

The Obsessive Compulsive Drinking Scale: A Self-Rated Instrument for the Quantification of Thoughts about Alcohol and Drinking Behavior

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It has been suggested that a crucial dimension of alcohol "craving" includes the concept of both obsessive thoughts about alcohol use and compulsive behaviors toward drinking. An interview-based rating scale, the Yale-Brown Obsessive Compulsive Scale-heavy drinkers (YBOCS-hd), has been found useful in quantifying this concept in alcohol-dependent individuals. A self-rating scale, the Obsessive Compulsive Drinking Scale (OCDS) has been developed by us as a modification of the YBOCS-hd. The YBOCS-hd showed excellent interrater reliability in our hands. The correlation between the YBOCS-hd and the OCDS total scores obtained on 60 alcohol-dependent individuals was 0.83. The test-retest correlation for the OCDS total score was 0.96, and the obsessive and compulsive subscales test-retest correlations were 0.94 and 0.86, respectively. The internal consistency of the items in the OCDS was high (0.86) and did not improve significantly with removal of individual items. The shared variance between the OCDS scores and alcohol consumption during the period of evaluation was only ~20%, indicating that the dimension measured by the scale was somewhat independent of actual drinking. As such, it might act as an independent measure of the "state of illness" for alcohol-dependent individuals.

When used during a prospective 12-week treatment research study, initial results indicate that the OCDS seems to validly measure a dimension of alcohol dependence, because it decreased from baseline during alcohol reduction and increased in relationship to relapse drinking. The ease of administration (5 min), reliability, and concurrent validity of the OCDS makes it particularly suitable as a screening and outcome measurement tool for various types of clinical treatment and research protocols.

Key Words: Alcohol, Scale, Obsessive, Compulsive, Craving.

MANY CLINICIANS and researchers believe that the concept of "craving" is central to the loss of control over alcohol consumption experienced by people with alcohol dependence.¹⁻⁴ For instance, it has been suggested that a higher level of craving for alcohol may be associated with an increased treatment failure rate among outpatients participating in clinical trials of drug therapy for management of the alcohol withdrawal syndrome.²

However, craving for alcohol has been an elusive concept. For example, studies often use a simple analog scale⁵

to quantitate craving, which leaves much of the interpretation of the concept to the individual being evaluated. The meaning of the concept of craving a substance is not clear. Several studies have indicated that the meaning of craving differs among substance-dependent individuals and between dependent patients and their professional care givers.^{1,6,7}

Modell et al.^{3,4} have suggested that many of the aspects of craving for alcohol in the dependent individual are similar to the thought patterns and behaviors of patients with obsessive-compulsive illness. These would include the recurrent and persistent thoughts about alcohol, the inability of the individual to resist these thoughts, the compulsive drive to consume alcohol, and the loss of control over that drive. These authors modified the Yale-Brown Obsessive Compulsive Scale^{8,9} to measure these aspects in heavy drinkers (YBOCS-hd) and related the scores to an analog measure of craving. The 10 questions of the scale are divided into an obsessiveness subset (questions 1-5) and a compulsivity subset (questions 6-10). This scale differentiated patients with alcohol abuse or dependence from normal drinking controls to a highly significant degree. Despite its apparent clinical utility, evaluation of the psychometric properties of this modified YBOCS was not reported. In addition, this scale is an interviewer-based scale that takes a trained interviewer some time to administer. For greater utility in clinical evaluation and for measuring change during treatment studies, it would be beneficial to use a self-rating instrument that would be more time- and cost-effective. To that end, we developed an instrument based on the YBOCS-hd to allow patients to self-rate their obsessive thoughts about alcohol and their compulsive use of alcohol that we termed the Obsessive Compulsive Drinking Scale (OCDS). We compared this self-rating scale to the interviewer-based YBOCS-hd, examined the internal consistency of the scale, did a test-retest reliability study, and illustrated its utility in a prospective fashion during a longitudinal treatment study.

METHODS

To validate the scale, several steps were taken. These will be described independently. The instruments used were the interview-based original YBOCS-hd of Modell et al.³ and a modified self-rating instrument based on the YBOCS-hd. This self-rated OCDS is included in the Appendix.

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When YBOCS-hd questions were ambiguous or complicated, they were modified for the OCDS. For example, some questions on the YBOCS-hd contained several subquestions that were answered by only one response set. This occurred in YBOCS-hd questions 1 and 6, which ask about both quantity and frequency of thoughts about drinking or actual alcohol consumption in the same question. YBOCS-hd question 7 inquires about effects on work and social function in the same question, and YBOCS-hd question 10 seeks to identify both the "drive to drink" and the ability to "control drinking." These YBOCS-hd questions (1, 6, 7, and 10) were conceptually divided, leading to a total of 14 discrete items on the OCDS compared with 10 mixed items on the YBOCS-hd. In addition, the wording for the questions and response choices was altered to better reflect the connotation imposed by self-reading and responding. The YBOCS-hd scale total score was calculated by adding the numerical ratings of the responses of items 1–10. The obsessive thoughts of drinking subscale total was obtained by adding the scores on items 1–5, and the compulsive drinking subscale total was obtained by adding items 6–10. To compare the two scales consistently, the scoring for the OCDS was corrected for the newly split items (YBOCS-hd questions 1, 6, 7, and 10) by using the higher score on each of the following OCDS question pairs: questions 1 and 2, questions 7 and 8, questions 9 and 10, and questions 13 and 14 for calculation of the total and two subscale scores. The OCDS total score was calculated, after the above adjustment, by adding the numerical ratings for the items (corresponding to the 10 YBOCS-hd original items). The obsessive thoughts of drinking subscale total was obtained by adding the scores on items 1–6 (adjusted as above) and the compulsive drinking subscale total was obtained by adding items 7–14 (adjusted as above). The reading level required for the instrument was determined to be approximately 9th grade, which is the preferred level for most readers (Flesch-Kincaid).

The subjects recruited for the cross-sectional validity and reliability studies were recently admitted patients meeting DSM-III-R criteria for alcohol dependence only (no recent abuse of other substances) to either a county detoxification facility or to a university psychiatric hospital substance abuse unit. Sixty patients participated in this phase of the study. There were 43 males and 17 females whose average age was 39 ± 10 years. Although the level of education was not recorded on each subject, a sample of the patients who participated in the study had a recorded education level of 13 ± 2.5 years (range 9–16). The average alcohol intake of these patients was 210 ± 107 g of alcohol/day (15 standard drinks/day on average) in the week before admission, as determined by self-report utilizing the Time Line Follow-back interview.¹⁰ Eleven additional patients were recruited from the same institution, after the original 60, to examine test order effects and test-retest reliability.

The subjects recruited for the outpatient longitudinal study were 18 patients participating in an ongoing combined pharmacological and cognitive-behavioral relapse prevention treatment trial. They met DSM-III-R criteria for alcohol dependence, but had no history of inpatient detoxification. In general, they were more socially stable (more intact families and higher employment) than the patients participating in the cross-sectional validation study.

Interview Interrater Reliability

To replicate and extend the work of Modell and colleagues^{3,4} and to evaluate the use of the instrument in our hands, interrater reliability data utilizing the YBOCS-hd interview instrument was obtained. Two research-trained psychiatrists (R.A. and D.M.) simultaneously rated the first 15 patients during an in-person interview conducted by one or the other in a balanced fashion. The interview was done on the treatment unit at a time when the person had no physical symptoms of alcohol withdrawal. The patients exhibited no gross cognitive impairment as evidenced by a normal clinical mental status exam that consisted of orientation questions and brief mnemonic screens. All but two patients were interviewed within 96 hr of admission. The patients were told to provide responses based on how they had felt in the week before inpatient admission. They were also asked

to rate the same items based on how they felt in the last 24 hr while in the treatment facility. Overall, the interview took ~15–30 min.

Agreement between the YBOCS-hd and the OCDS

Once it was determined that the interviewers had high interrater agreement, one interviewer (D.M.) subsequently interviewed the remaining patients. After each interview, the patients were asked to fill out the self-rated OCDS within 6–8 hr, at their convenience. The majority (80%) of the patients accomplished this in the interval immediately following the interview. It was observed that it took the patients ~5 min to accomplish this task.

Test-Retest Reliability of the OCDS

A subset of 18 patients (7 of the original 60 and 11 additional subjects) were given the OCDS on two occasions separated by 24–48 hr to examine the stability of the items over time. All of the original 7 patients and 10 of the additional patients also received the YBOCS-hd interview. To examine possible order effects caused by the YBOCS interview biasing response on the OCDS, 10 of these patients were interviewed immediately before the first OCDS administration, and 7 of these patients were interviewed immediately after the first OCDS administration.

Longitudinal Change in OCDS during Outpatient Treatment

Because the development and validation of the OCDS were done on inpatients, it was of interest to examine its performance and acceptability on an outpatient sample. The OCDS scores were compared in an outpatient sample with the reported alcohol consumption over time as an indication of concurrent validity. In addition, the ability of the scale to measure change was examined. The OCDS was administered to the first 18 patients participating in a 12-week, outpatient double-blind treatment study examining the efficacy of a pharmacological treatment (naltrexone) combined with weekly individual cognitive behavioral therapy for the prevention of relapse drinking in alcohol-dependent individuals. All patients met DSM-III-R criteria for alcohol dependence. The OCDS was administered at baseline and weekly for 12 weeks during the treatment trial. In addition, weekly alcohol consumption was quantified using the Time Line Follow-back method.¹⁰ Of these 18 patients, four representative patients with various levels of sobriety or drinking during the trial were chosen to illustrate how the OCDS scores change in relationship to alcohol consumption.

Statistical Analyses

Due to the ordinal nature of the item responses, interviewer interrater reliability was assessed by examining the correlations between ratings on every item, subscale scores, and total score for each interviewer utilizing the Spearman's rank correlation test.

To compare the self-rated OCDS scale with the YBOCS-hd scale, subscale and total scores for each instrument were compared using correlational analysis (Pearson's r), and the distribution differences in total and subscale scores were compared utilizing Student's t test. In addition, the reliability of the OCDS was examined utilizing Cronbach's α , which measures the internal consistency of the items.¹²

Test-retest reliability of the OCDS was examined by Pearson's correlational analysis of the subscale and total scores obtained from the two testing sessions. A paired t test was used to analyze whether there were any significant differences in subscale and total scores between the YBOCS-hd and OCDS when the order of administration was reversed.

The relationship between the OCDS scores and the amount of alcohol consumed in the week before assessment was analyzed by use of the Pearson's r statistic.

Table 1. Scores (Mean \pm sd) Obtained by Two Interviewers Utilizing the YBOCS-hd Scale on Newly Admitted Alcoholics ($n = 15$)

	Items 1–5	Items 6–10	Total score
Interviewer 1	11.1 \pm 4.2	13.5 \pm 3.0	24.3 \pm 6.5
Interviewer 2	8.9 \pm 4.8	14.0 \pm 3.0	22.9 \pm 6.5
Agreement	0.98*	0.95*	0.96*

Correlations between the two interviewers give an indication of interrater reliability.

* $p < 0.001$.

Table 2. Subscale and Total Scale Scores (Mean \pm sd) Obtained by Interview (YBOCS-hd) and Self-rating (OCDS) on 60 Recently Hospitalized Alcoholics

	YBOCS-hd	OCDS	<i>R</i> value
Obsessive subscale	9.0 \pm 4.8	9.5 \pm 4.8	0.82*
Compulsive subscale	13.6 \pm 3.3	13.2 \pm 3.5	0.69*
Total score	22.5 \pm 7.2	22.5 \pm 7.5	0.83*

Correlations between the two instruments are given as an indication of agreement between the two scales.

* $p < 0.001$.

RESULTS

The results of the interrater reliability study for the YBOCS-hd interview are given in Table 1. There was good agreement on each subscale score and in the overall correlation between the two interviewers. The rank order (Spearman's) correlations ranged from 0.95 to 0.98 and were very similar for the subscales and the total scale score. Correlations of scores for individual scale items ranged from 0.75 to 1.0. The lowest agreement was on YBOCS-hd items 9 and 10, which rate "effort to resist drinking" and "the drive to drink and its control," respectively. All other items had interrater correlations of >0.90 , suggesting excellent agreement between the two interviewers.

The relationship of the YBOCS-hd interview ratings and the OCDS ratings are presented in Table 2. It can be observed that the mean rating scores for the two methods are similar. This is true of the two subscale scores and the total score. The variation around the means for both instruments are almost identical. The correlations between the interview and self-rated scores are high and quite significant ($p < 0.001$), ranging from 0.69 to 0.83. The agreement between the interviewer and the subjects self-rating seemed to be somewhat greater for the obsessive thoughts about alcohol subscale ($r = 0.82$), compared with the compulsive drinking subscale ($r = 0.69$).

Because the scales seemed to be performing in a very similar fashion, the overall internal consistency among the OCDS scale items was examined. Additionally, the OCDS was assessed for change in internal consistency when one or more items were eliminated utilizing a Cronbach's α statistical analysis. The internal consistency of the total items on the OCDS was quite high, as indicated by an α of 0.86 that indicates the items can appropriately be combined to form a scale. The obsessive thoughts about alcohol subscale showed a similarly high internal consistency with an α of 0.85, whereas the compulsive drinking subscale had a slightly lower α of 0.73. The α s of the total scale remained

Table 3. Instrument Scores for Groups of Patients Who Were Interviewed (YBOCS-hd) before or after Filling Out the Self-Administered OCDS

	Interview (YBOCS-hd) Given first ($n = 10$)	Questionnaire (OCDS) Given first ($n = 7$)
YBOCS-hd		
Obsessive subscale	7.9 \pm 5.4	8.4 \pm 3.0
Compulsive subscale	13.8 \pm 2.7	14.0 \pm 3.0
Total score	21.7 \pm 7.2	22.4 \pm 5.9
OCDS		
Obsessive subscale	8.6 \pm 5.2	8.6 \pm 3.8
Compulsive subscale	11.5 \pm 3.8	12.0 \pm 4.0
Total score	20.1 \pm 8.6	20.6 \pm 7.3

in the range of 0.84–0.87 when individual items scores were deleted. The α s of the obsessive thoughts about alcohol subscale remained in a range of 0.81–0.84 for the remaining items when the adjusted scores of items 1–6 (questions 1 and 2 combined as indicated in "Methods") were deleted in a sequential fashion. The α s of the remaining items on the compulsive drinking subscale varied a little more as the adjusted scores of items 7–14 (questions 7 and 8, 9 and 10, and 13 and 14, combined as indicated in "Methods") were sequentially deleted. They ranged from 0.59 to 0.75. It appeared that the internal consistency of this subscale drops somewhat when the combined score of questions 13 and 14 (concerned with the "drive to drink and its control") was eliminated, because the α dropped from 0.72 for all items to 0.59 when only items 7–12 were included.

As an additional check on the consistency of the scale, the correlations of the two subscales with each other and with the total score were examined. The obsessive thoughts about alcohol subscale correlated with the compulsive drinking subscale ($r = 0.62$, $p < 0.001$) and with the total score ($r = 0.92$, $p < 0.001$). The compulsive drinking subscale correlated with the total score ($r = 0.86$, $p < 0.001$). This suggests that, although the shared variance between the subscales is significant (close to 40%), there is a fair amount of independent information obtained by each of the subscales.

Data generated and reported so far were collected by first interviewing the patient and then requiring that the OCDS questionnaire be filled out. To examine any order effects that may have biased the validity of the OCDS measurement, 7 patients from the same institution as the original 60 were recruited after the initial cohort was completed. They were asked to complete the OCDS before being interviewed using the YBOCS-hd. These individuals were compared with the final 10 individuals of the original cohort who were interviewed before completing the OCDS. Both groups of individuals plus an additional individual ($n = 18$) were given the OCDS a 2nd time, for the retest study described herein. The scores of the YBOCS-hd interview and the OCDS for both groups (the interview first group and the questionnaire first group) are given in Table 3. The subscale and total scores for YBOCS-hd and OCDS were quite similar, irrespective of the order in which the instruments were given. The correlation between the

Table 4. Subscale and Total Scores for the OCDS Given to Recently Hospitalized Alcoholics ($n = 18$) on Two Occasions to Examine the Test-Retest Stability of This Self-Rated Instrument

	Trial 1	Trial 2	<i>R</i> value
Obsessive items (1–6)	8.7 \pm 4.4	8.5 \pm 3.9	0.94*
Compulsive items (7–14)	11.8 \pm 3.7	11.1 \pm 4.1	0.86*
Total score	20.5 \pm 7.7	19.6 \pm 7.5	0.96*

Agreement between these two assessment trials is given as the correlation of the scores across subjects.

* $p < 0.001$.

OCDS total score and the YBOCS-hd total score when the OCDS was given first was 0.81 ($p < 0.05$).

To test the stability of the ratings of the OCDS, a test-retest protocol was done. The results are presented in Table 4. It can be observed that the average score and variation were remarkably similar between the two test conditions. The agreement across subjects between the two test conditions is highly significant, ranging from 0.86 for the compulsive drinking items to 0.96 for the total scale scores.

The relationship between the OCDS subscale scores and the amount of alcohol consumed during the period encompassed by the ratings was examined. As shown in Fig. 1, alcohol consumed/day in the week before hospitalization was correlated with the OCDS total score ($r = 0.42$, $p < 0.01$). Alcohol consumption was also correlated with the obsessive thinking about drinking subscale ($r = 0.47$ level $p < 0.01$) and with the compulsive drinking subscale ($r = 0.43$ level $p < 0.001$).

The ability of the OCDS to measure change, which might indicate its utility as an outcome measure for monitoring a patient's progress in a clinical or research setting, was examined by asking patients participating in a 12-week outpatient treatment trial to complete the OCDS weekly. They were instructed to answer the questions with the aggregate of the last week as the time frame for evaluation. At baseline, the scores for 18 patients were 18.9 ± 6.5 for the total OCDS score, 7.4 ± 3.7 for the obsessive thinking about alcohol subscale, and 11.6 ± 3.5 for the compulsive drinking behavior subscale.

The results of four representative patients who completed the study are given in Figs. 2 and 3. Alcohol consumption that occurred in the week previous to the OCDS rating is also shown to allow for visual inspection of the relationship of the OCDS scale to actual alcohol intake. Subjects 1 and 2 did not relapse (defined as mean drinking of at least 6 drinks/day during 1 week) during the course of treatment (Fig. 1), whereas subjects 3 and 4 did meet the criterion for relapse (Fig. 2). It can be seen that the patterns for the subjects are all different but, in general, when drinking is present, there is an elevation of the OCDS score and the subscales scores.

DISCUSSION

Data presented herein support the reliability, consistency, and validity of the OCDS scale as a self-rating in-

strument capable of assessing an alcohol-dependent individual's thinking about alcohol and drinking behavior. Because a precise definition of craving is not available, it is not certain, but does seem intuitively probable, that this obsessive-compulsive dimension is associated with the concept of craving, as previously indicated.⁴ Other more anecdotal information also appears to favor the assessment of this dimension to understand better the internal cognitive experience of the alcoholic in the struggle to control drinking.¹³ As such, this instrument might be particularly useful in the evaluation of certain types of therapeutic approaches, such as cognitive behavioral therapy, cue exposure techniques, and pharmacological treatments.

It is of interest that the means and variation around the mean for the OCDS in our population were almost exactly the same as those of the YBOCS-hd both reported herein and in the study by Modell and colleagues.³ These authors found a total score mean (\pm SD) of 22.3 ± 7.7 , whereas the YBOCS-hd and OCDS means reported herein were 22.5 ± 7.2 and 22.5 ± 7.5 , respectively. Similar consistency was seen for the two subscale scores across instruments and across studies. This is in spite of the clinical (Veterans Hospital, University Hospital, County Detoxification Center) and geographic (South Carolina versus Michigan) diversity of the patient populations studied. It is also noteworthy that, in our outpatient sample, who were less severely alcohol-dependent than our inpatient sample, the mean (\pm SD) pretreatment total OCDS score (18.9 ± 6.5) was lower than the mean (\pm SD) prehospital OCDS score (22.5 ± 7.5) of the inpatient sample. This adds face validity to the data obtained by the OCDS. Because all of the patients under study were alcohol-dependent, and because a significant difference in scores had previously been shown to exist between alcoholics and controls,³ it would appear that these instruments are examining a universal and measurable dimension of alcoholism.

The obsessive-compulsive dimension of alcoholism is not static, as indicated by the longitudinal data on outpatient alcoholics. Similarly, the high ratings on the OCDS for the week before hospitalization obtained in hospitalized subjects disappeared during the initial 24–48 hr of hospitalization. Patients provided extremely low scores (the vast majority scoring 0) on both the obsessive and compulsive subscales when answers were limited to the time in the hospital. At first, this seemed counterintuitive, because it was reasoned that, during early abstinence from alcohol, there would be increased craving manifested by intrusive and persistent thoughts about alcohol and cognitive distress associated with the lack of access to alcohol. However, the patients indicated that the lack of availability of alcohol in the hospital was the key ingredient to their diminished thoughts and desire to drink. In essence, they felt "safe" in the hospital from any compulsion to use alcohol and therefore did not "obsess" about it. Outpatients, on the other hand, have more variability in this regard. Most outpatients do have higher ratings on the OCDS when they initially

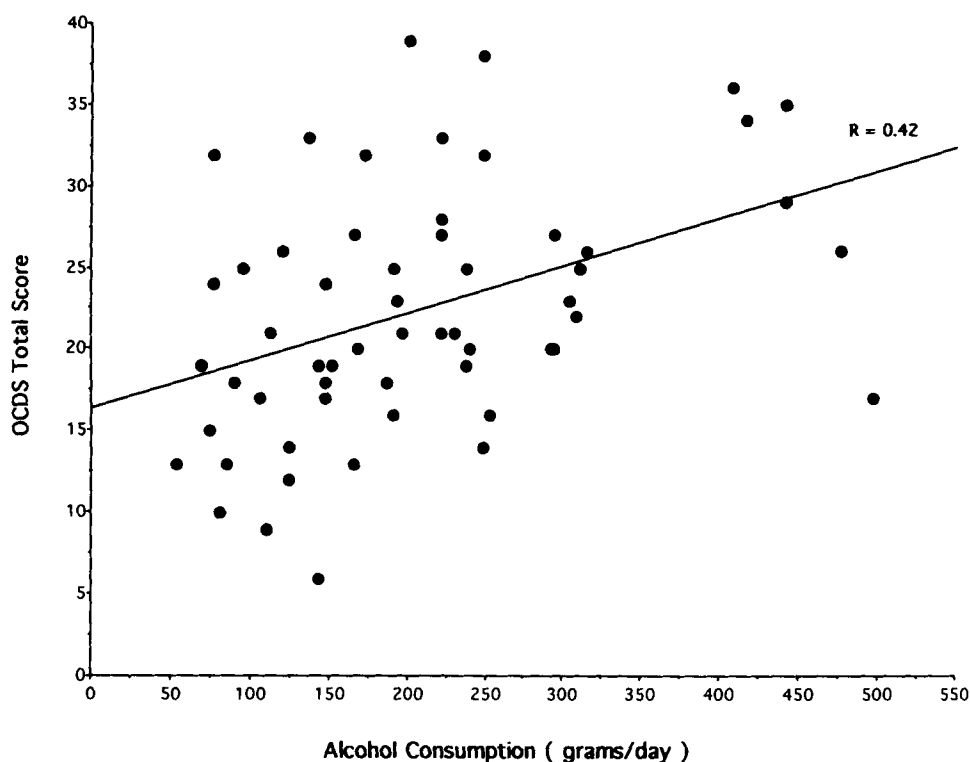


Fig. 1. Relationship of alcohol consumption to the total OCDS score during the week rating interval before hospitalization in 60 recently admitted, inpatient, alcohol-dependent individuals.

decrease, or stop, alcohol consumption. This diminishes as they are successfully engaged in treatment. Their OCDS scores generally do not drop completely to 0, and they seem to continue to have low-grade obsessive-compulsive alcohol thoughts and behaviors even when abstinent. It would seem, then, that there is an interaction between environmental cues such as alcohol availability and the level of cognitive distress as measured by the OCDS. In contrast, this is somewhat different than that observed in the obsessive-compulsive psychiatric disorder where the persistence of obsessive thoughts and compulsive behaviors seem, to a large degree, independent of environment.

Actual alcohol consumption is correlated with the OCDS score with a shared variance of ~20%. This would suggest that the measurement of this cognitive dimension is mostly independent of actual drinking behavior, at least as assessed by the total amount of alcohol consumed over the same rating interval (i.e., 1 week). This would seem intuitively correct, because the level of the cognitive struggle that each individual experiences in relationship to the decision to drink or not to drink may express itself in different levels of alcohol consumption because of other factors. These factors could include availability of alcohol, social or economic pressures not to drink or to limit consumption, psychological relapse prevention strategies, and physiological tolerance. The cognitive dimension measured by the OCDS would give a measure of the alcoholics "state of illness" independent of his alcohol consumption and as such may be indicative of treatment progress, potential to

relapse, and longer term prognosis. The OCDS might also be useful for prospective monitoring as an indicator of increased risk for imminent excessive alcohol consumption or of increased risk for the development of alcohol-related social consequences.

The use of a self-report questionnaire such as the OCDS instead of an interview such as the YBOCS-hd has several benefits. First, it is more efficient in regards to trained rater time and the costs associated with performing an interview. Second, as a measure of change within an individual, there should be more consistency over time, because the person filling out the OCDS is likely to interpret the questions similarly each time and supply an answer in reference to his/her own circumstance as change occurs. This eliminates interviewer bias, cue delivery, and interpretive differences, if performed by multiple raters over the period of evaluation. In addition, reporting bias regarding alcohol thoughts and behaviors that might occur during a face-to-face interview with a caregiver should be minimized with the use of a self-report questionnaire. Mitigating against these benefits is the possibility that misinterpretation of questionnaire items could be minimized by the interviewer involvement required by an instrument like the YBOCS-hd. Finally, because the obsessive thoughts about alcohol and compulsive behaviors toward alcohol reported by alcoholics seem to be related to some extent to the concept of craving for alcohol,⁴ the use of a questionnaire that operationalizes this dimension will minimize the multiple interpretations of the concept of craving previously described.^{6,7}

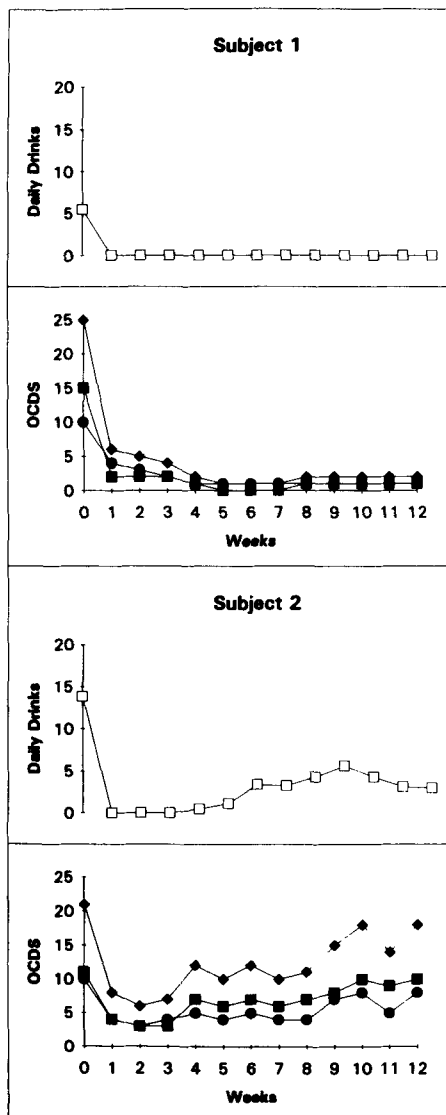


Fig. 2. OCDS total (◆), obsessive (●), and compulsive (■) subscale scores, as well as alcohol consumption (□), over a 12-week treatment study for two alcohol-dependent patients who did not relapse during the course of treatment.

In summary, a self-report questionnaire (OCDS) has been developed and validated against an interview-based questionnaire (YBOCS-hd), which evaluates a significant dimension of alcohol dependency. The OCDS appears reliable based on test-retest agreement and has high internal consistency. It appears to be capable of measuring change as indicated by our preliminary data in an outpatient treatment study. It is easily administered, requiring an average of 5 min to complete, and is thus well-accepted by patients. Because of these characteristics, the OCDS would appear to be a potentially useful tool for the evaluation of patient status during clinical care and for the measurement of outcome in prospective treatment studies.

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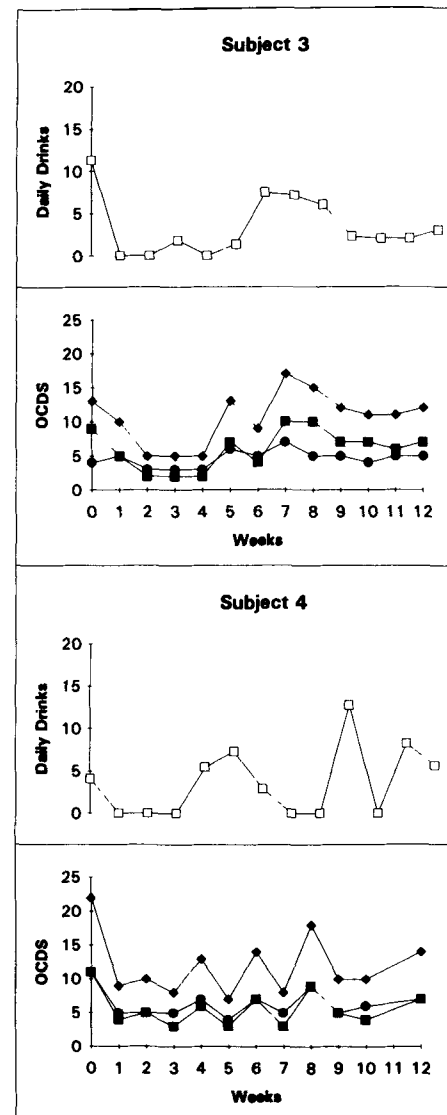


Fig. 3. OCDS total (◆), obsessive (●), and compulsive (■) subscale scores, as well as alcohol consumption (□), over a 12-week treatment study for two alcohol-dependent patients who relapsed (had at least 6 drinks/day on average in 1 week) during the course of treatment.

APPENDIX

Directions: The questions below ask you about your drinking alcohol and your attempts to control your drinking. Please circle the number next to the statement that best applies to you.

1. How much of your time when you're not drinking is occupied by ideas, thoughts, impulses, or images related to drinking?

- (0) None
- (1) Less than 1 hour a day
- (2) 1-3 hours a day
- (3) 4-8 hours a day
- (4) Greater than 8 hours a day

2. How frequently do these thoughts occur?

- (0) Never
- (1) No more than 8 times a day
- (2) More than 8 times a day, but most hours of the day are free of those thoughts
- (3) More than 8 times a day and during most hours of the day
- (4) Thoughts are too numerous to count and an hour rarely passes without several such thoughts occurring

Insert the Higher Score of Questions 1 or 2 here _____

3. How much do these ideas, thoughts, impulses, or images related to drinking interfere with your social or work (or role) functioning? Is there anything you don't or can't do because of them? [If you are not currently working, how much of your performance would be affected if you were working?]

- (0) Thoughts of drinking never interfere—I can function normally.
- (1) Thoughts of drinking slightly interfere with my social or occupational activities, but my overall performance is not impaired.
- (2) Thoughts of drinking definitely interfere with my social or occupational performance, but I can still manage.
- (3) Thoughts of drinking cause substantial impairment in my social or occupational performance.
- (4) Thoughts of drinking interfere completely with my social or work performance.

4. How much distress or disturbance do these ideas, thoughts, impulses, or images related to drinking cause you when you're not drinking?

- (0) None
- (1) Mild, infrequent, and not too disturbing
- (2) Moderate, frequent, and disturbing, but still manageable
- (3) Severe, very frequent, and very disturbing
- (4) Extreme, nearly constant, and disabling distress

5. How much of an effort do you make to resist these thoughts or try to disregard or turn your attention away from these thoughts as they enter your mind when you're not drinking? (Rate *your effort made to resist these thoughts*, not your success or failure in actually controlling them.)

- (0) My thoughts are so minimal, I don't need to actively resist. If I have thoughts, I make an effort to *always* resist.
- (1) I try to resist most of the time.
- (2) I make some effort to resist.
- (3) I give in to all such thoughts without attempting to control them, but I do so with some reluctance.

(4) I complete and willingly give in to all such thoughts.

6. How successful are you in stopping or diverting these thoughts when you're not drinking?

- (0) I am completely successful in stopping or diverting such thoughts.
- (1) I am usually able to stop or divert such thoughts with some effort and concentration.
- (2) I am sometimes able to stop or divert such thoughts.
- (3) I am rarely successful in stopping such thoughts and can only divert such thoughts with difficulty.
- (4) I am rarely able to divert such thoughts even momentarily.

7. How many drinks do you drink each day?

- (0) None
- (1) Less than 1 drink per day
- (2) 1–2 drinks per day
- (3) 3–7 drinks per day
- (4) 8 or more drinks per day

8. How many days each week do you drink?

- (0) None
- (1) No more than 1 day per week
- (2) 2–3 days per week
- (3) 4–5 days per week
- (4) 6–7 days per week

Insert the Higher Score of Questions 7 or 8 here _____

9. How much does your drinking interfere with your work functioning? Is there anything that you don't or can't do because of your drinking? (If you are not currently working, how much of your performance would be affected if you were working?)

- (0) Drinking never interferes—I can function normally.
- (1) Drinking slightly interferes with my occupational activities, but my overall performance is not impaired.
- (2) Drinking definitely interferes with my occupational performance, but I can still manage.
- (3) Drinking causes substantial impairment in my occupational performance.
- (4) Drinking problems interfere completely with my work performance.

10. How much does your drinking interfere with your social functioning? Is there anything that you don't or can't do because of your drinking?

- (0) Drinking never interferes—I can function normally.
- (1) Drinking slightly interferes with my social activities, but my overall performance is not impaired.
- (2) Drinking definitely interferes with my social performance, but I can still manage.
- (3) Drinking causes substantial impairment in my social performance.
- (4) Drinking problems interfere completely with my social performance.

Insert the Higher Score of Questions 9 or 10
here _____

11. If you were prevented from drinking alcohol when you desired a drink, how anxious or upset would you become?

- (0) I would not experience any anxiety or irritation.
- (1) I would become only slightly anxious or irritated.
- (2) The anxiety or irritation would mount, but remain manageable.
- (3) I would experience a prominent and very disturbing increase in anxiety or irritation.
- (4) I would experience incapacitating anxiety or irritation.

12. How much of an effort do you make to resist consumption of alcoholic beverages? (Only rate your effort to resist, not your success or failure in actually controlling the drinking.)

- (0) My drinking is so minimal, I don't need to actively resist. If I drink, I make an effort to always resist.
- (1) I try to resist most of the time.
- (2) I make some effort to resist.
- (3) I give in to almost all drinking without attempting to control it, but I do so with some reluctance.
- (4) I completely and willingly give in to all drinking.

13. How strong is the drive to consume alcoholic beverages?

- (0) No drive
- (1) Some pressure to drink
- (2) Strong pressure to drink
- (3) Very strong drive to drink
- (4) The drive to drink is completely involuntary and overpowering.

14. How much control do you have over the drinking?

- (0) I have complete control.
- (1) I am usually able to exercise voluntary control over it.
- (2) I can control it only with difficulty.
- (3) I must drink and can only delay drinking with difficulty.
- (4) I am rarely able to delay drinking even momentarily.

Insert the Higher Score of Questions 13 or 14
here _____

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