32.7)	10(30.3)	27(31.8)	
Mild to moderate (score 17-21)	22(42.3)	12(36.4)	34 (40)	
Mild (score 22-25)	6(11.5)	6(18.2)	12(14.1)	
No erectile dysfunction (score 26-30)	2(3.8)	1(3.0)	3(3.5)	

The mean score of overall Satisfaction was 5.6±1.6 (5.57 in MMT and 5.72 in BMT). Orgasmic Function was 5.54±2.01 (5.34 in MMT and 5.84 in BMT). Sexual Desire was 5.63±1.87 (5.59 in MMT and 5.69 in BMT). Intercourse Satisfaction was 8.56±2.84 (8.67 in MMT and 8.39 in BMT). Erectile function was 17.07±4.5 (17.09 in MMT and 17.03 in BMT). Total score was 42.4±11.7 (42.2 in MMT and 42.7 in BMT). There were no statistical differences in the components of the IIEF questionnaire between MMT and BMT group. The results of the t-test analysis between the two groups are represented in Table 3.

Table 3: The result of t-test analyze between methadone and buprenorphine treatment

Variable	MMT (Mean)	BMT (Mean)	P	Mean difference	95% CI for difference
Erectile Function	17.09	17.03	0.956	-0.05	-1.96, 2.07
Orgasmic Function	53.4	5.84	0.265	-0.50	-1.39, 0.38
Sexual Desire	5.59	5.69	0.811	-0.10	-0.93, 0.73
Intercourse Satisfaction	8.67	8.39	0.662	0.27	-0.98, 1.54
Overall Satisfaction	5.57	5.72	0.689	-0.15	-0.89, 0.59
Total score	42.2	42.7	0.874	-0.41	-5.64, 4.80

Our results showed that 18.8 % of patients have moderate or severe depression. Comparison of depression status in two groups shown in Table 4. Statistical analysis shows that a significant indirect relation between depression and sexual function (r= -0.435, P<0.001). There was no significant relation between drug dose and depression (r= -0.001, P= 0.952). Also, the results showed no significant relation between drug dose and sexual function (r= 0.031, P= 780).

Table 4: Comparison of depression status in two groups

Levels of Depression	MMT, No. (%)	BMT, No. (%)	Total, No. (%)	P
Normal	23(44.2)	20(60.6)	43(50.6)	0.57
Mild mood disturbance	13(25)	7(21.2)	20(23.5)	
Borderline clinical depression	4(7.7)	2(6.1)	6(7.1)	
Moderate depression	7(13.5)	2(6.1)	9(10.6)	
Severe depression	3(5.8)	1(3)	4(4.7)	
Extreme depression	2(3.8)	1(3)	3(3.5)	

DISCUSSION

In the present study, 10 % of the patients reported severe ED and about one third reported moderate ED. The percentage of patients reported ED is moderately lower than the percentages reported ED in previous studies and higher than the general population study of 2000 Italian males aged 18-39 years in which only 2% reported ED.[11,13,21-23] In our project we see no statistical differences in any type of sexual dysfunction between MMT and BMT group. Whereas, some studies demonstrated that patients in the methadone group had a higher rate of sexual dysfunction in comparison with the buprenorphine.[11,13,24] The results of a meta-analysis shows that sexual dysfunction was significantly higher combined odds ratio in the methadone group.[12] Our justification for the differences is that the differences in the characteristics of the study population. Also, the difference in results may be due to socio-economic differences across the communities.[25,26] The prevalence of moderate to severe depression in the patients in our study was 18.8%, while in the study of erectile dysfunction in male heroin users, receiving methadone and buprenorphine. It was 34 % and 38 % in another study.[11,13] Our results show that that depressed subjects had more sexual dysfunction that this finding was similar to previous studies.[11-13,27] We sought no significant association between drug dose and sexual function status while, in the study among 31 male and 17 female former addicts in methadone maintenance daily methadone dose (mg/kg) correlated significantly with frequency of sexual contacts and ejaculation.[28]

Sexual dysfunction and depression status were investigated in this study. Methadone and Buprenorphine had no different influence on sexual function but depressed patients had a greater problem in this disorder.

CONCLUSION

Based on our findings, sexual dysfunction was relatively high among males who received MMT and BMT and the disorder was more prevalent in depressed people. As the results, the problem needs more attention and should be offered the right solution to solve it. For this reason, depression can be a good indicator for screening people at risk to sexual dysfunction. However, further studies are necessary to make correct decisions about this.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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