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Validation Study of the Turkish Version of the Obsessive-Compulsive Drinking Scale in Male Alcohol Dependent Inpatients

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ABSTRACT

Validation study of the Turkish version of the obsessive-compulsive drinking scale in male alcohol dependent inpatients

Objective: By modifying an interview-based questionnaire (Yale-Brown Obsessive Compulsive Drinking Scale: YBOCS-hd), Anton, Moak, and Latham (1995) developed a self-administered questionnaire consisting of 14 queries, the Obsessive-Compulsive Drinking Scale (OCDS), which includes items to evaluate both total craving and its obsessive and compulsive components. The aim of this study was to determine the reliability and validity and factorial structure of the Turkish translation of the Obsessive-Compulsive Drinking Scale (OCDS) in male alcohol dependent inpatients.

Method: The study was conducted with hospitalized patients between August 2008 and March 2009 in Bakirkoy State Hospital for Mental Health and Neurological Disorders, AMATEM (Alcohol and Drug Research, Treatment and Education Center) in Istanbul. Participants were 155 consecutively admitted male alcohol dependents. Patients were investigated with the OCDS, the Michigan Alcohol Screening Test (MAST), the Penn Alcohol Craving Scale (PACS) and the Visual Analog Scale (VAS). The internal consistency of the Turkish version of OCDS was evaluated by the Cronbach's Alpha test, and for validity investigation, the PACS is used. Calculation of both 10 and 14 item solutions according to Dutch (D) and French (F) method and comparison of the results with D, F and Italian studies were done.

Results: Turkish version of the both 10 item and 14 item solutions were found to be compatible with original scales. In alcohol dependents, the internal consistency coefficient (Cronbach's alpha) was 0.83 for "Obsessive-D" scale, 0.84 for "Compulsive-D" scale, 0.89 for "OCDS-D", 0.81 for "Obsessive-F" scale, 0.77 for "Compulsive-F" scale and 0.86 for "OCDS-F". For each of the items, the corrected item-total correlation values were between 0.49 and 0.75 ($p<0.001$) for OCDS-D, whereas they were between 0.52 and 0.78 ($p<0.001$) for OCDS-F. Test-retest correlations were 0.64 for "Obsessive-D" scale, 0.74 for "Compulsive-D" scale, 0.75 for "OCDS-D", 0.65 for "Obsessive-F" scale, 0.72 for "Compulsive-F" scale, 0.74 for "OCDS-F". Subscale and total scores of OCDS-D and OCDS-F were correlated significantly with MAST, PACS and amount of drinks per day ($p<0.001$).

Discussion: Results which were obtained in this study suggests that the both 10 and 14 item Turkish versions of the OCDS are reliable and valid for alcohol dependent inpatients. Also Turkish version of the scale was found to be compatible with the results of Dutch, French and Italian studies, although 10 item solution did not show superiority to 14 item solution.

Key words: Alcohol, dependence, craving, reliability, validity, obsessive-compulsive drinking scale

ÖZET

Obsesif-kompulsif içme ölçeğinin Türkçe şeklinin yatarak tedavi gören erkek alkol bağımlılarında geçerlilik ve güvenirlik çalışması

Amaç: Anton, Moak ve Latham (1995), görüşmeci temelli ölçeği (Yale-Brown Obsesif Kompulsif İçme Ölçeği: YBOCS-hd) değiştirerek, 14 maddeden oluşan ve hem toplam aşermeyi hem de obsesif ve kompulsif komponentlerini değerlendiren Obsesif-Kompulsif İçme Ölçeğini (OCİÖ) geliştirmişlerdir. Bu çalışmanın amacı, OKİÖ'nin Türkçe tercümesinin geçerlilik, güvenirlik ve faktöryal yapısını yatarak tedavi gören erkek alkol bağımlılarında belirlemektir.

Yöntem: Çalışmaya, Bakırköy Ruh ve Sinir Hastalıkları Eğitim ve Araştırma Hastanesi AMATEM'de (Alkol ve Madde Bağımlılığı Araştırma Tedavi ve Eğitim Merkezi), Ağustos 2008 ile Mart 2009 tarihleri arasında, yatarak tedavi gören ardışık 155 erkek alkol bağımlısı hasta alınmıştır. Hastalara OKİÖ, Michigan Alkol Tarama Testi (MATT), Penn Alkol Aşerme Ölçeği (PAAÖ) ve Görsel Analog Ölçeği (GAÖ) uygulanmıştır. OKİÖ'nin Türkçe versiyonunun iç güvenirliği Cronbach alfa testi ve geçerlilik araştırması ise, PAAÖ kullanılarak yapılmıştır. Hollanda (D) ve Fransa (F) yöntemlerine göre 10 ve 14 maddelik çözümler hesaplanmış ve sonuçlar D, F ve İtalya çalışmaları ile karşılaştırılmıştır.

Bulgular: Ölçeğin hem 10 hem de 14 maddelik halleri orjinal ölçeklerle uyumlu bulunmuştur. Alkol bağımlılarında iç güvenirlik katsayısı (Cronbach alfa), "Obsesif-D" ölçeği için 0.83, "Kompulsif-D" ölçeği için 0.84, "OKİÖ-D" için 0.89, "Obsesif-F" ölçeği için 0.81, "Kompulsif-F" ölçeği için 0.77 ve "OKİÖ-F" için 0.86 idi. Tüm maddeler için düzeltilmiş madde-toplam korelasyon değerleri, OKİÖ-D için 0.49 ile 0.75 ($p<0.001$) arasındayken, OKİÖ-F için 0.52 ile 0.78 ($p<0.001$) arasındaydı. Test-tekrar test korelasyonları "Obsesif-D" ölçeği için 0.64, "Kompulsif-D" ölçeği için 0.74, OKİÖ-D" için 0.75, "Obsesif-F" ölçeği için 0.65, "Kompulsif-F" ölçeği için 0.72 ve OKİÖ-F" için 0.74 olarak bulunmuştur. Alt ölçekler ve OKİÖ'nin toplam puanları MATT, PAAÖ ve günlük içilen miktar ile anlamlı korelasyon göstermiştir ($p<0.001$).

Sonuç: Bu çalışmadan elde edilen sonuçlar OKİÖ'nin Türkçe şeklinde, hem 10 maddelik hem de 14 maddelik çözümlerin, yatarak tedavi gören alkol bağımlılarında güvenilir ve geçerli olarak kullanılabileceğini göstermektedir. Ayrıca, ölçeğin Türkçe şeklindeki 10 maddelik çözüm, 14 maddeliğe üstünlük göstermese de, sonuçlar Hollanda, Fransa ve İtalya çalışmalarıyla uyumlu bulunmuştur.

Anahtar kelimeler: Alkol, bağımlılık, aşerme, güvenirlik, geçerlik, obsesif-kompulsif içme ölçeği

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INTRODUCTION

Simple definition of "alcohol craving" may be "a strong desire" to take alcohol. Cravings represent subjectively experienced, motivational states that are associated with on-going drug use in drug dependent individuals (1). Although many alcoholics consistently experience craving, researchers have not yet developed a common, valid definition of the phenomenon (2). A recent study which reviewed 18 models in past 60 years, suggested that no single model explains craving completely (3). Nevertheless, craving has been linked both to poorer outcomes following treatment and greater attrition during treatment (4-7). Alcohol craving is generaly considered as a core symptom of alcohol dependence and a strong predictor of relapse in alcohol-dependent adults (7-10).

There are several questionnaires available to quantify craving in adults (11). One instrument, the Obsessive Compulsive Drinking Scale (OCDS) appears to be emerging as the gold standard for this purpose (4). OCDS was developed to reflect the correspondence between key features of obsessive–compulsive anxiety disorder and key features of substance dependence (12). This model proposes that the intrusive and disruptive thoughts and images that accompany drug craving are analogous to anxiety-provoking obsessions, and that drug seeking, excessive consumption and resulting impairment are analogous to the repetitively performed and ritualized compulsions one engages in to reduce anxiety (11).

Several clinical, neurobiological, and neuropsychological data suggest that both obsessive thoughts about alcohol use and compulsive behaviour towards drinking are part of craving. Modell et al. (13) suggested that some aspects of alcohol craving (obsessive, recurrent and persistent thoughts about alcohol and compulsive drive to consume alcohol) have a phenomenological overlap with the obsessive-compulsive syndrome. Obsessive thoughts and compulsive drinking behaviors have been proposed as key factors associated with the loss of control over alcohol consumption experienced by alcohol-dependent patients (14). Modell et al. (15) modified the Yale–Brown Obsessive Compulsive Scale (16) for use in alcohol-dependent patients (Yale–Brown Obsessive Compulsive Drinking Scale for heavy drinking: YBOCS-hd). On this basis, Anton et al. (17) developed the Obsessive Compulsive Drinking Scale (OCDS) consisting of 14 queries as a self-rating instrument for quantifying cognitive aspects of alcohol craving with a good reliability, consistency and validity. Anton et al. differentiated in a dichotomous model between the obsessive and the compulsive subscale. The ease of use (it can be completed in 5 minutes), the reproducibility, the validity, and the analytic capacity make the OCDS a very effective and useful questionnaire during trials for the treatment of patients with alcohol problems, while also proving to be significantly related to the severity of alcoholism (4,12,18). The widespread use of the OCDS can also be seen from the OCDS versions validated in other languages, e.g. French (19), Japanese (20) and Italian (21). Although the Turkish version of the YBOCS-hd proved to be a reliable and valid instrument measuring craving in alcohol-dependent male individuals (22), until now, validation study of OCDS in Turkish population had not been conducted.

The purpose of this study was to translate and to validate the Turkish version of the OCDS, to assess its reliability, internal consistency and factor structure, to compare it with the Italian (21), Dutch (23) and French (24) studies according to Dutch (23) and French (24) versions, which used 14 and 10 items solutions of the scale respectively.

METHODS

Settings and sample

The study was conducted in Bakırköy Research and Training Hospital for Psychiatry, Neurology and Neurosurgery, Alcohol and Drug Research, Treatment and Training Center (AMATEM) in Istanbul between August 2008 and March 2009. AMATEM is a specialized center for substance use disorders with 84 inpatient beds, and accepts patients from all over Turkey. The Ethical Committee of the hospital approved the study. Patient's written informed consent was obtained after the study protocol was thoroughly explained.

One hundred and twenty consecutively admitted alcohol-dependent inpatients without history of any other substance abuse were considered for participation in the study. All participants met the DSM-IV diagnostic criteria for alcohol dependence. Excluding criteria were illiteracy, mental retardation or cognitive impairment and comorbid psychotic disorder. Five patients were excluded due to illiteracy and three patients due to cognitive deficits. Although none of the patients refused to participate in the study, 16 patients were excluded because they left some parts of the scales unfilled, did not give the forms back or left the treatment program prematurely; i.e. before filling the forms. A total of 155 alcohol-dependent inpatients participated in the study. Interviews with the study group were conducted after detoxification period, i.e. 4-6 weeks after the last day of alcohol use.

The original OCDS was independently translated from English into Turkish by two experts in alcoholism. Consensus was reached on a common draft by these experts. This Turkish version was back translated into English by an independent translator. The final Turkish OCDS was then, first applied to 155 patients and administration was repeated again after 24 h to 136 of these 155 patients in a test–retest procedure to assess the retest reliability. All patients received the test to be completed in the morning; moreover, at the same time a visual analogue scale (VAS: 10 cm) for alcohol craving severity (frequency + intensity) was applied. The patient was asked to rate his current level of craving intensity from 0 ("no craving") to 10 ("worst imaginable craving") and level of craving frequency from 0 ("no craving") to 10 ("most frequent craving").

No patients exhibited acute withdrawal symptoms; psychotropic medication was allowed when indicated, but specific drugs endowed with anti-craving properties or able to prevent relapses were avoided. The daily amounts of alcoholic beverages consumed by the members of the study were expressed in drinks per day (one standard drink equal to 12 g of absolute alcohol).

Measures

All patients were assessed by using a semi-structured socio-demographic form. The diagnosis of alcohol or drug dependence in each participating patient based on the clinical examination, a screening interview based on the Structured Clinical Interview for DSM-IV (SCID-I) (25), Turkish version (26), conducted by a trained interviewer (CE).

Obsessive–Compulsive Drinking Scale (OCDS)

Several clinical, neurobiological, and neuropsychological data suggest that both obsessive thoughts about alcohol use and compulsive behaviour towards drinking are part of craving. Modifying an interview-based questionnaire (Yale–Brown Obsessive Compulsive Drinking Scale: YBOCS-hd), Anton et al., (17) developed a self-administered questionnaire consisting of 14 queries, the Obsessive–Compulsive Drinking Scale (OCDS), which includes items to evaluate both total craving and its obsessive and compulsive components. The ease of use (it can be completed in 5 minutes), the reproducibility, the validity, and the analytic capacity make the OCDS a very effective and useful questionnaire during trials for the treatment of patients with alcohol problems, while also proving to be significantly related to the severity of alcoholism (4,12,18).

The Penn Alcohol Craving Scale

Alcohol craving was measured with The Penn Alcohol Craving Scale (PACS) which is a 5-item measure that assesses frequency, severity and time spent thinking about alcohol, difficulty in resisting relapse opportunities, and strength of craving episodes (27). The PACS consists of five items each scored 0–6 in increasing severity of craving. Prior research has demonstrated the PACS to have greater predictive value for treatment outcomes compared to the Obsessive–Compulsive Drinking Scale or the Alcohol Urge Questionnaire (8). PACS was shown to be reliable and valid instrument for evaluating craving (27). Turkish version of the PACS is valid and reliable for screening severity of craving of alcohol dependent patients (28).

Cronbach's alfa for present study was found as 0.96.

Michigan Alcoholism Screening Test

The severity of dependence was assessed by using the Michigan Alcoholism Screening Test (MAST), (29) which was developed as a "rapid and effective screening for lifetime alcohol-related problems and alcoholism" for a variety of populations. Turkish version of the MAST is valid and reliable for screening severity of dependency of both alcohol and drug dependent patients (30). The Cronbach's alpha was 0.75 in the present study.

Statistical analysis

As to the OCDS scores (ranging from 0—no symptoms, to 4—severe symptoms), obsessive and compulsive subscales OB: items 1–6, CP: items 7–14) and the total scale was considered separately. As in previous studies two different methods were used to calculate these three variables (23,24), both of them were followed in the Italian study (21) in order to compare their results with those of the Dutch (23) and French (24) research groups. We too used both calculation system and compared with all these three studies (21,23,24).

Table 1: Socio-demographic and clinical characteristics of the Turkish subjects from the present study

		Mean ± S.D.	Minimum-Maximum
Age		44.34±9.37	26.0-66.0
Duration of education		9.36±3.66	5.0-22.0
Age onset of regular alcohol use		25.65±6.72	14.0-45.0
Duration of alcohol consumption		18.69±9.77	2.0-45.0
Amount of alcohol consumption (drinks per day)[a]		17.48±9.13	4.0-50.0
Number of previous treatment		1.79-1.22	0.0-3.0
		subjects	**%**
Marital status	Married	102	65.8
	Single	24	15.5
	Divorced	29	18.7
Employment status	Unemployed	68	43.9
	Part-time	39	25.2
	Employed	20	12.9
	Retired	28	18.1
Cloninger's type	Type 1	76	49.0
	Type 2	79	51.0

[a], Alcohol intake in the month before study entry.

Table 2: Item-Total Statistics of OCDS 14 items among Turkish alcohol dependents

OCDS	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	29.36	106.063	0.481	0.885
2	29.87	106.503	0.548	0.881
3	29.06	109.250	0.395	0.888
4	29.57	104.325	0.691	0.875
5	29.77	103.864	0.649	0.876
6	29.46	101.691	0.691	0.874
7	28.14	110.395	0.486	0.883
8	27.96	110.511	0.508	0.883
9	28.95	106.699	0.520	0.882
10	28.88	107.290	0.518	0.882
11	29.13	103.516	0.645	0.876
12	29.14	108.559	0.510	0.882
13	29.07	101.404	0.669	0.875
14	29.27	105.326	0.613	0.878

In the Dutch method, sum scores of items 1 to 6 (maximum score: 24) is obsessive subscale (OB-D), whereas sum scores of items 7 to 14 (maximum score: 32) is compulsive subscale (CP-D). Thus total score of the OCDS-D (maximum score: 56) is calculated by adding OB-D and CP-D.

In the French method, one of the highest score from items 1 and 2 is taken to compute OB-F subscale. Similarly, for calculating CP-F subscale, highest scores from items 7 and 8, from 9 and 10 and from 13 and 14. Thus maximum score is 20 for OB-F, 20 for CP-F and 40 for OCDS-F (OB-F + CP-F).

The reliability of the OCDS was assessed using Cronbach α which evaluates the internal consistency of the questionnaire, based on the correlation between items. Pearson's linear correlation analysis was employed to verify the correlations between variables (OB, CP and OCDS, calculated with both Dutch and French methods, and VAS). The same analysis was used to assess the test–retest correlations for OCDS, OB and CP subscales, and VAS. Goodness of fit with a normal distribution was tested by the Kolmogorov–Smirnov test. Principal component analysis was performed to detect the underlying dimensionality of the scale. The 14 OCDS items were standardized so that the method was performed on variables with means equal to 0 and variance equal to 1. The inter-item correlation matrix was factor analyzed. As a rotation method, Varimax with Kaiser Normalization was used. The eigenvalue-greater-than-one criterion was used to determine the number of relevant factors.

RESULTS

Sociodemographic variables and variables related with alcohol use are shown on Table 1 (Table1). Corrected Item-Total Correlations ranged between 0.40 and 0.69 (Table 2).

In the first evaluation, three factor solutions were found. Consistent with the original scale, items 1,2,4,5 and 6 computed "Obsessive factor" (explained 22.56% of variance), whereas items 7, 8, 11, 12, 13, and 14 computed "Compulsive factor" (explained 24.34% of variance). Third item originally from Obsessive factor (Degree of obsessive to interfere with social or work functioning) and 9 and 10th items (Degree of compulsions to interfere with social or work functioning) originally from Compulsive factor computed third factor, which explained 17.70% of variance (total of 64.6% of variance). These items were related with evaluation the function impairment related with obsessions and compulsive drinking, thus called as "Function factor" (Table 3). As a single factor, 14 items explained 41.55% of variance, 10 item 45.09% of variance. The resulting factors seem to describe the scale as a whole with its original distinction into two groups of items. Thus two factor solution was appropriate for Turkish version as in original scale.

Table 3: Factorial analysis of OCDS 14 items among Turkish alcohol dependents

	Component		
OCDS items	**Compulsive**	**Obsessive**	**Function**
8	0.807		
7	0.770		
12	0.701		
13	0.689		
14	0.650		
11	0.592		
1		0.794	
2		0.761	
4		0.711	
5		0.695	
6		0.633	
9	0.201		0.881
10	0.230		0.869
3		0.291	0.756
% of Variance	24.34	22.56	17.70

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Correlations between items, subscales and total score of OCDS: For each of the items, the corrected item-total correlation values were between 0.49 and 0.75 ($p<0.001$) for OCDS-D, whereas they were between 0.52 and 0.78 ($p<0.001$) for OCDS-F (Table 4).

Test–retest correlations and correlations of OCDS and subscales of OCDS with MAST, amount of drinks per day and PACS were shown on Table 4. Test–retest correlations was 0.64 for "Obsessive-D" scale, 0.74 for "Compulsive-D" scale, 0.75 for "OCDS-D", 0.65 for "Obsessive-F" scale, 0.72 for "Compulsive-F" scale, 0.74 for "OCDS-F". The subscales and total scores of the

Table 4: Correlations between items, subscales and total score of OCDS (n=155)

Dutch Method	OB-D	OCDS-D		CP-D	OCDS-D
OCDS 1	0.73*	0.58*	OCDS 8	0.66*	0.57*
OCDS 2	0.72*	0.62*	OCDS 9	0.63*	0.60*
OCDS 3	0.58*	0.49*	OCDS 10	0.63*	0.60*
OCDS 4	0.82*	0.74*	OCDS 11	0.77*	0.71*
OCDS 5	0.78	0.71*	OCDS 12	0.67*	0.59*
OCDS 6	0.78*	0.75*	OCDS 13	0.79*	0.74*
OCDS 7	0.65*	0.56*	OCDS 14	0.73*	0.68*
French Method	**OB-F**	**OCDS-F**		**CP-F**	**OCDS-F**
OCDS 1&2	0.72*	0.64*	OCDS 7&8	0.64*	0.52*
OCDS 3	0.62*	0.52*	OCDS 9&10	0.62*	0.64*
OCDS 4	0.83*	0.77*	OCDS 11	0.80*	0.70*
OCDS 5	0.81*	0.76*	OCDS 12	0.73*	0.60*
OCDS 6	0.81*	0.78*	OCDS 13&14	0.80*	0.71*

* Correlation is significant at the <0.001 level (2-tailed).

Table 5: Test–retest correlations and correlations of OCDS with MAST, amount of drinks per day and PACS

	Test–retest correlations	MAST	Amount of drinks per day	PACS
	(n=136)	(n=155)	(n=155)	(n=155)
OB (D)	0.643	0.364	0.339	0.572
CP (D)	0.738	0.499	0.462	0.477
OCDS (D)	0.748	0.486	0.450	0.579
OB (F)	0.645	0.354	0.325	0.558
CP (F)	0.718	0.502	0.435	0.490
OCDS (F)	0.742	0.470	0.418	0.585

* Correlation is significant at the <0.001 level (2-tailed).

OCDS were correlated significantly with MAST, PACS and amount of drinks per day ($p<0.001$) (Table 5). The duration of the alcoholism history was not correlated with OCDS-D, OCDS-F or their subscales (not shown).

Means ± S.D. (calculated according to the Dutch (D) and French (F) methods) and Cronbach's α values were compared to those found in the Dutch (23), French (24) and Italian studies (21). In alcohol dependents, the internal consistency coefficient (Cronbach's alpha) was 0.83 for "Obsessive-D" scale, 0.84 for "Compulsive-D" scale, 0.89 for "OCDS-D", 0.81 for "Obsessive-F" scale, 0.77 for "Compulsive-F" scale and 0.86 for "OCDS-F" (Table 6).

Pearson linear correlations between subscales, total OCDS and VAS scores calculated according to the Dutch (D) (23) and French (F) (24) methods (Table 7).

DISCUSSION

The results of the present study demonstrate that the OCDS has been successfully translated into Turkish. The Cronbach's α analysis showed good reliability and construct validity for the Turkish version of the scale, comparable with the original and the European versions. Our sample size was larger (n=155) than those of the Italian (n=103), French (n=50) and Dutch (n=39) studies, with which the results of our study was compared. Turkish version of the both French (10 item) and Dutch (14 item) solutions were found to be compatible with

Table 6: Means ± S.D., calculated according to the Dutch (D) and French (F) methods, and Cronbach α values as compared to those found in the Italian (21), Dutch (23) and French (24) studies

	Turkish		Italian		Dutch		French	
	Mean±S.D.	Cronbach α	Mean±S.D.	Cronbach α	Mean±S.D.	Cronbach α	Mean±S.D.	Cronbach α
OB (D)	11.04±5.66	0.83	10.06±6.04	0.88	5.90±3.90	0.79		
CP (D)	20.32±6.62	0.84	17.72±7.25	0.86	6.30±4.60	0.85		
OCDS (D)	31.36±11.05	0.89	27.66±12.44	0.76	12.20±7.70	0.89		
OB (F)	9.72±4.89	0.81	8.51±5.07	0.90			5.90±4.20	0.82
CP (F)	13.17±4.28	0.77	11.83±4.64	0.90			5.50±4.10	0.79
OCDS (F)	22.89±8.26	0.86	20.35±9.00	0.83			11.30±7.60	0.88

Table 7: Pearson's linear correlations calculated according to the Dutch (D) (23) and French (F) (24) methods

Calculation method	Pearson linear correlations*	Turkish	Italian	French	Duch
Duch version	r(OB–CP)	0.62	0.73		0.66
	r(OB–OCDS)	0.88	0.91		0.89
	r(OB–VAS)	0.54	0.42		0.59
	r(CP–OCDS)	0.92	0.95		0.93
	r(CP–VAS)	0.45	0.34		0.69
	r(OCDS–VAS)	0.54	0.41		0.71
French version	r(OB–CP)	0.62	0.72	0.68	
	r(OB–OCDS)	0.91	0.93	0.92	
	r(OB–VAS)	0.54	0.41		
	r(CP–OCDS)	0.89	0.92	0.91	
	r(CP–VAS)	0.47	0.31		
	r(OCDS–VAS)	0.56	0.39		

* $P < 0.01$ for all r-values.

original scales. The fact that the α values based on the calculation of Dutch method (23) and the French method (24) were both statistically significant, did not support the validity of grouping the score of four pairs of items and balancing the score range between OB and CP. This finding was consistent with the Italian study (21). Also the results of Schippers et al. (23) were relevant for this conclusion, as they found the same validity for the original and the substituted versions of the scale.

Anton et al. (17) created the Obsessive–Compulsive Drinking Scale (OCDS) by modifying a self-report questionnaire originally designed to measure obsessive cognitions and compulsive rituals (13). Their questionnaire assessed; the frequency and duration of distress, resistance to social–occupational problems caused by one's thoughts, impulses and images of drinking, the degree to which drinking interferes with one's daily functioning, and attempts to resist and to control one's drinking. Factor analysis of the scale in different countries showed different numbers of factors. Australian study identified a 4-factor solution (compulsions, interference, obsessions and resisting obsessions) (31). Mexican study identified 2-factor solution in 12-item version of the scale (excluding the items on drinking habits) explaining 56.9% of the variance (obsessive thoughts related to drinking and interference/behaviors related to drinking) (14). In the present study, the results from the corrected item-total correlation analysis demonstrated that OCDS was a scale consisting of obsessive and compulsive components, with 14 items assessing the same phenomenon. A three-factor solution might better describe its structure. Principal component analysis of the Turkish version of the 14 OCDS items showed that there were three eigenvalues greater than 1 and that these three factors explained 64.60% of the variance. The first factor explained 24.34% of the variance and was represented by the Compulsive component. The second factor was taken into consideration, it was able to explain another 22.56% of the variance and represented by the Obsessive component. Finally, the third factor was able to explain another 17.70% of variance, thus reaching 64.60% of the cumulative variance. It could be easy to recognize that the first factor discriminated nearly all CP items, the second factor discriminated nearly all OP items, while the third factor discriminated function impairment related with most CP items. A possible explanation for these findings was that our study population was mostly made up of severely dependent patients, as demonstrated by the heavy amounts of alcohol daily consumed by them (see Table 1), and also of nearly half "type 2-like" alcoholics, who were expected to experience the highest levels of craving. Also regardless of the type of alcoholism, treatment seeking population were severely dependent population, which may all increase the probability of function impairment. Nevertheless, with respect to the findings of Janiri et al. (21) in the Italian study, who identified three-factor solution, we can confirm the three-factor solution for the scale, but the resulting factors seemed to describe the scale as a whole with its

original distinction into two groups of items as Janiri et al. suggested in their population.

The correlation between OB, CP and OCDS total score was high, as was expected from their association in the construction of the scale. The correlations between the three variables and VAS were also significant, even to a higher extent than those obtained in the Italian study (21). Finding lower correlations, Anton et al. (4) suggested that OCDS may capture a broader dimension of alcoholism with respect to the analogue measures of craving, which usually leave the interpretation of its meaning to the patient. This was supported by several studies which indicated that the meaning of craving differs among substance-dependent subjects and professional caregivers (3), and this discrepancy could be explained by the multidimensionality of the concept of craving.

In line with the Italian (21) and Dutch (23) studies, the duration of the alcoholism history was not correlated with OCDS. In contrast with Italian study (21), the alcohol consumption prior to abstinence significantly influenced the OCDS scores, similarly with Anton's study which demonstrated a correlation between OCDS and previous alcohol consumption (4). This discrepancy may be due to different enrolment procedures used in different studies. When the relation between OCDS and the alcohol intake was taken into consideration, the fact should be reminded that the two OCDS items investigated alcohol consumption, while all subjects, as those in present study, were currently abstinent.

In a previous study, OCDS scores were significantly correlated with measures for the Alcohol Dependence Scale, number of DSM-IV criteria met for alcohol dependence as well as the number of days in a week engaged in heavy drinking, indicating concurrent validity (14). In the present study, OCDS scores were correlated with severity of alcohol related problems, amount of drinks per day, and severity of craving measured with PACS and VAS. These suggest the concurrent validity of the OCDS's Turkish version. OCDS score was found to be predictive of the hazard for heavy relapse in the following week (6) future total alcohol consumption during a treatment period of 12 weeks if obtained during a period of relative abstinence (4) and 12 months after treatment completion (7). Thus further studies evaluating the predictive value of the Turkish version of OCDS for relaps is essential.

In conclusion, results obtained in this study suggest that the Turkish version of the OCDS (both 10 item and 14 item solutions) are reliable and valid for alcohol dependent inpatients. Also the Turkish version of the scale was found to be compatible with the results of the Dutch, French and Italian studies.

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EK1

Obsesif Kompulsif İçme Ölçeği

Aşağıdaki sorularda alkol içmeniz ve içmenizi kontrol etme girişimleriniz hakkında bilgiler sorulmaktadır. Lütfen size uygun olan cevabı daire içine alın.

1. İçmediğinizde, zamanınızın ne kadarı içmeyle ilişkili fikirler, düşünceler, dürtüler ya da hayaller ile meşgul olur?
   0.) Hiç.
   1.) Günde 1 saatten az.
   2.) Günde 1-3 saat.
   3.) Günde 4-8 saat.
   4.) Günde 8 saatten daha fazla.

2. Bu düşünceler ne sıklıkta oluşur?
   0.) Hiç bir zaman.
   1.) Günde 8 kereden fazla değil.
   2.) Günde 8 kereden fazla, fakat günün çoğu saatinde bu düşüncelerden uzağım.
   3.) Günde 8 kereden fazla ve günün çoğu saatinde.
   4.) Düşünceler sayamayacak kadar fazla ve bu tür birkaç düşünce olmadan bir saat nadiren geçer.
   1. ya da 2. Soruların en Yüksek Puanını buraya yazın _____

3. İçmeyle ilgili bu fikir, düşünce, dürtü ya da hayaller sosyal ya da iş (ya da rol) işlevselliğinize ne kadar engel oluyor? Onlar yüzünden yapmadığınız ya da yapamadığınız herhangi bir şey var mı? [Eğer şu anda çalışmıyorsanız, çalışıyor olsaydınız, performansınız ne kadar etkilenirdi?]
   0.) İçme düşünceleri, hiç bir zaman engel olmaz. İşlevselliğim normal.
   1.) İçme düşünceleri, sosyal veya mesleki aktiviteleri az etkiler, fakat genel performansım bozulmaz.
   2.) İçme düşünceleri, sosyal veya mesleki performansımı kesinlikle engeller, fakat yine de baş ediyorum.
   3.) İçme düşünceleri, sosyal veya mesleki performansımda önemli yetersizliğe neden oluyor.
   4.) İçme düşünceleri, sosyal veya iş performansımı tamamen engeller.

4. İçmediğiniz sırada içmeyle ilgili fikir, düşünce, dürtü veya hayaller ne kadar sıkıntı ya da rahatsızlığa neden oluyor?
   0.) Hiç.
   1.) Hafif, sık değil ve fazla rahatsızlık verici değil.
   2.) Orta, sık ve rahatsızlık verici, fakat yinede baş edilebilir.
   3.) Şiddetli, çok şiddetli ve çok rahatsız edici.
   4.) Aşırı, neredeyse sabit devamlı ve yetersiz kılan sıkıntı.

5. İçmediğiniz sırada bu düşüncelere direnmek ya da görmezlikten gelmek veya aklınıza girdikleri zaman dikkatinizi bu düşüncelerden uzaklaştırmak için ne kadar gayret sarf ediyorsunuz? (Bu düşüncelere direnmek için gösterdiğiniz gayreti değerlendirin, onları kontrol etmekteki başarı ya da başarısızlığınızı değil).
   0.) Düşüncelerim o kadar az ki, aktif bir direnç göstermeme gerek yok. Eğer düşüncelerim olursa, direnebileceğim gayreti her zaman gösteririm.
   1.) Çoğu zaman direnmeye çalışıyorum
   2.) Direnmek için bir kısım direnç gösteriyorum
   3.) Bu tür düşüncelerin hepsine, onları kontrol etmeyi denemeden teslim oluyorum. Fakat bunu gönülsüz yapıyorum.
   4.) Tamamen ve isteyerek bu tür düşüncelerin hepsine teslim oluyorum.

6. İçmediğiniz sırada bu düşünceleri durdurma ya da değiştirmekte ne kadar başarılısınız?
   0.) Bu tür düşünceleri durdurma ya da değiştirmekte tamamen başarılıyım.
   1.) Genellikle bu tür düşünceleri bir kısım gayret ve yoğunlaşma ile durdurabiliyor ya da değiştirebiliyorum.
   2.) Bazen bu tür düşünceleri durdurabiliyor ya da değiştirebiliyorum.
   3.) Nadiren bu tür düşünceleri durdurabiliyor ve sadece zorlukla bu tür düşünceleri değiştirebiliyorum.
   4.) Bu tür düşünceleri anlık bile nadiren değiştirebiliyorum.

7. Her gün ne kadar içki içiyorsunuz?
   0.) Hiç
   1.) Günde 1 içkiden az
   2.) Günde 1-2 içki
   3.) Günde 3-7 içki
   4.) Günde 8 ya da daha fazla içki

8. Haftada kaç gün içiyorsunuz?
   0.) Hiç
   1.) Haftada 1 günden fazla değil
   2.) Haftada 2-3 gün
   3.) Haftada 4-5 gün
   4.) Haftada 6-7 gün
   7. ya da 8. Soruların en Yüksek Puanını buraya yazın _____

9. İçmeniz mesleki işlevselliğinize ne kadar mani oluyor? İçmeniz yüzünden yapmadığınız ya da yapamadığınız herhangi bir şey var mı? [Eğer şu anda çalışmıyorsanız, çalışıyor olsaydınız performansınız ne kadar etkilenirdi?]
   0.) İçmek hiç bir zaman engellemez—İşlevselliğim normal.
   1.) İçmek mesleki aktivitelerimi az engeller, fakat genel performansım bozulmaz.
   2.) İçmek mesleki performansıma kesinlikle engel, fakat yine de baş ediyorum.
   3.) İçmek mesleki performansımda önemli yetersizliğe neden oluyor.
   4.) İçmek sorunları iş performansıma tamamen engel oluyor.

10. İçmeniz sosyal işlevselliğinize ne kadar engel oluyor? İçmeniz yüzünden yapmadığınız ya da yapamadığınız her hangi bir şey var mı?
   0.) İçmek hiç bir zaman engellemez—İşlevselliğim normal.
   1.) İçmek sosyal aktiviteleri az engeller, fakat genel performansım bozulmaz.
   2.) İçmek sosyal performansıma kesinlikle engel, fakat yinede baş ediyorum.
   3.) İçmek sosyal performansımda önemli yetersizliğe neden oluyor.
   4.) İçmek sorunları sosyal performansıma tamamen engel oluyor.
   9. ya da 10. Soruların en Yüksek Puanını buraya yazın _____

11. İçme arzunuz olduğu zaman içmeniz engellense, ne kadar sıkıntılı ya da üzgün olursunuz?
   0.) Herhangi bir sıkıntı ya da sinirlilik yaşamam.
   1.) Sadece az sıkıntılı ya da sinirli olurum.
   2.) Sıkıntı ya da sinirlilik büyür, fakat baş edilebilir haldedir.
   3.) Sıkıntı ya da sinirlilik kalıcı ve çok rahatsız edici bir artış yaşarım.
   4.) Yetersizlik doğuran sıkıntı ya da sinirlilik yaşarım.

12. Alkollü içecekleri içmeye direnmek için ne kadar gayret harcıyorsunuz? (Sadece içmeye direnmek için gösterdiğiniz gayreti değerlendirin, onları kontrol etmekteki başarı ya da başarısızlığınızı değil).
    0.) İçmem o kadar az ki, aktif bir direnç göstermeme gerek yok. Eğer içersem, direnebileceğim gayreti her zaman gösteririm.
    1.) Çoğu zaman direnmeye çalışıyorum
    2.) Direnmek için bir kısım direnç gösteriyorum
    3.) Her içme arzuma, onları kontrol etmeyi denemeden teslim oluyorum, fakat bunu gönülsüz olarak yapıyorum.
    4.) Tamamen ve isteyerek içme arzularımın hepsine teslim oluyorum.

13. Alkollü içecek içme dürtüsü ne kadar güçlü?
    0.) Dürtü yok
    1.) İçmek için kısmi baskı
    2.) İçmek için güçlü baskı
    3.) İçmek için çok güçlü baskı
    4.) İçme dürtüsü tamamen istem dışı ve aşırı güçlü.

14. İçmeniz üzerine ne kadar kontrol sahibisiniz?
    0.) Tamamen kontrol sahibiyim.
    1.) Genellikle istemli kontrol gösterebiliyorum.
    2.) Sadece zorlukla kontrol ediyorum.
    3.) İçmeliyim ve sadece zorlukla içmemi erteleyebilirim.
    4.) İçmeyi bir an bile nadiren erteleyebiliyorum.

    13. ya da 14. Soruların en Yüksek Puanını buraya yazın _____