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TREATMENT SETTING AND FOLLOW-UP IN ALCOHOL DEPENDENCE

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ABSTRACT

This study aimed at evaluating patient and treatment variables influencing six month treatment outcome in alcohol dependence. 134 serially registered patients selected their treatment setting as either outpatient or inpatient. Sociodemographic variables, alcohol consumption patterns, drinking consequences were measured at intake. Following treatment, drinking patterns and consequences were re-measured at three and six months follow up in each of the groups. 86 of 134 chose the inpatient program and 48 the outpatient program. Overall, 58 maintained total abstinence, and 11 had significantly reduced alcohol consumption at six months follow up. The inpatient group did marginally better than the outpatient group. More severely dependent patients, those with greater physical and psychosocial consequences opted for an inpatient program, and did well. Less severely dependent patients did favourably with outpatient intervention alone. Improvements made within the first three months tended to influence subsequent treatment compliance. The observation that less severely dependent individuals who opted for outpatient services did favourably suggests that extensive treatment may be required only for those with more severe dependence or greater psychosocial consequences. Our findings also highlight the need for developing community based low cost interventions.

Key words : Alcohol dependence, treatment setting, outcome

Treatment for alcohol dependence is directed towards reducing a person's alcohol consumption and alleviating associated physical, psychological and social complications. Numerous treatment models are available for alcoholism. Recent studies suggest brief interventions in alcohol treatment to be as effective as extensive inpatient treatment (Chick et al.,1988; Edwards & Guthrie,1967. Lindstrom, 1992) though not all studies support this view (Finney et al.,1996; Heather,1995). Moreover, there is a paucity of information on the effectiveness of the various treatment models. Even after extensive research, we know little about the most effective methods of delivery for alcohol deaddiction services (Drummond, 1997). One of the major limitations of most of the studies is a high attrition rate. The lack of follow up is specially relevant in developing countries like India, where finances and infrastructure are not available to trace the subjects who do not come for follow-up. The current study analyses the factors that determine the choice of treatment setting and follow-up of subjects with alcohol dependence

MATERIAL AND METHOD

This prospective study was carried out in the Deaddiction Centre at National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. All newly registered patients over the age of 16 years presenting to the outpatient clinic over a three month period fulfilling the diagnosis of Alcohol Dependence Syndrome (ICD-10, 1993) were included in the study. Individuals with

comorbid psychiatric disorders or other substance abuse (apart from nicotine) were excluded.

Patients were evaluated on a semi-structured proforma to assess their socio-demographic and alcohol consumption profiles. The details of alcohol consumption, years of drinking, average quantity in grams and family history of alcohol abuse were obtained. Patients were evaluated for psychiatric complications like psychosis, hallucinations, deliberate self harm, depression, anxiety, delirium tremens, Wernicke - Korsakoff's syndrome and psychopathic personality. History of marital and family discord, job loss, absenteesm, financial loss, problems with law and drunken brawls were specifically obtained. All patients had detailed medical and psychiatric evaluation. Liver function tests including gamma glutamyl transferase and mean corpuscular volume were done in all subjects. Other consultations and laboratory tests were obtained if required. All patients were offered the inpatient program. Those who declined this were treated as outpatients.

The inpatient treatment program includes in hospital detoxification followed by five to six group therapy sessions for the patients and two-three sessions for the families. The group therapy session are interactive, aimed at breaking denial and increasing understanding about alcoholism as an illness. Two to three sessions deal with relapse prevention methods. Additional individual, family or behaviour therapy is decided by the treating team comprising a resident, three senior psychiatrists and a psychiatric social worker Disulfiram or other pharmacotherapy is similarly decided upon with the informed consent of the patient. Total duration of hospitalisation ranges from four to six weeks. Subsequently patients are expected to follow up in the outpatient once a fortnight and attend an hour's educative group session. The outpatient service includes evaluation, outpatient detoxification and weekly group therapy sessions for the patients and their families. This group session is educative in nature.

Follow up assessment on a semistructured proforma was done at three and six month intervals, by interviewing the patient, a significant family member and repeating liver function tests. The interview included assessment of drinking behaviour, treatment, general health and functioning in occupational, social and family spheres. Letters were sent to those who missed their appointments. A minimum of three letters were sent spaced over a month. Those who failed to come despite this were considered treatment dropouts.

The predictors of choice of treatment programme and follow up were computed using chi-square test. The predictive power of the patient and treatment variables in influencing overall outcome was determined using multiple stepwise regression.

RESULTS

Patient characteristics : Among 140 consecutive patients satisfying the inclusion criteria there were 135 men and five women. Ninety patients chose the inpatient program and 50 opted for the outpatient program. Comparison between these two groups is shown in table 1. Four patient variables contributed to the choice of treatment setting in 86.7% of cases on logistic regression analysis. These were problems at work, alcohol related psychosis, abnormal liver functions tests and hepatitis.

Follow-up : Six subjects, four from inpatient group and two from outpatient group, withdrew from the study before completing the initial treatment program. Among 134 subjects who completed the program, 48 (35.8%) patients did not come for follow up at three months They had lower income (below Rs.1000/month), lower prevalence of alcoholism in family and lower frequency of social problems like marital discord and problems at work. The inpatient group tended to have better follow up than outpatient group at three months although this was not borne out on multiple regression analysis (Table 2). On multiple stepwise regression analysis, five

TABLE 1
COMPARISON BETWEEN INPATIENTS AND OUTPATIENTS

Variables	Categories	Outpatient n=50	Inpatient n=90	Chi-square	d.f.	p
Income	<1000	37	53	2.93	1	NS
	>1000	13	37			
Marital status	Married	48	73	6.07	1	<0.01
	Single	02	17			
Family history of alcoholism	Present	18	58	10.21	1	<0.01
	Absent	27	26			
	NA=11					
Discord in the family	Present	19	48	4.30	1	<0.05
	Absent	31	42			
Problems at work	Present	11	61	27.77	1	<0.001
	Absent	39	29			
Financial loss	Present	18	66	18.67	1	<0.001
	Absent	32	24			
Hepatitis/ abnormal LFT	Present	02	24	10.92	1	<0.001
	Absent	48	66			
Hallucinosis /psychosis	Present	02	22	9.46	1	<0.001
	Absent	48	68			

NA : Not available, LFT . Liver Function Test, Level of significance < 0.05

TABLE 2
VARIABLES INFLUENCING FOLLOW-UP AT THREE MONTHS AFTER COMPLETION OF TREATMENT

Variables	Categories at 3 months n=48	No Follow-up n=86	Follow-up at 3 months	p value*
Income in Rupees	<1000	40	47	
	>1000	8	39	<0.01
Marital discord	Present	15	53	
	Absent	33	31	<0.001
Occupational dysfunction	Present	16	55	
	Absent	32	31	<0.001
Financial loss	Present	20	63	
	Absent	28	23	<0.001
Family history	Present	01	59	
	Absent	27	23	<0.001
Disulfiram	Present	06	40	
	Absent	42	46	<0.001
Treatment setting	Inpatient	22	64	
	Outpatient	26	22	<0.001

* p level of significance < 0 05

patient variables were found to have a predictive value for follow up at 3 months accounting for 36% of variance. The higher income and longer duration of inpatient stay positively correlated with the 3 months follow-up. Presence of physical complaints not attributable to alcohol, a positive family history of alcoholism and financial loss negatively influenced the follow-up at three months (Table 3).

TABLE 3
FACTORS INFLUENCING FOLLOW-UP OF 134 PATIENTS AT THREE MONTHS : MULTIPLE STEP WISE REGRESSION ANALYSIS

	Variables	Regression coefficient	Standard error of regression coefficient	Computed t-value
For 3 months regular followups (n=86)	Investigation (others)	-0.08425	0 01564	-5.38751
	Family histroy	-0.05853	0.02126	-2.75310
	Income	0.18388	0.05893	8 12058
	Financial loss	-0.00342	0.07702	-2.84889
	Duration of stay	0.00346	0 00147	2.34992
	Intercept	0.82110		

There was 53.5% attrition in follow-up between the 3 and 6 months. The comparison between the patients who dropped out after 3 months and those who continued follow-up for six months are shown in table 4. Multiple stepwise regression analysis of factors predicting maintenance of follow-up after three months is shown in table 5. Those with longer drinking history, a positive family history of alcoholism and on disulfiram tended to stay on in treatment whereas those with higher income tended to drop out of follow-up after 3 months. These variables explained 26% of total variance (Table 5).

TABLE 4
COMPARISON BETWEEN PATIENTS WHO DROPPED OUT AFTER THREE MONTHS AND THOSE WHO COMPLETED SIX MONTHS OF FOLLOWUP AFTER DEADDICTION PROGRAM

Variables	Categories	No follow-up after 3 months n=46	Follow-up at 6 months n=40	p
Income	<1000	30	17	
	>1000	16	23	<0.05
Mantal discord	Present	26	27	NS
	Absent	20	11	
Occupational dysfunction	Present	30	25	NS
	Absent	16	15	
Financial loss	Present	34	29	NS
	Absent	12	11	
Family history*	Present	29	30	NS
	Absent	13	10	
Treatment	Disulfiram	15	25	NS
	behavioural therapy	31	15	
Treatment setting	Inpatient	33	31	NS
	Outpatient	13	9	

* Not available in 4; NS - Not significant

TABLE 5
FACTORS INFLUENCING MAINTENANCE OF FOLLOW-UP FOR SIX MONTHS IN 86 PATIENTS WHO COMPLETED THREE MONTHS OF FOLLOW-UP : MULTIPLE STEPWISE REGRESSION ANALYSIS

	Variables	Regression coefficient	Standard error of regression coefficient	computed t
For maintenence of follow up after three months n=40	Years of drinking	0.02003	0.0067	3.29831
	Disulfiram	0.10629	0.03766	2.82239
	Income	-0.19260	0.07529	-2.55829
	Family history of alcoholism	0.08640	0.03977	2.17257

Patients with subjective sense of improvement in physical health and financial status tended to maintain follow-up at six months (Table 6).

Outcome : Data on outcome was available for 71 patients (52.9%) at 6 months. Among them 25 did not maintain follow-up. They responded to a letter and came for evaluation at six months. Total of 58 (81.7%) subjects maintained total abstinence and 11 (15.5%) had significantly reduced alcohol consumption. 65 (91.5%) patients reported subjective improvement in physical, psychiatric and social spheres at six

TABLE 6
INFLUENCE OF EARLY IMPROVEMENT ON FOLLOW UP

Variables	Categories	Drop out after 3 months n=46	Follow-up at 6 months n=40	df	Signi-ficance p
Improvement					
in physical	Yes	14	29		
health during		1	<0.01		
1st 3 months	No	14	6		
	Not Known	22	5		
Improvement					
in finance	Yes	20	33		
during 1st			1		<0.031
3 months	No	8	2		
	Not Known	18	13		

months of treatment. Only one patient continued to drink and his job suffered while maintaining contact with treatment. Five (7%) patients required readmission for relapse of alcohol dependence.

DISCUSSION

This is a clinic based prospective study on choice of treatment setting and follow-up at three and six months of 140 clients serially registered for an alcohol deaddiction program. All patients were encouraged to take intensive inpatient treatment. However the final choice of the treatment setting was left to the clients and their families. Those with greater complications opted for the inpatient treatment program and those who had less severe alcohol related problems selected outpatient treatment. It is possible that patients with more severe dependence might have been influenced by the treating consultant to opt for inpatient treatment. Treatment setting did not make a significant difference in the outcome at six months. Similar findings have been reported earlier (Edwards & Taylor,1994, Miller & Hester,1986; Project MATCH,1997). The issue of treatment setting is of importance in developing countries where the resources for alcohol deaddiction services are limited. As the patients with complications opted

for in hospital deaddiction and there were no significant differences in the outcome of two groups at six months, we feel that the choice of treatment setting may be left with the clients.

Patients who dropped out early (no contact at three months) had low income, less alcohol related problems, and did not have family history of alcohol dependence (Table 3 & 4). This group did not respond to mailed communication and were totally lost to cantact after completion of the initial treatment program. Low income is one of the variables contributing to the early drop out. Alternative, more easily accessible strategies like community based deaddiction programs may help in keeping these clients on regular follow-up. A subgroup of patients in the low income group maintained regular follow-up for six months. This possibly reflects that global improvement made in the first three months would improve their resources and follow-up. Clients with work related problems kept better follow-up. Similar findings have been reported earlier (Zweben & Cisler,1996). Of the treatment variables, use of disulfiram and longer hospitalisation predicted a better follow-up at three months. This may reflect the need and better utilisation of treatment facilities for patients on disulfiram and those with more physical complications prolonging the inpatient stay. Edward & Guthrie (1967) also reported better utilisation of hospital facilities by patients who underwent longer periods of hospitalisation.

The timing of follow-up contact with patients for evaluating treatment is an important issue. Lundwall and Backland (1971) advocate a minimum of six months follow-up for assessing efficacy of treatment. In the present study follow-up was attempted for six months. Only 40 patients kept regular follow-up for this period. The drop-out rate between three and six months was 53.5%. The variables predicting maintenance of follow-up at six months included long drinking history, positive family history of alcoholism and treatment with disulfiram (Table 4 & 5).

Moos et al. (1990) have emphasized greater attention on exploring patients' functioning immediately after treatment and over several subsequent intervals, to better understand the treatment and recovery process. The early gains obtained over the first three months of treatment tend to influence subsequent follow-up and treatment compliance. These include not only abstinence, but also perceptible improvements in physical health and finances. In the present study subjective sense of physical improvement and improvement in earnings during initial three months after treatment were significantly associated with maintenance of follow-up at six months (Table 6). This also highlights the fact that abstinence from alcohol is not the only early goal of any intervention strategy.

The data on alcohol use at six months was available in only 52.9%. Majority of them (81.7%) maintained total abstinence. The reported abstinence rate after alcohol deaddiction in India vary from 36% (Desai et al.,1993) to 50% (Sanjiv & Kuruvila,1991). In the present study due to high drop out rate at six months no conclusions could be drawn on the outcome. A significant observation was that ten of the eleven patients who continued to consume alcohol but maintained contact with the treating team were from the inpatient group. This probably reflects that those treated intensively tend to utilize hospital services better even if the expected or desired outcome is absent. Similar findings were reported previously (Edwards & Guthrie,1967).

In conclusion, our findings suggest that the choice of treatment setting may well be left with the patients and their families. The severely dependent patients did choose inpatient treatment. One of the significant factors for early as well as subsequent dropping out from the trial was poor finances. A group of less severe alcohol dependents did improve with brief intervention. Hence there is a need for systematic studies to identify the clients who will do well with brief interventions. Clients with subjective sense of physical improvement and better financial earnings immediately after completing the deaddiction programm maintained regular follow-up. This makes case for focussing on

comprehensive outcome in the management of alcoholism.

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