

Original Article

Validation for Persian Versions of “Desire for Drug Questionnaire” and “Obsessive Compulsive Drug Use Scale” in Heroin Dependents

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Abstract

Objective: Drug Craving could be defined as a subjective motivational state associated with a strong desire to consume drugs. Craving is a subjective phenomenon; therefore, self-report (subjective) craving measures are usually referenced. Two well-known questionnaires for measurement of drug craving severity are Desire for Drug Questionnaire or DDQ (for instant craving) and Obsessive Compulsive Drug Use Scale or OCDUS [for craving in a period of time (periodic craving), usually one week]. In this study, we evaluated the content-related validity of these questionnaires for Persian-language speaking crystalline-heroin abusers.

Methods: After translation by two different groups, back translation and retranslation process of the DDQ and OCDUS questionnaires were achieved by an expert team in English language; we used them for evaluation of instant and periodic craving among 131 male crystalline-heroin abusers. Then, both DDQ and OCDUS questionnaire's scores were subjected to an exploratory principal components factor analysis (PCA). The criterion for factor extraction was an eigenvalue equal to or more than 1.

Results: The factor analysis of DDQ and OCDUS led to three factors for DDQ and four factors for OCDUS; each group of factors together explained 62% and 65% of the common factor variance, respectively. There was no significant correlation between different DDQ and OCDUS components and demographic factors. Nevertheless, approximately all of the seven OCDUS and DDQ components were significantly correlated to each other.

Conclusion: The Persian version of DDQ and OCDUS questionnaires could be considered as valid and reliable instruments for evaluation of drug craving in male crystalline-heroin Persian-language speaking abusers.

Keywords: DDQ, drug craving, Farsi, heroin, OCDUS, Persian, questionnaire, validity

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Introduction

Drug craving was part of the diagnostic criteria for nicotine and opioids withdrawal in DSM-III-R, but was omitted from DSM-IV and then reappeared in DSM-V as one of the criteria for substance use disorders.¹ Thus far, various definitions have been presented for drug craving and different approaches have been used to study this condition.^{2,3} Drug craving could be defined as a subjective motivational state, which is related to desire for using drugs.³ Some investigators have restricted this term to refer to desire for drugs; but others have applied it to indicate a vast range of phenomena such as desire and intention to use drug and anticipating drug's reinforcement effects.⁴ Although craving is suggested as a one-dimensional

“motivational state”, some of the investigators suggested considering a spectrum from “impulsivity” including desire and anticipation of positive reinforcements to “compulsivity” including obsessive thoughts and anticipation of negative reinforcements in drug craving assessments.⁵⁻⁷ From the temporal point of view, there are two different approaches to drug craving assessment. Some investigators consider craving as an approximately stable situation, and consequently evaluated drug craving for a particular period of time⁵ and some others consider it as an instantaneous phenomenon, which is measurable just at the moment.⁸ Nevertheless, drug craving could be related to either an averaged quantity for a period of time or an instantaneous tendency to use drugs. Therefore, measurements covering relatively long periods of time are not able to adequately distinguish variations of instant craving; and instant craving evaluations are unable to cover fluctuations over a period of time. However, there are lines of evidence that indicate drug craving could be considered as a two dimensional state in which instantaneous and periodic self-reports of craving have different cognitive constructs and provide us with different predictive values.^{1,3}

Self-reports could measure subjective aspects of drug craving with good reliability and internal consistency. These instruments have high-levels of face validity and demonstrated several aspects of construct validity.⁹ Moreover, they are almost easy to design,

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and quite easy to use.

The two most widely used questionnaires for assessment of instant and periodic craving are Desires for Drug Questionnaire (DDQ) and Obsessive Compulsive Drug Use Scale (OCDUS). These questionnaires were initially designed and validated for the heroin-abusers;⁶ but they have been used for other drugs in different forms during the last decade.¹⁰⁻¹⁷

DDQ was basically adapted from the Desire for Alcohol Questionnaire (DAQ)¹⁸ to assess heroin craving at the present time as a multidimensional motivational state by Franken, et al. (2002). OCDUS was also adapted by Franken, et al. (2002), from the Obsessive Compulsive Drinking Scale (OCDS),¹⁹ which had originated from Yale–Brown Obsessive Compulsive Scale (Y-BOCS).^{20,21}

Validity is the most important criterion in concern with measurement of drug craving, which refers to the appropriateness of the concluded inferences.²² Content-related validity is an important type of validity that refers to the appropriateness of the type of measurement items and the completeness of the item sample.³

Opiates are the most common type of drugs of abuse, excluding cigarettes, alcohol and cannabis in Iran and heroin is the second most prevalent opiate after opium.²³ Heroin abuse is considered one of the most problematic types of drug use disorder and is highly associated with HIV/AIDS transmission in Iran.^{24,25} To our best knowledge, there is no published article on the validation of a craving measure for Persian speaking drug users in Iran.²⁶ In this study, we investigate the content-related validity and reliability of the Persian versions of the DDQ and OCDUS questionnaires in male heroin abusers.

Methods and Materials

Subjects

One hundred thirty-one male crystalline (white) heroin smokers, aged 33.4 ± 6.62 years (mean \pm standard deviation) were recruited from treatment seekers participating in methadone maintenance programs in 10 addiction treatment centers of Tehran before treatment entry, during one month. All subjects met the DSM-IV Criteria for heroin dependence during the last six months and reported crystalline heroin [locally known as crack²⁷] as their main drug of abuse during last month. The study procedure was comprehensively explained to participants who signed the consent forms. Participants were rewarded with 20% discount for one-month treatment costs. The Medical Ethics Committee of Tehran University of Medical Sciences approved the study protocol.

Instruments

Structured interview for demographics and substance abuse related variables

Clinical Drug Addiction Profile (CDAP) was used for structured interviews.²⁸ This profile was previously designed in the Iranian National Center for Addiction Studies (INCAS) for structured interviews to evaluate demographic characteristics and different addiction-related dimensions in drug abusers in Iran. It consists of 6 sections. In the first section, basic demographic information such as age, gender, marital status, level of education, etc. is inquired. The second section investigates the history of drug abuse, and the third one deals with the patient's history of drug abuse treatment. Section four evaluates the history of high risk

behaviors, and the fifth one addresses the patient's medical and psychological information in detail. The sixth section of this profile is a relatively thorough investigation of the patient's family relations and social status.

Desires for drug questionnaire (DDQ)

The original DDQ includes 13 questions for three main craving components, desire and intention to drug use (questions 1, 2, 4, 6, 10, 13 and 14), negative reinforcement (questions 5, 9, 11 and 12), and control (questions 3 and 8). We restored the question, which had been excluded from the final questionnaire by Franken, et al. (2002), in order to increase the internal consistency of its respective component, in our questionnaire (R: question 7). Participants answer questions on a seven-step Likert-scale answer sheet based on what he/she feels or thinks at the moment. The items were rated as follows: 1) not at all; 2) mild; 3) mild to moderate; 4) moderate; 5) moderate to severe; 6) severe and 7) approximately complete.

Obsessive compulsive drug use scale (OCDUS)

The original OCDUS questionnaire contains 12 questions and measures three components heroin thoughts and interference (questions 2, 3, 4, 6, 8 and 9), intention to use heroin and control of its consumption (questions 1, 7, 12 and 13), and resistance against thoughts and decisions to use heroin (questions 5 and 11). We re-included the question (R in Table 3: question 10), which had been eliminated from the original questionnaire by Franken, et al. (2002), during their validation study. Subjects should select from 5 graded options for each question based on their experiences during last week. For example, in question two, "How frequently do these thoughts related to heroin occur?", subjects should choose between 1) Never: I don't have those thoughts; 2) Rarely: No more than 8 times a day; 3) Sometimes: More than 8 times a day but most hours of the day are free of those thoughts; 4) Mostly: More than 8 times a day and during most hours of the day and 5) Always: Thoughts are too numerous to count and an hour rarely passes without several such thoughts occurring.

Procedure

The English DDQ and OCDUS questionnaires were translated into Farsi (Persian) by two independent expert translators in English language. Then, our expert teams in English language and Psychology assessments at the Iranian National Center for Addiction Studies accepted the final translated version of questionnaires for crystalline-heroin abuse. After completion of English-Persian translation, the text was once again translated back into English by two other groups who had not read the original English text. The first expert teams compared these two English versions and revised the translations accordingly to reach to an agreement for the complete correspondence between the original text and the translation (Translation and retranslation procedure was done based on *Beaton translation guideline*). The translated questionnaires were distributed among ten heroin users in a pilot assessment to check if all subjects could understand terminologies used in the Farsi translation. The participants filled the final Farsi questionnaires and the obtained data underwent data analysis.

Data Analysis

The obtained data was analyzed using SPSS 16 statistical software. The quantitative data were shown as "mean value \pm

standard deviation"; and the qualitative data were exhibited by frequency and percentage. For the final evaluation, the internal consistency method was used. Exploratory Principal Components Factor Analysis has been implemented to find the components of the DDQ and OCDUS questionnaires.²⁹ The criterion for extraction of factors was the eigenvalues equal to or greater than 1. Also, diagonal rotation was applied. Cronbach's alpha coefficient was used to indicate internal consistency of the factors.

Results

Participants

In this study, 131 male crystalline heroin abusers were investigated. The demographics and drug abuse characteristics of participants are presented in Table 1.

DDQ: Exploratory factor analysis and internal consistency

Table 2 shows the summary of results obtained from exploratory factor analysis of DDQ. Extraction of components with eigenvalues greater than 1, led to 3 components compatible with results from Franken, et al. (2002), and justifying 62% of the data variance. The first component includes 8 questions, which investigate the patient's "desire and intention to use drug". The second component contains 4 questions, which include "negative reinforcement" for drug use. The third component includes 2 questions related to "drug abuse control". The first and second components were significantly correlated (correlation coefficient = 0.601), but there was no correlation between the third component and other components (Table 4). The internal consistency of the components, calculated as Cronbach's alpha coefficients were 0.89, 0.79 and 0.4, respectively.

OCDUS: Exploratory factor analysis and internal consistency

Table 3 summarizes the results of OCDUS questionnaire exploratory factor analysis. In this questionnaire, extraction of components with eigenvalues greater than 1 led to 4 components which justify 65% of the data variances. The first three components were highly correlated but they were not correlated or less correlated with the fourth component (Table 4). The Cronbach's alpha coefficients for the components were 0.81, 0.02, 0.72 and 0.45, respectively. As it is visible, the coefficient for the second component was very low, but by eliminating question 4 from it, the internal consistency for this factor changed to 0.8; for this reason, question 4 was taken out of the process of analysis.

Relation between OCDUS and DDQ components

Correlations between DDQ and OCDUS components are shown in Table 4 comprehensively. It is noticeable that all components of the DDQ were in significant correlations with the first three components of OCDUS; but not with the fourth component.

DDQ: Correlations with demographics and drug abuse characteristics

There is no significant correlation between different DDQ components, demographics and the drug abuse characteristics of the participants; with the exception of the history of Imprisonment during past year, which was in a significant direct correlation with all DDQ components, (N⁺: 100 of 131; Negative: 3.3 ± 1.7; Positive: 5.4 ± 1.4; Sig: 0.0001 for desire and intention component), (N⁺: 100 of 131; Negative: 2.6 ± 1.6; Positive: 4.03 ± 1.5; Sig: 0.0001 for negative reinforcement), (N⁺: 100 of 131; Negative: 2.9 ± 1.5; Positive: 4.7 ± 1.2; Sig: 0.0001 for the control component); (it is worth mentioning that "Negative" and "Positive" means ± standard deviations represent direct and reverse relationships. While the correlation is significant, the higher mean, which might

Table 1. Demographics and Drug Abuse Characteristics of the study participants (131 male crystalline-heroin dependents).

Age (years)	33.4 ± 6.6
Education (years)	9.02 ± 2.8
Marital status	
Married	73 (55.7%)
Single	37 (28.2%)
Separated	8 (6.1%)
Widow	2 (1.5%)
Divorced	11 (8.4%)
History of drug injection	28 (21.2%)
Imprisonment	
Life time	116 (87.9%)
Last year	26 (19.7%)
Drug dealing	
Life time	55 (41.7%)
Last month	9 (6.9%)
Age of onset for crystalline heroin use (years)	29.4 ± 7.1
Addiction duration for crystalline heroin (years)	3.1 ± 1.8
Drug Abuse (last month, other than heroin)	
Opium	12 (9%)
Methamphetamine	34 (25.8%)
Cannabis	15 (11.4%)
Benzodiazepine	11 (8.3%)
Cigarette	121 (91.7%)

Table 2. Pattern matrix^a obtained from exploratory factor analysis of Persian version of Desires for Drug Questionnaire among 131 male crystalline-heroin abusers.

	Component in Persian DDQ			Original DDQ
	1	2	3	
Q-2) I would consider using heroin now	0.865	-0.077	0.020	1
Q-1) Using heroin would be satisfying now	0.829	-0.126	0.159	1
Q-6) My desire to use heroin now seems overwhelming	0.817	-0.034	-0.171	1
Q-7) I would accept to use heroin now if it was offered to me	0.804	0.072	0.117	R
Q-13) Using heroin would be pleasant now	0.784	0.140	-0.031	1
Q-4) I would do almost anything to use heroin now	0.678	0.001	-0.273	1
Q-14) I am going to use heroin as soon as I possibly can	0.529	0.058	0.234	1
Q-10)) I want heroin so much I can almost taste it	0.515	0.339	-0.003	1
Q-12) Even major problems in my life would not bother me if I used heroin now	-0.010	0.834	-0.021	2
Q-11) Using heroin now would make me feel less tens	0.116	0.768	0.035	2
Q-9) I would feel as if all the bad things in my life had disappeared if I used heroin now	-0.103	0.733	0.047	2
Q-5) I would feel less worried about my daily problems if I used heroin now	0.059	0.727	-0.087	2
Q-8) I could easily limit how much heroin I would use if I used now	-0.100	0.269	0.780	3
Q-3) If I started using heroin now I would be able to stop	0.157	-0.275	0.729	3
Extraction Method: Principal Component Analysis; Rotation Method: Promax with Kaiser Normalization; a: Rotation converged in 5 iterations; R: removed by Franken, et al. 2002.				

Table 3. Pattern matrix^a obtained from exploratory factor analysis of Persian version of Obsessive Compulsive Drug Use Scale questionnaire among 131 male crystalline-heroin abusers.

	Components in Persian OCDUS				Original OCDUS
	1	2	3	4	
Q-7) If you don't use, how often do you feel the urge or drive to use heroin?	0.944	-0.104	-0.107	-0.019	2
Q-8) If you don't use, how much time of the day do you feel the urge or drive to use heroin?	0.805	0.033	0.103	-0.060	1
Q-1) How much of your time, when you are not using, is occupied by ideas, thoughts, impulses, or images related to heroin use?	0.737	0.071	-0.014	0.067	2
Q-2) How frequently do these thoughts related to heroin occur?	0.582	0.119	0.086	0.090	1
Q-9) How much does the urge to use heroin interfere with your social life or occupational activities?	0.014	0.882	-0.005	-0.017	1
Q-3) How much do these thoughts related to heroin interfere with your social or work functioning?	0.061	0.842	0.039	0.020	1
Q-4) How much distress or disturbance do these thoughts related to heroin cause?	-0.040	0.824	-0.103	-0.050	1
Q-6) How successful are you in stopping or diverting these thoughts related to heroin?	-0.156	0.027	0.923	-0.030	1
Q-13) How much control do you have over your heroin use?	0.000	-0.083	0.826	0.069	2
Q-12) How strong was the drive to use heroin in the past week?	0.297	-0.164	0.573	-0.120	2
Q-10) If you were prevented from using heroin when you desired to use it, how anxious or upset would you become?	0.141	0.190	0.470	0.021	R
Q-11) How much of an effort do you make to resist the use of heroin?	0.091	-0.072	-0.177	0.910	3
Q-5) How much of an effort do you make to resist these thoughts related to heroin or try to disregard or turn your attention away from these thoughts?	-0.098	0.041	0.295	0.646	3
Extraction Method: Principal Component Analysis; Rotation Method: Promax with Kaiser Normalization; a: Rotation converged in 5 iterations; R: removed by Franken, et al. 2002.					

be related to the negative or positive correlation points, shows the direction of the meaningful correlation) and a reverse significant correlation between the “negative reinforcement” component of DDQ and the history of drug injection (N⁺: 96 of 131; Negative: 3.06 ± 1.8; Positive: 2.2 ± 1.3 ; Sig: 0.0001 for negative reinforcement), and abusing opium or methamphetamine during last month (N⁺: 12 of 131; Negative: 2.9 ± 1.6; Positive: 2.1 ± 1.1; Sig: 0.03 and N⁺: 34 of 131; Negative: 3 ± 1.5; Positive: 2.2 ± 1.3; Sig: 0.02 consequently).

OCDUS: Correlation with demographics and drug abuse characteristics

The first OCDUS component was significantly in a direct correlation with the history of imprisonment during past year (N⁺: 100 of 131; Negative: 14.7 ± 3.6; Positive: 17.7 ± 3.05;

Sig: 0.0001). The second component of this questionnaire was significantly in a reverse relationship with the history of opium and cigarette abuse during the last month (N⁺: 12 of 131; Negative: 8.8 ± 1.5; Positive: 8 ± 1.2; Sig: 0.03 and N⁺: 79 of 131; Negative: 10; Positive: 8.6 ± 1.6; Sig: 0.0001 consequently). The third component of the OCDUS questionnaire was significantly in a reverse relationship with the history of cigarette use during the last month (N⁺: 79 of 131; Negative: 17.5 ± 0.7; Positive: 14.1 ± 3.03; Sig: 0.04). The fourth component was not in any significant relationship with the history of abusing other types of the drugs or risky behaviors. There was no other significant correlation between OCDUS components and other demographic factors (age, level of education, duration of addiction or duration of drug abuse).

Table 4. Correlations between DDQ and OCDUS components of 131 male crystalline-heroin abusers.

	DDQ Component 1	DDQ Component 2	DDQ Component 3	OCDUS Component 1	OCDUS Component 2	OCDUS Component 3	OCDUS Component 4
DDQ Component 2							
Pearson Correlation	0.601**	---	---	---	---	---	---
Sig. (2-tailed)	0.000	---	---	---	---	---	---
DDQ Component 3							
Pearson Correlation	-0.041	0.016	---	---	---	---	---
Sig. (2-tailed)	0.296	0.328	---	---	---	---	---
OCDUS Component 1							
Pearson Correlation	0.666**	0.385**	0.666**	---	---	---	---
Sig. (2-tailed)	0.000	0.000	0.000	---	---	---	---
OCDUS Component 2							
Pearson Correlation	0.250**	0.198*	0.250**	0.463**	---	---	---
Sig. (2-tailed)	0.004	0.023	0.004	0.000	---	---	---
OCDUS Component 3							
Pearson Correlation	0.384**	0.367**	0.384**	0.493**	0.316**	---	---
Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	---	---
OCDUS Component 4							
Pearson Correlation	0.090	0.067	0.090	0.232**	0.079	0.310**	---
Sig. (2-tailed)	0.305	0.447	0.305	0.007	0.370	0.000	---
OCDUS Components 1, 2 and 3							
Pearson Correlation	0.598**	0.425**	0.598**	0.881**	0.640**	0.801**	0.287**
Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.001
N	131	131	131	131	131	131	131

*Correlation is significant at the 0.05 level (2-tailed); DDQ: Desires for Drug Questionnaire; OCDUS: Obsessive Compulsive Drug Use Scale; **Correlation is significant at the 0.01 level (2-tailed).

Discussion

The results of the exploratory factor analysis, as well as, the internal consistency of each DDQ component in Persian-Speaking crystalline-heroin abusers about the number and content of the obtained components, the constituting factors of these components, the internal consistency of each factor, and the degree to which these components justify data variance are in good conformity with the corresponding results of Franken, et al. (2002). In this study, three components have been extracted from the DDQ questionnaire: "desire and intention to use drug", "negative reinforcement" and "control". These components are in agreement with Franken, et al. (2002); the only difference is that in this study, there was no need to eliminate question 7 (I would accept to use heroin now if it was offered to me). This item had been placed in the control component group in Franken's study, and it was eliminated to increase the internal consistency of this group. It is interesting to note that in the present study, this item was placed in the "intention and desire to use drug" group, to which it is conceptually more similar. The findings of this study, like those of Franken, et al. (2002), conform well to the previous studies.^{18,30}

Our study findings denote that the various DDQ components

are not significantly correlated with demographic factors such as age and education (in the range we have recruited in this study) which shows the acceptable validity of this tool among Persian-Speaking crystalline-heroin abusers. In other words, DDQ could be used for various individuals with different demographics, and its results might be approximately generalized to different age and education groups considering the range of demographics in this study.

Interestingly, all DDQ components were significantly correlated with the imprisonment history. It could be said; apparently, patients with a history of imprisonment during the past year, exhibit higher levels of baseline instant craving. Of course, it is a two-way correlational and not a causal statement.

In the present study, the DDQ "negative reinforcement" component was reversely related to the history of opium and methamphetamine abuse during the past month, and also to the history of drug injection during the past year. In other words, believing that difficulties can be solved and deriving pleasure from drug abuse, which could be referred to as a positive approach toward drug abuse, were less among the multi-drug abusers and harm-taking subjects than just crystalline-heroin smokers. Interpretation and justification of this finding is an open

question in the present research. It might refer to their impairment in considering the consequences of their actions, which is an important characteristic of poly drug abusers.³¹

As mentioned in the results, extraction of components with eigenvalues greater than 1 led to extraction of 4 components in the OCDUS questionnaire. The first component (questions 1, 2, 7 and 8) could be conceptually termed as the “desire and mental preoccupation with drugs” component. The second component that contains questions 3 and 9 could be called “the effect of desire for drug, and drug-related thoughts on the patient’s work and life”. The third subgroup of the OCDUS questionnaire, obtained in this study, is the “motivation, emotion, and lack of control” component, which includes questions 6, 10, 12 and 13. Finally, the fourth component of this questionnaire could be considered as the “resistance to drug use” component, which includes question 5 and 11. In other words, according to the present study, the OCDUS questionnaire has four components when used for Persian-speaking crystalline-heroin abusers, each of which, with an acceptable internal consistency, evaluates different dimensions of crystalline-heroin craving.

Although the internal consistency of the OCDUS questionnaire components in this study is acceptable in the case of Persian-speaking crystalline-heroin abusers, and this questionnaire is valid for use in the field, these components have little consistency with the ones obtained in previous studies.⁶ In a study by Anton, et al. (1995), the OCDUS questionnaire was divided to two parts: “Obsessive thoughts” component and “compulsive actions” component. Nevertheless, Franken, et al. (2002), obtained three components in their exploratory factor analysis for the OCDUS in 102 under treatment subject which are: “thoughts and their interferences”, “desire to use drug and control”, and “resistance”, whereas our study led to extraction of four components, only one of which (“resistance”) is similar to Franken’s components. As to the cause of the said difference, we can take into account linguistic and cultural differences. However, in a multi-dimensional view of craving, increasing the number of high internal consistency components of a questionnaire leads to a more exact evaluation with greater diversity in dimensions. It is worth mentioning that three OCDUS components of Franken, et al. (2002), justify 68% of the data variance, and four components of the OCDUS in our study justify 65% of the data variance, which is approximately similar to Franken, et al. (2002).

As an important point with regard to the results of the present study, there is no significant correlation between various OCDUS components and demographic factors. This indicates the acceptable validity of the tool among Persian-speaking crystalline-heroin abusers and suggests that OCDUS might be approximately generalized to this group of drug dependents.

The component “desire to use drug and mental preoccupation with drugs” (first component) of the Persian OCDUS questionnaire, had a significant correlation with the imprisonment history during the past year, and it can be said that apparently individuals who, within the past year, spent some time in prison, showed, in the past week, more desire for drugs and were more mentally preoccupied with heroin. This is a two-way statement, and we can say that its opposite is also true. One point with regard to the “effect of desire for drug and drug-related thoughts on the patient’s work and life” component of the OCDUS questionnaire (second component), is its reverse relation to opium and cigarette use during the past month. In other words, individuals with a

history of opium and cigarette use during the past month have shown less effect of desire for drug and drug-related thoughts on the patient’s work and life. About its reverse relation with the history of opium abuse during the past month, we could mention that using opium (which is less effective than heroin about their opioid effects) in spite of abusing crystalline-heroin, might be considered as less drug dependence severity in comparison with the subjects restricted to heroin; thus, it is suggestible that this group had shown less effect of desire for drug and drug-related thoughts on their work and life. Nevertheless, its relationship with the history of cigarette abuse, which is clinically not so pleasant finding, could be attributed to the effects of nicotine on attention, emotion and decision making.³² The other finding of this study that indicated the reverse relationship of the “motivation, emotion, and lack of control” component of the OCDUS questionnaire (third component) with the history of using cigarette during the last month is also interpretable by considering the effect of nicotine on attention, emotion and decision making.³² There are no debatable results with regard to “resistance” component of the OCDUS questionnaire (fourth component).

It is worth mentioning that the relation between the intensity of drug craving with the history of imprisonment is a general finding in this study. This finding is cognitively and clinically important in the field of drug craving and requires complementary studies.

It is noticeable, as it is visible in the Table 4, that nearly all the seven OCDUS and DDQ components are correlated to each other with an approximately high level of significance (with the exception of component 4 of OCDUS which is significantly correlated only with components 1 and 3, and sum of 1, 2 and 3 of the same questionnaire). On the other hand, Franken, et al. (2002), reported that the “desire and intention” component of DDQ had a significant correlation with all components of the OCDUS questionnaire, and the DDQ “control” component was significantly correlated with the OCDUS “resistance” component.⁶ These strong correlations between components of these two questionnaires with themselves, and similar correlation with components of the other questionnaire, indicate that although Franken, et al. (2002), suggested: “using a general score (grade) for evaluating drug craving with regard to these two questionnaires requires further studies and that evaluations obtained from the components should only be used separately”⁶ by considering the close correlation and interrelation of the subgroups as well as the validity, credibility, and consistency of either questionnaire, it may be claimed that the subsets of each questionnaire form a group which evaluates a unique subject. Therefore, considering a general score for each questionnaire shall not create any special problem. These findings overall suggest that the general score for each questionnaire indicates nothing but the score for instant and periodic craving.

The present study has some limitations. We did not use a visual analog scale as another self-reporting tool for drug craving measurement, beside the questionnaires mentioned in this study. Moreover, comparison of the baseline and inductive craving, in the field of craving measurement, might be useful for better clarification of this complex situation. Furthermore, it was not possible for us to evaluate test-retest reliability, because the subjects were not accessible to us for retesting after the suggested period of time. Finally, it is suggested that the two questionnaires be validated and considered for evaluation of craving for other types of drugs of abuse.

In conclusion, the DDQ and OCDUS questionnaires have high validity for evaluation of instant and periodic drug craving. These instruments are generalized suitable for evaluation of crystalline-heroin craving in Persian-speaking drug abusers. Moreover, considering a general score for each of these questionnaires might be suggestible.

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DDQ Form – Heroin (Persian)

Please indicate to what extent you agree or disagree with each of the following statements. Do so by inserting an X mark on the line between “STRONGLY DISAGREE” and “STRONGLY AGREE”. The closer you insert the X to one or the other side indicates to what extent you agree or disagree. Please don't skip any statements. We want to know how you think and feel at THIS MOMENT, so the moment you complete this questionnaire.

لطفا میزان موافقت و یا مخالفت خود را با هر یک از جملات زیر بیان کنید. بدین صورت که یک علامت × درون جدول، بین کاملا موافق و کاملا مخالف قرار دهید. هر چه علامت × به دو انتهای جدول نزدیکتر باشد یعنی که شدت موافقت و یا مخالفت شما بیشتر است. لطفا هیچ یک از جملات را جا نیندازید. ما می خواهیم بدانیم که شما هم اکنون چه احساسی دارید و چگونه فکری کنید، بنابر این این پرسشنامه را با توجه به شرایط خود در حال حاضر پاسخ دهید.

FOR EXAMPLE:

STRONGLY DISAGREE

					×	
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 STRONGLY AGREE

برای مثال:

کاملا مخالف

					×	
--	--	--	--	--	---	--

 کاملا موافق

1. Using heroin would be satisfying now

STRONGLY DISAGREE

--	--	--	--	--	--	--

 STRONGLY AGREE

۱- در حال حاضر استفاده از کراک برایم از هر لحاظ ارضا کننده است.

کاملا مخالف

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 کاملا موافق

2. I would consider using heroin now

STRONGLY DISAGREE

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 STRONGLY AGREE

۲- در حال حاضر به استفاده از کراک فکر می کنم.

کاملا مخالف

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 کاملا موافق

3. If I started using heroin now I would be able to stop

STRONGLY DISAGREE

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 STRONGLY AGREE

۳- اگر همین الان استفاده از کراک را آغاز کنم، می توانم هر وقت که بخواهم مصرف خود را قطع کنم.

کاملا مخالف

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 کاملا موافق

4. I would do almost anything to use heroin now

STRONGLY DISAGREE

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 STRONGLY AGREE

۴- الان برای استفاده از کراک حاضر به انجام هر کاری هستم.

کاملا مخالف

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 کاملا موافق

5. I would feel less worried about my daily problems if I used heroin now

STRONGLY DISAGREE

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 STRONGLY AGREE

۵- اگر الان کراک استفاده کنم، نگرانی های من در مورد مشکلات زندگی کمتر می شود.

کاملا مخالف

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 کاملا موافق

6. My desire to use heroin now seems overwhelming

STRONGLY DISAGREE

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 STRONGLY AGREE

۶- الان میل من به مصرف کراک خیلی زیاد و غیر قابل کنترل است.

کاملاً مخالف

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 کاملاً موافق

7. I would accept to use heroin now if it was offered to me

STRONGLY DISAGREE

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 STRONGLY AGREE

۷- اگر الان به من پیشنهاد شود که کراک مصرف کنم، این کار را می‌کنم.

کاملاً مخالف

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 کاملاً موافق

8. I could easily limit how much heroin I would use if I used now

STRONGLY DISAGREE

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 STRONGLY AGREE

۸- اگر کراک مصرف می‌کردم، به راحتی می‌توانستم مقدار مصرف آن را کاهش دهم.

کاملاً مخالف

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 کاملاً موافق

9. I would feel as if all the bad things in my life had disappeared if I used heroin now

STRONGLY DISAGREE

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 STRONGLY AGREE

۹- فکر می‌کنم اگر الان کراک مصرف کنم، همه چیزهای بد زندگی من ناپدید می‌شوند.

کاملاً مخالف

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 کاملاً موافق

10. I want heroin so much I can almost taste it

STRONGLY DISAGREE

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 STRONGLY AGREE

۱۰- من آن قدر کراک دوست دارم که الان می‌توانم مزه اش را حس کنم.

کاملاً مخالف

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 کاملاً موافق

11. Using heroin now would make me feel less tens

STRONGLY DISAGREE

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 STRONGLY AGREE

۱۱- مصرف کراک باعث می‌شود کمتر احساس اضطراب و یا ناراحتی کنم.

کاملاً مخالف

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 کاملاً موافق

12. Even major problems in my life would not bother me if I used heroin now

STRONGLY DISAGREE

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 STRONGLY AGREE

۱۲- اگر الان کراک مصرف کنم حتی مهمترین مشکلات زندگی هم نمی‌توانند من را آزار دهند.

کاملاً مخالف

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 کاملاً موافق

13. Using heroin would be pleasant now

STRONGLY DISAGREE

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 STRONGLY AGREE

۱۳- استفاده از کراک در حال حاضر برایم لذت بخش است.

کاملاً مخالف

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 کاملاً موافق

14. I am going to use heroin as soon as I possibly can

STRONGLY DISAGREE

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 STRONGLY AGREE

۱۴- می‌خواهم به محض بیرون رفتن از اینجا، کراک مصرف کنم.

کاملاً مخالف

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 کاملاً موافق

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!!

از همکاری شما بسیار ممنون و سپاسگزاریم

Appendix 2. The text below shows the sub-scales and scoring of Persian validated version of desire for drug questionnaire (DDQ) in English and its translation for use of Persian audience.

DDQ Sub-Scales and its Scoring in Persian Language Speaking Individuals

زیر مجموعه‌های پرسشنامه DDQ کراک هرویین در فارسی زبانان و نمره دهی آن

The first component of Persian validated DDQ includes 8 questions (1, 2, 4, 6, 7, 10, 13, 14), which investigate the patient's "desire and intention to drug use". زیر مجموعه نخست از پرسشنامه DDQ مربوط است به "هوس و قصد مصرف مواد" که شامل ۸ مورد بوده و پرسش‌های ۱ و ۲ و ۴ و ۶ و ۷ و ۱۰ و ۱۳ و ۱۴ را شامل می‌شود.

The second component contains 4 questions (5, 9, 11, 12), which include "negative reinforcement" for drug use. زیر مجموعه دوم از پرسشنامه DDQ مربوط است به "تقویت منفی" که شامل ۴ مورد بوده و پرسش‌های ۵ و ۹ و ۱۱ و ۱۲ را در بر می‌گیرد.

The third component includes 2 questions related to "drug abuse control", which are questions 3 and 8. زیر مجموعه سوم از پرسشنامه DDQ مربوط است به "کنترل مصرف مواد" که شامل ۲ پرسش است که عبارتند از موارد ۳ و ۸.

Participants answer questions on a seven-step Likert-scale answer sheet based on what he/she feels or thinks at the moment. The items were rated as follows: (1) not at all, (2) mild, (3) mild to moderate, (4) moderate, (5) moderate to severe, (6) severe, and (7) approximately complete.

به هر پرسش، نمره‌ای از ۱ تا ۷ تعلق می‌گیرد و نمره هر زیر مجموعه برابر است با میانگین نمرات همه پرسش‌های آن. میانگین نمره ۱ معادل تقریباً هیچ، نمره ۲ خفیف، ۳ خفیف تا متوسط، ۴ متوسط، ۵ متوسط تا شدید، ۶ شدید و ۷ تقریباً کامل است و از آنجایی که میانگین نمرات معمولاً یک عدد صحیح نیست، ملاک برآورد نزدیکترین عدد صحیح به میانگین بدست آمده است. ارزیابی‌های این پرسشنامه مربوط به لحظه و زمان حال حاضر است. ضمناً نمره نرمال برای این پرسشنامه مطرح نبوده و معنی داری سطح تغییرات، ملاک ارزیابی است.

OCDUS Form – Heroin (Persian)

The questions below ask you about your heroin use and your attempts to control your use *in the last week*.

Please tick the statement that best applies to you.

- در پرسش های زیر از شما درباره مصرف کراک هرویین و تلاش شما برای کنترل مصرف در طی یک هفته گذشته سؤال می شود. لطفا جمله ای را که بیش از همه با شرایط شما مطابقت دارد علامت بزنید.

1. How much of your time, when you are not using, is occupied by ideas, thoughts, impulses, or images related to heroin use?

- None
- Less than 1 hour a day
- 1-3 hours a day
- 4-8 hours a day
- Greater than 8 hours a day

۱- وقتی کراک مصرف نمی کنید، چه مدت فکر و خیال و میل و هوس کراک شما را به خود مشغول می کند؟

- هیچ
- کمتر از یک ساعت در روز
- ۱ تا ۳ ساعت در روز
- ۴ تا ۸ ساعت در روز
- بیشتر از ۸ ساعت در روز

2. How frequently do these thoughts related to heroin occur?

- | | |
|------------------------------------|--|
| <input type="checkbox"/> Never | I don't have those thoughts |
| <input type="checkbox"/> Rarely | No more than 8 times a day |
| <input type="checkbox"/> Sometimes | More than 8 times a day but most hours of the day are free of those thoughts |
| <input type="checkbox"/> Mostly | More than 8 times a day and during most hours of the day |
| <input type="checkbox"/> Always | Thoughts are too numerous to count and an hour rarely passes without several such thoughts occurring |

۲- در طول یک روز چند بار فکر و خیال مربوط به کراک به ذهن شما می آید؟

- هرگز، من این افکار را ندارم.
- ندرتاً، کمتر از ۸ بار در روز است.
- گاهی، بیشتر از ۸ بار است اما اغلب ساعت روز از این افکار آزاد هستم.
- اغلب، بیشتر از ۸ بار و طی اغلب ساعات روز.
- همیشه، این افکار بیشتر از حد شمارش است و تقریباً همیشه درگیر این افکار هستم.

3. How much do these thoughts related to heroin interfere with your social or work functioning?

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Not at all | Thoughts of heroin use never interfere – I can function normally |
| <input type="checkbox"/> A little bit | Thoughts of heroin use slightly interfere with my social or occupational activities, but my overall performance is not impaired |
| <input type="checkbox"/> Somewhat | Thoughts of heroin use definitely interfere with my social or occupational performance, but I can still manage |
| <input type="checkbox"/> Much | Thoughts of heroin use cause substantial impairment in my social or occupational performance |
| <input type="checkbox"/> Very much | Thoughts of heroin use interfere completely with my social or work performance |

۳- فکر و خیال مربوط به کراک تا چه حد مزاحم کار و زندگی شما می شود؟

- به هیچ وجه، فکر و خیال مصرف کراک هرگز مزاحم کار من نیست، من می توانم به طور عادی کار کنم.
- بسیار کم، فکر و خیال مصرف کراک کمی مزاحم کار و زندگی من می شود، اما کار و زندگی من را مختل نمی کند.
- تا حدی، البته فکر و خیال مصرف کراک کمی مزاحم کار و زندگی من می شود، اما من می توانم آن را کنترل کنم.
- زیاد، فکر و خیال مصرف کراک کار و زندگی من را مختل کرده است.
- بسیار زیاد، فکر و خیال مصرف کراک من را کاملاً از زندگی ساقط کرده است.

4. If you were prevented from using heroin when you desired to use it, how anxious or upset would you become?

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Not at all | None |
| <input type="checkbox"/> A little bit | Mild, infrequent and not too disturbing |
| <input type="checkbox"/> Somewhat | Moderate, frequent and disturbing, but still manageable |
| <input type="checkbox"/> Much | Severe, very frequent and very disturbing |
| <input type="checkbox"/> Very much | Extreme, nearly constant, and disabling distress |

۴- اگر وقتی که میل به مصرف کراک دارید از مصرف آن منع شوید چقدر ناراحت و یا مضطرب می شوید؟

- به هیچ وجه، اصلاً باعث اضطراب و ناراحتی من نمی شوند.
- بسیار کم، خیلی کم باعث اضطراب و ناراحتی من می شود.
- تا حدی، تا حدی باعث اضطراب و ناراحتی من می شود.
- زیاد، خیلی باعث اضطراب و ناراحتی من می شود.
- بسیار زیاد، باعث اضطراب و ناراحتی شدید من می شود.

5. How much of an effort do you make to resist these thoughts related to heroin or try to disregard or turn your attention away from these thoughts? (Rate your effort made to resist these thoughts, not your success or failure in actually controlling them)

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Very much | My thoughts are so minimal, I don't need to actively resist. If I have thoughts, I make an effort to always resist |
| <input type="checkbox"/> Much | I try to resist most of the time |
| <input type="checkbox"/> Some | I make some effort to resist |
| <input type="checkbox"/> A little bit | I give in to all such thoughts without attempting to control them, but I do so with some reluctance |
| <input type="checkbox"/> Not at all | I completely and willingly give in to all such thoughts |

۵- چقدر سعی می کنید در برابر فکر و خیال مربوط به کراک مقاومت کنید یا نسبت به آن بی توجه باشید؟

- بسیار زیاد، این نوع افکار در من بسیار ناچیز است و من نیازی ندارم که در برابر آن مقاومت کنم، اگر هم فکر و خیالی وجود داشته باشد، همیشه در مقابل آن مقاومت می کنم.
- زیاد، اکثر مواقع سعی می کنم مقاومت کنم.
- مقداری، تا حدی برای مقاومت تلاش می کنم.
- بسیار کم، من بدون تلاش جدی برای کنترل، تسلیم این افکار می شوم، اما از این موضوع تا حدی ناراضی هستم.
- اصلاً، من به راحتی و با رضایت کامل تسلیم این افکار می شوم.

6. How successful are you in stopping or diverting these thoughts related to heroin?

- Always I am completely successful in stopping or diverting such thoughts
- Mostly I am usually able to stop or divert such thoughts with some effort and concentration
- Sometimes I am sometimes able to stop or divert such thoughts
- Rarely I am rarely successful in stopping such thoughts and can only divert such thoughts with difficulty
- Never I am rarely able to divert such thoughts even momentarily

۶- تا چه حد در کنترل فکر و خیال مربوط به کراک موفق هستید؟

- همیشه، کاملاً در کنترل این افکار موفق هستم.
- اغلب، معمولاً می توانم با کمی تلاش و دقت این افکار را کنترل کنم.
- گاهی، گاهی قادر به کنترل این افکار هستم.
- ندرتاً، به ندرت موفق به کنترل این افکار می شوم و به سختی می توانم آنها را تغییر دهم.
- هرگز، نمی توانم حتی برای یک لحظه این افکار را تغییر دهم.

7. If you don't use, how often do you feel the urge or drive to use heroin?

- Never
- Less than 1 hour a day
- 1-3 hours a day
- 4-8 hours a day
- Greater than 8 hours a day

۷- اگر کراک مصرف نکنید چند ساعت در روز میل یا اجبار، وسوسه و یا نیاز به مصرف آن را احساس می کنید؟

- اصلاً
- کمتر از ۱ ساعت در روز
- ۱-۳ ساعت در روز
- ۴ تا ۸ ساعت در روز
- بیشتر از ۸ ساعت در روز

8. If you don't use, how much time of the day do you feel the urge or drive to use heroin?

- Never I don't have those urges or drives
- Rarely No more than 8 times a day
- Sometimes More than 8 times a day but most hours of the day are free of those urges
- Mostly More than 8 times a day and during most hours of the day
- Always Urges are too numerous to count and an hour rarely passes without several such urges occurring

۸- اگر کراک مصرف نکنید چند بار در روز میل یا اجبار، وسوسه و یا نیاز به مصرف کراک را احساس می کنید؟

- اصلاً، هیچ میل و انگیزه ای ندارم.
- ندرتاً، کمتر از ۸ بار در روز.
- گاهی، بیشتر از ۸ بار در روز ولی اکثر اوقات روز از دست این افکار راحت هستم.
- اغلب، بیشتر از ۸ بار در روز و در اکثر اوقات روز.
- همیشه، این نیاز به مصرف بیش از حد شمارش است در حدی که تقریباً هیچ ساعتی نمی گذرد مگر آنکه چندین بار این احساس ایجاد شود.

9. How much does the urge to use heroin interfere with your social life or occupational activities?

- Not at all Urges to use heroin never interfere – I can function normally
- A little bit Urges to use heroin slightly interfere with my social or occupational activities, but my overall performance is not impaired
- Somewhat Urges to use heroin definitely interfere with my social or occupational performance, but I can still manage
- Much Urges to use heroin cause substantial impairment in my social or occupational performance
- Very much Urges to use heroin interfere completely with my social or work performance

۹- چقدر میل یا اجبار به مصرف مواد مزاحم کار و زندگی شما می شود؟

- اصلاً، میل یا اجبار مصرف هرگز مزاحم کار و زندگی من نیست و من می توانم به طور عادی کار کنم.
- کمی، میل یا اجبار مصرف کمی مزاحم کار و زندگی من می شود.
- تا حدودی، میل یا اجبار به مصرف کراک کمی مزاحم کار و زندگی من می شود، اما من می توانم آن را کنترل کنم.
- خیلی، میل یا اجبار به مصرف کراک آسیب های شدیدی به کار و زندگی من وارد کرده است.
- خیلی زیاد، میل یا اجبار به مصرف کراک به طور کامل کار و زندگی من را مختل کرده است.

10. How much of an effort do you make to resist the use of heroin?

- Very much My heroin use is so minimal, I don't need to actively resist. If I use, I make an effort to always resist
- Much I try to resist most of the time
- Some I make some effort to resist
- A little bit I give in to almost all heroin use without attempting to control it, but I do so with some reluctance
- Not at all I completely and willingly give in to all heroin use

۱۰- چقدر برای مقاومت در برابر مصرف کراک تلاش می کنید؟

- خیلی زیاد، میزان مصرف کراک من جزئی است، نیازی ندارم که خیلی مقاومت کنم، اگر مصرف کنم تمام سعی خود را خواهم کرد تا دیگر مصرف نکنم.
- زیاد، اکثر اوقات تلاش می کنم تا مقاومت کنم.
- گاهی اوقات، گاهی وقتها تلاش می کنم تا مقاومت کنم.
- خیلی کم، من تقریباً در مقابل دفعات مصرف کراک کاملاً تسلیم شده ام اما این تسلیم من با اکراه همراه است.
- به هیچ وجه، من همیشه به راحتی و با رضایت کامل تسلیم مصرف کراک شده ام.

11. How strong was the drive to use heroin in the past week?

- Not at all No drive
- A little bit Some pressure to use heroin
- Strong Strong pressure to use heroin
- Very strong Very strong drive to use heroin
- Overpowering The drive to use heroin is completely involuntary and overpowering

۱۱- چقدر انگیزه مصرف کراک در هفته قبل در شما قوی بوده است؟

- اصلاً، انگیزه ای نداشته ام.
- کمی، انگیزه کمی داشته ام.
- تا حدودی، کمی فشار برای مصرف داشته ام.
- زیاد، فشار و انگیزه زیادی داشته ام.
- بسیار زیاد، انگیزه مصرف کاملاً من را از خود بی خود کرده و از پا انداخته است.

12. How much control do you have over your heroin use?

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> Very much | I have complete control |
| <input type="checkbox"/> Much | I am usually able to exercise voluntary control over it |
| <input type="checkbox"/> Some | I can control it only with difficulty |
| <input type="checkbox"/> A little bit | I must use can only delay this use with difficulty |
| <input type="checkbox"/> Not at all | I am rarely able to delay the use of heroin even momentarily |

۱۲- چقدر بر مصرف کراک خود کنترل دارید؟

- خیلی زیاد، کاملاً کنترل دارم.
- زیاد، معمولاً قادرم که با اراده خود آن را کنترل کنم.
- تا حدودی، می توانم کنترل کنم اما به سختی.
- کم، من باید کراک مصرف کنم فقط می توانم مصرف آن را با سختی عقب بیندازم.
- اصلاً، نمی توانم حتی برای یک لحظه هم که شده مصرف کراک را به عقب بیندازم.

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!!

از همکاری شما بسیار ممنون و سپاسگزاریم

Appendix 4. The text below shows the sub-scales and scoring of Persian validated version of desire for drug questionnaire (OCDUS) in English and its translation for use of Persian audience.

OCDUS Sub-Scales and its Scoring in Persian Language Speaking Individuals

زیر مجموعه های پرسشنامه OCDUS کراک هرویین در فارسی زبانان و نمره دهی آن

The first component of Persian validated OCDUS consists of four questions (1, 2, 7, 8) and could be conceptually termed as “desire and mental preoccupation with drugs” component.

زیر مجموعه نخست از پرسشنامه OCDUS کراک هرویین در فارسی زبانان مربوط می شود به “هوس مصرف و اشتغال ذهنی با مواد”؛ این زیر مجموعه شامل چهار پرسش و موارد ۱ و ۲ و ۷ و ۸ است.

The second component contains questions 3 and 9, and could be called as “the effect of desire for drug, and drug-related thoughts on the patient’s work and life”.

زیر مجموعه دوم از پرسشنامه OCDUS کراک هرویین در فارسی زبانان مربوط می شود به “تاثیر هوس مواد و افکار مربوط به مواد بر کار و زندگی مصرف کنندگان” که شامل دو پرسش بوده و موارد ۳ و ۹ را در بر می گیرد.

The third subgroup of the OCDUS questionnaire is the “motivation, emotion, and lack of control” component, which includes questions 4, 6, 11 and 12.

زیر مجموعه سوم از پرسشنامه OCDUS کراک هرویین در فارسی زبانان مربوط می شود به “انگیزش، هیجان و نقص کنترل” و شامل چهار مورد است که عبارتند از پرسش های ۴ و ۶ و ۱۱ و ۱۲.

The fourth component of this questionnaire could be considered as the “resistance to drug use” component, which includes question 5 and 10.

زیر مجموعه چهارم از پرسشنامه OCDUS کراک هرویین در فارسی زبانان مربوط می شود به “مقاومت نسبت به مصرف مواد” که شامل دو پرسش و موارد ۵ و ۱۰ است.

Subjects should select from 5 graded options for each question based on their experiences during last week. For example, in question two, “How frequently do these thoughts related to heroin occur?”, subjects should choose between (1) Never: I don’t have those thoughts, (2) Rarely: No more than 8 times a day, (3) Sometimes: More than 8 times a day but most hours of the day are free of those thoughts, (4) Mostly: More than 8 times a day and during most hours of the day, and (5) Always: Thoughts are too numerous to count and an hour rarely passes without several such thoughts occurring.

به هر پرسش، به ترتیب پاسخ، نمره ای از ۱ تا ۵ تعلق می گیرد و نمره هر زیر مجموعه برابر است با میانگین نمرات همه پرسش های آن. میانگین نمره ۱ معادل هرگز، نمره ۲ ندرتا، ۳ گاهی اوقات، ۴ اغلب مواقع و ۵ تقریباً همیشه است. از آنجایی که میانگین نمرات معمولاً یک عدد صحیح نیست، ملاک برآورد نزدیکترین عدد صحیح به میانگین بدست آمده است.

ارزیابی های این پرسشنامه می تواند مربوط به یک دوره زمانی باشد و معمولاً یک هفته گذشته مد نظر قرار می گیرد. ضمناً نمره نرمال برای این پرسشنامه مطرح نبوده و معنی داری سطح تغییرات، ملاک ارزیابی است.