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## The Effect of Methadone Maintenance Therapy on Harm Reduction in Opiate Dependents in Kerman Socio-Behavioral Consulting Centers

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<b>Background:</b>	<b>Abstract</b> Socio-behavioral consulting centers offer methadone maintenance therapy which is a very useful method for drug dependents. These centers offer a wide range of services like education, consulting, prevention, care taking of patients and treatment for high risk groups such as AIDS-infected patients. Methadone maintenance therapy (MMT) is helpful in harm minimization and increasing the quality of the drug dependent's life; therefore, reducing infection in HIV patients. This study intends to investigate the importance of MMT on harm reduction in opioid dependents in Kerman.
<b>Methods:</b>	This descriptive, cross sectional study was performed on 110 patients referred to No. 1 and No. 2 socio-behavioral consulting centers in Kerman city in 2005 and 2006. Data was gathered by questionnaires once at the beginning of treatment and once 6 months after. Then the data was analyzed by SPSS <sub>13</sub> and chi square test.
<b>Findings:</b>	Methadone maintenance therapy resulted in a 97.3% reduction in common injections, 96.4% decrease in arrest and imprisonment, 80% decrease in family problems and 68.2% decrease in drug abuse and negative morphine tests in these centers. After 6 months of treatment, drug consumption expenses were also diminished.
<b>Conclusion:</b>	This study showed that treatment with MMT in these centers reduced dangerous behaviors, increased the quality of life and controlled transmission of dangerous diseases such as AIDS and hepatitis in the community.
<b>Key words:</b>	<b>Methadone maintenance therapy, Harm reduction, Socio-behavioral consulting centers</b>
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## Introduction

Addiction is an increasing issue all over the world. Methadone maintenance therapy (MMT) is one of the useful methods for patients dependent on drugs, especially for heroin users, psychiatric patients and malignancy cases.<sup>1</sup> From a few years ago, MMT has been carried out generally through Iran. Great investment has been made in this field, such as establishment of methadone treatment centers in prisons and welfare centers.

One of the places which provide this treatment is the socio-behavioral center. These centers give educational services, consultation, prevention, care taking and treatment of high risk groups for instance positive HIV (open to AIDS), education and consultation for high risk groups and conduction of educational programs for the public. The final goal is prevention and control of AIDS infection and its complications.

Hence 2-4% of addicts use common syringes, and they may not use condom, so AIDS infection is more prevalent in those who inject drugs, as a result 5-29% are HIV negative and 80% are HIV positive,<sup>2,3</sup> so it is the main responsibility of the health practitioner to do rapid detoxification or cut the drugs and prevent the returning of patients to their past situation.

In our country, socio-behavioral centers such as centers No. 1 and 2 in Kerman which were established in 2005 have been established to suppress the society's needs. They have useful programs like giving free syringes, condoms, MMT, sedative medicine and narcotic addiction treatment.

Because of the important role of MMT in reducing drug injection, crime, illegal drug intake and also increasing the quality of the addict's life, it seems this treatment reduces infectious HIV and at the same time reduces their anti social behaviors. MMT also reduces chronic liver disease and increases the effect of riboverin and interferon tablets in hepatitis C treatment; therefore, HIV-positive patients will be in a better situation.<sup>4,6</sup>

The aim of this study was to evaluate the effect of MMT in harm minimization in addicts in the behavioral consulting centers in Kerman.

## Methods

This descriptive, cross sectional study was carried out on 110 cases referred to No. 1 and No. 2 socio-behavioral centers in Kerman since the

establishment of these centers (April -September 2005) till the end of year 1385. Evaluation was performed by two questionnaires, once on entry and once 6 months after MMT. Data were collected using a demographic questionnaire including questions on history of consumption, treatment, judicial history and variables such as decline in working time, adultery, the amount of drug injection, record of imprisonment, involvement with the police, economic loss, family disputation and problems, using common syringes and changing the way of consumption. The data were collected and analyzed by SPSS<sup>13</sup> using chi square test.

## Results

The majority of people referred to the centers was between 20 to 40 years old and was mostly male (95.4%) with primary education (58.5% below high school) and unemployed (43.6%).

Cigarette, opium and heroin consumption was high and anti depressants had a higher consumption rate than other medicines (9-29%).

Of the referred patients, 65.4% had committed adultery, of which 10% had never used a condom. Common syringes were used for drug injection in 61.8%, of which 53.6% mentioned the point that as a result of drug consumption, they had disputes and family problems; 22.72% had these problems up to 3 times a month.

The most common reason of getting involved with the police was firstly disputation (23.6%), and secondly carrying drugs (19.09%). Records of arrest and imprisonment were seen in 77.2%; 56.26% had 5-10 records, 14.4% had 10-15 records and 1.8% had more than 10 records of imprisonment.

The most common reason of being imprisoned was drug addiction (41.8%) and the other reasons were carrying drugs (26.3%), struggle and disputation (23.6%), buying and selling drugs (12.7%) and robbery (6.26%). Infection by hepatitis virus, HIV virus and hepatitis B virus was seen in 68.2%, 56.4% and 68.2% of the cases, respectively.

1- *The effect of MMT on negative response of the morphine test:* MMT in 68.2% of cases, after 6 months of treatment, caused the negation of morphine test which was significant ( $P < 0.05$ ) and it showed the significant effect of methadone on reducing drug consumption or preventing further drug abuse.

**2- The effect of MMT on using common syringes:** MMT caused 97.3% reduction of common syringe usage which was significant in comparison to pretreatment ( $P < 0.05$ ).

**3-The effect of MMT on family disputation:** In 80% of the cases, after 6 months of MMT there was no quarrel and family problems anymore which was significant.

**4 -The effects of MMT on adultery:** In 57.2% of the cases, after 6 months of MMT there was no sex relationship out of the family, and also condom usage was increased by those who still had sex relationships out of the family, which was significant.

**5-The effect of MMT on involvement with the police and imprisonment:** After 6 months of MMT, 96.4% reduction was achieved in police involvement and imprisonment.

**6-The effect of MMT on drug expense:** After 6 months of MMT, the drug expense was significantly reduced in contrast with the past.

## Discussion

Reducing harmful and dangerous behaviors in the addicts is one of the aims of MMT. A study by Avants and his colleagues in 2004 has shown that this treatment had a positive effect on reducing drug injection and sex behavior out of the family and resulted in reducing dangerous infections such as AIDS and hepatitis B and C.<sup>4</sup>

Another study performed by Ghitza and his colleagues in 2006 has shown that MMT caused better behavior and also change in consumption behavior in cannabis dependent patients showing better social and economic quality of life and

reduction of expenses and amounts of injection.<sup>7</sup> This study showed that treatment with MMT improved the drug dependent's life in different dimensions and reduced the harm of high-risk behaviors among the referred cases. MMT influenced criminal behavior, arrest and also reduced imprisonment.

Ball's study has shown that following MMT would result in reduction in criminal behaviors.<sup>8</sup> MMT reduced injection by common syringes as shown in Ball's study.<sup>9</sup>

In the next level, MMT had impact on family disputation and quarrel and also reduced drug consumption during the treatment.

The study on 229 cases referred, who received MMT in USA, has showed the reduction in drug consumption during treatment.<sup>10</sup> Also, in this study MMT decreased adultery, but it was less effective compared to the other effects.

The results of meta analysis on 11, 8 and 24 studies regarding the effects of MMT on drug abuse and high-risk behaviors in transmitting AIDS and criminal behaviors showed that the highest effect of methadone treatment was firstly on criminal behaviors caused by taking medicine, secondly on reduction of drug usage during treatment and finally on high-risk behaviors of transmitting AIDS.<sup>11</sup>

In addition, this study, like other studies has showed that the socio-behavioral consulting center of Kerman has been successful in harm reduction as a result of following methadone treatment.

**Conflict of interest:** The Authors have no conflict of interest.

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## بررسی اثر بخشی کاهش آسیب به دنبال درمان نگهدارنده متادون در افراد وابسته به مواد افیونی در مراکز مشاوره رفتاری اجتماعی

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### چکیده

درمان نگهدارنده متادون از جمله روش‌های درمانی در افراد وابسته به مواد افیونی می‌باشد. مراکز مشاوره رفتاری اجتماعی از جمله مکان‌هایی است که برای درمان این بیماری به آن مراجعه می‌شود. این مراکز جهت خدمات آموزشی، مشاوره، پیش‌گیری، مراقبت و درمان برای گروه‌های پرخطر از جمله افراد مبتلا به ایدز می‌باشد. درمان نگهدارنده متادون سبب کاهش آسیب و افزایش کیفیت زندگی افراد وابسته به مواد افیونی می‌شود و از این رو می‌تواند در کاهش عفونت‌هایی هم‌چون ایدز مؤثر باشد. هدف از انجام این تحقیق، اثربخشی درمان نگهدارنده با متادون در کاهش آسیب افراد وابسته به مواد افیونی در مراکز مشاوره رفتاری اجتماعی شهر کرمان بود.

این مطالعه مقطعی توصیفی بر روی ۱۱۰ مراجع مراکز رفتاری و اجتماعی شماره ۱ و ۲ شهر کرمان در سال ۸۵-۱۳۸۴ انجام شد. داده‌ها توسط پرسش‌نامه، یک بار در ابتدای ورود به طرح و بار دوم ۶ ماه بعد از درمان جمع‌آوری گردید و سپس با کمک آزمون<sup>۲</sup>، در نرم‌افزار SPSS<sup>۱۳</sup>، مورد آنالیز قرار گرفت.

درمان نگهدارنده با متادون سبب کاهش ۹۷/۳ درصد در موارد تزریق مشترک، ۹۶/۴ درصد در موارد درگیری پلیس و زندانی شدن، ۸۰ درصد در موارد درگیری و مشاخره خانوادگی و ۶۸/۲ درصد در موارد کاهش مصرف مواد و منفی شدن تست مرفین در این مراکز شده بود. همچنین بعد از ۶ ماه درمان، هزینه‌های مصرف نسبت به قبل کاهش چشمگیری نشان داد.

این مطالعه نشان داد که درمان نگهدارنده با متادون در مراکز مشاوره رفتاری اجتماعی می‌تواند با کاهش رفتارهای پرخطر و بالا بردن کیفیت زندگی، سبب کنترل قابل توجه در انتقال بیماری‌های خطرناک مانند ایدز و هپاتیت و ... در جامعه گردد.

درمان نگهدارنده با متادون، کاهش آسیب، مراکز مشاوره رفتاری اجتماعی.

### مقدمه:

### روش‌ها:

### یافته‌ها:

### نتیجه‌گیری:

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تعداد صفحات: ۴

تعداد جدول‌ها: -

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