



# Quality of Life Among Drug-Dependent and Non-Drug Dependent Individuals in Iran

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Received 2016 December 20; Revised 2017 April 28; Accepted 2017 September 24.

## Abstract

**Background:** Drug dependency is one of the most important issues in any society and it is among the most widespread health risk factors.

**Objectives:** This study was conducted to determine quality of life in drug-dependent individuals, who were under methadone treatment, and non-drug dependent persons in Shahroud (northeast of Iran).

**Methods:** In this comparative study, 266 drug dependent participants and 541 non-drug dependent participants were studied in 2014. The Persian version of SF-36 Quality of Life Questionnaire was used to collect data. The data were analyzed using chi square test, t test, and ANOVA.

**Results:** The majority of the participants (77.1%) in both groups were male. The mean age of drug-dependent participants was  $37.6 \pm 10.7$ , the mean duration of drug dependency was  $12.0 \pm 9.3$  years, and the mean duration of treatment in methadone maintenance treatment centers (MMT) was  $24.6 \pm 22.6$  months. No significant difference ( $P > 0.05$ ) was observed between the 2 groups in any aspects of quality of life other than the vitality ( $P = 0.001$ ).

**Conclusions:** In this study, quality of life scores were not significantly different between drug dependent and non-dependent participants. It seems that treatment with the use of methadone and buprenorphine can play a good role in improving quality of life of addicts.

**Keywords:** Substance-Related Disorders, Drug-Dependent, Methadone, Quality of Life, Iran

## 1. Background

Since Iran is on the way of one of the main routes for transporting opiates, it is one of the world's major drug victims (1). Drug dependency is one of the most important issues in our society, and it is among the most widespread health risk factors, which can be investigated from biological, psychological, and social perspectives (2). Some risk factors of drug abuse include high levels of family conflicts, educational problems, occurrence of simultaneous psychological disorders such as mood swings and depression, peer and parental drug abuse, and early onset of smoking. The greater the number of these risk factors, the greater is the risk of addiction (3). Drug dependency is a chronic problem, which is often associated with other mental conditions, and can be comorbid with decreasing

quality of life both in physical and psychological aspects (4). Quality of life is a collection of physical, psychological, and social well-being, such as happiness, satisfaction, pride, health, economic status, and educational opportunities, which can be felt by a person or group of people (5).

Recent studies have examined the impact of drug dependency on the life of people and on their interactions and experience (6,7). Some studies indicate the lower quality of life of drug dependent people compared to that of non-drug dependents (8-12). However, some studies have shown that the quality of life of drug dependent individuals improves with practical support and replacement therapies, such as methadone and buprenorphine, which are provided mostly in specialized centers under the supervision of physicians and nurses (7,13).

## 2. Objectives

Given the importance of this issue, this study aimed at determining the quality of life of addicts, who received treatment in methadone maintenance treatment centers, and comparing it with the quality of life of non-addicts.

## 3. Materials and Methods

### 3.1. Study Design and Setting

In this comparative study, which was conducted in 2014, 6 Methadone treatment (MMT) centers were randomly selected from the registered centers in Shahroud, northeast of Iran.

#### 3.1.1. Participants

In this study, 266 drug-dependent individuals from MMT centers were selected as cases and 541 non-drug dependent persons were also selected as controls. Friend controls were used as controls. They were selected from a list of friends or associates obtained from the cases and were matched for age and economic conditions, but were not drug-dependent.

#### 3.1.2. Questionnaire

To measure quality of life, the Persian version of SF36 Questionnaire, which was previously validated in Iran by Montazeri et al. was used (14). The questionnaire included 10 items on demographic features and 36 on quality of life, which were administered to the participants. Illiterate individuals and those with limited literacy were interviewed to complete the questionnaire.

#### 3.1.3. Ethical Considerations

After explaining the goals of the study and obtaining a verbal informed consent from the participants, the questionnaires were administered anonymously to the participants by trained interviewers. The methods and proposal of this study were reviewed by the Ethical Review Board and Research Committee of Shahroud University of Medical Sciences (No = 9071).

#### 3.1.4. Data Analysis

The collected data were entered into SPSS-17 software and analyzed using chi square tests, t test, and ANOVA. Significance level was set at 0.05.

## 4. Results

The majority of the participants (77.1%) in both groups were male. Most of the participants (88.1%) were living in the city. Also, the majority of them were workers (26.2%). Education level of 77.6% of the participants in both groups was high school diploma or less. Moreover, 65.7% of the participants in the 2 groups were married. The monthly income of 70.4% of the participants was below \$145. The mean age of drug-dependent participants was  $37.6 \pm 10.7$  and that of non-drug dependents was  $34.9 \pm 11.9$ . The mean duration of drug abuse by the cases was  $12.0 \pm 9.3$  years, and the mean duration of treatment in methadone maintenance treatment centers was  $24.6 \pm 22.6$  months. As Table 1 demonstrates, there was no significant difference in any aspects of quality of life in the groups other than vitality ( $P = 0.001$ ).

Comparisons of the mean QoL scores (SF-36) of the 2 with regards to sex, occupation, housing status, and place of living are presented in Table 2, showing no significant differences in levels of independent variables between the 2 groups ( $P \geq 0.05$ ).

**Table 1.** Comparison of Quality of Life Subscale in Drug-Dependent and Non-Drug Dependent Participants

Variables	Drug Dependent	Non-Drug Dependent	P.Values
	Mean $\pm$ SD	Mean $\pm$ SD	
<b>Physical functioning</b>	71.1 $\pm$ 26.3	73.0 $\pm$ 26.9	0.344
<b>Physical role</b>	55.5 $\pm$ 37.8	58.8 $\pm$ 37.4	0.244
<b>Role emotional</b>	57.4 $\pm$ 40.9	54.0 $\pm$ 40.2	0.268
<b>Vitality</b>	56.1 $\pm$ 18.3	61.2 $\pm$ 20.0	0.001
<b>Mental health</b>	60.7 $\pm$ 18.8	62.9 $\pm$ 19.2	0.126
<b>Social functioning</b>	65.4 $\pm$ 23.4	67.9 $\pm$ 23.8	0.160
<b>Bodily pain</b>	70.3 $\pm$ 23.5	70.0 $\pm$ 24.6	0.859
<b>General health</b>	59.2 $\pm$ 18.2	61.6 $\pm$ 18.5	0.083
<b>SF-36 (Quality of Life)</b>	62.5 $\pm$ 17.3	63.3 $\pm$ 18.4	0.555
<b>PCS (Physical component summary)</b>	64.1 $\pm$ 19.9	65.9 $\pm$ 20.9	0.240
<b>MCS (Mental component summary)</b>	59.9 $\pm$ 19.6	61.5 $\pm$ 20.6	0.289

Comparison of the mean QoL score in educational levels in cases revealed there was not any significant difference between the 2 groups, but there were significant dif-

**Table 2.** Comparison of the Mean of Quality of Life Scores in Demographic Features in Between Drug-Dependent and Non-Drug Dependent Groups

Variables	Drug Dependent	Non-Drug Dependent
	Mean $\pm$ SD	Mean $\pm$ SD
<b>Sex</b>		
Male	62.3 $\pm$ 17.27	62.9 $\pm$ 18.5
Female	64.2 $\pm$ 19.5	64.2 $\pm$ 18.0
t	0.606	0.615
P-values	0.528	0.446
<b>Education</b>		
Illiterate	60.2 $\pm$ 18.0	59.0 $\pm$ 18.8
$\leq$ Diploma	63.4 $\pm$ 16.2	62.3 $\pm$ 18.0
Academic	62.6 $\pm$ 19.6	69.5 $\pm$ 17.4
F	0.734	0.481
P-values	11.257	0.001
<b>Job</b>		
Unemployed	57.0 $\pm$ 17.5	61.6 $\pm$ 19.7
Employed	63.9 $\pm$ 17.1	64.2 $\pm$ 17.5
t	0.009	6.864
P-values	0.116	2.476
<b>Marital status</b>		
Single	61.2 $\pm$ 17.4	65.7 $\pm$ 18.4
Married	63.2 $\pm$ 17.0	62.6 $\pm$ 18.3
t	1.126	5.418
P-values	0.326	0.005
<b>Home Status</b>		
Personal	66.1 $\pm$ 15.7	63.3 $\pm$ 17.7
Leased	61.7 $\pm$ 17.8	63.0 $\pm$ 18.6
Other	60.5 $\pm$ 17.8	63.4 $\pm$ 18.8
F	2.299	0.026
P-values	0.102	0.974
<b>Residence</b>		
Urban	62.8 $\pm$ 17.6	63.6 $\pm$ 18.6
Rural	60.0 $\pm$ 15.2	60.9 $\pm$ 16.4
t	2.802	1.909
P-values	0.419	0.270

ferences between mean scores in educational levels of non-drug dependent participants, so that the mean score of quality of life in those with academic education was higher than other individuals ( $P = 0.001$ ) (**Table 2**).

The relationship between marital status and quality of life in the drug-dependent group was not statistically sig-

nificant ( $P \geq 0.05$ ), but the relationship between marital status and quality of life was significant in the non-drug dependent group, so that the mean score of quality of life in singles was higher than others ( $P = 0.005$ ) (**Table 2**).

As displayed in **Table 3**, no significant difference was observed between different aspects of quality of life of the drug-dependent group in methadone maintenance treatment duration ( $P \geq 0.05$ ).

#### 4. Discussion

The results of this study revealed no significant difference between the quality of life of drug-dependent and non-drug dependent participants; this finding is not consistent with that of other studies conducted in Iran (2, 11, 12, 15) and those conducted in the world (7, 10). In these studies, it had been found that the quality of life of drug dependents was lower than that of non-drug dependents, which is not consistent with the results of this study. Perhaps one of the reasons for the insignificant difference between drug-dependent and non-drug dependent groups in this study was methadone maintenance treatment, which relatively improved quality of life in drug-dependent people. The present results suggest relatively good scores of individuals who received methadone maintenance treatment, which is consistent with the results of other studies done on the quality of life of people undergoing methadone maintenance treatment (9, 16-18).

In this study, 91.4% of the patients in maintenance therapy centers were male, and this is consistent with some other studies (9, 10, 13, 19-21). Some of the reasons for the higher percentage of males may be the higher prevalence of drug dependency among males and the lower number of females referring to methadone maintenance treatment centers (21).

The relationship between overall quality of life in drug-dependent and non-drug dependent groups and education level was significant, which is consistent with some studies (13) and inconsistent with the results of some other studies (10, 19).

No significant relationship was found between marital status and quality of life in the drug-dependent participants; however, in control participants, this relationship was significant, so that the quality of life in non-drug dependent singles was higher than the married; this is consistent with the study by Aghayan and et al. (13) and inconsistent with some other studies (10, 16).

Workers had the highest frequency in this study, and 20.3% of the participants were unemployed. Quality of life

**Table 3.** Comparison of Quality of Life Subscale in Drug-Dependents According to Treatment Duration

Variables	Methadone Maintenance Treatment Duration			F	P.Values
	> 10 Month	10 - 30 Month	< 30 Month		
General health	61.0 ± 18.3	58.0 ± 14.8	58.4 ± 20.98	0.747	0.475
Bodily pain	71.3 ± 22.5	68.2 ± 23.2	71.3 ± 25.19	0.500	0.607
Vitality	59.2 ± 15.9	52.6 ± 17.5	55.9 ± 20.99	3.000	0.052
Mental health	61.7 ± 17.77	58.6 ± 17.8	61.7 ± 20.8	0.779	0.460
Social functioning	64.4 ± 22.9	65.5 ± 22.1	66.5 ± 25.4	0.187	0.830
Physical Role limitation	71.1 ± 27.8	69.4 ± 24.6	72.8 ± 26.2	0.335	0.716
Physical functioning	55.3 ± 35.9	54.8 ± 38.5	56.5 ± 39.6	0.047	0.955
Emotional Role limitation	54.5 ± 40.5	59.0 ± 40.4	59.1 ± 42.1	0.380	0.684
MCS (Mental component summary)	59.9 ± 17.8	58.9 ± 18.5	60.8 ± 22.7	0.190	0.827
PCS (Physical component summary)	64.7 ± 18.8	62.6 ± 19.3	64.7 ± 21.7	0.317	0.728
SF36 (Quality of Life)	63.12 ± 16.2	61.3 ± 16.6	62.8 ± 19.4	0.272	0.762

in both groups had no significant relationship with job, which is consistent with the results of some studies (16) and inconsistent with the results of other studies (13).

Although the mean score of physical function in non-drug dependent people was higher than that in drug dependent, no significant relationship was observed between the 2 groups, which is not consistent with the results of Hossienifar (12), but it is in line with the results of Fooladi and Lev-Ran (10, 11).

The mean score for physical role limitation dimension in drug dependent and non-drug dependent participants showed no statistically significant difference, which is not consistent with the results reported by Fooladi and Hossienifar (11, 12). Moreover, the mean scores of vitality in non-drug dependents were higher than that in the drug-dependent group, which does not correspond with the results of Hossienifar (12), but accords with the results of Fooladi (11).

One of the limitations of this study was the lack of relevant studies to discuss and compare the current findings with similar studies. Other limitations were the method of sample selection of non-drug dependent participants and type of study (cross- sectional).

#### 4.1. Conclusions

Although most studies have indicated a low score of quality of life for drug-dependent participants, this study found a higher score of quality of life for drug-dependent participants; moreover, there was no significant difference between the scores of drug-dependent and non-drug dependent participants. Since all the drug-dependent

participants in this study were undergoing treatment in methadone maintenance treatment centers, it seems that maintenance treatment with methadone and buprenorphine can play an effective role in improving the quality of life of drug dependent participants.

#### Acknowledgments

The present work was supported by Shahrood University of Medical Sciences (Project No: 9071).

#### Footnotes

**Authors' Contributions:** Mohammad Amiri, Hadiseh Ramezanzad and Shahrokh Aghayan Conceived and Designed the evaluation, Ahmad Khosravi and Mohammad Amiri Performed the statistical analysis, Shahrokh Aghayan, Mohammad Amiri, Hadiseh Ramezanzad, and Zakiyyeh Sadeghi Performed the clinical data analysis and interpreted data, Mohammad Amiri, Ahmad Khosravi, Shahrokh Aghayan, and Zakiyyeh Sadeghi Drafted the manuscript, Ahmad Khosravi and Mohammad Amiri Revised it critically for important intellectual content. All authors read and approved the final manuscript.

**Declaration of Interest:** None.

**Funding / Support:** The present work was supported by Shahrood University of Medical Sciences (Project No: 9071).

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