

## Evaluation of the Effect of Interventions for the Female Drug Abusers

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**Objective** To investigate an effective method to facilitate the physical and mental recovery of drug abusers in detoxification restoration period. **Methods** Integrated interventions were adopted to observe the changes in the physical and mental conditions of female drug abusers who had withdrawn drugs. **Results** Comparing behavioral changes between the two groups before and after intervention, we found that changes of score in the intervention group were all higher than those in the control group in terms of their physical symptoms or state of anxiety. **Conclusion** It is necessary to help drug abusers understand the harm of drug-abuse, build up self-confidence and improve EQ through interventions. It will be beneficial for the drug addicts to refrain from drug-taking and regain a normal life. Our study has proved that positive results can only be obtained from integrated intervention projects.

**Key words:** Female; Drug-abuser; Intervention

### INTRODUCTION

Nowadays nearly every country in the world is affected by drug-abuse. Since 1990's, drug-abuse has spread to more than 700 counties and cities in China<sup>[1]</sup>. The number of drug abusers registered has reached one million. Drug abuse can bring about many public health and social problems, such as HIV transmission, occurrence of illegal deeds and crimes. Female drug abusers are a population group who are at high risk for HIV infection and transmission. Their sexual partners and children are inevitable victims of HIV, who will potentially cause enormous public health problems in the society. Therefore, it is of great importance to concentrate our study on female drug abusers. In this study we adopted one month-long interventions for female abusers who were withdrawing drug in order to promote and speed up the restoration of their physical and mental health.

### OBJECT

The female drug abusers were from the Second Mandatory Drug-treatment Center in Wuhan. The convalescent patients conforming to the screening criteria and having received acute therapy for 10 d were selected for this project.

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**Selection Criterion:**

- (1) Opium-dependants conforming to DSM-IV-R opium-dependence and diagnostic criteria.
- (2) Female drug abusers, aged 15-45, non-illiterate, resident population in Wuhan.
- (3) Patients being in convalescent period after 10 d of acute therapy.
- (4) Having negative response to the urine morphine test.
- (5) Normal routine blood and urine laboratory tests and liver and kidney function tests.
- (6) Without history of psychotics diseases.
- (7) Patients in the intervention group willing to accept the intervention scheme.

**Time for Observation:** Since all the convalescent patients took part in daily activities at the same time, the observation period for the trial group and the control group were staggered in order to avoid the flyblow.

## METHOD

### *Collecting the Basic Data Before Interventions*

**Contents:** Basic information (including demographic data, history of drug addiction, etc.), knowledge about drugs harmful to health, quality of life, etc. The patients enrolled were asked to fill the questionnaires by themselves under the guidance of investigator. It was non-anonymity inquiry. Before inquiry the patients were told about the aim, meaning and principle of confidentiality so as to get their support and cooperation. The requirements for questionnaires administration were also elucidated.

### *Intervention Measures*

Integrated interventions were adopted, such as psychological hint, improvement of EQ, health education, acupuncture, music therapy and physical exercises.

#### *Self Psychology Hint*

The patients were told to read hint words silently in the morning and at night, such as "I am self-confident", "I believe I can succeed" etc.

#### *Exercise*

The patients took part in a sort of gymnastic exercises containing eight sections, the main function of which was to promote the secretion of cerebral endorphin.

#### *Music Therapy*

The patients were asked to listen to therapeutic musical CD and dance with the music. They were also asked to listen to pop music so as to enjoy themselves.

#### *Health Education*

Through lectures, discussion and self-study, patients came to know the risk of drugs and drug-addiction. They were taught how to improve EQ, adjust their emotions, keep high spirit, and reject any temptation of drug-abuse.

#### *Psychological Consultation*

Consultations were provided by personal talk or through writing in accordance with

each patient's specific condition.

#### *Acupuncture*

Ha-Ci-Wu-Xing pins (a special kind of Chinese acupuncture treatment) were used to alleviate the continual symptoms or state of depression and anxiety .

#### *Relax Training*

Relaxing exercise was done before sleep every night.

#### *Intervention on the Family Members of the Patients*

Keeping close contact with patients' relatives, exchanging information about the patients' conditions so that cooperation from their families could be obtained.

#### *Collecting Data After Intervention*

After intervention the same questionnaires were used for survey again so as to compare with conditions before intervention.

#### *Data Analysis*

Using Foxpro to make database and using software (stata 5.0) to carry out statistic analysis.

## RESULTS

#### *Comparion of Demography Characteristics of Two Groups*

The number under observation was 56 for the intervention group and 63 for the control group. There was no significant difference between the two groups in age, vocation, education level, marital status and income, etc, so they were comparable.

#### *Comparison of Drug-abuse History Between the Two Groups*

There was no significant difference between the two groups in drug-abuse history (including age to start drug-abuse, duration, drug type, style, dose, frequency, etc.) and reasons for taking drugs. The drugs that they had taken were mainly heroin, orally at the beginning and then intravenously. The dose increased progressively along with the duration of drug-abuse, becoming more dangerous and with quantity ever increasing. The main reason for the first trial was usually curiosity and for the relapse was irresistible temptation of the drug, lack of determination, continual symptoms, bad circumstance and allurements from other drug-abuse friends.

#### *A Comparison on the Knowledge, Physical and Mental Status Between the Two Groups Before Interventions*

Table 1 shows that at the beginning, apart from irritation, both the intervention group and control group had similar score in other aspects.

TABLE 1  
Comparison of the Knowledge, Physical and Mental Status Before Interventions

	Intervention ( $\bar{x} \pm s$ )	Control ( $\bar{x} \pm s$ )	<i>t</i>	<i>P</i>
Knowledge Total Score	11.05±0.21	10.98±0.27	1.564	0.1204
Physical Symptom Total Score	11.16±6.32	9.93±6.11	1.079	0.2830
Ache Score	1.5±0.13	1.46±0.16	1.485	0.1402
Fret Score	1.52±0.16	1.35±0.15	5.980	0.0000
Sleeping Score	4.79±0.83	4.65±0.44	1.167	0.2455
Anxiety Total Score	44.34±8.70	42.48±9.50	1.109	0.2697
Depression Total Score	47.61±8.05	46.35±9.90	0.756	0.4513
Spirituality-sensibility Score	4.32±1.47	3.96±1.68	1.237	0.2186
Physical Impediment Score	18.45±3.91	18.17±4.43	0.364	0.7169
Spirit-motility Impediment	4.95±1.34	4.67±1.23	1.188	0.2371
Depression Psychology Impediment	19.89±4.47	19.56±5.35	0.363	0.7176

*Comparison of the Knowledge, Physical and Mental Status Between the Two Groups After Interventions*

TABLE 2  
Comparison of Knowledge, Physical and Mental Status After Intervention

	Intervention ( $\bar{x} \pm s$ )	Control ( $\bar{x} \pm s$ )	<i>t</i>	<i>P</i>
Knowledge Total Score	12.79±0.98	12.12±0.31	5.147	0.00
Physical Symptom Total Score	5.48±1.24	6.37±1.02	4.298	0.00
Ache Score	0.54±0.08	0.90±0.14	16.940	0.00
Fret Score	0.61±0.08	1.02±0.16	17.340	0.00
Sleeping Score	2.90±0.39	3.38±0.62	4.982	0.00
Anxiety Total Score	35.68±4.01	37.82±5.57	2.379	0.02
Depression Total Score	41.83±7.57	42.26±5.86	0.349	0.73
Spirituality-sensibility	2.93±0.83	3.35±0.98	2.506	0.01
Physical Impediment Score	6.84±3.48	15.73±4.76	1.437	0.15
Spirit-motility Impediment	4.30±1.40	4.35±1.63	0.178	0.86
Depression Psychology Impediment	18.40±5.15	20.20±4.08	2.124	0.04

Table 2 suggests that after intervention, there was a significant difference between the intervention and control group in knowledge, physical symptoms and irritation. The score of the intervention group was lower than that of control group. However, in the state of depression there was no significance though the score of the intervention group was lower than that of the control group.

*Comparison of the Physical and Psychological State Between the Two Groups a Month Later*

TABLE 3  
Comparison of the Score Change Between Two Groups

	Intervention ( $\bar{x} \pm s$ )	Control ( $\bar{x} \pm s$ )	<i>t</i>	<i>P</i>
Physical Symptom	6.11±0.99	3.88±0.99	12.265	0.00
Depression	3.34±1.04	2.20±1.60	4.545	0.00
Anxiety	6.52±1.12	1.52±1.41	21.238	0.00

From the degree of change compared between the two groups before and after interventions we could see whether in physical symptoms or in emotional state of anxiety the score changes in the intervention group were higher than those in the control group.

### DISCUSSION

It is reported<sup>[2]</sup> that most of drug-abusers have certain subjective reasons, such as abnormal curiosity, deficiency in the development of personality and unawareness of the harm of drug addiction. Moreover, temptation of drug-abusers, influence of adverse family surroundings are the reasons that contribute to the number of female drug addicts.

There are also some psychological characteristics in female drug-abusers, such as high depression, serious psychological relying, strong sense of inferiority, and 'heroin personality'.

Results of investigation show that the education level of female drug-abusers is generally lower and a trend of low-age appears. Most of them are non-professional or without fixed vocation. At first they take drugs orally and then intravenously. The main reason for first drug abuse is curiosity and relapse is often caused by irresistence to the temptation of drug and allurements from bad companions. Therefore it is important to let them know the harm of drug-abuse and set up self-confidence to give it up and improve the EQ by interventions. This will help them to refrain from drug-abuse and restore their physical and mental health. The result has been proved by the application of an integrated intervention project and short-term effect obtained.

A great deal of evidences indicate that there are some serious physiological and psychological obstacles that the off-drug patients should be coped with when turning to the healing phase. The main symptoms after withdrawal of drugs include stubborn insomnia, anxiety, depression, psychological imbalance, easiness to get vexed and agitated, etc. It is reported<sup>[3]</sup> that by using SAS and SDS questionnaires to investigate heroin-dependent patients who have abstained from drug by Methadone therapy, the score of anxiety and depression may be reduced in some cases but still higher than that of the normal. It is obvious that the two types of emotional disorders are related not only to the physical dependence but also to mental dependence. It is also reported that heroin addicted persons are often accompanied by gloomy psychological impediment, the incidence of which is 34%<sup>[4]</sup>. From our study we could see that after interventions the scores of anxiety and depression in two groups were all reduced, but the score change in the intervention group was more evident than that in the control group. In addition, the difference between the two groups was significant. The results show that apart from the effect of time delay, the

intervention project is effective on the alleviation of the patients' anxiety and depression.

Factors influencing relapse are various, including neurobiological, psychological and social ones. Among them, the continual symptoms and various psychological impediments are important factors leading to relapse. These symptoms are usually induced by the imbalance of nervous endocrine system after the patients are free from relying on heroin abruptly<sup>[5]</sup>. They often make the patients fall into an anguished condition that they have to take drug again.

The repeated relapse of persons abstained from drug is a big puzzle in the drug-cessation work at present. Reasons for relapse are so many that we should take integrated prevention and control measures. For example, in this study, acupuncture has the effect to decrease such symptoms as insomnia, anxiety and ache; music may bring about relaxation; health education and assurance of success will increase knowledge and promote EQ. But it should be noticed that none of single measure can precede over the others in every aspect.

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