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SHORT TERM REHABILITATION
Analytic Study No. V/VI

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OMEC, Inc.
115 South Peters
Norman, Oklahoma 73069

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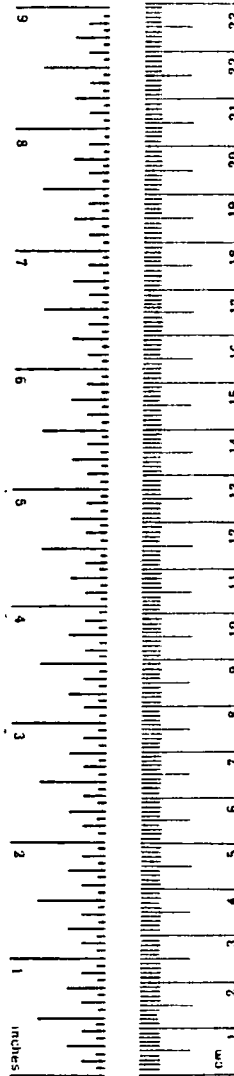
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16. Abstract

   This report describes the preliminary results of a controlled study of the effects of punitive sanctions and group therapy on the subsequent behavior of individuals arrested for Driving Under the Influence of Alcohol (DUI) in Oklahoma City during the period April, 1975 through June, 1976. Quasi-random assignments of 402 individuals convicted of DUI were made to four treatment groups which represented control, punitive, rehabilitation and a combination of rehabilitation and punitive efforts. Initial, six and twelve-month(post-initial) personal interviews and driver record checks were conducted to determine DUI recidivism rates, accidents and short-term life style changes of the study participants.

   None of the life style factors relating to employment, family status, social interaction, health status or residential stability showed any significant differences among treatment groups when initial and six-month or initial and twelve-month interview scores were compared. Self-reported alcohol consumption decreased significantly for both Punitive and Control groups during the same period. The Rehabilitation group had the lowest twelve-month DUI recidivism rate of any group and a longer mean recidivism time than either the Control or Punitive groups.

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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
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^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5 9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see Nat. Bureau of Standards, Misc. Publ. 286, Units of Weights and Measures. Price $2.25. SD Catalog No. C13.10:286.

Approximate Conversions from Metric Measures

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

°F   -40   0   32   40   80   98.6   120   160   200   212 °F
°C   -40   -20   0   20   37   40   60   80   100 °C

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OKLAHOMA CITY ASAP

SHORT TERM REHABILITATION

1976

by

Richard F. Krenek, Ph.D., P.E.

1. <u>INTRODUCTION</u>. The short term rehabilitation study in Oklahoma City began in April, 1975, and includes individuals arrested for driving under the influence who were randomly assigned to one of four treatment groups. For reasons of acceptance by all parties concerned, the STR Study in Oklahoma City was referred to as the Special Group Study. These terms will be used interchangably in this report.

A total of 402 persons were enrolled in the STR study during the period April, 1975 through June, 1976. The four special group categories were Rehabilitation, Control, Punitive and Rehabilitation plus Punitive in nature. The characteristics of the special group categories are discussed in the experimental design section of this report. Initial personal interviews and driver and criminal records checks were completed on each individual assigned to the special group. Follow-ups at 6, 12 and 18 months are scheduled to be conducted. Only the 6-month and most of the twelve-month interviews and records checks were completed prior to the deadline for the writing of this report. The initial interview consisted of a Mortimer-Filkins test combined with several questionnaires including the Life Activities Inventory, Current Status Questionnaire and Personality Assessment Scale. The follow-up interviews consisted of only the latter three instruments.

The records checks included a scan of both state and municipal arrest and conviction records for both traffic and non-traffic offenses. In addition, data on accidents involving the subjects in this study was also collected. The dependent variables in this study included DUI recidivism and changes in the Life Activities Inventory (LAI) and Current Status Questionnaire (CSQ).

The study was designed to attempt to answer the following basic research questions:

(1) Is any one of the experimental categories more effective than any other or the control category in reducing first year recidivism rates?

(2) Is any one of the four experimental categories more effective when compared to the others in producing desirable life-style changes.

(3) Are there measurable differences between recidivists and non-recidivists in each of the four groups that would enable an improvement in the selection process for rehabilitation as well as punitive sanctions?

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The following sections will contain detailed information concerning eligibility for special group assignment, the randomization process and special group system entry.

2. EXPERIMENTAL DESIGN

a. Eligibility. To be eligible for the special group assignment in the Oklahoma City ASAP, several conditions had to be met by the prospective assignee. The conditions included the following:

(1) No known prior alcohol related traffic offense.

(2) The index arrest must be of the non-accident variety.

(3) Age of the subject must be 21 or over.

(4) The individual was required to be a resident of Oklahoma City or a surrounding suburb.

(5) The BAC of the individual must have been recorded and be between .14 and .26%.

A clerk in the ASAP Prosecution office would make the determination or candidacy for special group assignment in each case coming through their office. If a determination of special group eligibility was made, a form (included as Appendix A) was completed. This form included name, date of birth, sex, date of arrest, and BAC on the subject proposed as a special group candidate. The clerical error rate in making ineligible assignments that ultimately were not detected prior to actual assignment was less than 2%.

b. The Randomization Process. The special group assignment forms referred to above and contained in Appendix A were initially given assignment numbers and assigned on a random order basis using dice to produce the random ordering. For example, if we have four groups lettered A through D, then a valid randomization scheme would be numbers 5 or 6 on the dice assigned to group A; numbers 8 or 9 assigned to group B; 2,3 or 7 assigned to group C; 4, 10, 11 or 12 assigned to group D. Each of the assignment forms was sequentially numbered and then lettered with the appropriate random assignment prior to its delivery to the ASAP Prosecutor's office. Assignments were then made in order from this stack as individual candidates were determined.

c. The Offer Acceptance/Rejection Process. A copy of the special group assignment form with all the information present was placed in the Prosecutor's file. While the selection and assignment process was truly randomized, the resultant was not, since rejection of an STR assignment was possible on the part of Prosecution, the judge or the client himself. The resultant must be considered as quasi-random,

rather than truly random. The offer of special group assignment was made in a meeting between the prosecuting attorney and the defense attorney, generally prior to arraignment, but occasionally post-arraignment. The scenario was, in almost every instance, a plea-bargaining session in which the prosecuting attorney instructed the defense attorney on the experimental nature of this program and informed him that participation would not prejudice any further action on his case. After that explanation, the offer was made and the attorney representing the defendant could accept or reject the offer at that time or confer with his client concerning the offer and then indicate acceptance or rejection. Further, even though acceptance had taken place at this point, rejection of the offer could take place at any time up to and including the formal trial procedure which formalized the agreement. Obviously, from the defendant's standpoint, some of the special group assignment alternatives were more deisrable than others, so, as one might expect, a disproportionate number of rejections were found in the assignment groups. Total rejections in each group were Rehabilitation (72), Control (13), Punitive (30) and Punitive plus Rehabilitation (80). Some of the candidates for special group assignment were rejected prior to a formal offer being made as a prerogative of the ASAP Prosecutor's office. Generally, these rejections involved a violation of one of the conditions for special group assignment initially. That is, the subjects may have had a prior alcohol related traffic offense that became known subsequent to the completion of the special group assignment form. They may have been involved in an accident along with the index DUI arrest or may not have been a resident of Oklahoma City. In rare instances, the judge would not permit a special group assignment because of knowledge he had concerning the candidate and his past performance primarily as it related to alcohol related offenses for that individual.

    d. <u>Weaknesses in the Random Assignment System</u>. The obvious weakness in the scheme utilized to randomly assign persons to the special group was the option of the suspect or his attorney to reject the offer. The obvious desirability of the control group contrasted with the much less desirable (from the suspect's standpoint) nature of the combination rehabilitation-punitive sanction, leading to a disparity in rejection rates. Investigation of the demographic/socioeconomic characteristics of each of the four groups, however, did not reveal any significant differences between the groups. STR group assignments by age, sex, race, education, income, marital status and index arrest BAC are given in Appendix B. It is felt that, while the rejection process weakened the credibility of the randomization, it probably did not destroy it or significantly jeopardize it to any detectable extent.

e. _System Entry_. System entry was facilitated by a first meeting with the probation officer immediately following the court appearance which finalized the acceptance of the offer of special group assignment. At this meeting an appointment was made for an initial interview. This initial interview would be conducted by a probation officer, usually within a week of the adjudication procedure. During the initial interview a Mortimer-Filkins questionnaire was administered along with the initial LAI, CSQ and PAS instruments. Those individuals who were participating in either the rehabilitation or rehabilitation plus punitive groups were instructed as to the date of their first session at the Alcohol Treatment Center. Both the control and punitive groups were reminded of their obligations to phone the probation office on a monthly basis during the coming year (no personal contact was required) and of their six and twelve-month obligations to return for testing follow-up. Initial records checks included local police records, state traffic records and FBI records.

f. _Other Elements of the Experimental Design_. Other aspects of the experimental design for the Oklahoma City STR Study are contained in Table 1. Eligibility and random assignment process were discussed previously in this section of this report.

g. _Attrition from the STR Study_. Attrition of clients from the STR study was anticipated prior to the start of the research program. Causes of client attrition included the following:

(1) changing residence with no forwarding address

(2) moving and setting up residence outside the Oklahoma City area

(3) "mysterious disappearance"

(4) incarceration

(5) death

Six and twelve-month completion rates for each of the four study groups are given in Table 2 below:

TABLE 2 : Completion Percentages - Six and Twelve-Month
Follow-Up Interview Completion Rates
Oklahoma City ASAP

GROUP	NUMBER	6-MONTH COMPLETIONS (%)	12-MONTH COMPLETIONS (%)
Rehabilitation	100	88	64
Control	108	93	85
Punitive	100	83	81
Punitive + Rehabilitation	94	78	53

TABLE 1:   Characteristics of STR (Special Group) Categories
Oklahoma City

GROUP ASSIGNMENT	PLEA	SENTENCE	OTHER CONDITIONS
Rehabilitation	DUI	One Year Deferred	Participate in Group Therapy Sessions for six months
Control	DUI	One Year Deferred	None
Punitive	Reduced to Reckless Driving	$300 fine, $200 suspended 90 days in jail - All suspended Fine paid immediately One year Unsupervised Probation	None
Punitive + Rehabilitation	Reduced to Reckless Driving	$300 fine, $200 suspended 90 days in jail - All suspended Fine paid immediately One year Unsupervised Probation	Participate in Group Therapy Sessions for six months

NOTE: Information relating to the therapists and group therapy utilized in this
study is contained in Appendix C.

No significant differences in age, sex, race, marital status, education or job classification were found between clients whose six and twelve-month interviews were completed and those whose were not $(x^2, \alpha = 0.05)$.

3. PERSONAL INTERVIEW SCALE RESULTS

a. Introduction. As previously mentioned in this report an intial interview, as well as subsequent follow-up interviews six and twelve-months later, was attempted for each individual assigned to the STR study. These interviews consisted of a Life Activities Interview (LAI), Current Status Questionnaire (CSQ), and Personality Assessment Scale (PAS). These instruments were developed at the Human Factors Laboratory, Department of Psychology, University of South Dakota, specifically for the STR study. The LAI and CSQ were designed "to provide information relative to clients' positions along a number of dimensions potentially indicative of treatment effectiveness." The PAS was incorporated "primarily as a means of quantifying personality attributes for potential use as covariates in analyses of treatment effectiveness, (although) certain state or trait dimensions available from this instrument are also likely to provide outcome measures as well."

The LAI scale consists of six derived factors, each of which is determined by four to ten salient variables. The CSQ scale consists of seven derived factors, each determined by four to twelve variables. An LAI/CSQ composite scale consisting of five derived variables was constructed to represent dimensions common to both the LAI and CSQ instruments. The PAS scale consists of 14 derived factors, each of which is determined by 3 to 15 variables. Details of instrument development and descriptions of the individual scale factors as provided the Oklahoma City ASAP by the University of South Dakota are given in Appendix D.

b. Results.

(1) Analysis of Variance Results. Basic problems exist with the analysis of the interview scale results that weigh heavily upon the interpretations of the statistical analysis. The scale scores can only be considered as having ordinal rank. The sensitivity or discriminating ability of the scale scores is unknown (to this researcher). In short, though a statistically significant difference between experimental groups may exist, the magnitude of "practical significance" is very much in question. In spite of this author's convictions concerning the data rank, the scale scores themselves appear to be normally distributed and independent with groups generally exhibiting homogeneity of variance, therefore lending themselves readily to the ANOVA statistical model. The ANOVA is utilized as a primary tool for statistical analysis in this section (SPSS ONEWAY ANOVA).

Experimental group means for initial, six-month and twelve-month interviews, LAI, CSQ, LAI/CSQ and PAS scales are contained in graphical form in Appendix E. Since the objective of this portion of the STR study was to assess differences (if any) in life style as a result of experimental group membership, it is appropriate to consider paired factor score differences (e.g., LAI 1 (Initial)-LAI 1 (6-Month) for each individual in each of the four experimental groups as the dependent variables of interest. The paired score differences for each factor score were computed by subtracting six-month and twelve-month factor scores from their paired initial score for each individual interviewed and participating in this study.

Statistical analysis of the initial/six-month differences indicated that four of the factors showed among group differences at the $\alpha \leq .10$ level. Results of the analysis are given in Tables 3 through 6 on the following pages.

Of the eighteen factors analyzed, only four showed statistically significant changes in factor scores between the initial and six-month interviews that were related to group assignment. All of the significant factors (LAI-2, LAI-6, CSQ-7 and LAI/CSQ-1) are related to alcohol consumption. None of the factors relating to employment, family status, social interaction, health status or residential stability showed any significant differences among groups when initial and six-month factor scores were compared. The results clearly indicate that self-reported alcohol consumption decreased after six months in both the Control and Punitive groups while no change or a slight increase in self-reported consumption occurred in the Rehabilitation and Rehabilitation + Punitive groups over the same period.

Statistical analysis of the initial/twelve-month differences showed a result similar to that for the initial/six-month differences. Three factors showed among group differences at the $\alpha \leq .10$ level. Results of the analysis are given in Tables 7 through 9 on the following pages.

As in the case of initial/six-month differences, of the eighteen factors analyzed, the three factors exhibiting significance among group differences were related to alcohol consumption(LAI-2, LAI/CSQ-1 and LAI/CSQ-5). None of the factors relating to employment, family status, social interaction, health status or residential stability showed any significant differences among groups when initial and twelve-month factor scores were compared. The results clearly indicate that self-reported alcohol consumption decreased after twelve months in both the Control and Punitive groups, while no change or a slight increase in self-reported consumption occurred in the Rehabilitation and Rehabilitation plus

TABLE 3: Analysis of Variance Results
Current Drinking Pattern - Quantity and Frequency

Scale: LAI-2

Variable: LAI-2 (Initial) - LAI-2 (6 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	364899	121633	8.529	.000
Within Groups	227	3237275	14261		
TOTAL	230	3602175			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	57	-36.35	120.6	15.96	-243	204	-68.3 to -4.4
Control	65	38.52	127.6	15.82	-265	285	6.9 to 70.1
Punitive	56	49.95	103.3	13.80	-262	266	22.3 to 77.6
Punitive + Rehabilitation	53	-34.23	123.7	16.99	-285	285	-68.3 to -0.1
TOTAL	231						

INTERPRETATION OF RESULTS: Relative decrease in self reported quantity and frequency of alcohol consumption by Control and Punitive groups with a relative increase in self reported alcohol consumption by Rehabilitation and Punitive + Rehabilitation groups.

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TABLE 4: Analysis of Variance Results
Immoderate Drinking Behavior

Scale: LAI-6 ·

Variable: LAI-6 (Initial) - LAI-6 (6 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	223308.	74436	5.25	.002
Within Groups	92	1304417.	14178		
TOTAL	95	1527726.			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	26	2.2	119.9	23.5	-347	290	-46.3 to 50.6
Control	21	113.7	167.5	36.5	- 93	553	37.4 to 189.9
Punitive	22	90.0	118.6	25.3	- 23	530	37.4 to 142.5
Punitive + Rehabilitation	27	.9.8	58.3	11.2	-115	126	-13.3 to 32.8
TOTAL	96						

INTERPRETATION OF RESULTS: Control and Punitive groups tended to show a decrease in self reported immoderate drinking behavior while Rehabilitation and Punitive + Rehabilitation groups showed essentially no change over the first six months.

TABLE 5: Analysis of Variance Results
Control of Drinking

Scale: CSQ-7
Variable: CSQ-7 (Initial) - CSQ-7 (6Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	108095.	36031	3.296	.021
Within Groups	307	3356180.	10932		
TOTAL	310	3464276.			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	81	-20.1	98.4	10.9	-358	189	-41.8 to 1.7
Control	93	-61.7	106.2	11.0	-376	168	-83.5 to -39.8
Punitive	70	-55.2	103.7	12.4	-282	161	-79.9 to -30.5
Punitive + Rehabilitation	67	-24.2	110.2	13.5	-303	176	-51.1 to 2.7
TOTAL	311						

INTERPRETATION OF RESULTS: Control and Punitive groups showed a tendency toward greater relative self-reported abstention from alcohol. Rehabilitation and Punitive + Rehabilitation groups showed less self reported improvement than the other two groups.

TABLE 6: Analysis of Variance Results
Current Quantity/Frequency of Drinking

Factor: LAI/CSQ-1

Variable: LAI/CSQ-1 (Initial - LAI/CSQ-1 (6 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	242821.	80940	7.167	.000
Within Groups	305	3444460.	11293		
TOTAL	308	3687282.			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	79	- 6.5	107.1	12.0	-303	260	-30.5 to 17.5
Control	91	46.1	111.2	11.7	-241	329	22.9 to 69.2
Punitive	71	52.1	93.6	11.1	-195	301	29.9 to 74.2
Punitive + Rehabilitation	68	-.8.1	110.9	13.5	-279	332	-34.9 to 18.7
TOTAL	309						

INTERPRETATION OF RESULTS: LAI-2 and CSQ-7 appear to be merged in this factor. Control and Punitive groups show a lower self-reported frequency and quantity of alcohol consumption after six months. Rehabilitation and Punitive + Rehabilitation groups showed essentially no change after six months.

TABLE 7: Analysis of Variance Results
Current Drinking Pattern - Quantity and Frequency

Scale: LAI-2

Variable: LAI-2 (Initial) - LAI-2 (12 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	125745.	41915	2.478	.063
Within Groups	139	2351473.	16917		
TOTAL	142	2477218.			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	23	-25.0	109.2	22.8	-247	204	-72.3 to 22.2
Control	56	36.1	138.7	18.5	-265	285	- 1.0 to 73.2
Punitive	42	26.5	121.4	18.7	-223	308	-11.4 to 64.3
Punitive + Rehabilitation	22	-37.0	142.6	30.4	-285	285	-100.3 to 26.2
TOTAL							

INTERPRETATION OF RESULTS: Relative decrease in self reported quantity and frequency of alcohol consumption by Control and Punitive groups with a relative increase in self reported alcohol consumption by Rehabilitation and Punitive + Rehabilitation groups.

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TABLE 8: Analysis of Variance Results
Current Quantity/Frequency of Drinking

Factor: LAI/CSQ-1

Variable: LAI/CSQ-1 (Initial) - LAI/CSQ-1 (12 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	93101	31033	2.431	.065
Within Groups	189	2413240	12768		
TOTAL	192	2506342			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT. FOR MEAN
Rehabilitation	28	-4.1	99.8	18.9	-207	226	-42.8 to 34.6
Control	81	45.9	114.5	12.7	-286	316	20.6 to 71.2
Punitive	54	37.0	110.9	15.1	-190	364	6.8 to 67.3
Punitive + Rehabilitation	30	-5.6	123.7	22.6	-279	332	-51.8 to 40.6
TOTAL	193						

INTERPRETATION OF RESULTS: LAI-2 and CSQ-7 appear to be merged in this factor. Control and Punitive groups show a lower self-reported frequency and quantity of alcohol consumption after twelve months. Rehabilitation and Punitive + Rehabilitation groups showed essentially no change after twelve months.

TABLE 9: Analysis of Variance Results
Current Drinking Problems

Scale: LAI/CSQ-5

Variable: LAI/CSQ-5 (Initial) - LAI/SCQ-5 (12 Months)

SOURCE	DF	S.S.	M.S.	F. RATIO	F. PROB.
Between Groups	3	359593	119864	6.280	.000
Within Groups	255	4867101	19087		
TOTAL	258	5226695			

GROUP	COUNT	MEAN	STD.DEV.	STD.ERROR	MIN.	MAX.	95% CONF INT FOR MEAN
Rehabilitation	49	-66.2	152.7	21.8	-337	161	-110.1 to -22.4
Control	90	- 2.7	118.9	12.5	-337	294	- 27.6 to 22.2
Punitive	69	- 2.8	136.3	16.4	-337	232	- 35.5 to 29.9
Punitive + Rehabilitation	51	-89.1	156.7	21.9	-337	200	-133.2 to -45.0
TOTAL	259						

INTERPRETATION OF RESULTS: LAI-2 and CSQ-7 appear to be merged in this factor. Control and Punitive groups show a lower self-reported frequency and quantity of alcohol consumption after twelve months. Rehabilitation and Punitive + Rehabilitation groups showed essentially no change after twelve months.

Punitive groups over the same period. A discussion of these results is contained in the Discussion and Conclusions section of this report.

(2). Analysis of Covariance - Results. An analysis of covariance, utilizing several Personality Assessment Scale factors (Initial Interview Scores) as covariates, was attempted. The SPSS ANOVA program utilized for this analysis permitted only five covariates. The five covariates arbitrarily chosen for this analysis were those with the highest intrasite "Cronbach's alpha"

$$\{ \alpha = \frac{K}{K-1} \cdot (1 - \frac{6^2_i}{6^2_\tau}) \}$$

The covariate factors, along with their KR 20 scores, were:

PAS1 - Strange, Eccentric Thoughts (KR20 = .892)
PAS2 - Anxiety, Depression & Tension (.888)
PAS3 - Projection of Attributes (.821)
PAS10- Paranoia (.767)
PAS12- Hypochondria (.837)

Group assignment was the independent variable with the dependent variable chosen to be the initial interview minus six-month interview factor scores for each individual in the Oklahoma City STR study. Each of the LAI, CSQ and LAI/CSQ factors were considered individually. A total of 18 separate analyses of covariance were completed.

The results of this analysis indicate that only four factors showed significant differences ($\alpha \leq .05$) among assignment groups. Analysis of covariance results for those four factors are contained in Table 10 through 13. Note that the four factors were LAI-2, LAI-6, CSQ-7 and LAI/CSQ-1. All of these factors relate to alcohol consumption and are exactly the same factors identified earlier in the ANOVA analysis as having significant six-month difference scores. The Analysis of Covariance results reported here clearly do not add a significant dimension to the analyses previously reported in this section. No twelve-month difference factor scores were analyzed, utilizing PAS factors as covariates as a consequence of the results obtained.

4. DRIVER RECORD STUDIES - ANALYSIS AND RESULTS

a. DUI Recidivism. The data contained in this section consists of the results of records checks at approximately six and twelve months after group entry. These records checks include DUI, reckless driving, other hazardous moving violation, traffic accidents and alcohol related accidents. Both the State of Oklahoma Depart-

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TABLE 10: Analysis of Covariance Results

Factor: LAI-2

Dependent Variable: LAI-2 (Initial) -LAI-2 (6 Months)

Independent Variable: Group Assignment

SOURCE OF VARIATION	SS.	DF.	M.S.	F.	SIG.
Covariates	132479.0	5	26495.7	2.739	0.019
PAS 1	5880.1	1	5880.1	0.608	0.999
PAS 2	911.8	1	911.8	0.094	0.999
PAS 3	8039.6	1	8039.6	0.831	0.999
PAS 10	36641.7	1	36641.7	3.788	0.050
PAS 12	7640.8	1	7640.8	0.790	0.999
Group Assignment	214026.4	3	71342.1	7.375	0.001
Explained	346506.0	8	43313.2	4.477	0.001
Residual	3231051.0	334	9673.8		
TOTAL	3577557.0	342	10460.6		

TABLE 11: Analysis of Covariance Results

Factor: LAI-6

Dependent Variable: LAI-6 (Initial) -LAI-2 (6 Months)

Independent Variable: Group Assignment

SOURCE OF VARIATION	SS.	DF.	M.S.	F.	SIG.
Covariates	76629.8	5	15325.9	3.136	0.009
PAS 1	34.8	1	34.8	0.007	0.999
PAS 2	54581.6	1	54481.6	11.169	0.001
PAS 3	2523.1	1	2523.1	0.516	0.999
PAS 10	330.1	1	330.1	0.068	0.999
PAS 12	35865.1	1	35865.1	7.339	0.007
Group Assignment	39503.3	3	13167.7	2.695	0.045
Explained	116134.0	8	14516.7	2.971	0.003
Residual	1573562.0	322	4886.8		
TOTAL	1689696.0	330	5120.2		

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TABLE 12: Analysis of Covariance Results

Factor: CSQ-7

Dependent Variable: CSQ-7 (Initial) -CSQ-7 (6 Months)

Independent Variable: Group Assignment

SOURCE OF VARIATION	SS.	DF.	M.S.	F.	SIG.
Covariates	43132.7	5	8626.5	0.841	0.999
PAS 1	169.1	1	169.1	0.016	0.999
PAS 2	4375.5	1	4375.5	0.427	0.999
PAS 3	17402.8	1	17402.8	1.697	0.190
PAS 10	1.3	1	1.3	0.000	0.999
PAS 12	863.4	1	863.4	0.084	0.999
Group Assignment	85331.5	3	28443.8	2.774	0.041
Explained	128465.0	8	16058.1	1.566	0.133
Residual	3373202.0	329	10252.8		
TOTAL	3501667.0	337	10390.7		

TABLE 13: Analysis of Covariance Results

Factor: LAI/CSQ-1

Dependent Variable:

Independent Variable: LAI/CSQ-1 (Initial) -LAI/CSQ-1 (6 Months)

SOURCE OF VARIATION	SS.	DF.	M.S.	F.	SIG.
Covariates	108290.8	5	21658.1	2.159	0.058
PAS 1	7261.8	1	7261.8	0.724	0.999
PAS 2	1742.5	1	1742.5	0.174	0.999
PAS 3	10912.8	1	10912.8	1.088	0.298
PAS 10	19644.8	1	19644.8	1.958	0.159
PAS 12	8590.6	1	8590.6	0.856	0.999
Group Assignment	166417.4	3	55472.4	5.530	0.001
Explained	274709.0	8	34338.6	3.423	0.001
Residual	3300157.0	329	10030.8		
TOTAL	3574866.0	337	10607.9		

ment of Public Safety and Oklahoma City Police records were checked. All six-month checks were completed as of the writing of this report. Because this section of this report addresses itself primarily to DUI recidivism as a function of group assignment, individuals who recidivated (DUI arrest after index arrest) prior to the time of group entry were eliminated from consideration in the data presented. For information purposes candidates who recidivated prior to group entry numbered four (4) in the Rehabilitation group, Five (5) in the Control group, three (3) in the Punitive Group and four (4) in the Rehabilitation + Punitive group. For the purposes of this report, a DUI recidivist is defined as an inidivdual assigned to the STR study as a result of a DUI arrest (index arrest) and who is subsequently rearrested for DUI by the Oklahoma City Police or found guilty of DUI by another court within the State and reported to the State Department of Public Safety.

   b. Simple DUI Recidivism. Simple DUI recidivism was measured for each of the four experimental STR groups. Results are given in Table 14 which follows.

TABLE 14 Twelve Month DUI Recidivism by
Experimental STR Group Assignment

GROUP	NUMBER IN GROUP	NOT KNOWN AS DUI RECIDIVIST	KNOWN DUI RECIDIVISTS	TWELVE MONTH RECIDIVISM RATE
Rehabilitation	96	85	11	.115
Control	105	86	19	.181
Punitive	95	80	15	.158
Punitive + Rehabilitation	90	73	17	.189

   No statistically significant difference in twelve-month DUI recidivism was found among the four STR assignment groups (x^2, $\alpha = .05$), even though recidivism in both the Control and Rehabilitation + Punitive groups appears greater than the Rehabilitation group. Obviously, an 18-month and perhaps a 24-month records check should be conducted in order that more definitive results may be obtained.

   c. Time to Recidivate. Table 15 contains information concerning means and standard deviations of experimental group recidivism time. Note that recidivism time is defined to be the time period (in days) between the index DUI arrest and

the first DUI arrest <u>after</u> entry into a group.

TABLE 15: Mean and Standard Deviation of Times from Index Arrest
to First Recidivist Arrest by Group Assignment

	REHABILITATION	CONTROL	PUNITIVE	PUNITIVE + REHAB.
Mean (days)	228.3	184.5	169.9	246.5
Std. Deviation	95.4	111.5	71.7	141.6
Min/Maxi.	82/400	47/467	91/316	95/510
N.	11	19	15	17

An appropriate research question to be addressed here would be: "Do non-traditional approaches to the convicted DUI driver appear to retard mean recidivism time more than traditional sanctions?" To answer this question, three independent t tests were utilized. The results are given in Table 16.

TABLE 16: Results of Independent t Tests of Group Means by Pairs

TEST	t	d.f.	SIGNIFICANCE
Punitive vs. Control	0.440	32	N.A.
Punitive vs. Rehabilitation	1.785	24	< .05
Punitive vs. R + P	1.889	30	< .05

Referring to Table 15, it appears that both the Rehabilitation and Rehabilitation plus Punitive groups had significantly longer mean recidivism times than the Punitive group. This statement should be tempered by the fact that homogeneity of variance was not found between the Punitive and Rehabilitation plus Punitive groups (F, $\alpha = .01$)

There also appears to be a discernible difference in the group recidivism time distributions (Table 17). The Rehabilitation group appeared to have a much lower incidence of "early recidivism" than any of the other three groups. This apparent difference was not statistically significant (K.S., $\alpha = .05$) for any of the independent pairs tested, however. The size of the initial sample was probably inadequate and/or the differences (if any) insufficiently large to provide statistical significance with a samll sample size.

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RECIDIVISM TIME (DAYS)	P +·R N	CUMUL. %	PUNITIVE N	CUMUL. %	CONTROL N	CUMUL. %	REHABILITATION N	CUMUL. %
0-99	1	5.9	2	13.3	6	31.5	1	9.1
100-199	9	58.8	9	73.3	7	68.4	3	36.4
200-299	1	64.7	3	93.3	2	78.9	4	72.7
300-399	1	70.6	1	100.0	3	94.7	2	90.0
400.499	4	94.1			1	100.0	1	100.0
> 500	1	100.0						

d. Reckless Driving Arrests. No reckless driving arrests were discovered for any of the 386 STR clients in either the six or twelve-months records checks.

e. Other Hazardous Driving Arrests. Data concerning hazardous (moving) driving arrests other than DUI or reckless driving are given in Table 18.

TABLE 18: Twelve Month Hazardous Driving Arrests
by Experimental STR Group Assignment

GROUP	NUMBER IN GROUP	NOT KNOWN TO HAVE HM VIOLATIONS	KNOWN HM VIOLATIONS	TWELVE MONTH HM VIOLATION RATE
Rehabilitation	96	86	10	.104
Control	105	92	13	.124
Punitive	95	85	10	.105
Punitive + Rehabilitation	90	78	12	.133

No statistically significant difference in twelve-month hazardous moving violations among the four STR assignment groups occurred (χ^2, $\alpha = .05$). Note that the hazardous moving violations considered here included traffic control violations (red lights, stop signs, yield signs, etc.) as well as speeding violations.

f. Accident Experience. Data concerning both total and alcohol related (A/R) accident experience is given in Table 19 below.

TABLE 19: Twelve Month Accident and A/R Accident Experience
by Experimental STR Group Assignment

GROUP	NUMBER IN GROUP	CLIENTS NO ACCIDENTS KNOWN	CLIENTS ONE OR MORE ACCIDENTS	CLIENTS ONE OR MORE A/R ACCIDENT	12 MONTH TOTAL ACCIDENT RATE	12 MONTH A/R ACCIDENT RATE
Rehabilitation	96	84	12	2	.125	.021
Control	105	93	12	4	.114	.038
Punitive	95	79	16	3	.168	.032
Punitive + Rehabilitation	90	79	11	2	.122	.022

No statistically significant difference in twelve month accident experience was found among the four STR assignment groups (x^2, $\alpha = .05$). The alcohol related accident rate for the Punitive group was not significantly different (t, $\alpha = .05$) from any of the other experimental groups.

5. ANALYSIS OF STR GROUP RECIDIVISM RATES BY DEMOGRAPHIC AND SOCIOECONOMIC CLASSIFICATIONS

a. Introduction. A legitimate concern that should be addressed in this report is the existence of possible relationships between demographic or socioeconomic variables and recidivism rate. Since the rehabilitation countermeasure chosen for the STR study was a series of group therapy sessions, it is possible that certain groups of individuals characterized by sex, race, income, etc. may not have benefitted from their rehabilitation experience to the extent other groups would. Perhaps the most reliable though not conclusive indicator of "failure to benefit" available in this study is DUI recidivism. Tables 20 through 27 beginning on page 25 provide data on recidivism rates by group assignment and sex, age, race, education, income, marital status, Mortimer-Filkins Questionnaire score and index arrest blood alcohol concentration.

b. Analysis. The statistical analysis that can be performed is limited in scope due to the problems inherent with small samples. The results of the analysis of the effects of these variables is given in the following paragraphs:

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(1) _Sex_. No difference in DUI recidivism rate between sex groups was noted. Females in the Rehabilitation group had a significantly higher recidivism rate than males in the Rehabilitation group (t, α = .05). Although the recidivism rate for females was lower than for males in both the Punitive and Rehabilitation plus Punitive groups, these differences were not statistically significant (t, α = .05)

(2) _Age_. No difference in DUI recidivism rates between age groups was detected (x^2, α = .05). Tests of differences in age group recidivism rates within group assignments were not possible due to small sample size. Note that the effectiveness of rehabilitation appeared to increase with age, however.

(3) _Race_. A significant difference in DUI recidivism rate between racial/ethnic groups was detected (x^2, α = .05). Mexican Americans had a much higher recidivism rate than any other racial/ethnic group identified. Again, the small sample problem precludes testing for differences in recidivism rates by race within group assignment. Note, however, that "non-Caucasians" assigned to the Rehabilitation group had no instances of recidivism.

(4) _Formal Education_. No difference in DUI recidivism rates by years of formal education completed was determined (x^2, α = .05). No further statistical analysis was attempted due to the small sample size.

(5) _Monthly Family Income_. No difference in DUI recidivism rates among income groups was detected (x^2, α = .05). Note, however, that in the $501 - $1,000 per month income group, both Control and Punitive groups appear to have much higher recidivism rates than either the Rehabilitation or Rehabilitation + Punitive groups.

(6) _Marital Status_. No difference in recidivism rate among marital status groups was detected (x^2, α = .05).

(7) _Mortimer-Filkins Questionnaire Score and Drinker Classification_. No difference in recidivism rate was detected among the three drinker classifications tested (classifications determined by Mortimer-Filkins questionnaire alone), (x^2, α = .05). Note that _all_ of the individuals participating in this study were classified as indeterminate or problem drinker types after their initial interviews.

(8) _Index Arrest BAC_. No difference in recidivism rate was detected among the four index arrest BAC group classifications tested (x^2, α = .05). Where sufficient data is present, however, it appears that recidivism tends to increase in likelihood with higher index arrest BAC. The Rehabilitation group appeared to produce results that are just the opposite (i.e., lower recidivism rates with increasing index arrest BAC).

TABLE 20: Recidivism Rates by Group Assignment and Sex

GROUP ASSIGNMENT	MALES		FEMALES	
	N	% RECIDIVATING	N	% RECIDIVATING
Rehabilitation	81	8.6	15	26.7
Control	94	18.1	11	18.2
Punitive	82	17.0	13	7.7
Punitive + Rehabilitation	79	20.2	11	9.1
TOTAL	336	16.1	50	16.0

TABLE 21: Recidivism Rates by Group Assignment and Age

GROUP ASSIGNMENT	> 20 N	% RECID.	21-29 N	% RECID.	AGE 30-39 N	% RECID.	40-49 N	% RECID.	≤ 50 N	% RECID.
Rehabilitation	1	0	26	19.2	20	15.0	20	10.0	29	3.4
Control	2	0	31	16.1	30	26.6	25	16.0	17	11.8
Punitive	2	50.0	25	16.0	33	18.1	18	5.5	17	17.6
Punitive + Rehabilitation	2	0	24	20.8	22	9.1	19	31.6	23	17.4
TOTAL	7	14.3	106	17.9	105	18.1	82	15.8	86	11.6

TABLE 22: Recidivism Rates by Group Assignment and Race

GROUP ASSIGNMENT	CAUCASIAN N	% RECID.	BLACK N	% RECID.	RACE MEX. AMER. N	% RECID.	AMER. INDIAN N	% RECID.
Rehabilitation	79	12.6	13	0	1	0	2	0
Control	83	15.7	10	10.0	3	66.7	8	37.5
Punitive	74	13.5	11	27.3	3	33.3	7	14.2
Punitive + Rehabilitation	71	16.9	5	20.0	2	100.0	12	16.7
TOTAL	307	14.7	39	12.8	9	55.6	29	20.7

| GROUP ASSIGNMENT | YEARS OF SCHOOL SUCCESSFULLY COMPLETED | | | | | | | |
| | 1 to 8 | | 9 to 12 | | 13-16 | | > 16 | |
	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.
Rehabilitation	18	11.1	58	13.8	20	5.0	0	0
Control	13	38.4	58	15.5	28	14.3	6	16.7
Punitive	16	12.5	63	14.3	14	28.5	2	0
Punitive + Rehabilitation	22	22.7	44	11.4	21	23.8	3	66.7
TOTAL	69	20.2	223	13.9	83	16.9	11	27.2

TABLE 24: Recidivism Rates by Group Assignment and Monthly Family Income

| GROUP ASSIGNMENT | MONTHLY FAMILY INCOME | | | | | | | |
| | < $500 | | $501-$1000 | | $1001-$2000 | | > $2001 | |
	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.
Rehabilitation	33	15.2	38	7.9	20	10.0	2	50.0
Control	29	10.3	39	30.8	26	7.7	7	28.6
Punitive	32	12.5	38	26.3	21	4.8	4	0
Punitive + Rehabilitation	32	18.8	34	8.5	17	35.3	1	0
TOTAL	126	14.3	149	19.5	84	13.1	14	21.4

TABLE 25: Recidivism Rates by Group Assignment and Marital Status

GROUP ASSIGNMENT	NEVER MARRIED		DIVORCED		WIDOWED		SEPARATED		MARRIED	
	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.
Rehabilitation	10	20.0	27	7.4	6	0	9	33.3	44	9.1
Control	9	0	27	29.6	2	0	9	22.2	58	15.5
Punitive	17	35.3	19	10.5	1	0	8	12.5	50	12.0
Punitive + Rehabilitation	10	30.0	25	28.0	5	20.0	9	11.1	41	12.2
TOTAL	46	23.9	98	19.4	14	7.1	35	20.0	193	12.4

TABLE 26: Recidivism Rates by Group Assignment and Mortimer
Filkins Questionnaire Score and Classification

GROUP ASSIGNMENT	MORTIMER-FILKINS QUESTIONNAIRE SCORE & CLASSIFICATION					
	MFQS < 15 SOCIAL DRINKER		MFQS = 16-25 INDETERMINATE DRINKER		MFQS > 26 PROBLEM DRINKER	
	N	% RECID.	N	% RECID.	N	% RECID.
Rehabilitation	52	9.6	31	9.7	13	23.0
Control	69	17.4	24	12.5	12	33.0
Punitive	55	16.4	33	15.2	7	14.3
Punitive + Rehabilitation	48	12.5	32	31.3	10	10.0
TOTAL	224	14.3	120	17.5	42	21.4

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TABLE 27: Recidivism Rates by Group Assignment and Index Arrest BAC

GROUP ASSIGNMENT	INDEX ARREST BAC									
	100 mg%*		110-140 mg%		150-190 mg%		200-240 mg%		$\geq$ 250 mg%	
	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.	N	% RECID.
Rehabilitation	1	100.0	4	25.0	59	10.2	27	11.1	5	0
Control	1	0	10	10.0	53	20.8	37	18.9	4	0
Punitive	0	0	9	22.2	54	13.0	28	17.9	4	25.0
Punitive + Rehabilitation	0	0	9	0	40	20.0	36	22.2	5	20.0
TOTAL	2	50.0	32	12.5	206	15.5	128	17.9	18	11.1

*The assignments in this category are the result of initial assignment clerical errors.

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6. DISCUSSION OF RESULTS AND CONCLUSIONS. The Analysis section of this report
provided data which showed that STR group assignment was not responsible for self-
reported six and twelve-month changes related to employment, family status, social
interaction, health status or residential stability. On the other hand, self-
reported alcohol consumption and abuse tended to decrease significantly for both
Control and Punitive groups while remaining stable or increasing for both the
Rehabilitation and Rehabilitation plus Punitive groups. This self-reported improve-
ment in alcohol consumption appears to be inconsistent with the twelve-month DUI
recidivism data. Recall that DUI recidivism rates among STR groups were not signifi-
cantly different. Twelve-month recidivism rates for the STR groups were: Rehabilita-
tion (.115), Control (.181), Punitive (.158) and Punitive plus Rehabilitation (.189).
It seems unlikely that these recidivism rates reflect the logical consequences of
the self-reported LAI/CSQ alcohol consumption factor changes in the STR groups.

The data discrepancy can probably be resolved as follows. Both the Punitive
and Control groups interacted personally with the STR interviewers on only four
occasions: 1) in court, 2) initial interview, 3) six-month interviews and 4) twelve-
month interviews. Since the interviewer was an "officer of the court" (actually
an ASAP probation officer) it is likely that the interviewee felt internal pressure
to report fewer instances of alcohol abuse and lower alcohol consumption even though
this was not the case. Rehabilitation and Punitive plus Rehabilitation group parti-
cipants also interacted personally with their interviewers on those same four occa-
sions. However, this interviewer did not have "officer of the court" status. In
fact, the interviewer may have also been the therapist in charge of the interviewee's
group sessions. This procedure was probably ill-advised and unknown to this
researcher prior to the writing of this report. Further, one of the themes of the
group therapy to which the latter two groups were exposed involved the recognition
of problems caused by excessive alcohol consumption. One could argue that all
four groups would tend to under-report alcohol consumption and abuse at their
initial interview. Perhaps out of a fear of the consequences in admitting to actual
alcohol abuse to an officer of the court, the Control and Punitive group participants
may have understated their involvement with alcohol. The Rehabilitation groups,
however, may have had a tendency to report alcohol involvement somewhat more
closely to its true level after the group therapy sessions. It is the opinion of
this researcher that factors relating to alcohol consumption or abuse cannot be
based upon self-reported variables where a perceived penalty for reporting that
abuse exists. It is also apparent that no other detectable life style changes

occured among the four STR assignment groups. This statement should not be construed as indicating that no changes in life style occurred as a result of group assignment, but merely that none could be detected with the instruments and methodology used.

An attempt to test the hypotheses previously mentioned was made. Initial and six-month distribution means for each of the four STR groups were computed for two of the four significant factor scores for DUI recidivists and non-recidivists. These two factors, selected at random, were LAI-2 and LAI/CSQ-1. Data is contained in Tables 28 and 29.

Of interest is the fact that the Δ_{1-6} shows improvement or a decrease in the alcohol comsumption for the Control and Punitive groups regardless of whether or not they were DUI recidivists. The Rehabilitation groups' data indicates that DUI recidivists tended to admit to increased alcohol involvement.

The data tends to support the previously stated hypothesis concerning the self-reported consumption of alcohol.

Of interest for future uses of group therapy in the ASAP program in Oklahoma City are the following observations:

1) Males in Rehabilitation tended to show a lower 12-month DUI recidivism rate than similarly treated females.

2) Blacks in Rehabilitation tend to show a lower recidivism rate than similarly treated whites.

3) Individuals in Rehabilitation with monthly incomes from $501 - $1,000 per month had a significantly lower recidivism rate than those with similar incomes in either the Punitive or Control groups.

These results cannot be generalized to other forms of rehabilitation and should not be automatically extended to group therapy in general.

While DUI recidivism and its parameter "time to recidivate" are not complete measures of countermeasure effectiveness, they must not be taken lightly. Time to first DUI recidivism, given that recidivism had occurred, was significantly less for the Punitive group when compared to both Rehabilitation groups. Further, the Rehabilitation group recidivism rate was lower than that of the Punitive group (though not statistically significantly lower). The Punitive plus Rehabilitation group, however, had a recidivism rate as high or higher than the Control group. Reasons for this apparent paradox are not known. One might, however, hypothesize that the reduction in charge to reckless operation and immediate payment of the $100 fine for inidividuals in the Punitive plus Rehabilitation group made the group therapy portion of this treatment appear almost as an afterthought to those participating. The DUI recidivism time distribution showed an initial (first 200 days)

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recidivism surge in the Punitive plus Rehabilitation group that was almost identical to the Punitive group. Recall that all individuals in the Rehabilitation group had pled guilty to DUI and given a one-year deferred sentence, with the court permitting withdrawal of that plea and dropping all charges, if performance in and attendance at group therapy sessions was satisfactory. This is a slightly different situation with a dissimilar reward structure. At the time the STR study began, the method used to obtain a combination of rehabilitation and punitive measures was the only one possible. Since that time, however, a "continued sentence" has been written into law. This permits a sentence (given a guilty plea to DUI) to be delayed for six months (for rehabilitation or other purposes). At the end of the six-month period, the court can permit the defendent to withdraw his guilty plea, while the prosecution amends the charge to reckless driving and the defendent pleads guilty to the reduced charge. A punitive sanction (fine or jail) can then be assessed.

It is not possible, utilizing the results of this study to date, to definitively and without qualification state that group therapy is the answer to creating positive life style changes and reducing recidivism rates for DUI offenders. More data from records checks at eighteen and twenty-four month periods after the initial interview should be collected and analyzed. It does not appear that further data collection involving the LAI, CSQ or PAS instruments is warranted.

TABLE 28: LAI-2 - Initial & Six-Month Mean Factor
Scores for Recidivists & Non-Recidivists by
STR Group Assignment

Assignment	Recidivists			Non-Recidivists		
	Initial	6-Month	Δ_{1-6}	Initial	6-Month	Δ_{1-6}
Rehabilitation	465.0	503.0	-38.0	402.9	421.5	-18.6
Control	427.9	402.6	25.3	422.7	395.9	26.8
Punitive	423.1	426.0	- 2.9	426.3	384.2	42.1
Punitive Plus Rehabilitation	375.8	421.1	-45.3	416.7	438.6	-21.9

Note: Positive Δ_{1-6} scores indicate a relative self-reported decrease in alcohol comsumption.

TABLE 29: LAI/CSQ-1 - Initial & Six-Month Mean Factor
Scores for Recidivists & Non-Recidivists by
STR Group Assignment

Assignment	Recidivists			Non-Recidivists		
	Initial	6-Month	Δ_{1-6}	Initial	6-Month	Δ_{1-6}
Rehabilitation	467.1	491.1	-24.0	412.0	409.9	2.1
Control	437.4	400.1	37.3	428.9	385.9	43.0
Punitive	427.3	417.0	10.3	425.2	378.3	46.9
Punitive Plus Rehabilitation	382.0	422.2	-40.2	432.5	435.4	-2.9

Note: Positive Δ_{1-6} scores indicate a relative self-reported decrease in alcohol consumption.

APPENDIX A

SPECIAL GROUP ASSIGNMENT

OKLAHOMA CITY ALCOHOL SAFETY ACTION PROJECT

ASSIGNMENT NO. _____

TO: _____

_____

NAME _____
        (Last)   (M)   (First)

DATE OF BIRTH _____

SEX _____

DATE OF ARREST _____

BAC _____

- No known prior A/R Traffic Offens

- Non-Accident Case

- 21 or Over

- Resident of OKC

- BAC: From and Including .15 to and Including .25

DATE OF OFFER _____

DEFENSE ATTORNEY _____

PROSECUTOR _____

OTHER _____

_____

Copy To: OMEC, Probation, ATSU

A-1

APPENDIX B

STR GROUP ASSIGNMENT

CLIENT SOCIOECONOMIC AND DEMOGRAPHIC VARIABLES

TABLE B-1: STR Group Assignment by Age

GROUP ASSIGNMENT	< 20	21-29	30-39	40-49	50-59	≥ 60	TOTAL
Rehabilitation	1	28	20	21	24	6	100
Control	3	32	31	25	12	5	108
Punitive	2	29	33	19	7	10	100
Punitive + Rehabilitation	2	26	23	20	16	7	94
TOTAL	8	115	107	85	59	28	402

TABLE B-2: STR Group Assignment by Sex

GROUP ASSIGNMENT	MALE	FEMALE	TOTAL
Rehabilitation	85	15	100
Control	97	11	108
Punitive	87	13	100
Punitive + Rehabilitation	82	12	94
TOTAL	351	51	402

TABLE B-3: STR Group Assignment by Race

GROUP ASSIGNMENT	CAUCASIAN	BLACK	RACE MEXICAN AMERICAN	AMERICAN INDIAN	OTHER	TOTAL
Rehabilitation	83	13	1	2	1	100
Control	86	10	3	8	1	108
Punitive	79	11	3	7	0	100
Punitive + Rehabilitation	74	6	2	12	0	94
TOTAL	332	40	9	29	2	402

TABLE B-4: STR Group Assignment by Years of
Formal Schooling Completed

GROUP ASSIGNMENT	YEARS OF FORMAL SCHOOLING COMPLETED				TOTAL
	1-8	9-12	13-16	$\geq$ 17	
Rehabilitation	18	61	21	0	100
Control	14	60	28	6	108
Punitive	16	68	14	2	100
Punitive + Rehabilitation	22	47	22	3	94
TOTAL	70	236	85	11	402

TABLE B-5: STR Group Assignment by Monthly Income

GROUP ASSIGNMENT	MONTHLY INCOME ($)					
	0-$500	$501-$1000	$1001-$2000	$2001-$3000	>$3000	TOTAL
Rehabilitation	33	39	23	0	2	97
Control	30	40	27	7	0	104
Punitive	35	39	22	2	2	100
Punitive + Rehabilitation	32	36	17	2	0	87
TOTAL	130	154	89	11	4	388

NOTE - Fourteen clients declined to provide income information

TABLE B-6: STR Group Assignment by Marital Status

GROUP ASSIGNMENT	NEVER MARRIED	DIVORCED	WIDOWED	SEPARATED	MARRIED	TOTAL
Rehabilitation	10	27	6	10	47	100
Control	10	27	2	9	60	108
Punitive	17	20	1	9	53	100
Punitive + Rehabilitation	11	27	6	9	41	96
TOTAL	48	101	15	37	201	402

TABLE B-7: STR Group Assignment by Index Arrest BAC

BLOOD ALCOHOL CONTENT

GROUP ASSIGNMENT	100 mg%	100-140 mg%	150-190 mg%	200-240 mg%	250-290 mg%	TOTAL
Rehabilitation	1	4	62	28	5	100
Control	1	10	56	37	4	108
Punitive	0	10	56	30	4	100
Punitive + Rehabilitation	0	9	42	37	6	94
TOTAL	2	33	216	132	19	402

NOTE - Two individuals were entered into the STR study with a BAC of 100 mg% through clerical error.

SHORT TERM REHABILITATION STUDY

STR Modality Description Questionnaire

SITE: _____Oklahoma City_____   MODALITY NAME: _Traditional Therapy_

(If more than one actual treatment program is classified under a given modality name, complete an entire questionnaire for each.)

PART A. STRUCTURAL CHARACTERISTICS OF TREATMENT PROGRAM:

1. What is the total number of treatment sessions for this modality? (If variable, indicate the average number.) _24_ ✓

2. What is the average duration of each session? (in minutes) _50 minutes_ ✓

3. How frequently are sessions scheduled? (If variable, indicate the average frequency.) _weekly_ ✓

4. What is the average duration of client exposure to this treatment program from entry date to termination date? (in days) _180 days_ ✓

5. What is the average number of clients per session of this treatment program? _8_

6. How many instructors or therapists interact with clients at each session? (If variable, indicate the average.) _2_

7. How many different instructors or therapists at your site are trained to provide this treatment program? _7_

8. What is the average cost to each of the following for each client's participation in this treatment program? (If client costs are on a sliding scale, indicate average client payment.)

   a. The client himself: $ _0_

   b. ASAP: $ _0_

   c. NIAAA: $ _57.60_

   d. Other (specify) _Oklahoma Department of Mental Health_ $ _134.40_

   Total Treatment Cost: $ _192.00_

9. What is the approximate total cost of providing one complete treatment program (e.g., If a given treatment program exposes an average of fifteen clients to four 2-hour sessions, what is the total cost of providing this service?). $ 1,456.00

10. Who is responsible for the conduct of this treatment program (e.g., ASAP, Safety Council, Mental Health Center)?

Mental Health Alcohol Treatment Program
_____

11. What percentage of the clients attending each treatment program are STR study clients (e.g., For treatment programs run exclusively for STR clients the appropriate response would be 100%.)?   65 %

12. Handling of treatment no-shows. (Indicate the percentage of STR clients subject to each of the following courses of action in the event of their failure to appear for the treatment program.)

    a. No consequences - no major effort to reschedule: %

    b. Rescheduling only: 50 %

    c. Imposition of jail or fine after attempt to reschedule fails: 50 %

    d. Imposition of jail or fine without attempt to reschedule: %

    NOTE: The sum of items a, b, c, and d = 100%

13. Handling of treatment dropouts. (Indicate the percentage of STR clients subject to each of the following courses of action in the event of their failure to maintain enrollment in the treatment program.)

    a. No consequences - no major effort to reschedule: %

    b. Rescheduling only: 15 %

    c. Imposition of jail or fine after attempt to reschedule fails: 85 %

    d. Imposition of jail or fine without attempt to reschedule: %

    NOTE: The sum of a, b, c, and d = 100%

PART B. DESCRIPTION OF TREATMENT PROCESSES

1. Rate on the 10 point scale below to what extent the leader's role is that of teacher-instructor versus therapist-counselor.

   Instructor 0 1 2 3 4 5 6 (7) 8 9 10 Counselor

2. The percentage of time utilized by this modality for each of the following purposes:

   a. to convey information (e.g., on drinking and driving) to participants: 40 %

   b. to help participants with their social, emotional, and behavioral problems: 60 %

   Total should equal 100%

3. The percentage of time spent in each of the following approaches:

   a. didactic approaches such as providing lectures, films, speakers, etc.:   10 %

   b. discussion between participants and the leader(s):   80 %

   c. discussion among the participants themselves: 10 %

   Total should equal 100%

4. Is a standard or formal program syllabus/outline used to guide this treatment program? _____ Yes ___XX___ No

   If so, specify the nature and origin of the program syllabus/outline.

   _____

   _____

5. To what extent is the content of the treatment program tailored to the characteristics of individual instructors or therapists? Rate on the 10 point scale below:

   Program unique
   to each   1 2 3 (4) 5 6 7 8 9 10   Program identical
   instructor   for all
                                               instructors

Items 6 through 17 pertain to non-school treatment modalities only.

6. What is the theoretical basis for this treatment program (e.g., psychoanalytic, behavioral, client-centered, confrontation, etc.)? _____ Client - centerd _____

   _____

Part B. Description of Treatment Processes (Continued)

Focus of Therapy

7. Rate the extent to which this treatment program focuses on client behavior versus client feelings.

Focus
on   1 2 3 4 5 (6)7 8 9 10   Focus
behavior   on
                                            feelings

8. Rate the extent to which this treatment program is focused on drinking/alcohol problems versus the general spectrum of client life problems.

Focus
exclusively 1 2 3 4 (5)6 7 8 9 10   Focus on
on drinking   general
problems   problems

9. Rate the extent to which this treatment is focused on personal versus interpersonal functioning.

Focus on
personal   1 2 3 4 5 6 (7) 8 9 10   Focus on
functioning   interpersonal
                                            problems

10. Indicate the percentage of time during the course of the treatment program which is devoted to discussion or consideration of each of the following three areas (the sum of the three should equal 100%):

a. past problems/historical antecedents of present
    problem or condition: 10 %

b. current client status or problems: 80 %

c. future client behavior, coping, etc.:   10 %

                                                          _____
                                                           100%

Goals of Therapy

11. Rate the extent to which therapeutic goals are established by the therapist versus the client(s).

Established
by   1 2 3 4 5 6 (7) 8 9 10   Established
therapist   by
                                            client(s)

Part B. Description of Treatment Processes (Continued)

12. Rate the extent to which abstinence from drinking is considered an essential goal of this treatment program.

Abstinence essential to successful outcome   1 2 3 4 5 ⑥ 7 8 9 10   Normal social drinking indicative of successful outcome

13. Rate the extent to which each of the following alternative goals are considered important within this treatment program, and also rank order these goals in the order of their importance by assigning a "1" to the most important, a "6" to the least important, etc. (What is sought is an indication of the relative emphasis placed on these alternative therapeutic objectives.)

Goal	Rank Order	Rating (Unimportant ... Very Important)
a. Development of specific behavioral skills	3	1 2 3 4 5 6 7 8 ⑨ 10
b. Reduction of undesired behaviors	2	1 2 3 4 5 6 7 8 ⑨ 10
c. Reduction of conflict	5	1 2 3 4 5 6 ⑦ 8 9 10
d. Self actualization	4	1 2 3 4 5 6 7 ⑧ 9 10
e. Development of insight	6	1 2 3 4 5 ⑥ 7 8 9 10
f. Interpersonal adjustment	1	1 2 3 4 5 6 7 8 ⑨ 10

14. Rate the extent to which discussion/interaction is determined by the therapist versus the client(s).

Content determined by client(s)   1 2 3 ④ 5 6 7 8 9 10   Content determined by therapist

Part B. Description of Treatment Processes (Continued)

15. What percentage of the verbal interchange in an average therapy session is contributed by:

    a. therapist: __30__ %

    b. client(s):   __70__ %

    Total should equal 100%

16. Rate the frequency with which specific advice, directions, or behavioral instruction is provided by the therapist.

Therapist
never provides   1   2 ③ 4   5   6   7   8   9   10   Therapist
direct advice/   usually provides
instruction   direct advice/
                                                           instruction

17. Rank in order of their importance or relevance to this treatment program the following alternative therapist role descriptions. (1 = the most important or relevant, 4 = the least important or relevant)

    __4__ a. analyst

    __1__ b. teacher/counselor

    __2__ c. sounding board

    __3__ d. friend/confidant

SHORT TERM REHABILITATION STUDY

<u>Probation Description Questionnaire</u>

SITE: <u>Oklahoma City</u>   PROBATION TYPE: <u>Unsupervised</u>

(If more than one type of probation is being employed for STR clients, complete an entire questionnaire for each type. Answer questions in relation to <u>STR clients only</u>.)

PART A. PROBATION DESCRIPTION

1. Does probation involve client contact? _____ Yes __X__ No

   If yes, describe your probation system. Include at a minimum:

   a. the <u>type</u> of contact (no contact, mail contact, phone contact, in person visits, etc.),

   b. the <u>frequency</u> of contacts (weekly, monthly, etc.),

   c. the <u>average length</u> for <u>each</u> type of contact,

   d. the <u>average number</u> of <u>each</u> type of contact during a complete probation period,

   e. the <u>sequence</u> of probation contacts (e.g., one mail contact, followed by eight phone contacts, followed by an in person exit interview).

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

   _____

Part A. Probation Description (Continued)

2. Total duration of probation period in days? (Indicate <u>average</u>, if variable.) _____ days

3. Is probation ever revoked? _____ Yes _____ No

    If yes, answer 4 and 5. If no, skip to 6.

4. What behavior is likely to cause revocation of probation? (Check as many as are applicable. If multiple behaviors are checked, rank in order of frequency.)

    _____ Rearrest for DWI (or equivalent)
    _____ Rearrest for other traffic offense
    _____ Non-abstinence
    _____ Not complying with rehab referral
    _____ Other, specify: _____

5. What are the typical consequences of a revoked probation? (Check as many as are applicable. If multiple consequences are checked, rank in order of frequency.)

    _____ None
    _____ Imposition of probated jail sentence
    _____ Imposition of probated fine sentence
    _____ Other, specify: _____

6. Is a probationer assigned to a specific probation officer?
    _____ Yes _____ No

7. Do probation officers have "officer of the court" status?
    _____ Yes _____ No

8. Is probation for STR clients:

    _____ handled along with regular cases by a "regular" (in existence before ASAP) probation office?
    _____ handled by special ASAP probation officers in a "regular" (in existence before ASAP) probation office?
    _____ handled by a special ASAP probation office (in existence only because of ASAP)?

9. In general, is <u>counseling</u> a function of probation officers in addition to normal supervisory functions? _____ Yes _____ No

10. If yes, in what % of the cases is counseling provided? _____%

Part A.   Probation Description (Continued)

11. Who pays the cost of probation? Indicate the average cost per
     client to each of the following (costs must sum to the total
     cost of probation for one client).

     $_____ client
     $_____ ASAP
     $_____ governmental agency (city, county, court, etc.)
     $_____ other, specify: _____

STR MODALITY DESCRIPTION QUESTIONNAIRE

SITE: __Oklahoma City__   MODALITY NAME: __Group Therapy - STR__

PART C. INSTRUCTOR/THERAPIST CHARACTERISTICS

(Fill out a separate Part C for each instructor or therapist responsible
for providing this treatment modality.)

Demographic Information (Optional)

Age:	55		
Sex:	___ Male	X Female	
Marital Status:	divorced		
Race:	wh		
Religious Preference:	Methodist		
Recovered Alcoholic:	___ Yes	X No	
Member of AA:	___ Yes	X No	

Formal Educational Background

Highest academic degree _MSW_, Area of study: __Social Work__
Year of degree: __1967__

Other specialized training [describe nature and duration, include
year(s) taken]: In service, Family Therapy; Virginia Satir work-

shop; Values Clarification ; Gestalt; Alcohol studies from 1967

to present; Average - one week.

Instructional/Therapeutic Experience

Is alcohol rehabilitation/instruction your primary occupation? __Yes__

Specify years of experience relevant to the provision of   5
alcohol rehabilitation or treatment.

Modality Specific Training

Has specific training been provided for the conduct of this   no
STR treatment modality?

If yes, describe the nature, duration and dates of such training:

_____

_____

_____

If yes, answer the following:

What percentage of client contact time is devoted to counseling activities? _____%

What percent of counseling time (not total contact time) is spent in each of the following areas? (Percentages must total 100%.)

_____% marital/family problems
_____% employment
_____% alcohol problems
_____% legal problems
_____% other, specify: _____

100 %

Is any attempt made to refer STR clients to additional rehabilitation?
___X___ Yes _____ No

If yes, which rehabilitation modality(s) is (are) most frequently recommended? (check one or more)

__XX__ AA
_____ group therapy
__XX__ individual therapy
_____ inpatient therapy
_____ chemotherapy
_____ other

STR MODALITY DESCRIPTION QUESTIONNAIRE

SITE: ___Oklahoma City___   MODALITY NAME: Group Therapy - STR

PART C. INSTRUCTOR/THERAPIST CHARACTERISTICS

(Fill out a separate Part C for each instructor or therapist responsible
for providing this treatment modality.)

Demographic Information (Optional)

```
Age:                          26
Sex:                  _____ Male    _XX_ Female
Marital Status:       Married
Race:                 White
Religious Preference: Catholic
Recovered Alcoholic:  _____ Yes     _XX_ No
Member of AA:         _____ Yes     _XX_ No
```

Formal Educational Background

Highest academic degree _MSW__, Area of study: Psychiatric Social Work
Year of degree: __1974__

Other specialized training [describe nature and duration, include
year(s) taken]: Gestalt Training, Alcohol Training, values

_____ clarification training, T.A. training (all workshops

_____ of varying duration - usually one full weekend (16 hours)

Instructional/Therapeutic Experience

Is alcohol rehabilitation/instruction your primary occupation? _yes_

Specify years of experience relevant to the provision of
alcohol rehabilitation or treatment.   3 years

Modality Specific Training

Has specific training been provided for the conduct of this   No
STR treatment modality?

If yes, describe the nature, duration and dates of such training:

_____

_____

_____

SHORT TERM REHABILITATION STUDY

Probation Description Questionnaire

SITE: __Oklahoma City, Oklahoma__   PROBATION TYPE: __unsupervised__

PART B. PROBATION OFFICER CHARACTERISTICS

(Fill out a separate Part B for each probation officer in contact with STR clients.)

Demographic Information (Optional)

Age: _____
Sex: _____ Male _____ Female
Marital Status: _____
Race: _____
Religious Preference: _____
Recovered Alcoholic: _____ Yes _____ No
Member of AA: _____ Yes _____ No

Formal Educational Background

Highest academic degree _____, Area of study: __I am now completing my BA in__
Year degree earned: _____   Criminal Justice Rehabilitation

Other specialized training [describe nature and duration, include year(s) taken]: _____

_____

_____

Relevant Experience

Is probation work your primary occupation? __XX__ Yes _____ No

How many years have you been actively engaged in probation work?
__5__ Years

How many years of experience do you have dealing with persons with alcohol problems (as opposed to probation experience in general)?
__15__ Years

Counseling Activity (Answer the following questions in relation to STR clients only.)

Do you view counseling, as opposed to normal supervisory functions, as a part of your responsibilities? _____ Yes __XX__ No

APPENDIX D

SUMMARY OF GENERAL SCORING PROCEDURES

FOR THE

SHORT TERM REHABILITATION STUDY

LIFE ACTIVITIES INTERVIEW

CURRENT STATUS QUESTIONNAIRE

PERSONALITY ASSESSMENT SCALE*

A. SUMMARY OF GENERAL SCORING PROCEDURES

The Life Activities Interview and the Current Status Questionnaire were designed to provide information relative to clients' positions along a number of dimensions potentially indicative of treatment effectiveness. Although the Personality Assessment Scale was incorporated into the design of the STR study primarily as a means of quantifying personality attributes of potential use as covariates in analyses of treatment effectiveness, certain state or trait dimensions available from this instrument are also likely to provide outcome measures as well.

A number of analyses were conducted in order to systematically identify potentially useful constructs (factors or dimensions) within each of these instruments which could provide the basis for the development of objective measures of client life status. In each case the analyses were based on initial contact data for the entire STR population of 3681 individuals. The distribution of these cases by STR site is as follows:

Denver	342
Fairfax	587
Kansas City	437
Minneapolis	159
New Orleans	340
Phoenix	355
San Antonio	303
South Dakota	200
New Hampshire	202
Oklahoma City	403
Tampa	353
TOTAL	**3,681**

A three stage process was followed to produce four sets of scales from these three instruments (a separate set of scales was developed for the combined LAI and CSQ instruments). The analytic stages involved: (1) specification of a set of raw score variables or items for each instrument, (2) a series of factor analyses to identify and define the factors or dimensions characterizing each instruments, and (3) the actual computation of factor scores (scale scores) for insertion into the STR Abstract File.

1. Specification of Raw Score Variables

A total of 134 distinct client responses are recorded on a single administration of the LAI interview, although only 81 LAI "questions" are asked. Some of the questions in the interview protocol are complex and yield a substantial number of separate responses, and many of the individual client responses are interdependent. The first step in the process of developing scale scores involved the specification of a set of raw score variables which could be derived from the available set of client responses. Important considerations during this process were the avoidance of logically dependent sets of items, the selection of items showing a reasonable variability of response among the 3681 clients, and a broad coverage of each of the "life status" dimensions which the items had been originally designed to represent.

The 134 separate client responses to the LAI were ultimately combined to form a total of 64 raw score variables which were subjected to further analysis. An earlier set of analyses applied to the LAI had employed 56 raw score variables. The increased number of variables included in the present analysis represents an attempt to broaden the measurement capabilities of the instrument.

The Current Status Questionnaire requires a total of 119 distinct responses on the part of the client. Utilizing the same general procedures described above for the LAI, a total of 81 raw score variables or items were derived from this instrument, and subjected to analysis. Because each of the 151 PAS items yielded a single response, the above described step was essentially bypassed for this instrument and the entire set of 151 responses was used.

The next preliminary analytic step was to scale the individual variables in order that the means, variances and ranges of the raw score variables were roughly equivalent. In most instances this involved simple categorization of continuous variables (e.g., income), or adjustments in the number of categories for ordinal variables. A limited number of dichotomous items were utilized in both the LAI and the CSQ. Because the PAS utilized a common five category response scheme for all items, no adjustments were made for this instrument.

Appendices B and C contain a description of the raw score variables of the LAI and the CSQ which were derived on the basis of the procedures indicated above.

2. Identification of Factors

A series of factor analytic procedures were conducted based on the correlation matrices obtained from the raw score variables derived for each of the instruments and each of the 3681 initial cases. The first such analysis for each instrument consisted of a principal components analysis in which a number of roots equal to the total number of raw score variables was extracted (64 for the LAI, 81 for the CSQ, 88 for the LAI and CSQ factored together, and 151 for the PAS). The purpose of this analysis was to estimate the number of factors to extract in subsequent analyses, by application of tests, such as Cattell's scree test (Cattell, 1966), to the vector of successive eigenvalues.

When an initial estimate of the number of factors had been made (6 for the LAI, 7 for the CSQ, 7 for the LAI/CSQ, and 14 for the PAS), an iterative principal axis factor extraction was performed using the squared multiple correlations of each variable with the n-1 remaining variables as the initial communality estimates.

Both orthogonal and oblique rotations were applied to the obtained factor matrix in an effort to achieve a final solution which approximately satisfied simple structure criteria for each instrument (or combination of instruments in the case of the factoring of LAI and CSQ items together). Orthogonal rotations in each case employed the Varimax

criterion (Kaiser, 1958). Although alternative oblique methods were considered for each of the instruments, the results reported in subsequent sections are based on the Maxplane procedure (Cattell and Muerle, 1960; Eber, 1966).

3. <u>Computation of Scale Scores</u>

Scale scores (for each instrument) were computed for each STR client utilizing an indirect scoring procedure (Horn, 1965) in which each scale is based only on the salient variables of a particular factor (those variables which define the factor and are highly correlated with it), and in which unit weight is assigned to each salient variable.

The first step in the computation of factor scores for inclusion in the STR Abstract File was to standardize the scores for each client on each variable which entered into the computation of a scale score. Computation of these z scores was based on the distribution of raw score variables for the entire sample of 3681 initial cases (clients).

e.g., for client i and variable j

$$z_{ij} = \frac{(X_{ij} - \mu_j)}{\sigma_j}$$

where z_{ij} is the standard score for client i on variable j;

X_{ij} is the obtained raw score for client i on variable j;

μ_j is the mean for variable j estimated as the j variable mean of the 3681 initial cases;

σ_j is the standard deviation of variable j estimated from the distribution of the 3681 initial cases.

Scale scores were then computed from these z scores and scaled to a mean of 500 and standard deviation of 100 (across the 3681 initial cases) according to the following procedure:

$$Y'_{i,k} = \left[\left[\frac{\left(\left(\frac{n_k}{m_{i,k}}\left(\sum_{j=1}^{n} z_{i,j} w_{j,k}\right)\right) - \mu_k\right)}{10\,\sigma_k}\right] + .500\right] 1000$$

IF $(y'_{k,k} < 000)$: $y'_{i,k} = 000$

IF $(y'_{i,k} > 999)$: $y'_{i,k} = 999$

IF $(n_k/m_{i,k} > 2)$: $y'_{i,k} =$ missing value code

D-4

where: $y'_{i,k}$ = scale score for subject i on factor k

$z_{i,k}$ = standard score for subject i on variable j

$w_{j,k}$ = weighting coefficient for variable j on factor k;
$$w_{j,k} = \begin{matrix} 1 \text{ for salient variables} \\ 0 \text{ for non-salient variables} \end{matrix}$$

n_k = number of salient variables for factor k

$m_{i,k}$ = number of non-missing factor k salient variables for subject i

μ_k = mean factor score (unscaled) for factor k (based on 3681 initial cases)

σ_k = standard deviation of factor k (based on 3681 initial cases)

n = number of total variables on this instrument.

It might be noted that this procedure permits the computation of a scale score when at least one-half of the salient variables for a given scale assume non-missing values (i.e., $n_k/m_{i,k} \leq 2$ when $m_{i,k} \geq n_k/2$). It might also be noted that scale scores are truncated to 000 or 999 if the actual scale score exceed $\pm 5\,\sigma$ (based on the scale score distribution of the total of 3681 STR cases on initial interview). In actual practice, this restriction does not seriously constrain the obtained scale scores since for most scales no client's scores exceeded the 000-999 range.

B. LIFE ACTIVITIES INTERVIEW (LAI)

Six LAI scale scores are contained in the STR Abstract File for each client on each interview replication (initial, 6 month, and 12 month follow-up). The six LAI factors were identified through a series of factor analytic procedures (utilizing both orthogonal and oblique rotational criteria) applied to the matrix of intercorrelations among the 64 derived raw score variables listed in Appendix B.

The six LAI factors and the salient variables used to define each are shown in Table 1. Also displayed in this table are the Varimax factor loadings for each of the salient variables (identified as F_V) as well as reference vector structure coefficients (R_S), factor pattern coefficients (F_P) and factor structure coefficients (F_S) derived from the oblique rotation by the Maxplane procedure. Raw variable means, standard deviations, and response ranges for each of the salient variables are also contained in Table 1.

Table 2 contains estimates of the internal consistency reliabilities for each of the six LAI scales for the entire STR study population, as well as for each of the eleven STR sites separately. In each instance the coefficients reported are the generalized KR20, or Cronbach's alpha. Appendix D contains scale score means and standard deviations (by site) for each of the six LAI scales.

Factor I of the LAI is defined by eight salient variables, all of which pertain to the client's employment or income production status. High scale scores would be obtained by the client who was employed, who worked a substantial number of hours per week, whose income production was high, and whose income source and amount had improved during the past six months. Low scores would be produced by clients who were not working, were supported by public assistance, or whose employment/economic situation had deteriorated during the prior six month period. The internal consistency reliability for this scale is relatively substantial, both for the entire STR study population (.815) and for each of the sites. Site KR20s range from .688 (New Hampshire) to .885 (Phoenix).

Factor II is defined by four LAI variables which relate to the quantity and frequency of alcohol consumption. High scale scores are obtained by clients whose current consumption is relatively large, and whose drinking frequency (at least for the prior week) was high. The alpha coefficients for this scale are also uniformly high [.859 overall, with a range from .702 (South Dakota) to .894 (San Antonio)]. It is suggested that reasonable care be taken in the interpretation of group differences relative to this scale since this factor seems to represent a relatively simple index of quantity/frequency of alcohol consumption rather than an indication of overt alcohol problems.

LAI Factor III includes six salient variables which relate to the marital status of the respondent, and to the extent to which the client participates in activities with family members rather than alone. One variable (#54) was included in the derived variables with a coding scheme such that a high

score indicated that the respondent frequently watched TV alone. In view of the negative factor loading for this variable the raw item was reflected prior to inclusion in the computation of the scale score for this factor. Subsequent to this reflection a high score on variable 54 indicates that the client "seldom" watches TV alone. It seems likely that this scale is primarily sensitive to the fact of a client being married or not, rather than to the quality of one's marital status or personal living situation. It is logical that a client who is married will tend to have more dependents, live with more people, take care of more people, and more frequently seek recreation with his family than will the client who is unmarried. As a consequence, this scale may be of somewhat limited utility as an index of treatment effect. The overall KR20 for this scale was .747, while site specific KR20s ranged from .630 (New Hampshire) to .808 (Kansas City).

Factor IV appears to represent a dimension which is characterized at one extreme by social alienation and withdrawal (low scores), and at the other by social interaction, involvement and activity. Ten salient variables define this factor. The alpha coefficient of internal consistency reliability across sites is .685, while individual site KR20s range from .595 (Fairfax) to .730 (Oklahoma City).

Factor V is defined by nine salient variables which assess various self-reported health problems and complaints. High scores are obtained by clients who report frequent health complaints, who were ill frequently during the past month, and who have sought medical assistance for health problems. The across site KR20 for this scale is .614, while individual site reliability coefficients range from .563 (New Hampshire) to .685 (Tampa).

The final LAI factor (Factor VI) is determined by six salient variables which appear to be indicative of consequences of excessive drinking behavior. The scale is labeled "immoderate drinking behavior" rather than another title such as "problem drinking," because the items do not represent self admission of alcohol problems, but rather indicate self report of incidents during which large amounts of alcohol were consumed (times drunk, times drive with 3 or 4 drinks, times got away with DUI) or physiological and social consequences of heavy drinking (times experience blackouts and binges from drinking, and days missed work either drunk or hung over). High scores on this scale reflect self report of relatively more immoderation than do low scores. The across site internal consistency reliability for this scale is .696 with site specific KR20s ranging from .548 (Denver) to .741 (Oklahoma City).

TABLE D-1 SCALES OF THE LIFE ACTIVITIES INTERVIEW (LAI) DERIVED FROM RESPONSES OF 3681 STR CLIENTS AT INITIAL INTERVIEW

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR I: EMPLOYMENT/ECONOMIC STABILITY				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR II: CURRENT DRINKING PATTERN (Q + F)				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR III: FAMILY STATUS (MARRIEDNESS)				
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	3.946	1.637	1-5

KR20 = .747   Hyperplane Count: Varimax = 71.9%, Maxplane = 75.0%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR IV: SOCIAL INTERACTION/INVOLVEMENT				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR V: CURRENT PHYSICAL HEALTH PROBLEMS				
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	1.360	.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 D-1(Continued)

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR VI: IMMODERATE DRINKING BEHAVIOR				
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%

TABLE D-2 INTERNAL CONSISTENCY RELIABILITIES[1] FOR THE 6 LAI SCALES FOR THE TOTAL STR STUDY POPULATION AND FOR EACH STR SITE.

SITE	N[2]	LAI SCALES					
		I	II	III	IV	V	VI
Total	3681	.815	.859	.747	.685	.614	.696
Denver	342	.758	.842	.750	.651	.631	.548
Fairfax	587	.755	.850	.777	.595	.606	.670
Kansas City	436	.875	.866	.808	.698	.578	.670
Minneapolis	160	.815	.803	.736	.618	.653	.667
New Orleans	341	.788	.833	.677	.672	.616	.687
Phoenix	356	.885	.831	.756	.616	.618	.725
San Antonio	301	.777	.894	.770	.654	.584	.584
South Dakota	200	.810	.702	.688	.714	.657	.610
New Hampshire	202	.688	.831	.630	.636	.563	.398
Oklahoma City	403	.746	.863	.759	.730	.622	.741
Tampa	353	.745	.848	.757	.691	.685	.619

[1] Coefficients reported are the generalized KR20, or Cronbach's alpha

$$[\alpha = \frac{k}{k-1} (1 - \frac{\sigma_i^2}{\sigma_t^2})].$$

[2] Refers to cases in data system; reliability coefficients are based on cases with non-missing data for all items and may be slightly less than this value.

C. CURRENT STATUS QUESTIONNAIRE (CSQ)

Factor analytic procedures applied to the CSQ data (81 raw score variables) of the 3681 initial interview cases yielded seven scales which are included within the STR Abstract File. Analytic procedures utilized with this instrument varied slightly from the procedure followed with the other instruments. Although a seven factor solution had been obtained in earlier factoring of the 81 CSQ variables, the final rotated solutions which served as the basis for the creation of scale scores utilized a six factor solution based on the intercorrelations of only 69 of the CSQ items. Those items (#71 - #82) pertaining to marital problems were omitted from this factoring because data from these items were available only from approximately one-half of the 3681 initial interview cases. Instead, the marriage problem items were separately subjected to a principal components analysis and the factor coefficients reported in Table 3 were obtained from this analysis.

Internal consistency reliabilities for the seven derived CSQ scales are presented in Table 4 for the entire STR study population and for each site separately. Appendix D contains scale score means and standard deviations, by site, for these scales.

Factor I of the CSQ is defined by those 12 marriage problem items mentioned above, and as indicated the coefficients reported in Table 3 were obtained from a separate principal components analysis applied to this subset of CSQ items. A high score on this scale is indicative of a high degree of self reported client-spouse conflict or of marriage difficulty. Internal consistency of this scale is substantial with an across site coefficient alpha of .852, and site KR20s ranging from .709 (New Orleans) to .886 (Tampa). It must be noted that scores on this scale are only recorded for those clients who are married at the time of interview (either initial or follow-up) and who consequently respond to these 12 items. As indicated above this constrains the data availability for this scale to approximately one-half of the STR study population. This scale directly replicates the "Marital Stress and Disruption" factor identified by Fort Logan Mental Health Center researchers with the Personal Data Questionnaire (PDQ), an instrument which contains the CSQ as a subset of items (Foster, 1977).

The second CSQ scale is identified by seven salient variables each of which concerns the client's self report of problems due to drinking, and the extent to which the client is able to regulate his drinking behavior. A high score on this scale is indicative of control over drinking behavior and problems, while a low score would suggest the presence of problems due to alcohol. The overall KR20 for this scale is .701, while individual site reliability coefficients range from .615 (San Antonio) to .758 (Phoenix). This scale, developed on the STR study population, is essentially equivalent to the "Loss of Control of Use of Alcohol" scale obtained for the Fort Logan PDQ.

CSQ Factor III appears to represent the clients' economic productivity and employment stability, and is defined by five salient variables. High scale scores are indicative of high income production, steady and regular employment, and satisfaction with the current work situation. The overall

internal consistency reliability of this scale is .674, with site coefficients ranging from .453 (Fairfax) to .766 (Phoenix). The extremely low reliability of this scale for the Fairfax clients may be due to the deviation of this subset of the STR study population with respect to socio-economic condition. In general, the Fairfax clients tend to occupy substantially higher income levels than do clients from the other sites. The variables which define this factor appear on three of the Fort Logan PDQ scales: "Job Instability," "Unemployment Status," and "Difficulties with Current Job or Work."

Factor IV of the CSQ is defined by eight variables which concern self reports of the presence or absence of client health problems. A high scale score is indicative of the absence of physical health problems, while low scores reflect reports of a variety of indications of health difficulties. The across site generalized KR20 for this scale is .697 and individual site reliability coefficients range from .607 (San Antonio) to .783 (New Hampshire). This scale appears to be a rather straightforward replication of the Fort Logan PDQ "Poor Health and Physical Condition" scale.

CSQ Factor V is defined by six salient variables which relate to the clients' residential stability. High scores are indicative of greater, and low scores of lesser, residential stability. KR20s obtained were .646 across sites, with a range of .494 (San Antonio) to .811 (Oklahoma City). This scale corresponds to the Fort Logan PDQ "Residential and Living Situation Unstable" scale.

Factor VI represents a dimension characterized at one extreme (low scale scores) by social withdrawal and/or alienation, and at the other (high score) by substantial amounts of social interaction and activity directed toward (or including) others. Across sites the internal consistency reliability of the scale is .623, with a range of site reliabilities from .527 (New Orleans) to .673 (Oklahoma City). The corresponding Fort Logan PDQ scale was titled "Social and Interpersonal Withdrawal."--

The final CSQ scale included in the Abstract File is defined by only four salient variables which relate primarily to abstention from drinking ("How long since last drink?", "Longest time without alcohol?"), and to the self report of present quantity and frequency of drinking compared to past times. The overall KR20 for this scale is .560 and site reliabilities ranged from .344 (South Dakota) to .598 (Oklahoma City). The salient variables defining this scale are essentially equivalent to those defining the "Increase in Duration of Drinking" scale in the Fort Logan PDQ.

TABLE D-3 SCALES OF THE CURRENT STATUS QUESTIONNAIRE (CSQ) DERIVED FROM RESPONSES OF 3681 STR CLIENTS AT INITIAL INTERVIEW

Item	FPC	Item Description	HI Score	Mean	SD	Response Range
		FACTOR I: MARITAL PROBLEMS[1]				
71	.508	How does present relationship with spouse compare to previous times?	Worse	2.490	1.009	1-5
72	.758	How are you getting along with your spouse?	Argue	1.219	.525	1-3
73	.775	Is your spouse satisfied with you?	Dissatisfied	1.160	.484	1-3
74	.542	Do you and your spouse argue?	Continuous	1.799	.617	1-4
75	.570	Does spouse make fair demands of you?	Demands Too Much	1.342	.560	1-3
76	.667	Do you and spouse reach agreement on important issues?	Never	1.944	.805	1-5
77	.480	Do you express innermost thoughts to spouse?	Never	2.109	.933	1-5
78	.660	Do you feel spouse understands you?	Puzzled	1.357	.628	1-3
79	.734	Do you feel spouse accepts you?	No	1.301	.536	1-3
80	.717	Does spouse want to remain married to you?	No	1.190	.505	1-3
81	.629	Does spouse do the work you expect of a marriage partner?	No	1.176	.478	1-3
82	.617	Would you like to terminate marriage if could do so in a reasonable manner?	Yes	1.187	.492	1-3

[1]This scale is relevant only to those clients who are married at the time of interview. Since approximately one-half of the 3681 initial cases did not record responses to these items, the 12 marriage items were not included with the other 69 CSQ items in the reported factoring. The coefficients reported above are from a principal components analysis of the 12 items separately from the rest of the CSQ (loadings for the first principal component are recorded above).

KR20 = .852

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR II: CONTROL OF DRINKING PROBLEMS				
43	.595	.468	.573	.629	Is drinking a problem for you at this time?	No	3.676	.661	1-4
45	.587	.450	.550	.592	Does drinking interfere with responsibilities?	No	3.826	.515	1-4
41	.566	.425	.519	.565	When drinking, are you able to regulate the amount you drink?	Always	3.415	.769	1-4
44	.502	.394	.481	.536	Are you finding it difficult to live without alcohol now?	No	3.806	.527	1-4
40	.405	.292	.357	.367	Are you able to regulate the times you drink?	Always	3.514	.771	1-4
29	.355	.255	.312	.362	Do you have any physical problems from excessive use of alcohol?	None	2.949	.230	1-3
46 (R)	-.291	-.187	-.229	-.329	Have you been drunk in public in past 6 months?	Never	3.340	.667	1-4

KR20 = .701   Hyperplane Count: Varimax = 60.9%, Maxplane = 78.3%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR III: INCOME/EMPLOYMENT STABILITY				
15	.770	.731	.841	.801	What is total earned income last month?	High	3.403	1.346	1-5
14	.674	.646	.743	.681	How long employed during last 6 months?	Constantly	4.278	1.276	1-5
16	.497	.483	.556	.489	How many hours spent in work activities last week?	High	3.008	1.319	1-5
18	.490	.443	.510	.492	How do you feel about present work situation?	Satisfied	2.505	.751	1-3
17	.426	.378	.435	.456	Is your financial situation changing?	Improving	2.316	.692	1-3

KR20 = .674   Hyperplane Count: Varimax = 68.1%, Maxplane = 79.7%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR IV: PHYSICAL HEALTH				
30	.724	.692	.737	.722	Are you currently having medical problems?	None	2.791	.468	1-3
31	.559	.544	.579	.549	Are you receiving medical assistance for health problems?	No	1.874	.332	1-2
33 (R)	-.547	-.513	-.546	-.571	Number of current health problems?	(R) None	4.390	.781	1-5
26	.460	.451	.480	.477	Have you been feeling tired or exhausted?	Never	3.498	.668	1-4
24	.368	.346	.369	.384	How is your health?	Improved	3.081	.598	1-4
25	.346	.307	.327	.391	How would you compare health to others your age?	Above Average	2.237	.534	1-3
28	.286	.272	.290	.291	Have you been ill with colds, flu, etc.?	Never	2.609	.534	1-3
27	.286	.266	.283	.317	How are you sleeping at night?	Soundly	2.807	.481	1-3

KR20 = .697   Hyperplane Count: Varimax = 65.2%, Maxplane = 69.6%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR V: RESIDENTIAL STABILITY				
04	.675	.653	.788	.590	How often changed residences last 6 months?	Never	2.642	.617	1-3
03	.605	.585	.706	.517	Length of time lived at present residence?	Long Time	2.610	.564	1-3
05	.482	.452	.545	.474	How often do you change residence?	Infrequently	2.817	.491	1-3
11	.303	.324	.391	.273	How many jobs in the past 6 months?	None	2.981	.624	1-4
08	.326	.283	.341	.327	Do you have your own telephone?	Yes	1.668	.471	1-2
10	.312	.281	.339	.355	How often do you typically change jobs?	Seldom	2.774	.547	1-3

KR20 = .646   Hyperplane Count: Varimax = 60.9%, Maxplane = 65.2%

Table D-3 (Continued)

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR VI: SOCIAL INTERACTION				
69 (R)	-.512	-.494	-.594	-.480	Do you do things with other people?	Often	2.339	.874	1-4
54	.442	.443	.533	.383	Number of hours in activities per week?	Many	2.350	1.195	1-5
50 (R)	-.413	-.371	-.446	-.434	Have you any close friends?	Many (R)	3.248	.936	1-4
59 (R)	-.359	0.324	-.389	-.387	Do you prefer not to get close to others?	False (R)	3.290	1.029	1-4
22	.301	.301	.361	.278	Are you devoting time to improvement of work skills?	Much	1.783	1.156	1-4
52 (R)	-.346	-.295	-.354	-.370	How much free time do you spend alone?	Little (R)	3.512	.814	1-4
60 (R)	-.311	-.280	-.337	-.328	Are you close to members of your immediate family?	Very (R)	2.524	.670	1-3
64 (R)	-.306	-.269	-.323	-.312	Do you participate in groups or clubs?	Regularly (R)	1.505	.935	1-4
35	.319	.256	.308	.385	Do eating habits provide a balanced diet?	Good Diet	2.748	.542	1-3
53 (R)	-.267	-.211	-.253	-.305	Does your work require you to meet people?	Often	3.051	1.083	1-4

KR20 = .623   Hyperplane Count: Varimax = 55.1%, Maxplane = 65.2%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR VII: CONTROL OF DRINKING				
38	.558	.538	.567	.558	How long since your last drink?	Months	2.421	.897	1-4
39	.474	.432	.455	.474	What is the longest time without alcohol in past 6 months?	Months	3.334	.714	1-4
63 (R)	-.453	-.398	-.420	-.454	Do most of your friends drink?	Few	2.380	1.103	1-4
42	.283	.257	.271	.283	Compare present quant./freq. of drinking to that of past times.	Decrease	3.730	1.012	1-5

KR20 = .560   Hyperplane Count: Varimax = 53.6%, Maxplane = 72.5%

TABLE D-4 INTERNAL CONSISTENCY RELIABILITIES[1] FOR THE 7 CSQ SCALES FOR THE TOTAL STR STUDY POPULATION AND FOR EACH STR SITE.

| SITE | N[2] | CSQ SCALES |
		I	II	III	IV	V	VI	VII
Total	3681	.852	.701	.674	.697	.646	.623	.560
Denver	342	.838	.577	.652	.732	.625	.535	.517
Fairfax	587	.860	.688	.453	.623	.578	.616	.553
Kansas City	436	.831	.705	.750	.669	.656	.634	.568
Minneapolis	160	.874	.598	.569	.683	.545	.648	.463
New Orleans	341	.709	.698	.763	.686	.544	.527	.552
Phoenix	356	.862	.758	.766	.677	.689	.669	.545
San Antonio	301	.846	.615	.538	.607	.494	.568	.498
South Dakota	200	.848	.618	.668	.782	.693	.651	.344
New Hampshire	202	.860	.702	.631	.783	.520	.600	.427
Oklahoma City	403	.865	.743	.647	.613	.811	.673	.598
Tampa	353	.886	.657	.671	.700	.571	.538	.526

[1] Coefficients reported are the generalized KR20, or Cronbach's alpha

$$[\alpha = \frac{k}{k-1} (1 - \frac{\sigma_i^2}{\sigma_t^2})].$$

[2] Refers to total cases in the data system; reliability coefficients are based on cases with non-missing data for all scale items and may be slightly less than this value.

D. LAI/CSQ COMPOSITE

Because several of the scales obtained for the Life Activities Interview appeared to represent common dimensions to those observed with the Current Status Questionnaire, a set of composite LAI/CSQ scales were derived on the basis of a factoring of a set of 88 items selected from the two instruments. In the case of identical questions on the two instruments only one of the two items was selected for inclusion in the composite variable set. Efforts were also made to avoid selecting items from the two instruments which appeared to be logically (or mathematically) dependent upon one another. The series of analyses conducted with this 88 variable set yielded a seven factor solution. Two of the factors obtained were essentially instrument specific (the Residential Stability factor from the CSQ, and the Family Status factor of the LAI) and composite scales were not created for these factors since measures of these attributes are available as CSQ and LAI scale scores. The five scored LAI/CSQ scales are identified in Table 5. Generalized KR20s (coefficient alphas) for these scales are presented in Table 6, and means and standard deviations of these scales, by site, are shown in Appendix D.

LAI/CSQ Factor I combines four LAI and three CSQ variables which appear to relate to clients' current pattern of drinking. A high scale score reflects a high quantity and frequency of drinking in the recent past and relatively short periods of abstention. LAI Factor II and CSQ Factor VII appear to be merged in this factor. The overall internal consistency reliability for this scale is .848 while site KR20s range from .654 (South Dakota) to .869 (Kansas City). It might be noted in Table 5 that the CSQ items scored on this scale show negative factor loadings. This is true because high scores on the CSQ drinking items were indicative of low frequency and quantity of consumption, while high LAI item scores indicated the opposite response pole. For this scale the CSQ items were therefore reflected (indicated by an "R" in the table) to conform to the LAI items. Since this scale achieves a substantial internal consistency reliability, and because it is defined by a broader set of salient markers than either of the corresponding LAI and CSQ scales, it may be preferable to utilize this composite measure as an indication of client drinking pattern.

LAI/CSQ Factor II represents a combination of LAI Factor I and CSQ Factor III and reflects the clients' employment stability and economic productivity. The overall KR20 for this scale is .752, with site reliability coefficients ranging from .641 (New Hampshire) to .841 (Phoenix). High scale scores reflect greater income production and stability of employment while low scale scores would be indicative of problems in this life status dimension.

LAI/CSQ Factor III is defined by a total of 12 items (9 from the LAI and 3 from the CSQ) which pertain to self reports of health related problems. The three CSQ items included in this scale were reflected for purposes of scoring. A high scale score would be obtained by the client who reports substantial numbers of physical health complaints and problems on the two instruments. The across site generalized KR20 for this scale is .664 while within site internal consistency reliability ranges from .641 (San Antonio and New Hampshire) to .735 (South Dakota). This scale combines Factor V from the LAI and Factor IV of the CSQ.

LAI/CSQ Factor IV represents the social withdrawal versus social interaction dimension observed as Factor IV of the LAI and Factor VI of the CSQ. A total of 16 salient variables define this factor (11 from the LAI and 5 from the CSQ). The individual scoring high on this scale would tend to be outgoing, gregarious, and socially active; while the low scoring individual would tend to be withdrawn and alienated from others. The KR20 (across sites) for this scale is .720 while intra-site KR20s range from a low of .615 (Fairfax) to a high of .745 (Oklahoma City).

The final composite scale included in the STR Abstract File (LAI/CSQ Factor V) appears to represent a broad index of current drinking problems which is essentially a combination of LAI Factor VI and CSQ Factor II. Reflections of items shown in Table 5 result in high scores being indicative of the presence of alcohol/drinking problems, while low scores represent the converse condition. The across site KR20 for this scale is .767 which is larger than the internal consistency reliability coefficients found for either LAI Factor VI or CSQ Factor II. This would seem to argue for the use of this scale score in preference to either the LAI or the CSQ drinking problems scales. Individual site KR20s ranged from .648 (Denver) to .786 (Oklahoma City).

TABLE D-5 SCALES DERIVED FROM THE LAI AND CSQ INSTRUMENTS FACTORED TOGETHER

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR I: CURRENT QUANTITY/FREQUENCY OF DRINKING				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR II: EMPLOYMENT/ECONOMIC STABILITY				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR III: CURRENT PHYSICAL HEALTH PROBLEMS				
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%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR IV: SOCIAL INTERACTION				
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	.288	.297	.268	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 D-5 (Continued)

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD	Response Range
					FACTOR V: CURRENT DRINKING PROBLEMS				
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%

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TABLE D-6 INTERNAL CONSISTENCY RELIABILITIES[1] FOR THE 5 LAI/CSQ
COMPOSITE SCALES FOR THE TOTAL STR STUDY POPULATION AND FOR
EACH STR SITE.

SITE	N[2]	LAI/CSQ COMPOSITE SCALES				
		I	II	III	IV	V
Total	3681	.848	.752	.664	.720	.767
Denver	342	.818	.747	.689	.655	.648
Fairfax	587	.839	.674	.673	.615	.738
Kansas City	436	.869	.837	.659	.741	.782
Minneapolis	160	.768	.719	.694	.667	.739
New Orleans	341	.839	.779	.664	.702	.779
Phoenix	356	.821	.841	.638	.693	.779
San Antonio	301	.863	.740	.641	.664	.665
South Dakota	200	.654	.725	.735	.618	.682
New Hampshire	202	.797	.641	.641	.697	.742
Oklahoma City	403	.858	.699	.652	.745	.786
Tampa	353	.833	.687	.677	.726	.717

[1] Coefficients reported are the generalized KR20, or Cronbach's
alpha $[\alpha = \frac{k}{k-1} (1 - \frac{\sigma_i^2}{\sigma_t^2})]$.

[2] Refers to cases in data system; reliability coefficients are
based on cases with non-missing data for all items and may
be slightly less than this value.

E. PERSONALITY ASSESSMENT SCALE (PAS)

Factor analytic procedures applied to the 151 variables of the PAS resulted in a 14 factor solution. PAS scale scores derived from this solution incorporated 123 of the 151 variables. Table 7 indicates the factor loaded by each of the 151 PAS variables. The 14 PAS scales, and the salient variables used to define each are presented in Table 8. Also contained in this table are the Varimax factor coefficients (F_V), the Maxplane reference structure (R_S), factor pattern (F_P), and factor structure (F_S) coefficients, and the raw variable means and standard deviations for each salient variable.

The response range for all 151 PAS items is 1 to 5. Unlike the LAI, CSQ, and LAI/CSQ composite scales, the computation of PAS scale scores did not involve the reflection of items in order to insure that the response orientations of all scale items were equivalent (i.e., salient variables showing a negative loading for a scale were not reflected prior to calculation of the scale score). As a consequence the indirect factor scores for the PAS involved the application of a factor weight matrix of "ones," "minus ones," and "zeros," rather than the simpler matrix of ones and zeros used with the other instruments. In part, this decision was based on the fact that the valence of the PAS scales is (at least for many of the scales) ambiguous. Efforts to identify useful second order PAS factors have been unproductive to date, and no second order scales are included in the STR Abstract File.

Generalized KR20s (Cronbach's coefficient alpha) computed for the entire STR population (across sites), and for each site individually are shown in Table 9 for each of the scales.

Factor analytic procedures similar to those described for the STR study population have also been applied to data collected with the PAS by researchers at the Ft. Logan Mental Health Center (Foster, 1977). The scales obtained in the analysis of STR study data are generally similar to a 16 factor solution developed in the Fort Logan Mental Health Center research program.

PAS Factor I is defined by 15 salient variables which appear to reflect strange, eccentric, or anomalous thoughts and behavior. A _high_ score on this scale would appear to represent the presence of the type of bizarre thought patterns characteristic of psychotic thought processes. _Low_ scores, conversely, indicate the absence of these expressions of anomalous thought patterns. This scale corresponds substantially to the Fort Logan dimension of "strange, eccentric thoughts versus conventional thoughts." The across site generalized KR20 for this scale is .874, and site reliability coefficients range from .908 (South Dakota) to .672 (Denver).

PAS Factor II is also defined by 15 salient variables. Variables defining this scale indicate expressions of anxiety, depression and tension. A person scoring _high_ on this scale would exhibit a greater number of anxiety/ depression symptoms than a _low_ scoring individual. This scale appears essentially equivalent, in terms of its set of salient variables to a

Fort Logan scale indicative of a dimension characterized by "tense, worried depressed versus happy, composed, carefree" at its extremes. The overall generalized KR20 for this scale is .850 with site generalized KR20s ranging from .888 (Oklahoma City) to .576 (Denver).

Eleven variables, which permit expressions of the clients' perception of the integrity of others, define PAS Factor III. Persons with high scores on this scale tend to not credit others with ill intent and do not regard the behavior of others as being selfishly motivated. Low scores on this scale would be obtained by individuals who tend to project negative attributes and ill intent to others, and tend to be suspicious of the motives of other people. Factor III corresponds almost exactly to a dimension identified in the Fort Logan scales as "imputes ill-intent to others versus credits others with good-intent." The generalized KR20 for this scale is .806 with site specific internal consistency reliabilities ranging from .826 (Denver) to .761 (San Antonio).

Factor IV is defined by 10 salient variables. These 10 variables are indicative of intellectual/aesthetic interests. An individual scoring high on this scale would be one with many intellectual and/or aesthetic interests. Persons scoring low on this scale would be characterized as having interests in areas other than intellectual and aesthetic. This scale has no valence in that classification of one type of interest as "better" than another must be a subjective judgment. This factor corresponds closely to a Fort Logan scale identified as "restricted interests versus intellectual-aesthetic interests." The across site generalized KR20 is .726. Site reliability coefficients ranged from .787 (Minneapolis) to .697 (New Orleans).

Eleven variables are used to define Scale V. Each of these variables is associated with a particular phobia. A high score on this scale would indicate a person reporting multiple phobias, where as a low score would indicate a person avowing few or no phobias. This scale corresponds closely to a Fort Logan scale identified as "phobic, fearful versus resolute fearlessness." The across site generalized KR20 for this scale is .687 with an individual site range of .768 (Minneapolis) to .574 (New Orleans).

The concept of "self image" is reflected in the 6 salient variables defining Scale VI. A high score on this scale suggests an insecure, indecisive, self debasing individual. A low score on this scale suggests a self confident, assured individual with a positive self image. The across site generalized KR20 for Scale VI is .595. Individual site coefficients ranged from .658 (Oklahoma City) to .502 (San Antonio). Since the across site generalized KR20 for this scale is not high, it is suggested that the use of this factor be considered in relation to its reliability coefficient for a particular site. Scale VI represents a mix of two Fort Logan factors identified as "self debasing, insecure versus self confident, assured" and "indecisive, hesitant versus decisive, persistent."

Factor VII is defined by 6 variables. The construct identified by these 6 salients can be described as moralism. A high score on this factor is indicative of non-traditional, generally liberal moral values. A low score is

indicative of relatively traditional, conservative moral values. As was the case for Scale IV, this scale has no valence. The acceptability of one type of moral values relative to another is a subjective judgment. The across site reliability coefficient for Scale VII is .561 while individual site coefficients range from .608 (Minneapolis) to .463 (Phoenix). The across site generalized KR20 for this scale suggests its use by a particular site should be tempered by the coefficient for that site. This scale corresponds to a Fort Logan scale identified as "experimenting moralism versus traditional moralism." Scale VII is defined by slightly fewer salients than the Fort Logan scale, however.

Factor VIII is defined by 9 salient variables. These salients indicate that Scale VIII is a measure of group attraction. Although initial inspection of the salients could suggest that some of the variables are indicative of concepts other than group attraction, careful consideration will reveal that salients not directly measuring group attraction measure components of group attraction (e.g.., trust of others, positive feelings toward others, etc.). A high score on this scale is indicative of group independence and negative feelings toward others. A low score on this scale is indicative of group attraction and positive feelings toward others. The across site generalized KR20 for scale 8 is .660. The site specific coefficients range from .705 (Minneapolis) to .463 (Tampa). This scale represents a mix of two Fort Logan factors identified as "group-independent, aloof versus group attracted, sociable" and "withdrawn mistrust of others versus open confidence in others."

Nine variables define Factor IX as a measure of introversion/extroversion. An outgoing, socially bold individual would score high on scale IX and a shy, retiring individual would score low. Scale IX is another without valence. The across site reliability coefficient is .757 with site specific coefficients from .812 (Minneapolis) to .629 (San Antonio). Scale nine corresponds closely to a Fort Logan scale identified by the same continuum noted above.

Paranoia is measured by Scale X. There are 8 salient variables which define Scale X. A high score on this scale would characterize an unsuspicious person with a relatively normal frame of reference toward others. A low score would characterize a suspicious, paranoid individual. This factor corresponds closely to one derived for the Fort Logan population identified as "suspicious, ideas of reference versus unsuspecting, naive." The across site generalized KR20 for this scale is .743. The high site specific coefficient was .776 (New Orleans), while the low site specific coefficient was .677 (Fairfax).

The 5 variables defining Factor XI suggest that the scale is a measure of emotional control. A high score on this scale indicates a lack of emotional control and an easily angered individual. A low score would indicate a high degree of emotional control and an easy going nature. This scale does not conform well to any of those derived by Fort Logan personnel. The across site reliability coefficient is .639. Individual site values were from .712 (Minneapolis) to .551 (New Orleans).

Hypochondria is measured by 10 salient variables on Scale XII. A high score on this factor would characterize an individual reporting many somatic complaints. A low score on this factor would characterize an individual who avowed good health. This factor corresponds to a Fort Logan factor identified as "somatic complaints versus avowal of health." The across site reliability coefficient is .785. The site specific coefficient range is .844 (South Dakota) to .637 (Fairfax).

Factor XIII is somewhat difficult to define, but appears to measure acting out behavior as a manifestation of anxiety. There are 5 salient variables. A high score on this factor would suggest a calm, relaxed person who did not act out aggressive behavior. A low score on this scale would indicate an anxious person who acted out aggressive behavior. The across site generalized KR20 is .602. Individual site generalized KR20s ranged from .706 (Tampa) to .366 (New Hampshire). Because of the somewhat unclear definition of this factor and its across site KR20, which is not high, it is suggested that use of the scale be tempered by both its KR20 for a specific site and its applicability to the site's clients. This factor does not correspond well to any scale derived from the Fort Logan population.

Factor XIV is defined by only 3 salient variables. These salients suggest Factor XIV is a measure of sensitivity. A high score on this root would describe an individual with average or less than average sensitivity. A low score would describe an individual with greater than average sensitivity. Scale XIV is another without a clear direction or valence. The across site reliability coefficient for Scale XIV is .553. The site specific coefficients ranged from .590 (Fairfax) to .483 (San Antonio). Because of the across site reliability coefficient, it is suggested that the use of this scale be tempered by the reliability coefficient for each specific site. This scale corresponds to a Fort Logan scale characterized as "tender-minded, hypersensitive versus tough-minded, hyposensitive."

TABLE D-7 SCALE ON WHICH 151 PERSONALITY ASSESSMENT SCALE VARIABLES ARE CONSIDERED SALIENT

Variable	Scale	Variable	Scale	Variable	Scale	Variable	Scale
1	7	39	1	77	12	115	1
2	4	40	9	78	5	116	6
3	--	41	4	79	1	117	5
4	--	42	12	80	8	118	4
5	9	43	10	81	3	119	--
6	4	44	12	82	6	120	--
7	4	45	4	83	3	121	--
8	2	46	3	84	7	122	13
9	12	47	1	85	11	123	1
10	9	48	5	86	--	124	12
11	--	49	--	87	3	125	--
12	--	50	1	88	12	126	12
13	6	51	5	89	3	127	10
14	--	52	5	90	--	128	7
15	6	53	9	91	--	129	8
16	--	54	--	92	2	130	8
17	11	55	--	93	--	131	8
18	5	56	--	94	1	132	10
19	9	57	9	95	14	133	2
20	9	58	4	96	2	134	10
21	8	59	11	97	7	135	8
22	11	60	10	98	2	136	2
23	3	61	12	99	5	137	7
24	1	62	--	100	2	138	12
25	5	63	1	101	8	139	13
26	6	64	3	102	--	140	2
27	1	65	10	103	2	141	--
28	2	66	11	104	13	142	8
29	2	67	--	105	2	143	5
30	10	68	1	106	2	144	--
31	3	69	5	107	3	145	--
32	1	70	9	108	1	146	14
33	--	71	1	109	13	147	--
34	3	72	10	110	8	148	3
35	2	73	1	111	5	149	7
36	2	74	14	112	--	150	9
37	12	75	6	113	--	151	4
38	4	76	4	114	13		

TABLE D-8 SCALES OF THE PERSONALITY ASSESSMENT SCALE (PAS) DERIVED FROM RESPONSES OF 3681 STR CLIENTS AT INITIAL INTERVIEW

Item	F_v	R_s	F_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR I: STRANGE, ECCENTRIC THOUGHTS			
73	.640	.434	.716	.638	I see or hear or feel strange things which are not quite real.	Often	1.268	.692
79	.664	.400	.660	.670	My life and things around me seem unreal, as if in a dream.	Often	1.293	.680
27	.579	.365	.603	.589	I suspect that someone is following me.	Often	1.229	.642
115	.678	.360	.594	.668	I think about ending it all.	Often	1.240	.659
32	.527	.350	.578	.533	I have pretended to be ill in order to get out of something.	Often	1.242	.608
50	.595	.347	.574	.615	Terrible thoughts come into my mind and tend to persist.	Often	1.320	.699
94	.628	.345	.570	.636	The wish that I were dead occurs to me.	Often	1.263	.671
39	.530	.344	.568	.533	I have periods when I laugh or cry in an uncontrollable manner.	Often	1.326	.700
123	.696	.318	.526	.692	I fear that I may be losing my mind.	Often	1.222	.614
71	.625	.312	.515	.612	I get attacks of nausea.	Often	1.222	.631
24	.533	.286	.472	.518	I experience dizzy spells.	Often	1.219	.623
108	.561	.276	.456	.574	When things were bothering me, I have felt like starting a fight.	Often	1.265	.661
63	.436	.249	.412	.452	I find myself memorizing numbers or repeating words for no apparent reason.	Often	1.400	.801
47	-.369	-.189	-.312	-.392	I have weird dreams I feel I should not talk about.	Few	4.450	.909
68	-.378	-.166	-.274	-.414	My thoughts are strange and peculiar.	Few	4.450	.905

KR20 = .874   Hyperplane Count: Varimax = 51.7%, Promax = 70.9%

Item	F_v	R_s	F_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR II: ANXIETY, DEPRESSION AND TENSION			
28	.465	.449	.811	.531	I am under a great deal of tension.	Often	1.728	1.004
100	.562	.438	.792	.691	I am unhappy or depressed.	Often	1.551	.796
133	.530	.407	.736	.661	I am unhappy or depressed.	Often	1.497	.771
140	.527	.376	.679	.512	I am satisfied with my life.	Not	1.680	.871
35	.468	.368	.664	.541	I am nervous and anxious about things.	Often	1.806	.919
106	.395	.331	.597	.566	I lose sleep worrying about things.	Often	1.451	.770
92	-.494	-.309	-.559	-.608	It seems that I am more easily hurt than most people.	False	3.859	1.174
8	.425	.290	.524	.407	I hide my feelings so that others do not know they hurt me.	Often	2.297	1.230
105	.398	.287	.519	.559	I worry beyond reason over things that really do not matter.	Often	1.505	.828
36	.386	.260	.470	.567	I brood or feel sorry for myself.	Often	1.382	.688
29	-.402	-.236	-.425	-.362	I have not lived up to my potential.	False	2.934	1.444
136	.357	.221	.399	.402	I have many interests to keep me busy and occupied.	False	2.177	.955
103	.322	.220	.398	.499	I feel no one really cares what happens to me.	Often	1.379	.732
96	.374	.220	.397	.513	When things were bad, I have felt like leaving home.	Often	1.551	.825
98	.354	.216	.390	.452	I think about possible misfortunes.	Often	1.871	.788

KR20 = .850   Hyperplane Count: Varimax = 46.4%, Promax = 73.5%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR III: PROJECTION OF ATTRIBUTES			
34	.640	.545	.626	.637	People will use somewhat unfair means to get what they want.	Few	3.747	1.124
64	.613	.527	.606	.615	Given the opportunity people will take advantage of an easily deceived person.	Few	3.737	1.159
31	.554	.466	.536	.545	People in authority arrange to get credit for the good work and blame the bad work on others.	Few	3.935	1.118
83	.563	.460	.528	.550	When people act in an unselfish way, it is because there is something in it for them.	Few	3.958	1.111
89	.505	.439	.504	.515	People expect more respect for their own rights than they are willing to allow for others.	Almost Never	3.297	1.136
87	.560	.434	.498	.551	People make friends primarily for the purpose of feathering their own nest.	Few	4.144	.953
107	.462	.397	.456	.460	People are honest primarily because they are afraid of being caught.	Few	3.634	1.309
148	.481	.369	.424	.488	It takes a lot of argument to convince a person of the truth.	Few	3.776	1.092
23	.407	.361	.414	.419	In order to get what they want, people in power will get around a law without actually breaking it.	Few	3.125	1.302
81	.411	.326	.374	.394	People really do not want to go out of their way to help others.	False	3.140	1.286
46	.374	.265	.304	.356	One should be suspicious when people are quite friendly.	Almost Never	4.181	.909

KR20 = .806   Hyperplane Count: Varimax = 57.6%, Maxplane = 84.8%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR IV: INTELLECTUAL, AESTHETIC INTERESTS			
151	.589	.513	.686	.584	I enjoy reading books about history.	No	2.324	1.262
2	.528	.482	.645	.502	I am interested in science.	No	2.598	1.359
7	.517	.432	.577	.491	I like poetry.	No	3.199	1.358
41	-.435	-.365	-.488	-.402	I do not enjoy going to art museums.	False	3.158	1.277
58	.454	.351	.469	.500	I keep up with reading in my areas of interest.	Almost Never	2.419	1.337
6	.408	.345	.461	.389	I might like the work of a librarian.	False	4.191	1.219
38	.408	.319	.426	.446	I read newspaper editorials.	Almost Never	2.892	1.524
118	.412	.272	.364	.477	I liked school	Almost Never	2.351	1.308
76	-.362	-.272	-.363	-.371	I listen to classical or symphonic music.	Often	1.920	1.090
45	.324	.199	.266	.346	Displays of flowers or plants catch my attention.	Almost Never	2.686	1.394

KR20 = .726   Hyperplane Count: Varimax = 74.2%, Maxplane = 88.7%

Table D-8(Continued)

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR V: PHOBIAS			
52	.497	.461	.576	.486	Snakes do not particularly frighten me.	False	2.751	1.306
51	.408	.359	.448	.415	There is nothing particularly fearful about spiders.	False	2.538	1.273
25	-.456	-.358	-.448	-.504	A lightening storm is a fearful experience.	False	3.671	1.218
78	.431	.351	.438	.425	Hardly anything frightens me.	False	2.591	1.145
111	-.369	-.310	-.387	-.378	A bloody person or animal frightens or sickens me.	False	3.444	1.178
48	-.390	-.276	-.345	-.437	Sharp or pointed objects make me nervous.	False	3.947	1.004
69	-.333	-.271	-.339	-.338	I become nervous when I look down from a high place.	Almost Never	3.769	1.382
18	-.277	-.247	-.308	-.283	Mice and beetles and other small animals and insects make me nervous.	Almost Never	4.600	.921
143	.310	.231	.289	.337	I have very little or no fear of being near to deep water.	False	2.116	1.174
99	-.284	-.219	-.273	-.311	It worries me a great deal to be closed into a small room or closet.	Almost Never	4.040	1.402
117	-.328	-.213	-.266	-.378	I fear traveling by airplane.	False	4.106	1.068

KR20 = .687   Hyperplane Count: Varimax = 69.5%, Maxplane = 88.7%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR VI: SELF IMAGE			
75	.458	.260	.501	.501	I have succeeded at the things I have tried.	Almost Never	2.131	1.029
15	.399	.246	.474	.477	My judgment is sound and mature.	Almost Never	2.083	.985
13	.258	.219	.422	.459	I have a hard time getting started on a task.	Often	1.599	.767
82	.255	.195	.374	.304	My decisions are governed by my head rather than my heart.	Almost Never	2.626	1.260
26	.227	.183	.352	.418	I give up trying to do something because it has so many difficulties and alternatives.	Often	1.513	.752
116	.195	.175	.337	.417	I have missed out on things because I could not make up my mind quickly enough.	Often	1.688	.797

KR20 = .595   Hyperplane Count: Varimax = 61.6%, Maxplane = 83.4%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR VII: MORALISM			
137	.463	.403	.533	.425	When talking with others I do not discuss sexual matters.	False	3.237	1.135
128	.453	.386	.510	.462	All forms of gambling should be outlawed.	Disagree	3.785	1.008
97	-.392	-.379	-.501	-.356	I might enjoy a sexy show.	False	2.222	.927
1	.392	.299	.395	.448	I am embarrassed by dirty stories.	Almost Never	4.479	.362
84	.348	.271	.358	.309	Under no circumstances would I break a law.	False	2.845	1.354
149	.314	.239	.315	.311	If given a choice I would rather have job security than a high paying job.	False	2.551	1.989

KR20 = .561   Hyperplane Count: Varimax = 66.9%, Maxplane = 80.8%

Table D-8 (Continued)

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR VIII: GROUP ATTRACTION			
135	.432	.413	.519	.412	I can forget my problems just by joining a playful group of friends.	Almost Never	3.155	1.362
130	.371	.411	.516	.449	I trust others.	Almost Never	2.227	1.105
131	.333	.390	.490	.391	The words of other people can be trusted.	Almost Never	2.760	1.138
21	.351	.360	.453	.327	All it takes is a little excitement to bring me out of feeling low.	Almost Never	3.228	1.307
80	.362	.343	.432	.340	The excitement of a crowd attracts me.	Almost Never	3.404	1.314
101	.326	.260	.327	.366	I feel excited and happy for no apparent reason.	Almost Never	3.740	1.152
142	.243	.259	.325	.322	In my life people have treated me fairly.	Almost Never	1.769	.901
129	.284	.239	.301	.409	I am in good spirits and cheerful.	Almost Never	1.932	.933
110	.231	.210	.264	.396	I am able to please other people.	Almost Never	2.167	1.060

KR20 = .660   Hyperplane Count: Varimax = 70.9%, Maxplane = 77.5%

Item	F_V	R_S	F_P	F_S	Item Description	HI Score	Mean	SD
					FACTOR IX: INTROVERSION/EXTROVERSION			
19	.585	.533	.653	.642	I find it difficult to make conversation with strangers.	Almost Never	4.600	.921
70	-.434	-.387	-.474	-.502	I have trouble making new friends.	Often	1.495	.831
5	.440	.383	.469	.448	I talk with strangers when I am traveling about town.	Often	2.595	1.333
150	.467	.368	.450	.497	I enjoy meeting new people.	Often	3.421	1.299
20	-.467	-.365	-.447	-.483	When I meet new people I am the first to strike up a conversation.	Almost Never	3.615	1.127
40	.446	.358	.439	.550	It is hard for me to take part in group conversations.	Almost Never	4.160	1.131
10	-.406	-.308	-.377	-.500	I enjoy leading discussions and exchanging opinions with people.	False	2.139	1.033
57	.267	.226	.277	.368	I wish I could be more outgoing than I am.	False	3.050	1.180
53	.246	.196	.240	.361	It bothers me to enter a party that has already started.	False	3.818	.994

KR20 = .757   Hyperplane Count: Varimax = 84.1%, Maxplane = 94.0%

Table D-8(Continued)

Item	F_v	R_s	F_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR X: PARANOIA			
43	.493	.428	.829	.579	Certain people would like me out of the way.	False	4.161	.904
72	.480	.400	.773	.535	Others are plotting against me.	Unlikely	4.491	.902
30	.469	.385	.746	.547	Someone is out to ruin me.	Unlikely	4.494	.845
132	.414	.340	.659	.549	I would have been more successful if certain people had not had it in for me.	False	4.055	.868
60	.319	.262	.508	.530	I wonder if there is something wrong with my mind.	False	4.147	.870
65	-.196	-.203	-.392	-.410	I can "pitch in" and get a job done.	False	1.642	.643
134	.234	.196	.379	.410	People try to take advantage of me.	Few	4.512	.819
127	.249	.194	.376	.501	People do not understand me.	False	3.731	.925

KR20 = .743   Hyperplane Count: Varimax = 79.5%, Maxplane = 88.1%

Item	F_v	R_s	F_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR XI: EMOTIONAL CONTROL			
59	.471	.411	.465	.498	I am not easily upset.	False	1.967	1.217
17	.459	.403	.456	.469	I am not known to be easily angered.	False	2.187	1.084
22	.462	.371	.420	.501	I am accurately described as calm and controlled.	False	2.059	.811
85	.403	.315	.356	.434	I am not a high strung, tense person.	False	2.238	1.091
66	.304	.215	.243	.329	I have never been known as a trouble-maker.	False	1.193	.981

KR20 = .639   Hyperplane Count: Varimax = 78.1%, Maxplane = 90.7%

Item	F_v	R_s	F_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR XII: HYPOCHONDRIA			
37	.520	.490	.699	.630	I have pains.	Often	1.454	.842
42	.403	.407	.580	.620	I have chest pains.	Often	1.298	.674
44	.423	.399	.568	.610	I have trouble with my stomach.	Often	1.373	.768
88	.435	.391	.557	.511	I have been healthy and free of illness over the past several years.	Almost Never	1.674	1.075
61	.302	.293	.418	.449	I have headaches.	Often	1.427	.732
126	.349	.281	.400	.368	I am healthier than most people my age.	False	2.377	1.175
9	.229	.261	.373	.457	I suffer from vomiting and nausea.	Often	1.193	.622
77	.228	.230	.328	.504	Parts of my body feel numb.	Often	1.307	.733
124	.248	.206	.294	.565	I feel upset in the pit of my stomach.	Often	1.357	.675
138	.148	.157	.224	.447	I lose my balance.	Often	1.265	.623

KR20 = .786   Hyperplane Count: Varimax = 88.1%, Maxplane = 90.1%

Table D-8(Continued)

Item	F_v	F_s	R_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR XIII: ACTING OUT, ANXIETY			
114	.338	.327	.454	.455	When angered I have felt like smashing things	Almost Never	4.479	.900
109	.313	.320	.444	.354	When things did not go my way, I have lost my temper.	Almost Never	4.336	.941
104	.252	.260	.361	.422	When I see someone I know I pretend not to notice.	Almost Never	4.601	.795
122	.266	.249	.345	.473	I feel as if a disaster or something dreadful is about to occur.	Almost Never	4.610	.849
139	.163	.172	.238	.348	I am so full of pep that I do not sleep.	Almost Never	4.595	.768

KR20 = .602   Hyperplane Count: Varimax = 81.5%, Maxplane = 86.1%

Item	F_v	F_s	R_p	F_s	Item Description	HI Score	Mean	SD
					FACTOR XIV: SENSITIVITY			
74	.322	.307	.347	.440	My interests are more varied than most people's.	False	2.930	1.318
95	.293	.303	.342	.391	I seem to experience things more intensely than most people.	False	3.291	1.242
146	.282	.288	.325	.352	I think I am more sensitive than most people.	False	3.010	1.299

KR20 = .553   Hyperplane Count: Varimax = 82.1%, Maxplane = 85.4%

TABLE D-9 INTERNAL CONSISTENCY RELIABILITIES[1] FOR THE 14 PAS COMPOSITE SCALES FOR THE TOTAL STR STUDY POPULATION AND FOR EACH STR SITE.

SITE	N[2]	PAS COMPOSITE SCALES													
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Total	3681	.874	.850	.806	.726	.687	.595	.561	.660	.757	.743	.639	.785	.602	.553
Denver	342	.672	.526	.826	.745	.661	.553	.515	.660	.740	.724	.604	.792	.562	.555
Fairfax	587	.862	.802	.795	.724	.640	.575	.568	.608	.798	.677	.648	.637	.519	.590
Kansas City	436	.895	.829	.798	.739	.696	.590	.506	.696	.717	.750	.678	.766	.615	.498
Minneapolis	160	.882	.850	.772	.787	.768	.628	.608	.705	.812	.775	.712	.735	.665	.580
New Orleans	341	.840	.829	.802	.679	.574	.560	.477	.622	.706	.776	.551	.751	.669	.512
Phoenix	356	.790	.849	.789	.730	.639	.605	.463	.677	.797	.700	.694	.773	.533	.632
San Antonio	301	.882	.834	.761	.703	.603	.502	.512	.653	.629	.688	.609	.772	.549	.483
South Dakota	200	.908	.837	.825	.755	.689	.579	.535	.634	.760	.718	.590	.844	.675	.533
New Hampshire	202	.882	.853	.801	.717	.704	.730	.570	.652	.749	.731	.602	.777	.366	.564
Oklahoma City	403	.892	.888	.821	.737	.751	.658	.591	.688	.762	.767	.643	.837	.580	.571
Tampa	353	.876	.856	.822	.706	.718	.570	.580	.594	.695	.769	.617	.775	.706	.526

[1] Coefficients reported are the generalized KR20, or Cronbach's alpha $[\alpha = \frac{k}{k-1} (1 - \frac{\sigma_i^2}{\sigma_t^2})]$.

[2] Refers to cases in data system; reliability coefficients are based on cases with non-missing data for all items and may be slightly less than this value.

D-35

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GRAPHICAL REPRESENTATION OF EXPERIMENTAL GROUP MEANS
FOR INITIAL, SIX-MONTH AND
TWELVE-MONTH LAI, CSQ, LAI/CSQ AND PAS SCALES

KEY: ◯ Rehabilitation
     ▢ Control
     ⬡ Punitive
     △ Rehabilitation + Punitive
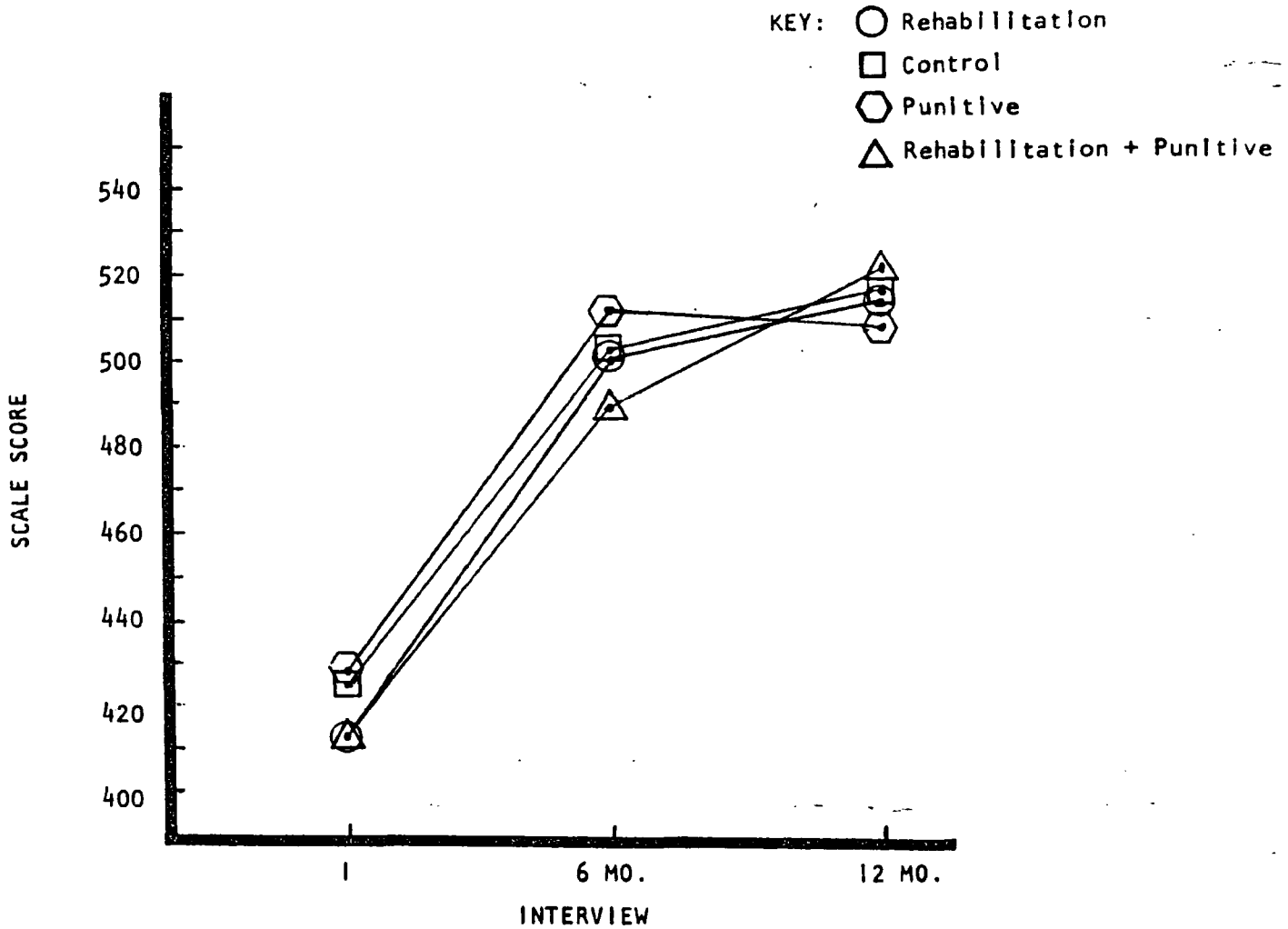
Figure E-1:LAI-1 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 1 of the LAI is defined by eight salient variables, all
of which pertain to the client's employment or income production
status. High scale scores would be obtained by the client who
was employed, who worked a substantial number of hours per week,
whose income production was high, and whose income source and amount
had improved during the past six months. Low scores would be
produced by clients who were not working, were supported by
public assistance, or whose employment/economic situation had
deteriorated during the prior six month period.
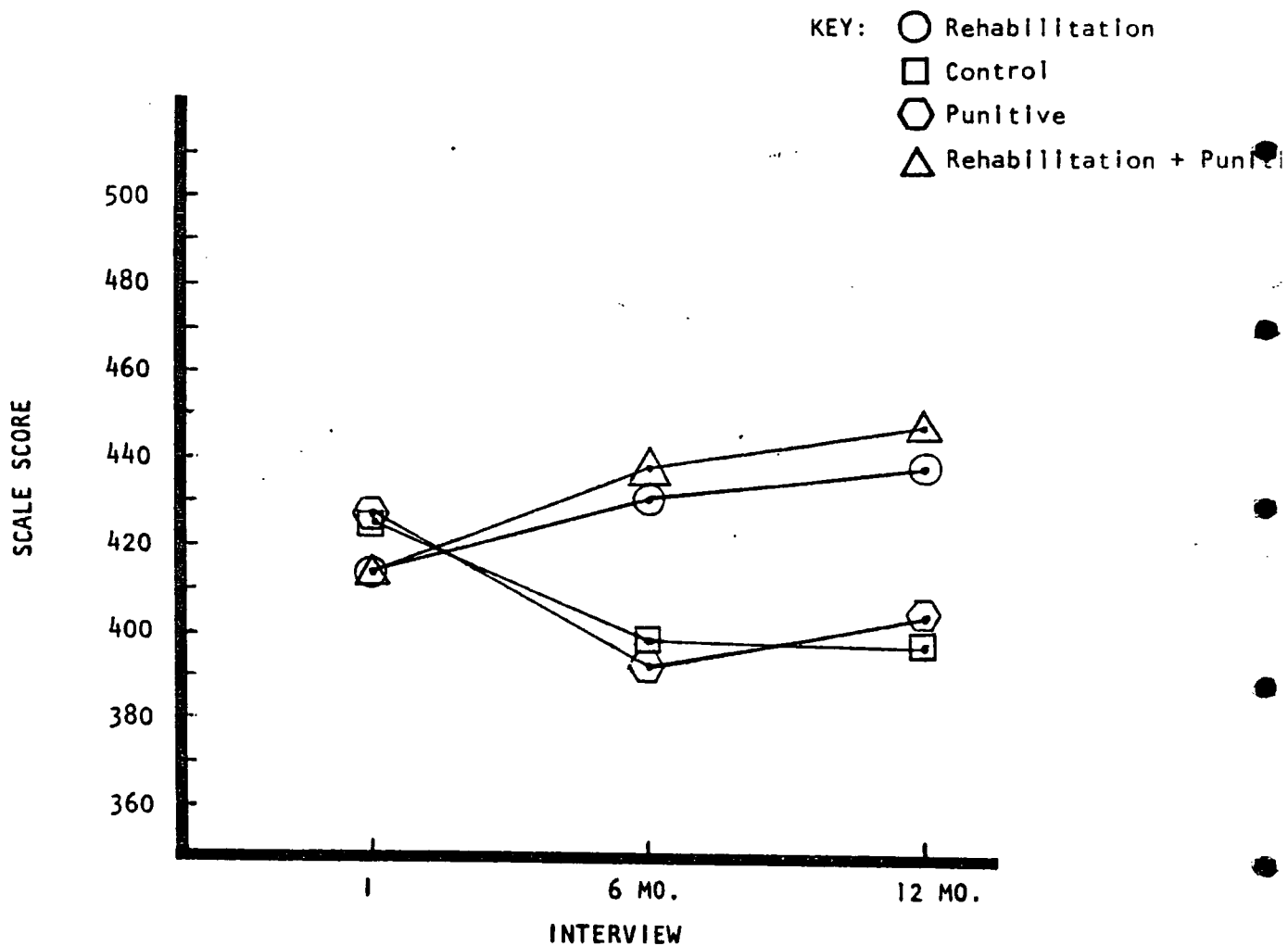
Figure E-2: LAI-2   Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 2 is defined by four LAI variables which relate to the
quantity and frequency of alcohol consumption. High scale scores
are obtained by clients whose current consumption is relatively
large, and whose drinking frequency (at least for the prior week)
was high. It is suggested that reasonable care be taken in the
interpretation of group differences relative to this scale since
this factor seems to represent a relatively simple index of
quantity/frequency of alcohol consumption rather than an
indication of overt alcohol problems.

Figure E-3: LAI-3   Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 3 includes six salient variables which relate to the
marital status of the respondent, and to the extent to which the
client participates in activities with family members rather than
alone.   It seems likely that this scale is primarily sensitive
to the fact of a client being married or not, rather than to the
quality of one's marital status or personal living situation.
It is logical that a client who is married will tend to have
more dependents, live with more people, take care of more people,
and more frequently seek recreation with his family than will the
client who is unmarried.   As a consequence, this scale may be
of somewhat limited utility as an index of treatment effect.
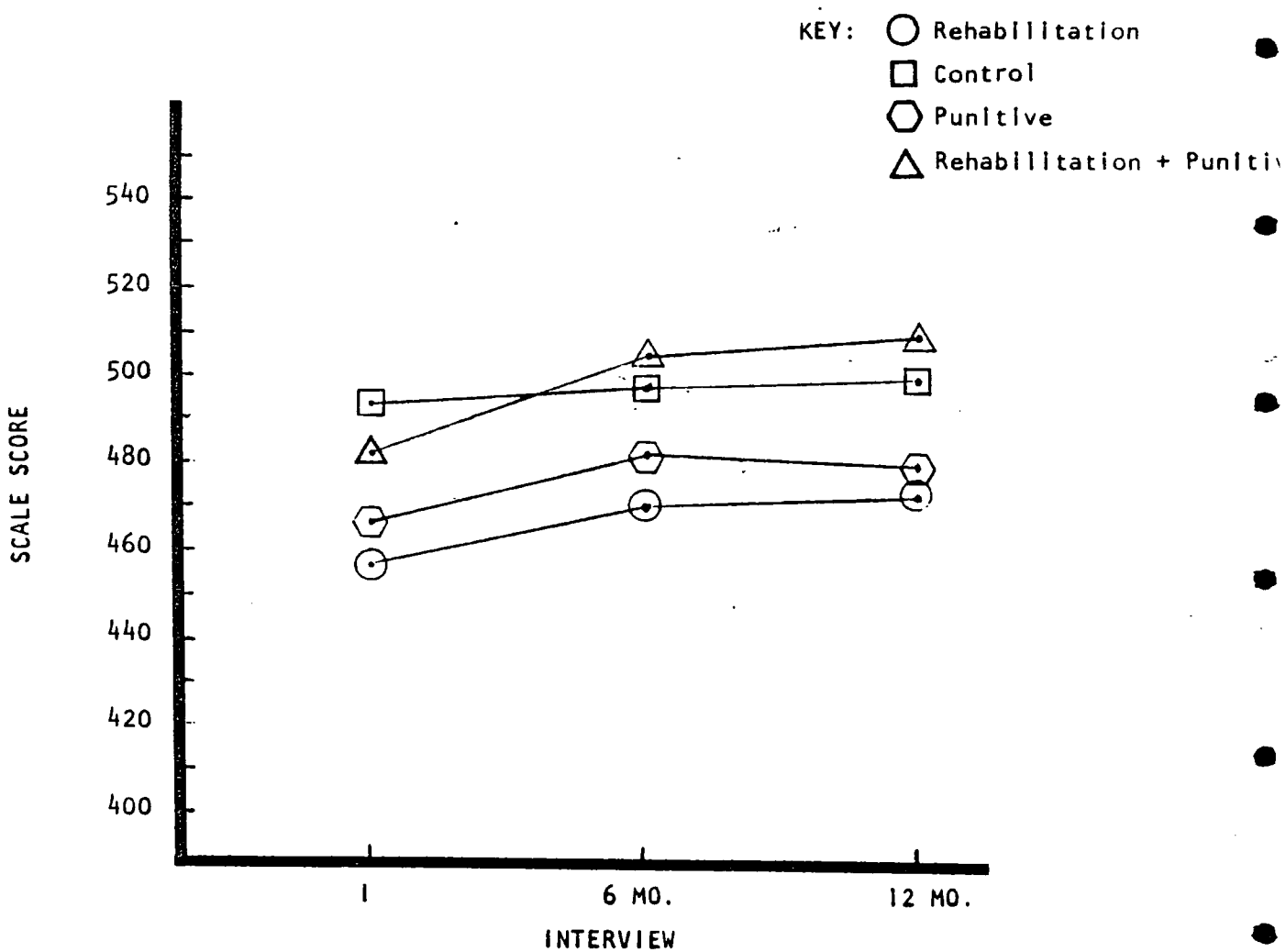
Figure E-4: LAI-4   Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 4 appears to represent a dimension which is characterized
at one extreme by social alienation and withdrawal (low scores),
and at the other by social interaction, involvement and activity.
Ten salient variables define this factor.
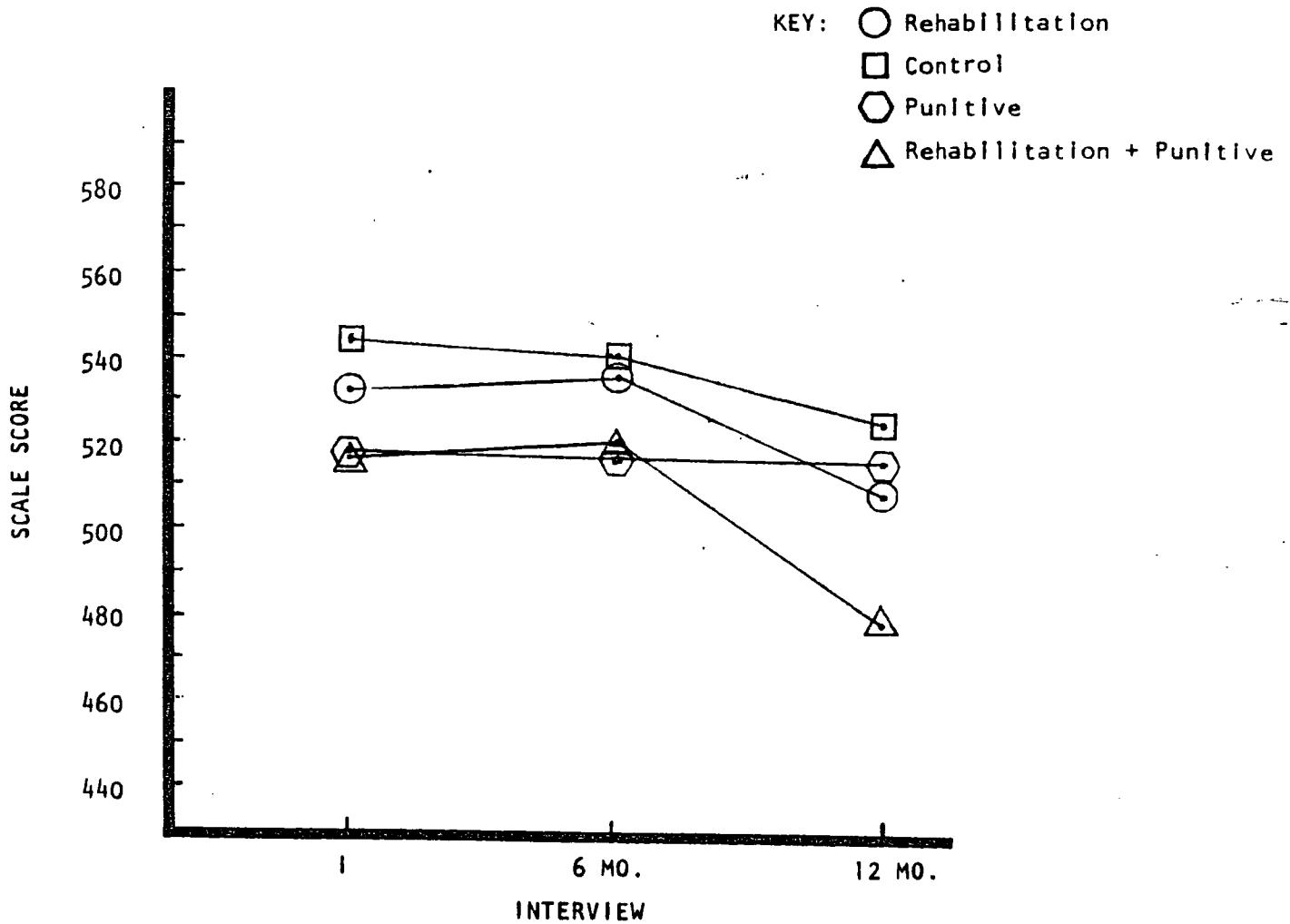
Figure E-5:LAI-5 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 5 is defined by nine salient variables which assess
various self-reported health problems and complaints. High
scores are obtained by clients who report frequent health com-
plaints, who were ill frequently during the past month, and
who have sought medical assistance for health problems.

KEY: ◯ Rehabilitation
      ☐ Control
      ⬡ Punitive
      △ Rehabilitation + Puniti

SCALE SCORE

490
480
470
460
450
440
430
420

I   6 MO.   12 MO.

INTERVIEW
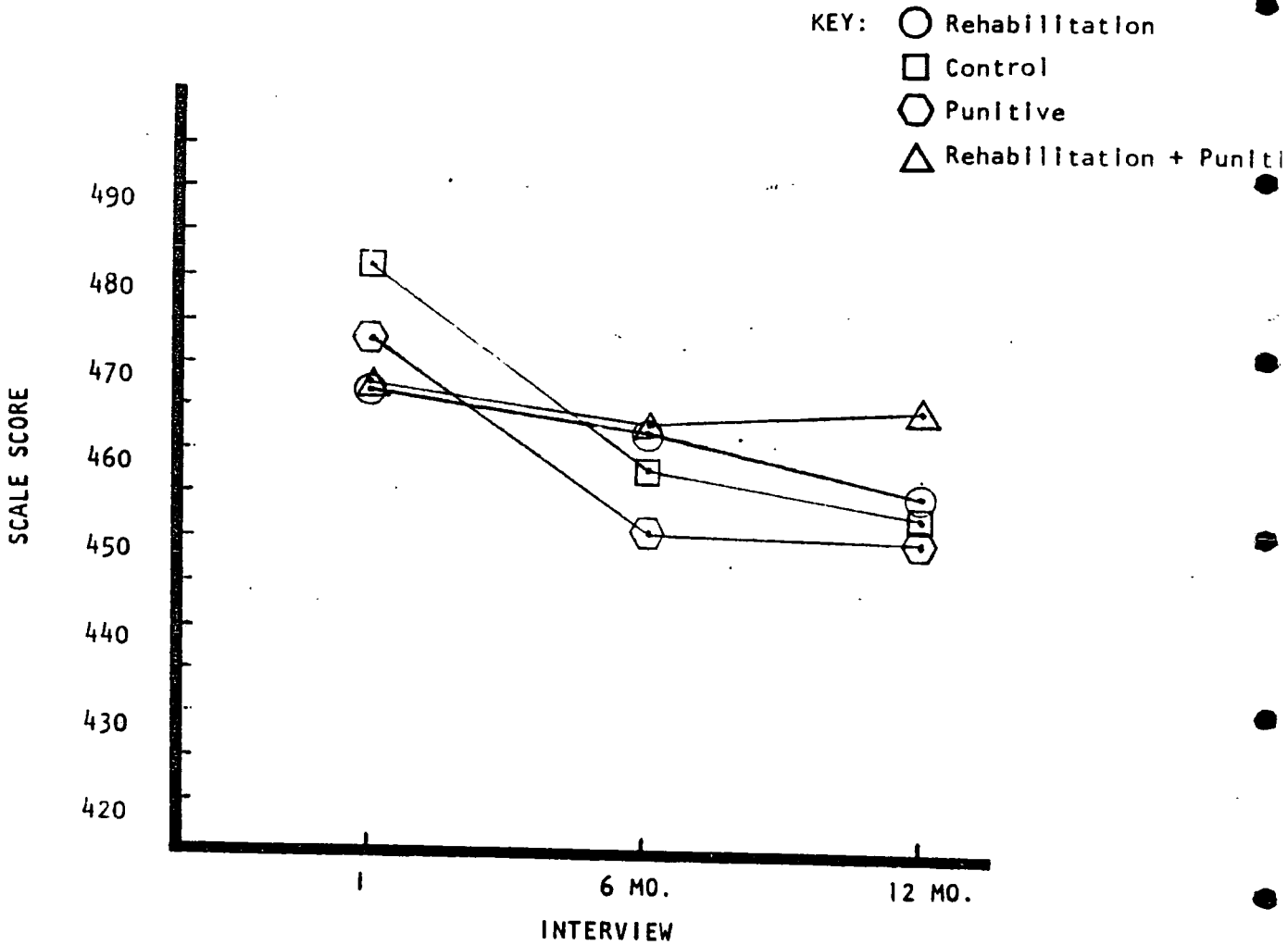
Figure E-6: LAI-6 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The final LAI factor (Factor 6) is determined by six salient
variables which appear to be indicative of consequences of
excessive drinking behavior. The scale is labeled "Immoderate
drinking behavior" rather than another title such as "problem
drinking," because the items do not represent self admission
of alcohol problems, but rather indicate self report of inci-
dents during which large amounts of alcohol were consumed
(times drunk, times drive with 3 or 4 drinks, times got
away with DUI) or physiological and social consequences of heavy
drinking (times experience blackouts and binges from drinking,
and days missed work either drunk or hung over). High scores
on this scale reflect self report of relatively more immod-
eration than do low scores.

E-6

KEY: ◯ Rehabilitation
       ☐ Control
       ⬡ Punitive
       △ Rehabilitation + Punitive

Figure E-7: CSQ-2   Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The second CSQ scale is identified by seven salient variables
                each of which concerns the client's self report of problems
                due to drinking, and the extent to which the client is able
                to regulate his drinking behavior. A high score on this scale
                is indicative of control over drinking behavior and problems,
                while a low score would suggest the presence of problems due
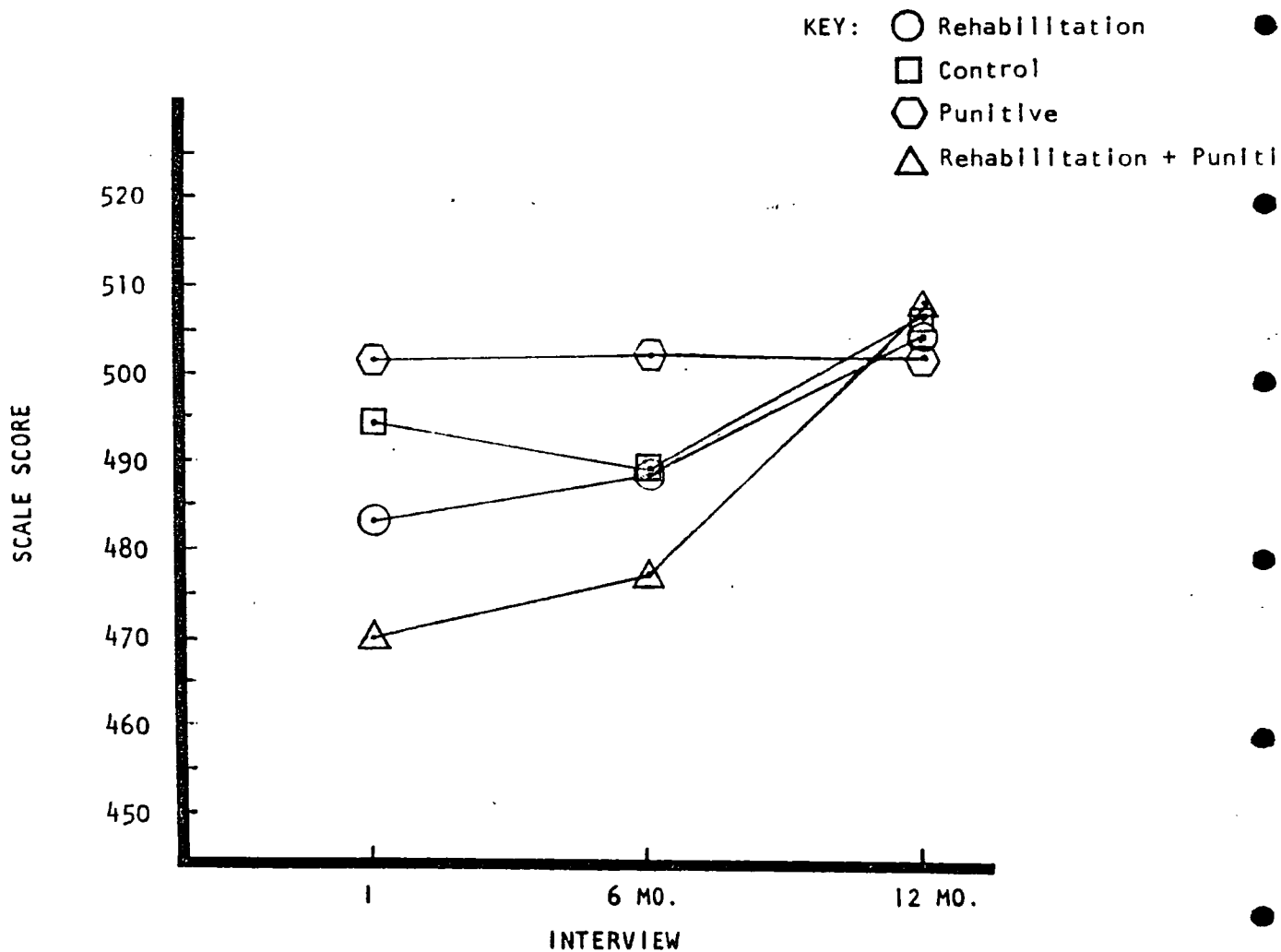   to alcohol.
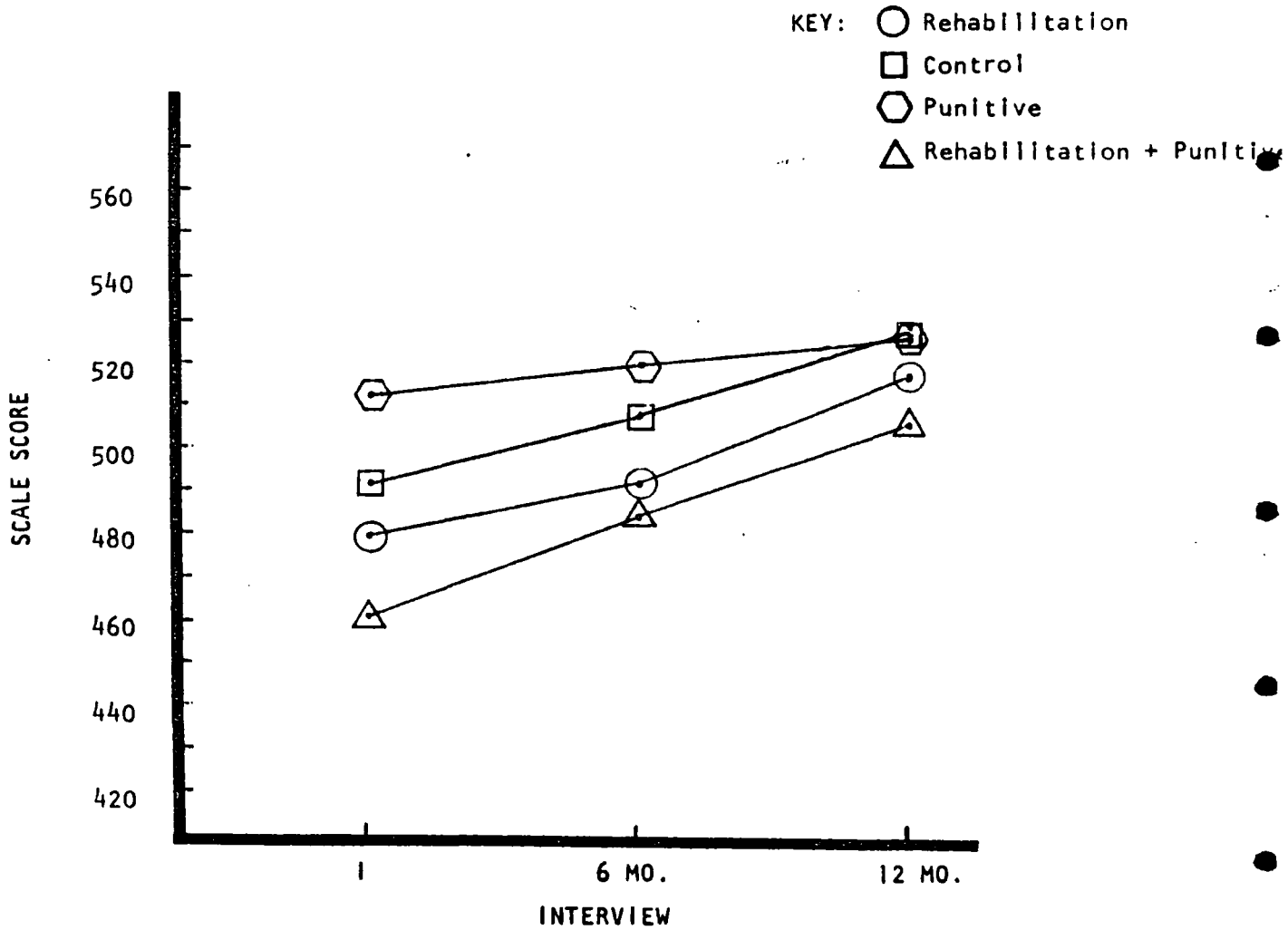
Figure E-8:CSQ-3 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: CSQ Factor 3 appears to represent the clients' economic
productivity and employment stability, and is defined by five
salient variables. High scale scores are indicative of high
income production, steady and regular employment, and satis-
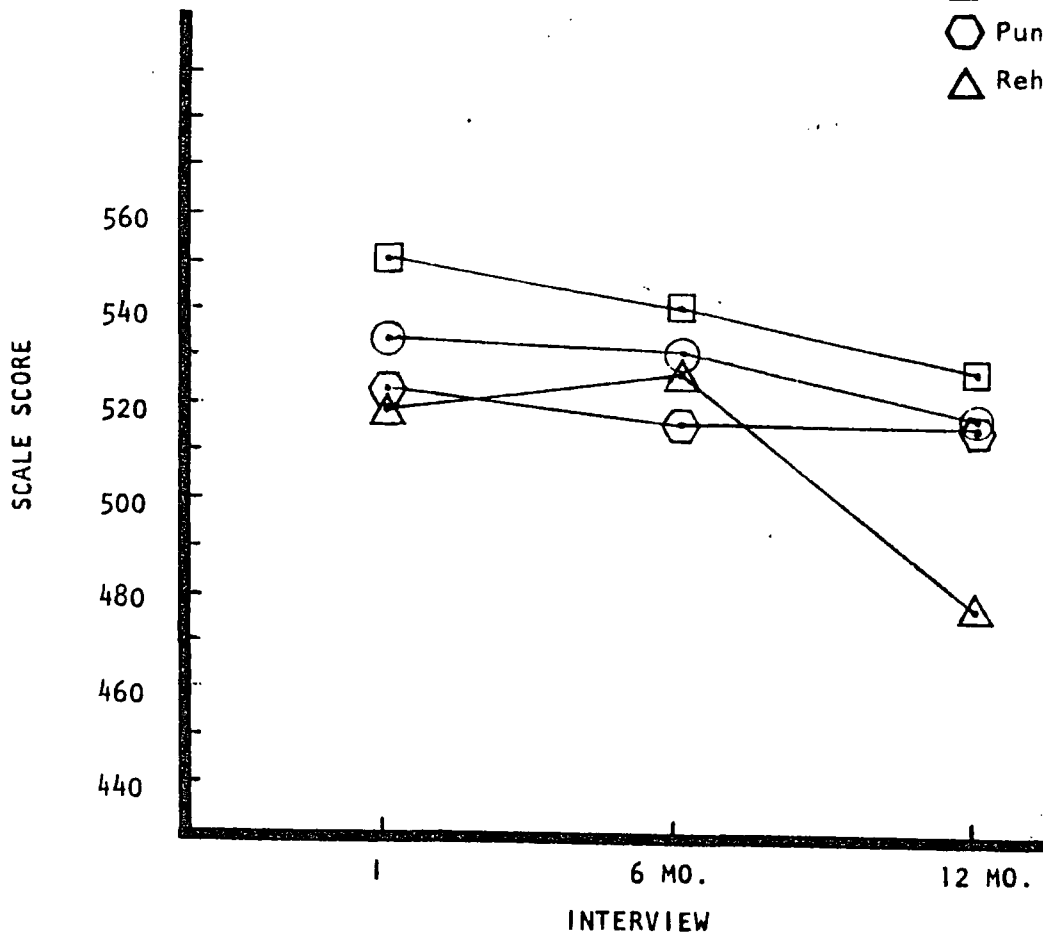faction with the current work situation.
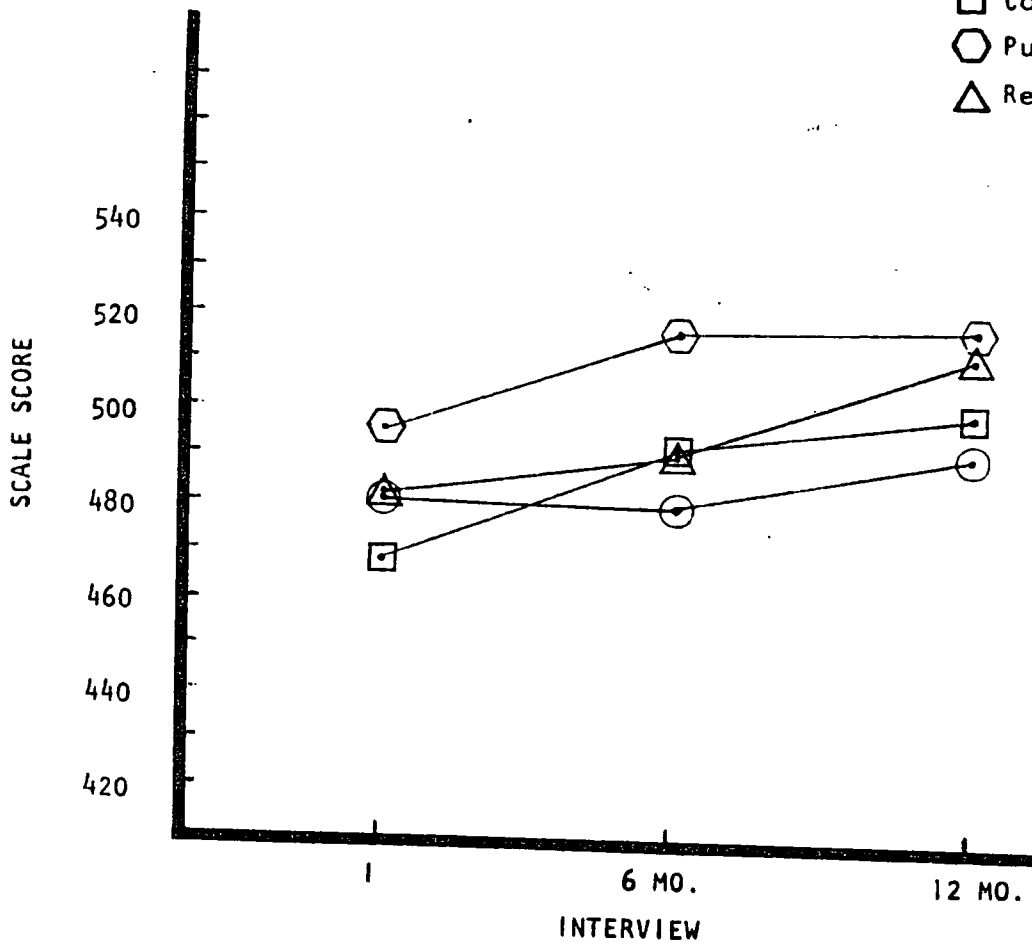
Figure E-9: CSQ-4 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 4 of the CSQ is defined by eight variables which concern
self reports of the presence or absence of client health problems.
A high scale score is indicative of the absence of physical
health problems, while low scores reflect reports of a variety
of indications of health difficulties.
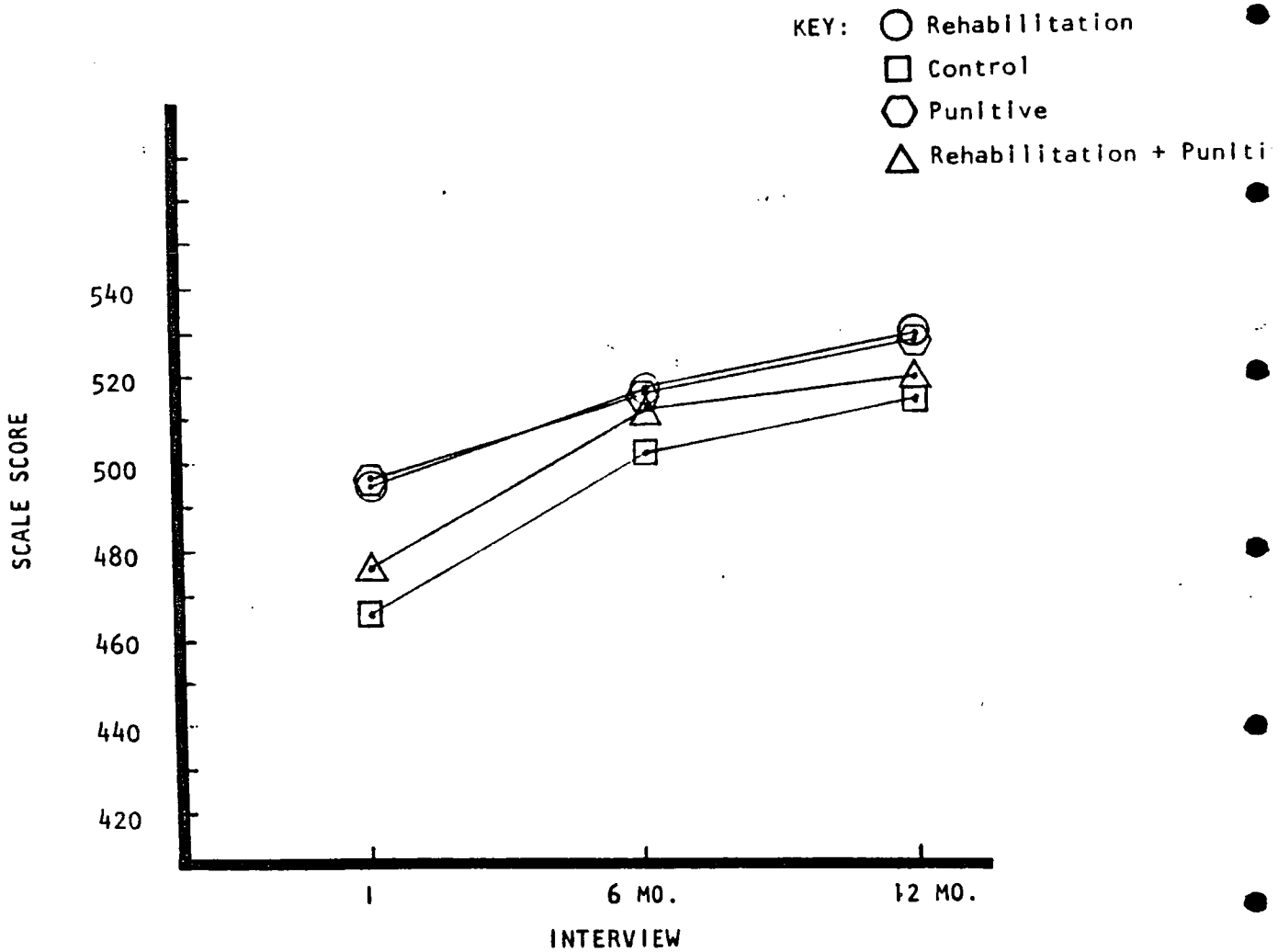
Figure E-10:CSQ-5 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 5 represents a dimension characterized at one extreme
                (low scale scores) by social withdrawal and/or alienation,
                and at the other (high score) by substantial amounts of
                social interaction and activity directed toward (or
                including) others.

KEY:　○ Rehabilitation
　　　□ Control
　　　⬡ Punitive
　　　△ Rehabilitation + Punitive
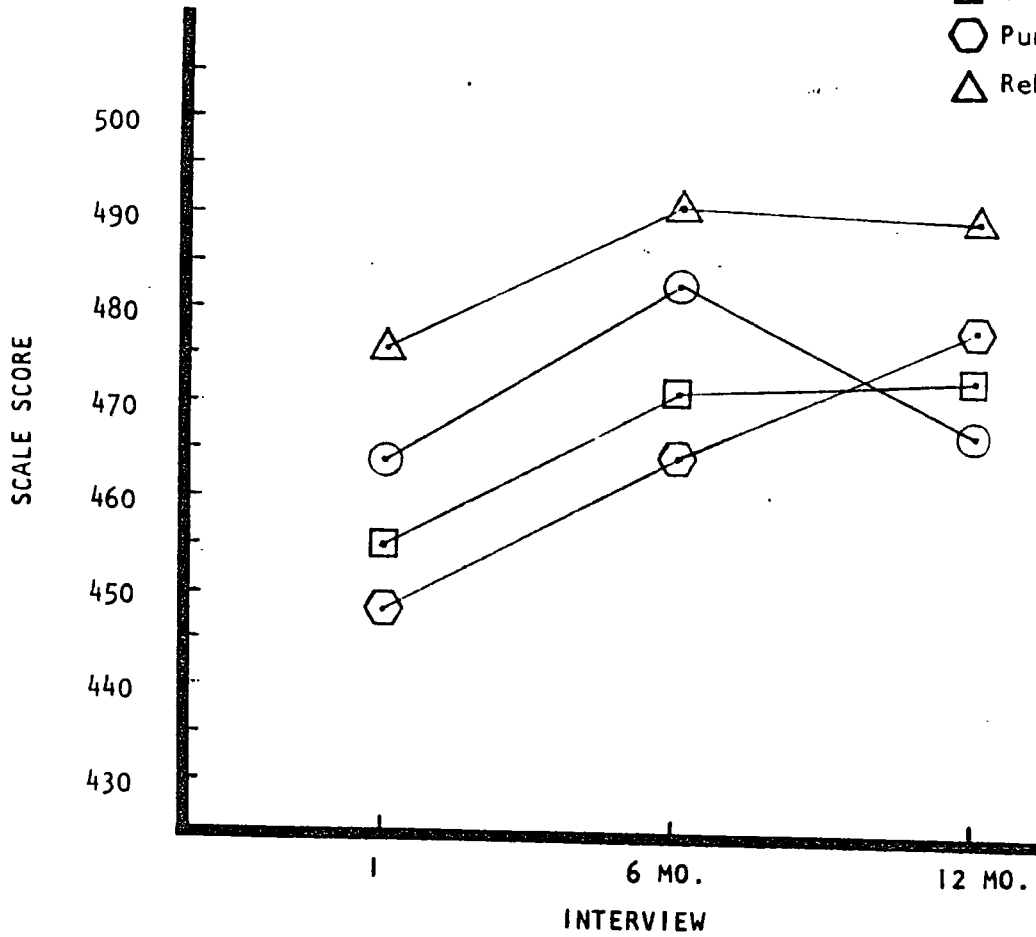
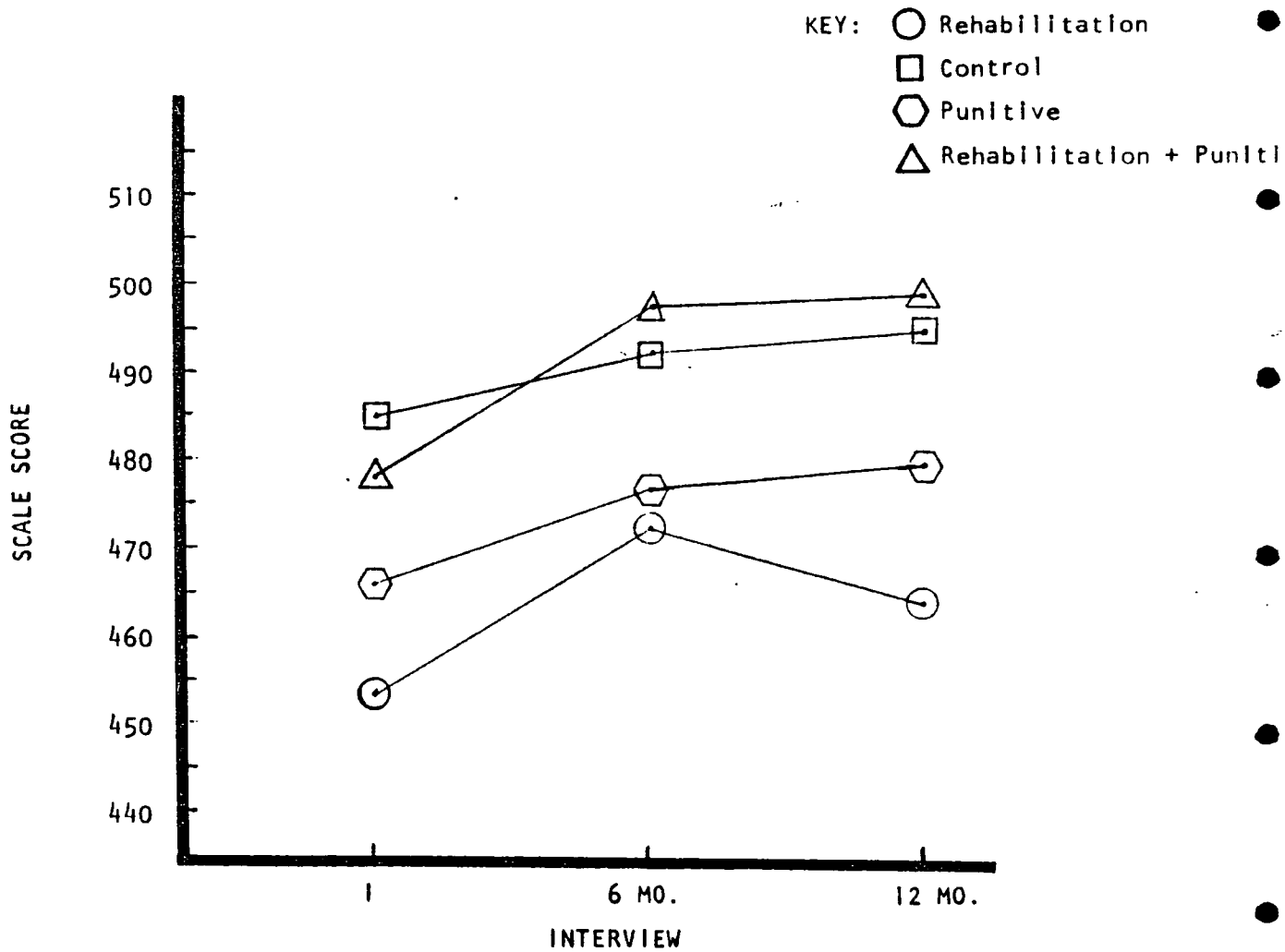Figure E-11: CSQ-6 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION:　Factor 6 represents a dimension characterized at one extereme
(low scale scores) by social withdrawal and/or alienation,
and at the other (high score) by substantial amounts of social
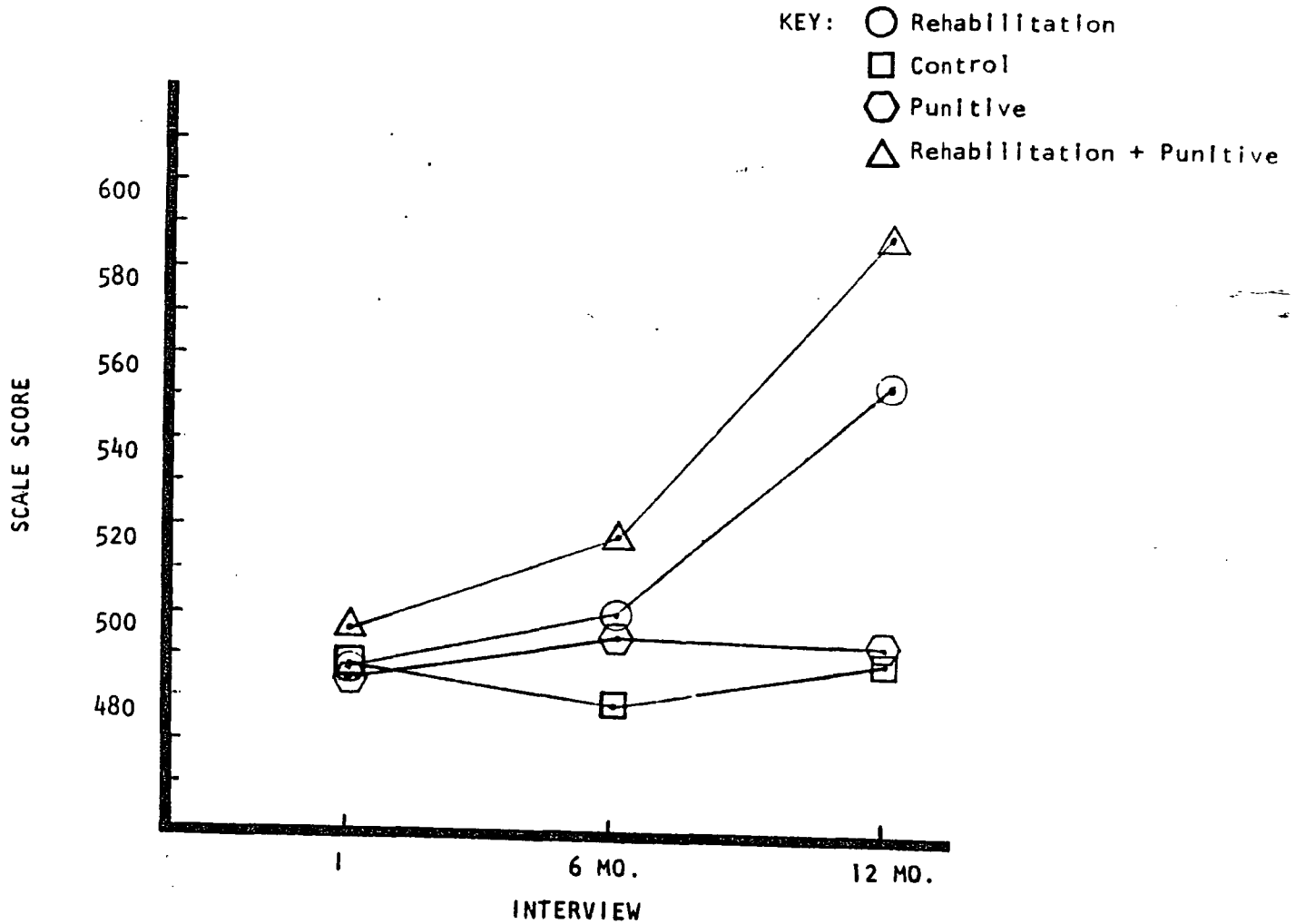interaction and activity directed toward (or including) others.
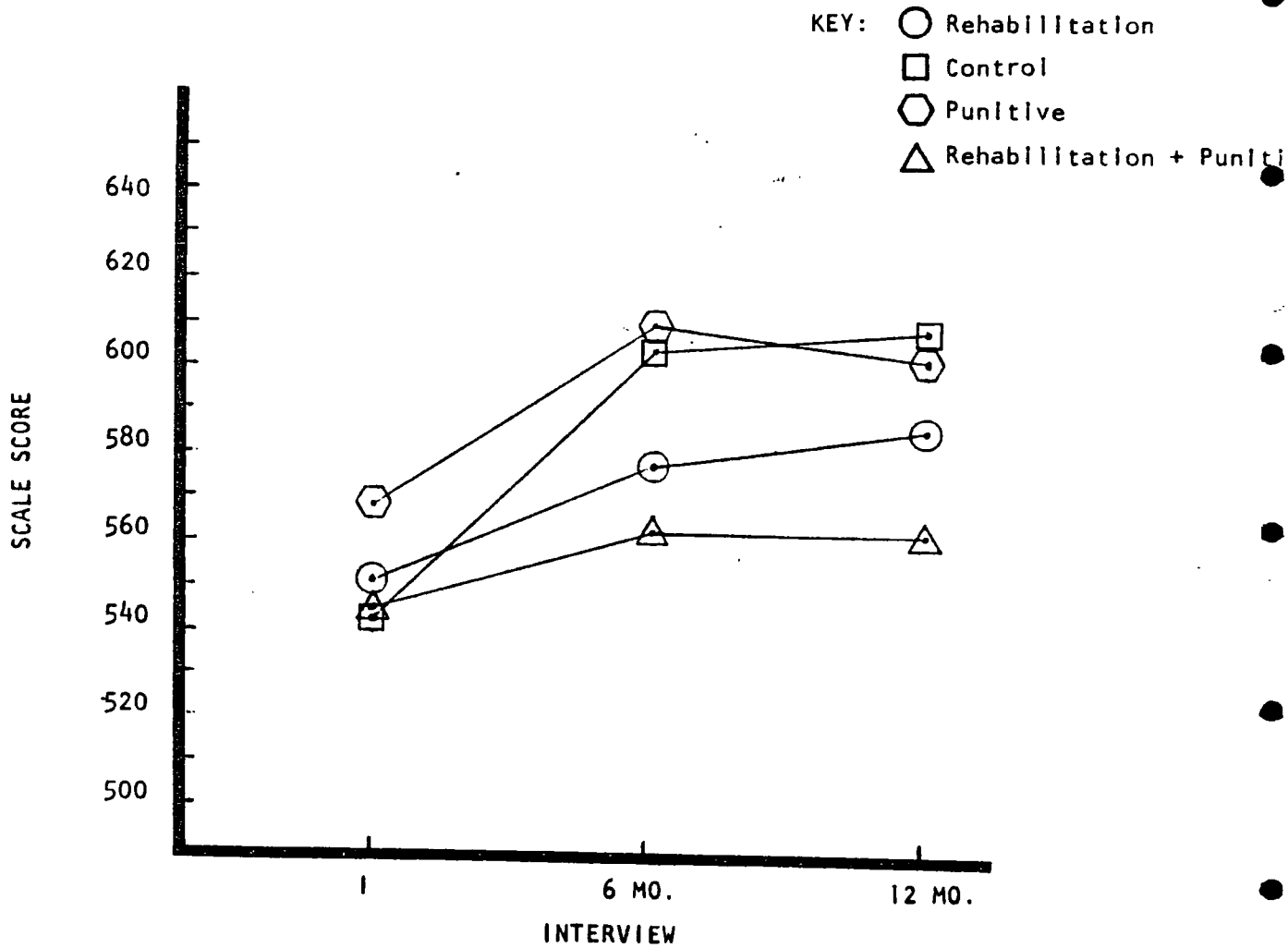
Figure E-12: CSQ-7 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The final CSQ scale included in the Abstract File is defined
by only four salient variables which relate primarily to
abstention from drinking ("How long since last drink?",
"Longest time without alcohol?"), and to the self report
of present quantity and frequency of drinking compared to
past times.

KEY: ○ Rehabilitation
      □ Control
      ⬡ Punitive
      △ Rehabilitation + Punitive
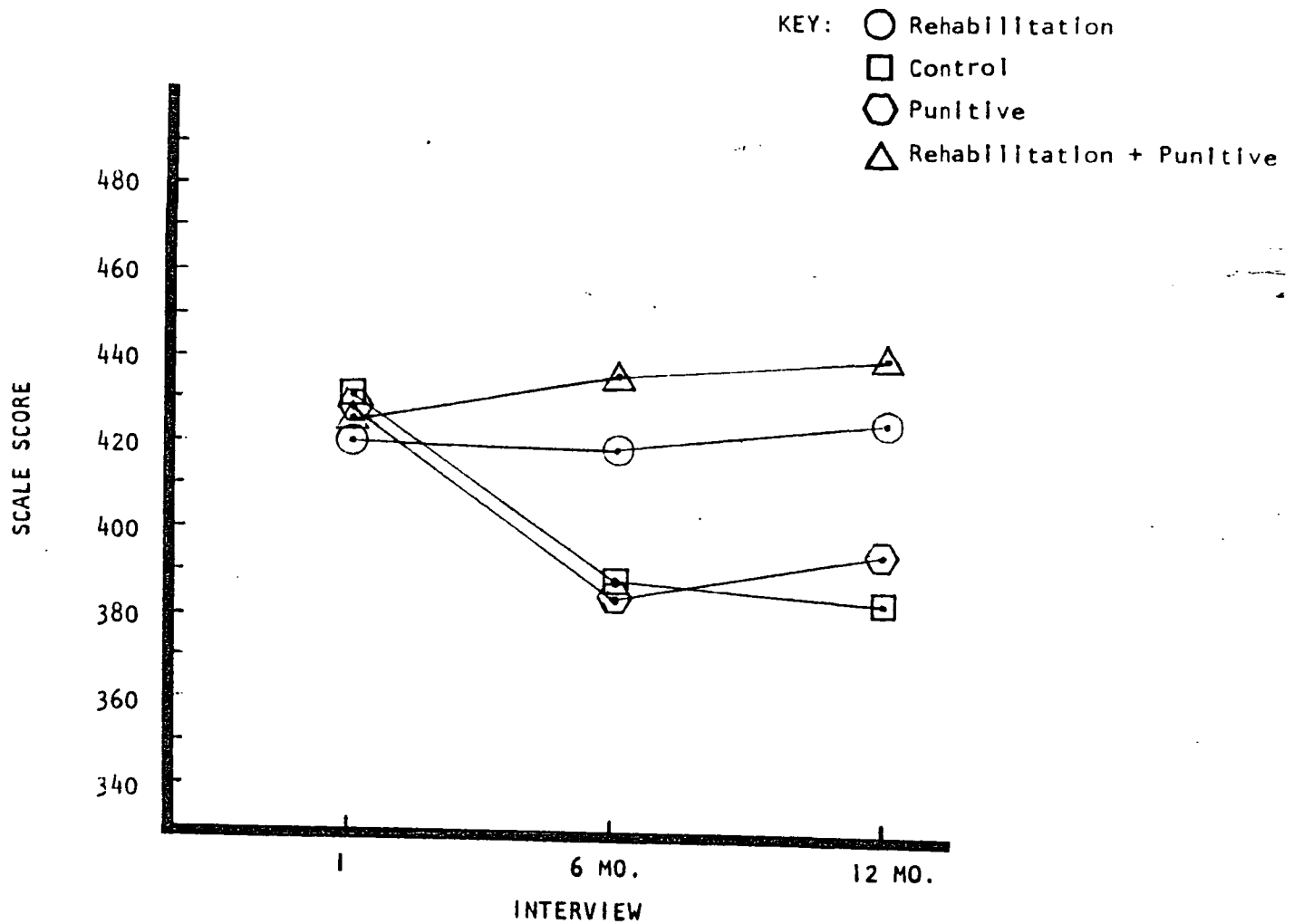
Figure E-13: LAI/CSQ-1 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: LAI/CSQ Factor 1 combines four LAI and three CSQ variables which
appear to relate to clients' current pattern of drinking. A
high scale score reflects a high quantity and frequency of
drinking in the recent past and relatively short periods of
abstention. LAI Factor 2 and CSQ Factor 7 appear to be
merged in this factor. Since this scale achieves a substantial
internal consistency reliability, and because it is defined by
a broader set of salient markers than either of the correspond-
ing LAI and CSQ scales, it may be preferable to utilize this
composite measure as an indication of client drinking pattern.

E-13

Figure E-14: LAI/CSQ-2 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: LAI/CSQ Factor 2 represents a combination of LAI Factor 1
and CSQ Factor 3 and reflects the clients' employment
stability and economic productivity. High scale scores
reflect greater income production and stability of employment
while low scale scores would be indicative of problems in this
life status dimension.

KEY:
- ○ Rehabilitation
- □ Control
- ⬡ Punitive
- △ Rehabilitation + Punitive

Figure E-15: LAI/CSQ-3 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 3 (LAI/CSQ) is defined by a total of 12 items (9 from
the LAI and 3 from the CSQ) which pertain to self reports of
health related problems. A high scale score would be obtained
by the client who reports substantial numbers of physical
health complaints and problems on the two instruments. This
scale combines Factor 5 from the LAI and Factor 4 of the CSQ.

KEY: ○ Rehabilitation
      □ Control
      ⬡ Punitive
      △ Rehabilitation + Puniti

SCALE SCORE

510 —
500 —
490 —
480 —
470 —
460 —
450 —
440 —

I   6 MO.   12 MO.

INTERVIEW

Figure E-16: LAI/CSQ-4 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: LAI/CSQ Factor 4 represents the social withdrawal versus
social interaction dimension observed as Factor 4 of the LAI
and Factor 6 of the CSQ. A total of 16 salient variables
define this factor (11 from the LAI and 5 from the gregarious,
and socially active; while the low scoring individual would
tend to be withdrawn and alienated from the others.

Figure E-17: LAI/CSQ-5 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The final composite scale included in the STR Abstract File
(LAI/CSQ Factor 5) appears to represent a broad index of current
drinking problems which is essentially a combination of LAI
Factor 6 and CSQ Factor 2. High scores are indicative of the
presence of alcohol/drinking problems, while low scores repre-
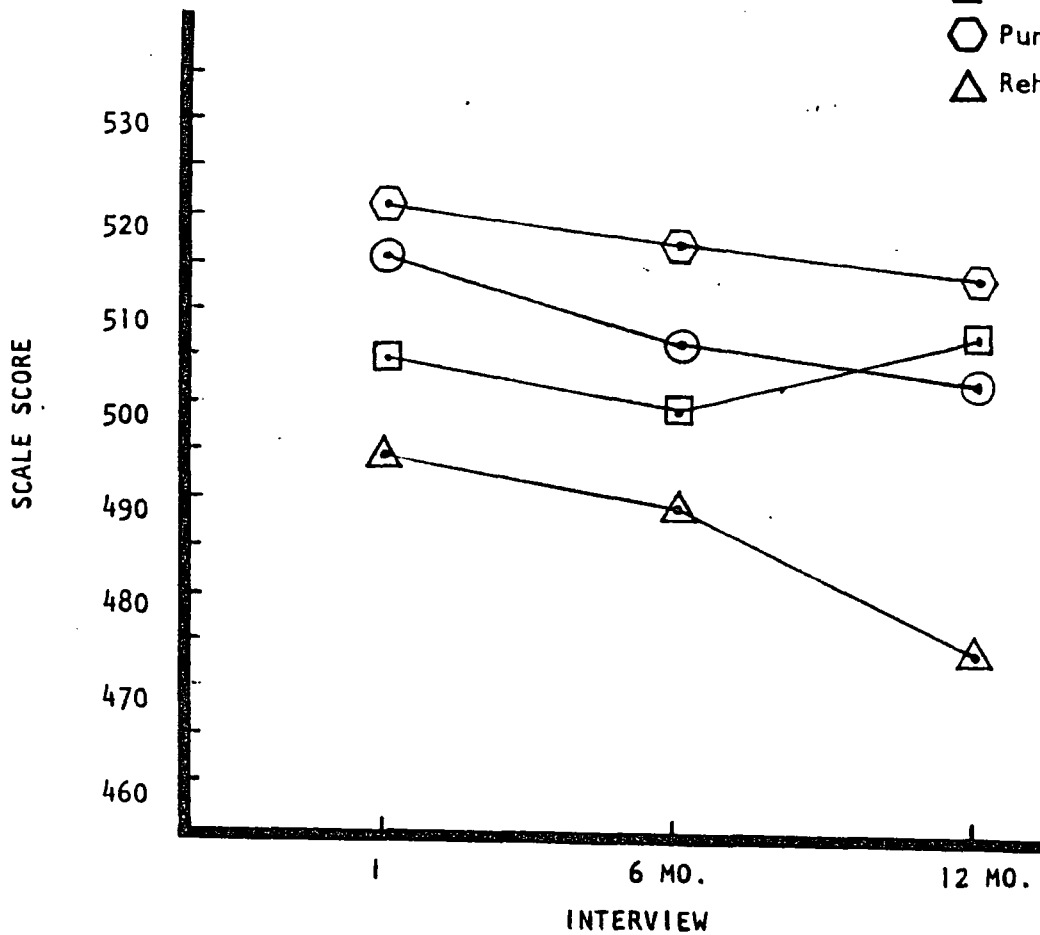sent the converse condition.
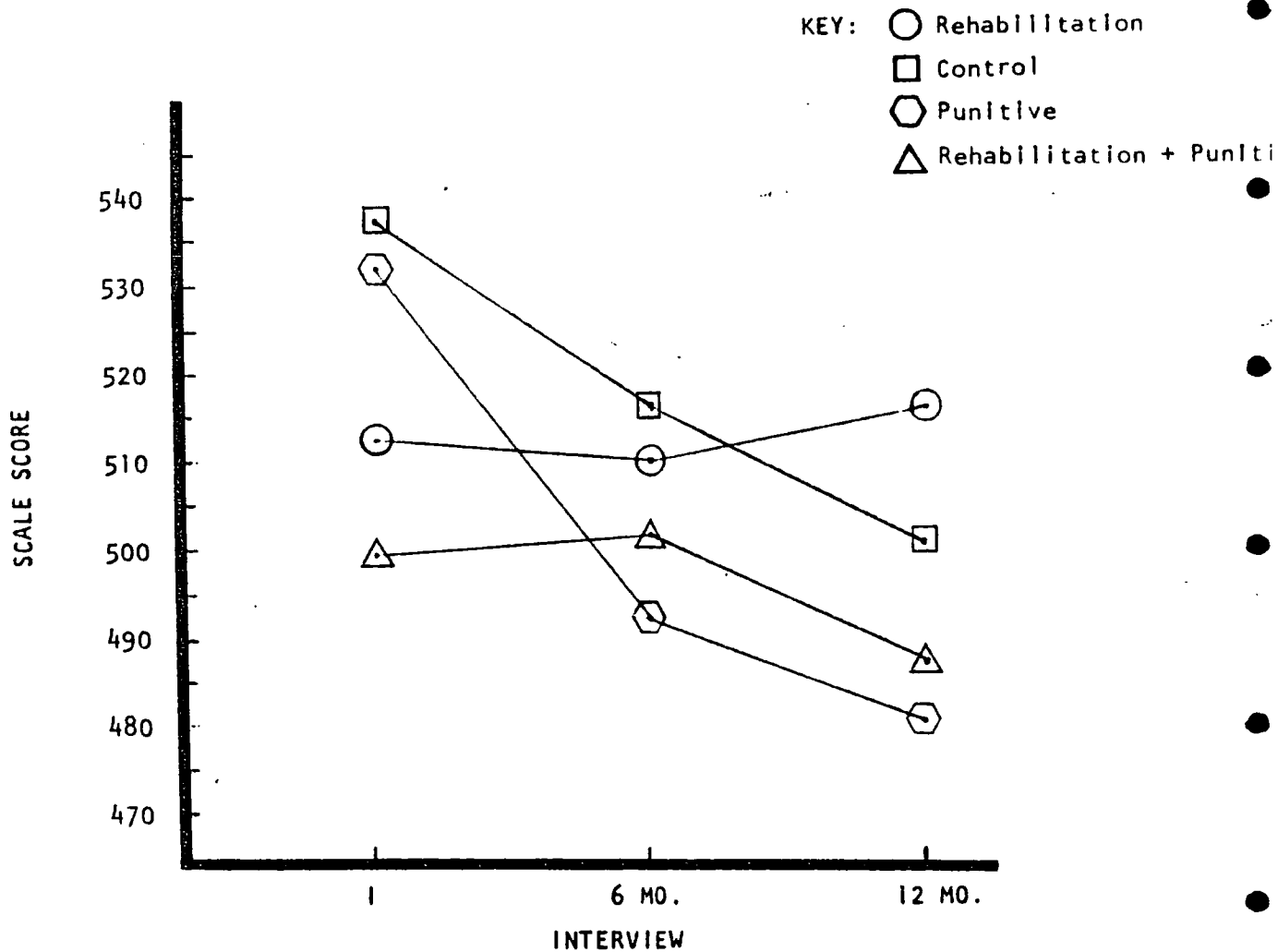
Figure E-18: PAS-1 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: PAS Factor 1 is defined by 15 salient variables which appear
to reflect strange, eccentric, or anomalous thoughts and
behavior. A high score on this scale would appear to represent
the presence of the type of bizarre thought patterns character-
istic of psychotic thought processes. Low scores, conversely,
indicate the absence of these expressions of anomalous thought
patterns.
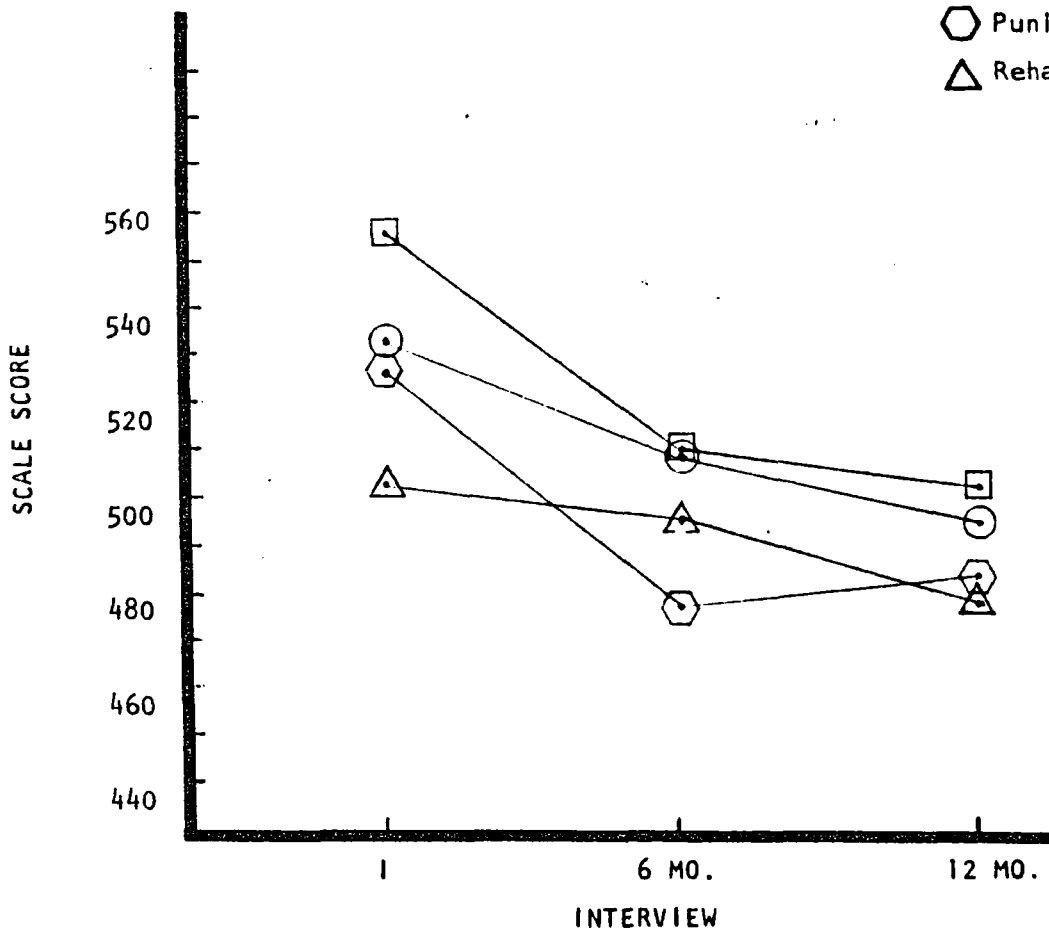
Figure E-19: PAS-2 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: PAS Factor 2 is also defined by 15 salient variables. Variables
                defining this scale indicate expressions of anxiety, depression
                and tension. A person scoreing high on this scale would exhibit
                a greater number of anxiety/depression symptoms than a low
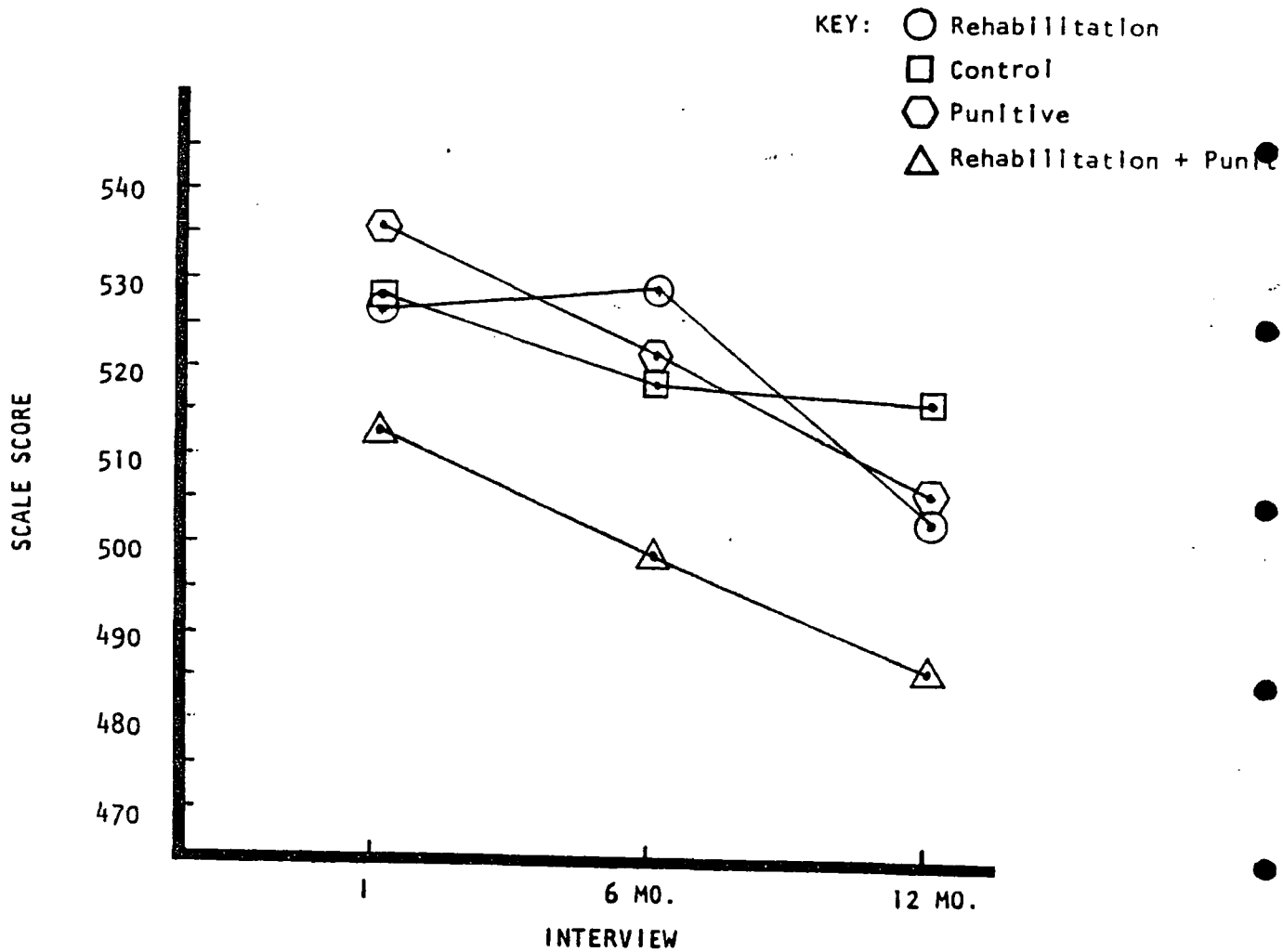   scoring individual.
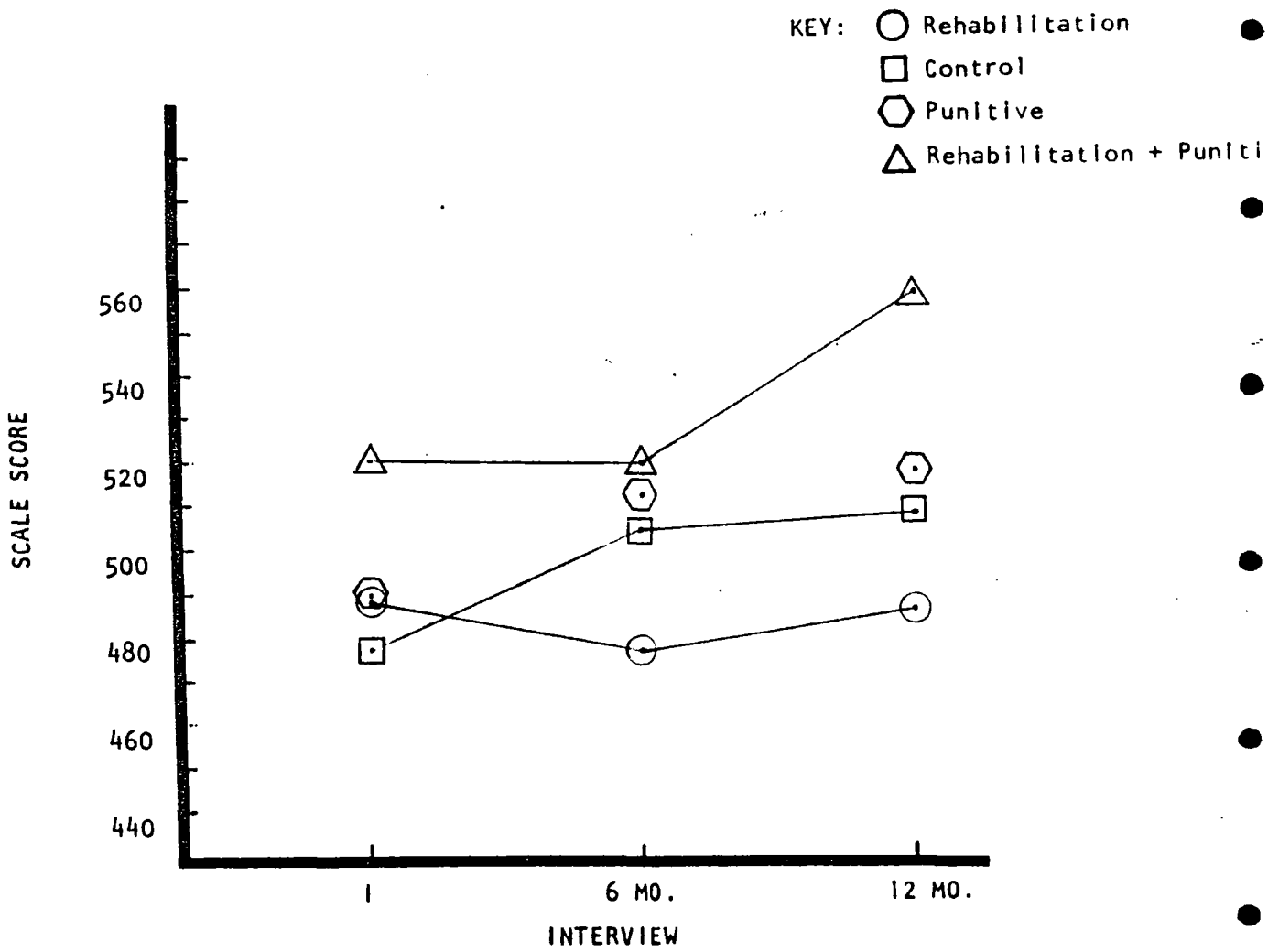
Figure E-20:PAS-3 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Eleven variables, which permit expressions of the clients'
perception of the integrity of others, define PAS Factor 3.
Persons with high scores on this scale tend to not credit others
with ill intent and do not regard the behavior of others as
being selfishly motivated. Low scores on this scale would be
obtained by individuals who tend to project negative attributes
and ill intent to others, and tend to be suspicious of the motive
of other people.

KEY: ◯ Rehabilitation
      ☐ Control
      ⬡ Punitive
      △ Rehabilitation + Punitive

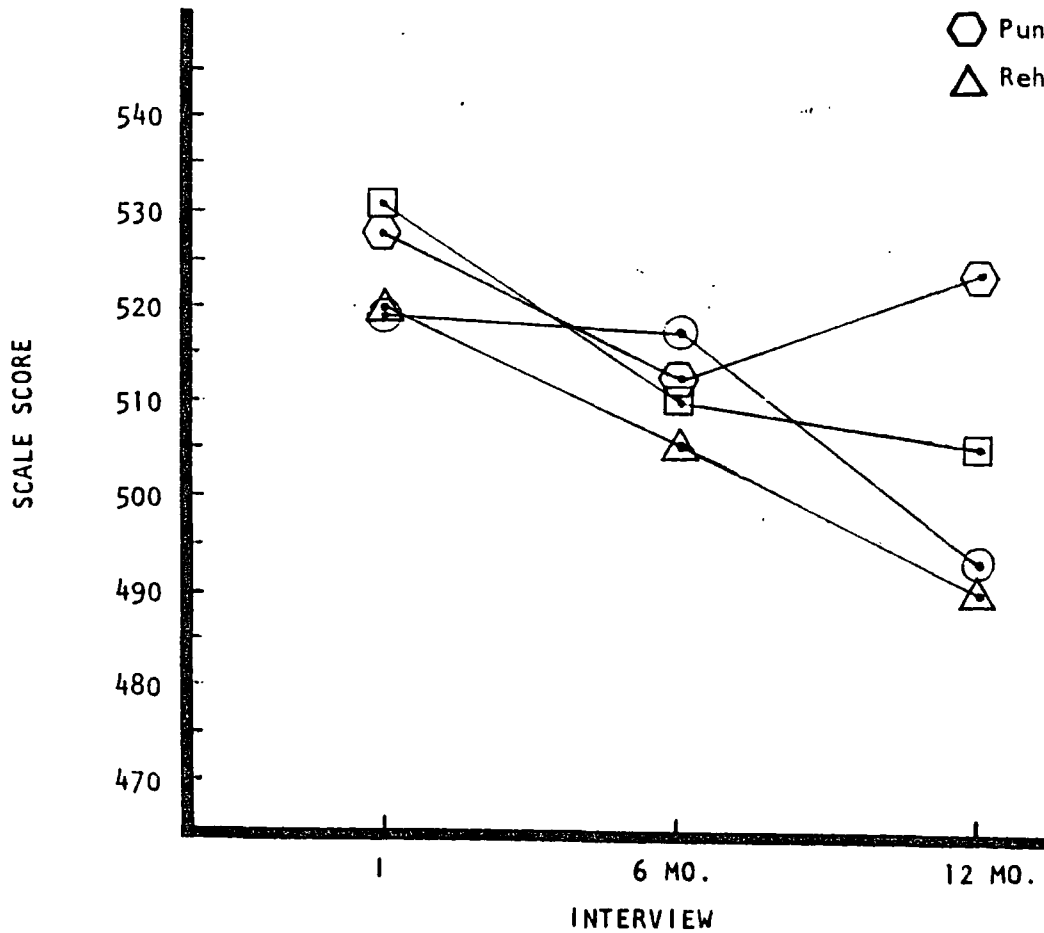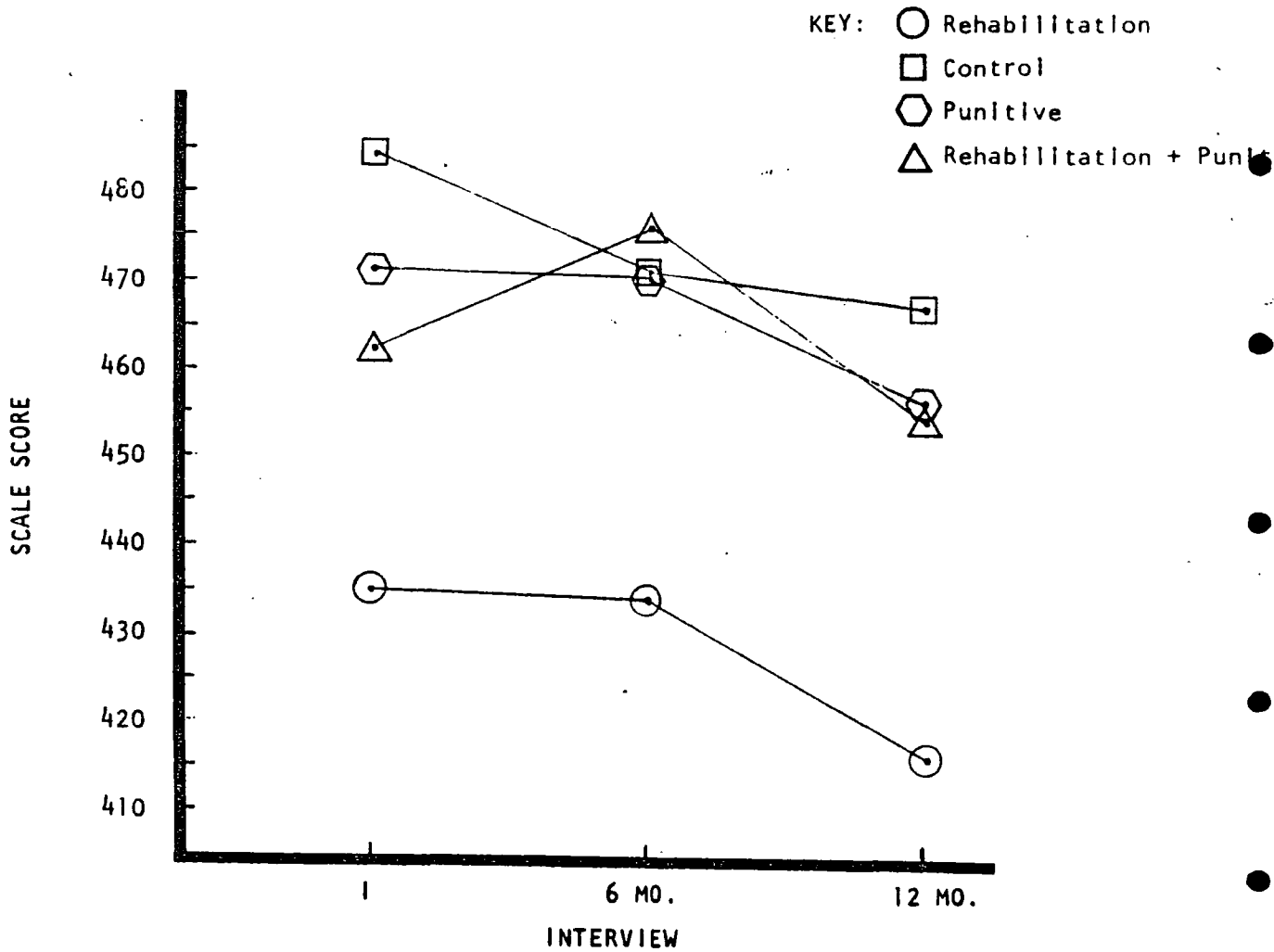Figure E-21: PAS-4 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 4 is defined by 10 salient variables. These 10
             variables are indicative of intellectual/aesthetic interests.
             An individual scoring high on this scale would be one with many
             intellectual and/or aesthetic interests. Persons scoring low
             on this scale would be characterized as having interests in
             areas other than intellectual and aesthetic. This scale
             has no valence in that classification of one type of interest
             as "better" than another must be a subjective judgment.

KEY: ⃝ Rehabilitation
     ☐ Control
     ⬡ Punitive
     △ Rehabilitation + Pun⬡
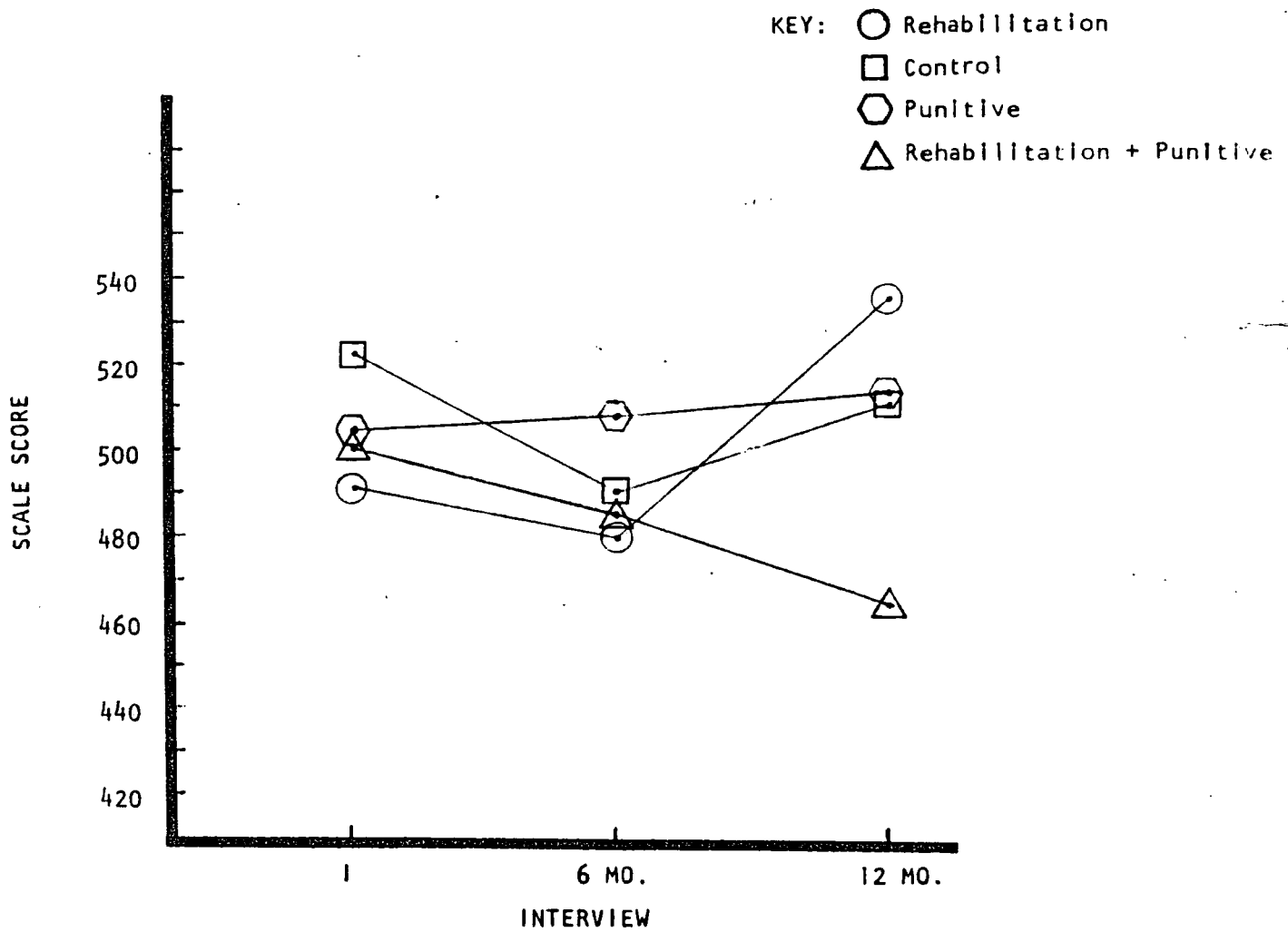
Figure E-22: PAS-5 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Eleven variables are used to define Scale 5. Each of these
variables is associated with a particular phobia. A high
score on this scale would indicate a person reporting multiple
phobias, where as a low score would indicate a person avowing
few or no phobias.

Figure E-23: PAS-6 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The concept of "self image" is reflected in the six salient
variables defining Scale 6. A high score on this scale
suggests an insecure, indecisive, self debasing individual.
A low score on this scale suggests a self confident, assured
individual with a positive self image.

Figure E-24: PAS-7 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 7 is defined by 6 variables. The construct identified
by these six salients can be described as moralism. A high
score on this factor is indicative of non-traditional, generally
liberal moral values. A low score is indicative of relatively
traditional, conservative moral values. As was the case for
Scale 4, this scale has no valence. The acceptability of one
type of moral values relative to another is a subjective
judgment.

KEY: ○ Rehabilitation
☐ Control
⬡ Punitive
△ Rehabilitation + Punitive

Figure E-25: PAS-8 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 8 is defined by 9 salient variables. These salients
indicate that Scale 8 is a measure of group attraction.
Although initial inspection of the salients could suggest that
some of the variables are indicative of concepts other than
group attraction, careful consideration will reveal that
salients not directly measuring group attraction measure
components of group attraction (e.g., trust of others, positive
feelings toward others, etc.). A high score on this scale is
indicative of group independence and negative feelings toward
others. A low score on this scale is indicative of group
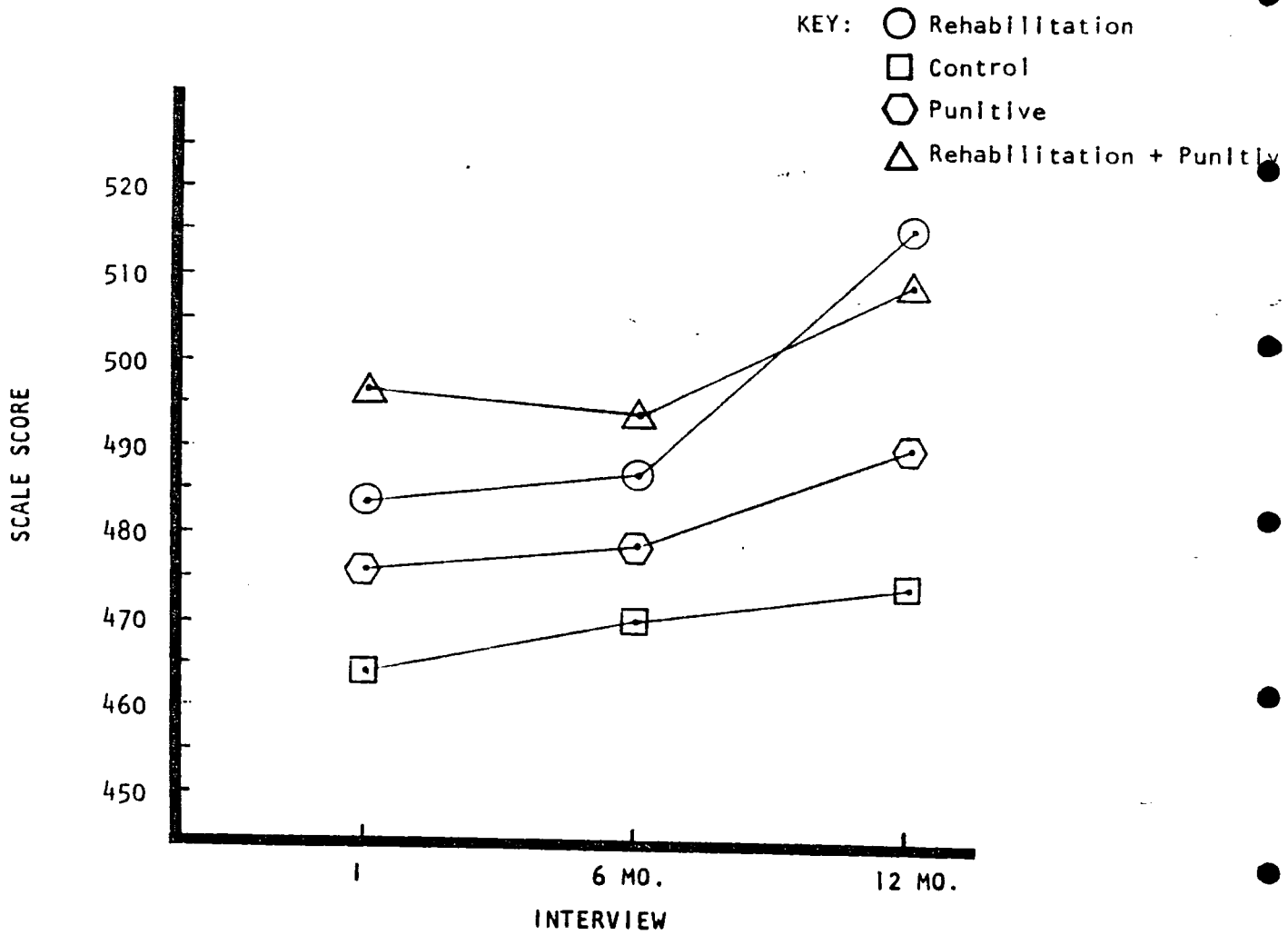attraction and positive feelings toward others.

Figure E-26: PAS-9 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Nine variables define Factor 9 as a measure of introversion/
extroversion. An outgoing, socially bold individual would
score __high__ on scale 9 and a shy, retiring individual would
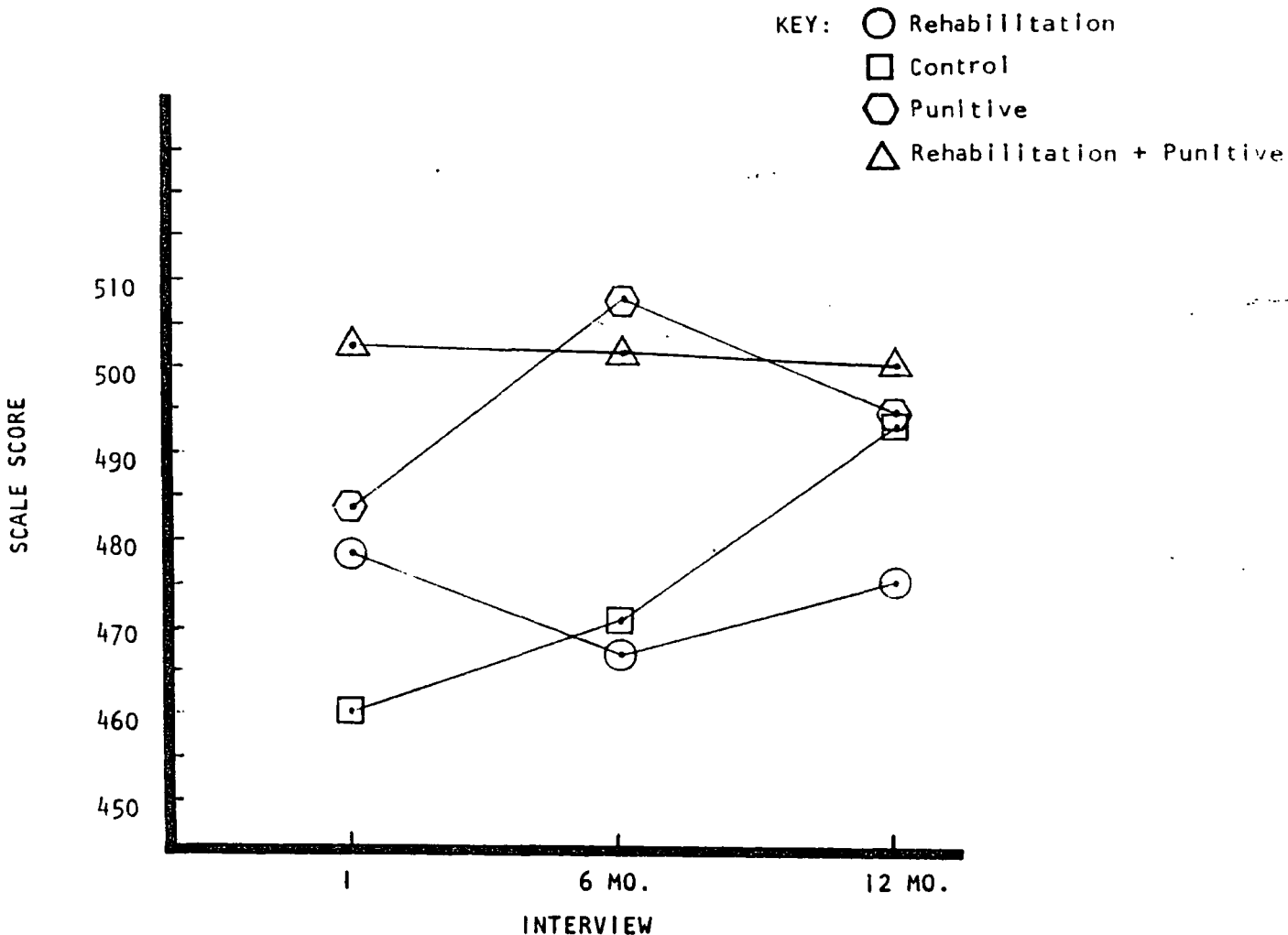score __low__ . Scale 9 is another without valence.

KEY:
○ Rehabilitation
□ Control
⬡ Punitive
△ Rehabilitation + Punitive

Figure E-27: PAS-10 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Paranoia is measured by Scale 10. There are 8 salient variables
which define Scale 10. A **high** score on this scale would character-
ize an unsuspicious person with a relatively normal frame of
reference toward others. A **low** score would characterize
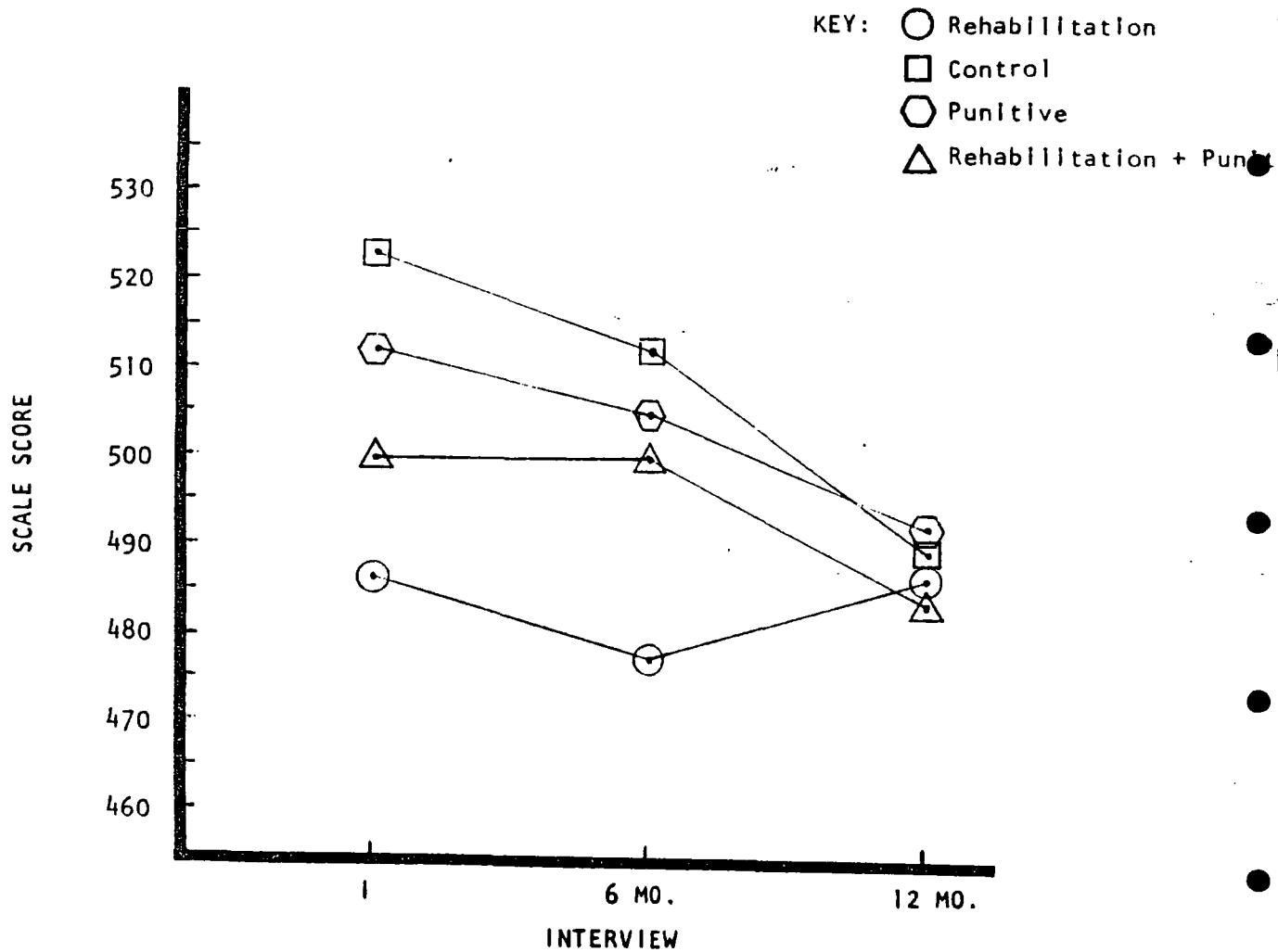a suspicious, paranoid individual.

Figure E-28: PAS-11 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: The 5 variables defining Factor 11 suggest that the scale is
a measure of emotional control. A _high_ score on this scale
Indicates a lack of emotional control and an easily angered
Individual. A _low_ score would indicate a high degree of
emotional control and an easy going nature.

KEY: ◯ Rehabilitation
      ☐ Control
      ⬡ Punitive
      △ Rehabilitation + Punitive

SCALE SCORE

550
540
530
520
510
500
490
480

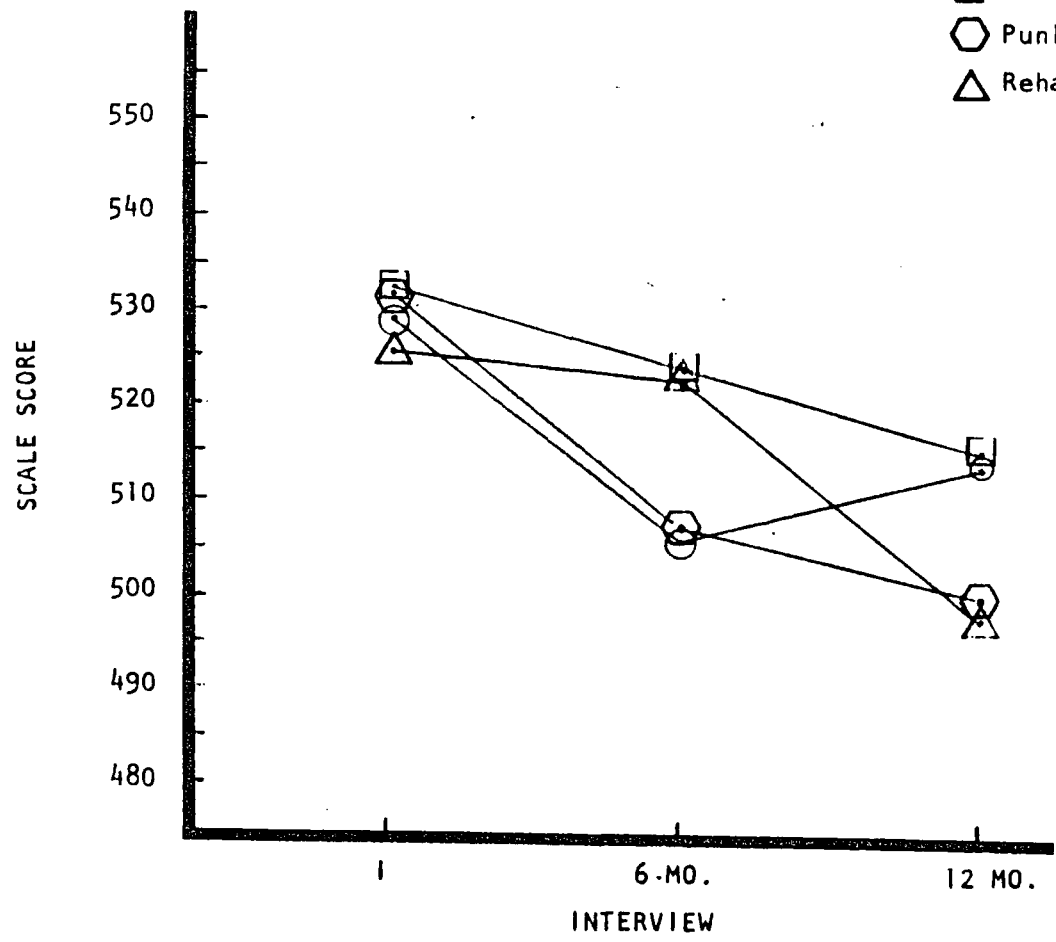I   6·MO.   12 MO.

INTERVIEW

Figure E-29: PAS-12 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Hypochondria is measured by 10 salient variables on Scale 12.
              A high score on this factor would characterize an individual
              reporting many somatic complaints. A low score on this factor
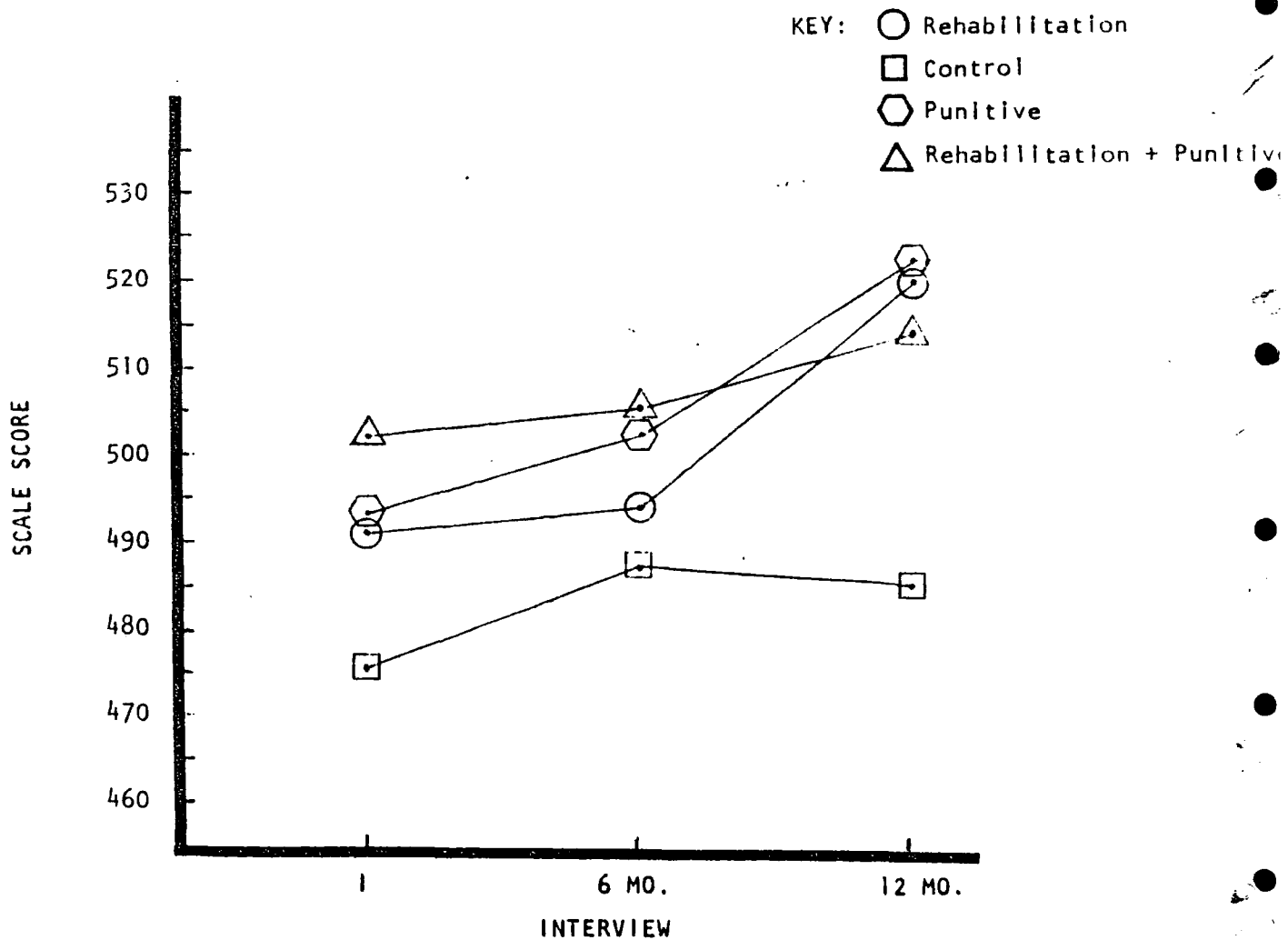   would characterize an individual who avowed good health.

Figure E-30: PAS-13 Initial, Six Month and Twelve Month
Factor Mean Scores by Group Assignment

DESCRIPTION: Factor 13 is somewhat difficult to define, but appears to measure
acting out behavior as a manifestation of anxiety. There are
five salient variables. A <u>high</u> score on this factor would suggest
a calm, relaxed person who did not act out aggressive behavior.
A <u>low</u> score on this scale would indicate an anxious person
who acted out aggressive behavior.