

The Study of Use of Obsessive–Compulsive Drinking Scale, For Craving in Alcohol-Dependent Patients: Relationship to Alcoholism Severity

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ABSTRACT

Background: Many clinicians and researchers believe that “craving” an abusable substance is a central phenomenon related to addiction. Craving for alcohol appears to be intimately related to the loss of control over consumption and to compulsive alcohol use. **Aim:** To compare the scores of obsessive compulsive drinking scale with visual analogue scale, severity of alcohol dependence questionnaire and addiction severity index. **Materials and Methods:** Literate patients who met DCR-ICD-10 criteria for alcohol dependence syndrome were taken in the study and they must have been drinking alcohol daily till 1 week ago and the subjects were required to consume at least 6 standard drinks per day over the last month. **Instruments used in this study were** Obsessive Compulsive Drinking Scale – OCDS, Severity of Alcohol Dependence Questionnaire – SADQ, Addiction Severity Index – ASI, Visual Analogue Scale – VAS, Mini Mental Status Examination – MMSE, Timeline Method – TL. **Results:** Among 40 patients, the mean age of these patients was 38 yrs (38.55 ± 9.60). 95% of them were Hindus and 5 % Christians. 82.5 % were married. And 50% of patients have the income between Rs.15000-20000 per month. The correlation matrix of OCDS variables (OCDS-T,OCDS-O,OCDS-C),ASI-A,SADQ,VAS variables(G,F,I) and TL on all four follow-ups were measured. All correlations were positive and significant at $p < 0.001$. obsessive compulsive drinking scale total score in 2 drinking outcome groups during 8 week treatment period was seen in which there is a difference between in two patient groups at baseline. i.e., abstinent group had lower score than relapse group. This difference was consistently observed between the groups over the entire period of follow-up. **Conclusion:** Craving was higher among those who relapsed than those who did not. Craving did predict high alcohol consumption and high index of severity at baseline and all through the follow-up.

Keywords: *Alcoholic Patients, Craving, Obsessive Compulsive Drinking Scale, Alcoholism Severity.*

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Untill recently alcoholism was regarded as an incurable psychological problem. During the last decade a chain of research has led to important hypothesis about the etiology of the physical craving of alcohol.

Many clinicians and researchers believe that “craving” an abusable substance is a central phenomenon related to addiction. Craving for alcohol appears to be intimately related to the loss of control over consumption and to compulsive alcohol use. Although craving is taken in to account in the criteria of alcohol dependence syndrome in the International Classification of Disease, Tenth Revision (WHO, 1992) it is not explicitly mentioned in the DSM-IV, (APA, 1994) which does consider the inability to cut down or control alcohol consumption a core feature of alcohol dependence syndrome.

Despite wide clinical recognition and mention in the literature, craving remains ill defined and its measurements non-specific. For instance although it is recognized that craving and its broad manifestations should be measured in alcoholism pharmacotherapy trials, most studies have used a simple visual analogue scale to quantify craving, which leaves the interpretation to the patient. Several studies have indicated that the meaning of craving differs among substance-dependent individuals and professional caregivers. The multi- dimensionality of craving could explain this discrepancy.

The 14 item obsessive compulsive drinking scale (OCDS) is a quick and reliable self-rating instrument that provides a total and two subscale scores that measure some cognitive aspects of alcohol craving. There is a need to translate and validate this scale in different languages, so that “craving” which is an important concept in diagnosis and treatment of alcohol dependence syndrome could be identified. This scale will enable the therapist to use standard (eg., naltrexone) pharmacological tools to assist the alcohol addict to modify craving and to become engaged in programmes of social and psychiatric treatment.

AIM

1. To compare the scores of obsessive compulsive drinking scale with visual analogue scale.
2. To compare the scores of obsessive compulsive drinking scale with severity of alcohol dependence questionnaire and addiction severity index.

MATERIALS AND METHODS

SAMPLE

Literate patients admitted to inpatient psychiatry ward for treatment of alcoholism in guntur district.

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INCLUSION CRITERIA:

1. Subject must have met DCR-ICD-10 (International Classification of Diseases, 10th edition- Diagnostic criteria for research, WHO, 1993) criteria for alcohol dependence syndrome.
2. Patients must have been drinking alcohol daily till 1 week ago (should not have been dry for more than 1 week before admission).
3. Patients were required to consume at least 6 standard drinks per day over the last month.

Standard drink according to SCAN

1 Standard drink = 25ml spirit = 8-12 gm alcohol

= 260 ml Beer

= 120 ml wine

4. Presence of a reliable informant was deemed necessary.
5. Subjects must be literate and able to study and understand English.

Exclusion criteria:

1. Presence of history of concurrent drug abuse.
2. Concurrent Axis 1 diagnosis and drug treatment for any mental illness. Co-morbidity was ruled out by a SCAN aided interview.
3. Presence of serious medical illness including organic brain syndrome.

Instruments:

1. Obsessive – Compulsive Drinking Scale – OCDS
2. Severity of Alcohol Dependence Questionnaire – SADQ
3. Addiction Severity Index – ASI :
4. Visual Analogue Scale – VAS
5. Mini Mental Status Examination – MMSE:
6. Timeline Method : TL

Details of above scales are given in the review of literature.

ASSESSMENT:

All the patients who could read were approached within 7 days of last drink with a view to include them in the study. Every patient along with a responsible relative was explained the purpose of the interview. An informed consent was taken from the patients who agreed to participate in the study and they were accepted for further assessment in the following sequence. Baseline evaluation was conducted within 7 days of abstinence. MMSE was administered. A cut off score of 24 was used. Patients who scored less than 24 were dropped from study.

1. **Sociodemographic data**, i.e., age, education, occupation, income, religion and marital status were collected using a semi structured interview schedule.
2. Associated physical or psychiatric co morbidity was ruled out by detailed interview and clinical examination.
3. **Severity of alcohol dependence questionnaire (SADQ)** administered to the patient in order to measure severity of dependence. Respondents were instructed to focus on their most recent

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period of heavy drinking, which was also typical of their heavy drinking. English scale is used for patients. However, patients were clarified and explained about the items which found difficult to understand.

4. **Addiction Severity Index (ASI):** Seven areas of alcohol related problems were assessed with ASI. The guidelines given in the manual of ASI 5th edition were strictly followed. However no translated version was available and interview was conducted from the original English version.

Certain guidelines that were followed during the ASI interviews are mentioned here.

- A. It was briefly stated to the patient that some questions regarding alcohol related problems if any were going to be asked. It was also added that the responses to the questions were to be kept completely confidential.
- B. The design of the interview was described, stressing the 7 potential problem areas, i.e., medical, employment/support, drug and alcohol, legal, family/social and psychiatric status.
- C. An explanation of the patient rating scale was given and an example was offered to test the understanding of the patient. As the focus of the interview proceeded from one area to the next, each new section was introduced and patient's focus from previous areas was changed.
- D. During the administration of ASI, ample opportunity was given for clarification of questions and responses and it was attempted to make sure that intent of each question was clear to the patient.
- E. Patients' misrepresentation or inability to understand was judged on the confidence ratings with record of an explanatory note. The severity rating on ASI was converted to composite scores according to formulae given in the manual.
 - ✓ MEDICAL : $A/90 + B/12 + C/12$
 - ✓ EMPLOYEMENT : $1.000 - (A/4 + B/4 + C/120 + \text{Log } D/36)$
 - ✓ ALCOHOL : $A/180 + B/180 + C/180 + D/24 + E/24 + \text{Log } F/44$
 - ✓ LEGAL : $A/5 + B/150 + C/20 + D/20 + \text{Log } E/46$
 - ✓ FAMILY : $A/10 + B/150 + C/20 + D/20 + \text{Ratio}/5$
 - ✓ PSYCHIATRIC : $A/11 + B/11 + C/11 + D/11 + E/11 + F/11 + G/11 + H/11 + I/330 + J/44 + K/44.$

5. Visual Analogue Scale : was used to assess craving

3 types of analogue scales were used. they are –

- Global
- Frequency
- Intensity

10 cm scale was divided by 1 cm hatch marks and patients were asked to place a mark anywhere on the line that best described their craving in the past week. The distance from the lower anchored end to the patient's mark was measured in millimeters and used for scoring.

The global analogue scale, which stated “the amount of my craving for alcohol” was anchored at one end “very little” and at the other “a great deal”. The frequency analogue scale, which stated

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“my craving for alcohol happened”, was anchored at one end “rarely” and at the other “almost all the time”. The intensity analogue scale, which stated “the intensity of my craving for alcohol was anchored at one end “none” and at the other “irresistible”.

6. **Obsessive Compulsive Drinking Scale (OCDS):** craving was further assessed using OCDS. Subjects were instructed to rate the OCDS for the last week of drinking. English version was used. However, the items were clarified and explained to the patient whenever required.
7. **Time line method:** recent alcohol consumption was measured using timeline method. Subjects were asked to recall as accurately as possible their daily drinking behaviour over the 90 days period prior to the date of their most recent drink of alcohol (use of such an interval has been suggested by polich et al, 1981). The amount of alcohol consumed was converted to grams according to 25ml spirit/260ml beer/120 ml wine is equal to 8-12 grams of alcohol which was called standard drink.

Following the initial assessment the patients were treated with 100-150 mg of chlordiazepoxide and vitamin B complex medication daily. Detoxification was followed by disulfiram therapy, behaviour therapy (in the form of 10 sessions of electrical aversion therapy) and group therapy. Equal number of sessions was conducted for all patients.

Follow-up assessment:

Patients craving was reassessed by 3 scales of VAS and OCDS. The amount of alcohol consumption was measured by time line method. In this way patients were assessed once in 2 weeks for a total 8 weeks following discharge. At each visit, VAS, OCDS and TL method were administered.

Analysis:

At the end of the study patients were divided into 2 groups

1. Abstinent
2. Relapses

Subjects were consumed 2 or more standard drinks for 2 consecutive days any time in the 2 weeks period were noted in relapse group.

Ethical aspects:

All the patients were clearly explained the purpose of study and then informed consent was taken. It was also stated to the patient that exclusion or inclusion in the study was no way related to the treatment or the outcome of the condition for which the patient was admitted.

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RESULTS

58 patients were approached in psychiatric inpatient wards. 2 patients refused to participate in study, 5 were in delirium at the time of admission, 4 subjects were not able to read and write, 2 patients could not be treated with Disulfiram because of psychiatric illness. Finally 5 patients did not come regularly for follow-up. Thus 18 patients could not be included in the study.

Table 1 shows the socio-demographic data of 40 patients. The mean age of these patients was 38 yrs (38.55 ± 9.60). 95% of them were Hindus and 5 % Christians. 82.5 % were married.

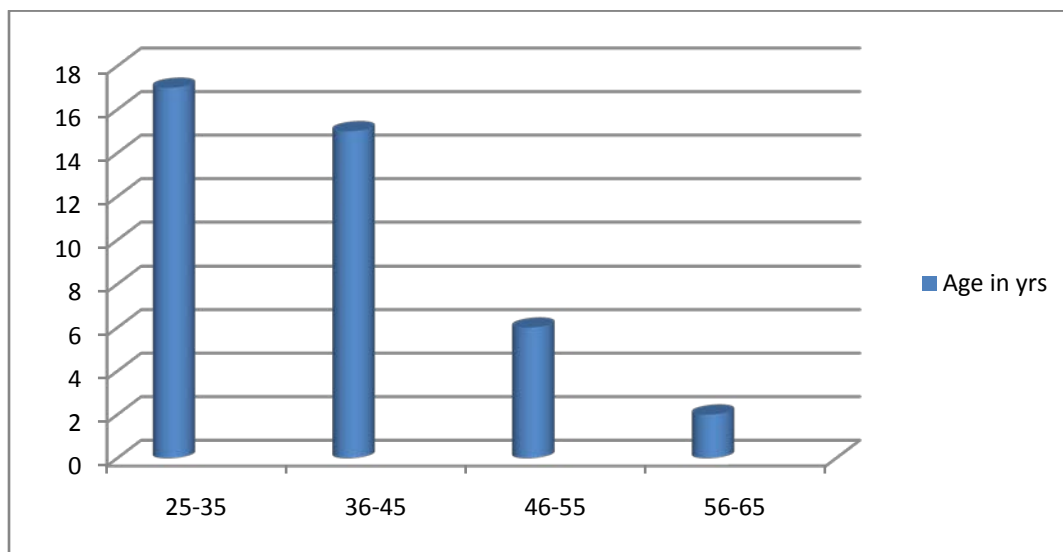
The income of 50% of patients was Rs.15000-20000 per month. 35% had the income of above Rs.20000 per month.15% Have the income of less than 15000 per month

N=40, AGE

Mean age in yrs 38.55, Standard deviation ± 9.60

Table 1

Age In Yrs	N	Percentage
25-35	17	42.5
36-45	15	37.5
46-55	6	15.0
56-65	2	5.0

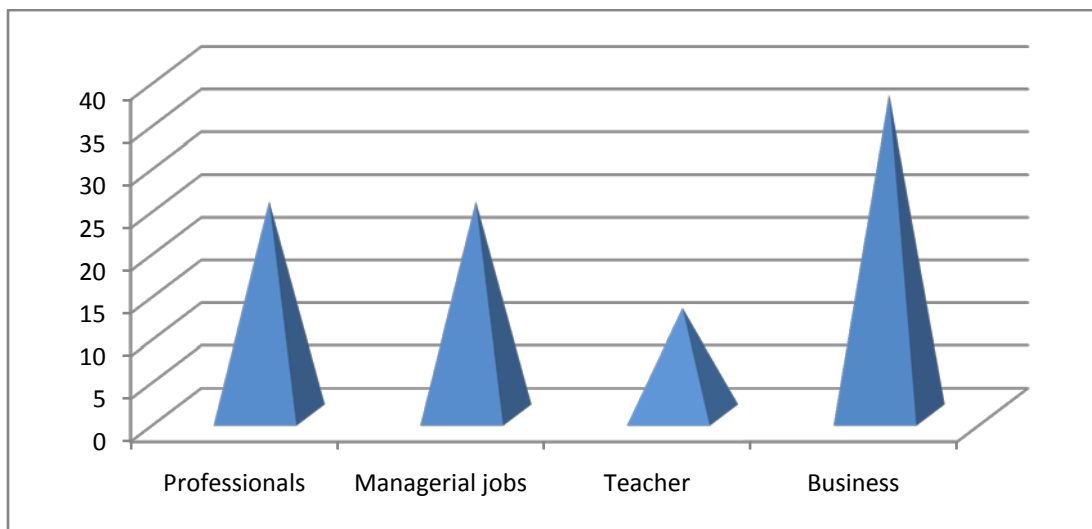


Religion	N	Percentage
Hindu	38	95
Christian	2	5

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Marital Status	N	Percentage
Married	33	82.5
Unmarried	7	17.5

Occupation	N	Percentage
Professionals	10	25
Managerial jobs	10	25
Teacher	5	12.5
Business	15	37.5



Income	N	Percentage
<15000	6	15
15000-20,000	20	50
>20000	14	35

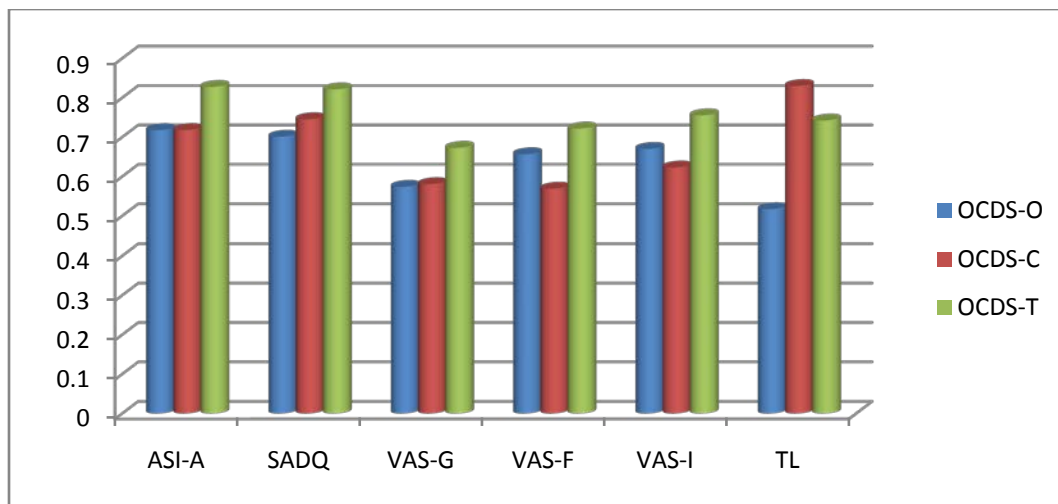
In order to explore relationship between different variables, pearsons product moment correlations were conducted .table II shows correlation matrix of OCDS variables(OCDS-T,OCDS-O,OCDS-C),ASI-A,SADQ,VAS variables(G,F,I) and TL. The variables positively correlate with each other at $p < 0.001$ suggesting significant correlation.

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Table-II, Comparison between OCDS (Total and Subscale) Scores with Other Variations

Pearsons product moment correlations			
	'r' values		
	OCDS-O	OCDS-C	OCDS-T
ASI-A	0.7179**	0.7182**	0.8274**
SADQ	0.7010**	0.7455**	0.8212**
VAS-G	0.5738**	0.5807**	0.6728**
VAS-F	0.6566**	0.5691**	0.7217**
VAS-I	0.6701**	0.6231**	0.7552**
TL	0.5171**	0.8299**	0.7422**

p value * 0.01, ** 0.001



The correlation matrix of OCDS variables (OCDS-T,OCDS-O,OCDS-C),ASI-A,SADQ,VAS variables(G,F,I) and TL on all four follow-ups is shown in table III. All correlations are positive and significant at $p < 0.001$.

TABLE-III : Pearsons product moment correlations			
I FOLLOWUP	'r' values		
	OCDS-O	OCDS-C	OCDS-T
VAS-G	0.9658**	0.9264**	0.9543**
VAS-F	0.9522**	0.9194**	0.9454**
VAS-I	0.9602**	0.9212**	0.9489**
TL	0.9396**	0.9105**	0.9330**

p value * 0.01, ** 0.001

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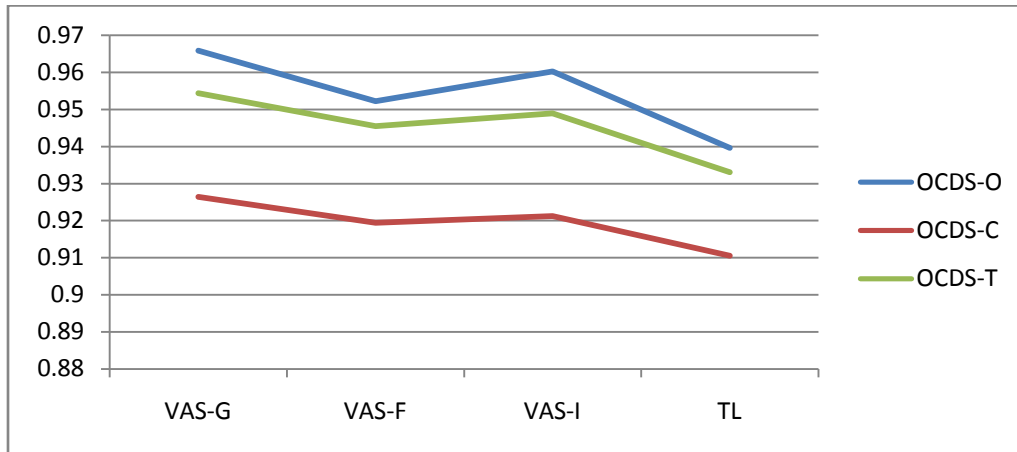
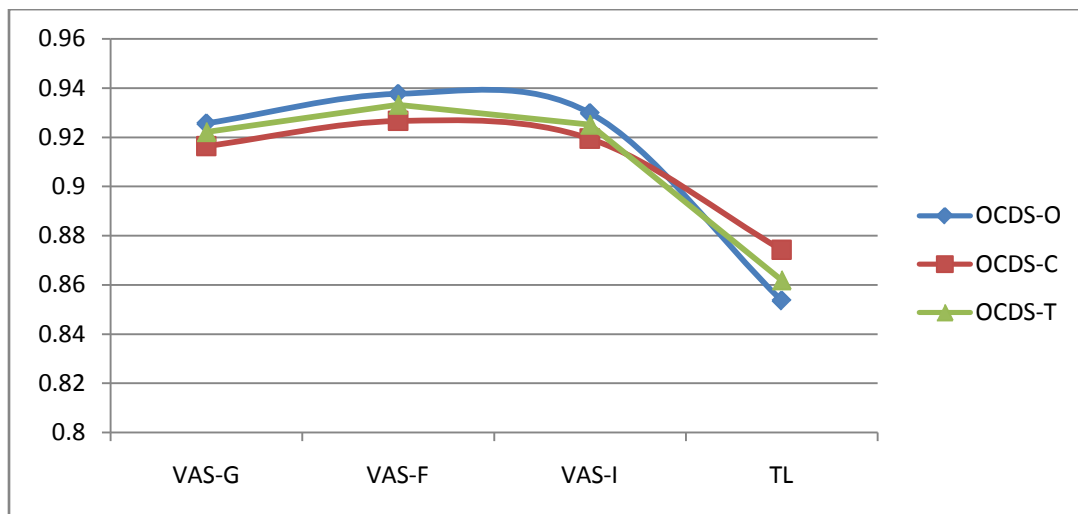


TABLE-III : Pearsons product moment correlations

II FOLLOWUP	'r' values		
	OCDS-O	OCDS-C	OCDS-T
VAS-G	0.9256**	0.9164**	0.9221**
VAS-F	0.9376**	0.9266**	0.9332**
VAS-I	0.9298**	0.9194**	0.9251**
TL	0.8536**	0.8743**	0.8619**

p value * 0.01, ** 0.001



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TABLE-III : Pearsons product moment correlations			
III FOLLOWUP	'r' values		
	OCDS-O	OCDS-C	OCDS-T
VAS-G	0.9366**	0.9249**	0.9316**
VAS-F	0.9366**	0.9249**	0.9316**
VAS-I	0.9366**	0.9249**	0.9316**
TL	0.9123**	0.9185**	0.9161**

p value * 0.01, ** 0.001

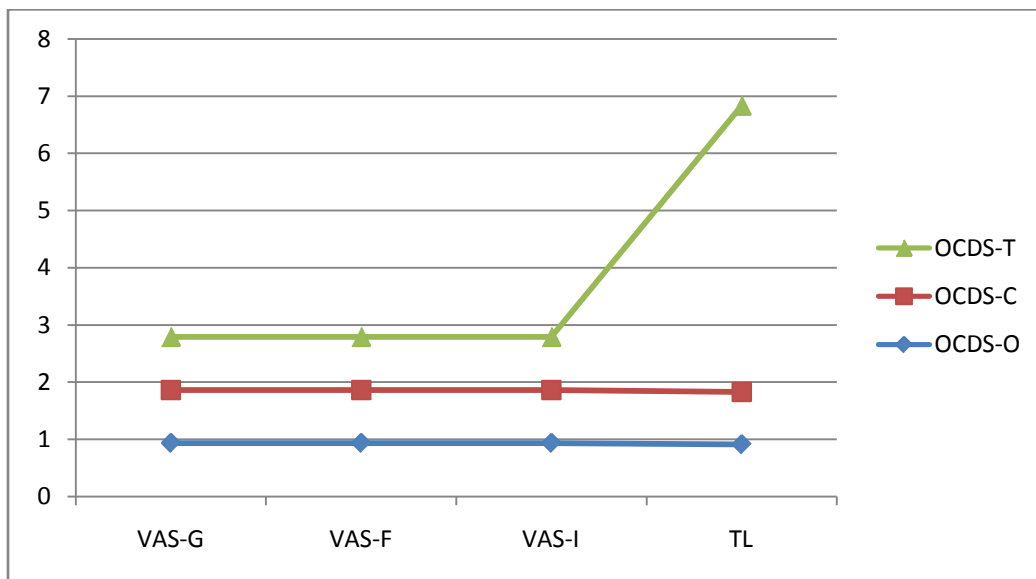


TABLE-III : Pearson's product moment correlations			
IV FOLLOWUP	'r' values		
	OCDS-O	OCDS-C	OCDS-T
VAS-G	0.9597**	0.9503**	0.9568**
VAS-F	0.9597**	0.9503**	0.9568**
VAS-I	0.9597**	0.9503**	0.9568**
TL	0.9369**	0.9439**	0.9421**

p value * 0.01, ** 0.001

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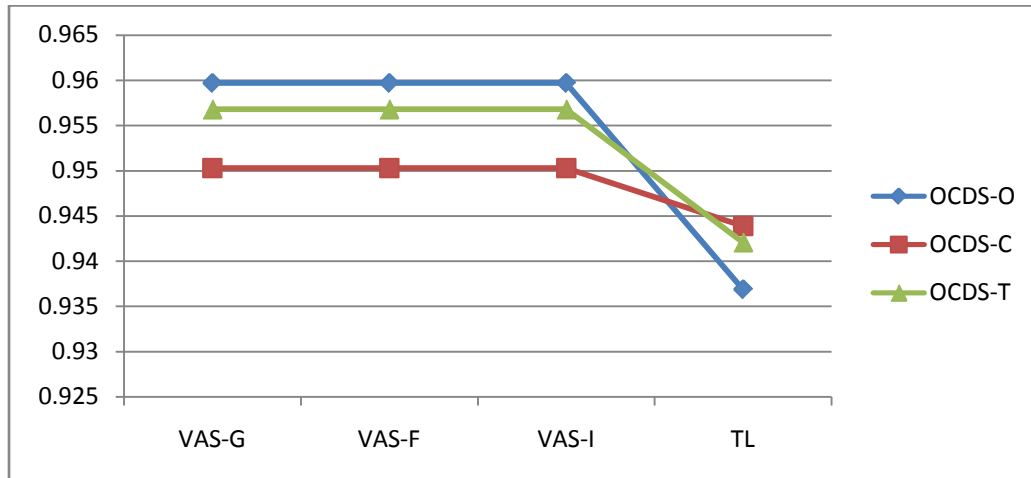


Table-IV shows comparison between patients who were abstinent (group-I) and those relapsed (group-II). 29 subjects were in group-I and 11 subjects in group-II, appropriate statistical tests were administered to compare the groups.

The groups were not different in socio-demographic data (age, education, and marital status). However, the patients who ultimately relapsed had consistently higher scores on all the clinical variables (OCDS-T, OCDS-O, OCDS-C, ASI, SADQ, VAS variables (G, F, I)) than those who remained dry.

TABLE-IV, GROUP-I-ABSTINENT-29, GROUP-II-RELAPSEERS-11

*Chi square test used all other variables – student ‘t’ test used

	GROUP-I	GROUP-II		
AGE	38.83 ± 8.46	37.82 ± 12.58	p 0.77	NS
MARRIED/UNMARRIED	24	8	p 0.62	NS
ASI-A	0.42 ± 0.09	0.79 ± 0.07	p<0.0001	S
VAS-G	6.41 ± 1.30	8.73 ± 0.47	p<0.0001	S
VAS-F	6.14 ± 1.06	8.73 ± 0.47	p<0.0001	S
VAS-I	6.17 ± 1.07	8.73 ± 0.47	p<0.0001	S
SADQ	34.34 ± 2.29	45.18 ± 2.86	p<0.001	S
OCDS-O	8.48 ± 2.21	17.36 ± 4.37	p<0.0001	S
OCDS-C	8.48 ± 2.76	15.73 ± 4.05	p<0.0001	S
OCDS-T	16.97 ± 4.44	34.91 ± 3.21	p<0.0001	S
TL	6.52 ± 0.78	8.18 ± 0.98	p<0.001	S

NS-not significant, S-significant

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Table V shows comparison between group I and group II on OCDS scores (total and subscale) over 4 follow-ups. It is observed that these groups are significantly ($p < 0.001$) discriminated on the basis of craving scores as measured on OCDS scale on first, second and third follow-up. In the fourth follow-up group-I (abstinent) didn't have any score on OCDS scale. So student t test could not be administered.

TABLE-V

I FOLLOW-UP (Student 't' test used)		
OCDS-O-1 GROUP-1 GROUP-2	MEAN 0.8966 8.5444	SD 1.520 5.087 DF 10.68 p value 0.0001
OCDS-C-1 GROUP-1 GROUP-2	MEAN 0.7931 8.3636	SD 1.521 4.388 DF 10.92 p value 0.0001
OCDS-T-1 GROUP-1 GROUP-2	MEAN 1.6897 16.9091	SD 2.953 9.311 DF 10.77 p value 0.001

II FOLLOW-UP (Student 't' test used)		
OCDS-O-2 GROUP-1 GROUP-2	MEAN 0.5517 7.0000	SD 1.021 4.472 DF 10.40 p value 0.001
OCDS-C-2 GROUP-1 GROUP-2	MEAN 0.4828 7.1818	SD 0.871 4.996 DF 10.23 p value 0.001
OCDS-T-2 GROUP-1 GROUP-2	MEAN 1.0000 14.1818	SD 1.871 9.432 DF 10.30 p value 0.001

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III FOLLOW-UP (Student 't' test used)		
OCDS-O-3 GROUP-1 GROUP-2	MEAN 0.1034 4.0909	SD 0.310 5.300 DF 10.03 p value 0.032
OCDS-C-3 GROUP-1 GROUP-2	MEAN 0.0690 3.9091	SD 0.258 5.338 DF 10.02 p value 0.038
OCDS-T-3 GROUP-1 GROUP-2	MEAN 0.1724 8.0000	SD 0.539 10.630 DF 10.02 p value 0.035

IV FOLLOW-UP (student 't' test could not be used, as there is no score in group 1)		
OCDS-O-4 GROUP-1 GROUP-2	MEAN 0.0000 5.2727	SD 0.000 6.342
OCDS-C-4 GROUP-1 GROUP-2	MEAN 0.0000 5.0909	SD 0.000 6.024
OCDS-T-4 GROUP-1 GROUP-2	MEAN 0.0000 10.3636	SD 0.000 12.331

Data shows obsessive compulsive drinking scale total score in 2 drinking outcome groups during 8 week treatment period. There is a difference between in two patient groups at baseline. i.e., abstinent group had lower score than relapse group. This difference was consistently observed between the groups over the entire period of follow-up.

Similar trend was observed for the obsessive and compulsive subscale scores of the two groups i.e., there was a significant difference at baseline that was consistently maintained over the follow-up.

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In order to identify the variables that predict outcome at entry or on follow-up ,stepwise multiple regression analysis were carried out with each of three OCDS scores(total, obsessive, compulsive) as the dependent variables. To predict outcome at entry age ,education ,SADQ score, ASI-Alcohol composite score ,TL value(independent variables) were regressed on to the OCDS total and subscale scores at baseline and four follow-ups .

Table VI-at baseline both ASI- Alcohol composite score and TL value predicted the OCDS-T score. When the regression was repeated using the same variable for OCDS subscales, only TL-value predicted the subscale scores. when regression done using OCDS values as independent variables showed significant t value (0.0001)

TABLE VI

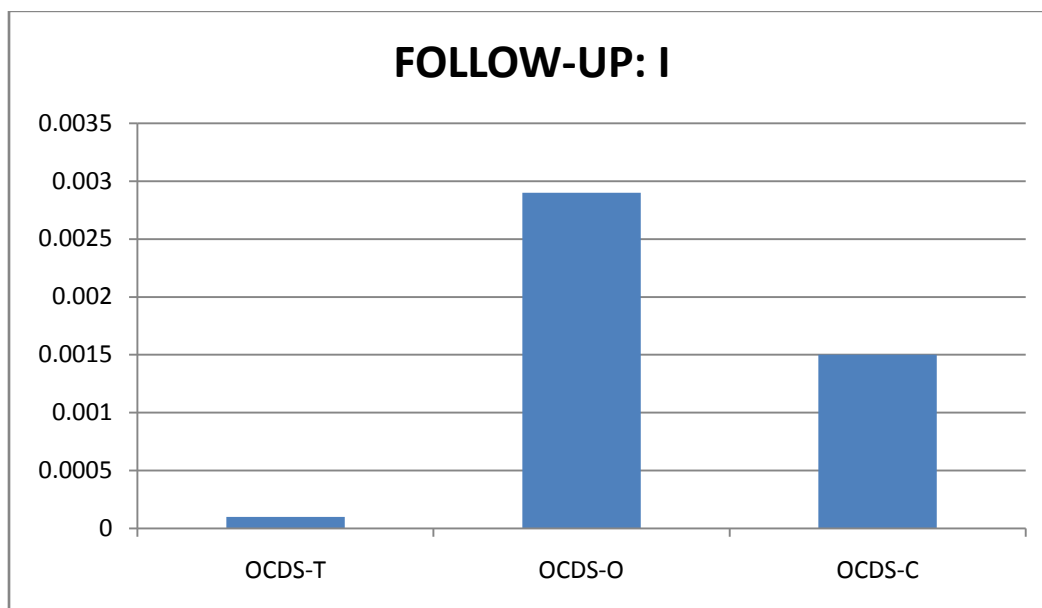
MULTIPLE REGRESSION ANALYSIS (BASELINE)	
I	
a) Dependent variable : OCDS-T	
	‘t’ values
ASI-A	0.00001
TL	0.0105
Age, Edu, SADQ-not significant	
b) Dependent variable : OCDS-O	
	‘t’ values
TL	0.0001
Age, Edu, SADQ, ASI-A-not significant	
c) Dependent variable : OCDS-C	
	‘t’ values
TL	0.0013
Age, Edu, SADQ, ASI-A-not significant	
II	
a) Dependent variable : ASI-A,SADQ,TL	
independent variable : OCDS-T	
	‘t’ values 0.0001
b) Dependent variable : ASI-A,SADQ,TL	
independent variable : OCDS-O	
	‘t’ values 0.0001
c) Dependent variable : ASI-A,SADQ,TL	
independent variable : OCDS-C	
	‘t’ values 0.0001

On 4 follow-ups TL value predicted the OCDS-total scores but not OCDS subscale score (p>0.001).

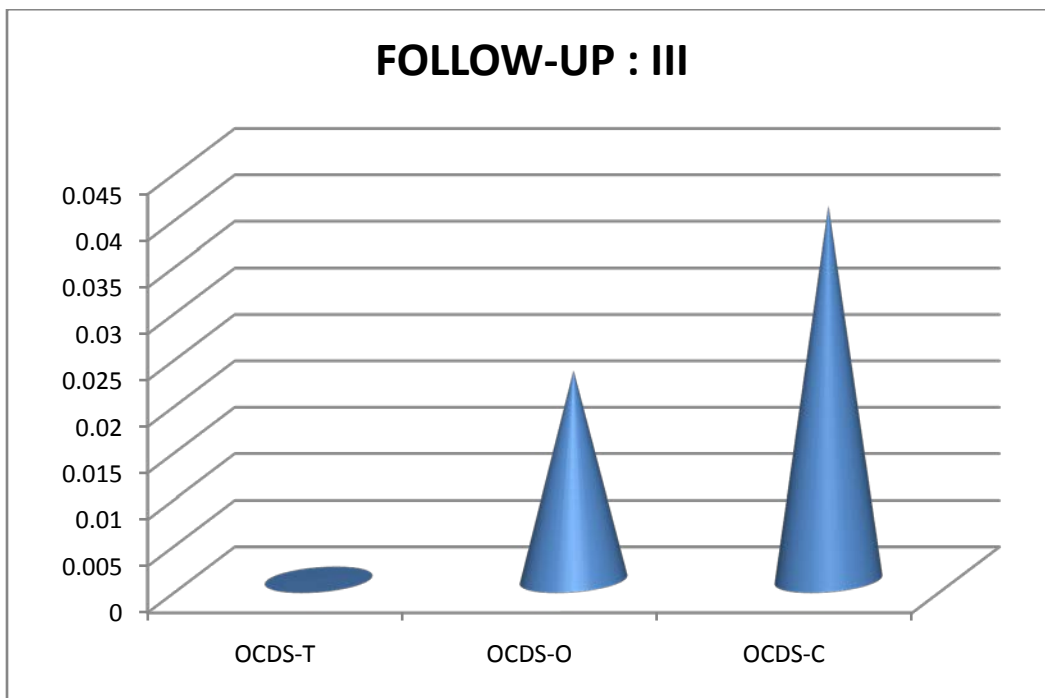
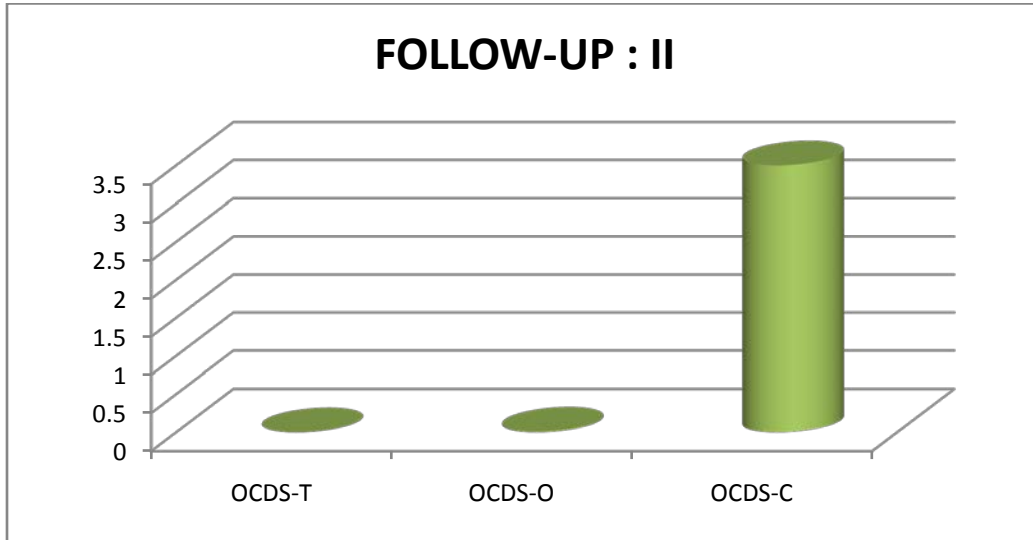
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TABLE-VII, Multiple Regression Analysis

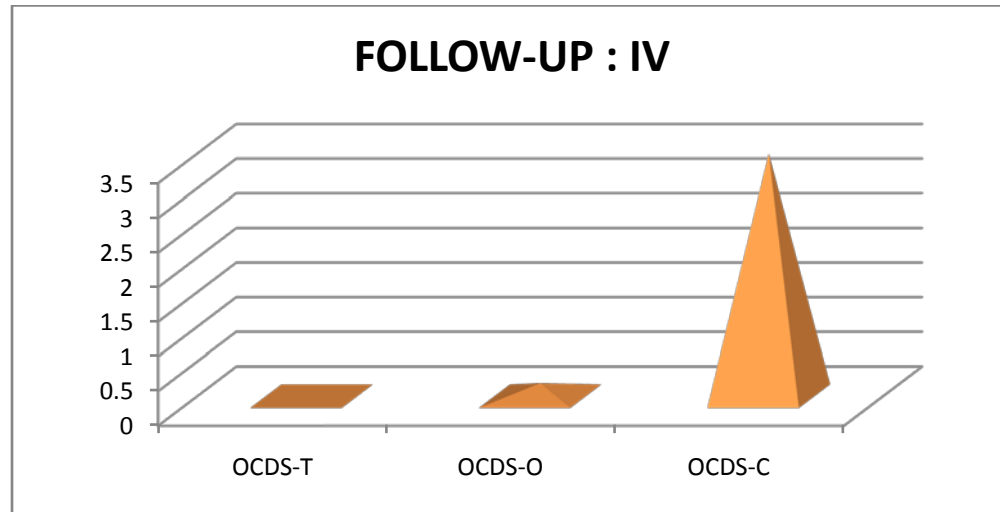
I FOLLOW-UP-INDEPENDENT VARIABLE TL	
DEPENDENT VARIABLE	't' value
OCDS-T	0.0001
OCDS-O	0.0029
OCDS-C	0.0015
II FOLLOW-UP-INDEPENDENT VARIABLE TL	
DEPENDENT VARIABLE	't' value
OCDS-T	0.0001
OCDS-O	0.0095
OCDS-C	0.0046
III FOLLOW-UP-INDEPENDENT VARIABLE TL	
DEPENDENT VARIABLE	't' value
OCDS-T	0.0001
OCDS-O	0.0225
OCDS-C	0.0402
IV FOLLOW-UP-INDEPENDENT VARIABLE TL	
DEPENDENT VARIABLE	't' value
OCDS-T	0.0001
OCDS-O	0.1884
OCDS-C	0.1557



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DISCUSSION

➤ ON METHODOLOGY

Despite wide clinical recognition and mention in the literature, measurement of craving has remained non-specific. This is also because of various definitions given by different researchers. Our study was focused to measure craving and prediction of outcome in our subjects by measuring craving as an obsessive compulsive phenomenon.

Many rating instruments are present to assess the severity of alcohol dependence syndrome and associated complications. But till recently, craving was measured only by visual analogue scale in majority of studies. In present study, obsessive compulsive drinking scale was used to measure craving. In this study English version was used as educated patients were taken as sample.

In this study the subjects reported on their own or brought by family members for treatment of alcohol dependence syndrome. Written informed consent was obtained from the subjects recruited in the study

Those who was consuming alcohol regularly till recently were included in the study. Those who were abstinent for more than a week were excluded. This allowed us in assessing the current experience of craving in our subjects. Moreover, all expect one patient were treatment native at intake. This means there was no influence of craving among our patients.

Patients were required to drink 6 standard drinks of alcohol over the last 1 month. This is to ensure pathological pattern of drinking by the criteria of amount of consumption. This could mean that presumably significant craving will have been experienced in those individuals who consumed high amounts of alcohol.

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The exclusion was set in order to select a highly homogeneous sample without any other substance use or co morbidity. this was likely to have ensured of craving solely for alcohol.

We used reliable and valid instruments to measure various aspects of alcohol dependence syndrome and against which the validity of OCDS was determined.

Severity of alcohol dependence was measured by 2 types of instruments

- a. SADQ – SADQ found to be reliable and valid instrument to measure severity of alcohol dependence (Stockwell et al, 1979).
- b. ASI – ASI has been shown to be reliable and valid among substance abusers undergoing treatment (Fureman et al, 1990).
- c. The amount of alcohol consumption was measured by timeline method – the reliability and validity of this procedure has been established with several different population of alcohol abusers (Sobell et al, 1988).
- d. Craving was assessed on OCDS and Visual Analogue Scale – VAS was broken into 3 components to increase reliability.

Patients were assessed initially during detoxification, later on follow-up every 2 weekly for 8 weeks in order to determine how the experience of craving change over time and in relation to alcohol consumption.

In a previous study (Anton et al, 1996) weekly follow-up for 12 weeks was conducted. But in our study because of subject's financial constraints and distance, followup did by weekly for 8 weeks.

➤ ON RESULTS

Most of our subjects are around 40yrs and there is no significant difference between 2 groups regarding age. Majority of them are married and were job holders or businessman. In study by Anton et al 1996, patients were mostly (middle aged 42-45yrs), married men who had, on average, several years of post secondary education.

Table 2 shows the correlation variables between the various scores of OCDS and scores on ASI, SADQ, VAS (Global, Frequency, Intensity) and amount of consumption of alcohol in gms by TL method. The results show that among the entire group of the patients the variables are positively correlated ($p < 0.001$) among each other.

This means that at baseline higher the score on dependence severity (ASI and SADQ). This also indicates that at baseline higher the OCDS scores, higher were measurement of subjective craving and amount of alcohol consumption. The significant positive correlation between the scores craving measured by OCDS and VAS supports concurrent version of OCDS.

In another study (Modell et al 1992) on 62 subjects craving was measured by using YBOCS – hd and found highly significant correlations between subjectively rated craving for alcoholic beverages and several of the YBOCS-hd questions regarding alcohol related thoughts and drinking behaviour. Moreover, that the score of craving measured correlated with other variables of alcoholism eg.,

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- a) Amount of alcohol consumption.
- b) Severity of dependence syndrome which invariably support construct validity of the concept of craving as an obsessive compulsive phenomenon.
- c)

Anton et al 1996 reported that the OCDS scores were significantly correlated with ASI- Alcohol composite score, but the total score and obsessive subscales were highly correlated than the compulsive sub scale scores. Compulsive drinking subscales highly correlated to the frequency of craving on VAS than the obsessive subscale or other components of VAS. Despite being significant, the correlation between amount of alcohol consumed in the week before intake to the study and the OCDS total score was not strong.

Correlation tables of the variables during 1st, 2nd, 3rd, 4th follow ups are shown in table3. There is a clear evidence of positive correlation among all the variables, over all four follow ups of all the 40 individuals. This supports the hypothesis that persistence of high craving could be associated with higher subjective rating as well as high alcohol consumption on follow up.

During follow up the patients were divided into abstinent (group 1) and relapsers (group 2). Relapsers group consisted of those subjects who consumed 2 or more standard drinks for 2 consecutive days any time in the 2 weeks period (Anton et al 1996). Our study consists of 29 subjects in abstinent group, 11 in relapse group. In previous study (Anton et al 1996) subjects were divided into 3 groups, abstinent, slip and relapse.

In our study, abstinent and relapsers were compared at baseline. It was observed that they did not differ on socio-demographic variables. However, the relapsers were significantly different from the abstainers on all the clinical variables. Relapsers rated high on ASI, SADQ, VAS, OCDS and also consumed higher amount of alcohol than those who remained abstinent. This means that although the two groups belonged to the similar sociodemographic strata, they were different on all the measures of alcoholism including craving.

In earlier study by Anton et al 1996 reported no significant difference between sociodemographic characters or scores on different scales between 3 groups at baseline.

Table 5 shows that the difference between two groups persisted on all four follow ups in OCDS scores.

The patients who relapsed in our study rate consistently higher scores ($p < 0.05$) (not only over 1 or 2 follow ups) than those who did not, throughout the 8 week follow-up period. To what extent this helps us to use craving as a obsessive compulsive phenomenon to study and predict relapse need to be addressed and explored in future studies.

All groups had a reduction in score during the course of treatment in previous study (Anton et al 1996). At baseline and week 1 there was no difference between patients groups. However, in weeks 2 to 12, there was a significant difference in the total OCDS score between abstinent patients and who slipped or relapsed. In general, after week 7 the slip and relapsed groups also

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significantly differed from each other. Patients who relapsed had higher OCDS total scores than those who maintained continual abstinence.

Table 6 in our study shows that ASI and TL value predicted the outcome of subjects at baseline when regressed on OCDS scores. Amount of consumption had a bearing on degree of craving. When regression analysis done using OCDS scores as independent variable, showed same significance.

Table 7 indicates TL value predicted only the OCDS total scores but not subscale scores on follow-up.

Taken together, these findings suggest that OCDS scores and TL values at entry and follow-up are interrelated and patients who report high score on any one index may be more likely to report high scores on the other. Such patients would essentially be a group who relapse on follow-up. This indicates high predictive validity of OCDS scale.

LIMITATIONS OF STUDY

- Our study had a rather small sample size (N=40). A larger sample could have strengthened the results.
- We followed the patients for 8 weeks. This was done due to certain practical difficulties. It is suggested that long period of follow-up would have shown the change in craving and outcome.

CONCLUSION

Craving measured by obsessive compulsive drinking scale, was easy to administer to our patients with alcoholism. None rejected the scale or complained of poor understandability of the scales. Craving was higher among those who relapsed than those who did not. Craving did predict high alcohol consumption and high index of severity at baseline and all through the follow-up.

When multiple regression was done using craving as dependent variable and alcohol consumption and severity of alcohol dependence as independent variable or vice versa, in order to determine predictive power of craving on other measures of alcoholism, it was found that craving could predict alcohol consumption at baseline as well as relapse.

All the observations support predictive validity of craving as obsessive compulsion phenomenon. True craving as a obsessive compulsive phenomenon is likely to be useful in clinical practice.

REFERENCES

- Anton RF, Darlene HM, Latham P, The obsessive compulsive drinking scale: A new method of assessing outcome in alcoholism treatment studies. *Archives of General Psychiatry*, 53,225-231, 1996.
- Anton RF, Moak DH, Latham P, The obsessive compulsive drinking scale: a self-rated instrument for the quantification of thoughts about alcohol and drinking behaviour. *Alcoholism Clinical and Experimental Research* 19(1), 92-99, 1995.
- [Anton RF](#), [Moak DH](#), [Latham PK](#); The obsessive compulsive drinking scale: A new method of assessing outcome in alcoholism treatment studies. [Arch Gen Psychiatry](#). 1996 Mar;53(3):225-31.

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- Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571, 1961.
- Brislin RW, Lonner WJ, Thornidike RM. *Cross cultural research methods*. Newyork. Jon Wiley, 1973.
- Chambers FT. A psychological approach in certain cases of alcoholism. *Mental hygiene*, 12,64-68, 1937.
- Cohen G, Collions MA. Alkaloids from catcholamines in adrenal tissue: possible role in alcoholism, *Science*, 167, 1749-1751, 1970.
- Davis VE, Walsh MD. Alcohol, amines and alkaloids. A possible basis for alcohol addiction. *Science*, 167,1005-1007, 1970.
- Hore BD. Craving for alcohol. *British Journal of addiction*, 69,137-140, 1974.
- Hore BD. Factors in alcohol relapse. *British Journal of addiction*, 66,89-96, 1971.
- International classification of diseases, 10th revision. WHO, 1992.
- International classification of diseases, 9th revision. WHO, 1980.
- John Littleton, HillaryLittle. Current concepts of ethanol dependence : biological processes. *Addiction*, 89,1397-1412, 1994.
- Kaya MF, Jacqueline MG, E. Victor L, Michelle M, Catherine RA, Heidi PF, Relationships of measures of alcohol consumption with alcohol related problems in multiple studies.*Addiction*, 89, 1143-1156, 1994.
- Laberg JC, Ellertsen B. Psychophysiological indicators of craving in alcoholics: Effects of cure exposure. *British journal of addiction*, 82 (12), 1341-1348, 1987.
- Ludwig AM, Wikler A, Stark LH. The first drink: Psychobiological aspects of craving. *Archives of general Psychiatry*, 30, 539-547, 1974.
- Modell JG, Glaser FB, Mountz JM, Schmattz S, Cyr L. Obsessive and compulsive characteristics of alcohol abuse and dependence: quantification by a newly developed questionnaire.*Alcoholism Clinical and Experimental Research* 266-271, 1992.
- Modell JG, Glasser FB, Cyr L, Mountz M, Obsessive and compulsive characteristics of craving for alcohol in alcohol abuse and dependence. *Alcoholism Clinical and Experimental Research* 16(2), 272-274, 1992.
- Modell JG, Mountz JM, Beresford TP. Basal ganglia/limbic striatal and thalamocortical involvement in craving and loss of control in alcoholism. *Journal of Neuropsychiatry and clinical Neurosciences*, 2(2), 123-144, 1990.
- Roger meyer, Steven Mirin. A psychology of craving : Implications of behavioural research : *Psychiatric clinics of North America*. 9:3, 57-62, 1986.
- Tabakoff, Boris, One man’s craving is another man’s dependence. *British Journal of Addiction*, 85(10), 1253-1254, 1990.
- Volpicelli JR, Alertman Al, Hayashida M, O’Brien CP. Naltrexone in the treatment of alcohol dpendence. *Archives of General Psychiatry*, 49, 876-880, 1992.
- Woodruff RA Jr, Goodwin DW, Guze SB. *Psychiatric Diagnosis*. London, Oxford University Press, 1974.