A FOLLOW UP STUDY OF ALCOHOL DEPENDENT PATIENTS FOLLOWING IN PATIENT TREATMENT AT THE AVALON TREATMENT CENTRE

BY

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University of Cape Town

For my parents

Margaret and Dudley Dirks

with love and gratitude

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INTRODUCTION

This is a report of an investigation assessing outcome in a consecutive series of alcohol dependent patients admitted to the Avalon Treatment Centre from 21 October 1985 to 14 April 1986. Although extensive work has been done on the epidemiology of alcoholism among "coloured" people [classified in terms of the population registration Act*]. A direct result of the original field survey by Gillis, Keet and Slabbert[1] was the establishment of this centre. A follow up study of people identified as having drinking problems in the original field survey showed that few people stopped drinking on their own account.[2] Little is known about treatment outcome of patients hospitalized at this centre.

Treatment at The Avalon Treatment Centre is based on therapeutic community principles, group therapy, family and social case work as well as the use of antabuse. Contact with Alcoholics Anonymous is encouraged during and after hospitalisation. In addition patients are also followed up by a community sister.

An extensive follow up study of "white" patients at William Slater hospital in Cape Town reported an abstinence rate of 16%.[3] Since treatment at the Avalon Treatment Centre is the same, some comparisons of results can be made with this study. A review of 271 follow up studies

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*This is an arbitrary racial categorisation to maintain power and segregation by the minority Government in South Africa. This Act attempts to take away the dignity and inestimable value of human life. It is abhorrent to the author, who regrets having to use these terms.

reported that abstinence rates have to be below 10,5% or above 53,3% to be unusual.[4] A collation of two year follow up studies of therapeutic communities suggested the following minimum baseline to justify the existence of a programme for alcoholics: 7% dead, 54% problem, 11% success and 28% lost to follow up.[5]

A number of treatment outcome models are available. It has been found that reduced drinking is associated with improvement in other life areas such as work, family and social life.[4] Because of this it has been concluded that drinking behaviour is a sufficient criterion of treatment efficacy.

Other assessments have shown that a reduction in drinking is associated with improvements in depression and physical symptoms, but is less closely associated with improvement in social and occupational functioning.[6] This issue is not resolved. A recent study gives support for both unitary (total abstinence as the best indicator of outcome) and multidmensional (assessment of a broad range of life areas) approaches.[7]

It has been stressed that multiple outcome measures need to be used and not only drinking behaviour. These should include treatment utilization, physical health, drinking behaviour, other substance use, legal problems, vocational problems, social adjustment and psychological status.[8]

Research from around the world indicates that outcome abstinent rates of in-patient programmes are the same as less intensive outpatient programmes.[9, 10, 11, 12, 13] or no treatment.[14] A recent study has

confirmed these findings but also found improved family and occupational functioning following hospitalisation.[15] It has also been stated that improving attendance rates at outpatient clinics does not improve outcome in drinking related variables.[16] It has also been emphasised that outpatient aftercare contributes to improved outcome.[5, 53]

Outcome stuties have also focussed on the effects of patient characteristics such as age and psychosocial adjustment. Older patient appear to have a better prognosis.[9, 12] This has been contradicted by other research findings.[52] Previous studies have shown that good psychosocial adjustment predicts good outcome.[3, 41]

The method of diagnosis is a critical factor in study design, because a diagnosis of alcoholism can mean many things.[17,18] Till the middle seventies, the dominant concept was that of Jellinek, characterised by loss of control and/or inability to abstain.[19] British researchers in 1976 proposed a new conceptualization, the alcohol dependence syndrome.[20] This concept enumerated a number of psychophysiological symptoms. The severity of alcohol dependence questionnaire was developed to assess severity of the syndrome.[21,22] Tolerance and withdrawal, although described, were not essential to make the diagnosis.[19, 23]

The DSM-III-R in keeping with this development[19] emphasises a cluster of at least three symptoms of nine specified criteria (see appendix), all of which have equal weight.[24] It was felt that tolerance developed through diverse mechanisms, that it developed to only certain aspects of a drug's effects and that it could not be reliably rated. Withdrawal

symptoms were non-specific and because of large amounts used, some individuals never experienced withdrawal symptoms.[25, 26] The new system also provides guidelines for rating severity of dependence, namely remission, partial remission, mildly, moderately or severely dependent.[26]

A review of methodological studies in the alcohol literature[27] showed that although the information obtained from alcoholics tends to be reliable and valid, there can be considerable variability in accuracy depending on the sensitivity of the information sought, the specificity of the validation criteria, the personal characteristics of the respondents and the demand characteristics of the task. To enhance validity, these authors emphasize guarantee of confidentiality, trained interviewers and standardized protocols. Motivation can be increased by rest periods and providing the respondent with a review of certain questionnaire data during or after the interview. Accurancy of information is also increased when subjects believe that objective validation of their responses is available to the data gatherer.

There has been an interest in the use of certain abnormal laboratory tests particularly MCV (mean corpuscular volume) and GGT (gamma glutamyl transferase) to confirm heavy alcohol consumption. No consensus has developed about the usefulness of these tests. It has been postulated that the different responses of GGT to alcohol abuse is not explained directly by alcohol intake, but rather by the environmental or genetic causes.[28] This has been confirmed by other research which shows no correlation between ethanol consumption and laboratory tests.[29]

Although elevation of both tests may imply that a patient has a two in three chance of being a heavy drinker, as markers of heavy alcohol consumption they are not sensitive.[30, 31] Research has consistently shown that standardized questionnaires are more sensitive in identifying alcoholic patients.[32,33,34] The diagnosis of alcoholism continued to depend on a clinical history of alcohol related problems, and these markers individualy or collectively do not make or exclude the diagnosis.[35]

MCV and GGT have different sensitivites. MCV identifies 50% of heavy drinkers.[36] GGT identifies 1/3 of alcoholics.[33] There are suggestions that the sensitivity of these two tests together with others can be increased using complex mathematical pattern recognition called discriminant analysis.[37] These mathematical formulations require use of a special computer programme. Since interview tests are known to exhibit high sensitivity and reasonable specificity, but are vulnerable to deliberate falsification and subconscious denial, combining these tests with self administered tests will enhance objectivity.[38]

The present study aims to determine outcome using a variety of measures. These include severity of alcohol dependence and, other psychoactive substance dependence (as defined in DSM-III-R), pattern of drinking, psychosocial functioning, morbidity and mean corpuscular volume and gamma glutamyl transferase values following treatment. It aims also to correlate other outcome measures with severity of alcohol dependence. This would hopefully provide an answer to the questions of whether stable psychosocial adjustment at the start of treatment predicts remission from

alcoholism; whether remission is associated with improved psychosocial adjustment; whether extent of initial hospital treatment predicts treatment outcome; whether greater frequency of contact with Alcoholics Anonymous and the outpatients clinic is associated with remission. The validity of gamma glutamyl transferase and mean corpuscular volume in follow up is described. The influence of patients characteristics and prognostic factors as described by Gillis in outcome[3] is also investigated. These include strength of motivation for treatment, the use of denial, participation in treatment and prognosis on discharge.

PATIENTS AND METHODS

The Avalon Treatment Centre admits patients from all over South Africa, but mostly from the environs of Cape Town. In order to make follow up interviews feasible, only patients who were resident within 60 km of the unit at the time of admission were selected. The researcher was blind to admission data, except the date of admission, till after the follow up was completed.

A letter informing all patients about the study was sent prior to a home visit. Where possible, telephonic contact was made before the interview to confirm appointments. The interview used a structured questionnaire which consisted of questions derived from other sources (see appendix).

Questions were asked about demographic data, drinking pattern and periods of sobriety, symptoms of alcohol dependence and other psychoactive substance dependence in the previous six months. Occupational history, physical health, symptoms of neurotic and psychotic disorder, attendance at Alcoholics Anonymous and the outpatients department were also enquired about. A mini mental state was also done if at interview there was any evidence of intellectual deterioration. This was not done routinely in view of the lengthy questionnaire.

At the end of the interview, the patient was asked to give a blood sample for a full blood count and liver enzymes. Relatives were also interviewd when this was possible. This information was then rated according to modified rating scales described by other authors.

Psychosocial ajustment scale[11]

1. unemployed more than 80% of the time, living on the street, alone or instititionalized
2. either regular job or stable home but not both
3. regular job and stable home and in contact with family

Alcohol dependence scale[39]

1. remission (does not have any symptoms)
2. partial remission (symptomatic but does not meet criteria for dependence)
3. dependent (DSM-III-R criteria)

Non alcohol drug use scale[39]

1. no problems
2. abuse
3. dependent (DSM-III-R criteria)

Drinking outcome pattern[3]

1. continuously abstinent
2. abstinent for periods with occasional or limited periods of drinking
3. drinking most of the time with occasional periods of abstinence
4. constant drinking

Psychiatric disorder scale (excluding psychoactive substance disorder)
(Devised by the author)

1. insufficient symptoms to allow diagnosis of psychiatric disorder
2. sufficient symptoms to allow diagnosis of neurotic disorder
3. sufficient symptoms to allow diagnosis of functional psychotic disorder
4 sufficient symptoms to allow diagnosis of organic psychiatric disorder

Personality disorder scale
(Devised by the author)

1. no evidence of persistent personality traits leading to disturbed relationships
2. persistent personality traits leading to disturbed relationships but insufficient to diagnose personality disorder
3. sufficient syptoms to diagnose personaltiy disorder

The follow up interview lasted approximately 40 minutes and field work was done personally by the researcher over a three month period at the end of 1988. In all patients a minimum follow up period of two and a half years had elapsed since discharge from the unit. Because alcoholism is a remitting disorder and that there are more patients in remission six months after discharge than at 18 months, a follow up period of two years or more is necessary to determine the long term effects of a treatment programme.[9,40,41,42] At the end of the follow up study, admission data

was similarly rated to provide comparison with outcome results. At admission to the unit all patients were interviewed according to a semi structured schedule and sufficient data was available for rating purposes described above. All patients had a DSM-III-R diagnosis of alcoholism at admission except one patient who was in remission, but had met the criteria for dependence two years earlier.

As most of the interviews were done at night, blood samples were stored at 4 degrees Centigrade before being processed the following morning. Mean corpuscular volume tends to increase with storage (Prof. P. Jacobs, Department of Haemotology). However, weekly controls performed throughout the study showed that this effect was minimal, and our mean corpuscular values are reliable. Kinetic assays of liver enzymes were done rather than a screen assay to improve the accuracy of this data (Mr Jan Nieuwmeyer, Department of Chemical Pathology).

RESULTS

Of 63 consecutive admissions who fulfilled the time and geographical requirements of the study, 48 had follow up interviews. In addition incomplete information was available from relatives on seven patients of whom three were known to have left Cape Town, three had died and one was imprisoned. The whereabouts and outcome of eight patients is not known. The study has a total follow up rate of 86%. Collateral information from relatives was obtained on 45 of the patients who had interviews. Blood samples were obtained from 45 patients. In three cases there were discrepancies between relatives' and patients' reports. The worst report was accepted as true. Two patients gave blood samples, but refused permission for a relative to be interviewed. Both had remarried and had not informed their wives of previous treatment for alcoholism.

Data analysis, alcohol dependence and drinking pattern

Of 63 admissions, 11 patients or 17% achieved remission, 12 patients or 19% achieved partial remission and 30 patients or 48% remained alcohol dependent in terms of DSM-III-R. This included three deceased patients whose medical records and collateral information confirmed alcohol dependence until their deaths. No data was available on 10 or 16% for classification.

These patients who died, as well as two others in whom collateral information only was available, were excluded from analysis in tables 7, 8, 9, 11, 13, 14, because follow up interviews on which the necessary data

was dependent had not been done. Collateral information did allow the inclusion of one living patient of this group in the analysis of Table 5, as well as the inclusion of two deceased patients in the analysis of Table 6. Collateral information allowed the analysis of 55 patients' psychosocial adjustment at follow up and the drinking pattern of 54 patients.

Drinking patterns at admission and follow up are shown in Table 1.

Table 1

Drinking pattern at admission and follow up

Drinking Pattern	Patient numbers			
	Admission		Follow up	
	N	%	N	%
Continuously abstinent	1	2%	10	16%
Abstinent with occasional or limited breaks	3	5%	12	19%
Drinking most of the time	15	24%	16	25%
Constant drinking	44	70%	16	25%
No classification	0		9	14%

Those older than forty years of age at admission showed more improvement and those who were married at time of admission showed an increased tendency to improve. Occupation and level of education do not appear to influence outcome.

None of these findings reached a significant level.

Table 2 shows the relationship of patient characteristics to outcome.

TABLE 2

Demographic data and outcome in those patients whose alcohol dependence could be classified at follow up.

Patient Characteristics	N	Alcohol dependence severity at follow up					
		Remission		Partial Remission		Dependent	
		N	%	N	%	N	%
Age at admission							
20 - 29	16	2	13%	7	44%	7	44%
30 - 39	21	3	14%	4	19%	14	67%
40 - 49	15	6	40%	1	7%	8	53%
50 - 59	1	0		0		1	100%
Occupation							
Skilled worker	22	5	23%	5	23%	12	55%
Unskilled worker	18	2	11%	5	28%	11	61%
No occupation	13	4	31%	2	15%	7	54%
School Standard Reached							
Std 8 - 10	26	6	23%	5	19%	15	58%
Std 6 - 7	16	1	6%	6	38%	9	56%
Std 2 - 5	11	4	36%	1	9%	6	55%
Training							
University	3	1	33%	0		2	67%
College	9	2	22%	3	33%	4	44%
Apprenticeship	18	3	17%	6	33%	9	50%
None	23	5	22%	3	13%	15	65%
Marital Status							
Married	24	6	25%	5	21%	13	54%
Divorced	17	3	18%	4	24%	10	59%
Widowed	1	1	100%	0		0	
Single	11	1	9%	3	27%	7	64%

Psychoactive substance dependence

Most patients did not alter their abuse of other substances. No patients in remission reported abuse of other psychoactive substances. Two patients in partial remission reported abuse of dagga and one continued using benzodiazepines, but had no symptoms of dependence. Of those who were dependent, two abused dagga and mandrax and one patient was dependent on benzodiazepines. This last patient, a nurse, had not had this problem at admission. The other change in substance use during the follow up period was that a patient in partial remission had stopped abuse of dagga, mandrax and LSD.

Psychosocial Adjustment

There is a tendency to improve in psychoscial adjustment after treatment but a small group of patients deteriorate:

TABLE 3

Admission and Follow Up Psychosocial Adjustment

Psychosocial Adjustment	Patient Numbers			
	Admission		Follow Up	
	N	%	N	%
Unemployed more than 80% of the time, living on the street or institutionalized	0	0%	4	6%
Regular job or stable home but not both	53	84%	32	51%
Regular job, stable home and in contact with family	10	16%	19	30%
No classification	0	0%	8	13%

Psychosocial adjustment at admission did not predict alcohol dependence outcome (as assessed with this scale):

TABLE 4

Admission psychosocial adjustment and alcohol dependence outcome

Admission Psychosocial Adjustment	Severity of alcohol dependence at follow up		
	Remission	Partial Remission	Dependent
Unemployed more than 80% of the time, living alone on the street or institutionalized N = 0			
Job or stable home but not both N = 43	10 23%	8 19%	25 58%
Job and stable home and in contact with family N = 10	1 10%	4 40%	5 50%

Rates of regular employment were similar in all outcome groups:

TABLE 5
Occupational functioning and alcohol dependence at follow up

Follow up Severity of Alcohol dependence	occupational functioning at follow up				
	not employed	casually employed	regularly employed	disability grant alcohol related	diability grant not alcohol related
Remission	2		6	1	2
N = 11	18%		55%	9%	18%
Partial Remission	2		8	1	1
N = 12	17%		67%	8%	8%
Dependent	10	2	13	1	
N = 26	38%	8%	50%	4%	

Remission was associated with improved family life:

TABLE 6

Home atmosphere and alcohol dependence at follow up

Follow up alcohol dependence severity	Follow up home atmosphere	
	Daily contact with family	Happy and stable family life
Remission	10	10
N = 10	100%	100%
Partial Remission	9	8
N = 12	75%	67%
Dependent	22	11
N = 28	79%	39%

Mental State at Follow Up

An increased rate of reported symptoms is noted with increasing severity of dependence. A large number of patients in remission still report neurotic symptoms.

TABLE 7

Psychiatric symptoms and alcohol dependence at follow up

Follow up alcohol dependence severity	Follow up psychiatric symptoms				
	Anxiety symptoms	Depression symptoms	Anxiety and Depression symptoms	Psychotic symptoms	Dementia symptoms
Remission	3	1	2		
N = 10	30%	10%	20%		
Partial Remission	3	1	3	1	
N = 12	25%	8%	25%	8%	
Dependent	6	2	15	1	1
N = 26	23%	8%	58%	4%	4%

TABLE 8

Psychiatric disorder and alcohol dependence at follow up

Follow up alcohol dependence severity	Psychiatric disorder at follow up			
	no disorder	neurotic disorder	psychotic disorder	organic psychiatric disorder
Remission	7	3		
N = 10	70%	30%		
Partial Remission	7	4	1	
N = 12	58%	33%	8%	
Dependent	3	22		1
N = 26	12%	85%		4%

Personality disorder was diagnosed more often in those who continued to experience alcohol problems at follow up. The following clinical ratings of personality disorder were made at interview. This was based on information provided by patients and family. Type of personality disorder was not specified, but rather its presence or absence noted.

TABLE 9

Personality disorder and alcohol dependence at follow up

Follow up severity of alcohol dependence	Personality disorder rating at follow up		
	No personality difficulty	Persistent personality traits	Definite personality disorder
Remission	7	3	
N = 10	70%	30%	
Partial Remission	3	9	
N = 12	25%	75%	
Dependent	3	19	4
N = 26	12%	73%	15%

Although no systematic assessment of personality disturbance had been made at admission and so prevented reliable analysis, no patients who had been given diagnosis of schizoid, avoidant or antisocial personality disorder improved.

Treatment and Outcome

Patients were divided into two groups - those who had completed their course of in patient treatment and those who had not completed their in patient treatment and the outcome results compared. The average number of visits to OPD for each outcome group was also compared as was their attendance at Alcoholics Anonymous.

TABLE 10

Initial hospitalization, contact with outpatients after discharge and alcohol dependence at follow up

Severity of alcohol dependence	Initial hospitalization		
	Completed	Not completed (premature discharge)	Average number of visits to OPD in follow up period (range)
Remission	10	1	5,3
N = 11	91%	9%	(0 - 22)
Partial Remission	9	3	3,3
N = 12	75%	25%	(0 - 6)
Dependent	21	9	3,4
N = 30	70%	30%	(0 - 14)

TABLE 11

Contact with Alcoholics Anonymous
and outcome

Severity alcohol dependence	Frequency of contact with Alcholics Anonymous			
	weekly	monthly	seldom	never
Remission	2	1	1	6
N = 10	20%	10%	10%	60%
Partial Remission	1		2	9
N = 12	8%		17%	75%
Dependent	3		5	18
N = 26	12%		19%	69%

These results show that those in remission have more contact with OPD and more had completed their initial hospitalization. The group differences in treatment utilization are larger than the group differences in contact with Alcoholics Anonymous.

Prognostic factors at admission and alcohol dependence at follow up

Patients' motivation for treatment, denial of problems, participation in treatment and prognosis were looked at in relation to severity of alcohol dependence at follow up. These were rated retrospectively (except for prognosis) as described by Gillis.[3] The improvement rates of these categories were then compared. Prognosis was that recorded at discharge from the unit. Twelve patients had not had their prognosis recorded.

TABLE 12

Prognostic factors and alcohol dependence severity

Prognostic Factor	N	Remission N	Remission %	Partial Remission N	Partial Remission %	Dependent N	Dependent %
Motivation							
good	16	6	36%	2	13%	8	50%
fair	27	5	19%	7	26%	15	56%
poor	10	0	0%	3	30%	7	70%
Denial							
none	26	7	27%	3	12%	16	62%
some	21	4	19%	8	38%	9	43%
strong	6	0	0%	1	17%	5	83%
Participation							
active	26	7	27%	3	12%	16	62%
moderate	21	4	19%	8	38%	9	43%
poor	6	0	0%	1	17%	5	83%
Prognosis							
hopeful	11	4	36%	3	27%	4	36%
guarded	6	3	50%	1	17%	2	33%
poor	24	3	13%	6	25%	15	63%

Alcohol dependence severity outcome: Remission, Partial Remission, Dependent.

Even though most patients with better prognostic factors remain dependent, more of these improve than those given a poorer rating. Interrator differences appears to have influenced the effect of discharge prognosis on outcome as half of those given a guarded prognosis improved.

Morbidity and severity of alcohol dependence

More patients still experiencing alcohol related problems have experienced ill health in the preceding years. There was an increase in both alcohol related ill health and sickness not as a result of alcoholism:

TABLE 13

Physical health in the preceeding follow up year*
(excluding conmplications of alcoholism) and
alcohol dependence

Severity of alcohol dependence	Health problems arising during last follow up year				
	good	minor complaints	chronic illness without disability	chronic illness with disability	acute illness with hospitalisation
remission	5	3		2	
N = 10	50%	30%		20%	
partial remission	8	2		1	1
N = 12	67%	17%		8%	8%
dependent	5	11	4	2	4
N = 26	19%	42%	15%	8%	15%

*See question 65 in appendix for definition of these column headings.

TABLE 14

Lifetime morbidity of alcoholism and severity of alcohol dependence (not necessarily experienced in the follow up year) in those patients who had an interview

	Complications of Alcoholism						
Severity of organic alcohol dependency	none	delirium tremens	hepatic cirrhosis	epilepsy	peripheral neuropathy	organic brain disease	other
Remission	5	3	0		1		1
N = 10	50%	30%			10%		10%
Partial remission	7	2	0	2			1
N = 12	58%	17%		17%			8%
Dependent	9	7	1	1	3	1	4
N = 26	35%	27%	4%	4%	12%	4%	15%

Those patients still having symptoms of alcohol dependence reported more complications of alcoholism. Three patients died in the follow up period. They were in their forties. Two died as a result of liver failure and one of a cereberovascular accident. They all abused alcohol until they died. A 5% death rate is recorded.

Biochemical and Haematological findings and severity of alcohol dependence at follow up

MCV = mean corpuscular volume (fl)

GGT = gamma glutamyl transferase (u/l)

TABLE 15

Severity of alcohol dependence at follow up and biochemical and haematological values

Severity of alcohol dependence	Biochemical and Haematological results					
	GGT<40	GGT>40	MCV<95	MCV>95	MCV>95 OR GGT>40	MCV>95 AND GGT>40
Remission	10	0	8	2	2	0
N = 10	100%		80%	20%	20%	
Partial Remission	8	2	6	4	6	0
N = 10	80%	20%	60%	40%	60%	
Dependent	13	12	10	15	17	10
N = 25	52%	48%	40%	60%	68%	40%

No patients in remission had abnormal GGT. Abnormal MCV values identified more patients with alcohol problems than abnormal GGT values.

When either MCV or GGT is abnormal, then two thirds of patients with alcohol problems are identified. Only those who are dependent have both abnormal GGT and MCV concurrently. However, a large number of dependent patients have normal MCV and GGT values.

DISCUSSION

Drinking pattern and alcohol dependence

Our follow up rate of 86% is good compared to other studies reported in the literature with follow up rates ranging from 57% to 61%.[51] Our rate is satisfactory, as results are said to be untrustworthy when less than half of the original sample can be traced.[40] To prevent an inflated success rate, it is best to consider these patients as treatment failures.[42] This will give a minimum figure of improvement.

Taking the above into consideration, the 16% rate of total abstinence in our sample is identical to that reported in the William Slater hospital study.[3] Furthermore in the present study there was an overall improvement of 35% compared to 40% in the William Slater hospital study.

This is not surprising since the two hospitals are run by the same department of psychiatry and have similar programmes. The discrepancies in rates of improvement accounted may be accounted for by a lower follow up rate in the Avalon Treatment Centre study and those patients not seen were rated as doing badly.

Two measures of the severity of alcoholism have been used in this study: the assessment of drinking pattern and the DSM-III-R concept of alcohol dependence. Although the DSM-III-R measure provides more information about social, occupational and physiological impairment than does drinking pattern,[24] the two outcome measures show a remarkable correspondence in

this study. For example using the DSM-III-R 17% of patients are reported to be in remission and there is an improvement rate of 36%. It seems that these different and non-overlapping measures of the severity of alcoholism yield similar results and it does not seem to matter which index of change is chosen.

Admission psychosocial adjustment and demographic data as predictors of outcome

Our scale proved too crude to discriminate levels of adjustment when used as a prognostic index at the start of treatment. Another problem is that admission data had to be rated retrospectively. This design, although the most common in alcoholism evaluation research, has a low level of scientific sophistication. It is nevertheless useful, since even studies with group pretest - post-test designs pose interpretative problems. Selection bias with imposition of exclusionary criteria, and unequal exposure to treatment influence outcome.[43] The scale did provide indication that even though a small group of patients deteriorate, there is a trend towards improvement in psychosocial adjustment following treatment.

Patient characteristics were more useful as predictors of outcome. More patients who were older than forty improved than those who were younger. Those who were married showed a similar trend. Unlike other research,[3,44] our results do not indicate that better training, education and occupation is associated with improved outcome. Most of the patients in this sample come from a socially disadvantaged community and

this may account for the discrepancy with other studies.

Motivation, denial and participation in treatment are shown to be useful prognostic factors. Prognosis, as assessed at discharge and therefore subject to inter-rater differences, was not shown to be a useful prognostic factor in this study.

Patients who were assessed as schizoid, avoidant or antisocial did not improve. In a therapeutic community which requires group commitment they probably could not participate as well in treatment as other patients.

Severity of alcohol dependence and psychosocial adjustment at follow up

Rates of employment among those who were in remission were similar when compared to those who were still experiencing alcohol problems. The employment prospects for the older and poorly skilled group is limited. This may account for the relatively high unemployment rate in those who are in remission. A pattern of weekend and binge drinking[1] may account for the maintenance of occupational functioning among those still experiencing alcohol related problems. The family, however, is not protected by this pattern and few dependent patients report happy homes. Our results show that remission is definitely associated with improved family life.

Those who are dependent, experience more psychiatric symptoms and disorders than those who are in remission. A large number of patients in remission continue to experience psychiatric problems. Controversy exists

in the literature about the significance of these syndromes among alcoholics, whether they represent true psychiatric disorders or rather are epiphenomena of alcohol intoxication and withdrawal.[45] Clinic samples[46] report different epidemiological data when compared to other non clinic samples.[47] Patients who are depressed or antisocial may present themselves earlier and more frequently to treatment programmes. Other research has also emphasised the need to distinguish between primary and secondary alcohol dependence, that is which disorder was first symptomatic.[48, 49]

Our findings support these conclusions. Many symptoms probably are secondary and are epiphenomena and increase with severity of alcohol dependence but a large percentage of alcoholic patients probably have a primary disorder unrelated to their alcoholism. Psychosocial adjustment could possibly be improved by appropriate treatment for this group.

Treatment utilization and contact with Alcoholics Anonymous and outcome

As a group, those in remission, had more treatment contact than those still experiencing problems. It appears that greater contact with treatment facilities, i.e. initial hospitalization, contact with Alcoholics Anonymous and outpatients is associated with improved outcome. Contrary to claims that contact with Alcoholics Anonymous is better than traditional medical treatment,[41] our findings support the view that professional treatment influences outcome more strongly.[10] However, as our results indicate, treatment cannot be considered in isolation from patient characteristics.

Relationship between morbidity, biochemical and haematological values and outcome.

Continued dependence is clearly associated with increased morbidity. There is an increase in ill health not alcohol related as well as in the frequency of the complications of alcoholism. Physicians should be alert to the problem of undiagnosed alcoholism even when the presenting symptoms are not direct complications of alcohol dependence. Biochemical and haematological values are useful in corroborating patients' reports (and probably increased their truthfulness, as they all knew prior to interview that they would be asked to give a blood sample). They are, however, not as specific nor as sensitive as questionnaires in delineating alcohol dependence.

We found that no patients in remission had a raised GGT. However like studies reviewed in the introduction,[33] only one-third of patients still experiencing alcohol problems had an abnormal GGT. MCV identified 50% of patients with alcoholism in this study. This was also similar to other studies.[36] Only those who were still dependent had both tests raised but this occurred in only 40%. Together they are more specific but are not sensitive.

There is hope from the literature,[37,50] that with the development of discriminant function analysis that alcoholism could be diagnosed in the future on commonly ordered laboratory tests. This is needed because a diagnosis of alcoholism and its morbidity is often missed.

Limits of the study

The study is limited by its small sample size. Although data was subjected to computer analysis, none of our findings reached statistical significance. The home visits proved time consuming and often had to be repeated before the patient could be interviewed. It soon became clear that not all follow up patients could be interviewed. No refusals are recorded. All patients had been contacted before about the intended visits and were given feedback about their follow up interview when the questionnaire was completed. Their blood results were later posted to them.

The research design did contribute positively to the validity of our results. All interviews were done by a psychiatrist who was blind to admission data and a structured questionnaire used. Collateral information was obtained in most patients as well as blood samples. However, there were many assessment interferences. Homes were often crowded, without electricity or patients were intoxicated when initially seen. Some patients even had to be interviewed in my car.

CONCLUSIONS

Avalon Treatment Centre's results are similar to other alcohol treatment programmes.[3,4,5] There is a suggestion that those patients who are more frequent outpatient attenders have a better outcome. This is similar to other research.[53] However, few patients maintained contact with OPD throughout the two and a half years following treatment. If a more adequate post hospitalization programme is developed, such as increasing the number of community sisters and home visits, the outcome may be improved. During the research some patients started reattending the outpatient department after they had been followed up.

A large number of patients live far from the unit. 57% of patients were regularly employed at follow up. Most of these patients who are working, have had no special training, nor gone far at school. As such their earning capacity is limited. Many cannot afford to attend at Avalon Treatment Centre and more local clinics need to be set up.

APPENDIX

Follow up questionnaire for alcohol dependent patients admitted to the Avalon Treatment Centre.

Source of questions and rating scales:

A. Gillis L S, Lewis J, Slabbert M. Psychiatric disturbance and alcoholism in the coloured people of the Cape Peninsula: Cape Town, University of Cape Town 1965.

B. Vaillant G E. The natural history of alcoholism, Cambridge, Massachusetts, Harvard University Press 1983.

C. Wing J K, Cooper J E, Sartorius N. The measurement and classification of Psychiatric Symptoms, London, Cambridge University Press 1974.

D. Spitzer R, Williams J. Instruction manual for the structured interview for DSM III (SCID) 2.1.85 Revision. New York. New York State Psychiatric Institute 1985.

E. American Psychiatric Association. Diagnostic and statistical manual of mental disorders third edition revised. Washington DC. American Psychiatric Association 1987.

F. Gillis L S, Keet M. Prognostic Factors and Treatment results in hospitalised alcoholic. Quarterly Journal of Studies on Alcohol 1969; 30:426-437

M indicates modified.

INTRODUCTION

This is a study to find out what has happened to the patients admitted to the Avalon Treatment Centre since discharge. Everything you say is confidential and together with the responses of others, the results of this study will be analysed to provide feedback about our programme at Avalon. Your help with this study is appreciated.

Hierdie onderhoud is deel van 'n narvorsingstudie om uit te vind wat het met pasiente geword nadat hulle behandeling ontvang het by Avalon. Wat u sê is vertroulik en sal saam met die antwoorde van andere ontleed word om ons programme by Avalon beter te verstaan. U samewerking is waardeur.

DEMOGRAPHIC DATA

1	Date of interview ____________		
2	Name ________________________		
3	Address ______________________ ______________________ ______________________		
4	Phone Number ________________		
5	Age __________________________		
D 6	Sex	1. male 2. female	
D 7	Are you married? Is u getroud?	1. married 2. separated 3. divorced/annulled 4. widowed 5. never married	
8	How many children do you have? Hoeveel kinders het u?		
A 9	What is your religion? Wat is u geloof?	1. None 2. Christian 3. Moslem 4. Other	
AM 10	What kind of work do you do? Wat soort werk doen u?	1. Professional (doctor, nurse, attorney, teacher) 2. Managerial (administrative clerk, supervisor, inspector) 3. Owner of small business, clerical and sales worker, technician 4. Skilled worker (joiner, painter, mechanic) 5. Semiskilled worker (machines, messenger) 6. Unskilled worker (farm labourer, garden boy) 7. Housewife 8. Pensioner/disability grant 9. No occupation 10. Other type not specified	

A	11	What standard did you reach at school? Hoe ver het u op skool gegaan?	1. Std 8 - Std 10 2. Std 6 - Std 7 3. Std 2 - Std 5 4. Sub A - Std 1 5. No schooling
A	12	What further training have you had since leaving school? Watter opleiding het u gehad nadat u die skool verlaat het?	1. University 2. Technical College 3. Apprenticeship

PATTERN OF DRINKING

A	13	Do you take any alcoholic drink presently? Op die oomblik drink jy nog steeds?	1. yes 2. no
	14	For how many long have you been abstinent in the last 6 months? Hoe lank in die laaste 6 maande is u nugter?	
A	15	If yes: How often do you drink? Hoe gereeld drink u?	1. daily 2. 4-6 days/weeks 3. 3 days/week 4. 2 days/week 5. once a week 6. once monthly 7. once in 3 months 8 less than once in 3 months
AM	16	What do you drink mostly? Wat drink u die meeste?	1. wine 2. brandy/whisky/gin 3. beer/ale/stout
A	17	How much do you drink? Hoeveel drink u?	

SYMPTOMS OF ALCOHOL DEPENDENCE IN THE LAST SIX MONTHS

1 = absent   2 = sub threshold   3 = threshold

In the last 6 months ...

DM	18	Did you often find that when you started drinking you ended up drinking more that you thought you would? What about drinking for a much longer period of time than you thought you would? Het u meer gedrink het somtye as wat u beplan het? Het u ook somtye langer gedrink as wat u beplan het?	1. Often takes alcohol in large amounts or over a longer period than intended 1 2 3

DM 19	Have you wanted to stop or cut down the amount of alcohol you were drinking because you were concerned about the effect on your health, your ability to do your work or how you were getting along with other people? IF YES: is this something you kept worrying about or was it just a passing concern? Wou jy ophou drink of minder drink omdat u bekommerd was oor hoe u gesondheid, werk of verhoudings met ander mense deur die drank beinvloed is. INDIEN JA: het u aanhoudend oor dit bekommer of het dit u nie baie gepla nie? OR Did you try to cut down or stop drinking alcohol altogether? (Did you ever actually stop drinking altogether?) (How many times did try to cut down or stop altogether?) Het jy probeer om op te hou drink? (Het jy ooit heeltemaal opgehou?) (Hoeveel keer het jy probeer om op te hou of minder de drink?)	2.	Persistent desire to stop or reduce alcohol use because of concern about adverse health, social or occupational consequences. One or more repeated efforts to cut down or control alcohol use 1 2 3
DM 20	Did you often spend a lot of time thinking about drinking or making sure that you had alcohol available? Het u gereeld baie gedink aan drank of seker gemaak dat u genoeg drank het?	3.	Frequent pre-occupation with seeking or taking alcohol. 1 2 3
DM 21	Did you have a time when you were intoxicated or high or very hung-over when you were doing something important like being at school or work, or taking care of children? What about missing something important like staying away from school or work or missing an appointment because you were intoxicated, high or very hungover? Did you ever drink while doing something where it was dangerous to drink at all?	4.	Often intoxicated or impaired by alcohol use when expected to fulfil social or occupational obligations (eg doesn't go to work because hungover or high, goes to work high, drives when drunk

	Was daar 'n tyd wanneer jy so besope of babbelas was terwyl jy besig was met iets belangrik soos by die skool of werk, of vir kinders sorg. Het u belangrike pligte nie nagekom soos afwesig wees van werk of skool of afsprake omdat u dronk was of babbelas? Het u gedrink terwyl u besig was en dit gevaarlik was om te drink?		1 2 3
DM 22	Did you drink so often that you started to drink instead of working or spending time at hobbies or with your family or friends?	5.	Has given up some important social occupational or recreational activity in order to seek or take the substance
	Het u so baie gedrink dat u nie gewerk het nie, nie tyd aan stokperdjies of gesin of vriende bestee nie?		1 2 3
DM 23	Did you keep drinking even though you knew that you had a physical problem or illness that was made worse by alcohol? What about continuing to drink when you knew that it was increase problems you were having with other people, such as family members or people at work?	6.	Continuation of alcohol use despite a physical disorder or a significant social problem that the individual knows is exacerbated by the use of alcohol
	Het u gedrink ten spyte van ligaamlike siekte wat u geweet word veroorsaak of erger gemaak deur drank. Het u aangehou drink wanneer u bewus was dat dit probleme met gesin of werksmense vererger het?		1 2 3
DM 24	What about finding that when you drank the same amount, it had much less effect than before. Did you have to drink a lot more than before in order to get high?	7.	Tolerance: need for increased amounts of alcohol in order to achieve intoxication or desired effect or diminished effect with continued use of the same amount.
	Het u gevind dat wanneer u dieselfde hoeveelheid gebruik het dat dit minder uitwerking gehad as tevore? Met verloop van tyd moes u meer drink om besope te raak?		1 2 3

DM 25	Did you ever have the shakes when you cut down or stopped drinking (that is, your hands shook so much that other people would have been able to notice it)? Het u bewerasie gehad wanneer u probeer het om op te hou of minder te drink (dit wil sê dat die hande so gebewe dat andere sou dit aanmerk).	8. Withdrawal symptoms such as coarse tremor ("shakes") seizures, DTs. (Do no include simple "hangover") 1 2 3
DM 26	After not drinking for a few hours or more, did you often drink to keep yourself from getting the shakes or becoming sick? What about drinking when you were having the shakes or feeling sick so that you would feel better? As u nie gedrink het vir 'n paar uur het u 'n regmaker gevat om seker te maak dat u nie bewe of babbelas is nie? Het u gedrink wanneer u gebewe het of babbelas was om beter te voel.	9. Relief drinking: often drinks to relieve or avoid withdrawal symptoms 1 2 3

AT LEAST 3 ITEMS ARE CODED "3"

CODE "2" FOR SUBTHRESHOLD PATTERN
CODE "1" FOR NO SYMPTOMS

CHRONOLOGY

DM 27	How old were you when you first started having problems with alcohol? Hoe oud was u toe u eers drankprobleme gehad het?	Age at onset of Alcohol Dependence _____
DM 28	When was the last time you had problems with alcohol? Wanneer was die laaste tyd toe u drankprobleme gehad het?	Number of months prior to interview when last showed significant features of Dependence (CODE 0 IF LESS THAN ONE MONTH) _____
DM 29	IF PROBLEMS WITHIN THE LAST MONTH: When did this episode of drinking begin? Wanneer het u weer begin om te drink?	Number of months prior to interview when current episode began (LEAVE BLANK IF NO PROBLEMS WITHIN THE LAST MONTH) _____

DM 30 During the past five years, how much of the time have you had problems with alcohol?

Gedurende die laaste vyf jaar, vir hoe lank het u drank probleme gehad?

Duration in months during past five years with symptoms of Alcohol Dependence

_____

NON-ALCOHOLIC SUBSTANCE USE DISORDERS

DM 31 Now I would like to ask you about your use of certain drugs or medicines that affect how you think or feel, like sleeping pills, tranquilizers, dagga, Mandrax, or stimulants.

Have you ever taken any drugs like these without prescription, or more than was prescribed - that is, on you own - to get high, to sleep better, or to change your mood?

IF YES: Have you taken any of these drugs more than five times on your own?

IF YES, ASK ABOUT EACH DRUG CLASS MENTIONING THE SPECIFIC DRUGS NOTED BELOW. CHECK DRUG CLASS USED 5+ TIMES AND NOT SPECIFIC DRUGS USED.

Het u al slaap pille, dagga, Mandrax of opwekkende middels meer as vyf keer gebruik om beter te slaap, lekker te voel of u bui te verander sonder voorskrif van 'n dokter?

Has taken non-alcoholic drug on his or her own more than five times to sleep or to alter mood or thinking

1 2 3

DM 32 Specify drug used more than 5 times on own.

1. Benzodiazepines
2. Mandrax
3. Dagga
4. Stimulant
5. Other

WRITE "1", "2" or "3" FOR EACH ITEM THAT HAS BEEN USED MORE THAN 5 TIMES

1.BZP 2.MAN 3.DAG 4.STIM 5.OTHER

AT LEAST THREE OF THE FOLLOWING:

DM 33 Did you often find that when you started taking (DRUG) you ended up taking much more of it than you planned?

Het jy gevind dat wanneer jy die dwelmmiddels gebruik, jy meer gebruik as wat hy beplan het.

What about taking it over a much longer period of time than you thought you would?

Het jy dit ook vir 'n langer tyd gebruik as wat jy beplan het?

(1) Often takes drugs in larger amounts or over a longer period than intended ____ ____ ____ ____ ____

DM 34 Did you want to stop or cut down the amount of (DRUG) you were taking because you were concerned about its effect on your health, your ability to do your work or how you were getting along with other people.

Het jy al probeer om op te hou of te verminder die hoeveelheid van die dwelmmiddel omdat u bekommerd was oor hoe u gesondheid, werk of verhoudings met mense beinvloed is?

(2) Persistent desire to stop or reduce drug use because of concern about adverse health, occupational or social consequences ____ ____ ____ ____ ____

OR

Did you try to cut down OR stop taking drug altogether?
(Did you ever actually STOP taking drug altogether?)
(How many times did you try to cut down or stop altogether?)

Het jy probeer om op te hou of die hoeveelheid van die dwelmmiddel te verminder?
(Het jy ooit opgehou om die dwelmmiddel be vat?)

(Hoeveel keer het jy probeer om die hoeveelheid te verminder of op te hou)

(2) Repeated efforts to cut down or control drug use.

DM 35 Did you often spend a lot of time thinking about taking (DRUG) or making sure that you had (DRUG) available?

Het jy gereeld baie aan die gebruik van die dwelmmiddel gedink of het u verseker dat die dwelmmiddel beskikbaar was?

(3) Frequent pre-occupation with seeking or taking drug. ____ ____ ____ ____ ____

DM 36 Did you have a time when you were intoxicated or high from (DRUG) when you were doing something important, like being at school or work, or taking care of children?
at about missing something important, like staying away from school or work or missing an appointment because you were intoxicated or high?

Did you ever take (DRUG) while doing something where it was dangerous to take (DRUG) at all?

Was jy ooit besope wanneer jy besig was met iets belangrik soos by die skool te wees, of werk, of kinders versorg?
Het u belangrike pligte soos wegbly van skool, werk of 'n afspraak versuim omdat u besope was?
Het u dwelmmiddel gebruik waar did gevaarlik was om dwelmmiddel te vat?

(4) Often intoxicated or impaired by drug use when expected to fulfil social or occupational obligations
(eg: doesn't go to work because high, goes to work high, drives when intoxicated) ____ ____ ____ ____ ____

DM 37 Did you take (DRUG) so often that you started to take (DRUG) instead of working or spending time at hobbies or with family or friends?

Het u die dwelmmiddel so gereeld gebruik dat u nie gewerk het, nie tyd vir stokperdjies of gesin of vriende gehadhet nie?

(5) Has given up some important social, occupational or recreational activity in order to seek or take the substance. ____ ____ ____ ____ ____

DM 38 Did you keep taking (DRUG) even though you knew that you had a physical problem or illness that was made worse by (DRUG)? What about continuing to take (DRUG) when you knew that it was increasing problems you were having with other people such as with family members or people at work?

Het jy die dwelmmiddel gebruik alhoewel u bewus was dat u 'n ligaamlike probleem of siektes het wat erger gemaak word deur die dwelmmiddel.

Het u aangehou met die gebruik van dwelmmiddel alhoewel u bewus was dat dit probleme met die gesin of werkmense veroorsaak het?

(6) Continuation of drug use despite a physical disorder or a significant social problem that the individual knows is exacerbated by the use of the drug. ____ ____ ____ ____ ____

DM 39 Did you find that you needed to take a lot more (DRUG) than before in order to get high? What about finding that when you took the same amount, it had much less effect than before?

Het u gevind dat u moet meer van die dwelmmiddel gebruik om besope te raak? Het u gevind dat dieselfde hoeveelheid kleiner uit werking gehad het as tevore?

(7) Tolerance: need for increased amount of drug in order to achieve intoxication or desired effect, or diminished effect with continued use of the same amount. ____ ____ ____ ____ ____

DM 40 Have you ever had withdrawal symptoms, that is, felt sick when you cut down or stopped taking (DRUG)?

Het u siek gevoel wanneer u die hoeveelheid van dwelmmiddel verminder of u opgehou het?

IF YES: What symptoms did you have? IF UNCLEAR WHETHER SYMPTOMS REPRESENT WITHDRAWAL, CONSULT DSM-III CRITERIA FOR WITHDRAWAL SYNDROMES

(8) Characteristic withdrawal symptoms ____ ____ ____ ____ ____

DM 41 After not taking (DRUG) for a few hours or more, did you often take it to keep yourself from getting sick (WITHDRAWAL SXS)? What about taking (DRUG) when you were feeling sick (WITHDRAWAL SXS) so that you would feel better.

As u nie die dwelmmiddel vir ure gebruik het nie, het u dit weer gebruik om te verhoed dat u siek raak?
Het u dit ook gebruik wanneer u siek geword het sodat u beter kan voel?

(9) Relief drug use: often takes drugs to relieve or avoid withdrawal symptoms. ____ ____ ____ ____ ____

AT LEAST THREE ITEMS CODED "3"
CODE "2" FOR SUBTHRESHOLD PATTERN

1.BZP 2.MAN 3.DAG 4.STIM 5.OTHER

AT LEAST THREE ITEMS FOR ONE OF THE DRUG CLASSES CODED "3" ____ ____ ____ ____ ____

CODE "2" FOR SUBTHRESHOLD PATTERN FOR ONE OR MORE DRUG CLASSES — 1 2 3

CHRONOLOGY

	Question	Response
DM 42	How old were you when you first had a problem with any of these drugs? Hoe oud was u toe u oorspronklik probleme met dwelmmiddels gehad het?	Age at onset of non-alcohol Substance Dependence ____
DM 43	When was the last time you had a problem with any of these drugs? Wanneer laas het u dwelmmiddel probleme gehad?	Number of months prior to interview when last showed significant features of Dependence (CODE 0 IF LESS THAN ONE MONTH) ____
DM 44	Altogether for how many months have you had a problem with drugs? Hoeveel maande het u probleme met dwelmmiddels gehad het?	Duration in months of total time had symptoms non-alcohol dependence ____
DM 45	If problems within the last month. When did this period of taking (DRUG) begin? Wanneer het u meer begin om die dwelmmiddels te gebruik?	Number of months por to interview when current episode began (LEAVE BLANK IF NO PROBLEMS WITHIN THE LAST MONTH) ____

CRIMINAL HISTORY

	Question	Response
AM 46	Have you been in trouble with the law because of your drinking? Het u die wet oortree weëns drank?	1. yes 2. no
47	What for Waarvoor?	1. drunken driving 2. drunkenness 3. other
48	Have you been in trouble with the law because of drugs? Het u die wet oortree weëns dwelmmiddels?	1. yes 2. no
49	What for? Waarvoor?	1. possession 2. dealing 3. other

50	Have you done things against the law like stealing or anything else? Het u die wet oortree omdat u gesteel of iets anders gedoen het?	1. yes 2. no
51	How many times have you been imprisoned? Hoeveel keer is u tronk toe?	

FAMILY HISTORY

AM 52	Do other family members have drinking problems? Is daar gesinslede met drank probleme?	1. yes 2. no
AM 53	What is the home atmosphere like? Hoe is die huishoudelike atmosphere?	1. happy 2. not happy but stable 3. unhappy with major conflicts
54	Do you live alone? Woon u alleen?	1. yes 2. no
55	Who do you stay with? Met wie bly u?	1. family 2. wife 3. friend 4. boarder 5. other
AM 56	Is your wife/husband staying with you? Woon u saam met u eggenote?	1. yes 2. no
AM 57	Specify why not Waarom nie?	1. desertion 2. arguments 3. other reasons
AM 58	How often do you see your family? Hoe gereeld sien u u gesin?	1. daily 2. weekly 3. monthly 4. yearly 5. never

OCCUPATIONAL HISTORY

AM 59 What is your working position?
Werk u op die oomblik?

1. full time
2. part time
3. casual
4. sick leave
5. unemployed
6. pensioner
7. never employed

AM 60 How long have you had your present job?

Hoe lank het u u huidige betrekking?

1. 0 - 6 months
2. 6 -12 months
3. 1 - 2 years
4. 2 - 5 years
5. 6 -10 years
6. 10 years

AM 61 How many jobs have you had in the last 3 years?

Hoeveel betrekkings het u in die laaste 3 jaar gehad.

AM 62 Have you been unemployed in the last 3 years?

Is u in die laaste 3 jaar sonder werk?

1. yes
2. no

AM 63 For what period?

Vir hoe lank?

1. 1- 3 months
2. 3- 6 months
3. 6-12 months
4. 12-18 months
5. 18-24 months

AM 64 Reason for unemployment

Rede vir werkloosheid

1. retrenchment
2. ill health
3. alcoholism
4. other

HEALTH SECTION

BM 65 What has your health been like (excluding complications of alcoholism)

Wat is die bestand van u gesondheid (nie as gevolg van drank)

1. good
2. minor but chronic complaints (eg backache, borderline hypertension)
3. chronic illness without disability (eg emphysema, corpulmonale, diabetes)
4. Chronic illness with disability (eg severe angina, multiple sclerosis)
5. Acute illness leading to hospitalisation

AM 66 How many days sick leave have you taken in the last two years?

Hoeveel dae is u op siek verlof in die laaste twee jaar?

AM 67 Have you had any of the following complications of alcoholism?

Het u enige van die volgende komplikasies van drank gehad?

1. delirium tremens
2. hepatic cirrhosis
3. epilepsy
4. peripheral neuropathy
5. organic brain disease
6. other
7. none

AM 68 Have you been treated at Valkenberg or Lentegeur hospitals?

Het u by Valkenberg of Lentegeur hospitale behandling ontvang?

1. yes
2. no

69 How often in the last two years have you been hospitalised?

Hoe gereeld in die laaste 2 jaar is u daar opgeneem?

1. 0
2. once
3. twice
4. more

70 When was the last time you were hospitalised there?

Wanneer laas was u daar opgeneem?

(Specify date and time in months prior to interview)

71 In the last 2 years have you been admitted to a rehabilitation centre?

In die laaste twee jaar was u toegelaat by 'n rehabilitasie sentrum?

1. yes
2. no

72 For how long (in months)

Vir hoe lank

73 In the last 2 years how often have you attended OPD Avalon?

In die laaste twee jaar hoe gereeld het u buitepasiente bygewoon by Avalon?

1. each month
2. every 2nd month
3. quarterly
4. twice yearly
5. once yearly
6. never

74 In the last 2 years how frequently have you attended AA meetings?

In die laaste twee jaar hoe gereeld het u AA vergaderings bygewoon?

1. weekly
2. monthly
3. seldom
4. never

75 MENTAL STATE EXAMINATION

Appearance
Behaviour
Affect
Speech
Thought flow and form
Thought possession
Delusions and/or Hallucinations
Mini Mental State Examination

ADDENDUM TO MENTAL STATE EXAMINATION

C 76 Have you worried a lot in the past month?
(What do you worry about?)

Was u gedurende die afgelope maand baie bekommerd?
Waaroor is u bekommerd - geld, behuising, kinders, gesondheid, werk, huwelik, familie, vriende, baie ander?

1. no symptoms
2. symptoms definitely present during past month, but of moderate clinical intensity or intense more than 50% of the time
3. Symptom clinically intense more than 50% of the time

C 77 Have you been getting exhausted and worn out during the day or evening, even when you haven't been working very hard?

Voel u gedurende die dag of aan uitgeput en afgemat - ook wanneer u nie hard gewerk het nie.

1. no symptoms
2. only moderate form of symptoms (tiredness) present or intense from exhaustion less than 50% of the time
3. Intense form of symptom (exhaustion) present more than 50% of the past month

C 78 Have you been so fidgety and restless that you couldn't sit still?

Was u so gespanne en rusteloos dat u nie kan stilsit nie?

1. no symptoms
2. moderate form of symptoms (fidgety, restless) present; or intense form (pacing, can't sit down) less than 50 % of the time
3. intense form of symptom (pacing, etc) present more than 50% of past month

C 79 Do you often feel on edge or keyed up or mentally tense or strained?

1. no symptoms
2. symptom definitely present during past month, but of

	(Do you generally suffer with your nerves) (Do you suffer from nervous exhaustion) Voel u dikwels gespanne? (Ly u oor die algemeen aan u senuwees?) (Ly u aan senuwee uitputting?)	moderate intensity less than 50% of the time 3. intense form of the symptoms present more than 50% of the past month
C 80	Have there been times lately when you have been very anxious or frightened? (What was this like) (Did your heart beat fast) Ask for other autonomic symptoms (How often in the past month) Was daar tye wanneer u baie angstig of bang gevoel het? (Hoe was dit gewees? Het u hart vinnig klop?) (Hoe dikwels gedurende die afgelope maand?)	1. no symptoms 2. symptom definitely present with autonomic accompaniment during past month, but of moderate clinical intensity less than 50% of the time 3. Symptom clinically intense more than 50% of the time
C 81	Have you had the feeling that something terrible might happen? (That some disaster might occur but you are not sure what? Like illness or death or ruination?) (Have you been anxious about getting up in the morning because you are afraid to face the day? (What did it feel like?) Het u die gevoel gehad dat iets vreesliks gaan gebeur? (Dat een of ander ramp mag plaasvind maar dat u nie seker is wat dit mag wees nie? Soos bv siekte, dood of ruinasie?) Was u baie angstig as u in die oggend opstaan? (Hoe het dit gevoel)	1. No symptoms. 2. Symptom definitely present, with autonomic accompaniment during the past month but of moderate clinical intensity, or intense less than 50% of the time. 3. Symptom clinically intense more than 50% of the time.
C 82	Do you spend a lot of time on personal cleanliness, like washing over and over even though you know that you are clean? What about tidiness (Do you get worried about contamination with germs?) (Do you have other rituals? What happens when you try to stop?	1. No symptom. 2. Symptom of moderate intensity or if severe, present less than 50% of the time 3. Symptom present in severe degree, more than 50% of the past month.

Spandeer u baie tyd aan persoonlik higiene soos bv om oor en oor te was selfs weet u dat u skoon is? Wat omtrent netheid? (Is u bekommerd dat u met kieme besmet sal raak?) (Het u ander rituele?) (Wat gebeur wanneer u ophou?)

C 83 Do you find it difficult to make decisions even about trivial things? (Do you constantly have to question the meaning of the universe?) (Do you get awful thoughts coming into your mind even when you try to keep them out?) (What happens when you try to stop?)

1. No symptom.
2. Symptom of moderate intensity or if severe, present less than 50% of the time.
3. Symptom present in severe degree, more than 50% of the past month.

C 84 Do you keep reasonably cheerful or have you been very depressed or low spirited recently. Have you cried at all? When did you last really enjoy anything?

Was u gedurende die afgelope tye taamlik opgewek, of was u teneergedruk of moedeloos? (Het u ooit gehuil?) Wanneer het u laas regtig geniet om iets to doen?

1. No symptoms.
2. Only moderately depressed during past month or deep depression for less than 50% of the time and tending to vary in intensity.
3. Deeply depressed for more 50% of the past month and tending to be unvarying in intensity.

C 85 How do you see the future? (Has life seemed quite hopeless?) (Can you see any future?) (Have you given up or does there still seem some reason for trying?)

Hoe sien u die toekoms? (Sien u die lewe sonder hoop?) (Kan u nog 'n toekoms sien?) (Het u moed opgegee of is daar nog rede om te probeer?)

1. No symptoms
2. Hopelessness of moderate intensity but still some degree of hope for the future (irrespective of time during month)
3. Intense form of symptom (patient has given up hope altogether).

C 86 Have you felt that life wasn't worth living? (Did you ever feel like ending it all?) (What did you think you might do?) (Did you actually try?)

1. Never considered suicide
2. Deliberately considered suicide (not just a fleeting thought) but made no attempt.
3. Suicidal attempt but subjects life never likely to be in serious danger except
4. Suicidal attempt apparently designed to end in death (ie accidental discovery or inefficient means)

		Question	Rating
C	87	Have you sometimes felt particularly cheerful and on top of the world, without any reason? (Too cheerful to be healthy?) (How long does it last?) Voel u soms sonder enige rede buitengewoon opgewek en blymoedig? (Te blymodedig om normaal te wees? (Hoe lank duur dit?)	1. No symptom 2. Moderately expansive mood (euphoria with worked element of inappropriateness or excitement, whether recognised by subject or not present during past month and persistent for hours at a time. Doesn't include transient high spirit. Not necessarily described by subject. 3. Intense form of symptom (elation or exhaltation) definitely present during past month and persistent for hours. Described by subject.
C	88	Have you felt particularly full of energy lately or full of exciting ideas? (Do things seem to go too slowly for you?) (Do you need less sleep than usual?) (Do you find yourself extremely active but not getting tired?) (Have you developed new interests lately?) Voel u die laaste tyd buitengewoon vol energie, of opwindende idees? (Wil dit voorkom of dinge vir u stadig gaan? (Het u minder slaap as gewoonlik nodig? (Vind u dat u buitengewoon aktief is maar nie moeg word nie?) (Het u onlangs nuwe belangstellings ontwikkel?)	1. No symptoms. 2. Subjective equivalent of flight of ideas. Images and ideas flash through the mind each suggesting others, at a faster rate than usual persists for hours at a time. Definitely occurred in past month. 3. As in 2 but accompanied by a very high energy output and activity which does not seem to make subject tired at the time. Definitely occurred during past month and persisted for hours at a time.
C	89	Do you ever get the feeling that something odd is going on which you can't explain (or that familiar surroundings seem strange? How do you explain it?) Het u ooit die gevoel dat iets eienaardigs aangaan wat u nie kan verklaar nie? (Of dat 'n bekende omgewing vreemd voorkom? Hoe verklaar u dit?) Does your imagination sometimes play tricks on you? Bedrieg u verbeelding u soms?	1. No symptoms 2. Symptoms definitely present. No delusions have actually been formulated, although patient may feel that various delusional explanations are possible. 3. Full delusional elaboration has occurred.

Is there anything unusual about the way things look or sound, or smell, or taste?

Does your body function normally?)
(Is your appearance normal?)

Is daar enigiets uitsonderlik omtrent die manier dinge vir u lyk, klink, ruik of proe?
(Werk u ligaam normaal?)
(Is u eie voorkoms normaal?)

C 90 I should like to ask you a routine question which we ask everybody.
Do you ever seem to hear noises or voices when there is no one about, and nothing else to explain it?
(Do you ever seem to hear your name being called)

Ek wil graag 'n roetine vraag vra wat ons vir almal vra:
Gebeur dit soms dat u stemme of 'n geraas hoor terwyl daar niemand naby is nie en daar niks is wat die geraas verklaar nie?

Is that true of visions or other unusual experiences, which some people have? (touch, taste, smell, temperature, pain, etc)

Is dit dieselfde as gesig verskynsels of ander ongewone ondervindings wat sekere mense kry? (bv voel, smaak, reuk, temperatuur, pyn, ens)

1. No symptoms
2. Hallucinations congruent with mood
3. Hallucinations not congruent with mood

C 91 Can you think quite clearly or is there any interference with your thoughts?
(Are you in full control of your thoughts?)
(Can people read your mind?)
(Is there anything like hypnotism or telepathy going on?)

Kan u heeltemal helder dink of is daar steurings met u denke?
Is u in volle beheer van u gedagtes?
Kan mense u gedagtes lees?
Is daar iets soos telepatie of hipnotisme wat op u inwerk.

1. No symptoms
2. Symptom described clearly but subject thinks it may be due to own unconscious thoughts.
3. Symptom described clearly and thoughts are believed to be interfered with.

RATING SCALES

BM 92 PSYCHOSOCIAL ADJUSTMENT SCALE

(1) unemployed more than 80% of time, living on the street, alone or institutionalised.
(2) either a regular job or stable home but not both.
(3) regular job, stable home and in contact with family.

EM 93 ALCOHOL DEPENDENCE SCALE

(1) remission (does not have any symptoms)
(2) partial remission
(symptomatic but does not meet criteria for dependence)
(3) Dependent (DSM-III-R criteria)

EM 94 NON-ALCOHOL DRUG SCALE

(1) no problems
(2) abuse
(3) dependent
(DSM-III-R criteria)

F 95 DRINKING PATTERN SCALE

(1) continuously Abstinent
(2) abstinent for periods with occasional or limited breaks
(3) drinking most of the time with occasional periods of abstinence
(4) constant drinking

96 AVERAGE DAILY INTAKE OF ABSOLUTE ALCOHOL IN GRAMS

97 PERSONALITY DISORDER SCALE
(excluding other psychiatric disorder)

(1) no evidence of persistent personality traits with disturbed relationships
(2) persistent personality traits leading to disturbed relationships
(3) sufficient symptoms to diagnose personality disorder

98 PSYCHIATRIC DISORDER SCALE
(excluding psychoactive substance dependence)

(1) insufficient symptoms to allow diagnosis of psychiatric disorder
(2) sufficient symptoms to allow diagnosis of neurotic disorder
(3) sufficient symptoms to allow diagnosis of psychotic disorder
(4) sufficient symptoms to allow diagnosis of organic psychiatric disorder

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