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SD: ASAP ANALYTIC STUDY NO. 5/6 - 1977  
AN ANALYSIS OF ALCOHOL REHABILITATION EFFORTS

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16. Abstract <p>ACQUISITIONS</p> <p>This study examines the efficacy of problem drinker driver rehabilitation as a viable addition, or alternative, to traditional court punitive sanctions for driving while intoxicated. Two groups of clients were analyzed in a control group versus treatment group experimental design. The first group were regular SD:ASAP clients who were randomly assigned to treatment or control after January, 1974. The second group was a subset of SD:ASAP clients who became part of the national Short Term Rehabilitation (STR) study.</p> <p>The treatment outcome measures were the traditional DWI recidivism, analyzed with a survival rate methodology, and the recently developed questionnaire/interview scale scores measuring certain aspects of life activity.</p> <p>The recidivism comparisons were based on cohorts of clients formed quarterly with a follow-up period of 15 quarters. No evidence was found to suggest that rehabilitation made any difference in post-treatment drunk driving behavior.</p> <p>An evaluation of the questionnaire/interview scale scores found that most of the scales were not good discriminators of drinking status and therefore not likely to reflect change in post-treatment behavior. Follow-up comparisons between treatment and control groups showed no differences.</p>			
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# METRIC CONVERSION FACTORS

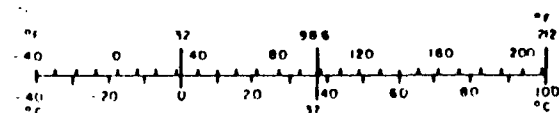
## Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
<b>LENGTH</b>				
m	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
<b>AREA</b>				
m <sup>2</sup>	square inches	6.5	square centimeters	cm <sup>2</sup>
ft <sup>2</sup>	square feet	0.09	square meters	m <sup>2</sup>
yd <sup>2</sup>	square yards	0.8	square meters	m <sup>2</sup>
mi <sup>2</sup>	square miles	2.6	square kilometers	km <sup>2</sup>
	acres	0.4	hectares	ha
<b>MASS (weight)</b>				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
<b>VOLUME</b>				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft <sup>3</sup>	cubic feet	0.03	cubic meters	m <sup>3</sup>
yd <sup>3</sup>	cubic yards	0.76	cubic meters	m <sup>3</sup>
<b>TEMPERATURE (exact)</b>				
F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	C

\* To convert Celsius to Fahrenheit, multiply by 9/5 and add 32. To convert Fahrenheit to Celsius, subtract 32 and multiply by 5/9.

## Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
<b>LENGTH</b>				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
<b>AREA</b>				
cm <sup>2</sup>	square centimeters	0.16	square inches	in <sup>2</sup>
m <sup>2</sup>	square meters	1.2	square yards	yd <sup>2</sup>
km <sup>2</sup>	square kilometers	0.4	square miles	mi <sup>2</sup>
ha	hectares (10,000 m <sup>2</sup> )	2.5	acres	
<b>MASS (weight)</b>				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
<b>VOLUME</b>				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m <sup>3</sup>	cubic meters	35	cubic feet	ft <sup>3</sup>
m <sup>3</sup>	cubic meters	1.3	cubic yards	yd <sup>3</sup>
<b>TEMPERATURE (exact)</b>				
C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	F



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## INTRODUCTION

The advent of alcohol countermeasures in South Dakota generated activity directed toward the re-education and rehabilitation of problem drinker drivers. These activities provided services to the courts as an alternative, and in addition to, the traditional punitive sanctions for alcohol related traffic offenders. In order to match particular individuals to the forms of rehabilitative intervention most likely to effect change in their drinking-driving behavior, South Dakota ASAP developed a drinker diagnostic scheme that divided the continuum of problem drinking into four classes. Treatment assignment was then based on the extent of a client's drinking problem and on the availability of treatment options in a particular area of the state. The treatments ranged from a two session driver improvement school to inpatient therapy at a mental health or medical institution.

This report then is an evaluation of the efficacy of drinker rehabilitation/re-education in modifying drinking-driving behavior. For the most part, experimental comparisons will be made between a treatment group and an identical randomly assigned no treatment control group. In situations where a control group is not available quasi-experimental comparisons are made with a matched group who for some reason were either not referred to treatment or dropped out or failed to show for their assigned treatment. Even with an adequate experimental design, meaningful evaluation of problem drinker rehabilitation has been severely hindered by the lack of a good dependent measure. The traditional measure of a client's success or failure is the re-occurrence of an alcohol related driving offense or crash, which in most cases is known only if the individual is re-arrested for DWI. The first problem is that arrest recidivism is a rare event, requiring both a large number of treatment entries and a lengthy follow-up period before it is sensitive to detecting differential treatment effects. Secondly, it reflects only one dimension of problem drinking-driving, and then may only represent the chance association of getting caught for a given frequency of a client's post treatment drunk driving behavior.

Recognizing the need for supplementary treatment criterion measures, a set of questionnaire/interview instruments was developed which sought to probe more aspects of a client's life activity that were not explicitly drinking-driving related. Scales were derived from the instruments by combining responses to sets of similar questions, and if the resulting indexes were, at least in part, reflective of problem drinking status, then they would likely show change as drinking problems diminished. To be useful as a measure of post treatment change the instruments were administered at six, twelve and 18 month follow-up intervals.

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The three instruments in their final form are found in Appendix A and are referred to as the Life Activities Interview (LAI), Current Status Questionnaire (CSQ), and Personality Assessment Scale (PAS). This package was primarily developed for use in a supplementary program level ASAP study, the Short Term Rehabilitation (STR) study, of which South Dakota was one of ten participants during a two year contract extension period. A detailed description of the instrument development and factor analytic procedures applied to the interviews and questionnaires is found in Program Level Evaluation of ASAP Diagnosis, Referral and Rehabilitation Efforts, Volume IV, "Development of the Short Term Rehabilitation (STR) Study," Sept. 1976. Final Report, Report #DOT-HS-191-3-759-F4 and in Short Term Rehabilitation (STR) Study Abstract File Manual, March, 1977. These efforts resulted in a large number of potential dependent and independent measures; six LAI scales, seven CSQ scales, five LAI/CSQ combined scales and fourteen PAS scales.

The South Dakota ASAP had instituted random assignment with control groups in January, 1974. Concurrently, a subset of these clients were administered Life Activities Interviews and a number also received follow-up interviews at six month intervals. Beginning with the contract extension in 1975, a separate STR client pool was established. These clients received the entire set of instruments in a strict, repeated measures follow-up design to become part of the national STR data base. Evaluation of the effectiveness of drinking driver rehabilitation is based on the follow-up performance (either records checks or personal interviews) of the two sets of clients: 1) those regular SD:ASAP clients who entered the diagnostic/treatment system after random assignment, and 2) the pool of clients who were randomly assigned in the STR study.

The first section of this report is an analysis of the regular SD:ASAP clients. This client pool has the advantage of a large number of clients and sufficiently long follow-up period to conduct a meaningful recidivism analysis. The last section is devoted to the STR clients and an analysis of selected scale scores over the follow-up period. Because of differences in data availability, length of follow-up and record structure, different analytical questions will be addressed in each section.

The scale scores derived from the three interview/questionnaire instruments represent a totally new and innovative approach to the analysis of drinker rehabilitation. As such it is not known how many or which of the variables may be useful in this respect. A number of the scales may be more useful as predictor variables than outcome variables and others may just not be relevant or have no a priori expectations of the direction of change the treatment might effect. To this end the analytical approach is basically exploratory and emphasizes the distributional characteristic and change patterns of a number of these variables.

## DRINKER DIAGNOSIS

South Dakota ASAP operated a thorough pre-sentence investigation system, collecting information from records checks, arrest information, and client and outside (family, friends, employer) interviews. This information was summarized by the court worker and sent to the central office where a treatment coordinator determined the final drinker classification and treatment recommendation. The more important variables in this determination were the Mortimer-Filkins Interview Score, arrest BAC and number of prior DWI's. A detailed evaluation of the drinker diagnostic process can be found in SD:ASAP Analytic Study No. 5/6 - 1976, "An analysis of Drinker Diagnosis, Referral and Alcohol Rehabilitation Efforts." This report recommends a number of changes to streamline and remove much of the subjectivity from the diagnostic process. The report also concludes, however, that the system as it operated during ASAP produced sufficiently reliable and valid drinker classifications as to not seriously confound data analyses targeted towards isolating treatment effects.

## REHABILITATION/RE-EDUCATION RESOURCES

SD:ASAP funded two short term re-education modalities, Driver Improvement School (DIS) and Problem Drinker Driver Classes (PDDC). All other referral resources are community based outpatient and inpatient treatment facilities and local chapters of Alcoholics Anonymous (AA). SD:ASAP neither funded nor controlled community alcohol treatment facilities. However, a large number of agencies voluntarily agreed to accept court referrals and did in general, cooperate with SD:ASAP in arranging these referrals.

The basic treatment modalities receiving SD:ASAP referrals are described below. Although each of the rehabilitation modalities differ slightly in their approach to the treatment of alcohol problems, a common characteristic of each of the SD:ASAP treatment countermeasures except DIS is an explicit orientation toward AA principles.

### Problem Drinker Driver Classes

PDDC is an alcohol safety school designed primarily for problem drinkers although a substantial number of non-problem drinkers were referred to this modality. PDDC was conducted by SD:ASAP courtworkers with strong AA orientation and experience working with alcoholics and persons with less advanced drinking problems. For problem drinkers recommended for more intensive treatment, PDDC served as a transition modality. When appropriate, PDDC instructors attempted to abate client acceptance of alcohol dependency. Thus, PDDC was often recommended in combination with other modalities such as AA and outpatient treatment.

For all participants, whether or not recommended for additional treatment, PDDC functioned as a short term re-education modality with the

stated objective of preparing the convicted individual to determine whether his or her drinking pattern is that of a problem drinker or alcoholic, and to create awareness of the consequences of alcohol abuse. PDDC was organized into four sessions, one 1½ hour session per week. The average session size is approximately nine, with a range of from three or four to 17 or 18. The typical approach of the courtworker/instructors is to combine didactic instruction with group discussion. There is usually one film shown per session. The curriculum is basically the Vermont ASAP Crash School workbook adapted for use in South Dakota.

### Driver Improvement School

DIS is a re-education program designed primarily for the non-problem drinker (SD:ASAP classification 1, social drinker). It is a one session course, lasting approximately 1½ hours, and was taught by the SD:ASAP courtworkers. The course can best be characterized as a didactic/instructional presentation of factual information primarily in a lecture format. Although group discussion is encouraged within the course, this type of interchange tends to be restricted to the factual content of the course materials and not directed toward resolution of social/emotional problems of participants. Because of the didactic orientation of DIS and because few problem drinkers were referred to this modality, DIS did not perform the function of a transition modality as did PDDC.

### Inpatient Treatment

A total of thirteen inpatient alcohol treatment programs were available for SD:ASAP-identified and court-referred problem drinkers during the four year operational period. These programs served strictly as referral resources within the state, and did not receive funding from SD:ASAP. Costs of treatment at these installations were borne by the client or non-ASAP agencies such as the S.D. Department of Vocational Rehabilitation. Inpatient programs ranged from four to eight weeks in duration, and ordinarily involved a relatively intensive mix of individual and group counseling and therapy. A marked emphasis on the "AA philosophy" exists in virtually all of these programs.

### Outpatient Treatment

A total of 27 facilities received SD:ASAP court referrals and provided alcohol counseling and therapy on an outpatient basis. As with the inpatient treatment programs, outpatient programs are heavily committed to the "AA philosophy". Treatment in these installations was typically of about the same duration as inpatient treatment, and also involved a mix of individual counseling and group therapy.

### Alcoholics Anonymous

South Dakota has a relatively extensive network of local Alcoholics Anonymous (AA) chapters with 50 dispersed throughout the state. The courtworkers maintained an excellent working relationship with these local chapters and were able to secure referral to AA as both a single referral option or, more frequently, in combination with one or more forms of rehabilitation.



## DATA AVAILABILITY

South Dakota ASAP's random assignment of clients to control and treatment groups began in January, 1974, and entries to this client base continued through the first quarter of 1977. In addition to the regular diagnostic interviews and questionnaires a subset of these clients were administered the Life Activities Inventory (LAI), a basic instrument used in the evaluation of STR clients. Other clients were administered the LAI at six, twelve and 18 month intervals following treatment entry, although not necessarily the same clients that had received the initial interviews.

Entries to the Short Term Rehabilitation Study began in December, 1975, and ended in April, 1976. Six and twelve month follow-ups were scheduled for all these clients in a strict repeated measures design.

Follow-up records checks for both groups relied heavily on the DWI arrest file maintained by the University of South Dakota. Thus, in terms of arrest recidivism as a criterion measure, all clients under study were followed for at least one full year after initial entry.

### SD:ASAP CLIENTS

Table 1 shows the frequency of client entries into the various treatment alternatives by drinker type. Note that there are no entries in the control group for chronic alcoholics--this is by design and only relative treatment effects are compared for this group. The non-problem drinkers have a fairly straight forward balanced design; the comparisons of interest are between driver improvement school (DIS), problem drinker driver classes (PDDC) and the no treatment control group. The problem and serious problem drinker classes are combined for many of the analyses. The treatment modalities for these groups are also collapsed for comparisons of PDDC with a more intensive treatment category to include PDDC plus other treatments.

Table 2 shows the number of initial and follow-up Life Activities Interviews by drinker type. Considerable attrition occurs in the follow-up interviews and the frequencies in the follow-up periods do not necessarily represent a repeated measure on a client that received an earlier interview. A fairly large number of initial interviews are available for each drinker class and scale score comparisons that discriminate well between these groups will provide an indication of where to expect change if treatment is effective in diminishing drinking problems.

Tables 3 and 4 are an accounting of LAI availability for the collapsed drinker and treatment modalities with randomly assigned control groups. Unfortunately the number of follow-up interviews declines rapidly for

TABLE 1. MAJOR REFERRAL MODALITY COMBINATIONS BY DRINKER TYPE (1974 - 1976)

	Drinker Type				Total
	Social Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic	
Not Referred	19 18.8 6.5	28 27.7 4.4	29 28.7 6.6	25 24.7 5.8	101  5.6
DIS	112 76.7 38.5	26 17.8 4.0	7 4.8 1.6	1 0.7 0.2	146  8.1
PDDC	81 8.2 27.8	445 45.1 69.3	270 27.4 61.2	190 19.3 44.2	986  54.7
Inpatient Treatment	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	10 100.0 2.3	10  0.5
Outpatient Treatment	1 4.0 0.3	3 12.0 0.5	6 24.0 1.4	15 60.0 3.5	25  1.4
PDDC + AA	0 0.0 0.0	3 6.4 0.5	16 34.0 3.6	28 59.6 6.5	47  2.6
PDDC + Treatment	0 0.0 0.0	7 3.1 1.1	75 32.9 17.0	146 64.0 34.0	228  12.6
Control	73 33.0 25.1	122 55.2 19.0	26 11.8 5.9	0 0.0 0.0	221  12.2
Other	5 12.5 1.7	8 20.0 1.2	12 30.0 2.7	15 37.5 3.5	40  2.2
TOTAL	291 16.1	642 35.6	441 24.4	430 23.8	1804

Cell contents are:

- 1) frequency
- 2) percent of row
- 3) percent of column

TABLE 2. LAI AVAILABILITY BY DRINKER TYPE

	Drinker Type				
	Non-Problem	Problem	Serious Problem	Chronic Alcoholic	Total
Total Entries	291	642	441	430	1804
Initial Interview	208	445	277	298	1228
6 Month Follow-up	54	159	119	115	447
12 Month Follow-up	32	64	46	35	177
18 Month Follow-up	27	40	34	13	114

(17)

TABLE 3. LAI AVAILABILITY BY MAJOR TREATMENT MODALITY FOR  
NON-PROBLEM DRINKERS

	DIS	PDDC	Control	Other/Not Referred	Total
Total Entries	112	81	73	25	291
Initial Interview	67	60	59	22	208
6 Month Follow-up	26	15	12	1	54
12 Month Follow-up	16	8	7	1	32
18 Month Follow-up	13	6	6	2	27

TABLE 4. LAI AVAILABILITY BY MAJOR TREATMENT MODALITY FOR  
PROBLEM PLUS SERIOUS PROBLEM DRINKERS

	DIS	PDDC	PDDC+Other Treatment	Control	Other/Not Referred	Total
Total Entries	33	715	100	148	77	1083
Initial Interview	16	489	56	96	65	722
6 Month Follow-up	11	183	29	44	11	278
12 Month Follow-up	4	72	17	16	1	110
18 Month Follow-up	6	42	15	9	2	74

both drinker types, especially in the control groups. Furthermore, since the follow-ups are not repeated measures, the analysis of these data is for the most part restricted to descriptive distributional comparisons.

#### STR CLIENT DATA

Only midrange problem drinkers (i.e., problem and serious problem drinkers under SD:ASAP's classification scheme) qualified for entry into the STR client pool. As shown in Table 5, there were 200 entries of which 112 were randomly assigned to PDDC while 88 fell into the control group. Follow-up interview completion was hindered by project termination with an overall completion rate of slightly less than 60 percent.

Whereas only the one LAI instrument was administered to the South Dakota ASAP clients, the results of two additional instruments, the Current Status Questionnaire (CSQ) and Personality Assessment Scale (PAS) are available for the STR clients.

TABLE 5. STR CLIENT DATA AVAILABILITY

## 6 MONTH FOLLOW-UPS

Month	PDDC		CONTROL		TOTAL	
	Due	Completed	Due	Completed	Due	Completed
June	22	12 (54.5%)	18	10 (55.6%)	40	22 (55.0%)
July	24	15 (62.5%)	34	20 (58.5%)	58	35 (60.3%)
August	28	17 (60.7%)	20	12 (60.0%)	48	29 (60.4%)
September	36	23 (63.8%)	16	7 (43.7%)	52	30 (57.7%)
October	2	1 (50.0%)	0		2	1 (50.0%)
TOTAL	112	68 (60.7%)	88	49 (55.7%)	200	117 (58.5%)

## 12 MONTH FOLLOW-UPS

Month	PDDC		CONTROL		TOTAL	
	Due	Completed	Due	Completed	Due	Completed
December	22	13 (59.1%)	18	12 (66.7%)	40	25 (62.5%)
January	24	16 (66.7%)	34	19 (55.9%)	58	35 (60.3%)
February	28	17 (60.7%)	20	11 (55.0%)	48	28 (58.3%)
March	36	18 (50.0%)	16	11 (68.8%)	62	29 (55.8%)
April	2	2 (100.%)	0		2	2 (100.%)
TOTAL	112	66 (58.9%)	88	53 (60.2%)	200	119 (59.5%)

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## REGULAR SD:ASAP REHABILITATION ANALYSIS

### DISTRIBUTION OF LIFE ACTIVITIES INTERVIEW SCALES BY DRINKER TYPE

This section examines the six LAI scales as to their ability to discriminate between drinker types. It is assumed that the drinker diagnosis resulted in reasonably valid assessments of problem drinking. If this is so it is also reasonable to expect that for any dependent measure (i.e., LAI scale) to be sensitive or useful in detecting change in drinking status caused by treatment, it should also be able to discriminate between drinker groups at the initial interview.

A number of new scale scores are being investigated and it is of interest to examine each with respect to its distributional characteristics. That is, scale to scale and group to group comparisons should be made with respect to location, spread and symmetry to provide direction as to the removal of outliers and appropriate transformations to achieve symmetry and homoscedasticity. A recently developed visual aid in the form of graphic displays<sup>1,2</sup> provides a robust means of characterizing a distribution of scores. The schematic of Mortimer-Filkins Interview scores shown in Figure 1 illustrates this technique. The ends of the box correspond to the upper and lower quartiles, the line through the middle of the box is the median, the point within the box is the mean, the dashed lines emanating from either end of the box indicate spread in the tails and points beyond the end of the dashed line would fall beyond the 95 percent confidence limits for a normally distributed sample.

### MORTIMER-FILKINS INTERVIEW AND QUESTIONNAIRE SCORES

The Mortimer-Filkins Interview and Questionnaire were the basic instruments used for SD:ASAP drinker diagnosis. The interview and questionnaire scores are plotted in Figures 1 and 2 respectively, and there is a definite pattern of location across the four groups. The Mortimer-Filkins Interview is the better discriminator with very little overlap between the upper and lower quartiles for adjacent groups. Both the interview and questionnaire have nearly symmetric and normal distributions--the non-problem drinker class is slightly different because of the large number of scores near the lower bound of zero, and the slight linear increase in standard deviation across the groups is largely a result of allowing more room for the lower tail.

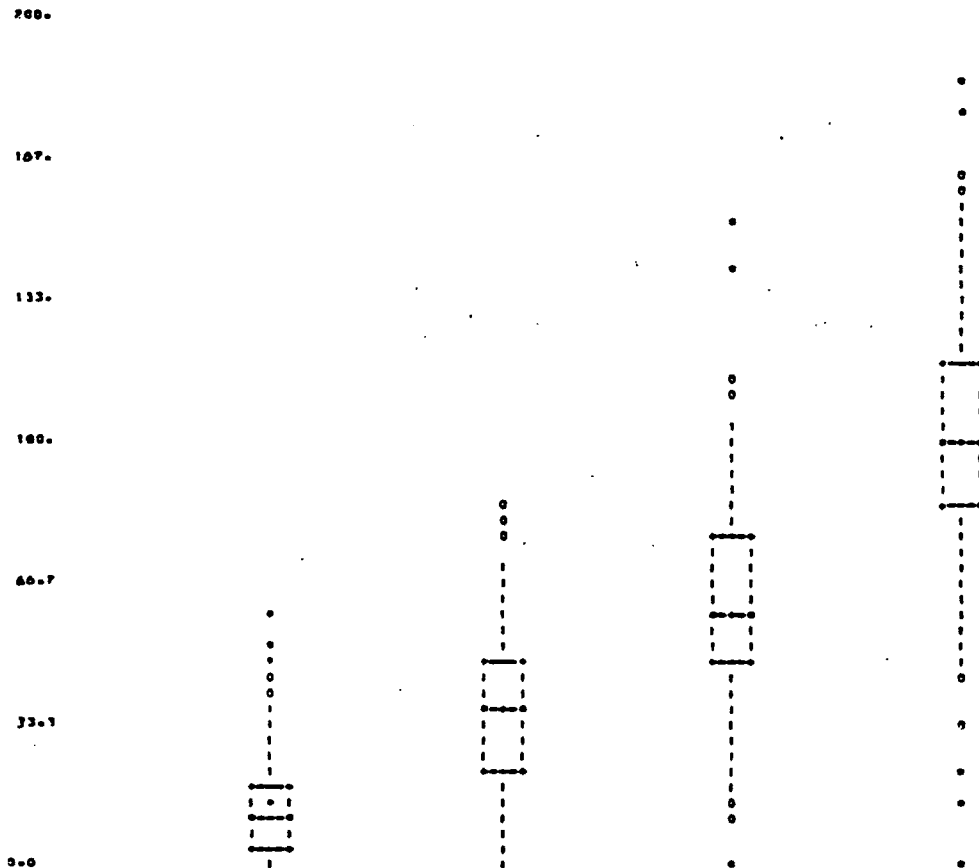
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<sup>1</sup>Tukey, J. W., Exploratory Data Analysis. Reading, MA: Addison-Wesley, 1977.

<sup>2</sup>SAS Supplemental Library User's Guide. SAS Institute, Raleigh, NC. pp. 150-153.

FIGURE 1. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE

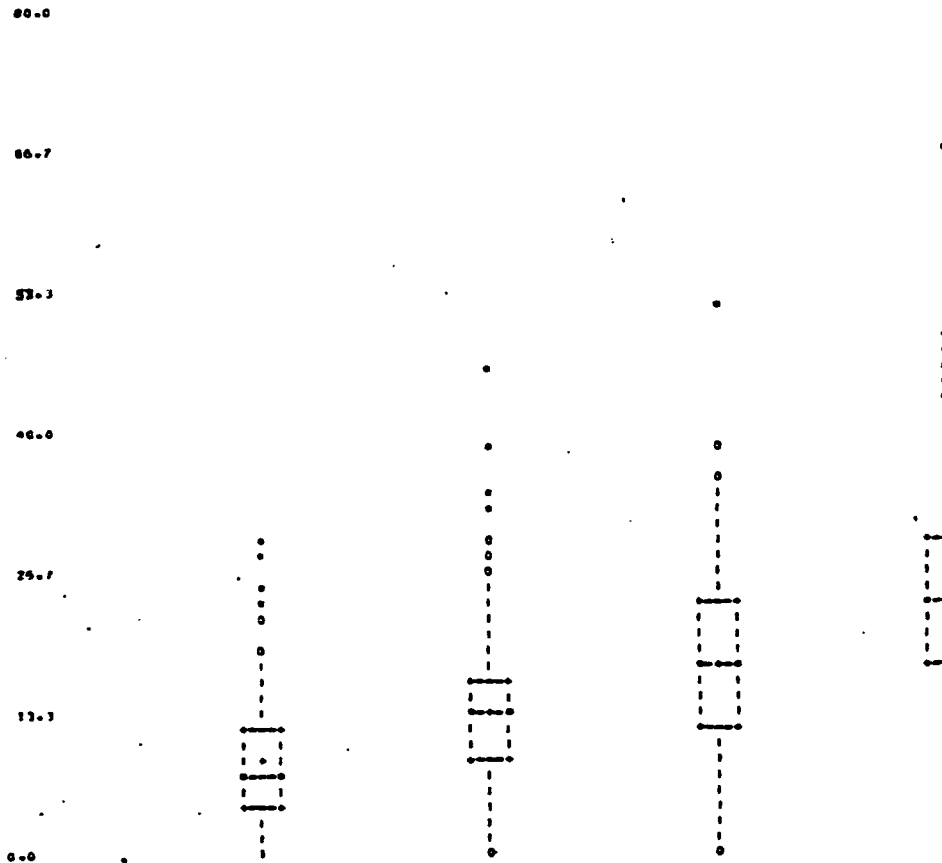
MORTIMER-FILKINS INTERVIEW



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	208	444	277	298
MEAN	13.4	36.4	61.0	99.2
S. D.	11.6	18.1	22.9	28.0
MAX	60	84	152	184
MIN	0	0	0	0

FIGURE 2. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE

MORTIMER-FILKINS QUESTIONNAIRE



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	208	445	277	298
MEAN	8.9	13.5	18.0	24.2
S.D.	5.5	6.4	7.3	9.1
MAX	29	46	52	67
MIN	0	0	0	0

The separation observed in these distributions is nearly perfect (as it should be since these scores were a primary input for classification) and illustrates what one would hope to achieve from a dependent measure designed to show a shift in location as a result of drinker rehabilitation.

### LIFE ACTIVITIES INTERVIEW SCALES

Table 6 is extracted from the Abstract File Manual<sup>3</sup> and serves to summarize the dimension of life style being measured. These scales differ considerably in their expected ability to reflect indirect symptoms of problem drinking--Factors II and VI deal directly with alcohol use and abuse and should be most sensitive.

#### Factor I: Employment/Economic Stability

Eight weighted items make up Factor I, an employment/economic stability scale, for which a high score indicates a more favorable economic position. The distribution of these scores by drinker type is graphed in Figure 3 and shows a fairly strong positive skewness toward an upper bound score of approximately 650. The scores are almost identically distributed for the first two drinker types, while tending to stretch out in the lower half for the serious problem drinkers and chronic alcoholics. This scale then, as one might expect, could be a useful indicator of treatment induced improvements among the most problematic drinkers where alcohol has affected job attendance and performance. These extreme drinkers have for the most part been excluded from the STR study and therefore, this factor may not be a useful change indicator for mid-range problem drinkers.

#### Factor II: Current Drinking Pattern (Quantity/Frequency)

As shown in Table 6 only four items compose the alcohol consumption quantity/frequency scale and these questions refer to the immediate history (i.e., within the past week or month). Thus, the timing of the interview may be critical in the respondent's score, especially if it closely follows a DWI arrest. The distribution of scores in Figure 4 shows rather unexpected results where the chronic alcoholics appear to be no worse off than the non-problem drinkers. These distributions appear symmetric in the tails but skewed toward higher scores in the center of the distribution. Since this measure is directed at drinking status, it should be a useful change measure; however, judging from the initial interview scores it is either very sensitive to the timing of the interview administration or it is simply measuring an alcohol dimension that is common to all drinker types.

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<sup>3</sup>Ellingstad, V. S. and Struckman-Johnson, D. L. Short term rehabilitation (STR) study: Abstract file manual. Contract #DOT-HS-6-01366. Human Factors Laboratory, University of South Dakota, Vermillion, South Dakota, March, 1977.

TABLE 6. SCALES OF THE LIFE ACTIVITIES INTERVIEW (LAI) DERIVED FROM RESPONSES OF 3681 STR CLIENTS AT INITIAL INTERVIEW

<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>S</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR I: EMPLOYMENT/ECONOMIC STABILITY</u>									
2	.890	.878	.912	.889	Is primary financial support from earned income?	Yes	1.793	.405	1-2
4	.884	.857	.891	.887	How many hours do you work per week?	High	3.472	1.397	1-5
1	.868	.856	.889	.870	Are you currently working?	Yes	1.827	.378	1-2
3	.549	.534	.555	.543	Is primary financial support from public assistance?	No	1.914	.281	1-2
10	.466	.457	.475	.461	Has income source changed in past 6 months? (How?)	Favorable	2.015	.476	1-3
11	.481	.456	.474	.485	Has income amount changed in past 6 months? (How?)	Increased	2.146	.680	1-3
13	.445	.417	.433	.442	How many times were you discharged in past 6 months?	None	1.861	.346	1-2
5	.466	.413	.429	.508	What is total monthly family income amount?	High	3.314	1.355	1-5
KR20 = .815      Hyperplane Count: Varimax = 65.6%, Maxplane = 73.4%									

<u>FACTOR II: CURRENT DRINKING PATTERN (Q + F)</u>									
31	.891	.853	.903	.903	How many days last week did you have some drinks?	Most	2.805	1.556	1-5
29	.912	.851	.901	.932	What is total number of drinks consumed last week?	Many	2.550	1.294	1-5
30	.625	.598	.634	.629	Are you primarily a beer drinker?	Yes	1.547	.498	1-2
33	.602	.548	.580	.627	What is the most drinks on one occasion in past month?	Many	4.139	1.514	1-5
KR20 = .859      Hyperplane Count: Varimax = 84.4%, Maxplane = 84.9%									

<u>FACTOR III: FAMILY STATUS (MARRIEDNESS)</u>									
40	.724	.659	.734	.756	Are you currently married?	Yes	1.455	.498	1-2
44	.704	.641	.713	.720	How many dependents do you currently have?	Many	2.234	1.198	1-5
42	.641	.631	.702	.608	How many people do you currently live with?	Many	3.100	1.413	1-5
46	.467	.527	.587	.415	How often last month did you go out for recreation with family?	Often	2.843	1.765	1-5
45	.494	.484	.539	.483	How many people do you take care of?	Many	1.743	1.089	1-5
54 (R)	-.419	-.399	-.444	-.421	How often have you watched TV alone?	(R) Seldom	3.945	1.637	1-5
KR20 = .747      Hyperplane Count: Varimax = 71.9%, Maxplane = 75.0%									

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Table 6. Scales of the Life Activities Interview (LAI) Derived from Responses of 3681 STR Clients at Initial Interview (Continued)

<u>Item</u>	<u>F<sub>v</sub></u>	<u>R<sub>s</sub></u>	<u>F<sub>p</sub></u>	<u>F<sub>s</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR IV: SOCIAL INTERACTION/INVOLVEMENT</u>									
59	.469	.458	.489	.472	How often have you helped someone with a task?	Often	2.804	1.569	1-5
63	.468	.450	.479	.430	How many self accomplished activities in past 6 months?	Many	3.174	1.457	1-5
60	.469	.449	.479	.458	How often have you entertained others in your home?	Often	2.433	1.564	1-5
58	.476	.448	.478	.506	How often have you talked with a friend about his problems?	Often	2.244	1.506	1-5
61	.461	.435	.463	.472	How many new acquaintances did you make last month?	Several	2.836	1.764	1-5
49	.425	.416	.444	.431	How often do you engage in physical fitness activities?	Often	1.687	1.029	1-4
57	.409	.399	.425	.392	How many gifts have you given to others?	Several	2.290	1.438	1-5
53	.348	.368	.392	.317	How often have you engaged in sedentary activities with others?	Often	2.876	1.604	1-5
51	.378	.368	.392	.374	How often have you engaged in participant sports?	Often	1.785	1.205	1-5
47	.304	.283	.301	.313	How many close friends do you have?	Many	3.017	1.236	1-5
KR20 = .685      Hyperplane Count: Varimax = 64.1%, Maxplane = 68.8%									

<u>FACTOR V: CURRENT PHYSICAL HEALTH PROBLEMS</u>									
25	.875	.864	.885	.879	How many days last week with health complaints?	Many	2.458	1.735	1-5
24	.463	.462	.473	.459	How many allergy problems or colds last week?	Many	1.671	1.402	1-5
22	.460	.447	.457	.471	How many sleep problems and nervousness last week?	Many	1.520	1.212	1-5
19	.451	.446	.457	.453	How many drugs are you currently taking?	Many	1.846	1.045	1-5
23	.453	.445	.456	.455	How many fatigue and muscle aches last week?	Many	1.554	1.229	1-5
27	.421	.409	.419	.428	How many days were you ill last month?	Several	1.537	1.207	1-5
21	.415	.401	.411	.427	How many digestive problems and headaches last week?	Many	1.350	.923	1-5
17	.321	.325	.333	.311	Are you currently taking tranquilizers?	Yes	1.070	.256	1-2
26	.305	.303	.311	.302	How many medical visits for health care last month?	Several	1.261	.721	1-5
KR20 = .614      Hyperplane Count: Varimax = 76.6%, Maxplane = 78.1%									

Table 6. Scales of the Life Activities Interview (LAI) Derived from Responses of 3681 STR Clients at Initial Interview (Continued)

<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>S</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR VI: IMMODERATE DRINKING BEHAVIOR</u>									
36	.667	.600	.691	.723	How many times were you drunk last month?	Several	1.663	1.146	1-5
39	.574	.535	.617	.596	How often did you get away with DUI last month?	Several	1.278	.833	1-5
32	.505	.457	.526	.553	How many times did you drive with 3/4 drinks last month?	Several	1.837	1.354	1-5
38	.463	.433	.498	.471	How many blackouts did you have last month?	Several	1.094	.471	1-5
37	.376	.355	.408	.371	How many binges did you go on last month?	Several	1.052	.366	1-5
34	.313	.302	.348	.287	Did you miss work because you were drunk or hung over?	Yes	1.039	.316	1-5
KR20 = .696      Hyperplane Count: Varimax = 60.9%, Maxplane = 68.8%									

FIGURE 3. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE

EMPLOYMENT/ECONOMIC STABILITY

700.

600.

500.

400.

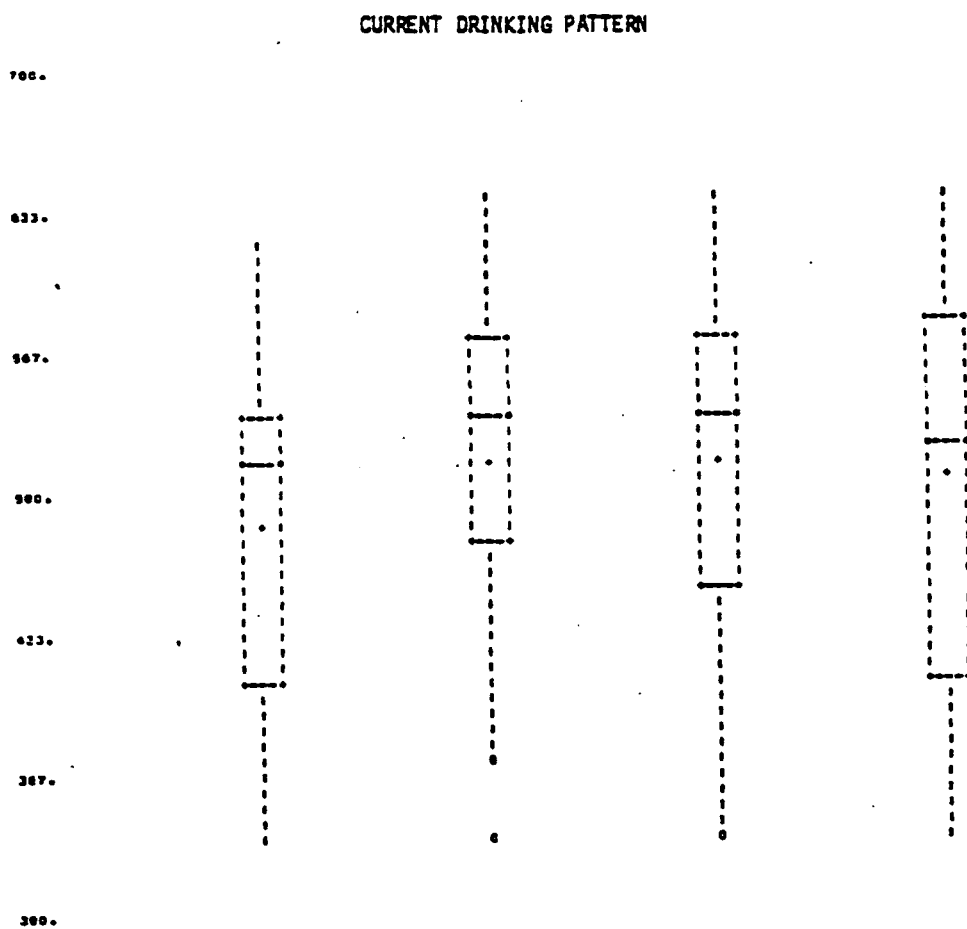
300.

200.

100.

	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	206	443	275	297
MEAN	500.3	487.4	478.2	452.5
S.D.	77.5	89.7	102.1	105.3
MAX	618	618	618	618
MIN	181	167	158	167

FIGURE 4. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N.	206	441	275	296
MEAN	487.9	517.3	514.1	505.1
S.D.	73.2	73.6	79.1	88.2
MAX	619	642	642	642
MIN	334	334	334	334

### Factor III: Family/Marital Status

The distribution of the family/marital status dimension is shown in Figure 5. The authors of the Abstract File Manual suggest that this scale is more sensitive to a clients being married or not rather than the quality of a persons marital status and that it may not be useful as a problem drinking indicator. This certainly seems to be indicated by the distribution comparisons in Figure 5 where there is no hint of ordered differences by drinker type. Furthermore, any changes in such a dimension are likely to be a long term consequence and would not be visible in a Short Term Rehabilitation study.

### Factor IV: Social Interaction/Involvement

Figure 6 shows the distribution of the social interaction dimension by drinker type. High scores represent more social activity and involvement while extreme low scores represent social alienation. This scale contains the largest number of items (ten) and the distributions appear fairly normal except for a lower bound at 295. There is a slight hint of progressively less social interaction in the two more severe drinker types.

### Factor V: Current Physical Health Problems

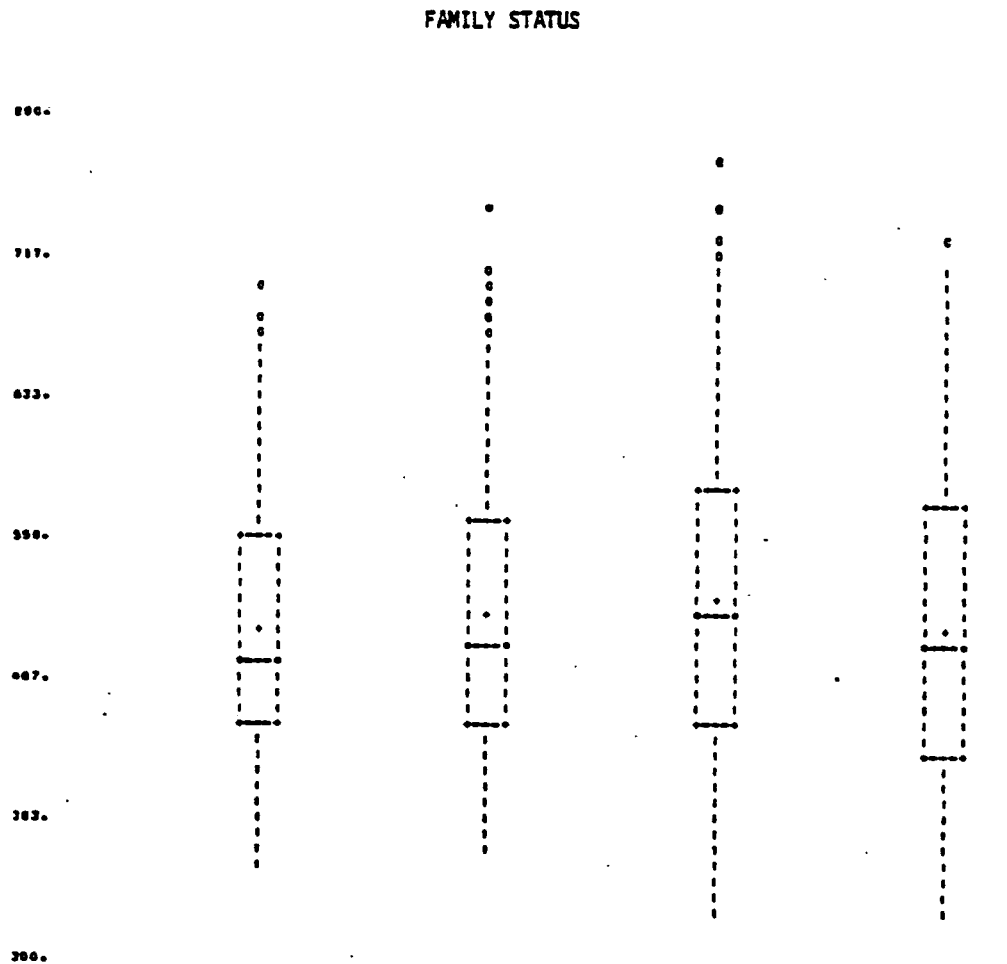
The physical health scale does show a definite pattern of greater health problems associated with more intense drinking problems (Figure 7). There are obvious distributional problems; however, as the theoretical probability density function is of a negative experimental type, characterized by a large concentration of persons with no health problems/complaints (score 400) with fewer and fewer observations as the score increases along the continuum of unhealthiness. No simple transformation can make these distributions normal, and for one to rely on traditional, normal distribution theory inferences about means is to risk the loss of important information and mask possible real differences due to a treatment effect.

As with the economic stability scale, the physical health scale appears to be more useful in discriminating at the high extreme of drinking problems. Another consideration is that any rehabilitation influenced changes may be very long term and not observable in a short duration study.

### Factor VI: Immoderate Drinking Behavior

The immoderate drinking behavior scale distribution is shown in Figure 8, and it appears to discriminate well at least between the extreme drinker types. Again, however, the distributions are highly skewed and not well suited for traditional inferential statistical methods.

FIGURE 5. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	206	442	274	297
MEAN	493.2	499.6	512.0	494.3
S.D.	75.8	79.2	91.0	86.0
MAX	696	740	769	726
MIN	355	369	325	325

FIGURE 6. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPES

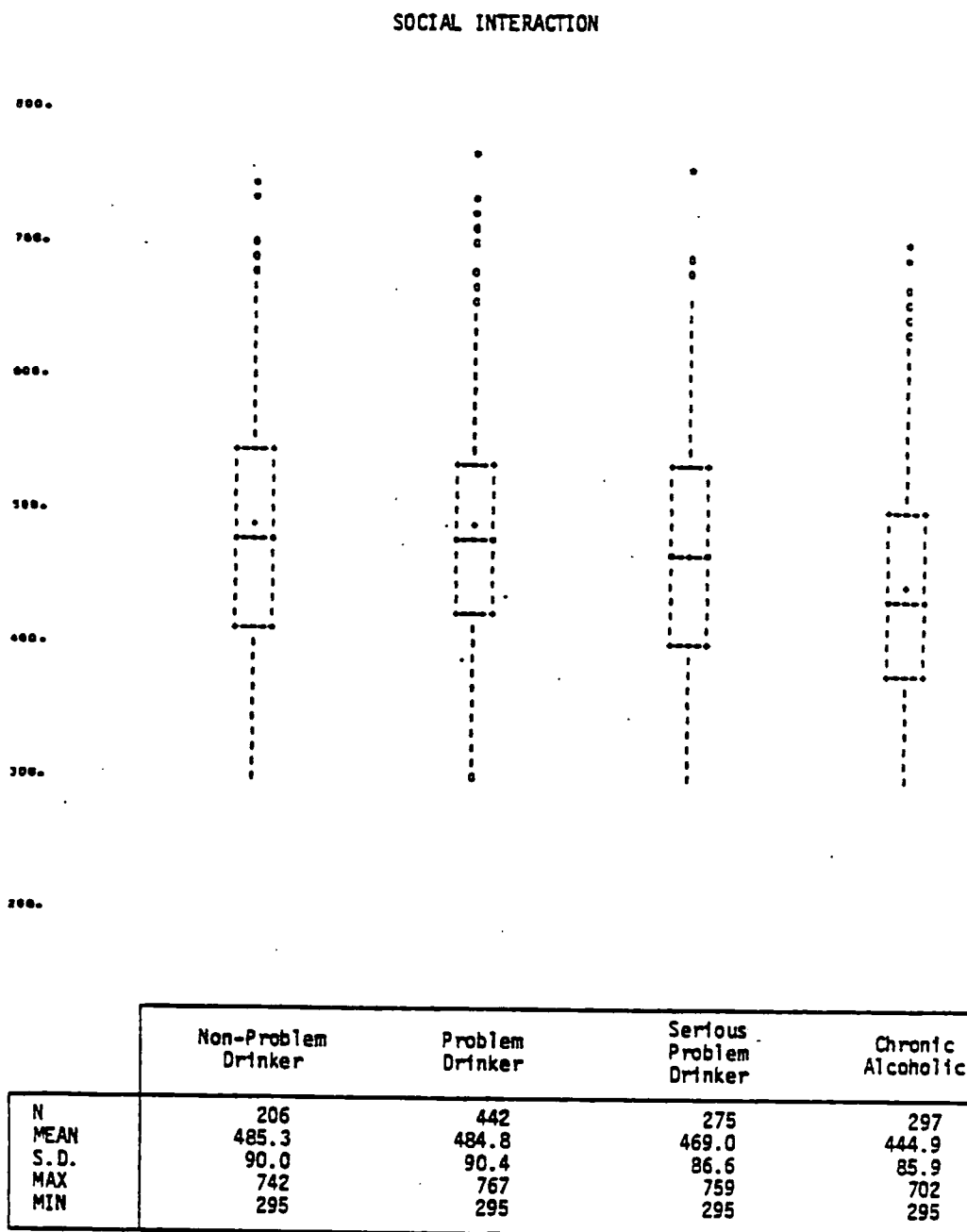
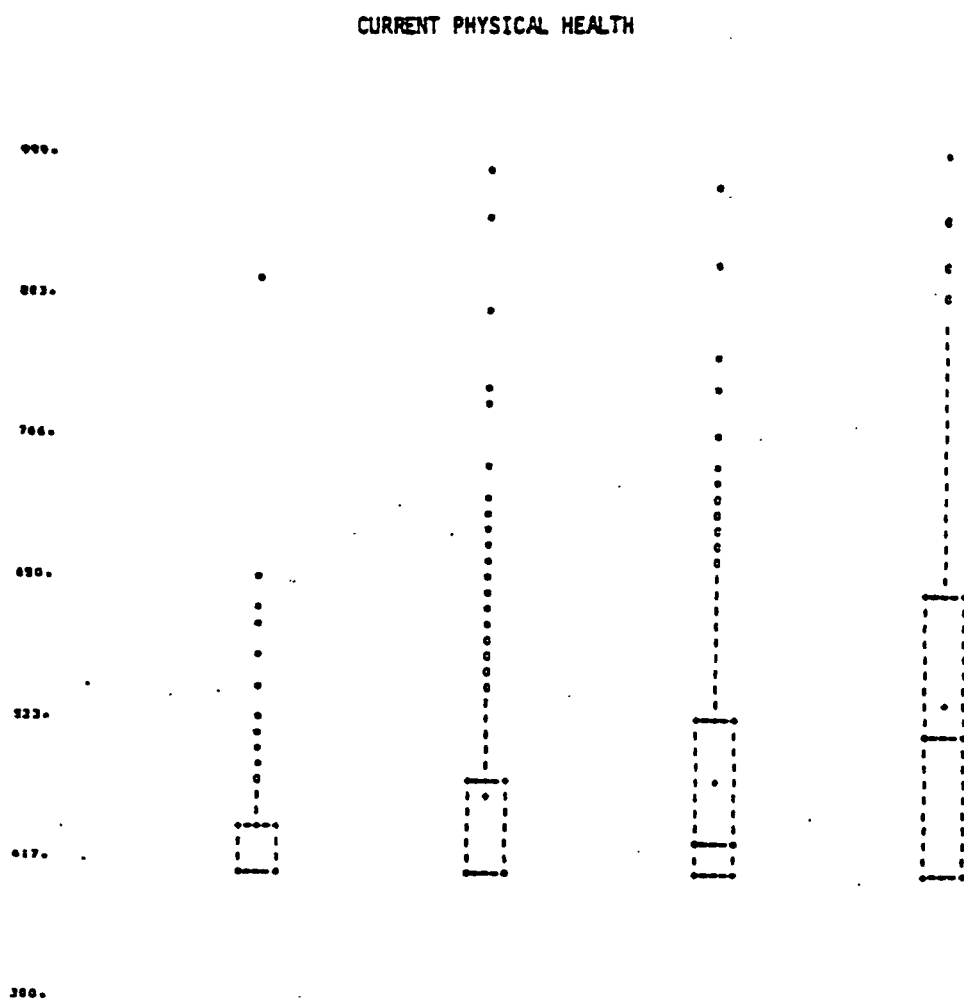
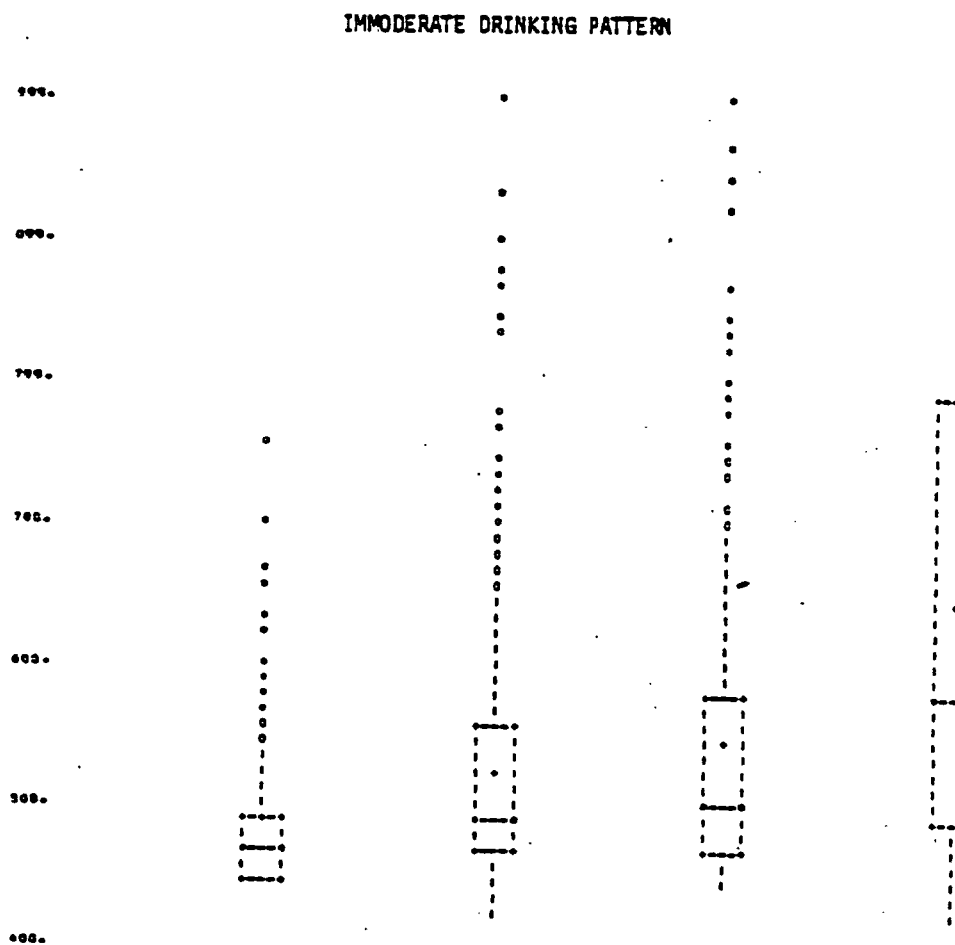


FIGURE 7. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	206	442	275	296
MEAN	440.1	463.4	484.6	545.9
S.D.	61.6	93.8	103.9	138.8
MAX	898	986	973	999
MIN	404	404	404	410

FIGURE 8. SOUTH DAKOTA LAIs - INITIAL INTERVIEWS BY DRINKER TYPE



	Non-Problem Drinker	Problem Drinker	Serious Problem Drinker	Chronic Alcoholic
N	206	441	275	296
MEAN	484.6	526.9	546.8	646.9
S. D.	54.1	98.4	115.9	184.9
MAX	755	999	999	999
MIN	446	418	446	418

## CHANGE IN THE DISTRIBUTION OF LAI SCALES--AN INVESTIGATION OF POSSIBLE TREATMENT EFFECTS

Tables 3 and 4 summarize the data availability for the two collapsed drinker types. The severe attrition in follow-up interviews dictates the meaningful modality comparisons; non-problem drinkers are restricted to DIS, PDDC and control groups, while serious problem group modality comparisons are PDDC, PDDC plus other treatment and control. There still remain a very small number of observations in the twelve and 18 month follow-up periods for some of the modalities and the stability of these scale score distributions is certainly questionable.

### Non-Problem Drinkers

Figures 9 through 14 plot the LAI scale score distributions for non-problem drinkers by treatment modality across the four observational periods.

The economic stability measure (Figure 9) reflects little change for either of the treatment groups. The control group shows a decline in economic stability during the twelve and 18 month intervals; however, less than ten observations are represented in these distributions and the apparent decline may reflect the type of person available for interview rather than any real change in income or employment status.

The quantity/frequency of current drinking pattern is shown in Figure 10. Both treatment groups and the control group show some decline in this measure on the six month follow-up; only the PDDC group shows continued decline after twelve months. By 18 months the distribution for all groups has returned to its initial interview appearance.

None of the three scales representing family status, social interaction or physical health show any patterned change or treatment group differences of interest.

The most interesting measure is Factor VI, immoderate drinking behavior, and is shown in Figure 14. There appears to be definite improvement for all three groups after six months. Because of the small number of cases represented in the twelve and 18 month intervals, there is not much evidence to suggest that treatment had a major effect, however.

### Problem Plus Serious Problem Drinkers

Figures 15 through 20 distribute the LAI scales of problem plus serious problem drinkers for the randomly assigned control, PDDC and PDDC and other treatment modalities.

The economic stability index shows the PDDC and PDDC plus treatment groups somewhat worse off after 18 months; whereas, the control group appears to

FIGURES 9 - 14. SOUTH DAKOTA LAIs BY FOLLOW-UP FOR NON-PROBLEM DRINKERS. GROUPS ARE DIS, PDDC, AND CONTROL.

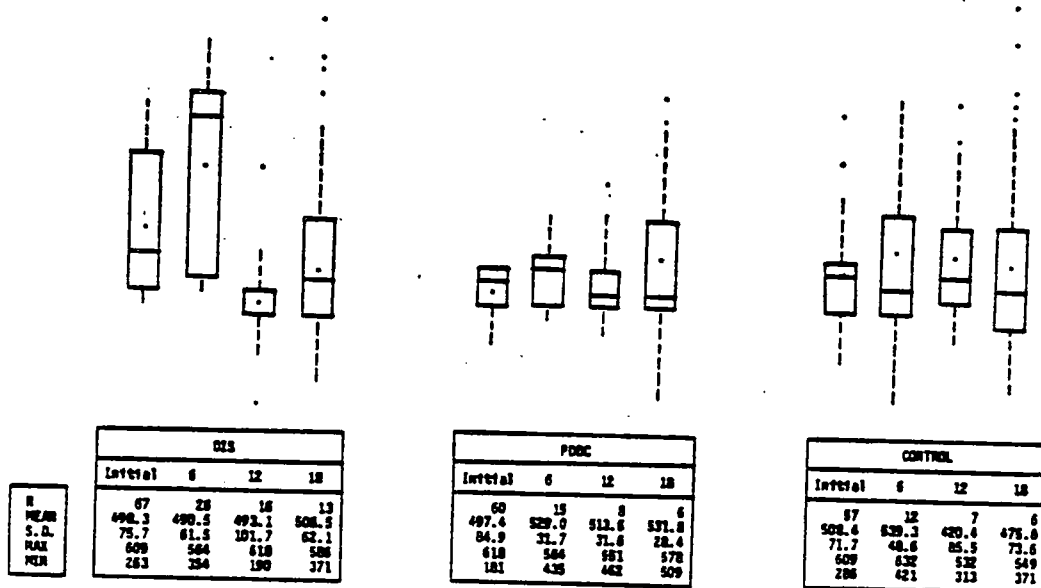


FIGURE 9. EMPLOYMENT/ECONOMIC STABILITY

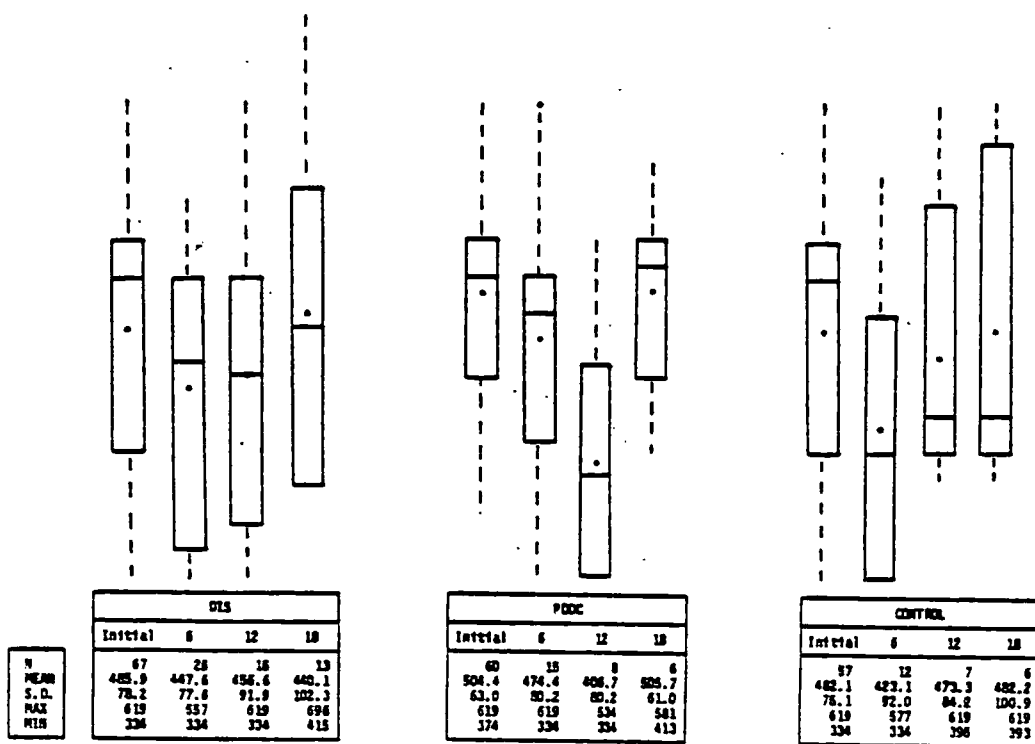


FIGURE 10. CURRENT DRINKING PATTERN

FIGURES 9 - 14 (CONTINUED). SOUTH DAKOTA LAIs BY FOLLOW-UP FOR NON-PROBLEM DRINKERS. GROUPS ARE DIS, PDDC, AND CONTROL.

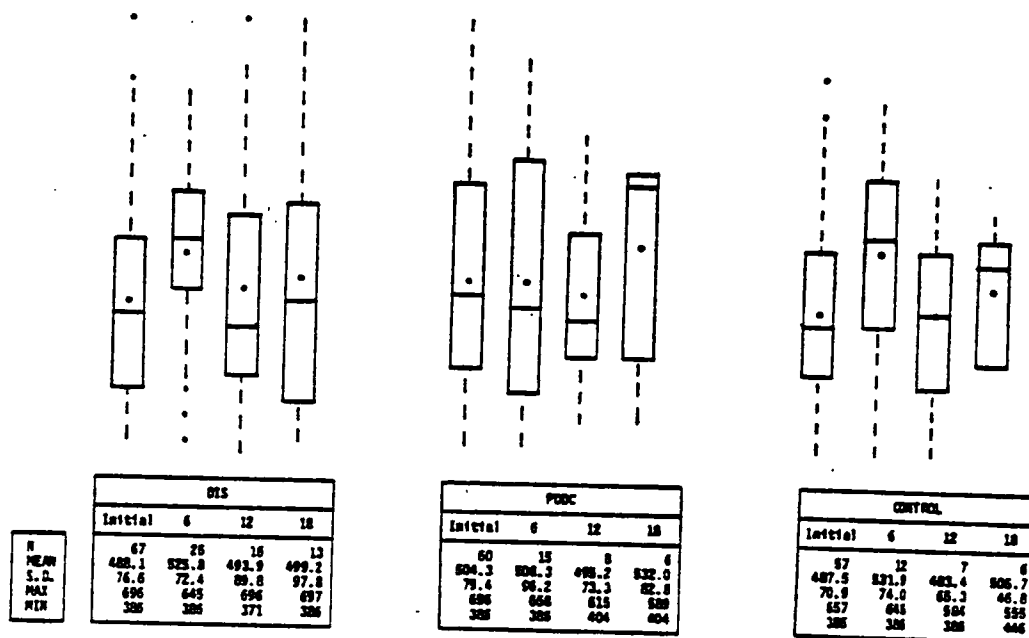


FIGURE 11. FAMILY STATUS

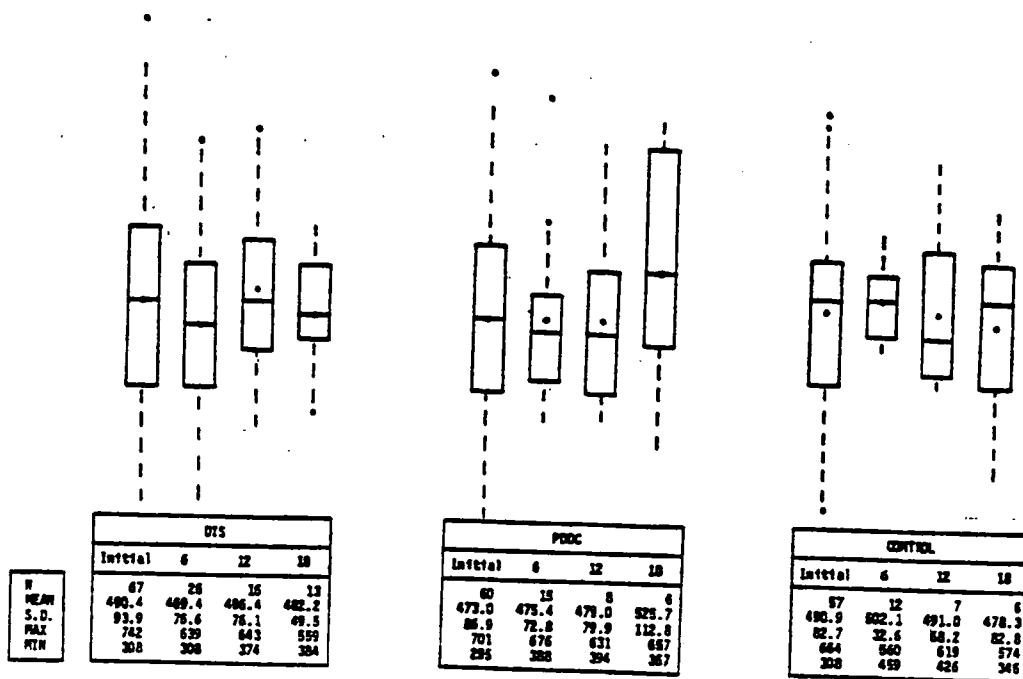


FIGURE 12. SOCIAL INTERACTION

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FIGURES 9 - 14 (CONTINUED). SOUTH DAKOTA LAIs BY FOLLOW-UP FOR NON-PROBLEM DRINKERS. GROUPS ARE DIS, PDDC, AND CONTROL.

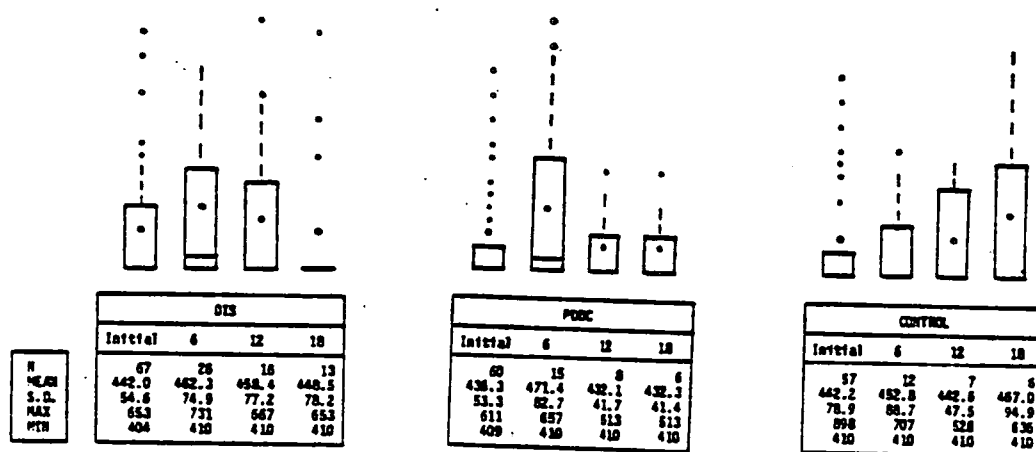


FIGURE 13. CURRENT PHYSICAL HEALTH

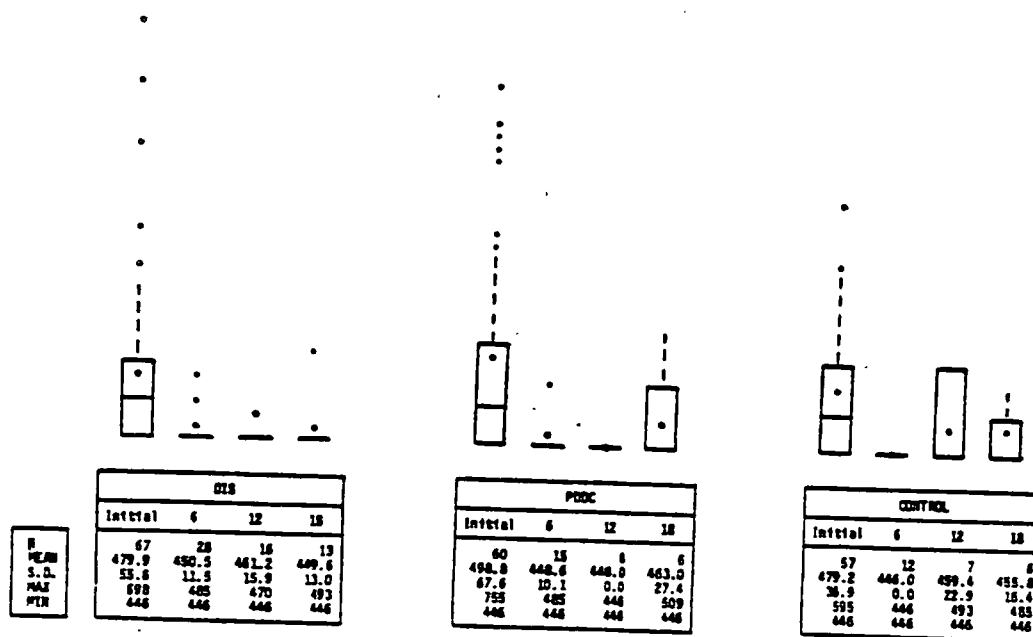


FIGURE 14. IMMODERATE DRINKING BEHAVIOR

FIGURES 15 - 20. SOUTH DAKOTA LAIs BY FOLLOW-UP FOR PROBLEM + SERIOUS PROBLEM DRINKERS. GROUPS ARE PDDC, PDDC + OTHER TREATMENT, AND CONTROL.

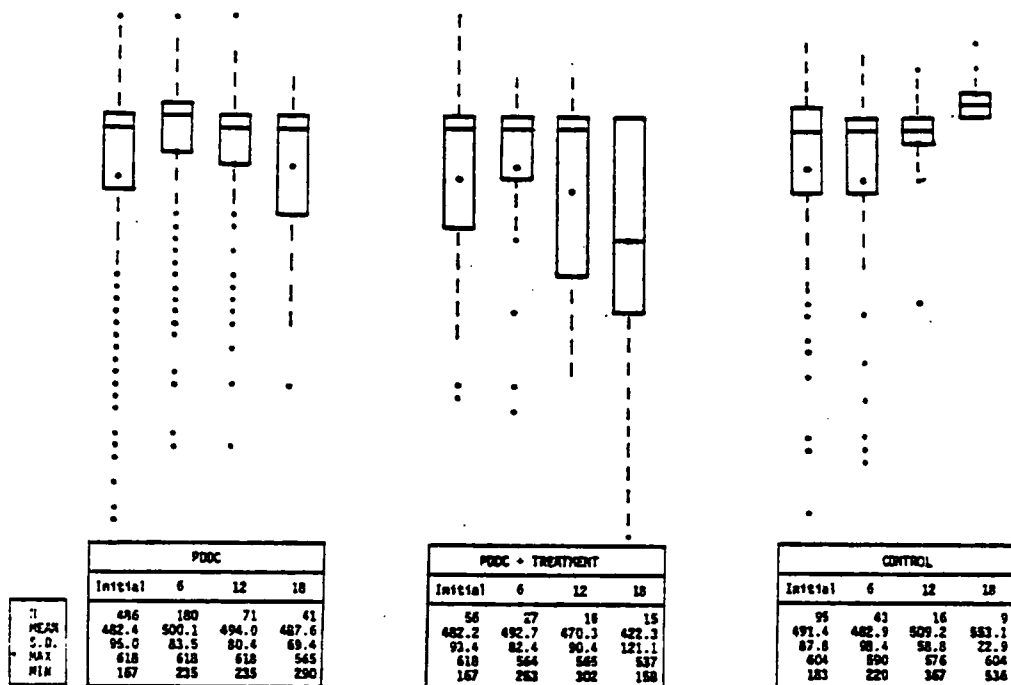


FIGURE 15. EMPLOYMENT/ECONOMIC STABILITY

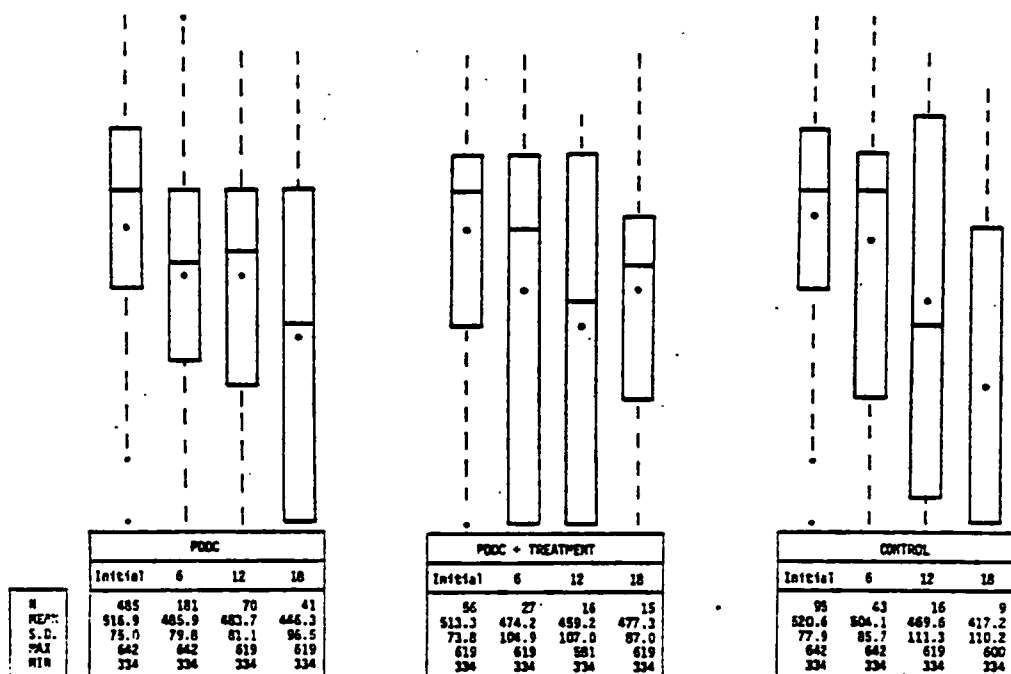


FIGURE 16. CURRENT DRINKING PATTERN

FIGURES 15 - 20 (CONTINUED). SOUTH DAKOTA LAIs BY FOLLOW-UP FOR PROBLEM + SERIOUS PROBLEM DRINKERS. GROUPS ARE PDDC, PDDC + OTHER TREATMENT, AND CONTROL.

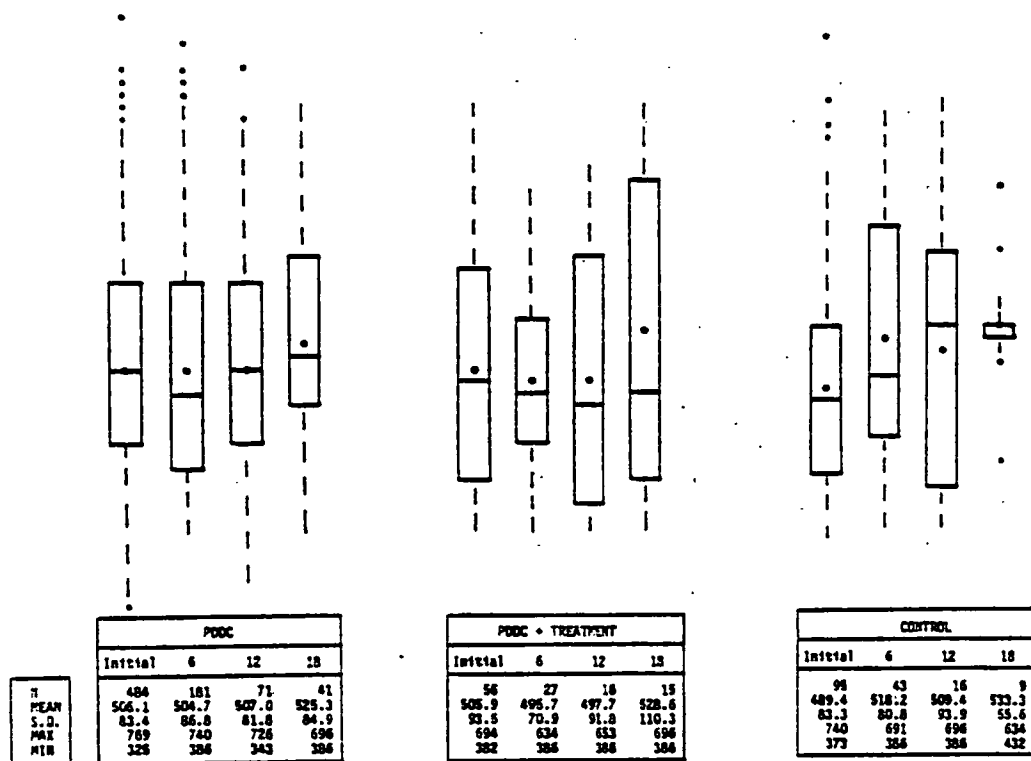


FIGURE 17. FAMILY STATUS

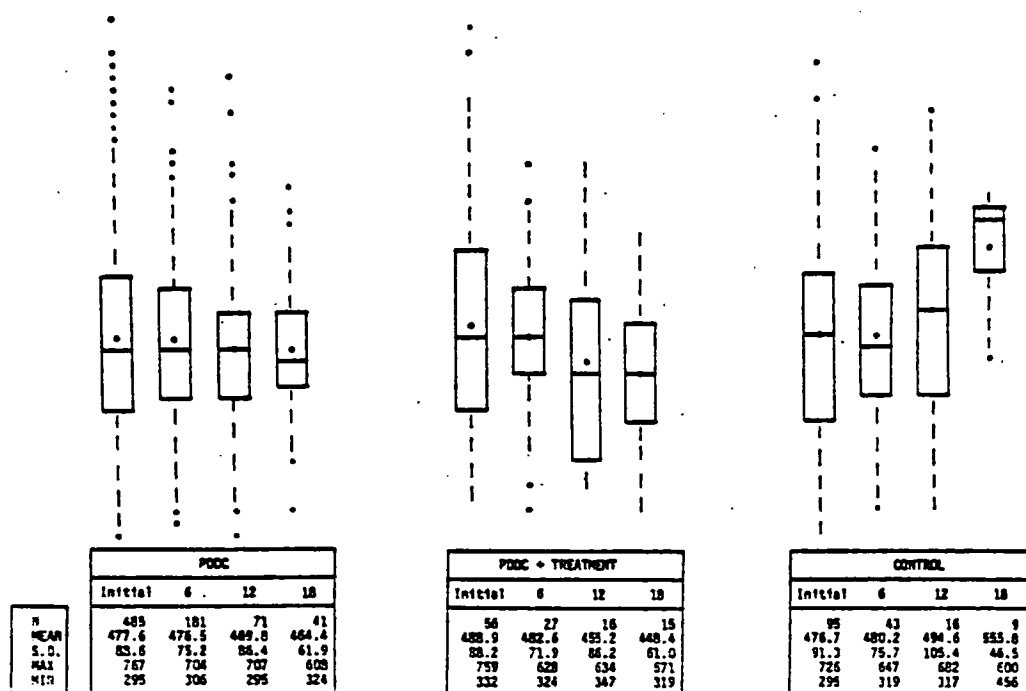


FIGURE 18. SOCIAL INTERACTION

FIGURES 15 - 20 (CONTINUED). SOUTH DAKOTA LAIs BY FOLLOW-UP FOR PROBLEM + SERIOUS PROBLEM DRINKERS. GROUPS ARE PDDC, PDDC + OTHER TREATMENT, AND CONTROL.

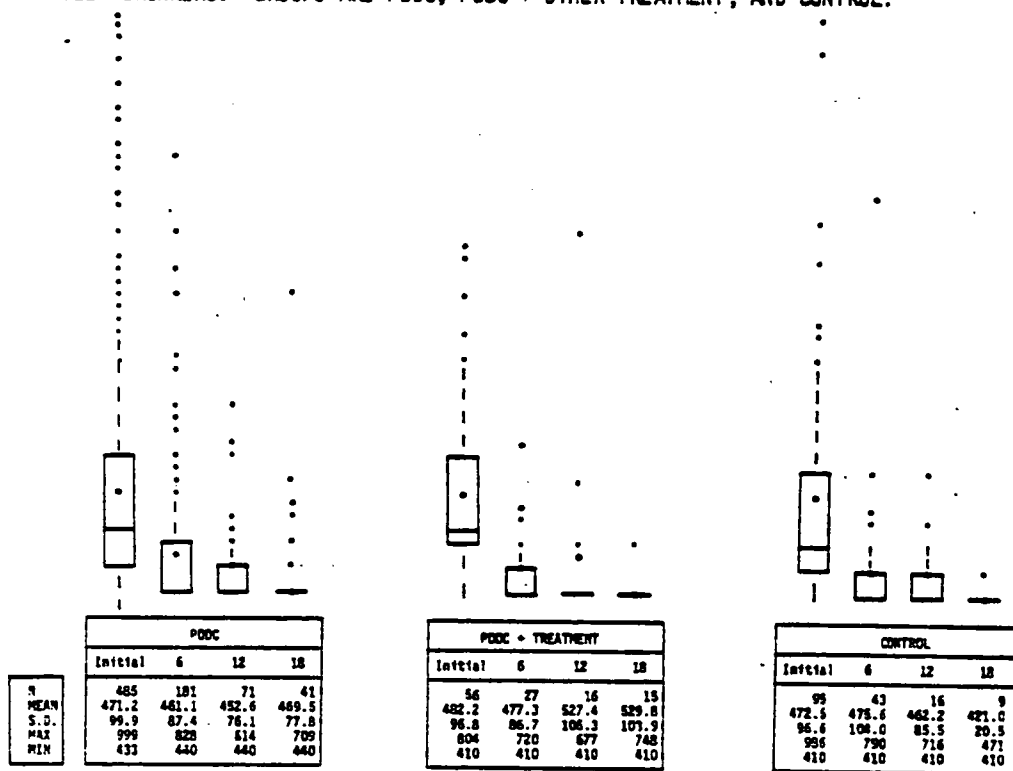


FIGURE 19. CURRENT PHYSICAL HEALTH

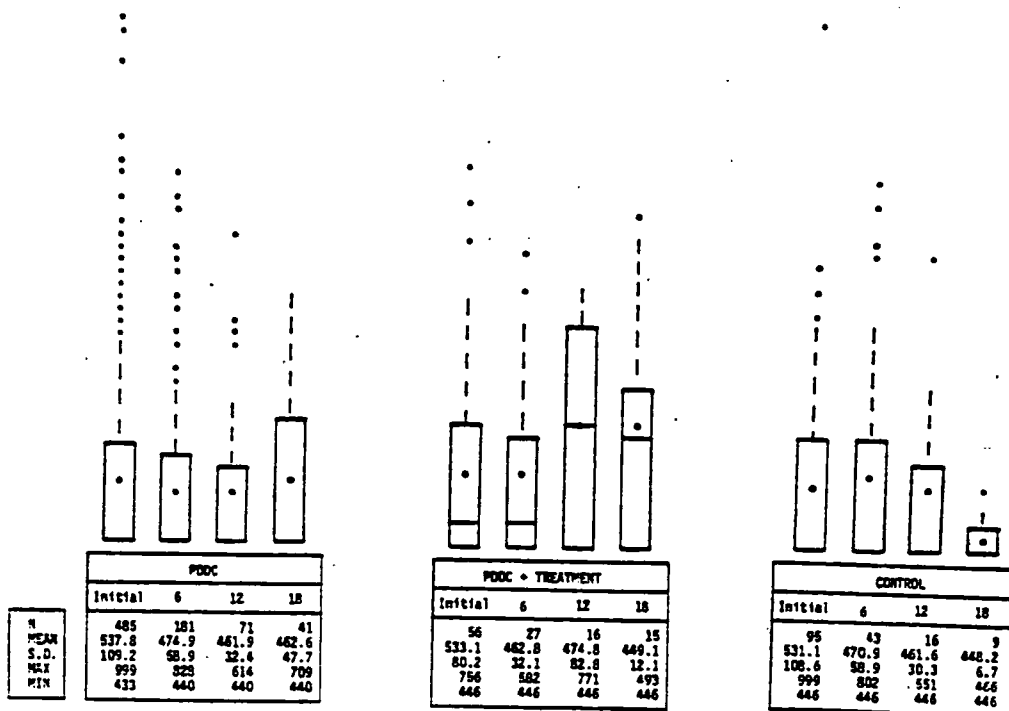


FIGURE 20. IMMODERATE DRINKING BEHAVIOR

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have improved slightly. The quantity/frequency of drinking scale shows general improvement across all groups--no treatment effect is evident. The family status scale shows no patterned change. The control group displays a tendency toward more social interaction which is not evident in either treatment group. All three groups show similar improvement on the physical health factor. The alcohol abuse dimension shows little change for either treatment group--the control group's record is at least as good or better on this scale.

### RECIDIVISM ANALYSIS

The final section of the SD:ASAP client analysis looks at the traditional measure, DWI recidivism, for possible treatment effects during that period in which randomly assigned control groups were in effect. The follow-up records checks were obtained independently of any client contact, so 1804 client entries since January, 1974, are used in the group comparisons. The statistical method is the life table analysis of survival data for progressively censored samples<sup>4,5</sup> (survivors are defined as persons who do not become re-arrested by the end of the observation period).

The observation interval for group entry and follow-up is quarterly. Each group received entries in each quarter from the beginning of 1974 through and including the first quarter of 1976. Records check follow-ups continued through June, 1977, thus the minimum follow-up period for any client is five full quarters, while the initial entries have a maximum follow-up period of fourteen quarters.

Modality comparisons are performed within a particular drinker type--as before, problem drinkers and serious problem drinkers are combined. Of primary importance are performance comparisons of the control group with whatever treatment alternatives are available for a particular drinker type. There are, however, other quasi-control comparisons of treatment groups with those clients who for some reason were either not referred for treatment, dropped out of treatment or never showed up for treatment. This type of comparison is most important for the chronic alcoholics since none of these severe drinkers were randomly assigned to control.

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<sup>4</sup>Gross, A. J. and Clark, V. A. Survival Distributions: Reliability Applications in the Biomedical Sciences. John Wiley and Sons, New York, 1975.

<sup>5</sup>Cutler, S. J. and Ederer, F. (1958). Maximum Utilization of the Life Table Method in Analyzing Survival, Journal of Chronic Diseases, Vol. 8, pp. 699-713.

### Treatment Effectiveness for Non-Problem Drinkers

Figure 21 shows the 15 quarter cumulative survival rates for: 1) total non-problem drinkers who completed their assigned treatment (i.e., either DIS or PDDC), 2) non-problem drinkers not referred to treatment, and 3) treatment dropouts and no shows. Table 7 summarizes the survival rate computations for selected intervals after entry along with t-tests for pairwise comparisons of the not referred group and dropout group with the treated group. Inspection of Figure 21 shows that the treatment group curve remains above the other groups over the entire 15 quarter range; the curves remain essentially parallel and show no tendency to diverge with length of follow-up. Nevertheless, the separation in these curves is small with less than four percent difference between the treated and non-treated groups at the end of 15 quarters. The t values suggest that the separations are far from being significant.

The actual treatment modality and control group comparisons for non-problem drinkers are shown in Figure 22. Again there is little separation between the three curves, although the PDDC group has a slightly lower recidivism rate over the entire follow-up period. Table 8 indicates that the differences in the survival rates for either the PDDC/control or DIS/control comparisons are not statistically significant at any of the four intervals tested.

Non-problem drinkers as a group display a relatively low probability of re-arrest--approximately 15 percent recidivist rate in a four year follow-up period. There is little evidence in either of the foregoing comparisons to suggest that treatment in the form of either two session or four session classes is a significant deterrent to subsequent drunk driving behavior.

### Treatment Effectiveness for Problem Drinkers

Figure 23 shows the cumulative survival rate curves for three problem drinker groups: 1) total problem drinker treatment entries, 2) total problem drinkers not referred, and 3) total treatment dropouts and no shows. For purposes of these analyses, two SD:ASAP drinker classifications, problem drinkers and serious problem drinkers have been combined, and are referred to as problem drinkers. The quasi-experimental statistical comparisons between total treatment entries versus total not referred groups, and between total treatment entries and total dropout/no-show groups are summarized in Table 9.

Inspection of Figure 23 indicates the basic similarity of survival rate curves for the three groups. The quasi-experimental assessment of overall treatment effectiveness does not yield any statistically significant differences between the total treatment entry and total not referred groups, and therefore, no indications of overall treatment program effectiveness (in increasing the probability of survival

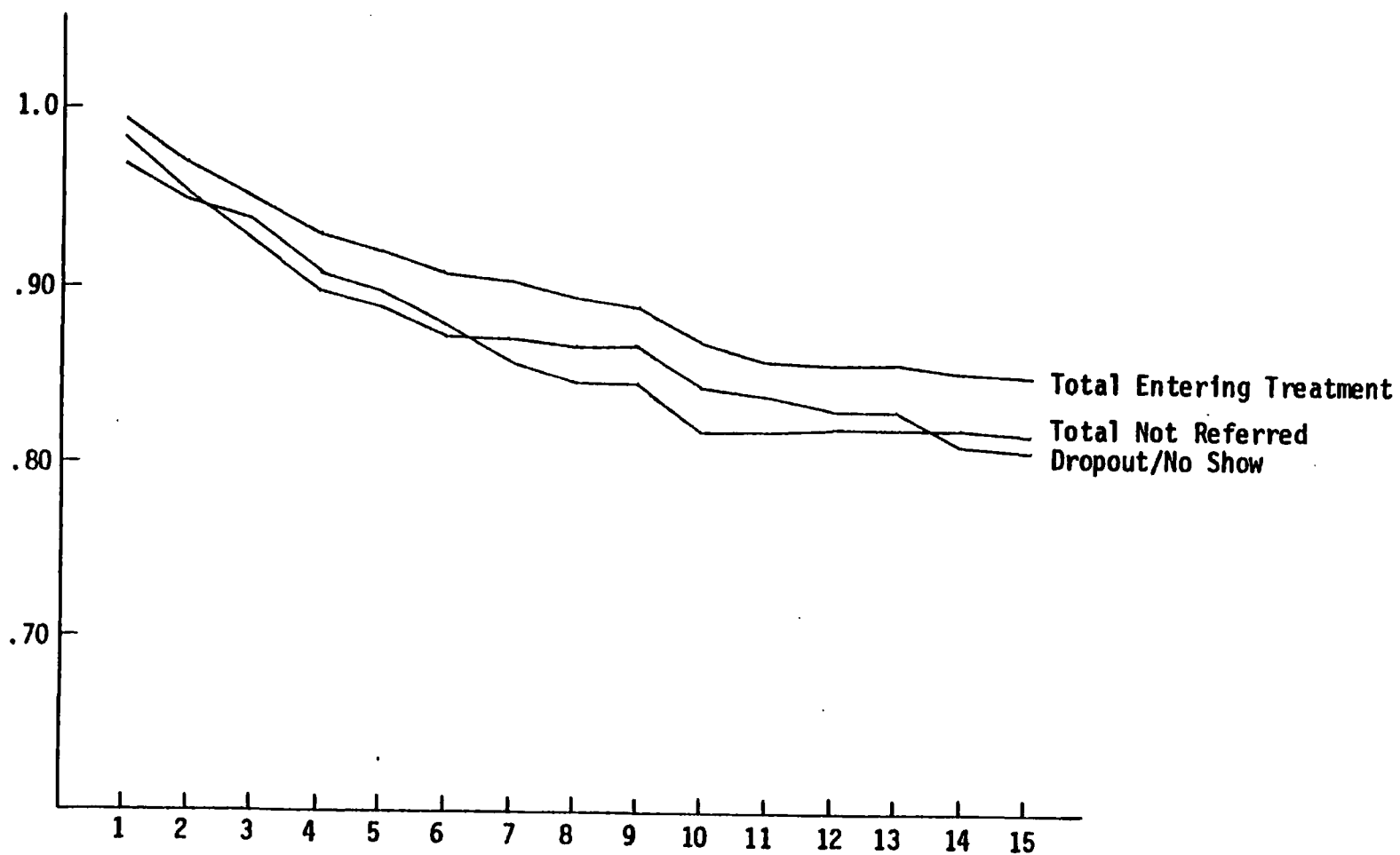


FIGURE 21. CUMULATIVE SURVIVAL RATE FOR NON-PROBLEM DRINKERS

TABLE 7. QUASI-EXPERIMENTAL SURVIVAL RATE COMPARISONS FOR SOCIAL DRINKERS

	Quarter	Total Treatment Entries	Total Not Referred	Dropout/No Show
Cumulative Survival Rate	4	.9343	.9126	.9018
	8	.8985	.8496	.8708
	12	.8606	.8226	.8342
	15	.8550	.8226	.8141
Standard Error	4	.0084	.0278	.0179
	8	.0104	.0359	.0204
	12	.0130	.0395	.0245
	15	.0141	.0395	.0311
Effective Sample Rate	4	867.0	103.0	275.0
	8	842.5	99.0	269.6
	12	707.3	93.4	229.9
	15	623.6	93.4	156.4

t Tests

		Quarters After Entry			
		4	8	12	15
Total Treatment Entries vs. Total Not Referred	t=	0.74	1.31	0.91	0.77
	df=	968	940	799	715
Total Treatment Entries vs. Dropout/No Show	t=	1.64	1.21	0.95	1.20
	df=	1140	1110	935	778

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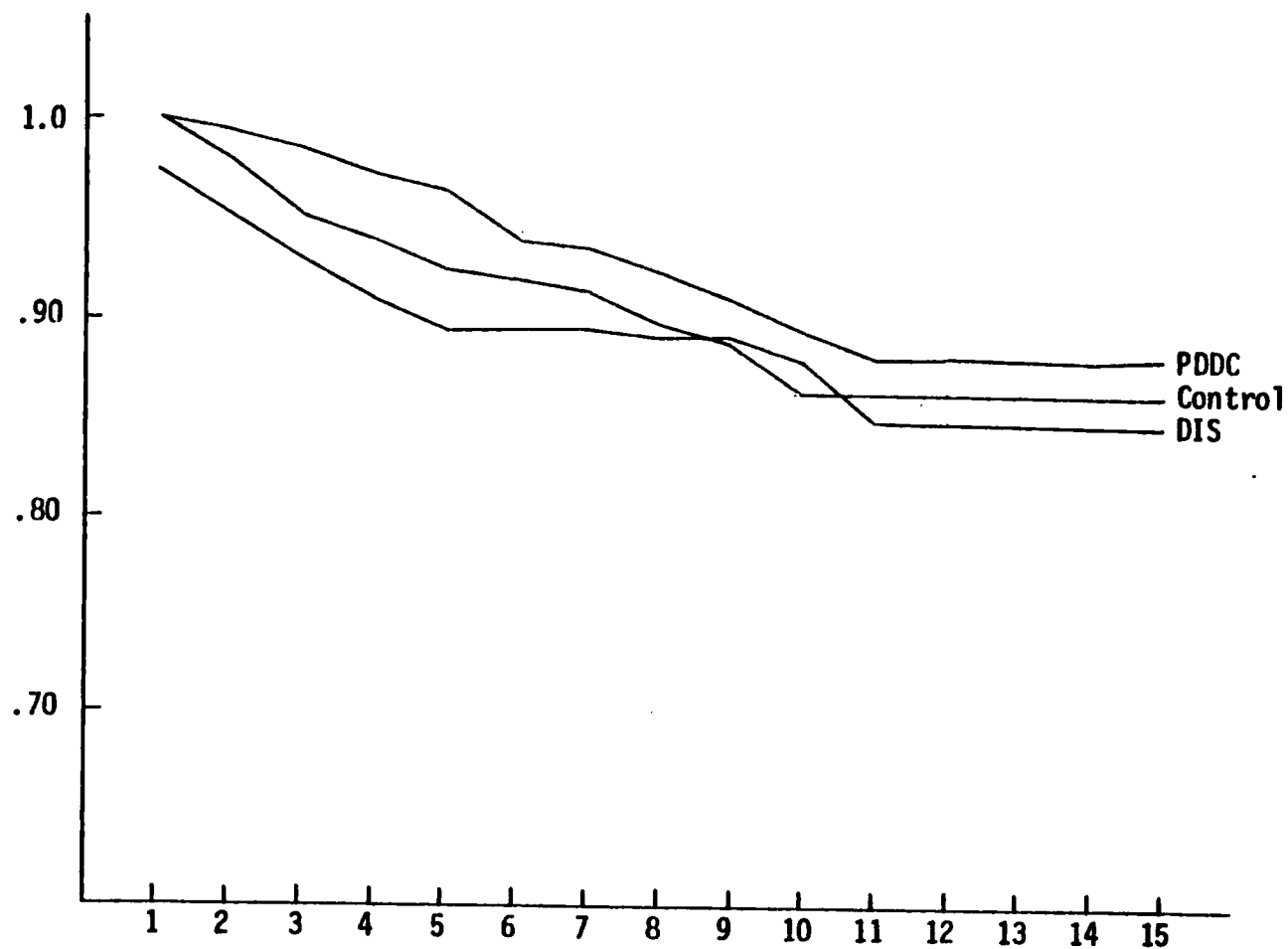


FIGURE 22. TREATMENT MODALITY COMPARISONS OF CUMULATIVE SURVIVAL RATES FOR NON-PROBLEM DRINKERS

TABLE 8. EXPERIMENTAL SURVIVAL RATE COMPARISONS FOR SOCIAL DRINKERS

	Quarter	Control	DIS	PDDC
Cumulative Survival Rate	4	.9412	.9128	.9734
	8	.9003	.8916	.9256
	12	.8655	.8507	.8826
	15	.8655	.8507	.8826
Standard Error	4	.0180	.0231	.0099
	8	.0239	.0256	.0165
	12	.0303	.0337	.0216
	15	.0303	.0337	.0216
Effective Sample Size	4	170.0	149.0	263.0
	8	157.0	147.2	154.2
	12	126.5	111.6	221.1
	15	126.5	111.6	221.1

## t Tests

		Quarters After Entry			
		4	8	12	15
Control vs. DIS	t=	0.97	0.25	0.33	0.33
	df=	317	302	236	236
Control vs. PDDC	t=	-1.56	-0.87	-0.46	-0.46
	df=	431	409	346	346

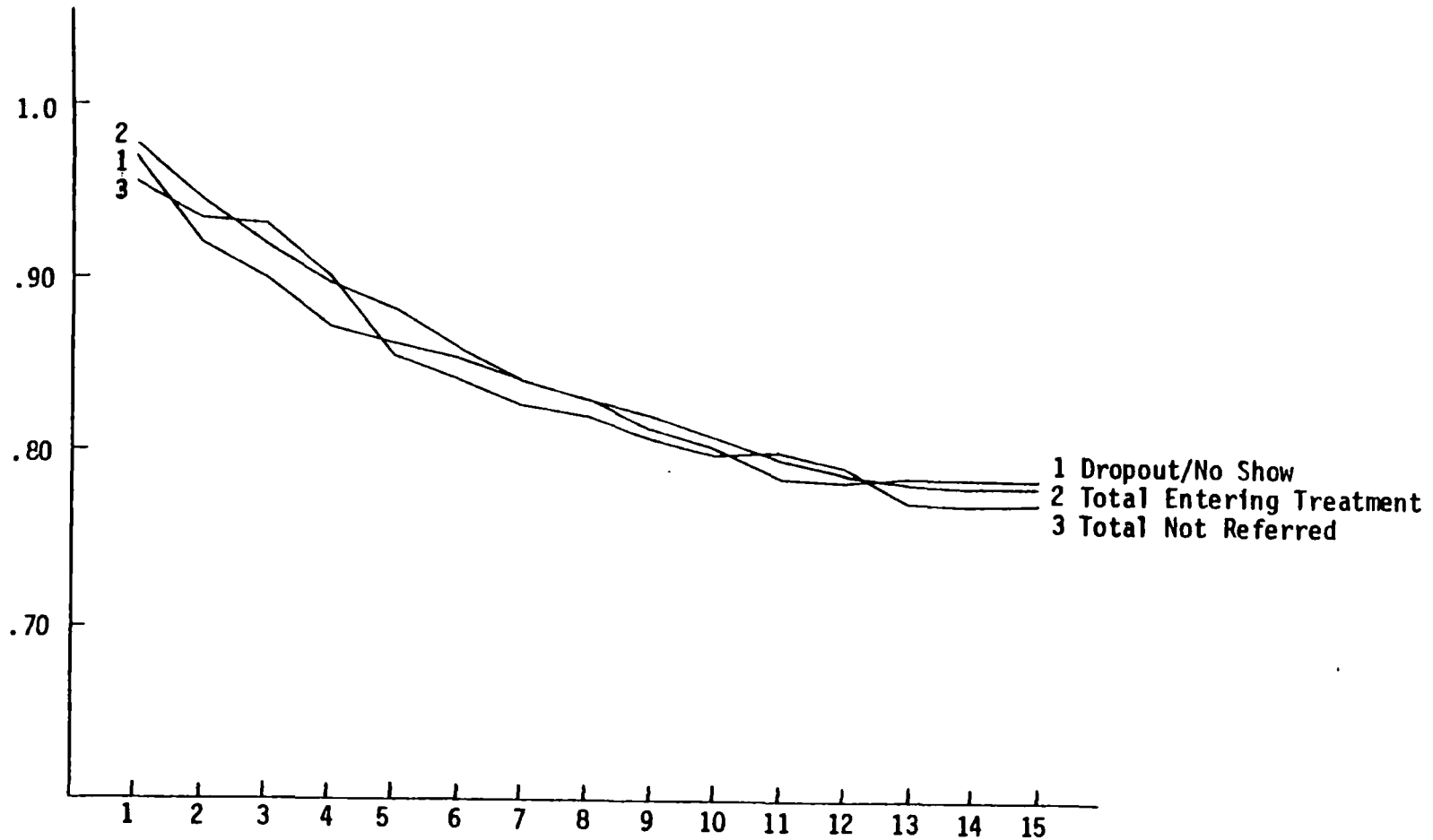


FIGURE 23. CUMULATIVE SURVIVAL RATE FOR PROBLEM DRINKERS

TABLE 9. QUASI-EXPERIMENTAL SURVIVAL RATE COMPARISONS FOR PROBLEM PLUS SERIOUS PROBLEM DRINKERS

	Quarter	Total Treatment Entries	Total Not Referred	Dropout/No Show
Cumulative Survival Rate	4	.8998	.8988	.8745
	8	.8318	.8249	.8314
	12	.7891	.7925	.7878
	15	.7801	.7711	.7878
Standard Error	4	.0051	.0196	.0143
	8	.0064	.0249	.0166
	12	.0077	.0279	.0205
	15	.0084	.0310	.0205
Effective Sample Size	4	3507.0	237.0	534.0
	8	3407.5	233.2	507.5
	12	2798.2	211.6	399.8
	15	2432.4	184.1	399.8

t Tests

		Quarters After Entry			
		4	8	12	15
Total Treatment Entries vs. Total Not Referred	t=	0.00	0.27	-0.12	0.28
	df=	3742	3639	3008	2615
Total Treatment Entries vs. Dropout/No Show	t=	1.59	0.02	0.06	-0.35
	df=	4039	3913	3196	2830

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without re-arrest) for problem drinker countermeasures considered together. It should again be noted that the not referred group does not represent a matched or systematically designated control group for this comparison. It is entirely possible that individuals were differentially assigned to treatment or no treatment for reasons related to their subsequent recidivist performance.

Figure 23 and Table 9 also show the post-referred performance of problem drinkers who dropped out of or failed to show up for assigned treatment programs and their follow-up interval comparisons to the group of total treatment entries. These two groups appear to have essentially equivalent cumulative survival rate curves and indicate no statistical differences between groups for any of the four follow-up intervals examined.

The experimental comparisons of each of the major problem drinker treatment modalities with the random assignment control condition are illustrated in Figure 24. Table 10 summarizes the statistical comparisons between the performance of each modality group versus the control group for the four, eight, twelve and 15 quarter intervals subsequent to treatment entry.

The virtually identical cumulative survival rate curves for the no treatment control group and for the group of problem drinkers assigned to PDDC only, along with the lack of any significant differences between these groups during the selected observation intervals, fails to support the hypothesis that PDDC alone is capable of increasing the probability of survival without re-arrest for individuals classified as problem drinkers.

Figure 24 illustrates a rather wide separation of cumulative survival rate curves for the control group compared to the outpatient/PDDC plus treatment group, and as compared to the group of individuals referred to the AA/PDDC + AA countermeasures. The survival rate curve for the control group remains at a higher level than that of either of the two modality combinations across the entire 15 quarter follow-up period, thus indicating a consistently lower rate of individuals surviving re-arrest for the rehabilitation countermeasures. Statistical comparisons for the outpatient group versus the control group show significant differences at eight quarters ( $t = 2.62$ ,  $df = 772$ ,  $p < .01$ ) and at twelve quarters ( $t = 2.07$ ,  $df = 602$ ,  $p < .05$ ), while indicating no statistical significance at the final 15 quarter observation. The group of individuals referred to the AA/PDDC + AA modality combination show the lowest cumulative survival rate curve and when compared to the individuals assigned to the no treatment control group indicate a statistically significant difference at quarter four ( $t = 2.79$ ,  $df = 640$ ,  $p < .01$ ), quarter eight ( $t = 3.23$ ,  $df = 623$ ,  $p < .01$ ), quarter twelve ( $t = 3.76$ ,  $df = 481$ ,  $p < .01$ ) and the final interval, quarter 15 ( $t = 3.22$ ,  $df = 367$ ,  $p < .01$ ).

The results of these comparisons of the performance of problem drinkers referred to particular treatment modalities or combinations and the

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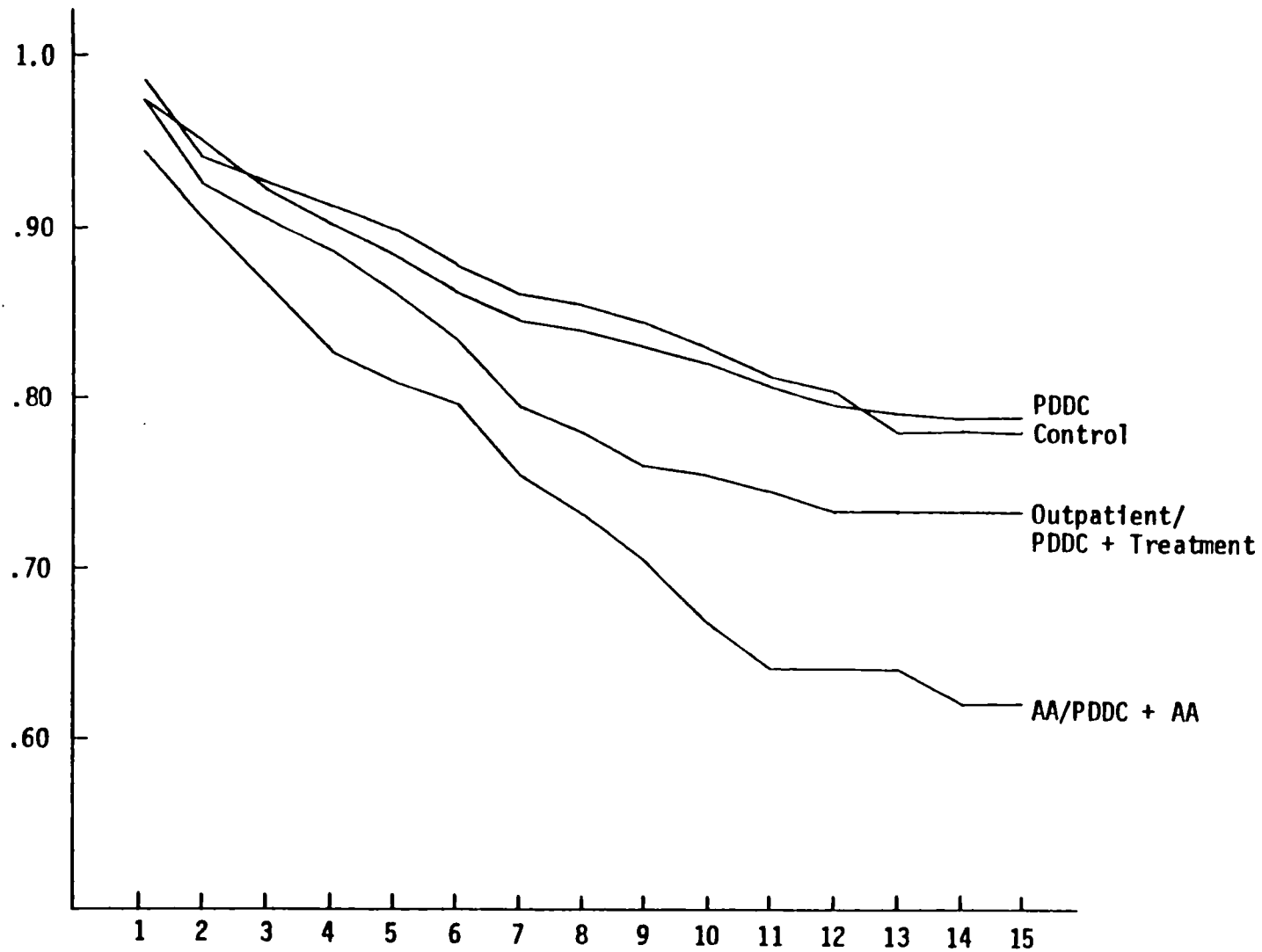


FIGURE 24. TREATMENT MODALITY COMPARISONS OF CUMULATIVE SURVIVAL RATES FOR PROBLEM DRINKERS

TABLE 10. EXPERIMENTAL SURVIVAL RATE COMPARISONS FOR PROBLEM PLUS SERIOUS PROBLEM DRINKERS

	Quarter	Control	PDDC	Outpatient <sup>1</sup>	AA <sup>2</sup>
Cumulative Survival Rate	4	.9145	.9024	.8882	.8103
	8	.8553	.8411	.7808	.7345
	12	.8056	.8000	.7347	.6424
	15	.7815	.7903	.7347	.6226
Standard Error	4	.0129	.0074	.0173	.0297
	8	.0166	.0092	.0231	.0336
	12	.0222	.0113	.0261	.0374
	15	.0273	.0126	.0261	.0411
Effective Sample Size	4	468.0	1609.0	331.0	174.0
	8	451.6	1579.2	322.1	173.1
	12	318.2	1258.5	285.4	164.7
	15	229.6	1052.1	285.4	139.1

t Tests

		Quarters After Entry			
		4	8	12	15
Control vs. PDDC	t=	0.81	0.75	0.23	-0.29
	df=	2075	2029	1575	1280
Control vs. Outpatient	t=	1.22	2.62**	2.07*	1.24
	df=	797	772	602	513
Control vs. AA	t=	2.79**	3.23**	3.76**	3.22**
	df=	640	623	481	367

<sup>1</sup>Outpatient = Outpatient/PDDC + Outpatient

<sup>2</sup>AA = AA/PDDC + AA

\*p < .05

\*\*p < .01

performance of similarly classified individuals who were assigned to a no treatment control group suggest that these treatments may not have been effective in accomplishing their intended traffic safety objectives, that is, reducing the probability of recidivism, or conversely, increasing the probability of survival without re-arrest.

It must be noted, however, that the assignments to the no treatment control group were made after individuals were referred to a particular treatment modality. Since referral to a particular countermeasure was usually predicated on the severity of alcohol problem exhibited, it is therefore reasoned that individuals actually assigned to AA and/or outpatient treatments would represent the more severe range of problems, while the no treatment control group would be comprised of a broader range of ASAP clients. Also, further caution should be observed in the interpretation of the low survival rate curve manifest by the AA/PDDC + AA group as this group contained a rather small total sample size (only 21 problem drinkers were referred to this modality combination), and they exhibited relatively large standard curves for each of the observed follow-up intervals, as indicated in Table 10.

#### Treatment Effectiveness for Chronic Alcoholics

The most severe problem drinkers identified by the SD:ASAP pre-sentence investigation were designated chronic alcoholics, and were exempt from the random assignment control group procedure implemented in the first quarter of 1974. Because of this exception, quasi-experimental comparisons were utilized both for analyses of overall treatment program effect, and for analyses designed to assess the effectiveness of individual treatment modalities and modality combinations.

Figure 25 shows cumulative survival rate curves for three groups of chronic alcoholic clients: 1) total treatment entries, 2) total not referred to treatment, and 3) total dropouts/no shows. Table 11 contains the t-test comparisons at the four, eight, twelve and 15 quarter intervals of the follow-up period for the total treatment entry group versus the total not referred group and for the total treatment entry group versus the group of dropout/no shows.

Although the survival rate curve for the total treatment entries group appears to be well above that for the group of individuals not referred to treatment (with a rather wide separation between quarters twelve through 15), none of the t-tests conducted between these groups proved to be statistically significant\*. Comparisons between the

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\*It should be noted that the total not referred group consisted of a relatively small sample size (26 individuals) which may have contributed to this lack of significance.

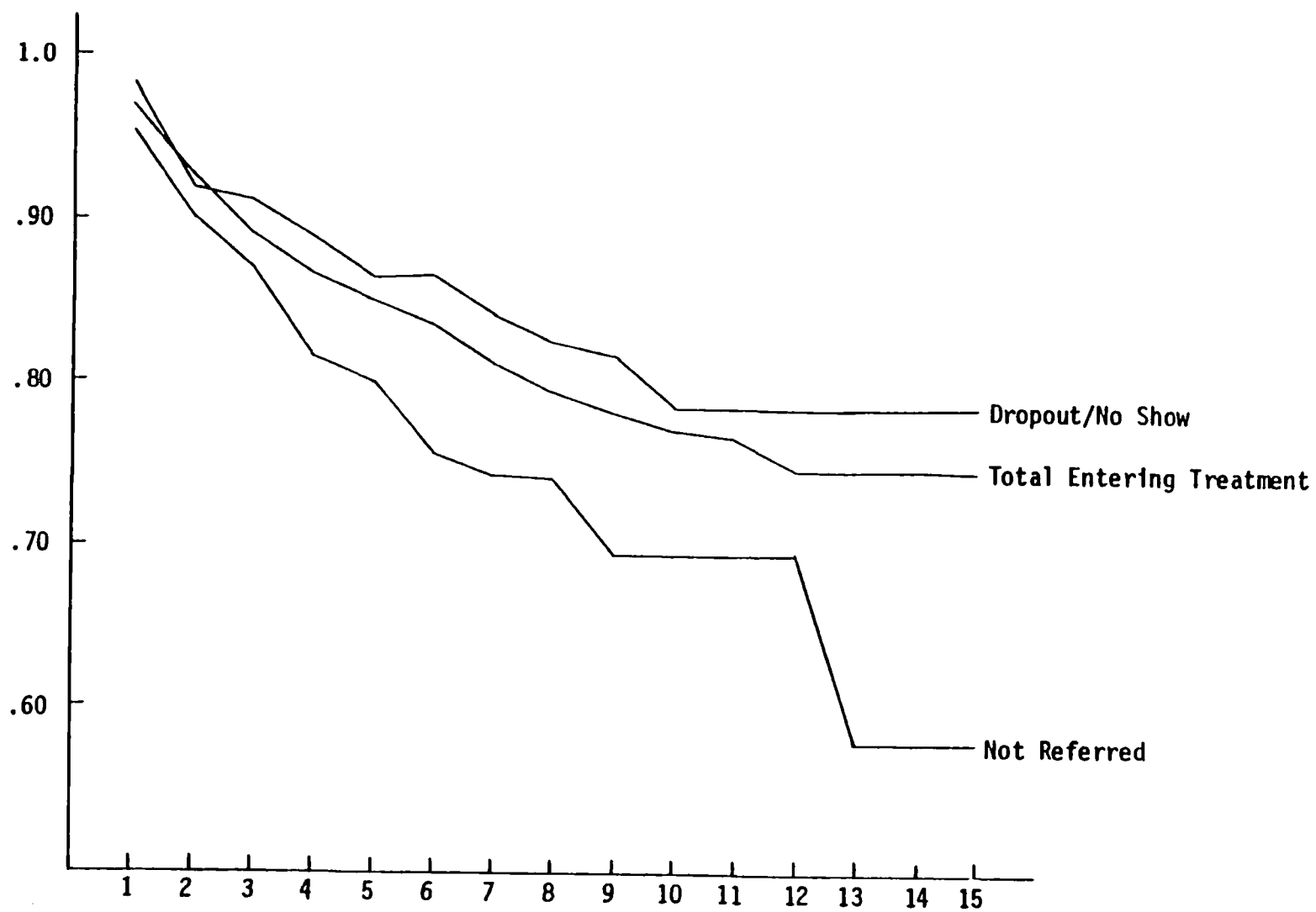


FIGURE 25. CUMULATIVE SURVIVAL RATE FOR CHRONIC ALCOHOLICS

TABLE 11. QUASI-EXPERIMENTAL ANALYSIS OF OVERALL TREATMENT EFFECT FOR CHRONIC ALCOHOLICS

	Quarter	Total Treatment Entries	Total Not Referred	Dropout/No Show
Cumulative Survival Rate	4	.8692	.8169	.8906
	8	.7961	.7442	.8287
	12	.7486	.6970	.7865
	15	.7486	.5808	.7865
Standard Error	4	.0115	.0459	.0225
	8	.0142	.0521	.0284
	12	.0195	.0585	.0362
	15	.0195	.1167	.0362
Effective Sample Size	4	856.0	71.0	192.0
	8	810.3	70.2	175.4
	12	493.4	61.7	128.5
	15	493.4	17.9	128.5

t Tests

		Quarters After Entry			
		4	8	12	15
Total Treatment Entries vs. Total Not Referred	t=	1.10	0.96	0.84	1.42
	df=	925	878	553	509
Total Treatment Entries vs. Dropout/No Show	t=	-0.85	-1.03	-0.92	-0.92
	df=	1046	984	620	620

total treatment entry and total dropout/no show group were also made at quarters four, eight, twelve and 15 of the follow-up period. The proportion of individuals surviving without arrest does not appear to be any different for these groups, as each of the four t-tests conducted also proved to be non-significant.

Since an appropriate no treatment control group was not available for chronic alcoholics referred to various SD:ASAP treatment modalities, the total not referred group was used as a comparison group to support quasi-experimental analyses of the effectiveness of each of the major rehabilitation modalities to which chronic alcoholics were exposed. It should be noted that this is not a matched or systematically assigned control group. For the chronic alcoholic clients it is highly likely that perception of an individual's drinking problem severity by the courts may have influenced treatment referral decisions. Although it is not possible to document the nature or extent of the bias present, it appears likely that the individuals who were perceived as exhibiting less severe and disabling drinking problems were more likely to be exempt from a court referral to rehabilitation.

Cumulative survival rates for four referral groups of chronic alcoholic clients are shown in Figure 26. These included: 1) PDDC, 2) outpatient treatment (or outpatient + PDDC), 3) AA (or PDDC + AA), and 4) inpatient treatment. Table 12 summarizes the interval comparisons (quarters four, eight, twelve and 15) of the survival rates for each of these groups with the survival rate of the total not referred comparison group.

Comparison of the PDDC group with the group of individuals not referred to treatment reveals a relatively large separation between survival rate curves for these two groups. The PDDC group maintains the highest rate of survival from re-arrest than all modality and modality combinations, with the not referred group indicating the lowest rate for all groups during the final four operation intervals.

It should be remembered, however, that clients classified as chronic alcoholics that are referred to the PDDC education modality were considered to have a drinking problem of less severity than other clients in this classification, and therefore, the PDDC group would be expected to manifest the highest proportion of individuals surviving re-arrest. Although the separation of survival rates between these two groups appears to be fairly wide (especially between quarters twelve and 15), none of the t-tests conducted between these two groups proved to be statistically significant. The lack of sensitivity of these tests, however, may be at least partially due to the relatively small sample size for the total not referred group, which contributes to the relatively large standard curves produced by this group.

The comparison of cumulative survival rates between the no treatment group and the individuals referred to outpatient treatment alone or outpatient treatment plus PDDC reveals the treatment group exhibiting a slightly higher survival rate from quarter three through quarter

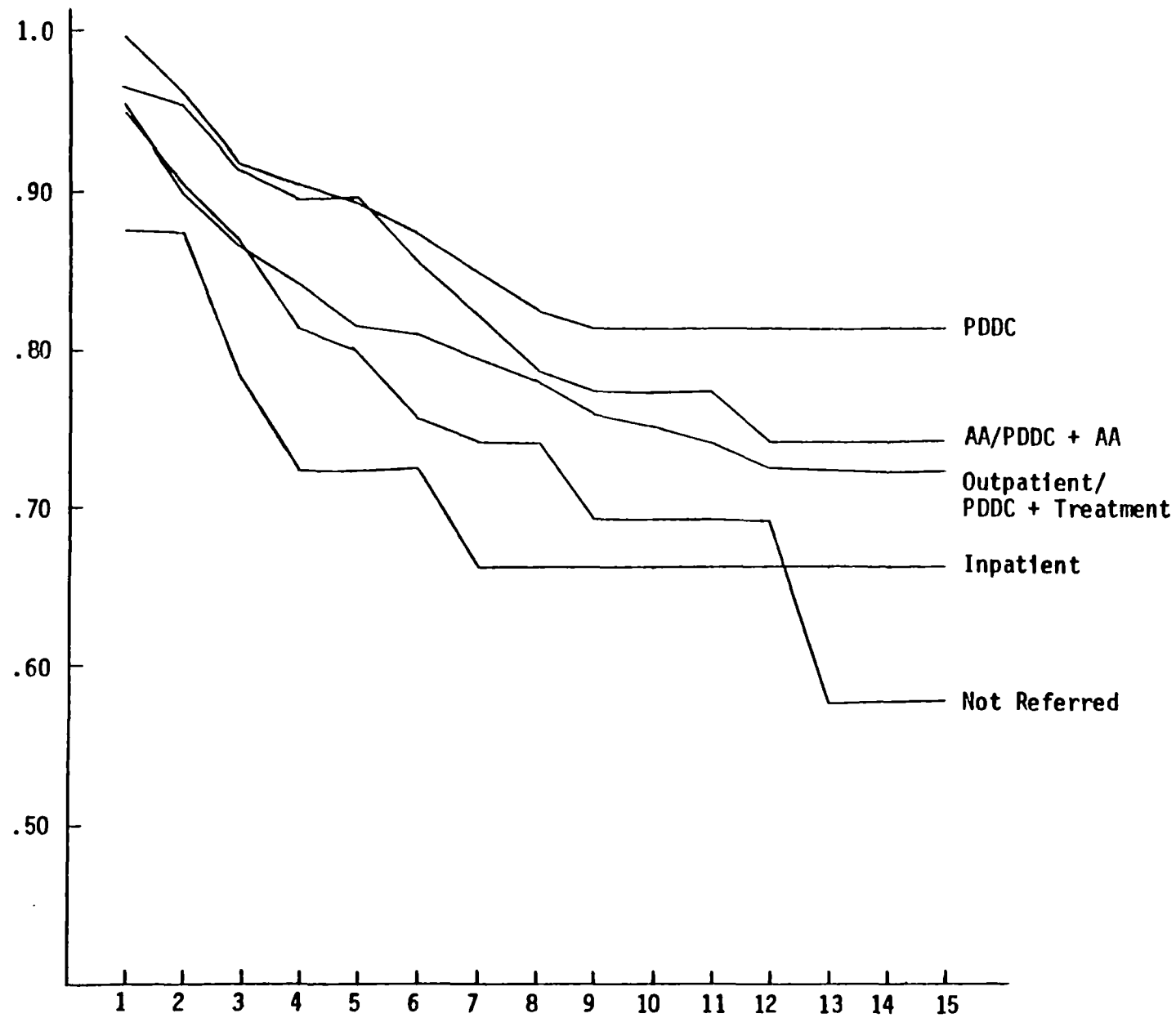


FIGURE 26. TREATMENT MODALITY COMPARISONS OF CUMULATIVE SURVIVAL RATES FOR CHRONIC ALCOHOLICS

TABLE 12. QUASI-EXPERIMENTAL ANALYSIS OF INDIVIDUAL TREATMENT PROGRAM EFFECT FOR CHRONIC ALCOHOLICS

	Quarter	TNR	PDDC	Outpatient <sup>1</sup>	AA <sup>2</sup>	Inpatient
Cumulative Survival Rate	4	.8169	.9077	.8449	.8980	.8788
	8	.7442	.8281	.7811	.7890	.6654
	12	.6970	.8165	.7278	.7428	.6654
	15	.5808	.8165	.7278	.7428	.6654
Standard Error	4	.0459	.0207	.0204	.0306	.0568
	8	.0521	.0286	.0235	.0421	.0824
	12	.0585	.0305	.0316	.0526	.0824
	15	.1167	.0305	.0316	.0526	.0824
Effective Sample Rate	4	71.0	195.0	316.0	98.0	33.0
	8	70.2	173.9	308.4	93.9	32.8
	12	61.7	161.4	198.9	68.9	32.8
	15	17.9	161.4	198.9	68.9	32.8

t Tests

		Quarters After Entry			
		4	8	12	15
Not Referred vs. PDDC	t=	-1.80	-1.41	-1.81	-1.95
	df=	264	242	221	177
Not Referred vs. Outpatient	t=	-0.56	-0.64	-0.46	-1.22
	df=	385	377	259	215
Not Referred vs. AA	t=	-1.47	-0.67	-0.58	-1.27
	df=	167	162	129	85
Not Referred vs. Inpatient	t=	0.99	0.81	0.31	-0.59
	df=	102	101	92	49

<sup>1</sup>Outpatient = Outpatient/PDDC + Outpatient

<sup>2</sup>AA = AA/PDDC + AA

twelve, at which time the survival rate for the not referred group dropped considerably. Once again, however, none of the statistical comparisons conducted approached statistical significance.

The survival rate curves for no treatment and individuals referred to Alcoholics Anonymous alone or Alcoholics Anonymous plus PDDC revealed a slightly higher and somewhat consistent survival rate for the treatment referral group until quarter twelve, when the not referred group again dropped drastically. As with the other treatment conditions reported, none of the statistical comparisons conducted proved to be significant.

The final modality specific comparison is between the no treatment comparison group and those persons referred to inpatient treatment programs. In this case the post-referral performance of the inpatient treatment group was slightly below that for the no treatment group until quarter twelve, when once again, the curve for the no treatment group dropped sharply. The results of the comparisons conducted at each of the tested intervals were again, proved not to be significant.

Examination of the survival rate curves illustrates that individuals referred to the PDDC, outpatient and AA modalities or combinations of these modalities do exhibit a slightly lower tendency to become re-arrested than do the individuals not referred to any treatment programs. While the trends of these curves appear to be in the expected direction, the small numbers of individuals included in some of the comparison groups (only 26 individuals in the not referred group and only 30 individuals referred to AA/PDDC + AA) are in part responsible for the statistical non-significance. It might also be noted that clients referred to inpatient treatment modalities reflect the most severe drinking problems for this drinker classification and can be expected to exhibit a rather low level of cumulative survival rate. In conjunction with the fact that only ten individuals were contained in this group, the statistical non-significance obtained was not unexpected.

## ANALYSIS OF TREATMENT EFFECTS FOR STR CLIENTS

Table 5 summarizes the data availability for the South Dakota STR file's initial interviews and six and twelve month follow-up interviews. These clients were administered the complete battery of STR instruments (i.e., Life Activities Inventory, Current Status Questionnaire and Personality Assessment Scale) in a simple repeated measures design with one treatment/control group comparison. Table 5 shows a follow-up attrition rate of slightly over 40 percent; however, when clients are selected with all three repeated observations the attrition rate jumps to over 50 percent (41 control group and 49 treatment group). Because of the substantial loss of data the distribution of selected scale scores by group over the three observation periods will be described graphically as in previous sections using the entire sample. The descriptive analyses are then supplemented with the results of a multiple profile analysis<sup>6</sup> that tests the hypothesis that the change in level of the distributions over the three time periods is the same for both groups.

The dependent measures of primary interest are the combined LAI/CSQ scale scores. These scales are derived from combining items on both instruments; the resulting factors are summarized in Table 13 and for the most part represent expanded versions of five of the LAI scales. Only the family/marital status factor did not contain items from the CSQ and therefore does not appear as a combined scale.

### RESULTS

The distribution of Factor I, current quantity/frequency of drinking, is plotted over the initial and follow-up periods by group in Figure 27. Note that this factor is the same as Factor II of the LAI (Table 6) with the addition of three items from the CSQ. The distribution of Factor I at the initial interview is almost identical, both in central tendency and spread, for the control group and the PDDC treatment group. Both groups show a slight tendency toward increased drinking at the six month interval and moderate improvement at the 18 month follow-up. It is interesting that the variance of this measure almost doubles in the follow-up periods, which may have something to do with the timing of recent history questioning that follows shortly after arrest.

The multiple profile analysis tests whether the slope of lines connecting the means of the three periods are equal for both groups. The multivariate F test result is:  $F(2,87) = 0.70, p < .50$  indicating that there is no differential change between groups.

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<sup>6</sup>Morrison, D. F., Multivariate Statistical Methods. New York: McGraw-Hill, 1976.

TABLE 13. SCALES DERIVED FROM THE LAI AND CSQ INSTRUMENTS FACTORED TOGETHER

<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>S</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR I: CURRENT QUANTITY/FREQUENCY OF DRINKING</u>									
LAI 29	.883	.841	.874	.884	How many drinks (alcohol) did you have last week?	Many	2.550	1.294	1-5
LAI 31	.853	.809	.841	.850	How many days with drinks last week?	Many	2.805	1.556	1-5
CSQ 38 (R)	-.791	-.754	-.784	-.794	How long has it been since last drink?	Hours (R)	2.579	.897	1-4
LAI 33	.702	.672	.698	.706	What is most drinks on one occasion last month?	Many	4.139	1.514	1-5
LAI 30	.604	.601	.625	.612	Are you a beer drinker?	Yes	1.547	.498	1-2
CSQ 39 (R)	-.484	-.457	-.475	-.472	What is longest time without booze.	Hours (R)	1.666	.714	1-4
CSQ 42 (R)	-.334	-.323	-.336	-.336	Compare present F/Q of drinking to past times.	Increase (R)	2.270	1.012	1-5
KR20 = .848      Hyperplane Count: Varimax = 78.4%, Maxplane = 86.4%									
<u>FACTOR II: EMPLOYMENT/ECONOMIC STABILITY</u>									
LAI 02	.880	.860	.903	.889	Are you supported by earned income?	Yes	1.793	.405	1-2
LAI 04	.887	.859	.902	.895	How many hours do you work per week?	High	3.472	1.397	1-5
CSQ 14	.623	.602	.633	.640	How long have you been employed during the past 6 months?	Constantly	4.278	1.276	1-5
CSQ 18	.534	.474	.497	.544	How satisfied are you with work situation?	Satisfied	2.505	.751	1-3
LAI 11	.475	.447	.470	.466	Has your income amount changed in past 6 months?	Increased	2.146	.680	1-3
LAI 10	.449	.438	.460	.443	Has your income source changed in past 6 months?	Favorable	2.015	.476	1-3
LAI 05	.500	.426	.448	.516	Total monthly family income?	High	3.314	1.355	1-5
LAI 13	.421	.381	.400	.406	Have you been discharged from work in past 6 months?	No	1.861	.346	1-2
KR 20 = .752      Hyperplane Count: Varimax = 75.0%, Maxplane = 80.7%									

Table 13. Scales Derived from the LAI and CSQ Instruments Factored Together (Continued)

<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>S</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR III: CURRENT PHYSICAL HEALTH PROBLEMS</u>									
LAI 25	.664	.648	.690	.689	How many days last week with health complaints?	Many	2.458	1.735	1-5
CSQ 30 (R)	-.630	-.608	-.647	-.616	Are you having any medical problems?	Yes (R)	1.209	.468	1-3
CSQ 31 (R)	-.519	-.509	-.542	-.496	Are you receiving medical assistance?	Yes (R)	1.126	.332	1-2
LAI 19	.517	.490	.522	.506	How many drugs are you taking?	Several	1.846	1.045	1-5
LAI 23	.417	.414	.441	.421	How often have fatigue or muscle aches?	Often	1.554	1.229	1-5
LAI 26	.409	.402	.429	.400	How many medical visits for health care last month?	Many	1.261	.721	1-5
LAI 17	.409	.395	.420	.391	Are you currently taking tranquilizers?	Yes	1.070	.256	1-2
LAI 27	.377	.373	.398	.383	How many days ill last month?	Many	1.537	1.207	1-5
LAI 22	.389	.367	.391	.428	How often have sleep problems or nervous?	Often	1.520	1.212	1-5
LAI 24	.366	.365	.388	.364	How often have allergy or colds?	Often	1.671	1.402	1-5
LAI 21	.363	.342	.364	.395	How often have digestive problems or headache?	Often	1.350	.923	1-5
CSQ 24 (R)	-.314	-.297	-.316	-.326	How is your health?	Worsened (R)	1.919	.598	1-4
KR20 = .664      Hyperplane Count: Varimax = 71.6%, Maxplane = 77.3%									

Table 13. Scales Derived from the LAI and CSQ Instruments Factored Together (Continued)

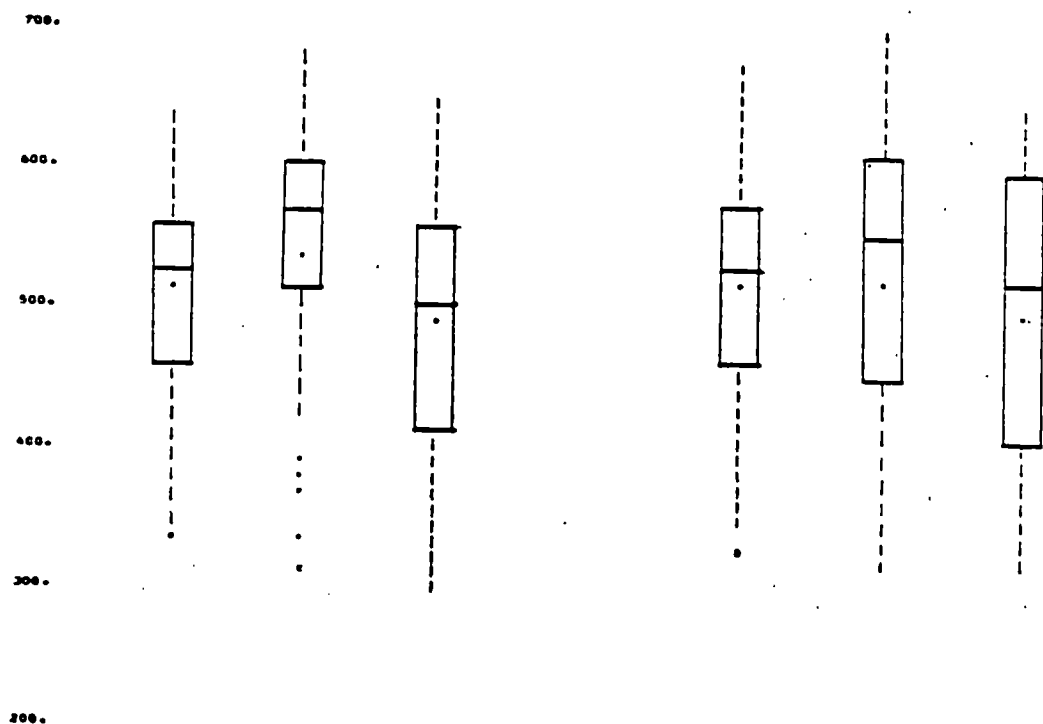
<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>c</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR IV: SOCIAL INTERACTION</u>									
LAI 63	.456	.476	.496	.441	How many self accomplished activities in last month?	Many	3.174	1.457	1-5
LAI 58	.480	.462	.482	.468	How often have you talked with a friend about his problems?	Often	2.244	1.506	1-5
LAI 59	.471	.455	.474	.470	How often have you helped someone with a task?	Often	2.804	1.569	1-5
LAI 60	.461	.450	.469	.469	How often have you entertained others in your home?	Often	2.433	1.564	1-5
LAI 61	.466	.441	.460	.463	How many new acquaintances have you made?	Many	2.836	1.764	1-5
LAI 57	.390	.394	.410	.379	How many gifts have you given to others?	Many	2.290	1.438	1-5
LAI 49	.402	.383	.399	.401	How often do you engage in physical fitness activities?	Often	1.687	1.029	1-5
LAI 46	.337	.380	.396	.336	How many times last month did you go out for recreation with family?	Often	2.843	1.765	1-5
CSQ 22	.341	.343	.357	.334	How much time devoted to improve work skill?	Much	1.783	1.156	1-4
LAI 47	.342	.341	.355	.366	How many close friends do you have?	Many	3.017	1.236	1-5
LAI 51	.358	.339	.353	.367	How often have you engaged in participant sports?	Often	1.785	1.205	1-5
LAI 53	.326	.326	.339	.317	How often have you engaged in sedentary activities with others?	Many	2.876	1.604	1-5
CSQ 64 (R)	-.291	-.306	-.319	-.293	Do you participate in clubs or groups?	Often (R)	1.505	.935	1-4
CSQ 21	.272	.285	.297	.265	Do you do more than is expected at work?	Often	2.624	.911	1-4
CSQ 52 (R)	-.244	-.279	-.290	-.265	How much free time do you spend alone?	Little (R)	3.512	.814	1-4
CSQ 53 (R)	-.256	-.271	-.282	-.259	Does work require meeting people?	Often (R)	3.051	1.083	1-4
KR20 = .720                      Hyperplane Count: Varimax = 61.4%, Maxplane = 68.2%									

Table 13. Scales Derived from the LAI and CSQ Instruments Factored Together (Continued)

<u>Item</u>	<u>F<sub>V</sub></u>	<u>R<sub>S</sub></u>	<u>F<sub>P</sub></u>	<u>F<sub>S</sub></u>	<u>Item Description</u>	<u>HI Score</u>	<u>Mean</u>	<u>SD</u>	<u>Response Range</u>
<u>FACTOR V: CURRENT DRINKING PROBLEMS</u>									
CSQ 43 (R)	.608	.577	.660	.606	Is drinking a problem at this time?	Yes (R)	1.324	.661	1-4
CSQ 45 (R)	.561	.516	.591	.560	Does drinking interfere with responsibilities?	Yes (R)	1.174	.515	1-4
CSQ 41 (R)	.567	.513	.587	.557	Can you regulate your drinking amount?	No (R)	1.585	.769	1-4
CSQ 44 (R)	.506	.474	.542	.510	Are you finding it hard to live without alcohol?	Yes (R)	1.194	.527	1-4
LAI 36	-.456	-.389	-.446	-.505	How many times were you drunk last month?	Many	1.663	1.146	1-5
LAI 38	-.423	-.376	-.430	-.441	How many blackouts last month?	Many	1.094	.471	1-5
LAI 39	-.351	-.328	-.376	-.379	How many times did you get away with DUI last month?	Many	1.278	.833	1-5
CSQ 46	-.354	-.299	-.343	-.378	How often drunk in public in past 6 months?	Several	1.660	.677	1-3
CSQ 29 (R)	.333	.287	.328	.344	Any physical problems from alcohol?	Many (R)	1.051	.230	1-3
LAI 37	-.335	-.283	-.323	-.348	How many binges last month?	Many	1.052	.366	1-5
CSQ 40 (R)	.334	.279	.320	.328	Can you regulate your drinking times?	No (R)	1.486	.771	1-4
LAI 32	-.280	-.275	-.314	-.317	How many times did you drive with 3/4 drinks last month?	Often	1.837	1.354	1-5
CSQ 58	-.318	-.265	-.303	-.340	How are you getting along with others?	Not Well	1.065	.254	1-3
LAI 34	-.264	-.228	-.261	-.267	How many times miss work because drunk or hung over?	Many	1.039	.316	1-5
KR20 = .767                      Hyperplane Count: Varimax = 56.8%, Maxplane = 70.5%									

FIGURE 27. LAI/CSQ COMBINED SCALES FOR STR CLIENTS BY FOLLOW-UP PERIOD

CURRENT QUANTITY/FREQUENCY OF DRINKING



	CONTROL		
	Initial	6	12
N	88	49	53
MEAN	509.2	537.1	487.0
S.D.	63.8	94.8	97.8
MAX	634	676	644
MIN	331	312	302

	PDDC		
	Initial	6	12
N	112	68	66
MEAN	512.9	514.7	489.4
S.D.	74.4	109.6	101.3
MAX	668	688	635
MIN	321	310	308

Factor II is an employment/economic stability index, and a slightly modified version of Factor I of the LAI. There is very little change in central tendency in the distribution of these scores by time period as reflected by either the means or medians (Figure 28). The multivariate F for parallel profiles is  $F(2, 87) = 0.48, p < .60$ . It is interesting to note, however, the change in the shape of the distribution for the PDDC group with a lengthening of the lower inside quartile during the follow-up periods. Since a high score on Factor II would represent greater economic/employment stability, such a change does not represent a favorable treatment effect.

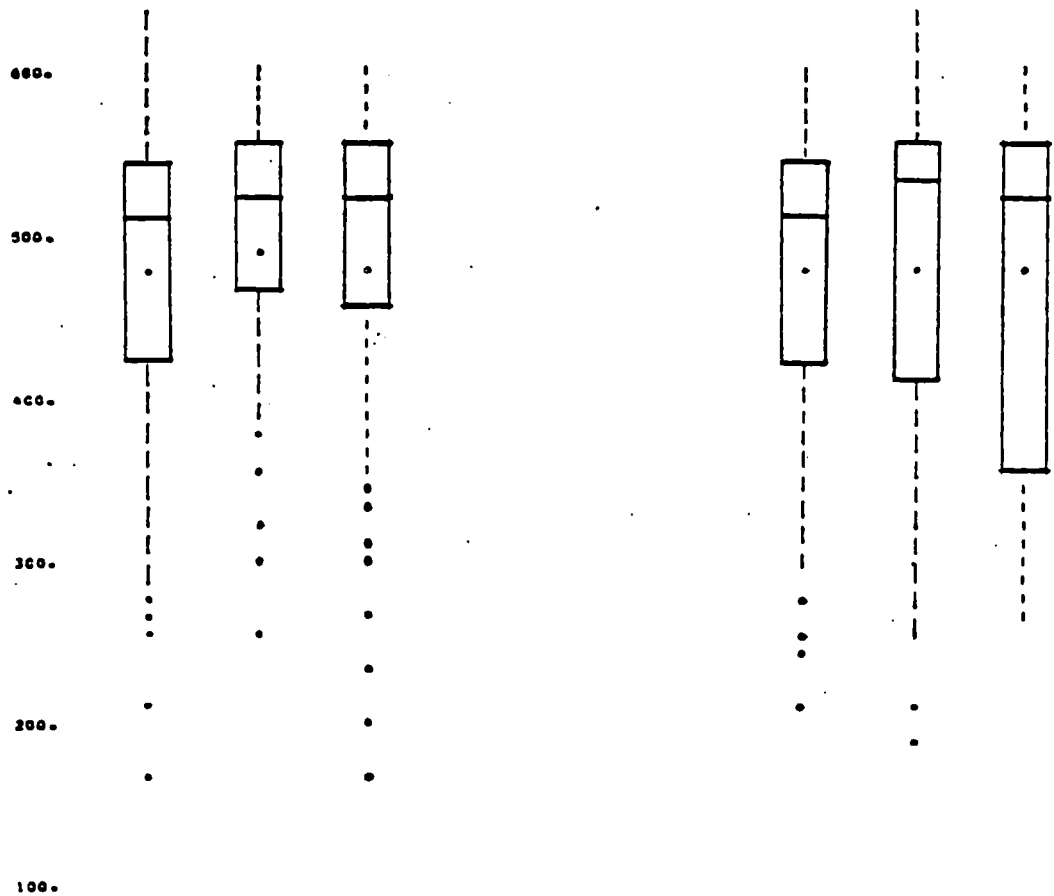
The distribution of current physical health problems, Factor III, is shown graphically in Figure 29. This scale is an expanded version of LAI scale V which was shown to discriminate fairly well between drinker types. The problem with the physical health dimensions is in the shape of the distribution which is clearly non-normal and any change of interest would occur in the upper half of the distribution. As such the mean is a relatively useless statistic for quantifying changes between treatment and control groups. It is possible that some transformation could achieve a more manageable distribution, but as Figure 29 indicates the direction of change for the control group is favorable to that of the PDDC group and contrary to the hypothesized treatment effect.

The social interaction dimension was not a good discriminator of problem drinking as shown in a previous section. Furthermore, it is not certain how treatment might alter this measure. Figure 30 shows how Factor IV is distributed over time by group. There is no apparent pattern of change that might reflect a treatment effect and the multiple profile analysis shows that the two paths across time are parallel ( $F(2, 87) = 0.64, p < .50$ ).

Probably the most sensitive and relevant measure for rehabilitation effectiveness is Factor V, providing a dimension of current drinking problems. This is similar to LAI scale VI which was shown to discriminate well between drinker types, although the expanded version is still beset with highly skewed distributional problems as seen in Figure 31. There is an apparent improvement in both groups with the control group showing the more patterned change. The multivariate test for parallel change in average performance shows no difference between groups, however ( $F(2, 86) = .80, p < .50$ ).

FIGURE 28. LAI/CSQ COMBINED SCALES FOR STR CLIENTS BY FOLLOW-UP PERIOD

EMPLOYMENT/ECONOMIC STABILITY

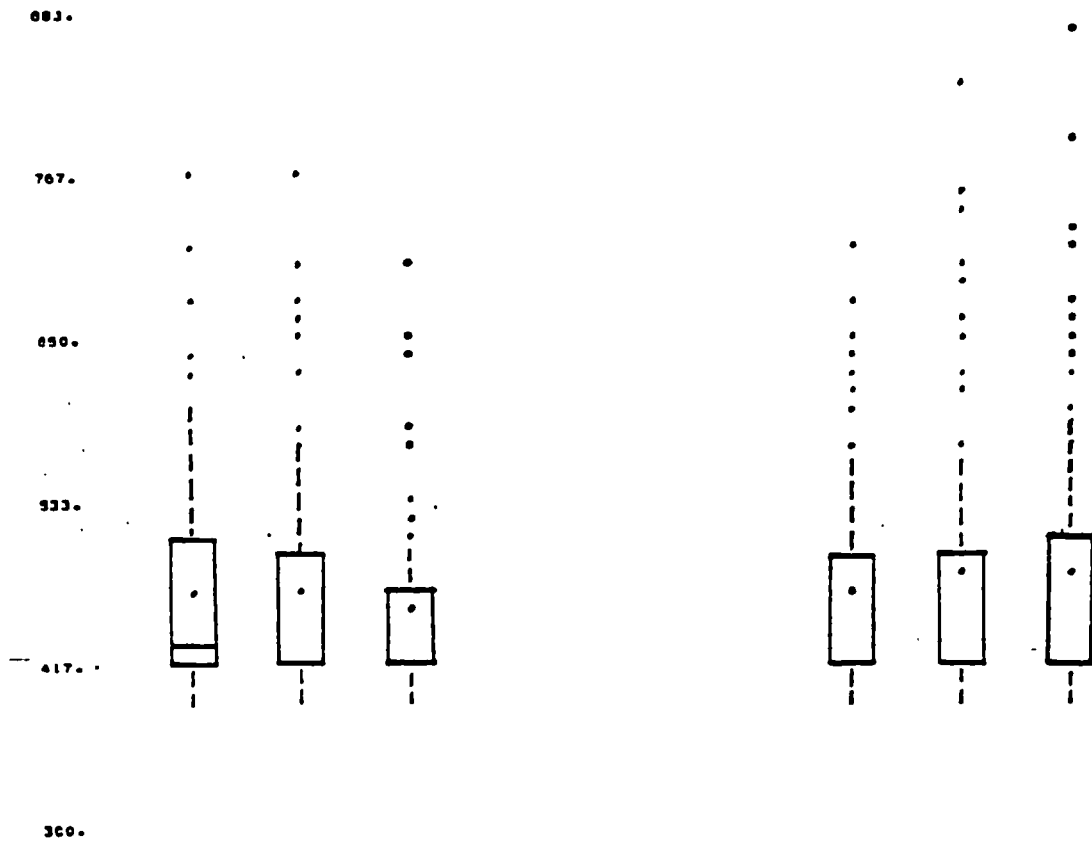


	CONTROL		
	Initial	6	12
N	88	49	53
MEAN	478.0	489.1	481.2
S.D.	94.7	96.1	115.5
MAX	632	601	604
MIN	164	260	166

	PDDC		
	Initial	6	12
N	112	68	66
MEAN	476.3	483.2	478.0
S.D.	94.3	114.9	106.0
MAX	604	632	602
MIN	209	184	265

FIGURE 29. LAI/CSQ COMBINED SCALES FOR STR CLIENTS BY FOLLOW-UP PERIOD

CURRENT PHYSICAL HEALTH



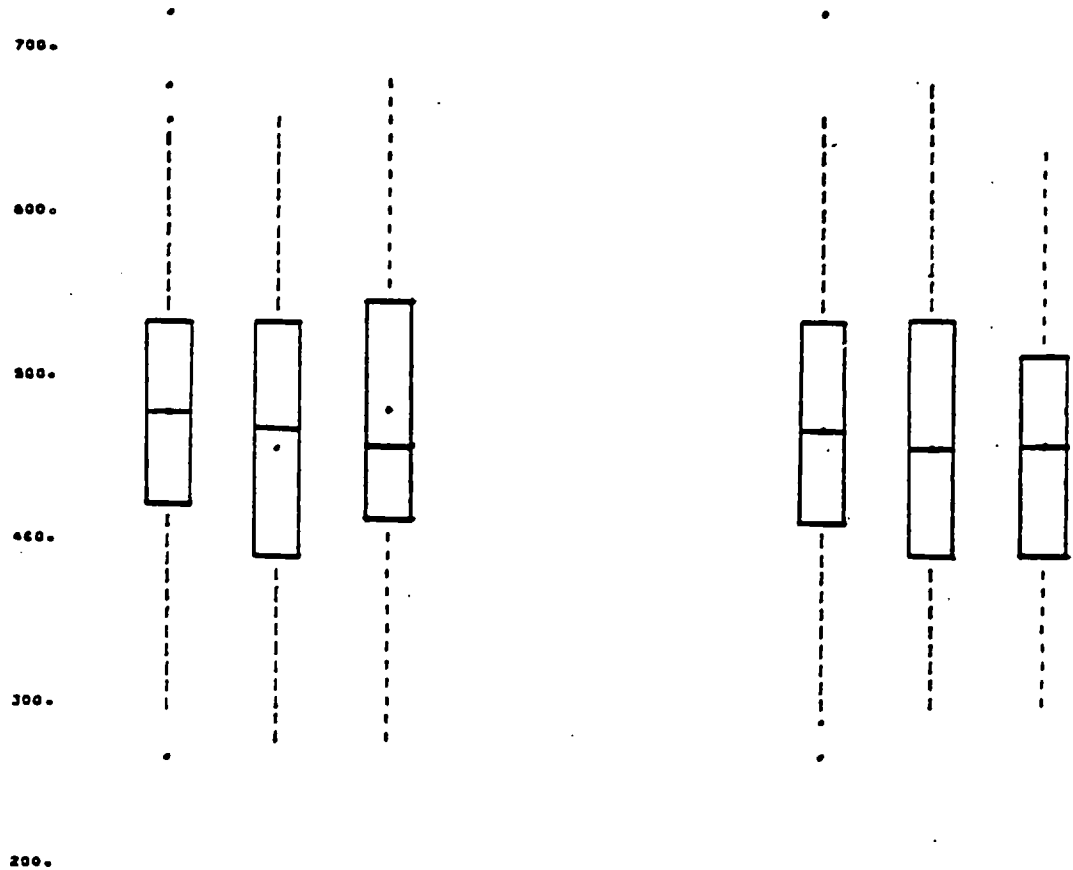
	CONTROL		
	Initial	6	12
N	88	49	53
MEAN	472.2	468.6	456.2
S.D.	94.3	91.3	67.8
MAX	996	769	703
MIN	388	388	388

PDDC		
Initial	6	12
112	68	66
464.4	481.0	484.5
94.9	113.7	110.9
999	993	876
388	388	388

69

FIGURE 30. LAI/CSQ COMBINED SCALES FOR STR CLIENTS BY FOLLOW-UP PERIOD

SOCIAL INTERACTION

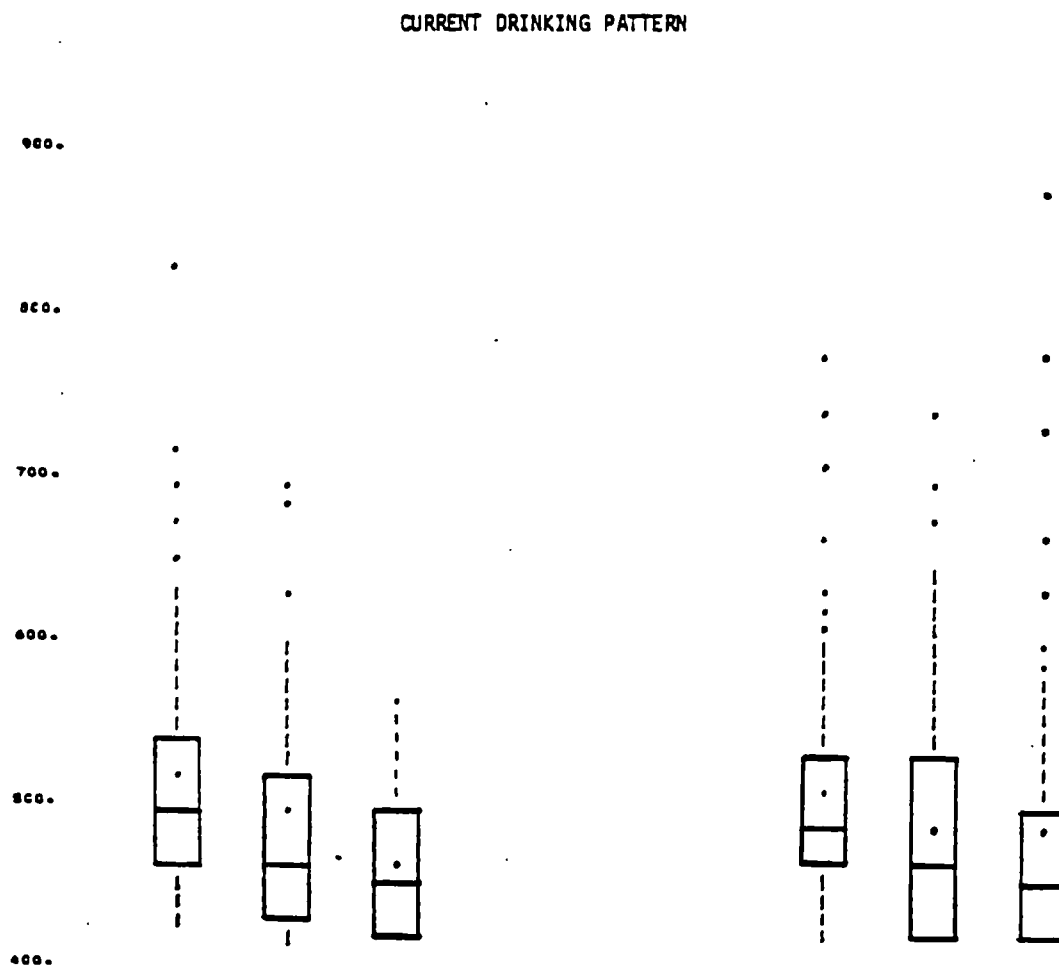


	CONTROL		
	Initial	6	12
N	88	49	53
MEAN	478.2	459.2	473.5
S.D.	85.9	96.0	89.4
MAX	718	651	727
MIN	267	278	283

	PDDC		
	Initial	6	12
N	112	68	66
MEAN	469.6	457.3	460.0
S.D.	85.1	87.0	88.9
MAX	717	674	628
MIN	263	298	299

(26)

FIGURE 31. LAI/CSQ COMBINED SCALES FOR STR CLIENTS BY FOLLOW-UP PERIOD



	CONTROL		
	Initial	6	12
N	88	49	53
MEAN	511.7	489.3	456.4
S.D.	84.5	109.9	43.6
MAX	959	948	561
MIN	423	412	411

	PDDC		
	Initial	6	12
N	111	68	65
MEAN	500.7	482.7	478.6
S.D.	82.9	76.8	90.7
MAX	999	737	864
MIN	412	412	411



## DISCUSSION

This study was concerned with problem drinker-driver rehabilitation as an effective addition or alternative to traditional court sanctions for modifying such behavior. Two independent data sets were analyzed, the first consisted of a pool of regular SD:ASAP clients covering the entire range of problem drinker status, the second group was midrange problem drinkers who became part of the national Short Term Rehabilitation study. For most of the analyses clients entering a specific treatment or combination treatment modality were compared with a matched set of clients assigned to a no treatment control group. Post treatment criterion measures were of two types: 1) the traditional measure of DWI recidivism, and 2) scale scores derived from questionnaires/interviews that measured various indexes of life activity.

Recidivism analyses were performed only on the regular SD:ASAP clients with cohorts formed on quarterly entries. The maximum follow-up time was 15 quarters, while the last cohort entered had a follow-up of five quarters. Treatment and no treatment groups were compared within each of three drinker types. The least severe drinker group, social drinkers, had a relatively low recidivism rate with approximately 15 percent being re-arrested after 15 quarters. Experimental comparisons between PDDC and DIS treatments and control found no statistically nor practically significant differences as only three percentage points separated the high and low groups. There was some separation in recidivism rates for problem drinkers; however, it was not supportive of a favorable treatment effect. The control group and PDDC recidivism rates were identical while the more intensive treatment modalities (PDDC plus outpatient therapy or AA) showed a considerably higher recidivism rate. The chronic alcoholics had no control group with which to compare treatments; however, once again the least intensive PDDC modality had a significantly lower recidivism rate than the more intensive treatments, including inpatient therapy. It is quite probable that the more intensive treatment groups were biased with a higher percentage of more problematic drinkers; nevertheless, there was no evidence based on recidivism data that drinker rehabilitation is a worthwhile alternative to traditional court sanctions for drunk driving.

The use of scale scores derived from questionnaire/interview instruments is a recent innovation to provide a broader set of measures that could possibly reflect behavioral changes induced by drinker rehabilitation. A large number of SD:ASAP clients were administered the Life Activities Inventory from which six indexes of life activity/status were derived.

South Dakota had the advantage of a sample of these scores from each of the four drinker types, and it was argued that if the scales

were to be useful measures of change in problem drinking they should show definite differences in distribution location across drinker types. The drinker type comparison of the scale score distributions found absolutely no differential ordered pattern in three of the six measures. These were family/marital status, social interaction/involvement, and surprisingly, current drinking pattern (quantity/frequency). It would seem, therefore, that these factor scores are measuring a dimension common to all types of drinkers and are relatively useless measures with which to isolate mitigation in drinking problems. Two scales, employment/economic stability and current physical health problems showed some ability to discriminate between the extreme drinker types (i.e., social drinkers versus chronic alcoholics); however, they seem most appropriate in reflecting very long term change and their very non-normal distributional characteristics present analytical difficulties. Only one factor, immoderate drinking behavior, showed an ordered change in location across the drinker types. However, this measure was distributed almost negative exponentially (i.e., showing differences only in one tail of the distribution) and traditional parametric statistical methods which rely on means as a measure of location would be insensitive to detecting group differences.

The six scales' distributions were inspected descriptively for over time changes and for any notable differences between treatment groups and control. The two drinking scales showed signs of improvement in follow-up interviews although both control and treatments exhibited the same change. The STR clients were analyzed on a slightly modified version of these scales in a strict repeated measures design to compare the performance of a PDDC treatment group with a control group. The results were similar with minor changes on the physical health and problematic drinking scales; the control group showed the greater improvement on both measures, however.

Based on the South Dakota client data presented in this report, the potential of the life activity measures as an evaluation tool in independent univariate analyses is certainly suspect. The concept has the advantage of observing incremental improvement in a follow-up design, as opposed to remaining ignorant of a client's status until he becomes a non-survivor in a binary choice of treatment outcomes. However, the instrument development defines a multidimensional problem and as such the only proper analytic procedure would be to utilize some multivariate model. This, of course, presents technical problems in a repeated measures design which must be worked out. But a continuation of univariate comparisons for treatment effects, as in the present study, will never untangle the interrelationships of alcohol use and life activity as was intended.

A P P E N D I X   A

LIFE ACTIVITIES INTERVIEW  
CURRENT STATUS QUESTIONNAIRE  
PERSONALITY ASSESSMENT SCALE

Life Activities Interview

ASAP SHORT TERM REHABILITATION STUDY

LIFE ACTIVITIES INVENTORY: SECTION III

18 MONTH FOLLOW-UP INTERVIEW

U.S. DEPARTMENT  
OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC  
SAFETY ADMINISTRATION



## COMPLETION OF THE LIFE ACTIVITIES INVENTORY

The Highway Safety Act of 1966 ( 23 U.S.C. 403 ) authorizes the collection of this information in order to determine the relative and absolute program level effectiveness of short - term alcohol rehabilitation education and treatment programs in terms of arrest recidivism and/or production of positive life adjustments. Not providing this information may result in elimination from participation in the Short-Term Rehabilitation Study (STR), including referral to STR treatment. Disclosure of this information is voluntary.

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## PROJECT

- 1 ☐ Denver  
2 ☐ Fairfax  
3 ☐ Kansas City  
4 ☐ Minneapolis  
5 ☐ New Orleans

- 6 ☐ Phoenix  
7 ☐ San Antonio  
8 ☐ South Dakota  
9 ☐ New Hampshire  
10 ☐ Oklahoma City  
11 ☐ Tampa

DATE OF ADMINISTRATION

\_\_\_\_ / \_\_\_\_ / \_\_\_\_  
month day year

--	--	--	--	--	--

INTERVIEWER NAME

\_\_\_\_\_

--	--	--	--

PROJECT CLIENT ID NUMBER

\_\_\_\_\_

HUMAN FACTORS LABORATORY ID NUMBER

\_\_\_\_\_

TIME OF INTERVIEW IN MINUTES

\_\_\_\_\_

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This section of the Life Activities package was developed for the NHTSA under contract DOT-HS-191-3-759. The entire package was assembled for the NHTSA by the University of South Dakota under the above contract entitled "An Evaluation of ASAP Rehabilitation Efforts".

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**TREATMENT SUBSEQUENT TO STR ASSIGNMENT**  
**(Voluntary Entry or Court Assignment To Treatment Subsequent To STR Assignment)**

**B. Indicate all modalities that the client has entered during the 18 months prior to this 18 Month Follow-Up.. Do not include PMT or modalities entered concurrent with PMT as a part of the STR Assignment. Enter treatment modality code number in first column and treatment name [e.g. Transactional Analysis, reality therapy, etc.] in second column.**

## TREATMENT MODALITY CODES

2 = Inpatient Therapy  
3 = Outpatient - Individual  
4 = Outpatient - Group

5 = Outpatient - Family  
6 = Outpatient - Structured Behavioral  
7 = Detoxification  
8 = Direct Chemotherapy

9 = Indirect Chemotherapy  
10 = Alcoholics Anonymous  
11 = Half-Way House  
12 = Educational/Alcohol Safety School

[illegible]

## LIFE ACTIVITIES INVENTORY

1. What is your current occupation?

*enter title and brief description*

[ ] [ ] [ ]

2. Which one of the following categories best describes your occupation at the present time?

[ ] [ ] [ ]

*check one box*

- 1 ☐ Professional, technical, and kindred workers
- 2 ☐ Managers and administrators, except farm
- 3 ☐ Sales workers
- 4 ☐ Clerical and kindred workers
- 5 ☐ Craftsmen and kindred workers
- 6 ☐ Operatives, except transport
- 7 ☐ Transport equipment operatives
- 8 ☐ Laborers, except farm
- 9 ☐ Farmers and farm managers
- 10 ☐ Farm laborers and farm foremen
- 11 ☐ Service workers, except private household
- 12 ☐ Private household workers
- 13 ☐ Student
- 14 ☐ Housewife
- 15 ☐ Not working

*if the client is not currently working, skip to question 4:  
if the client is currently working, ask the following . . .*

3. In your present job, or jobs, how many hours do you usually work per week?

*enter the number of hours to the nearest hour*

[ ] [ ] [ ]

(74)

4. Of the following categories, which one or ones best describes your current primary income source?

*check one or more boxes*

- ☐ Earned income [for example, salary, wages, tips]
- ☐ Pensions, Social Security, etc.
- ☐ Support by others [such as family, spouse, friends, etc.]
- ☐ Public assistance [for example, welfare, unemployment compensation, aid to dependent children]
- ☐ No income [for example, living on savings]

5. What is your present total family monthly income before deductions for taxes and other things?

*enter the amount to nearest the dollar*

\$

*If the client has not been employed at all in the last 30 days, if the client is a student who has not had a job in the last 30 days, or if the client is a housewife not employed outside the home in the last 30 days, skip to question 13. Otherwise, ask the following . . .*

6. How many days, that you normally would have worked, did you miss in the past 30 days?

*enter the number of days*

*If the number of days missed is zero, skip to question 10;  
if the number of days missed is not zero, ask the following . . .*

7. How many of these days did you miss work because you were ill?

*enter the number of days*

8. How many of these days did you miss for other reasons you would consider acceptable to your employer, such as a death in the family, jury duty, bad weather, etc.?

*enter the number of days*

9. How many of these days did you miss work for personal reasons other than the previous two, such as just not feeling like going to work, etc.?

*enter the number of days*

*The sum of responses to questions 7, 8, and 9 must equal the response to question 6.*

10. In the past 30 days, how many times have you been "chewed-out" or verbally disciplined by people at work, whether or not you argued back?

*enter the number of times*

11. In the past 30 days, how many arguments have you had with people at work?

enter the number of arguments

If the number of arguments is zero, skip to question 13;  
if the number of arguments is not zero, ask the following . . .

12. How many of these arguments involved physical injury or attack, that is, striking someone or being struck?

enter the number of arguments  
involving injury or attack

13. Has your primary source or sources of income changed in the last 6 months?

check one box

1 ☐ Yes

2 ☐ No

If no, skip to question 15; if yes, ask the following . . .

14. Which one of the following categories best describes the impact of the change or changes in source?

check one box

1 ☐ Generally good or favorable

2 ☐ Neither favorable nor unfavorable

3 ☐ Generally bad or unfavorable

15. Has the amount of your monthly income changed in the last 6 months?

check one box

☐ Yes

☐ No

If no, skip to question 18; if yes, ask the following . . .

16. Has your income increased or decreased?

check one box

☐ Increased

☐ Decreased

17. By what amount has your monthly income changed?

enter the amount of change to the nearest dollar

81

*If the client has not been employed at all in the last 6 months, if the client is a student who has not had a job in the last 6 months, or if the client is a housewife not employed outside the home in the last 6 months, skip to question 26. Otherwise, ask the following . . .*

18. How many times have you quit a job in the last 6 months?

*enter the number of times*

*If the number of times is zero skip to question 21;  
if the number of times is not zero, ask the following . . .*

19. How many times did you quit with a new job already lined up?

*enter the number of times*

20. How many times did you quit with no new job lined up?

*enter the number of times*

*The sum of responses to question 19 and 20 must equal the response to question 18.*

21. How many times have you been discharged [fired or layed off] from a job in the last 6 months?

*enter number of discharges*

*If the number of discharges is zero, skip to question 25;  
if the number of discharges is not zero, ask the following . . .*

22. How many of these discharges were the direct result of a drunk driving arrest [lost license, job requires driving; company policy, etc.] ?

*enter number of discharges*

23. How many of these discharges were for reasons such as strikes, general or seasonal layoffs, plant closings, etc.?

*enter number of discharges*

24. How many of these discharges were for other reasons such as poor work performance, personality conflicts, etc.?

*enter number of discharges*

*The sum of responses to questions 22, 23 and 24 must equal the response to question 21.*

*If the client has not been employed at all in the last 6 months, if the client is a student who has not had a job in the last 6 months, or if the client is a housewife not employed outside the home in the last 6 months, skip to question 26. Otherwise, ask the following . . .*

25. Have you been promoted or assigned additional job responsibilities in the last 6 months?

*check one box*

1 ☐ Yes

2 ☐ No

☐

26. During the last 6 months, have you participated in any formal education or training to increase your work skills or to provide career advancement?

*check one box*

1 ☐ Yes

2 ☐ No

☐

*If no, skip to question 28; if yes, ask the following . . .*

27. How much of your time, in the last 6 months, has been involved in this formal education or training? Include both class time and homework time.

*check one box*

1 ☐ Nine hours or less

2 ☐ Ten to twenty hours

3 ☐ Twenty to seventy-five hours

4 ☐ More than seventy-five hours

☐

*If the client has not been employed at all in the last 6 months, if the client is a student who has not had a job in the last 6 months, or if the client is a housewife not employed outside the home in the last 6 months, skip to question 29. Otherwise, ask the following . . .*

28. Have you received any bonuses or other rewards for good work performance during the last 6 months? Include merit raises, sales awards, and any other formal recognition of work performance such as certificates, acknowledgment in company newsletters, etc. . . Exclude normal raises for cost of living, union contracts, etc. . .

*check one box*

1 ☐ Yes

2 ☐ No

☐

29. Are you currently taking any drugs or medications for the relief of temporary physical conditions such as the flu, a cold, etc.?

*check one box*

1 ☐ Yes

2 ☐ No

☐

30. Are you currently taking any drugs or medications for the relief of chronic physical conditions such as heart trouble, arthritis, diabetes, hay fever, asthma, etc.?

*check one box*

1 ☐ Yes

2 ☐ No

☐

*If no, skip to question 32; if yes, ask the following . . .*

31. How long have you been taking a drug or medication for this reason?

*check one box*

1 ☐ One month or less

2 ☐ One month to one year

3 ☐ More than one year

☐

32. Are you currently taking any drugs or medications such as tranquilizers, sleeping pills, stimulants, etc., for the relief of tension, depression, nervousness, or similar conditions?

*check one box*

1 ☐ Yes

2 ☐ No

☐

*If no, skip to question 34; if yes, ask the following . . .*

33. How long have you been taking a drug or medication for this reason?

*check one box*

1 ☐ One month or less

2 ☐ One month to one year

3 ☐ More than one year

☐

34. Are you currently taking any drugs or medications other than alcohol to produce "highs" or altered states of consciousness?

*check one box*

1 ☐ Yes

2 ☐ No

☐

*If no, skip to question 36; if yes, ask the following . . .*

35. How long have you been taking a drug or medication for this reason?

*check one box*

1 ☐ One month or less

2 ☐ One month to one year

3 ☐ More than one year

☐

36. How many different medications or drugs are you currently taking? Include all drugs mentioned in previous questions and any other drugs you are currently taking such as, antabuse, methadone, vitamins, birth control pills, antacid tablets or liquids, pain killers, etc. . .

*enter the total number of medications or drugs*

37. On the average, how many hours sleep per night did you get for the last 7 nights?

*enter the number of hours*

$\frac{34}{35}$

85

38. On which of the last 7 days have you been bothered by each of the following health problems? Do not include specifically alcohol related ailments.

*It would be helpful to work through the preceding week one day at a time and ask if any of the listed physical problems occurred on Monday, then Tuesday, etc.*

*check appropriate boxes*

	<i>Mon</i>	<i>Tues</i>	<i>Wed</i>	<i>Thur</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>	<i>None</i>	
Digestive problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sleep problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervousness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fatigue/weakness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Muscular aches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergies, asthma, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colds, flu, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

39. How many times in the last 30 days have you visited a doctor, hospital, or other medical treatment facility for each of the following reasons relating to **your own** health care?

*Be sure all alcohol related visits whether directly alcohol related [e.g. detoxification] or indirectly alcohol related [e.g. injury received as the result of drunkenness] are included in the "alcohol related problems" category.*

<i>reasons</i>	<i>enter the number of times</i>	
Alcohol related problems such as vitamin deficiency, cirrhosis of the liver, injury incurred while drunk, drying out, etc. . . . .	<input type="text"/>	<input type="text"/>
Chronic physical conditions such as heart trouble, ulcers, diabetes, arthritis, etc. . . . .	<input type="text"/>	<input type="text"/>
Accidents or injuries such as sprains, fractures, cuts, lacerations, etc. . . . .	<input type="text"/>	<input type="text"/>
Treatment of temporary illness or ailments such as flu, infections, rashes, pneumonia, etc. . . . .	<input type="text"/>	<input type="text"/>
Regular physical checkups . . . . .	<input type="text"/>	<input type="text"/>

40. During the past 30 days, how many days have you been physically ill, whether or not the illness forced you to miss work?

*enter the number of days*



41. During the last 6 months have you voluntarily sought psychiatric or psychological help or counseling?

*check one box*

1 ☐ Yes

2 ☐ No

*If no, skip to question 43; if yes, ask the following . . .*

42. Did you seek such help for problems related to alcohol?

*check one box*

1 ☐ Yes

2 ☐ No

*If the client has not had anything to drink in the last 7 days, skip to question 44. Otherwise, ask the following . . .*





*If the client has not had anything to drink in the last 30 days, skip to question 53. Otherwise, ask the following . . .*

44. How many times in the last 30 days have you driven a car, or other motor vehicle, after having more than three or four drinks? This does not necessarily mean driving while legally intoxicated.

*enter the number of times*

45. What is the largest number of drinks [12 oz. beer, 4 oz. wine, or 1 oz. liquor] that you have drunk on one occasion during the last 30 days?

*enter the number of drinks*

*If the client has not been employed at all in the last 30 days or if the client is a housewife not employed outside the home in the last 30 days, skip to question 48. (Do not skip if the client is a student, whether employed or not.) Otherwise, ask the following . . .*

46. How many days of work (school) have you missed in the last 30 days because you were drunk?

*enter the number of days*

47. How many days of work (school) have you missed in the last 30 days because you were hung over?

*enter the number of days*

48. During the past 30 days, where have you done most of your drinking?

*check one box*

1 ☐

*At home*

2 ☐

*Away from home, for example, bars, friends houses, etc.*

49. How many days in the last 30 days have you been drunk?

*enter the number of times*

*If the number of times drunk is zero, skip to question 53. Otherwise, ask the following . . .*

50. How many times in the last 30 days have you been drunk for more than one day at a time?

*enter the number of times*

51. How many times in the last 30 days have you experienced blackouts or lapses of memory after drinking?

*Explain the difference between a blackout and physically passing out. Record blackouts only.*

enter the number of times

52. How many times in the last 30 days have you gotten away with driving while intoxicated?

enter the number of times

$\frac{35}{36}$

53. What is your current marital status?

check one box

1 ☐ Never married

2 ☐ Divorced

3 ☐ Separated

4 ☐ Married

5 ☐ Widowed

*If the response to question 53 is "never married" skip to question 56. Otherwise, ask the following . . .*

54. Has your marital status changed in the last six months?

check one box

1 ☐ Yes

2 ☐ No

*If no, skip to question number 56; if yes, ask the following . . .*

55. What was your marital status immediately preceding your current marital status?

check one box

1 ☐ Never married

2 ☐ Divorced

3 ☐ Separated

4 ☐ Married

5 ☐ Widowed



56. How many people are you living with now?

*enter the number of people*

57. Has the number of people living with you changed in the last six months?

*check one box*

1 ☐ Yes

2 ☐ No

☐

*If no, skip to question 59; if yes, ask the following . . .*

58. How many people were you living with prior to the most recent change?

*enter the number of people*

59. How many people, excluding yourself, are presently dependent on you for one half or more of their financial support?

*enter the number of people*

60. How many people, excluding yourself, do you presently take care of; for example, cooking, cleaning, personal attention, etc.?

*Male respondents participating in family care should be included in this item.*

*enter the number of people*

*If the number of people is zero, skip to question 62;  
if the number of people is not zero, ask the following . . .*

61. Do you share these care responsibilities with one or more others, for example, a spouse?

*check one box*

1 ☐ Yes

2 ☐ No

☐

62. How many close or intimate friends, excluding immediate family, do you presently have with whom you could talk out a particular problem you might have?

*enter the number of friends*

63. Has this number increased, decreased, or remained the same in the last six months?

*check one box*

1 ☐ *Increased*

2 ☐ *Remained the same*

3 ☐ *Decreased*

*If the number has decreased, skip to question 65; if there has been no change in the number, skip to question 66; if the number has increased, ask the following . . .*

64. How many friends have you gained in the last six months?

*enter the number of friends gained*

*skip to question 66*

65. How many friends have you lost in the last six months?

*enter the number of friends lost*

66. Do you presently engage in any form of physical fitness activity?

*check one box*

1 ☐ *Yes*

2 ☐ *No*

*If no, skip to question 69; if yes, ask the following . . .*

67. How frequently do you engage in physical fitness activities?

*check one box*

1 ☐ *Every day*

2 ☐ *Several times a week*

3 ☐ *Once a week or less*

68. What is the total number of hours per week you spend on all your physical fitness activities together?

*enter the number of hours*

69. In the past 7 days, how many times have you participated in each of the following activities alone, and how many times have you participated in each of the activities with others?

	enter the number of times in each box		
	alone	with others	
Spectator sports events . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Participant sports activities such as tennis, fishing, hunting, handball, golf . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Movies, concerts, shows, etc. . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Bars, night clubs, dancing . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Parties, picnics . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Games such as checkers, chess, cardgames, monopoly, puzzles . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Visiting . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Pleasure drives . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Watching television, listening to stereo or radio . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Other recreational activities . . . . .	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

70. How many times in the last 30 days have you left home, with the following people, to seek recreation or entertainment?

36  
37

	enter the number of times in each box	
With family and/or friends living with you . . . . .	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
With relatives not living with you . . . . .	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
With friends not living with you . . . . .	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Alone . . . . .	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

If the client has lived alone for all of the last 30 days, skip to question 72.  
Otherwise, ask the following . . . .

71. How many times in the past 30 days have you left home temporarily to get away from others at home, for example, going for a walk or a drive?

enter the number of times

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72. How many times have you bought gifts for people in the last 30 days?

enter the number of times

73. How many times in the last 30 days have you talked with a friend about a problem he or she was having?

enter the number of times

74. How many times in the last 30 days have you helped someone with a task, for example, moving furniture, painting a house, offered the use of your car, etc?

enter the number of times

75. How many times in the past 30 days have you entertained others in your home, for example, having someone over for dinner or having a party?

enter the number of times

76. How many new acquaintances did you make in the last 30 days?

enter the number

77. How many hours in the last 30 days have you contributed to activities in the following categories?

activity categories

enter the number of  
hours in each box

Religious, such as church council, Bible  
classes, etc., not regular worship services . . . . .

Civic, such as the Boy Scouts or JayCees,  
etc. . . . .

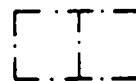
Fraternal, such as the Elks, Moose, etc. . . . .

Political . . . . .

Charitable, such as cancer fund com-  
mittees, collecting for charities, etc. . . . .

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78. Which of the following activities have taken place in the last 6 months?



*check one box in  
each row*

<i>has occurred</i>	<i>has not occurred</i>	<i>activity</i>
<input type="checkbox"/>	<input type="checkbox"/>	Acquired credit cards
<input type="checkbox"/>	<input type="checkbox"/>	Chaired a committee
<input type="checkbox"/>	<input type="checkbox"/>	Started a business
<input type="checkbox"/>	<input type="checkbox"/>	Acquired a dependent
<input type="checkbox"/>	<input type="checkbox"/>	Opened a savings account
<input type="checkbox"/>	<input type="checkbox"/>	Started an education/training program
<input type="checkbox"/>	<input type="checkbox"/>	Acquired a pet
<input type="checkbox"/>	<input type="checkbox"/>	Made a large purchase [over \$500]
<input type="checkbox"/>	<input type="checkbox"/>	Opened a checking account
<input type="checkbox"/>	<input type="checkbox"/>	Had a medical checkup
<input type="checkbox"/>	<input type="checkbox"/>	Acquired a subordinate at work
<input type="checkbox"/>	<input type="checkbox"/>	Began a new hobby
<input type="checkbox"/>	<input type="checkbox"/>	Took out an insurance policy
<input type="checkbox"/>	<input type="checkbox"/>	Invested money
<input type="checkbox"/>	<input type="checkbox"/>	Had a dental checkup
<input type="checkbox"/>	<input type="checkbox"/>	Started repair/remodeling your home
<input type="checkbox"/>	<input type="checkbox"/>	Took out a loan

79. How many times in the last 6 months have you felt a personal loss because of the death of a friend or relative?

*enter the number of times*

80. How many times in the last 6 months have you been emotionally upset because of the serious injury or illness of a friend or relative?

*enter the number of times*

81. How many charitable organizations, for example, a cancer fund or heart fund have you contributed to during the past 6 months?

*enter the number of organizations*

*RETURN TO PAGE 1 AND RECORD THE TIME OF THE INTERVIEW*



Current Status Questionnaire  
and  
Personality Assessment Scale

ASAP SHORT TERM REHABILITATION STUDY

LIFE ACTIVITIES INVENTORY: SECTION II

18 MONTH FOLLOW-UP QUESTIONNAIRE

U.S. DEPARTMENT  
OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC  
SAFETY ADMINISTRATION



## COMPLETION OF THE LIFE ACTIVITIES INVENTORY

The Highway Safety Act of 1966 ( 23 U.S.C. 403 ) authorizes the collection of this information in order to determine the relative and absolute program level effectiveness of short term alcohol rehabilitation education and treatment programs in terms of arrest recidivism and/or production of positive life adjustments. Not providing this information may result in elimination from participation in the Short-Term Rehabilitation Study (STR), including referral to STR treatment. Disclosure of this information is voluntary.

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*For Office Use Only*

## PROJECT

- 1 ☐ Denver
- 2 ☐ Fairfax
- 3 ☐ Kansas City
- 4 ☐ Minneapolis
- 5 ☐ New Orleans

- 6 ☐ Phoenix
- 7 ☐ San Antonio
- 8 ☐ South Dakota
- 9 ☐ New Hampshire
- 10 ☐ Oklahoma City
- 11 ☐ Tampa

DATE OF ADMINISTRATION      /      /  
month   day   year

INTERVIEWER NAME \_\_\_\_\_

PROJECT CLIENT ID NUMBER \_\_\_\_\_

HUMAN FACTORS LABORATORY ID NUMBER \_\_\_\_\_

The questionnaire in this section of the Life Activities package was developed by the Fort Logan Mental Health Center, Denver, Colorado as part of their ongoing treatment evaluation program. The entire package was assembled for the NHTSA by the University of South Dakota under the contract DOT-HS-191-3-759 entitled "An Evaluation of ASAP Rehabilitation Efforts".

**STOP. BEFORE YOU BEGIN, READ THESE INSTRUCTIONS**

The first section of this booklet contains questions about your present life situation. Please check the answer or answers to each question that you feel are most correct. Do not leave an item without marking it. All information will be kept confidential. If you have no questions please begin. If you have questions please ask the interviewer now.

## I. LIVING SITUATION

1. Check all persons with whom you are currently living.

- ☐ 1. Spouse
- ☐ 2. Dependent children
- ☐ 3. Adult son and/or daughter
- ☐ 4. Parent[s]
- ☐ 5. Relative[s]
- ☐ 6. Friend[s]
- ☐ 7. Live alone

2. Which of the following best describes your place of residence?

- ☐ 1. Own home
- ☐ 2. Rented house or apartment
- ☐ 3. Boarding or rooming house
- ☐ 4. Nursing home
- ☐ 5. No-cost shelter
- ☐ 6. No residence
- ☐ 7. Other

3. Enter the length of time you have lived at your present residence.

*Enter the actual numbers in the spaces provided.*

\_\_\_\_ Years, \_\_\_\_ Months, \_\_\_\_ Weeks

4. How often have you changed your residence in the last six months?

- ☐ 1. Never
- ☐ 2. Once
- ☐ 3. More than once

5. How often do you typically change your residence?

- ☐ 1. More than twice a year
- ☐ 2. Once or twice a year
- ☐ 3. Less than once a year

6. Have you recently been evicted from or asked to leave your place of residence?

- ☐ 1. Yes
- ☐ 2. No

7. Have your living conditions changed in the past six months?

- ☐ 1. Worsened
- ☐ 2. Stayed about the same
- ☐ 3. Improved

8. Do you have your own telephone?

- ☐ 1. Yes
- ☐ 2. No

9. Do you own or are you buying an automobile?

- ☐ 1. Yes
- ☐ 2. No

10. How often do you typically change jobs?

- ☐ 1. More than twice a year
- ☐ 2. Once or twice a year
- ☐ 3. Less than once a year

11. How many jobs have you had in the past six months?

- ☐ 1. None
- ☐ 2. One
- ☐ 3. Two
- ☐ 4. More than two

12. Does your circle of friends and acquaintances change from time to time?

- ☐ 1. Almost never
- ☐ 2. Sometimes
- ☐ 3. Often
- ☐ 4. Very often

## II. EMPLOYMENT SITUATION

13. Check the one of the following which best describes you.

- ☐ 1. Retired, not working
- ☐ 2. Retired, working part-time
- ☐ 3. Housewife, unemployed outside home
- ☐ 4. Housewife, employed part-time outside home
- ☐ 5. Housewife, employed full-time outside home
- ☐ 6. Student
- ☐ 7. None of the above

go on to next page

14. How long have you been employed during the past six months?

- ☐ 1. All six months  
☐ 2. 3, 4, or 5 months  
☐ 3. 1 or 2 months  
☐ 4. A few days or weeks but less than a month  
☐ 5. No jobs at all throughout this period

15. Enter your income last month from the following sources (if housewife, report family income).

*Enter the actual numbers in the spaces provided.*

<div>11</div> <div>12</div> <div><table border="1"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table></div>																	<div>_____</div> Earned income [before taxes] <div>_____</div> Unemployment compensation <div>_____</div> Pensions <div>_____</div> Welfare and/or related public assistance <div>_____</div> Alimony and/or child support <div>_____</div> Other [inheritance, dividends, etc.]

16. Enter the number of hours a week you spend in the following work activities?

*Enter the actual numbers in the spaces provided.*

<div><table border="1"><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></div>										<div>_____</div> Housework or home maintenance <div>_____</div> Employment outside home <div>_____</div> Volunteer work

17. Is your financial situation changing?

- ☐ 1. Improving  
☐ 2. Not changing notably  
☐ 3. Worsening

*If you are currently unemployed skip questions 18 through 22.*

18. How do you feel about your present work situation?

- ☐ 1. Satisfied  
☐ 2. Usually satisfied, but sometimes think I would rather do something else  
☐ 3. Dissatisfied, looking for something else.

19. Are you having any trouble with the people you work with [for]?

- ☐ 1. No serious problems  
☐ 2. Some notable problems  
☐ 3. Serious problems [e.g., recently fired]

20. Relative to your own standards, are there deficiencies in your work?

- ☐ 1. No serious deficiencies  
☐ 2. Some notable deficiencies  
☐ 3. Unable to do my work

21. Do you voluntarily do more on your job than is required?

- ☐ 1. Never or almost never  
☐ 2. Sometimes  
☐ 3. Often  
☐ 4. Very often

22. Are you devoting time outside of work to improve your work skills and/or employment situation?

- ☐ 1. No  
☐ 2. One to two hours a week  
☐ 3. Three to four hours a week  
☐ 4. More than four hours a week

23. Do you dread going to work?

- ☐ 1. Never or almost never  
☐ 2. Some days  
☐ 3. Most days  
☐ 4. Almost every day

### III. HEALTH

24. How is your health?

- ☐ 1. Improved some lately  
☐ 2. Noticed no change  
☐ 3. Worsened some recently  
☐ 4. Recently had severe and/or disabling problems

25. How would you describe your health, relative to others your age?

- ☐ 1. Below average  
☐ 2. Average  
☐ 3. Above average

go on to next page

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26. Have you been feeling tired or exhausted?

- ☐ 1. Almost every day
- ☐ 2. Most days
- ☐ 3. Some days
- ☐ 4. No or almost never

27. How are you sleeping at night?

- ☐ 1. Usually get a good night's sleep
- ☐ 2. Have had some trouble sleeping
- ☐ 3. Rarely get a good night's sleep

28. Have you been ill with colds, flu, etc.?

- ☐ 1. No or almost never
- ☐ 2. Occasionally
- ☐ 3. Frequently

29. Do you currently have any physical problems related to the excessive use of alcohol?

- ☐ 1. None
- ☐ 2. Some
- ☐ 3. Many

30. Are you currently having any medical problems?

- ☐ 1. No
- ☐ 2. Minor one[s]
- ☐ 3. Major one[s]

31. Are you currently receiving medical assistance for health problems?

- ☐ 1. Yes
- ☐ 2. No

32. Have you been hospitalized in the past six months for a physical illness or injury?

- ☐ 1. One week or more
- ☐ 2. Less than one week
- ☐ 3. No

33. Check the health problems which currently apply to you:

- ☐ 1. Skin problems
- ☐ 2. Heart or cardiovascular problems
- ☐ 3. Stomach or intestinal problems
- ☐ 4. Lung or respiratory problems
- ☐ 5. Eyes, ears, nose, or throat problems
- ☐ 6. Unusual weight changes
- ☐ 7. Pain or tingling in hands, feet, legs, etc
- ☐ 8. Headaches
- ☐ 9. Liver problems

34. Check the complete, regular meal[s] that you eat most days:

- ☐ 1. Breakfast
- ☐ 2. Lunch
- ☐ 3. Dinner

35. Do your eating habits provide a well-balanced intake of food each day [contain fruit, vegetables, meat, cereal, etc.]?

- ☐ 1. Eat very little or only one type of food on most days
- ☐ 2. May get in a good day or two a week but rarely more
- ☐ 3. Probably eat a well-balanced diet on most days

36. Are you currently using vitamin supplements [prescription or non-prescription]?

- ☐ 1. Almost every day
- ☐ 2. Sometimes
- ☐ 3. Rarely or never

*Answer the following questions whether or not you are currently drinking.*

#### IV. ALCOHOL USE

37. Are you sober at this time?

- ☐ 1. Yes
- ☐ 2. No

go on to next page

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38. How long has it been since your last drink?  
*Enter the actual numbers in the spaces provided.*

Mos.  Wks.  Days  
 Hrs.

39. What is the longest period that you have gone without alcohol in the past six months?  
*Enter the actual numbers in the spaces provided.*

Mos.  Wks.  Days  
 Hrs.

40. Are you able to regulate the times at which you drink?

- ☐ 1. Never or almost never  
☐ 2. Sometimes  
☐ 3. Most times  
☐ 4. Always or almost always

41. When drinking, are you able to regulate or control the amount you drink?

- ☐ 1. Always or almost always  
☐ 2. Most times  
☐ 3. Sometimes  
☐ 4. Never or almost never

42. How would you compare the frequency and amount of your present drinking to that of previous times?

- ☐ 1. Increased notably  
☐ 2. Increased some  
☐ 3. About the same  
☐ 4. Decreased some  
☐ 5. Decreased notably

$\frac{12}{13}$

43. Is drinking a problem for you at this time?

- ☐ 1. Very much so  
☐ 2. Moderately so  
☐ 3. Somewhat  
☐ 4. Not at all

44. Are you finding it difficult to live without alcohol?

- ☐ 1. Very much so  
☐ 2. Moderately so  
☐ 3. Somewhat  
☐ 4. Not at all

45. Does your present drinking interfere with fulfilling responsibilities to yourself or others?

- ☐ 1. Very much so  
☐ 2. Moderately so  
☐ 3. Somewhat  
☐ 4. Not at all

46. Have you been drunk in public in the past six months?

- ☐ 1. No  
☐ 2. Once or twice  
☐ 3. More than twice

47. In the past six months have you been treated or detained for public intoxication?

- ☐ 1. No  
☐ 2. Once  
☐ 3. More than once

48. Are you currently cited or summoned for a driving violation involving alcohol?

- ☐ 1. No  
☐ 2. For driving while impaired  
☐ 3. For driving under the influence of alcohol

49. Have you been convicted recently of an alcohol related driving offense?

- ☐ 1. No  
☐ 2. For driving while impaired  
☐ 3. For driving under the influence of alcohol

## V. GENERAL INFORMATION

50. Have you any close friends?

- ☐ 1. No  
☐ 2. One or two  
☐ 3. Three or four  
☐ 4. More than four

51. Have you had any automobile accidents in the past six months?

- ☐ 1. No  
☐ 2. One  
☐ 3. More than one

go on to next page

52. How much of your free time do you spend alone?

- ☐ 1. 75-100%  
☐ 2. 50-75%  
☐ 3. 25-50%  
☐ 4. 0-25%

*If you are currently unemployed, skip question 53.*

53. Does your work require you to meet people?

- ☐ 1. Almost never  
☐ 2. Sometimes  
☐ 3. Often  
☐ 4. Very often

54. Enter the number hours a week you typically spend in the following activities.

*Enter the actual numbers in the spaces provided.*

- Athletic activities [jogging, basketball, bowling, etc.]  
— Other gamelike activities [cards, billiards, etc.]  
— Reading, writing, painting, etc.  
— Construction hobbies [sewing, model building, etc.]  
— Watching television  
— Attending live sports events  
— Attending or giving parties

55. Have you been involved in any physical fights in the past six months?

- ☐ 1. No  
☐ 2. Yes, but was unreasonably provoked  
☐ 3. Yes, have been involved in one or more incident[s] which were probably my fault

56. Have you had recent trouble paying your bills?

- ☐ 1. Have no current bills or always get them paid on time  
☐ 2. Sometimes late and/or very rarely skip a payment  
☐ 3. Several bills are past due but am trying to get caught up  
☐ 4. So far behind that I have stopped trying to pay my bills

57. Are you currently attending Alcoholics Anonymous?

- ☐ 1. No  
☐ 2. Occasionally  
☐ 3. Regularly

58. Are you getting along with others at this time?

- ☐ 1. No difficulties  
☐ 2. Some difficulties  
☐ 3. Many difficulties

59. Do you prefer not to get close to others?

- ☐ 1. True  
☐ 2. Probably true  
☐ 3. Probably false  
☐ 4. False

60. Are you close to members of your immediate family [parents, brothers' and sisters' families, etc.]?

- ☐ 1. Little or no contact  
☐ 2. Somewhat close  
☐ 3. Quite close

61. Do you attend church functions other than regular weekly services [choir, Bible classes, coffee hours, etc.]?

- ☐ 1. No  
☐ 2. Less than once a week  
☐ 3. Once a week or more

62. Have you been charged with any criminal offense in the past six months [do not include driving or drunkenness convictions]?

- ☐ 1. No  
☐ 2. Yes, a misdemeanor or petty crime  
☐ 3. Yes, charged with a more serious crime, such as a felony

63. Do most of your friends drink?

- ☐ 1. True of few  
☐ 2. True of some  
☐ 3. True of many  
☐ 4. True of most

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64. Do you participate in groups or clubs [such as bridge clubs, lodges, fraternities, tennis clubs, etc.]?

☐

- ☐ 1. Regularly
- ☐ 2. Occasionally
- ☐ 3. Rarely
- ☐ 4. No

65. Have you physically injured anyone in the past six months [do not include driving accidents]?

☐

- ☐ 1. No or not to my knowledge
- ☐ 2. Quite unintentionally or under very unusual circumstances
- ☐ 3. Have been involved in one or more incident[s]

66. How do you feel about your contacts with other people?

☐

- ☐ 1. Wish I had more friends or saw my friends more frequently
- ☐ 2. Content with my relationships with others
- ☐ 3. Wish I had fewer friends or that my friends would contact me less often

67. Are your relationships with other people changing?

☐

- ☐ 1. Worsening
- ☐ 2. Remaining about the same
- ☐ 3. Improving

68. Have you attempted suicide in the past six months?

☐

- ☐ 1. No
- ☐ 2. Yes, but really hoped someone would find or stop me
- ☐ 3. Yes, made a very serious attempt on my life

69. Do you get out and do things with other people such as attend movies or ball games?

☐

- ☐ 1. Almost never
- ☐ 2. Sometimes
- ☐ 3. Often
- ☐ 4. Very often

70. Have you pleaded or been found guilty in the past six months of driving violations which did not involve alcohol?

- ☐ 1. No
- ☐ 2. A minor one,
- ☐ 3. A major one or several minor ones

*Answer the following questions if you are married, separated, or living in a marital-type relationship.*

## VI. MARRIAGE

71. How does your present relationship with your spouse [marriage partner] compare to that of previous times?

- ☐ 1. Noticeably better
- ☐ 2. Somewhat better
- ☐ 3. About the same
- ☐ 4. Somewhat worse
- ☐ 5. Noticeably worse

72. How are you getting along with your spouse?

- ☐ 1. Practically no serious disagreements
- ☐ 2. Serious disagreements, but we usually "patch things up"
- ☐ 3. Continuing serious disagreements, often unresolved

73. Is your spouse satisfied with you?

- ☐ 1. Seems to be generally satisfied with me
- ☐ 2. Has some serious complaints
- ☐ 3. Generally not satisfied with me

74. Do you and your spouse argue?

- ☐ 1. Never or almost never
- ☐ 2. Sometimes
- ☐ 3. Often
- ☐ 4. Continuously or almost continuously

75. Does your spouse make fair demands of you?

- ☐ 1. Expects and/or demands too much
- ☐ 2. Sometimes expects too much, but often fair
- ☐ 3. Almost always expects only what is fair

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76. Do you and your spouse reach agreement on important issues?

- ☐ 1. On all things
- ☐ 2. On most things
- ☐ 3. On some things
- ☐ 4. On few things
- ☐ 5. Never see eye-to-eye on important matters

77. Do you express your innermost thoughts and feelings to your spouse?

- ☐ 1. On all things
- ☐ 2. On most things
- ☐ 3. On some things
- ☐ 4. On few things
- ☐ 5. Never

78. Do you feel your spouse understands you?

- ☐ 1. I think I am quite puzzling to her /him
- ☐ 2. Understands some important features
- ☐ 3. Understands me quite well

79. Do you feel your spouse accepts you?

- ☐ 1. Accepts me the way I am
- ☐ 2. Generally accepts me but wants important changes too
- ☐ 3. Does not accept me the way I am

80. Does your spouse want to remain married to you?

- ☐ 1. Seems to want to end it
- ☐ 2. Sometimes wants to end it, other times does not
- ☐ 3. Does not want to end it

81. Does your spouse do the work you expect of a marriage partner?

- ☐ 1. Seldom does what is expected
- ☐ 2. Does poorly in some things, okay in others
- ☐ 3. Usually does what is expected

82. Would you like to terminate your marriage if you could do so in a reasonable manner?

- ☐ 1. Clearly prefer to end it
- ☐ 2. Sometimes want to end it, other times do not
- ☐ 3. Clearly prefer not to end it

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**STOP. BEFORE YOU CONTINUE, READ THESE INSTRUCTIONS.**

The following section of this booklet consists of numbered statements. The statements are about your feelings toward yourself and your beliefs in general. After each statement is a set of words to describe how much the statement applies to you or how well the statement describes your feelings. You are to check the one word after each statement which best describes how you feel about the statement. This may be difficult for some of the statements, but please do the best you can. Do not leave an item without making a mark on it. You will see that each set of words has a blank middle category. You probably will not use this category very often, if at all. This category should be marked **only** if you absolutely can not decide whether or not the statement describes your feelings or beliefs. All information will be kept confidential. If you have no questions please begin. If you have questions please ask the interviewer now.

1. I am embarrassed by dirty stories.  
☐ ☐ ☐ ☐ ☐  
 Almost Always Most Times Some Times Almost Never
2. I am interested in science.  
☐ ☐ ☐ ☐ ☐  
 Very Much Somewhat Very Little Not At All
3. As a youngster I used to skip school.  
☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
4. My father was good to me.  
☐ ☐ ☐ ☐ ☐  
 Almost Always Most Times Some Times Almost Never
5. I talk with strangers when I am traveling about town.  
☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
6. I might like the work of a librarian.  
☐ ☐ ☐ ☐ ☐  
 True Probably True Probably False False
7. I like poetry.  
☐ ☐ ☐ ☐ ☐  
 Very Much Somewhat Very Little Not At All
8. I hide my feelings so that others do not know they hurt me.  
☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
9. I suffer from vomiting and nausea.  
☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often

10. I enjoy leading discussions and exchanging opinions with people.  
☐ ☐ ☐ ☐ ☐ ☐  
 Very True True False Very False
11. I am not afraid of the dark.  
☐ ☐ ☐ ☐ ☐ ☐  
 Very True True False Very False
12. I think about a secret dream life.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
13. I have a hard time getting started on a task.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
14. I have argued with people when they were wrong.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Always Most Times Some Times Almost Never
15. My judgment is sound and mature.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Always Most Times Some Times Almost Never
16. Things happen which frighten me.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Never Some Times Often Very Often
17. I am not known to be easily angered.  
☐ ☐ ☐ ☐ ☐ ☐  
 Very True True False Very False
18. Mice and beetles and other small animals and insects make me nervous.  
☐ ☐ ☐ ☐ ☐ ☐  
 Almost Always Most Times Some Times Almost Never

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19. I find it difficult to make conversation with strangers.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Always	Most Times		Some Times	Almost Never

20. When I meet new people I am the first to strike up a conversation.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Always	Most Times		Some Times	Almost Never

21. All it takes is a little excitement to bring me out of feeling low.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Always	Most Times		Some Times	Almost Never

22. I am accurately described as calm and controlled.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very True	True		False	Very False

23. In order to get what they want, people in power will get around a law without actually breaking it.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
True of Most	True of Many		True of Some	True of Few

24. I experience dizzy spells.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

25. A lightning storm is a fearful experience.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very True	True		False	Very False

26. I give up trying to do something because it has so many difficulties and alternatives.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

27. I suspect that someone is following me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

28. I am under a great deal of tension.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

29. I have not lived up to my potential.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
True	Probably True		Probably False	False

30. Someone is out to ruin me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very Likely	Likely		Unlikely	Very Unlikely

31. People in authority arrange to get credit for the good work and blame the bad work on others.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
True of Most	True of Many		True of Some	True of Few

32. I have pretended to be ill in order to get out of something.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

33. There are times when I do not tell the truth.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

34. People will use somewhat unfair means to get what they want.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
True of Most	True of Many		True of Some	True of Few

35. I am nervous and anxious about things.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Almost Never	Some Times		Often	Very Often

go on to next page

36. I brood or feel sorry for myself.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

37. I have pains.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

38. I read newspaper editorials.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Every Day Days Days Never

39. I have periods when I laugh or cry in an uncontrollable manner.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

40. It is hard for me to take part in group conversations.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

41. I do not enjoy going to art museums.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

42. I have chest pains.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

43. Certain people would like me out of the way.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

44. I have trouble with my stomach.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

45. Displays of flowers or plants catch my attention.

☐ ☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

46. One should be suspicious when people are quite friendly.

☐ ☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

47. I have weird dreams I feel I should not talk about.

☐ ☐ ☐ ☐ ☐ ☐  
True of True of True of True of  
Most Many Some Few

48. Sharp or pointed objects make me nervous.

☐ ☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

49. I like to poke fun at people.

☐ ☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

50. Terrible thoughts come into my mind and tend to persist.

☐ ☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

51. There is nothing particularly fearful about spiders.

☐ ☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

52. Snakes do not particularly frighten me.

☐ ☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

53. It bothers me to enter a party that has already started.

☐ ☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

go on to next page



54. I got along well with my parents.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

55. I feel excited, stimulated and alert when things are going badly.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

56. Lectures on serious subjects bore me.

☐ ☐ ☐ ☐ ☐  
True of True of True of True of  
Most Many Some Few

57. I wish I could be more outgoing than I am.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

58. I keep up with reading in my areas of interest.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

59. I am not easily upset.

☐ ☐ ☐ ☐ ☐  
True Probably True Probably  
True False

60. I wonder if there is something wrong with my mind.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

61. I have headaches.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

62. There are things about me that I do not like.

☐ ☐ ☐ ☐ ☐  
True of True of True of True of  
Most Many Some Few

63. I find myself memorizing numbers or repeating words for no apparent reason.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

64. Given the opportunity people will take advantage of an easily deceived person.

☐ ☐ ☐ ☐ ☐  
True of True of True of True of  
Most Many Some Few

65. I can "pitch in" and get a job done.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

66. I have never been known as a trouble-maker.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

67. I feel most secure when alone.

☐ ☐ ☐ ☐ ☐  
Very True True False Very  
True False

68. My thoughts are strange and peculiar.

☐ ☐ ☐ ☐ ☐  
True of True of True of True of  
Most Many Some Few

69. I become nervous when I look down from a high place.

☐ ☐ ☐ ☐ ☐  
Almost Most Some Almost  
Always Times Times Never

70. I have trouble making new friends.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

71. I get attacks of nausea.

☐ ☐ ☐ ☐ ☐  
Almost Some Often Very  
Never Times Often

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72. Others are plotting against me.
- ☐ Very Likely ☐ Likely ☐ Unlikely ☐ Very Unlikely
73. I see or hear or feel strange things which are not quite real.
- ☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
74. My interests are more varied than most people's.
- ☐ True ☐ Probably True ☐ Probably False ☐ False
75. I have succeeded at the things I have tried.
- ☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never
76. I listen to classical or symphonic music.
- ☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
77. Parts of my body feel numb.
- ☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
78. Hardly anything frightens me.
- ☐ Very True ☐ True ☐ False ☐ Very False
79. My life and things around me seem unreal, as if in a dream.
- ☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
80. The excitement of a crowd attracts me.
- ☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never

81. People really do not want to go out of their way to help others.
- ☐ True ☐ Probably True ☐ Probably False ☐ False
82. My decisions are governed by my head rather than my heart.
- ☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never
83. When people act in an unselfish way, it is because there is something in it for them.
- ☐ True of Most ☐ True of Many ☐ True of Some ☐ True of Few
84. Under no circumstances would I break a law.
- ☐ True ☐ Probably True ☐ Probably False ☐ False
85. I am not a high strung, tense person.
- ☐ Very True ☐ True ☐ False ☐ Very False
86. I really enjoy a good party or being with a group of boisterous people having a good time.
- ☐ Very Much ☐ Somewhat ☐ Very Little ☐ Not At All
87. People make friends primarily for the purpose of feathering their own nest.
- ☐ True of Most ☐ True of Many ☐ True of Some ☐ True of Few
88. I have been healthy and free of illness over the past several years.
- ☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never

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89. People expect more respect for their own rights than they are willing to allow for others.

☐ ☐ ☐ ☐ ☐  
Almost Always Most Times Some Times Almost Never

90. I am a restless person and like to move about.

☐ ☐ ☐ ☐ ☐  
Very True True False Very False

91. I admire people who can put up with tedious, routine work.

☐ ☐ ☐ ☐ ☐  
True of Most True of Many True of Some True of Few

92. It seems that I am more easily hurt than most people.

☐ ☐ ☐ ☐ ☐  
True Probably True Probably False False

93. Old customs and traditions should be preserved.

☐ ☐ ☐ ☐ ☐  
True of Most True of Many True of Some True of Few

94. The wish that I were dead occurs to me.

☐ ☐ ☐ ☐ ☐  
Almost Never Some Times Often Very Often

95. I seem to experience things more intensely than most people.

☐ ☐ ☐ ☐ ☐  
True Probably True Probably False False

96. When things were bad, I have felt like leaving home.

☐ ☐ ☐ ☐ ☐  
Almost Never Some Times Often Very Often

97. I might enjoy a sexy show.

☐ ☐ ☐ ☐ ☐  
Very True True False Very False

98. I think about possible misfortunes.

☐ ☐ ☐ ☐ ☐  
Almost Never Some Times Often Very Often

99. It worries me a great deal to be closed into a small room or closet.

☐ ☐ ☐ ☐ ☐  
Almost Always Most Times Some Times Almost Never

100. I am unhappy or depressed.

☐ ☐ ☐ ☐ ☐  
Almost Never Some Times Often Very Often

101. I feel excited and happy for no apparent reason.

☐ ☐ ☐ ☐ ☐  
Almost Every Day Most Days Some Days Almost Never

102. Under the right circumstances I could do things of benefit to the community.

☐ ☐ ☐ ☐ ☐  
True Probably True Probably False False

103. I feel no one really cares what happens to me.

☐ ☐ ☐ ☐ ☐  
Almost Never Some Times Often Very Often

104. When I see someone I know I pretend not to notice.

☐ ☐ ☐ ☐ ☐  
Almost Always Most Times Some Times Almost Never

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105. I worry beyond reason over things that really do not matter.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
106. I lose sleep worrying about things.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
107. People are honest primarily because they are afraid of being caught.
- ☐ ☐ ☐ ☐ ☐
- True of Most      True of Many      True of Some      True of Few
108. When things were bothering me, I have felt like starting a fight.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
109. When things did not go my way, I have lost my temper.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never
110. I am able to please other people.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never
111. A bloody person or animal frightens or sickens me.
- ☐ ☐ ☐ ☐ ☐
- Very True      True      False      Very False
112. I am an important person.
- ☐ ☐ ☐ ☐ ☐
- True      Probably True      Probably False      False
113. Certain habits of others have annoyed or bothered me.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often

114. When angered I have felt like smashing things.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never
115. I think about ending it all.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
116. I have missed out on things because I could not make up my mind quickly enough.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
117. I fear traveling by airplane.
- ☐ ☐ ☐ ☐ ☐
- Very True      True      False      Very False
118. I liked school.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never
119. Going out dancing would be my idea of a good time.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never
120. I doubt that I will ever amount to much.
- ☐ ☐ ☐ ☐ ☐
- True      Probably True      Probably False      False
121. Strong disagreements should be resolved to everyone's satisfaction.
- ☐ ☐ ☐ ☐ ☐
- Almost Never      Some Times      Often      Very Often
122. I feel as if a disaster or something dreadful is about to occur.
- ☐ ☐ ☐ ☐ ☐
- Almost Always      Most Times      Some Times      Almost Never

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123. I fear that I may be losing my mind.  
☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
124. I feel upset in the pit of my stomach.  
☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
125. On important decisions I shift back and forth from one alternative to another.  
☐ Very True ☐ True ☐ False ☐ Very False
126. I am healthier than most people my age.  
☐ True ☐ Probably True ☐ Probably False ☐ False
127. People do not understand me.  
☐ Very True ☐ True ☐ False ☐ Very False
128. All forms of gambling should be outlawed.  
☐ Strongly Agree ☐ Agree ☐ Disagree ☐ Strongly Disagree
129. I am in good spirits and cheerful.  
☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never
130. I trust others.  
☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never
131. The words of other people can be trusted.  
☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never

132. I would have been more successful if certain people had not had it in for me.  
☐ Very True ☐ True ☐ False ☐ Very False
133. I am unhappy or depressed.  
☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
134. People try to take advantage of me.  
☐ True of Most ☐ True of Many ☐ True of Some ☐ True of Few
135. I can forget my problems just by joining a playful group of friends.  
☐ Almost Always ☐ Most Times ☐ Some Times ☐ Almost Never
136. I have many interests to keep me busy and occupied.  
☐ Very True ☐ True ☐ False ☐ Very False
137. When talking with others I do not discuss sexual matters.  
☐ Very True ☐ True ☐ False ☐ Very False
138. I lose my balance.  
☐ Almost Never ☐ Some Times ☐ Often ☐ Very Often
139. I am so full of pep that I do not sleep.  
☐ Almost Every Day ☐ Most Days ☐ Some Days ☐ Almost Never
140. I am satisfied with my life.  
☐ Very Much ☐ Somewhat ☐ Very Little ☐ Not At All

go on to next page

141. In my youth I got into scrapes with the law.

☐ Almost  
Never

☐ Some  
Times

☐ Often

☐ Very  
Often

142. In my life people have treated me fairly.

☐ Almost  
Always

☐ Most  
Times

☐ Some  
Times

☐ Almost  
Never

143. I have very little or no fear of being near to deep water.

☐ Very  
True

☐ True

☐ False

☐ Very  
False

144. As a youngster I belonged to a group or gang of kids that stuck together.

☐ Almost  
Always

☐ Most  
Times

☐ Some  
Times

☐ Almost  
Never

145. I worry about hurting other people's feelings.

☐ Almost  
Never

☐ Some  
Times

☐ Often

☐ Very  
Often

146. I think I am more sensitive than most people.

☐ True

☐ Probably  
True

☐ Probably  
False

☐ False

147. I enjoy playing practical jokes.

☐ Almost  
Never

☐ Some  
Times

☐ Often

☐ Very  
Often

148. It takes a lot of argument to convince a person of the truth.

☐ True of  
Most

☐ True of  
Many

☐ True of  
Some

☐ True of  
Few

149. If given a choice I would rather have job security than a high paying job.

☐ Very  
True

☐ True

☐ False

☐ Very  
False

150. I enjoy meeting new people.

☐ Almost  
Never

☐ Some  
Times

☐ Often

☐ Very  
Often

151. I enjoy reading books about history

☐ Very  
Much

☐ Somewhat

☐ Very  
Little

☐ Not At  
All

15

Tell the interviewer you have finished.

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