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ONE MODEL FOR THE EVALUATION OF ASAP REHABILITATION EFFORT

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16. Abstract

The relative effectiveness of ASAP modalities was inferred from recidivism defined as re-arrest for DWI after entry into a rehabilitation modality.

The first phase of this investigation employed a principal components analysis to examine the organizational characteristics of 44 alcohol safety schools and 32 group therapies employed by 27 ASAP sites. Alcohol safety schools were then grouped, through hierarchical clustering analysis, into organizationally homogeneous types of schools.

In the second phase of the study, recidivism rates for various drinker and school types were examined.

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SUMMARY

The purpose of this study was to develop a model for evaluating various ASAP treatment modalities for convicted drinking drivers on a program level. Participants in the modalities were classified at each project as problem or non-problem drinkers on the basis of historical records and diagnostic interviews.

The relative effectiveness of ASAP modalities was inferred from recidivism defined as re-arrest for DWI after entry into a rehabilitation modality.

The first phase of this investigation employed a principal components analysis to examine the organizational characteristics of 44 alcohol safety schools and 32 group therapies employed by 27 ASAP sites. Alcohol safety schools were then grouped, through hierarchical clustering analysis, into organizationally homogeneous types of schools.

In the second phase of the study, recidivism rates for various drinker and school types were examined.

Three school types were developed on the first root of the factor analysis. The results of the analyses employed in the second phase indicated there was no statistically significant differences between school types over time. Problem drinkers had a significantly higher cumulative recidivism rate than non-problem drinkers.

The hypothesis that school types, as they were defined in this study, had a differential effect in moderating recidivism rates could not be supported.

The results and methodology are discussed in the context of the need for evaluation models designed to aid the treatment community and the need for clearly defined categories of rehabilitation modalities, developed by systematic methods, which are subject to evaluation procedures.

INTRODUCTION

HISTORY OF ASAP

In 1966 a report was submitted to the Congress of the United States by the Secretary of Transportation (21). This report identified alcohol as the largest single factor contributing to fatal crashes in the United States. It indicated that 50 percent of all highway fatalities were alcohol-related and suggested that alcoholics and problem drinkers contributed to a large proportion of such fatalities.

In June of 1970, the U. S. Department of Transportation began the initial funding of what would become 35 demonstration alcohol countermeasure projects known as the Alcohol Safety Action Projects (ASAPs). The ultimate goal of each ASAP was to reduce alcohol-related fatal, injury and property damage crashes by reducing the number of persons driving vehicles while intoxicated (DWI).

One of the objectives of this federal program was to coordinate the activities of existing agencies at State and local levels such that each demonstration project would function as a comprehensive drinking driver control system. Such a system would involve several subsystem components, such as the legislature, police, courts, media, and alcohol treatment agencies. One of the major failures of such control systems in the past had been their lack of coordination among the various agencies involved (9). Individual agencies often failed to perceive their activities in relation to other agencies or in relation to a shared set of total system

objectives. For example, few courts possessed adequate systematic procedures to allow for the diagnosis and referral of problem drinkers to local treatment resources. Similary, few treatment centers had programs suitable for court-referred problem drinkers. Thus, the two agencies most closely related to the potential change of problem drinking behavior often operated in relative isolation of each other.

In addition to the integration of existing community resources, innovative procedures were developed to deal with drinking drivers. They included presentence investigations designed to identify problem drinkers, and short-term treatment alternatives to the sanctioning procedure.

The present study addresses itself to the ASAP rehabilitation subsystem. The goal of this subsystem, as originally set forth, is to modify the behavior of persons convicted of DWI in a manner that will reduce the probability of subsequent DWI behavior. Other goals and objectives are also present among the persons working within this area. Some of these include: (1) improving the life status of problem drinkers by reducing problem-related drinking behavior; (2) minimizing unwanted side-effects of large scale enforcement and adjudication effects upon persons who may be leading a marginal existence; (3) lending organization to the problem drinker diagnosis, referral, and treatment community; (4) improving the quality of treatment program evaluation and (5) communicating the results of such program evaluation efforts to the outside

world, by contributing to the quality and body of alcohol rehabilitation literature.

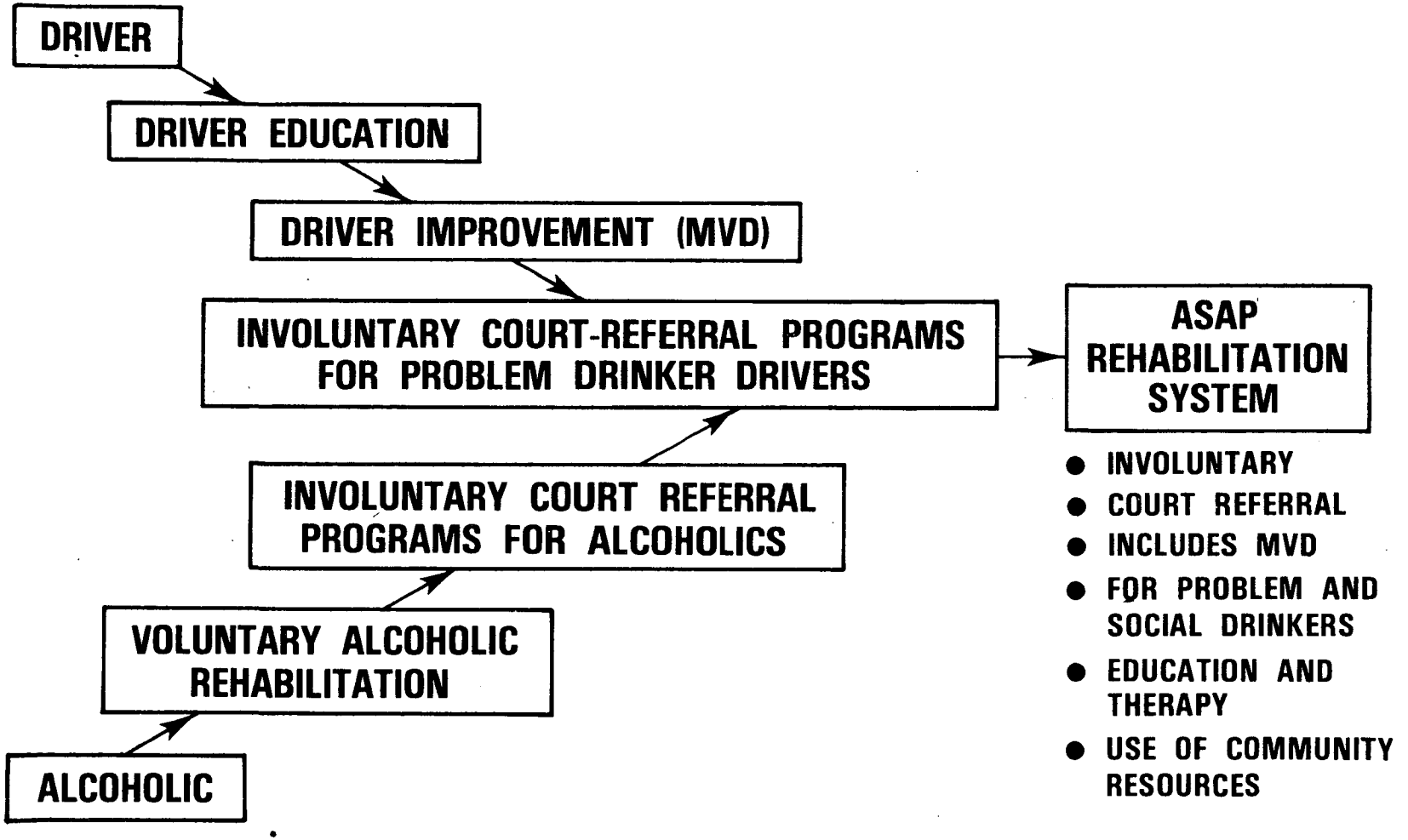
There have been many obstacles in the way of reaching any one of these goals. In some cases, organization and planning at various levels of the program have been lacking. In others, there has been a reluctance to systematically refer persons from the courts to the treatment community. In still others, a reluctance to collect necessary data was apparent. In most cases persons involved at the project and community level have refused to implement the control group design procedures which are necessary for an adequate evaluation of program effectiveness. Efforts in this area continue to improve, however, and the present study is merely a step in the evolution of that process.

A BACKGROUND OF RELATED REHABILITATION EFFORTS

Before continuing further into a description of the evaluation approach taken by the National Highway Traffic Safety Administration (NHTSA), it would be well to review the present status of literature in this area. For reasons apparent in the methods section of this paper such a review will concentrate on the effectiveness of rehabilitation programs in modifying the re-arrest frequency of persons exposed to them. Figure 1 describes two general areas of relevant background literature including the driver training area and the alcohol rehabilitation area.

Efforts in the more general Driver Improvement area have been less than spectacular. In a 1968 review of the major controlled studies

FIGURE 1


DRIVER
DRIVER EDUCATION
DRIVER IMPROVEMENT (MVD)
INVOLUNTARY COURT-REFERRAL PROGRAMS FOR PROBLEM DRINKER DRIVERS
ASAP REHABILITATION SYSTEM
INVOLUNTARY
COURT REFERRAL
INCLUDES MVD
FOR PROBLEM AND SOCIAL DRINKERS
EDUCATION AND THERAPY
USE OF COMMUNITY RESOURCES
INVOLUNTARY COURT REFERRAL PROGRAMS FOR ALCOHOLICS
VOLUNTARY ALCOHOLIC REHABILITATION
ALCOHOLIC

of driver improvement (11) it was indicated that while such programs could be expected to reduce subsequent violations among drivers exposed to them, their ability to reduce crashes among such drivers was not apparent. A more recent review (7) suggested that even if such programs were 100 percent effective in modifying the behaviors of known problem drivers, the resultant impact on total fatal crashes would be quite small.

In the general alcohol rehabilitation area, a similar situation exists. A recent review of the literature in this area (16) evaluated the relative effectiveness of various treatment alternatives which were potentially available to the ASAP system. The study concluded that due to a lack of substantive research findings, no single approach could be recommended, without reservation, as being superior in effectiveness. In fact, because of a lack of controlled studies, it was difficult to determine if any of the particular modalities had significant behavioral effects on the persons exposed to them. Of the modalities reviewed, however, fairly long term combinations of chemotherapy and group psychotherapy appeared to hold the most promise.

Two other studies are worth noting with regard to the evaluation of treatment modalities within the general alcohol rehabilitation area. The first study conducted in 1942 (23) concluded that, up to that time, there was no evidence that individual psychotherapy programs were of any value in treating alcoholism. The second study, conducted 25 years later (8) came to the same conclusion. While these studies did not prove that psychotherapy was completely

ineffective in the treatment of alcoholism, they did indicate that the implementation and/or evaluation of such programs had never been systematic or controlled enough to enable a determination of which kinds of clients would be expected to benefit from such programs and which would not.

Moving into the area of involuntary referral programs, there has been some recent evidence in the literature that, contrary to earlier beliefs, such programs can be successful in getting persons into treatment programs; keeping them in such programs; and motivating them to respond to treatment efforts (1,14,17). While there are also suggestions in the literature that the drinking behaviors of a substantial number of such persons could be changed, evidence here was much less convincing and even less so with regard to reducing subsequent alcohol-related arrests.

With regard to treatment programs for drinker-drivers, purely educational efforts were first documented with a program in Phoenix, Arizona. Evaluations of this program (4, 22) have suggested that it may be effective in reducing violations among those exposed to it (as compared with a control group) but no evidence concerning the program's crash reduction potential has been provided to date. In studies of more comprehensive drinker-driver treatment programs, a Colorado study (2) suggested that a treatment sanctioning alternative examined in that city resulted in no fewer subsequent alcohol-related driving offenses among convicted DWIs than did penal oriented sanctions. However, a long term evaluation (12)

of two recent California prototype programs (15,16,17) has suggested that comprehensive treatment programs may be effective in reducing subsequent alcohol-related violations and crashes among persons exposed to them. A more extensive review of research in this area can be found in a recent report on ASAP rehabilitation activities (22).

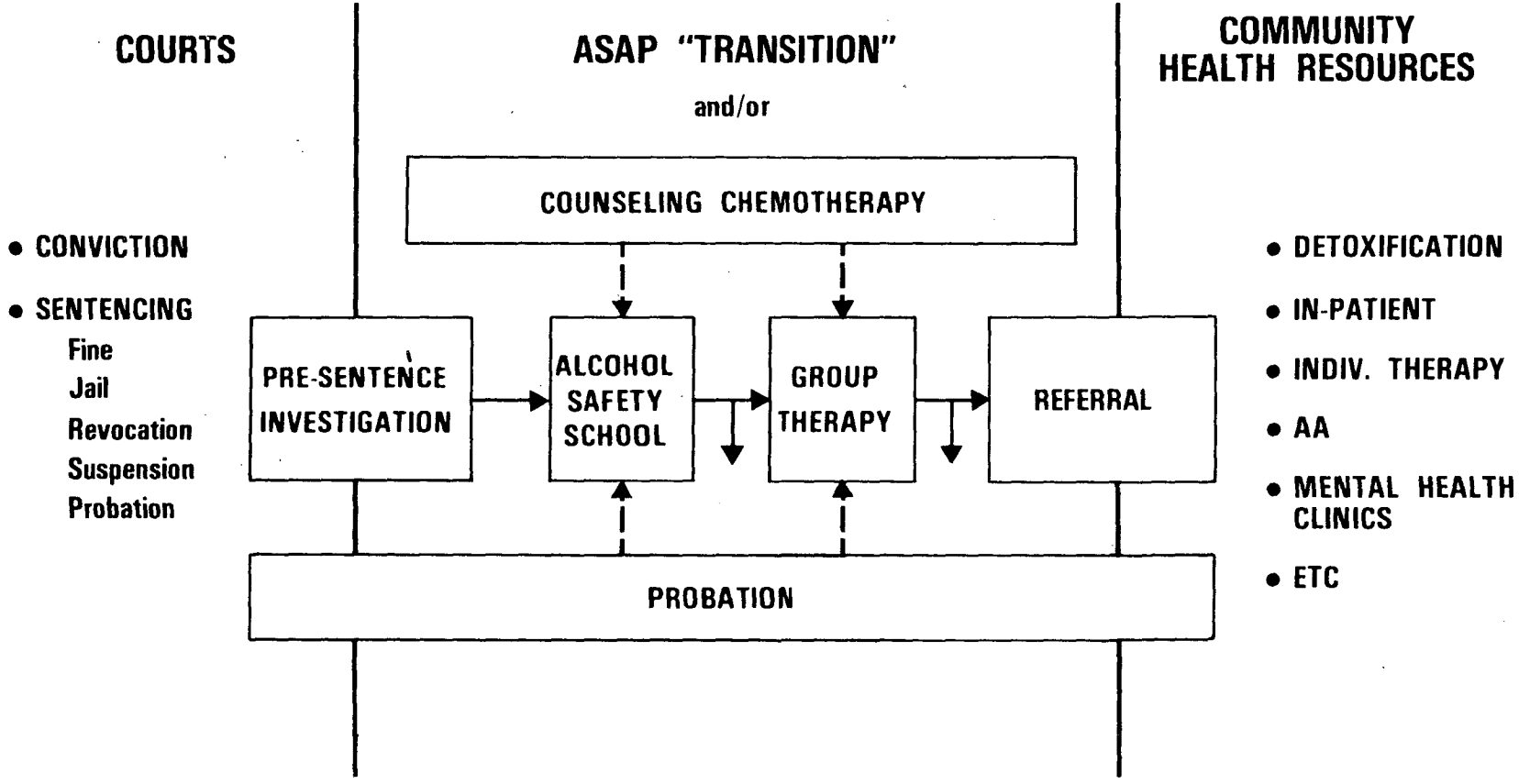
ASAP REHABILITATION EFFORTS

Development

During the development stages of the ASAP program, it was decided that ASAP funds would not be allocated for costly, long term therapy or medical care. Considering the number of persons which had to be processed from the courts and the amount of funding which was available, it was apparent that such programs could not be fully supported. As an alternative, the ASAPs were to provide a referral mechanism between the courts and the community treatment agencies, which were capable of supporting longer term treatment. In addition to soliciting the aid of the National Institute of Alcoholism and Alcohol Abuse (NIAAA) in supporting such community programs, the NHTSA endorsed a program of short-term, group-oriented rehabilitation modalities to aid individuals in the transition between the courts and the community resources. This transitional ASAP rehabilitation program, as envisioned, can be seen in Figure 2.

Unfortunately, the greater proportion of individuals who entered the ASAP treatment system were never exposed to long term treatment programs. For such persons, the short term educational (and to a lesser extent group therapy) modalities provided the only exposure

FIGURE 2


COURTS
ASAP "TRANSITION"
and/or
COMMUNITY HEALTH RESOURCES
COUNSELING CHEMOTHERAPY
• CONVICTION
• SENTENCING
Fine
Jail
Revocation
Suspension
Probation
PRE-SENTENCE INVESTIGATION
ALCOHOL SAFETY SCHOOL
GROUP THERAPY
REFERRAL
PROBATION
• DETOXIFICATION
• IN-PATIENT
• INDIV. THERAPY
• AA
• MENTAL HEALTH CLINICS
• ETC

to rehabilitation efforts. The present study specifically addresses the effectiveness of such short term efforts, especially with regard to the alcohol safety schools.

Program Level Evaluation

Earlier NHTSA efforts to evaluate ASAP rehabilitation programs were less than satisfactory (22). On the program level, a format was developed to enable reporting recidivism rates (re-arrests for an alcohol-related offense) for a variety of treatment modalities. This reporting format will subsequently be referred to as Table 15.

Little was gleaned from this effort in the first two years of its use. The primary reasons for this lack of results included: (1) inadequate definition of the term recidivism; (2) failure to segregate data for problem and non-problem drinkers; (3) inadequate specification of modality characteristics; (4) a lack of adequate control or comparison groups; and (5) differences in the quality of data collection and recording procedures at the various projects. As a result, it was possible only to derive an approximate 12 month recidivism rate from this data. This estimate indicated that about 6 percent of those persons entering the ASAP program could be expected to be re-arrested for an alcohol-related offense within the next 12 month period. While there were indications that this rate may have been lower for persons exposed to chemo-therapy (disulfram) programs, sufficient control was not present to make such a claim. (See Table I)

Table I

RECIDIVISM RATES FOR BASIC TREATMENT MODALITIES

	ALCOHOL SAFETY SCHOOL	INDIV. AND GROUP THERAPY	CHEMO-THERAPY	TOTAL REHAB.
TOTAL ENTERING BY 2ND QUARTER 1972	6,107	1,066	771	12,834
NO. RECIDIVATING WITHIN 4 QUARTERS (12 MONTHS)	336	61	29	815
APPROXIMATE 12 MONTH RECIDIVISM RATE	5.5%	5.7%	3.8%	6.4%

Project Level Evaluation

In order to evaluate the effectiveness of ASAP rehabilitation efforts at a project level, guidelines were set up for an analytic study to be conducted by each project in this area. This procedure will subsequently be referred to as the analytic study (#6) procedure. Although all modalities were of potential interest to evaluators, nearly all of the first year's analytic study effort was directed to an evaluation of the alcohol safety schools. This was probably justified, since approximately 72 percent of the treatment effort for 1972 was educationally oriented. As Table II indicates, these studies included several criterion measures of effectiveness. These measures included attitude and knowledge level change; violations; and (in one study) crash reductions.

The evidence with regard to increases in knowledge level as a result of exposure to the various schools was quite consistent. In the area of positive attitude changes, the data was less convincing and in the area of crash-reductions, evidence for such an effect was non-existent. At first glance, it appeared that many schools were being effective in reducing subsequent alcohol-related violations.

As Table II points out, six of the ten studies which examined arrest recidivism reported results favoring the educational program. On close inspection, however, only two studies

Table II

RESULTS OF ANALYTICAL STUDIES OF EFFECTIVENESS
OF ALCOHOL SAFETY SCHOOLS

	MEASURES OF EFFECTIVENESS			
	KNOWLEDGE INCREASE	ATTITUDE CHANGE	VIOLATION DECREASE	CRASH DECREASE
NUMBER OF STUDIES REPORTING	13	9	10*	1
% REPORTING POSITIVE RESULTS	100%	56%	60%	0%

*only 2 were well controlled studies.

used randomly assigned control groups. Of these studies, one showed significant favorable results for the school group and the other failed to find any significant differences between the school and control groups.

Three additional studies included control and experimental groups which were matched on at least one variable related to recidivism. Of these three studies only one reported significant results favoring the education group. In general, as the amount of control decreased, the number of studies reporting favorable results increased. This relationship has been noted with other programs (19).

As a result of the lack of adequate evaluation procedures in 1972, guidelines and format for both the program level (Table 15) and project level (analytic study #6) evaluation efforts were revised extensively. The present study reflects such revisions as well as an initial program level analysis conducted on the educational modalities. (A review of the most recent analytic study findings is also proceeding at this time and the results will be reported at a later date.)

VARIATIONS AMONG EDUCATIONAL PROGRAMS

The importance of selecting the appropriate treatment modalities for individuals with particular personality characteristics and drinking patterns has often been suggested. However, it has

already been pointed out that the type of offenders who benefit the most (or least) from various modality approaches is not known. This is also the case among the several educational approaches included within the general rubric of alcohol safety schools.

The particular organization and orientation of alcohol safety schools, and to a lesser extent group therapies, varies widely within and between the 27 ASAP sites included in this study. Differences in alcohol safety schools are largely a function of the type of drinker for which the curriculum was originally designed. Schools designed for social drinkers tended to be didactic and oriented toward information transmission. Schools for problem drinkers tended to have more discussion and more social, emotional, and behavioral counseling than their social drinker counterparts. When ASAP's became operational, however, many courts referred offenders to schools regardless of the drinker type they were designed for. Occasionally, such referrals were made necessary by overloads in a particular modality.

PURPOSE OF THE STUDY

The purpose of the present study was twofold. First it was intended to develop a model for program level evaluation using reported arrest recidivism rates. Second it was intended to determine the effectiveness of various school types in the reduction of arrest recidivism. However, since few projects reported recidivism data for persons assigned to no-treatment control groups, the alternative

remaining was to compare the effectiveness of different school types. In this study the structural characteristics of ASAP education and group therapy modalities as they evolved in different communities, were first identified and described. The alcohol safety schools were then grouped into categories or types which were more homogeneous in terms of such organizational characteristics. Finally, differences in recidivism rates between drinker types and school types were examined.

METHODS

The tasks conducted in the present investigation and described in this section are as follows:

(1) Selection of a suitable criterion measure for evaluating treatment program effectiveness;

(2) Selection and modification of a criterion data collection procedure;

(3) Selection of a suitable method for calculating recidivism rates;

(4) Selection of a formula for transforming recidivism data into a form appropriate for data analysis;

(5) Specification of the differences between various drinker (client) types;

(6) Development of a device specifying the identifying various modality types;

(7) Selection of a procedure for discriminating between various modality (school) types; and

(8) Conducting appropriate statistical analyses of recidivism rates between:

   a) drinker types;

   b) school types; and

   c) interactions of drinker and school types.

SELECTION OF A CRITERION MEASURE

In order to be considered effective, the education and group therapy treatment modalities would be expected to decrease the frequency of driving while intoxicated for persons exposed to

them. Direct measures of such DWI behavior, however, would require constant surveillance of these individuals. For a variety of reasons, such surveillance was not considered feasible for the present study.

A number of indirect (or proxy) measures of driving behavior have been suggested. For example, fatal and injury crashes would be a good proxy measure since their reduction is the ultimate goal of ASAP. In addition, each occurrence of a fatal or serious injury crash is visible to authorities and thus likely to become a matter of public record. However, a major disadvantage of the use of crashes (particularly fatal crashes) is their rarity of occurrence. Not only are fatal crashes relatively rare events (in a statistical sense), alcohol-related fatal crashes are even twice as infrequent[1] and those fatal crashes involving a person with a previous conviction for DWI are approximately 25 times as rare[2]. From the target group side of the picture, it has been estimated that for every convicted DWI who becomes involved in a subsequent fatal crash approximately 600 do not.[3] Thus, it is apparent that unless

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[1] It is estimated that approximately 1/2 of all fatalities result from an alcohol related crash.

[2] Data from an NHTSA supported study (5) suggested that only about 4 percent of the fatally injured drivers sampled had a previous DWI conviction.

[3] Estimates derived from a present in-house NHTSA effort to develop models for target group involvement in fatal crashes using a variety of data sources.

data were collected on a massive number of treated DWI clients, it would be difficult to accumulate a sufficient number of fatal crash observations to conduct statistical tests.

Another proxy measure of effectivness is arrest recidivism. In the present context, recidivism is defined as a re-arrest for an alcohol-related offense following entry into an assigned treatment modality. From a frequency point of view, this measure is certainly less desirable than is the direct surveillance of DWI behavior since it has been estimated that the probability of an intoxicated driver actually being arrested for DWI (much less convicted) is between 1/1000 and 1/2000 (3). On the other hand, such re-arrests are much more frequent among convicted DWI's than are subsequent fatal crashes. In fact they are probably more than 36 times as frequent.[1] Arrest recidivism was the criterion measure chosen for the present study.

Another potential measure of treatment effectiveness is the subjective report of life changes. Here the assumption is made that reports of decreasing alcohol-related problems (of which a DWI conviction is only a small part) signify a decrease in problem drinking behavior (including DWI). The obvious advantage with such a criterion is that it would measure changes in a criterion

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[1] Figuring approximately 6 percent of DWI's are re-arrested for DWI within the following 12 months this would result in approximately 36 recidivist for every 600 DWIs as compared with 1 fatality for every 600 DWIs. (This is probably a conservative estimate.)

which is characteristic of 100 percent of the problem drinker DWI population since, by definition, all of them have drinking-related problems. This can be compared to the approximate 12 percent of problem drinker DWI's who are re-arrested for an alcohol-related offense in a subsequent 12 month period. Furthermore, with life change criteria, an assessment can be made of the social benefits outside the driving sphere which may be derived from effective treatment programs. Life change measures, however, were not available for the present study.

DATA SOURCES

The data sources for this study were 27 Alcohol Safety Action Projects (ASAPs) which were in operation during calendar year 1973.

CRITERION DATA COLLECTION PROCEDURE

The revised standard reporting form (Evaluation Table 15) and the instructions for its use appear in Appendix A. As in prior years, the 27 ASAP projects included in this study used Table 15 to report the number of persons entering each treatment modality for each quarter the project was in operation. They also reported the number of each quarter's entries which were re-arrested (recidivated) in subsequent quarters.

The primary changes from the 1972 to the 1973 reporting procedure included:

(1) Recidivism was formally defined as a re-arrest for an alcohol-related driving offense following entry into a treatment modality;

(2) A separate recidivism table was completed for diagnosed problem drinkers; non-problem drinkers; and unidentified drinkers; and

(3) For the first year following entry into treatment, recidivism was reported in one rather than two quarter intervals.

The last reporting quarter for the data in this study ended December 31, 1973. For the majority of ASAP sites which first began operation in quarter one of 1972, referrals had a maximum of eight quarters of exposure time to re-arrest.

CALCULATION OF RECIDIVISM RATES

There are a variety of ways to calculate recidivism rates, all of which include some advantages and some disadvantages. In the present study it was decided to use a method whereby recidivism rates would be estimated for each quarter of exposure following entry into a treatment modality. All treatment entries were used regardless of whether or not they completed the program; dropped out of their own accord; or dropped out because of a re-arrest for DWI. Although Table 15 called for the separation of these groups, in reality it proved to be difficult task. The recidivism rate estimate for each quarter of exposure was derived by dividing the total number of persons re-arrested during that quarter of exposure by the total number of persons exposed for that length of time.

$$\text{EXAMPLE: Quarterly Recidivism Rate} = \frac{\text{Number re-arrested in that quarter following entry}}{\text{Number exposed for that many quarters}}$$

Table III illustrates this procedure. Individuals entered treatment at different times throughout the year. Entries in latter quarters do not have as long an exposure period as those entering in earlier quarters. Thus, latter quarter treatment entries can only be used in the estimation of shorter term (e.g., 1st quarter) recidivism rates and the rate estimates for various exposure quarters are based on a different sample sizes.

After calculating quarterly recidivism rates in the manner described these quarterly rates were then summed to provide cumulative quarterly rates.

Example:

Cumulative two-quarter Recidivism rate	=	Rate for first quarter of exposure + rate for second quarter of exposure

Each quarterly rate represents the best estimate of the performance of all individuals at that point in time following entry into treatment. Shorter term exposure rates (e.g., Q_1 or Q_2) should be more stable than longer term estimates (e.g., Q_4 or Q_6) since they are based on a larger sample of persons exposed for that period of time.

TRANSFORMATION OF RECIDIVISM DATA

For the purpose of statistical analyses, cumulative recidivism rates (CR) were transfored by the formula:

$$CRT = 2 \text{ arc sin } \sqrt{CR}$$

Table III

PROCEDURE FOR ESTIMATING QUARTERLY AND CUMULATIVE RECIDIVISM RATES:

TABLE 15 EXAMPLE

ROW NO.	EVALUATION MEASURE	MODALITY OR 1
1	NUMBER ENTERING IN Q1	250
2	Recidivists in Q1	22
3	Recidivists in Q2	11
4	Recidivists in Q3	11
5	Recidivists in Q4	11
10	NUMBER ENTERING IN Q2	229
11	Recidivists in Q2	21
12	Recidivists in Q3	11
13	Recidivists in Q4	5

RECIDIVISM ESTIMATE FOR FIRST EXPOSURE QUARTER

$$\frac{\text{NO. RE-ARRESTED DURING FIRST QUARTER OF EXPOSURE}}{\text{NO. EXPOSED FOR ONE QUARTER}} = \frac{22 + 21}{= 250 + 229} = .090$$

RECIDIVISM ESTIMATE FOR SECOND EXPOSURE QUARTER

$$\frac{\text{NO. RE-ARRESTED DURING SECOND QUARTER OF EXPOSURE}}{\text{NO. EXPOSED FOR TWO QUARTERS}} = \frac{11 + 11}{= 250 + 229} = .046$$

TWO QUARTER CUMULATIVE RECIDIVISM RATE = .090 + .046 = .136

Thus cumulative recidivism rates (CR) were transformed into arc sin cumulative recidivism rates (CRT). The arc sin transformation was selected since it: (1) reduces heterogeneity of variance between comparison groups and (2) provides for a more normal distribution of recidivism rates.

SOURCES OF INTERPROJECT VARIANCE IN REPORTING RECIDIVISM DATA

Several sources of interproject variance in reporting procedure exist. Some of these include: (1) the sophistication of Department of Motor Vehicle (DMV) record systems; (2) the amount of transience in the various project area populations; (3) differences in laws and sanctions; particularly with regard to license suspension; and (4) differences in arrest intensity. While all of these factors (and others) could affect the quality of the data collected, one of the more important variables, arrest intensity, was examined and found not to be significantly related to recidivism rates. Most of the factors are difficult to measure at the program level and were not accounted for in this study.

There were other factors, of course, capable of contaminating the data. For example, with regard to classification by modality type, a participant in any modality can volunteer at any time for additional treatment. It is virtually impossible for the project evaluator to have a knowledge of all such events. With regard to court-referred rehabilitation, however, some of such variability was removed by including for recidivism analysis only those clients referred solely to the alcohol safety schools. This would have

been more difficult to do with any other modality including the group therapies and is one reason why recidivism analyses were conducted only on alcohol safety schools in this study.

Finally, most participants in an alcohol safety school attended under some form of judicial incentive or coercion. It is difficult to scale such incentives and/or restraints on a meaningful continium of intensity or even to develop a taxonomy of conditions of participation which is consistent across projects. Thus, such conditions as well as others, (like prior arrests) were not considered in this program level analysis of recidivism data.

DIAGNOSIS OF DRINKER TYPES

As indicated previously, Evaluation , Table 15 instructions require the reporting of separate recidivism data for each of three drinker types. The ASAP diagnostic procedure included guideline criteria for identifying a problem drinker. These criteria included:

(1) Diagnosis as an alcoholic by a competent medical or treatment facility, or

(2) Self admission of alcoholism or problem drinking, or

(3) Two or more of the following:

a) A BAC of .15 percent or more at the time of arrest,

b) A record of one or more prior alcohol-related arrests,

c) A record of previous alcohol-related contacts with medical, social, or community agencies,

d) Reports of maritial, employment, or social problems related to alcohol,

e) Diagnosis of problem drinker on the basis of an approved structured written diagnostic interview instrument.

Individuals who were diagnosed but were not classified as a problem drinkers were considered non-problem drinkers. A third category of unidentified drinkers was available to indicate people for which no diagnosis was made or for which there was insufficient information to make a classification. In practice, however, several ASAP's used the unidentified category for people with drinking problems of intermediate severity. For this reason, recidivism data for unidentified drinkers were not used in this study.

SPECIFYING THE CHARACTERISTICS OF MODALITY TYPES

Specification of the characteristics of ASAP educational and group therapy modalities was accomplished using the questionnaire form shown in Appendix B. This device was designed to measure the observable, structural characteristics of these modalities such as: (1) the proportion of time spent in didactic approaches; (2) the percentage of time spent in discussion among participants themselves; (3) number of clients per session; etc. The information was collected from a series of on-site interviews with one or more persons familiar with the modality. In some cases, several instructors or therapists completed a questionnaire about a particularly modality. In these cases, the responses were averaged. Most often, however, a single expert such as the ASAP rehabilitation coordinator completed the forms.

The qualifications and talents of the modality leader or instructor are likely to be the most important variables relating to modality effectiveness. Unfortunately, the specific characteristics which relate to effectiveness for various client types have not yet been accurately specified and, for a variety of reasons, would not be easy to assess. Describing a modality in terms of leader characteristics is further complicated by the relatively high turnover rate of instructors and therapists. For these reasons, leader qualifications were not represented in the modality profiles developed.

The final profile variables which did result from this effort included the following:

(1) Information transmission (proportion of time spent in this activity)

(2) Participant-leader interaction (proportion of time spent in this activity)

(3) Participant-participant interaction (proportion of time spent in this activity)

(4) Total client exposure time (number of minutes or hours exposed)

(5) Average session size (number of clients per session)

Complete profile variables were obtained for 76 rehabilitation modalities at the 27 ASAP sites. For labeling purposes, these modalities were divided a priori into 44 alcohol safety schools and 32 group therapies. The criteria for labeling the modalities

were as follows:

(1) If a modality was labeled as an alcohol safety school (or educational program) by the project, it remained as such.

(2) If a modality was labeled as a group therapy by the project and its profile did not indicate that 60 percent or more of its total exposure time was spent in information transmission activities, it remained as such. Otherwise it was relabeled as an alcohol safety school.

DISCRIMINATING BETWEEN VARIOUS MODALITY TYPES

Principal Components Analysis

In order to derive some meaningful dimension(s) on which the various modality types could be separated or clustered, the five profile variable scores for each of the 76 rehabilitation modalities were subjected to a principal components factor analysis. For each dimension or factor root derived which accounted for an acceptable proportion of the variance in the profile variable scores, factor scores were obtained for each of the 76 modalities. A factor score for a particular modality was calculated by multiplying each standardized variable score for that modality (plus a constant of five) by its respective standardized factor weight, then summing all five weighted profile variables.

EXAMPLE: $(V_1 + 5)\ W_1 + (V_2 + 5)W_2 \ . \ . \ . + (V_5 + 5)W_5$

where Vi = standardized profile variable score

Wi = standardized profile variable factor weight

i = 1,5

A separate factor score was calculated for each treatment modality on each significant dimension derived by the factor analysis. This factor score can be interpreted as the position of that modality on the dimension from which the factor weights were derived. The meaning of such a dimension, of course, is inferred upon inspection of the factor loadings for the variables in the profile.

Hierarchical Cluster Analysis

Once factor scores were obtained for the alcohol safety schools, it was desirable to identify natural clusters, or groups, of schools which had similar scores on each root (or dimension). It was expected that school types (or groups) thus derived would provide a basis for examining the effects of different rehabilitation approaches in altering the recidivism patterns of different drinker types. (In the present study only the schools were groupd in this manner and examined with regard to statistical analyses of recidivism rates.)

A hierarchical clustering algorithm developed by Ward (26) was selected to perform this clustering task. An explanation of the nature of this procedure can be found in two brief references (23, 25). Basically, however, the procedure begins by grouping

schools with similar factor scores in a progressive basis which minimizes the error within any grouping. As the schools are combined into fewer, but larger groups, the within-group error increases.[1] The procedure ends when all schools have been classified into one of two groups. The researcher must decide, on the basis of within-group error, at which level of the heirarchy to select his groups. The decision rule used in selecting the school types in this study was to use the level with the fewest number of clusters where the next merging of schools would result in a substantial increase in error. The computer programs for both the principal components analysis and the cluster analysis can be found in Veldman (23).

ANALYSIS OF RECIDIVISM RATES FOR DRINKER TYPES

For each drinker type (i.e., problem and non-problem drinkers) cumulative quarterly recidivism rates were calculated and transformed using the arc sin transformation. Differences between these transformed quarterly profiles were then tested using a profile analysis (27). In this test a multivariate analysis of variance is performed on (p-1) successive differences in a profile of p variables (in this case p=5 quarterly differences). The primary

---

[1] In reality the procedure works from a symmetric, school by school, matrix in which each matrix element is the squared difference between its associated row and column factor scores, divided by the number of schools represented in each difference (e.g., in the first case two).

hypothesis tested by this procedure, which is of interest to this study is that the profiles are parallel.[1] This test is analagous to a univariate test of interaction. In the present situation this test addresses the question of whether the shape of the cumulative recidivism curves is different for each drinker type.

Four additional one-way analyses of variance were performed on the cumulative rates at each quarter interval of exposure. These analyses were included for two reasons:

(1) Since the profiles were cumulative in nature the profile analysis of between group differences (which would have examined cumulative scores) is not as interpretable as univariate test of differences at each quarter; and

(2) Recidivism rates at different quarter intervals were based on different sample sizes (i.e., shorter exposure rates were based on larger sample sizes than longer exposure rates). Only schools which had complete data for all exposure periods could be included in the profile analysis. Univariate

---

[1] Two other tests are also made using this procedure, one is a test of no slope and the other is a test of between group differences in the sum of the p variables. However, since the data used in the profiles were cumulative in nature, these tests were not considered relevant.

tests however could be performed on the total number of schools which had data for a particular quarter of exposure regardless of whether they had complete data for all quarters. Thus, analyses could be conducted on larger, more stable samples, using the univariate test.

All analyses of variance were performed according to the general linear model with a step-down solution through an a-priori ordering of effects, Overall and Spiegel (13). The alpha level was set at .05 for all analyses. The strength of the relationship between recidivism rates and taxonomic factors was estaimated by the formula:

$$\text{Eta squared} = \frac{\text{SS Hypothesis - SS Error}}{\text{SS Total + SS Error}}$$

Eta squared can be interepreted as the percentage of variance in recidivism rates than can be attributed to the independent variable.

ANALYSIS OF RECIDIVISM RATES FOR SCHOOL TYPES

For each drinker type, a profile analysis was performed on the school types determined by the clustering analysis. In addition, five two-way analyses of variance, (i.e., school type by drinker type) were performed on the cumulative recidivism rate at each quarter in the profile. Separate statistical analyses were performed

on school types for each factor root.[1] The school type effect was always tested first in the general linear model. Every alcohol safety school was considered as a separate school for each drinker type attending it.

---

[1] While school types were derived on the second root and recidivism analyses were conducted on these root 2 school types, the results of such tests are not reported in this paper due space constraints and due to problems in interpreting the meaning of root 2.

RESULTS

DISCRIMINATING BETWEEN VARIOUS MODALITY TYPES

Principal Components Factor Analyses

The results of the principal components analysis conducted on the five profile scores for each of the 76 treatment modalities are shown in Table IV. Two principal components or factor roots were identified which accounted for 49.9 percent and 25.6 percent of variance respectively. These factor roots can be pictured as orthogonal dimensions on which the 76 modalities can be arrayed.

Figure 3 illustrates these two roots or dimensions graphically and suggests the characteristics of each, as derived from the factor weights shown in Table IV.

As can be seen, the first factor or dimension had high negative loadings for the information transmission and session size variables and high positive loadings for the participant-participant interaction and exposure time variables. Thus high scores for information transmission (i.e., much session time devoted to this activity) or for session size (i.e., large number of participants per class) would tend to place a modality on the left or negative side of this dimension as illustrated in Figure 3.

On the other hand, high scores for exposure time (i.e., program required much time to complete) or for participant-participant interaction (i.e., much time spent with clients interacting with each other as in encounter groups) would tend to place a modality

FIGURE 3

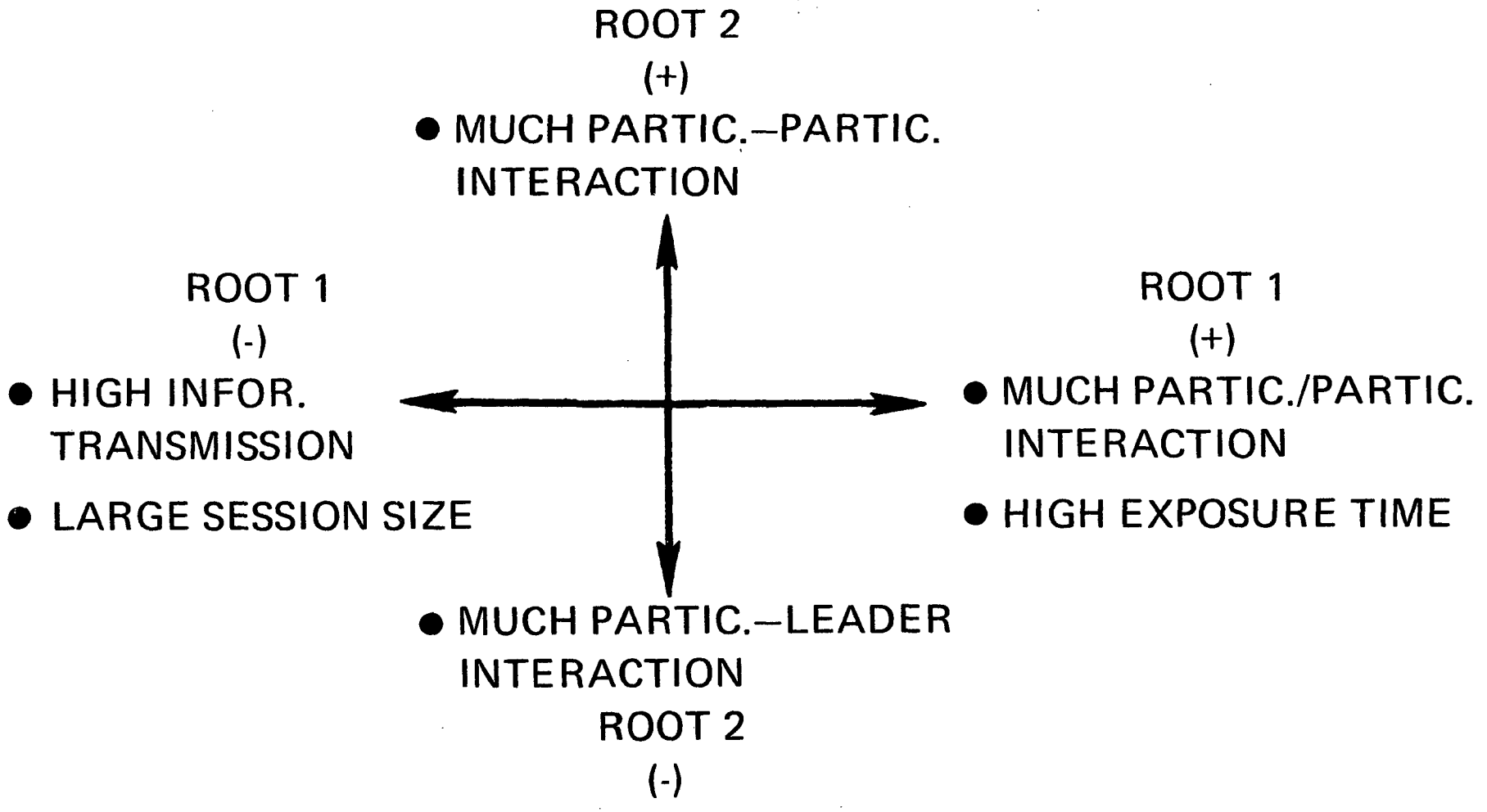

ROOT 2
(+)
● MUCH PARTIC.–PARTIC. INTERACTION
ROOT 1
(-)
● HIGH INFOR. TRANSMISSION
● LARGE SESSION SIZE
ROOT 1
(+)
● MUCH PARTIC./PARTIC. INTERACTION
● HIGH EXPOSURE TIME
● MUCH PARTIC.–LEADER INTERACTION
ROOT 2
(-)

Table IV

PRINCIPAL COMPONENTS FACTOR LOADINGS AND
STANDARDIZED FACTOR WEIGHTS

	Root 1		Root 2	
Variables	Loadings	Weights	Loadings	Weights
Information Transmission	-.8862	-.3546	.1070	.0836
Participant-Leader Interaction	.2483	.0993	.9231	.7208
Participant-Participant Interaction	.7788	.3116	-.5619	-.4388
Total Exposure Time	.7047	.2820	.2880	.2249
Average Session Size	-.7410	-.2965	-.1354	-.1057
Percent of Trace	49.98		25.61	

on the right or positive side of the first dimension. A high score for participant-leader interaction did not weigh heavily in placing a modality on either side of the dimension.

Any rehabilitation modality with a high negative factor score on root 1 would be placed on the negative side of this dimension and would be characterized by: (1) a large number of participants; (2) much time allocated to didactic educational activities (rather than counseling activities); (3) relatively short time intervals and; (4) little interaction among participants themselves. A modality with these characteristics would likely be a two session, lecture oriented alcohol safety school.

A modality with a high positive factor score on root 1 would be placed on the right side of that dimension and would involve: (1) relatively long exposure time or many sessions; (2) a small number of participants at each session; (3) little time spent in didactic educational activities; and (4) much time spent with participants interacting with each other. Modalities with such traits would be more therapeutic oriented.

Thus, the first root can be conceptualized as a dimension representing the educational vs therapy approaches taken by the various modalities. Since this root accounted for nearly twice as much variance as the second root and since the second root is somewhat more difficult to interpret, the remainder of this paper will be limited to the analysis of modalities situated on this first dimension.

The factor scores for each modality are listed in Appendix C. The first two letters of the modality code indicate the state in which the project is located. The last two letters identify the modality as an alcohol safety school (AS) or a group therapy (GT) according to the a priori classification criteria discussed in the methods section. Different numerals indicate unique modalities for each project within each general classification. In Figure 4 individual rehabilitation modalities are plotted according to their approximate position in factor space for root 1. A clear discrimination between alcohol safety schools and group therapies is evident on this root.

Hierarchical Cluster Analysis

A hierarchical cluster analysis was performed on the factor scores for the alcohol safety schools (n = 44). The results of this analysis are portrayed graphically in Figure 5. Here the linkage tree diagram and the associated error at each level of the hierarchy are shown in relation to the approximate positions of the various alcohol safety schools on Root 1. As is evident, the tree begins at the ten cluster level and shows the stepwise merging of similar schools. As the within cluster error increases, the homogeneity of the groups, in terms of the qualities represented in the factor scores, decreases.

Again, the decision rule used in selecting the school types was to use the level with the fewest clusters where the next merging of the schools would result in a substantial increase in error. As

FIGURE 4

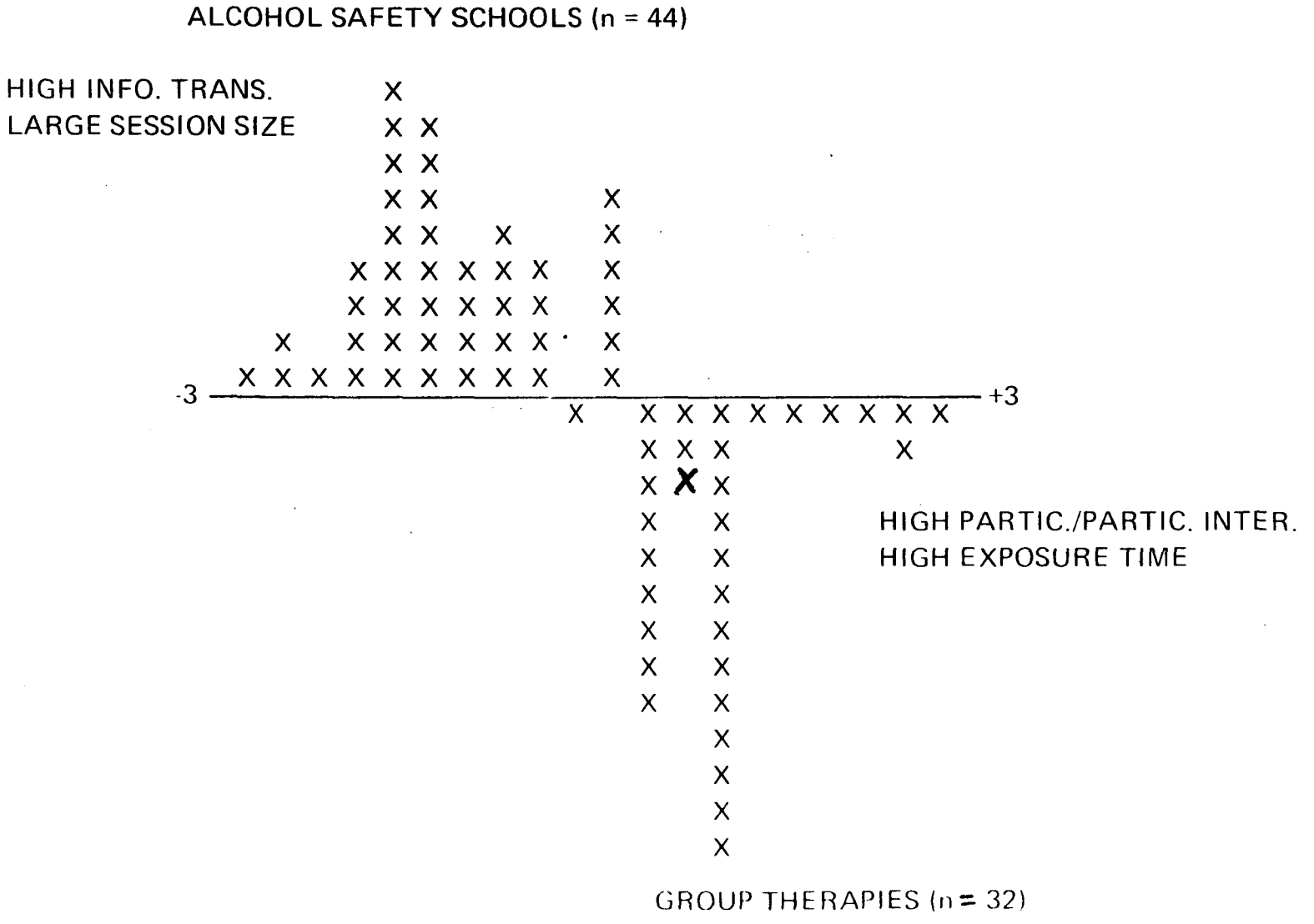
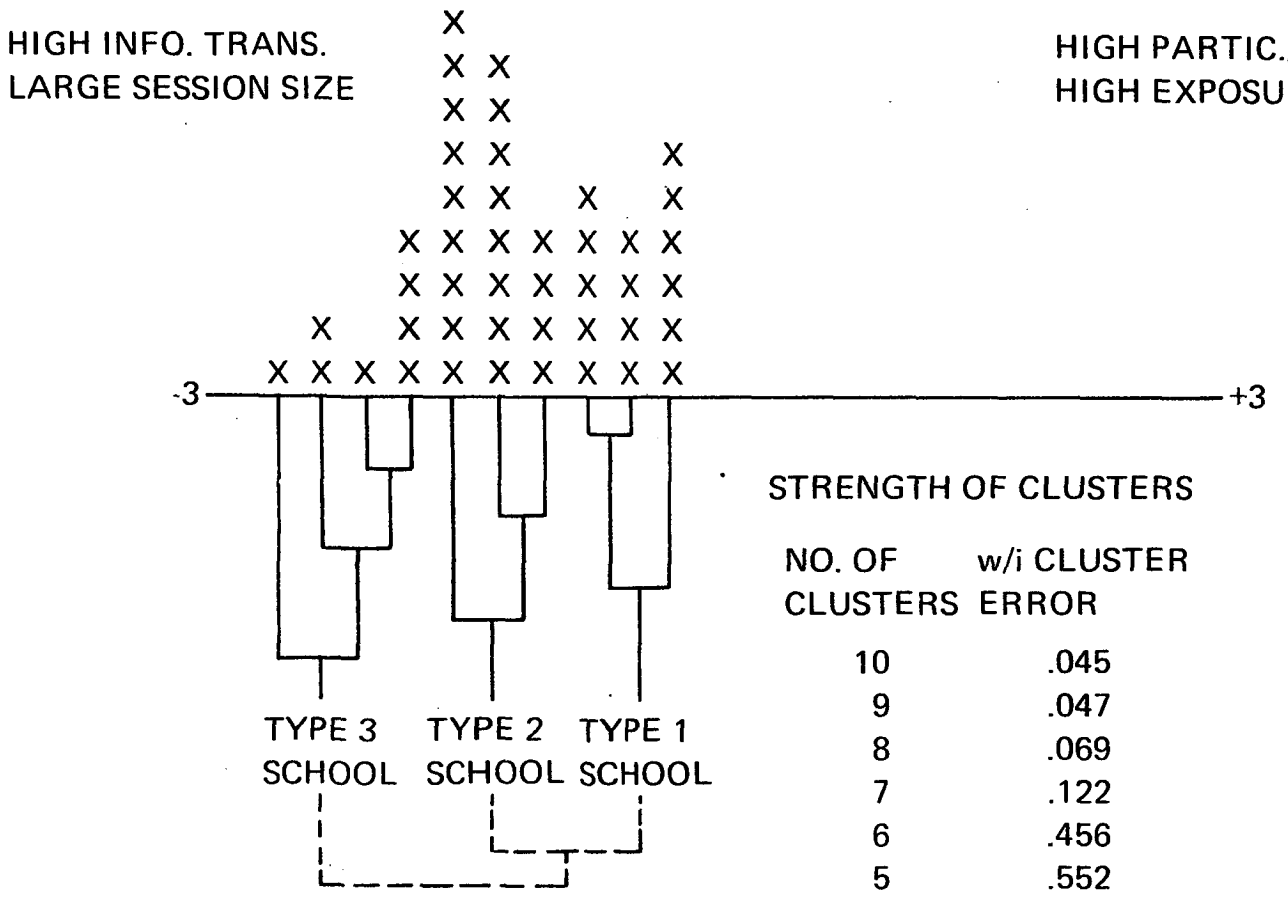

ALCOHOL SAFETY SCHOOLS (n = 44)
HIGH INFO. TRANS.
LARGE SESSION SIZE
-3
+3
HIGH PARTIC./PARTIC. INTER.
HIGH EXPOSURE TIME
GROUP THERAPIES (n = 32)

FIGURE 5



STRENGTH OF CLUSTERS

NO. OF CLUSTERS	w/i CLUSTER ERROR
10	.045
9	.047
8	.069
7	.122
6	.456
5	.552
4	1.071
3	1.347
2	5.266

is indicated in Figure 5 the within-group error in moving from 3 clusters to 2 clusters increases from 1.347 to 5.266. Thus the decision to stop the process at 3 clusters was made.

As an aid in interpreting the characteristics of the school types, the means of the profile variables were calculated for each type. Table V shows the average profiles and average factor scores for root 1 school types. Type 3 schools spend on an average, eighty-five percent of the time in retraining. There is only about eighteen percent of class time spent in participant-leader discussion, and virtually no time spent in participant-participant interaction. The total exposure time averages about eight hours and the session size averages approximately 47 students.

On the other end of the first dimension, type 1 schools with positive factor scores allocate about half of the total exposure time to counseling activities, i.e., the complement of information transmission. Both participant-leader and participant-participant interaction are present in approximately equal amounts. Session size averages 15 persons and the total exposure time averages 18 hours.

Type 2 schools engage in retraining activities seventy-four percent of the total exposure time. The amount of time spent in participant-participant discussion, however, is as great as type 1 schools, i.e., thirty-four percent. There is an average of twelve percent of the time spent in participant-participant interaction. The average total exposure time for type 2 schools is 11 hours, and the average

Table V

MEANS OF PROFILE VARIABLE SCORES AND FACTOR SCORES
FOR ROOT 1 SCHOOL TYPES

	SCHOOL TYPES		
VARIABLES	TYPE 3	TYPE 2	TYPE 1
INFORMATION TRANSMISSION (% OF TIME)	85%	74%	51%
SESSION SIZE (NO. PERSONS)	47	20	15
PARTIC./LEADER INTERACTION (% OF TIME)	18%	34%	34%
EXPOSURE TIME (HRS)	8 HRS	11 HRS	18 HRS
PARTIC./PARTIC. INTERACTION (% OF TIME)	3%	12%	32%
FACTOR SCORE	-1.53	-.57	.20

session size is approximately 20 students. It appears that type 2 schools have a retraining orientation similar to that of type 3 schools, but, with a smaller class size, they appear to utilize a discussion approach for the presentation of drinking and driving information. The positions of the three school types on root 1 can be seen in Figure 6.

ANALYSIS OF RECIDIVISM RATES FOR DRINKER TYPES

Cumulative quarterly recidivism rates for problem drinkers and non-problem drinkers are shown in Figure 7. There appears to be a significant trend towards consistently higher re-arrest rates for problem drinkers than for non-problem drinkers, lending considerable credibility to the diagnostic process.[1] After the initial quarter, where only about 1 percent of the problem or social drinkers recidivate, problem drinkers appear to have a quarterly recidivism rate of about 3-4 percent and a 12 month rate of about 11 percent for the first year after entry into treatment.

Non-problem drinkers, on the other hand, have a quarterly recidivism rate of only about 2 percent and an annual (first year) rate of about 6 percent.

Figure 8 shows the transformed arc sin cumulative rates for the two drinker types along with a summary of the results of the

---

[1] Some of the consistency between diagnosis and subsequent recidivism rates is due to the fact that the diagnostic process involves using prior DWI arrests as an indicator of problem drinking and subsequent arrests are more likely among persons with prior arrests than among those without such arrests. However factors such as BAC level and the results of diagnostic instruments appeared to be

FIGURE 6

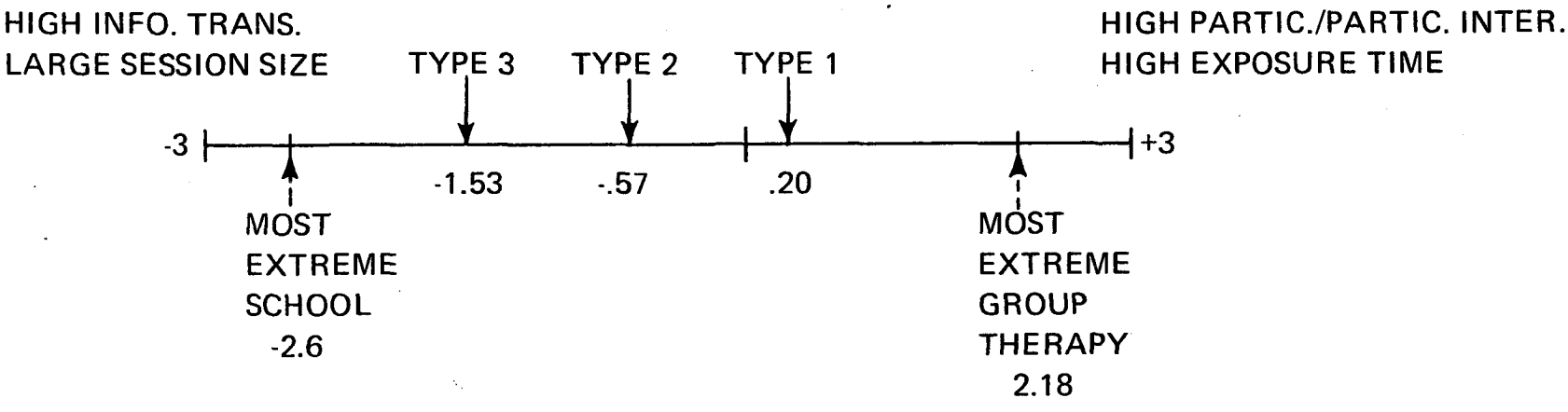

HIGH INFO. TRANS.
LARGE SESSION SIZE
TYPE 3
TYPE 2
TYPE 1
HIGH PARTIC./PARTIC. INTER.
HIGH EXPOSURE TIME
-3
+3
-1.53
-.57
.20
MOST
EXTREME
SCHOOL
-2.6
MOST
EXTREME
GROUP
THERAPY
2.18

FIGURE 7

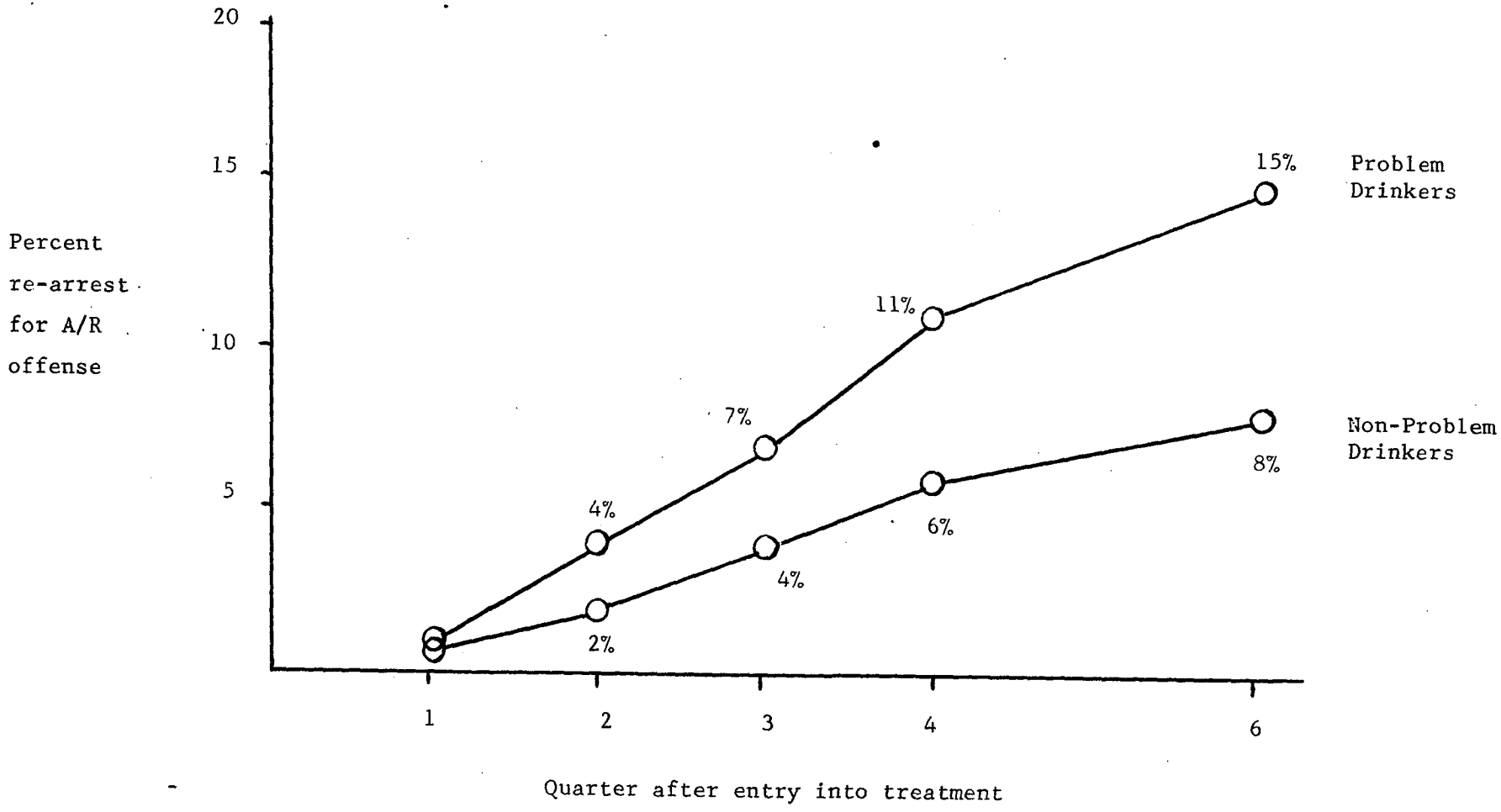
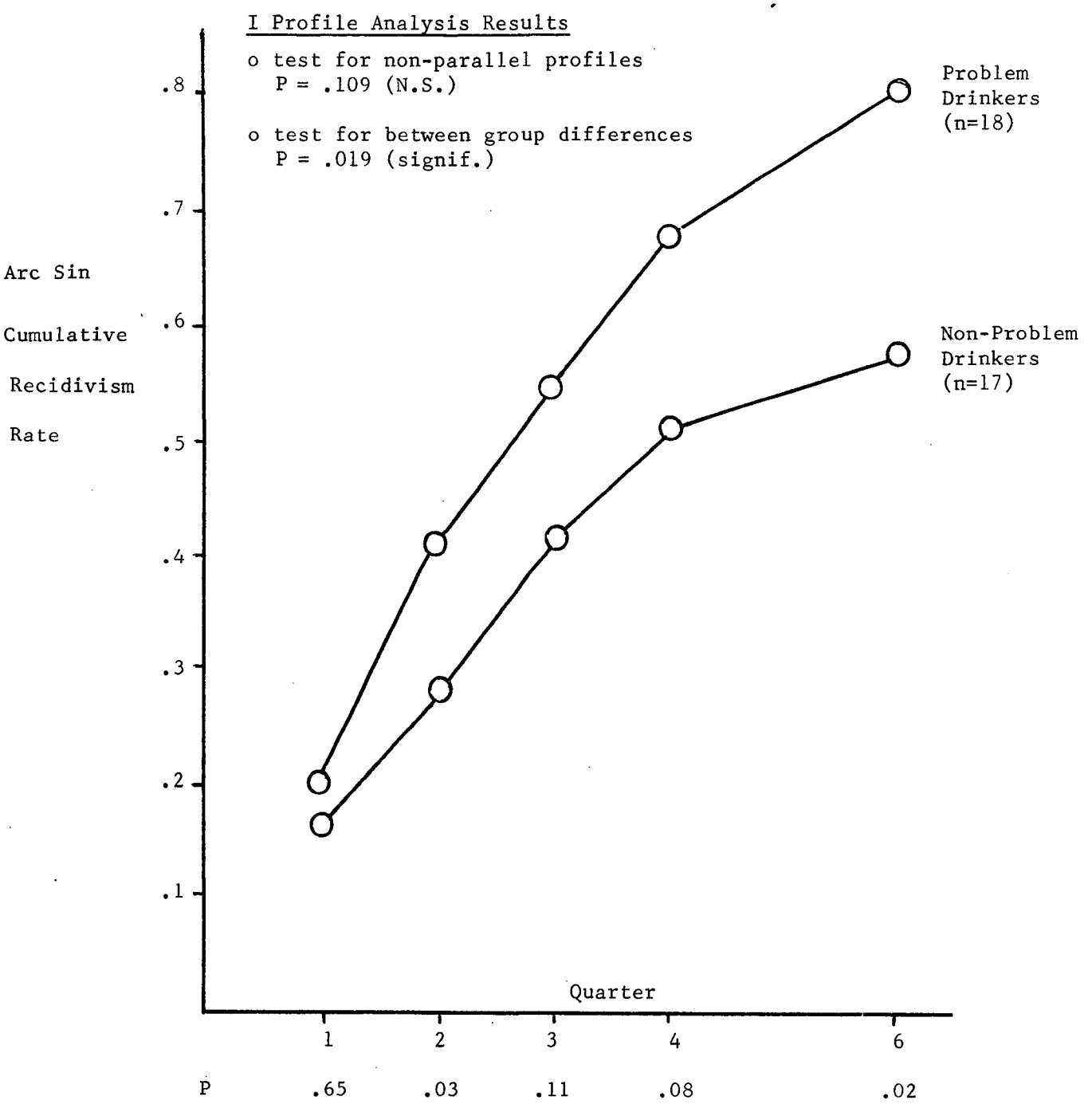

20
15
10
5
Percent re-arrest for A/R offense
15%
Problem Drinkers
11%
7%
4%
2%
Non-Problem Drinkers
8%
6%
4%
1
2
3
4
6
Quarter after entry into treatment

FIGURE 8



Results of analyses of variance for each quarter interval

statistical analyses conducted on such data.[1] With regard to the profile analysis, only one of the three tests conducted (tests for slope, parallelness, and between group differences constitute this analysis) was relevant given the cumulative nature of the data. This test was the test for non-parallel slopes and it was non-significant. Thus, it must be concluded that the slopes of the cumulative rates for the two drinker types remained similar over six quarters of exposure.

Again, since the data was cumulative in nature the finding of a significant slope would be expected. While the test for between group differences was also significant, the fact that it was conducted on cumulative-cumulative rates makes it difficult to interpret. More complete results for the profile analyses and the cumulative arc sin data are contained in Table VI.

Table VII shows the results of the individual one-way analyses of variance conducted on each quarters cumulative rates. These tests are considerably more meaningful than the single test conducted by the multivariate program. As Table VII indicates there were

---

[1] Summary results of the one-way analyses of variance conducted at each quarter period are shown here for convenience to the reader. It should be remembered that these tests were based on somewhat larger sample sizes (especially in earlier quarters) than was the profile analysis, which included only schools with complete data for all exposure periods. Thus, the profiles varied slightly and were probably more stable with the larger samples.

Table VI

SUMMARY OF PROFILE ANALYSIS OF VARIANCE:
CHANGE IN ARCSIN CUMULATIVE RECIDIVISM RATES OVER
SIX QUARTERS OF EXPOSURE TIME FOR
PROBLEM AND NON-PROBLEM DRINKERS

A. Results

Test of slope, non-zero scale means:

Wilks LAMBDA = .1964

F = 30.691 (df = 4 and 30)

p < .001

Test of parallel profiles:

Wilks LAMBDA = .7836

F = 2.071 (df = 4 and 30)

p = .109

Test of between group differences:

Mean square hypothesis = 4.0289

Mean square error = .6705

F = 6.009 (df = 1 and 33)

p = .019 ETA.SQ = .016

B. Mean Arcsin Cumulative Recidivism Rates

	Maximum Exposure Time in Quarter Years				
Drinker Type	1	2	3	4	6
Problem	.2013	.4124	.5470	.6776	.8031
Non-problem	.1677	.2868	.4170	.5138	.5771

Table VII

SUMMARY OF ONE-WAY ANALYSES OF VARIANCE
BETWEEN DRINKER TYPES FOR EACH EXPOSURE PERIOD

	Maximum exposure time in quarter years				
Results	1	2	3	4	6
Mean square hypothesis	.0154	.1760	.1216	.1679	.4464
Mean square error	.0174	.0336	.0455	.0539	.0688
F	0.885	5.232	2.670	3.114	6.487
df	1 and 44	1 and 43	1 and 38	1 and 35	1 and 33
p	.645	.026	.107	.083	.015
ETA.SQ	.003	.086	.040	.054	.136

significant differences (at the .05 level) between the two drinker types for 2 of the 5 intervals tested (i.e., quarters 2 and 6). The test at six quarters of exposure time is a test of the overall difference in profiles and the profiles are significantly different with 13.6 percent of the variance attributable to the drinker type classification.[1] Again, especially in the early quarters, these tests were conducted on larger samples than was represented in the profiles.

ANALYSIS OF RECIDIVISM RATES FOR SCHOOL TYPES

Figure 9 illustrates the cumulative recidivism rate profiles for each school type according to the types of drinkers assigned to it. Here, again, problem drinker rates for every school type are higher than for non-problem drinkers. Further, there appears to be a trend toward higher recidivism rates for problem drinkers in the type 3 school (short session size, many participants per session, much time spent on information transmission, little participant-participant interaction). The first year recidivism rate for problem drinkers who attended the type 3 school was 15.2 percent as compared with 11 percent for problem drinkers in general. Problem drinkers in school type 1, however, had generally higher recidivism rates than in the type 2 school.

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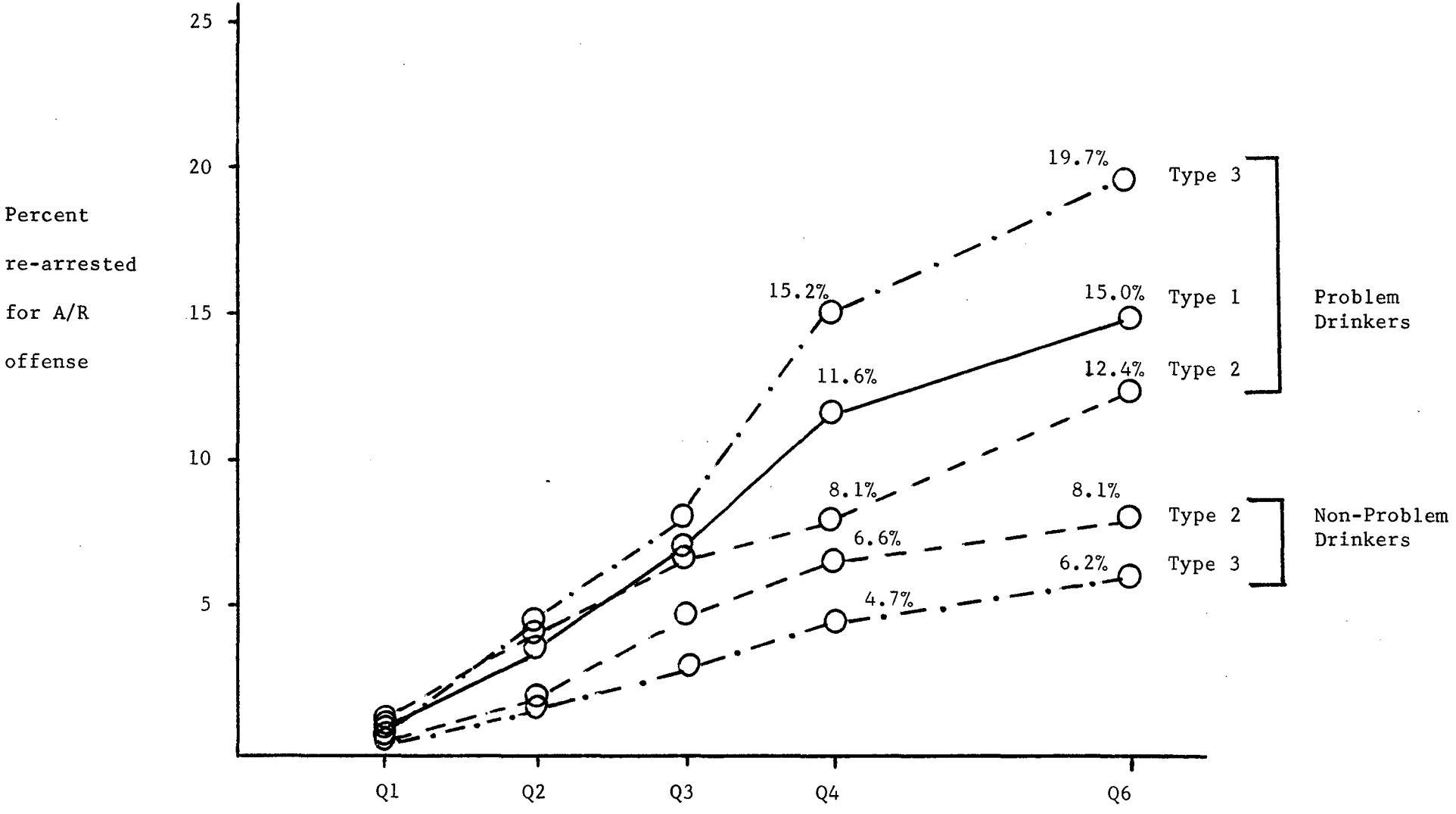
[1] One school in this analysis had only five quarters of exposure time.

FIGURE 9


25
20
15
10
5
Percent re-arrested for A/R offense
19.7%
Type 3
15.2%
15.0%
Type 1
Problem Drinkers
11.6%
12.4%
Type 2
8.1%
8.1%
Type 2
Non-Problem Drinkers
6.6%
6.2%
Type 3
4.7%
Q1
Q2
Q3
Q4
Q6
Quarter after entry into treatment

With regard to the two school types which social drinkers attended[1] (types 2 and 3) the cumulative profiles are quite similar.

Figures 10 and 11 contain the arc sin cumulative rates and summary results of the profile tests conducted on these data for problem drinkers and non-problem drinkers, respectively. As with the analyses of drinker types, the tests for non-parallel profiles are most relevant, but were non-significant in both cases. Between group differences (based on cumulative-cumulative data) were not significant. Tables VIII and IX contain more complete summaries of the results of the profile analyses and the data on which they were conducted. The results of the two-way analyses of variance performed for each exposure period are summarized in Table X. The test for overall between group differences at six quarters of exposure revealed no significant difference between school types. The four and six quarter tests were on type 2 and type 3 schools only, because of a small sample size for type 1 schools. Tests on the other exposure periods also indicated no significant differences between school types.

There was, however, a statistically significant interaction between school type and drinker type in the four quarters exposure interval. In a test of the simple effects, it was found that problem drinkers

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[1] Non-problem drinker rates for type 1 schools were not analyzed because of the small sample size in this category.

FIGURE 10

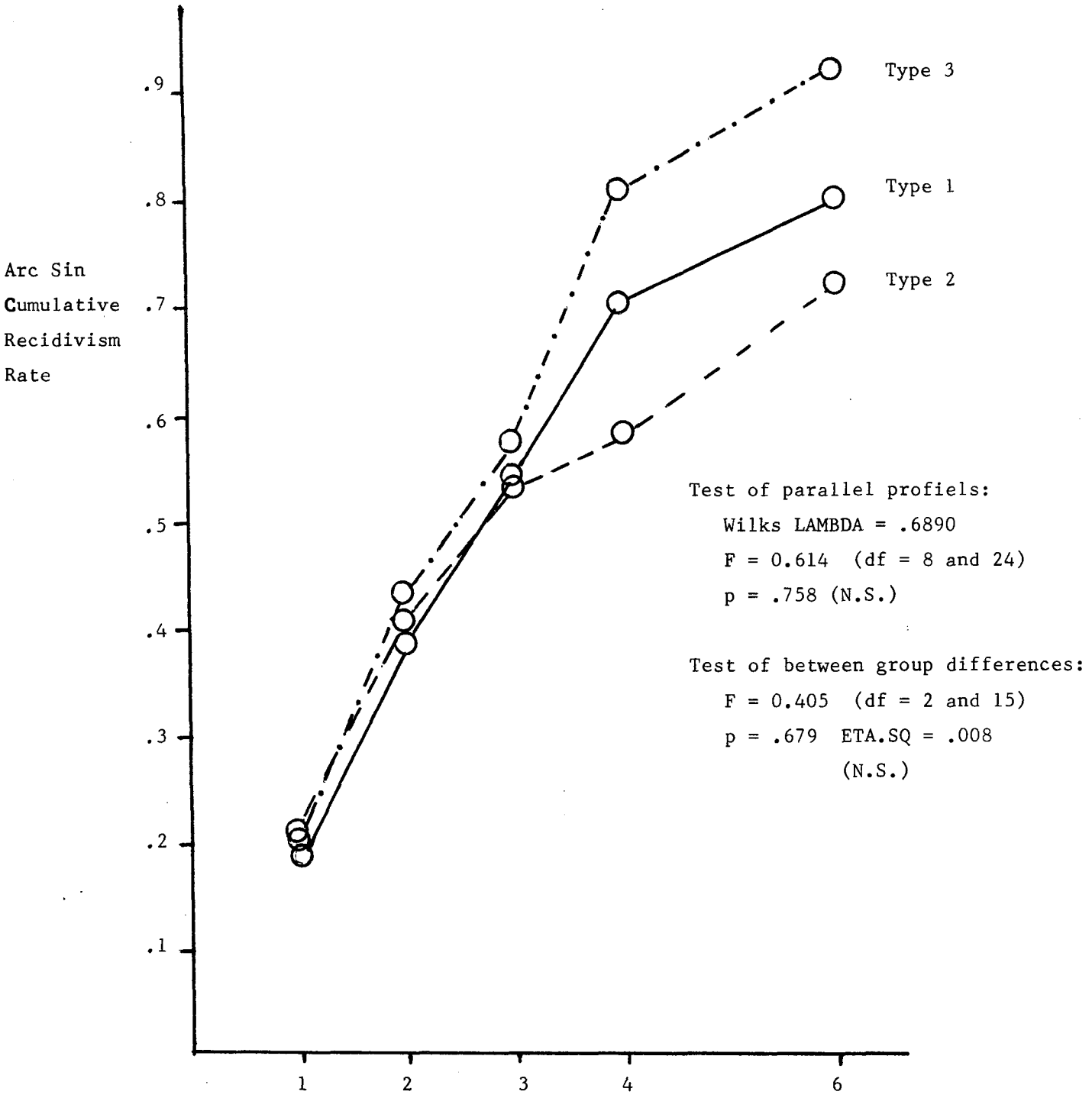
Arc Sin
Cumulative
Recidivism
Rate
.9
.8
.7
.6
.5
.4
.3
.2
.1
1
2
3
4
6
Type 3
Type 1
Type 2
Test of parallel profiels:
Wilks LAMBDA = .6890
F = 0.614 (df = 8 and 24)
p = .758 (N.S.)
Test of between group differences:
F = 0.405 (df = 2 and 15)
p = .679 ETA.SQ = .008
(N.S.)

Table VIII

SUMMARY OF PROFILE ANALYSIS OF VARIANCE:
CHANGE IN ARCSIN CUMULATIVE RECIDIVISM RATES
OVER SIX QUARTERS OF EXPOSURE TIME FOR ROOT 1
SCHOOL TYPES, PROBLEM DRINKERS

A. Results

Test of slope, non-zero scale means:

Wilks LAMBDA = .2092

F = 11.340 (df = 4 and 12)

p = .001

Test of parallel profiles:

Wilks LAMBDA = .6890

F = 0.614 (df = 8 and 24)

p = .758

Test of between group differences:

Mean square hypothesis = .3993

Mean square error = .9864

F = 0.405 (df = 2 and 15)

p = .679 ETA.SQ = -.008

B. Mean Arcsin Cumulative Recidivism Rates

	Maximum Exposure Time in Quarter Years				
School Type	1	2	3	4	6
1	.1885	.3859	.5396	.6962	.7959
2	.2105	.4093	.5302	.5757	.7197
3	.1976	.4342	.5742	.8011	.9191

FIGURE 11

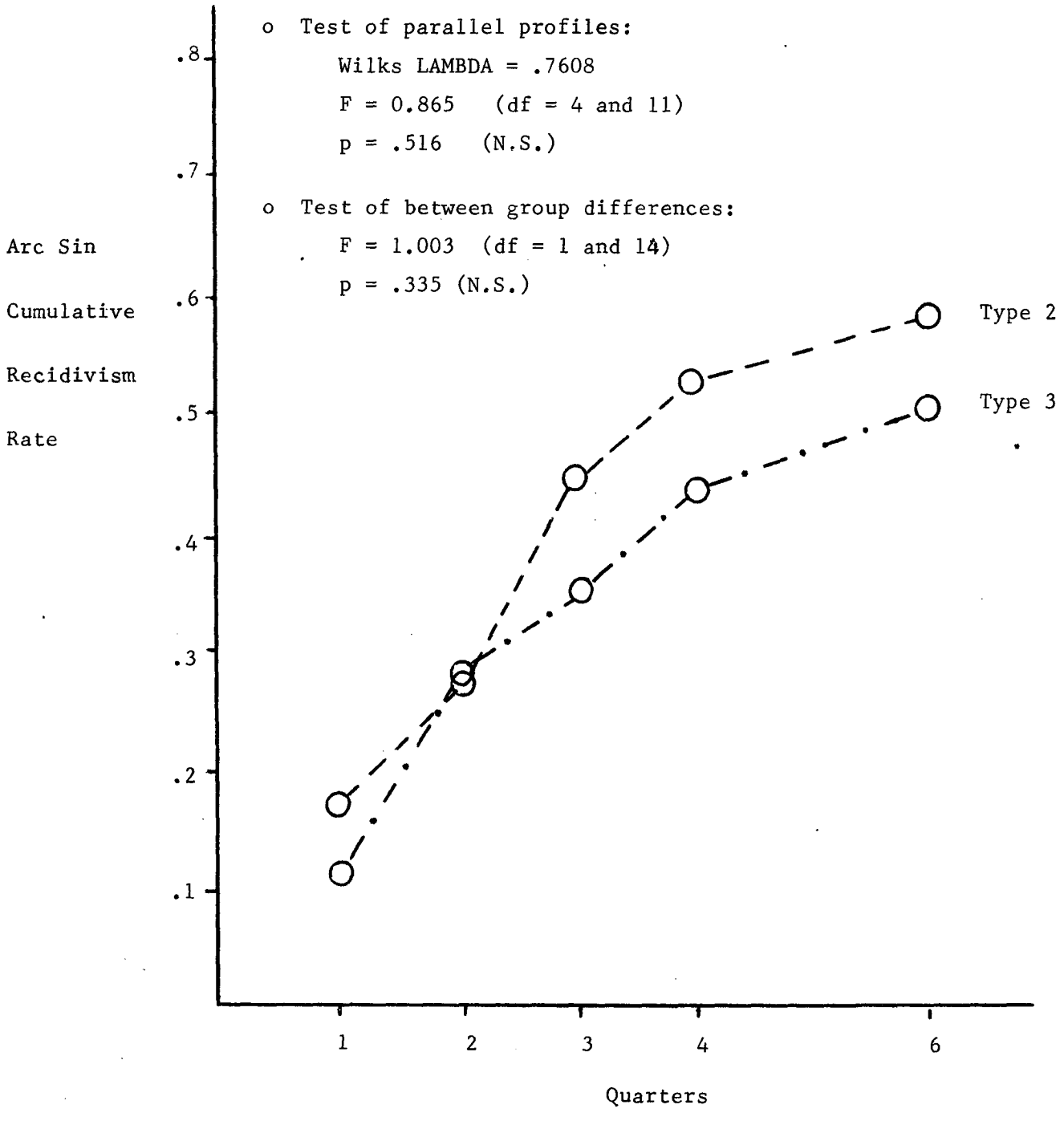
o Test of parallel profiles:
Wilks LAMBDA = .7608
F = 0.865 (df = 4 and 11)
p = .516 (N.S.)
o Test of between group differences:
F = 1.003 (df = 1 and 14)
p = .335 (N.S.)
Arc Sin
Cumulative
Recidivism
Rate
.8
.7
.6
.5
.4
.3
.2
.1
Type 2
Type 3
1
2
3
4
6
Quarters

Table IX

SUMMARY OF PROFILE ANALYSIS OF VARIANCE:
CHANGE IN ARCSIN CUMULATIVE RECIDIVISM RATES OVER
SIX QUARTERS OF EXPOSURE TIME FOR ROOT 1 SCHOOL TYPES,
NON-PROBLEM DRINKERS

A. Results

Test of slope, non-zero scale means:

Wilks LAMBDA = .0408

F = 64.723 (df = 4 and 11)

p < .001

Test of parallel profiles:

Wilks LAMBDA = .7608

F = 0.865 (df = 4 and 11)

p = .516

Test of between group differences:

Mean square hypothesis = .3256

Mean square error = .3248

F = 1.003 (df = 1 and 14)

p = .335 ETA.SQ < .001

B. Mean Arcsin Cumulative Recidivism Rates

	Maximum Exposure Time in Quarter Years				
School Type	1	2	3	4	6
2	.1757	.2785	.4433	.5212	.5762
3	.1285	.2812	.3516	.4347	.5042

Table X

SUMMARY OF TWO-WAY ANALYSES OF VARIANCE FOR EACH EXPOSURE PERIOD: ROOT 1 SCHOOL TYPES

Source	MS	df	F	P	ETA. SQ
One Quarter					
Between Schools	.0324	2	1.887	.163	.038
Between Drinkers	.0269	1	1.562	.216	.012
Schools x Drinkers	.0129	2	0.075	.927	.040
Error	.0172	40			
Two Quarters					
Between Schools	.0130	2	0.364	.702	.027
Between Drinkers	.1957	1	5.491	.023	.097
Schools x Drinkers	.0055	2	0.153	.859	.036
Error	.0356	39			
Three Quarters					
Between Schools	.0267	2	0.569	.577	.021
Between Drinkers	.1645	1	3.500	.067	.062
Schools x Drinkers	.0183	2	0.389	.686	.030
Error	.0470	34			
Four Quarters					
Between Schools	.0379	1	0.990	.670	.001
Between Drinkers	.2416	1	6.318	.018	.137
Schools x Drinkers	.1741	1	4.554	.040	.091
Error	.0382	26			
Six Quarters					
Between Schools	.0370	1	0.634	.561	.010
Between Drinkers	.4759	1	8.162	.008	.188
Schools x Drinkers	.1319	1	2.263	.141	.033
Error	.0583	26			

had a significantly higher recidivism rate than non-problem drinkers in type 3 schools ($F = 5.240$, $df = 1$ and 10, ETA.SQ = .261). There was no significant difference between drinker types in type 2 schools ($F = 0.935$, $df = 1$ and 10, ETQ.SQ = -.004). This drinker type by school type interaction, however, is not evident at six quarters of exposure time and therefore may be spurious.

DISCUSSION

RESULTS OF THE STUDY RELATIVE TO THE NEED FOR TAXONOMY

One of the requirements for the evaluation of rehabilitation programs, is a careful and systematic description of the programs under study. ASAP rehabilitation modalities are a heterogeneous population of educational-theraputic techniques which attempt to impact the drinking-driving problem with positive behavior modifying approaches. It has been pointed out quite clearly that these approaches include a variety of combinations of retraining and counseling activities often designed for particular target groups. The recent use of such rehabilitation modalities in the area of highway traffic safety has not generally benefitted from a taxonomic structure within which to evaluate the relative effectiveness of various strategies. The development of such a taxonomy was addressed by this study.

A wide range of alcohol safety school structural characteristics was evident from the results of the principal components analysis. Furthermore, the alcohol safety schools appeared to be structurally different from the group therapy programs. Only one group therapy of the sample of 32, overlapped with the distribution of alcohol safety schools in the first factor space. The general structural differences indicated by this dimension reflect the relative emphasis of particular modalities toward retraining, counseling, or theraputic functions. Schools with large negative factor scores perform, almost exclusively, a retraining function. As one moves toward the positive end of the continuum there is more discussion of factual material and the retraining function is supplemented more and more with group counseling activities. Finally, moving in the direction of high

positive factor scores, one passes beyond the alcohol safety school distribution into more intensely theraputic modalities.

The hierarchical clustering analysis defined three school types on the first factor root. Type 3 schools consisted of primarily retraining activities. They used a didactic approach and had large numbers of participants at each session. Type 2 schools consisted of slightly less retraining, with a smaller session size than type 3 and used participant-leader discussion to help convey information. Type 1 schools were approximately half counseling and half retraining oriented. They had the longest total exposure time, the smallest average session size, and they utilized substantial amounts of both participant-leader and participant-participant discussion.

The variety of alcohol safety schools suggests the possibility of matching school type modalities with drinker types. Such drinker types include both social drinkers and individuals in the early to middle stages of alcoholism. While a precise, diagnostic classification of drinker types was not available for the present study, an approximation to such a taxonomy, involving the use of standardized guidelines was provided.

RESULTS OF THE STUDY RELATIVE TO DIFFERENCES IN DRINKER TYPES

Only two broad categories of drinking drivers were included in this study. A profile analysis performed on the arc sin cumulative recidivism rates for problem and non-problem drinkers entering alcohol safety schools, indicated that the slopes of the profiles were not significantly different. Consequently, the hypothesis that

the two drinker types have different mean times to recidivism could not be supported from the data.

Problem drinkers, however, had a significantly higher mean recidivism rate after six quarters of exposure time. This significant difference between drinker type recidivism rates suggests that despite the broad and overlapping nature of the NHTSA reporting categories and despite interproject deviations from the classification criteria, problem drinkers have, on the average, a higher probability of recidivating than non-problem drinkers within six quarters of exposure time.

RESULTS OF THE STUDY RELATIVE TO DIFFERENT SCHOOL TYPES

The hypothesis that the school types, as they were defined in this study, had a differential effect on recidivism rates also could not be be statistically supported. There were consistent trends for the type 3 school to result in higher recidivism rates for problem drinkers. If such a relationship actually existed, however, there apparently was a sufficient amount of "noise" in the data to mask its effect, since the school type effect in the two-way analyses of variance performed on six quarter cumulative rates did not indicate significant differences.

From these results, it cannot be concluded that the schools, in general, had no effect on recidivism rate since no control group data was provided. However, the fact that no differential effect could be demonstrated between what were apparently quite different schools, does not add much support to any suggestion that the schools (by themselves) have such an effect.

It appears that if a difference exists between the behavior modification potential of the various schools, arrest recidivism is not very sensitive measure of such an effect. In fact one can make a strong case that recidivism rates calculated at the program level are insensitive measures of effectiveness.

Many differences exist between ASAP communities which could substantially affect re-arrest rates and contribute to within-group (error) variance at a program level. Large within-group error and small sample size would make it necessary to have very strong effects in order to obtain statistical significance. On the basis of site visits to each project, it would appear that substantial variance is contributed by the quality of the tracking systems and difficulties in searching records at ASAP sites.

Furthermore, considering the fact that only 11 percent of the problem drinkers and 6 percent of the non-problem drinkers recidivate in the subsequent year, it may be that life changes other than recidivism will have to be examined in order to determine the behavior modification potential of the various treatment modalities. In view of this possibility the NHTSA is placing more emphasis on the collection of life change data in the evaluation of some of the group therapy programs presently being implemented at ASAP sites. Future reports should contain the results of such efforts.

NEED FOR CONTROL GROUPS

It was necessary for the present study to attribute effects to school types on a post hoc basis. With such a design, one can never be certain that there was not a systematic bias in the assignment of participants to schools. Furthermore, as was pointed out, the lack of control groups limits conclusions to relative differences and not absolute effectiveness. The lack of control groups is not uncommon in the area of rehabilitation. The thought of random assignment aggravates the sense of ethics of most treatment persons, especially when the random assignment includes a no-treatment condition. Often this can be overcome by taking the time to discuss the issue with the treatment people. The best solution, however, involves conducting the assignment at the administrative or central referral level. Here, however, one often runs into opposition from project administrators.

It is only in well controlled demonstration projects that the effectiveness of school types, established on an a priori basis with randomly assigned participants, can be properly ascertained. The impact of Hawthorne effects and expectation effects can easily cause a project evaluation to show positive effects which have little to do with the treatment program itself. On the other hand, assignment of only the worst drinker types to particular modalities can easily cause such an evaluation to show negative results for the treatment program. The importance of random control group designs must be seen as being beneficial to all. However, in fairness to the treatment community, maximally sensitive measures to change must also be

included even if they are not of primary concern to the agency supporting the demonstration program.

THIS STUDY AS A MODEL

Finally, despite the inability of the present study to show that school types were differentially effective, the need for increased precision in the evaluation of rehabilitation efforts must be emphasized. The results of this study have shown that a broad range of activities and orientations exist under the single classification of alcohol safety school. One cannot hope to obtain consistent findings when the phenomenon under study is so diffuse in nature. Where positive results occur, they are unlikely to be replicated if the circumstances under which they occurred are vaguely defined. The methodology developed in this study demonstrated a systematic procedure for developing more clearly defined categories of rehabilitation modalities which are subject to evaluation procedures. Such categories represent the first step in the formulation of guidelines for the development of rehabilitation modalities in future demonstration projects. Those aspects of the present study which should be employed in future studies include:

(1) The attempts to discriminate between different drinker types assigned to the various treatment modalities.

(2) The attempts to identify the structural differences between various treatment modalities.

(3) The close scrutinization of the criterion measures to be used in evaluating program effect.

(4) The attempts made to standardize as completely as possible the guidelines for recording and reporting data.

Several other requirements exist for adequate program level evaluation. One of the most apparent and one which was not fulfilled by this study is the need for control group data. Also, the use of other, more sensitive measures such as life changes should prove more sensitive to the immediate effects of rehabilitation efforts. The design of future projects could also benefit from a refinement in drinker type classification. It is probably only through the pairing of specific drinker types with clearly defined modalities that treatment effects can be unambiguously demonstrated.

Evaluators have a responsibility to the treatment community as well as to administrators and other researchers.

Treatment people also conduct day-to-day evaluations of their clients. These evaluations consist of the therapists interpretation of data from the client's reactions, activities, and life events. Systematic (or scientific) evaluation often seems counterproductive to these persons and is frequently perceived as an obstruction to the performance of their jobs. In the past, many research oriented evaluators have not tended to dissipate this feeling. In fact, they have often created new feelings of tension and prejudice between themselves and treatment people. Research results are often not presented to the therapists in a form which helps them. If anything

at all they are told only what is wrong. The inevitable competition between persons who see themselves as having different objectives results.

It is not clear whether this study deviates significantly from this pattern or not. However, it is hoped that these results, and others to follow, can be interpreted (and used) in a manner which improves the effectiveness of the rehabilitation area rather than in a way which hinders it.

REFERENCES

1. Bjrvner, K. An Evaluation of Compulsive Treatment Programs for Alcoholic Patients in Stockholm, With Particular Reference to Longitudinal Development, Epidemiological Aspects and Patient Morbidity, Opuscula Medica 25: 107, 1972.

2. Blumenthal, M. and Ross, H. L. Two Experimental Studies of Traffic Law, Vol. I, The Effect of Legal Sanctions on DWI Offenders, NHTSA Report DOT HS 800 826 Geomet Incorporated, Rockville, Maryland, February, 1973.

3. Borkenstein, R. F. Technical Content of State and Community Police Traffic Service. National Highway Safety Board, Washington, D.C. 1968.

4. Crabb, D., Gettys, T. R., and Stewart, E. L. Development and Preliminary Tryout of Evaluation Measures for Phoenix Driving While Intoxicated Reduction Program, Report prepared for PPG Industries Foundation, Arizona State University, Tempe, Arizona, 1971.

5. Filkins, L. D., Clark, C. D., Rosenblatt, C. A., Carlson, W. L., Kerlan, M. W., Manson, H. Alcohol Abuse and Traffic Safety: A Study of Fatalities, DWI Offenders, Alcoholics, and Court-related Treatment Approaches. U.S. Department of Transportation, NHTSA Report for Contracts FH-11-6555 and FH-11-7129, Highway Safety Research Institute, University of Michigan, June, 1970.

6. Filkins, L. D., Mortimer, R. G., Post, D. V., and Chapman, M. M. Field evaluation of court procedures for identifying problem drinkers. U. S. Department of Transportation. NHSTA Report

DOT HS 801 091, Highway Safety Research Institute, University of Michigan, May, 1974.

7. Goldstein, L. G. Driver Improvement: A Review of the Literature, California Traffic Safety Education Task Force Report, Sacramento, California, December, 1973.

8. Hill, M. J. and Blane, H. T. Evaluation of Psychotherapy with Alcoholics: A Critical Review, Quarterly Journal of Studies on Alcohol, 28; 76-104, March, 1964.

9. Joscelyn, J. D., and Jones, R. K. A Systems Analysis of the Traffic Law System: Summary Volume. U.S. Department of Transportation, NHTSA Report No. DOT HS 800 640, Institute for Research in Public Safety, Indiana University, October, 1971.

10. Joscelyn, K. B., Maickel, R. P., and Goldenbaum, D. M. The Drinking Driver: A Survey of Treatment Alternatives. U.S. Department of Transportation. NHSTA Report No. DOT HS 800 611, Institute for Research in Public Safety, Indiana University, October, 1971.

11. Kaestner, N. Research in Driver Improvement: The State of the Art, Traffic Quarterly 22 (4): 497-520.

12. Newman, J. R., McEachern, A. W. and Kirby, S. Drinking Drivers and Their Traffic Records, Draft Final report on NHTSA Contract DOT-HS-101-2-45, University of Southern California, 1974.

13. Overall, J. E. and Spiegel, D. K. Concerning Least Squares Analysis of Experimental Data. Psychological Bulletin, 72, (5), 311-322, 1969.

14. Panepinto, W. C., and Higgins, M. J. Keeping Alcoholics in Treatment: Effective Follow-through Procedures. Quarterly Journal of Studies on Alcohol, 30, 414-419, 1969.

15. Pollack, S., Didenko, McEachern, and Berger. Drinking Driver and Traffic Safety Project. U.S. Department of Transportation, NHTSA Report No. DOT HS 800 699, Public Systems Research Institute, University of Southern California, May, 1972.

16. Sackman, H. Guidelines for Developing and Implementing Community Programs to Assist and Re-educate Drinking Drivers: Volume I. U.S. Department of Transportation, NHTSA Report No. DOT HS 800 634. Public Systems Research Institute, University of Southern California, January, 1972.

17. Sackman, H., Didenko, O., and Thomas, M. Community Demonstration Plan to Assist and Re-educate Drinking Drivers: Volume II. U.S. Department of Transportation, NHTSA Report No. DOT HS 800 635, Public Systems Research Institute, University of Southern California, January, 1972.

18. Seixas, F. A. and Hopson, A. L. The Effect of Rehabilitation on the Driving Behavior of Problem Drinkers, NHTSA Final Report, DOT HS-801-110, National Council on Alcoholism, New York, N.Y. July, 1973.

19. Smart, R. G. The Evaluation of Alcoholism Treatment Programs, Addictions 17 (1): 41-51, 1970.

20. Stewart, E. I., and Malfetti, J. L. Rehabilitation of the Drunken Driver: A Corrective Course in Phoenix, Arizona, for Persons Convicted of Driving Under the Influence of Alcohol. New York, Columbia University Teachers College Press, 1970.

21. U.S. Department of Transportation. Alcohol and Highway Safety. A report to Congress from the Secretary of Transportation, 1968.

22. U.S. Department of Transportation. Alcohol Safety Action Projects - Evaluation of Operations - 1972: Volume II Detailed Analysis, Chapter 6 Evaluation of the Rehabilitation Countermeasure Activities. NHTSA Report No. DOT HS 800 874, Annual Report from the Office of Alcohol Countermeasures, 1974.

23. Veldman, D. J. Fortran Programming for the Behavioral Sciences. New York, Holt, Rinehart and Winston, 1967.

24. Voegtlin, W. L. and Le Mere, F. The Treatment of Alcohol Addiction: A Review of the Literature, Quarterly Journal of Studies on Alcohol 2: 717-803, 1942.

25. Wallace, D. L. Clustering, International Encyclopedia of the Social Sciences, 2 519-524, Crowell, Collier and McMillan Inc., U.S.A., 1968.

26. Ward, H. J., Jr. Hierarchical Grouping to Optimize an Objective Function. American Statistical Association Journal, 58, 236-244, 1963.

27. Morrison, D. F. Multivariate Statistical Methods. New York, McGraw-Hill, 1967.

APPENDIX A

Table 15 Recidivism Data Reporting Forms and Instructions for Use

A SUMMARY OF THE REVISED GUIDELINES FOR COMPLETING TABLE 15

The following guidelines differ from existing Table 15 requirements in several important respects as a result of input from various evaluators and as a result of efforts by OAC to eliminate problems in last year's reporting procedure. The requested changes can be summarized as follows:

- Development of a consistent definition of recidivism. It is suggested that recidivism be defined in terms of re-arrest for an A/R traffic offense subsequent to entry into a rehabilitation or control category.

- Separate reporting of entry to rehabilitation or control conditions, and recidivism from these conditions, for the three drinker type classifications used in other Appendix H Table 14 (Problem Drinkers, Non-Problem Drinkers, and Unidentified). It is not possible to identify drinker classifications with the current Table 15.

- Provision of additional rows in the tables to permit reporting of recidivism in one quarter intervals for the first year subsequent to entry into rehabilitation or control conditions. Current data suggest that a substantial proportion of observed recidivism occurs during the first six month period after entry and it is felt that a more sensitive measure is necessary on the program level.

- Requirement of accurate and consistent descriptions of rehabilitation countermeasures used as column headings.

- Requirements of recidivism reporting for rehabilitation dropouts.

- Distinction between true random assignment control groups, and control groups formed on other than a random basis.

It is felt that these changes in format and reporting requirements necessary for an adequate assessment of arrest recidivism rates on a national level.

INSTRUCTIONS FOR COMPLETING TABLE 15

There are 13 columns on Table 15 in which to classify individuals. Six of these refer to rehabilitation modalities or combinations of modalities specified by each project. One column refers to all individuals entering** a rehabilitation modality other than one of the six specified. One column refers to individuals not sentenced or referred to any rehabilitation. One column refers to the the total number of individuals entering treatment. One column refers to individuals referred to treatment who do not enter, and one to individuals dropping out of rehabilitation. Two columns refer to control groups. The column definitions on the following pages describe the requirements for inclusion of persons in these columns.

There are nine row headings for each quarter. The first of these refers to the total number of individuals entering rehabilitation during that quarter who fit the definition specified in column headings. The second row heading refers to the subset of individuals in the first heading who became recidivists in the quarter in which they entered rehabilitation. The next three row headings refer to the subset of individuals in the first heading who became recidivists in the three subsequent one quarter periods following their entry into rehabilitation. The remaining three row headings for each quarter refer to the subset of individuals becoming recidivists in subsequent two quarter periods.

For the purposes of this table, a recidivist should be defined as follows: "any individual who subsequent to enrollment in a rehabilitation modality or combination of modalities (or subsequent to conviction for control and non-treated individuals or subsequent to dropping out of rehabilitation for individuals dropping out) is re-arrested* for an alcohol related driving offense." An individual should be classified as a recidivist whether the re-arrest* occurs during the course of treatment or after completion.

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* If necessary, recidivism may be defined in terms of re-conviction for an A/R offense. If this change in definition is made it should be prominently noted on the table.

** Analysis of recidivism for persons completing rehabilitation programs should be reserved for Analytic Study #6 if such analysis is desired.

Observe the following conventions for individuals with more than one arrest* subsequent to enrollment in a rehabilitation modality or combination (or subsequent to conviction for non-treated and control individuals (or) subsequent to drop out for individuals dropping out of rehabilitation). 1) An individual should be included as a recidivist only once for each time through a particular treatment or treatment combination, i.e., if an individual is arrested* three times after entering a rehabilitation modality or combination, he should be counted as a recidivist only once unless further rehabilitation has been entered as the result of one of the recidivist arrests. 2) If an individual enters a rehabilitation modality or combination as the result of a recidivist arrest* he should be treated as a different individual both in terms of entry into treatment and in terms of future recidivism.

COLUMN 1 - TOTAL NOT REFERRED TO TREATMENT

This column should include all those individuals convicted of an alcohol related offense during the specified time periods who were 1) not referred to ASAP, or 2) referred to ASAP but not referred to treatment.

COLUMN 2 - TOTAL ENTERING TREATMENT

This column should include all those individuals entering rehabilitation during the specified time periods regardless of the eventual outcome. That is, this column should include both individuals referred or sentenced to treatment who did not enter treatment and individuals entering treatment. This column should be the sum of columns 3 through 11 if no control group was drawn from the set of individuals referred or sentenced to rehabilitation. This column should be the sum of columns 3 through 11 plus 13 if a control group was drawn from those individuals sentenced or referred to rehabilitation.

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* If necessary, recidivism may be defined in terms of re-conviction for an A/R offense. If this change is made it should be prominently noted on the table.

COLUMN 3 - TOTAL DROPOUTS

This column should include all individuals who entered rehabilitation but who subsequently dropped out of rehabilitation in the specified time period. This column should not include those persons who dropped out of rehabilitation as the result of becoming a recidivist. If an individual is sentenced or referred to multiple treatment modalities, he should not be included in this column unless he has dropped out of all modalities.

COLUMN 4 - TOTAL NO SHOWS

This column should include all individuals referred to rehabilitation at a specified time period who failed to enter rehabilitation. If an individual was referred to multiple treatment modalities and did enter at least one, he should not be included in this column, but rather in the column of the treatment combination he entered.

COLUMNS 5 to 10 - TREATMENT MODALITIES*

Columns 5 to 10 should be headed with the six treatment modalities or treatment modality combinations most frequently used at your ASAP. These columns should include all individuals entering these modalities during the time periods specified and include: 1) those who are still enrolled in the treatment modality, or 2) those who have completed treatment, or 3) those who became recidivists while enrolled in the treatment modality (regardless of whether or not becoming a recidivist terminated treatment). These columns should be mutually exclusive. That is, a single individual should not appear in more than one of these six columns. An individual counted in one of these six columns should be included in no other column in the table except column two (total referred to treatment).

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* A detailed description of what treatment is involved in each of the six columns should be provided. Abbreviations are not enough. In addition, references to documents in which there are complete descriptions of the modalities should be provided when possible.

COLUMN 11 - OTHER TREATMENTS*

This column should include all individuals entering any treatment or treatment combination other than those specified in columns 6 to 10 during the specified time period: 1) who are still enrolled in treatment, or 2) who completed treatment, or 3) who became recidivists while enrolled in treatment. All individuals entering treatment who are not included in columns 5 to 10 should be counted in this column. Individuals counted in this column should be included in no other column of the tables except column 2 (total referred to treatment).

COLUMN 12 - CONTROL (RANDOM)**

This column should include all individuals randomly assigned to a group during the specified time periods.

COLUMN 13 - CONTROL (NON-RANDOM)***

This column should include all individuals assigned to a control group on a non-random basis during the specified time periods. This group may be made up of individuals randomly drawn from a larger group non-randomly assigned to a treatment modality. This group may be a subset of those individuals not referred to rehabilitation.

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* A detailed description of what these other treatments or treatment combinations are should be provided.

** A description of the random assignment procedures should be provided.

*** The basis for assignment to the control group should be specified. A justification of the validity of the group as a control should be provided. If the group is a subset of individuals referred or sentenced to rehabilitation it should be prominently noted.

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
By REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15A-1
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1													
2	Recidivists in Q1													
3	Recidivists in Q2													
4	Recidivists in Q3													
5	Recidivists in Q4													
6	Recidivists in Q5 + Q6													
7	Recidivists in Q7 + Q8													
8	Recidivists in Q9 + Q10													
9	Recidivists from Q11 on													
10	NUMBER ENTERING IN Q2													
11	Recidivists in Q2													
12	Recidivists in Q3													
13	Recidivists in Q4													
14	Recidivists in Q5													
15	Recidivists in Q6 + Q7													
16	Recidivists in Q8 + Q9													
17	Recidivists in Q10 + Q11													
18	Recidivists from Q12 on													
19	NUMBER ENTERING IN Q3													
20	Recidivists in Q3													
21	Recidivists in Q4													
22	Recidivists in Q5													
23	Recidivists in Q6													
24	Recidivists in Q7 + Q8													
25	Recidivists in Q9 + Q10													
26	Recidivists in Q11 + Q12													
27	Recidivists from Q13 on													
28	NUMBER ENTERING IN Q4													
29	Recidivists in Q4													
30	Recidivists in Q5													
31	Recidivists in Q6													
32	Recidivists in Q7													
33	Recidivists in Q8 + Q9													
34	Recidivists in Q10 + Q11													
35	Recidivists in Q12 + Q13													
36	Recidivists from Q14 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15B-1
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5													
2	Recidivists in Q5													
3	Recidivists in Q6													
4	Recidivists in Q7													
5	Recidivists in Q8													
6	Recidivists in Q9 + Q10													
7	Recidivists in Q11 + Q12													
8	Recidivists in Q13 + Q14													
9	Recidivists from Q15 on													
10	NUMBER ENTERING IN Q6													
11	Recidivists in Q6													
12	Recidivists in Q7													
13	Recidivists in Q8													
14	Recidivists in Q9													
15	Recidivists in Q10 + Q11													
16	Recidivists in Q12 + Q13													
17	Recidivists in Q14 + Q15													
18	Recidivists from Q16 on													
19	NUMBER ENTERING IN Q7													
20	Recidivists in Q7													
21	Recidivists in Q8													
22	Recidivists in Q9													
23	Recidivists in Q10													
24	Recidivists in Q11 + Q12													
25	Recidivists in Q13 + Q14													
26	Recidivists in Q15 + Q16													
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8													
29	Recidivists in Q8													
30	Recidivists in Q9													
31	Recidivists in Q10													
32	Recidivists in Q11													
33	Recidivists in Q12 + Q13													
34	Recidivists in Q14 + Q15													
35	Recidivists in Q16 + Q17													
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - PROBLEM DRINKERS

TABLE NO. 15C-1
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9													
2	Recidivists in Q9													
3	Recidivists in Q10													
4	Recidivists in Q11													
5	Recidivists in Q12													
6	Recidivists in Q13 + Q14													
7	Recidivists in Q15 + Q16													
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10													
11	Recidivists in Q10													
12	Recidivists in Q11													
13	Recidivists in Q12													
14	Recidivists in Q13													
15	Recidivists in Q14 + Q15													
16	Recidivists in Q16 + Q17													
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11													
20	Recidivists in Q11													
21	Recidivists in Q12													
22	Recidivists in Q13													
23	Recidivists in Q14													
24	Recidivists in Q15 + Q16													
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12													
29	Recidivists in Q12													
30	Recidivists in Q13													
31	Recidivists in Q14													
32	Recidivists in Q15													
33	Recidivists in Q16 + Q17													
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15A-2
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1													
2	Recidivists in Q1													
3	Recidivists in Q2													
4	Recidivists in Q3													
5	Recidivists in Q4													
6	Recidivists in Q5 + Q6													
7	Recidivists in Q7 + Q8													
8	Recidivists in Q9 + Q10													
9	Recidivists from Q11 on													
10	NUMBER ENTERING IN Q2													
11	Recidivists in Q2													
12	Recidivists in Q3													
13	Recidivists in Q4													
14	Recidivists in Q5													
15	Recidivists in Q6 + Q7													
16	Recidivists in Q8 + Q9													
17	Recidivists in Q10 + Q11													
18	Recidivists from Q12 on													
19	NUMBER ENTERING IN Q3													
20	Recidivists in Q3													
21	Recidivists in Q4													
22	Recidivists in Q5													
23	Recidivists in Q6													
24	Recidivists in Q7 + Q8													
25	Recidivists in Q9 + Q10													
26	Recidivists in Q11 + Q12													
27	Recidivists from Q13 on													
28	NUMBER ENTERING IN Q4													
29	Recidivists in Q4													
30	Recidivists in Q5													
31	Recidivists in Q6													
32	Recidivists in Q7													
33	Recidivists in Q8 + Q9													
34	Recidivists in Q10 + Q11													
35	Recidivists in Q12 + Q13													
36	Recidivists from Q14 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15B-2
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5													
2	Recidivists in Q5													
3	Recidivists in Q6													
4	Recidivists in Q7													
5	Recidivists in Q8													
6	Recidivists in Q9 + Q10													
7	Recidivists in Q11 + Q12													
8	Recidivists in Q13 + Q14													
9	Recidivists from Q15 on													
10	NUMBER ENTERING IN Q6													
11	Recidivists in Q6													
12	Recidivists in Q7													
13	Recidivists in Q8													
14	Recidivists in Q9													
15	Recidivists in Q10 + Q11													
16	Recidivists in Q12 + Q13													
17	Recidivists in Q14 + Q15													
18	Recidivists from Q16 on													
19	NUMBER ENTERING IN Q7													
20	Recidivists in Q7													
21	Recidivists in Q8													
22	Recidivists in Q9													
23	Recidivists in Q10													
24	Recidivists in Q11 + Q12													
25	Recidivists in Q13 + Q14													
26	Recidivists in Q15 + Q16													
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8													
29	Recidivists in Q8													
30	Recidivists in Q9													
31	Recidivists in Q10													
32	Recidivists in Q11													
33	Recidivists in Q12 + Q13													
34	Recidivists in Q14 + Q15													
35	Recidivists in Q16 + Q17													
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - UNIDENTIFIED DRINKERS

TABLE NO. 15C-2
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9													
2	Recidivists in Q9													
3	Recidivists in Q10													
4	Recidivists in Q11													
5	Recidivists in Q12													
6	Recidivists in Q13 + Q14													
7	Recidivists in Q15 + Q16													
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10													
11	Recidivists in Q10													
12	Recidivists in Q11													
13	Recidivists in Q12													
14	Recidivists in Q13													
15	Recidivists in Q14 + Q15													
16	Recidivists in Q16 + Q17													
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11													
20	Recidivists in Q11													
21	Recidivists in Q12													
22	Recidivists in Q13													
23	Recidivists in Q14													
24	Recidivists in Q15 + Q16													
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12													
29	Recidivists in Q12													
30	Recidivists in Q13													
31	Recidivists in Q14													
32	Recidivists in Q15													
33	Recidivists in Q16 + Q17													
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15A-3
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q1													
2	Recidivists in Q1													
3	Recidivists in Q2													
4	Recidivists in Q3													
5	Recidivists in Q4													
6	Recidivists in Q5 + Q6													
7	Recidivists in Q7 + Q8													
8	Recidivists in Q9 + Q10													
9	Recidivists from Q11 on													
10	NUMBER ENTERING IN Q2													
11	Recidivists in Q2													
12	Recidivists in Q3													
13	Recidivists in Q4													
14	Recidivists in Q5													
15	Recidivists in Q6 + Q7													
16	Recidivists in Q8 + Q9													
17	Recidivists in Q10 + Q11													
18	Recidivists from Q12 on													
19	NUMBER ENTERING IN Q3													
20	Recidivists in Q3													
21	Recidivists in Q4													
22	Recidivists in Q5													
23	Recidivists in Q6													
24	Recidivists in Q7 + Q8													
25	Recidivists in Q9 + Q10													
26	Recidivists in Q11 + Q12													
27	Recidivists from Q13 on													
28	NUMBER ENTERING IN Q4													
29	Recidivists in Q4													
30	Recidivists in Q5													
31	Recidivists in Q6													
32	Recidivists in Q7													
33	Recidivists in Q8 + Q9													
34	Recidivists in Q10 + Q11													
35	Recidivists in Q12 + Q13													
36	Recidivists from Q14 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15B-3
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q5													
2	Recidivists in Q5													
3	Recidivists in Q6													
4	Recidivists in Q7													
5	Recidivists in Q8													
6	Recidivists in Q9 + Q10													
7	Recidivists in Q11 + Q12													
8	Recidivists in Q13 + Q14													
9	Recidivists from Q15 on													
10	NUMBER ENTERING IN Q6													
11	Recidivists in Q6													
12	Recidivists in Q7													
13	Recidivists in Q8													
14	Recidivists in Q9													
15	Recidivists in Q10 + Q11													
16	Recidivists in Q12 + Q13													
17	Recidivists in Q14 + Q15													
18	Recidivists from Q16 on													
19	NUMBER ENTERING IN Q7													
20	Recidivists in Q7													
21	Recidivists in Q8													
22	Recidivists in Q9													
23	Recidivists in Q10													
24	Recidivists in Q11 + Q12													
25	Recidivists in Q13 + Q14													
26	Recidivists in Q15 + Q16													
27	Recidivists from Q17 on													
28	NUMBER ENTERING IN Q8													
29	Recidivists in Q8													
30	Recidivists in Q9													
31	Recidivists in Q10													
32	Recidivists in Q11													
33	Recidivists in Q12 + Q13													
34	Recidivists in Q14 + Q15													
35	Recidivists in Q16 + Q17													
36	Recidivists from Q18 on													

TABLE 15

ANNUAL REHABILITATION RECIDIVISTS
BY REHABILITATION PROGRAM - NON-PROBLEM DRINKERS

TABLE NO. 15C-3
PROJECT _____
ANNUAL ENDING _____

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDOM CNTRL.
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	NUMBER ENTERING IN Q9													
2	Recidivists in Q9													
3	Recidivists in Q10													
4	Recidivists in Q11													
5	Recidivists in Q12													
6	Recidivists in Q13 + Q14													
7	Recidivists in Q15 + Q16													
8	Recidivists in Q17 + Q18													
9	Recidivists from Q19 on													
10	NUMBER ENTERING IN Q10													
11	Recidivists in Q10													
12	Recidivists in Q11													
13	Recidivists in Q12													
14	Recidivists in Q13													
15	Recidivists in Q14 + Q15													
16	Recidivists in Q16 + Q17													
17	Recidivists in Q18 + Q19													
18	Recidivists from Q20 on													
19	NUMBER ENTERING IN Q11													
20	Recidivists in Q11													
21	Recidivists in Q12													
22	Recidivists in Q13													
23	Recidivists in Q14													
24	Recidivists in Q15 + Q16													
25	Recidivists in Q17 + Q18													
26	Recidivists in Q19 + Q20													
27	Recidivists from Q21 on													
28	NUMBER ENTERING IN Q12													
29	Recidivists in Q12													
30	Recidivists in Q13													
31	Recidivists in Q14													
32	Recidivists in Q15													
33	Recidivists in Q16 + Q17													
34	Recidivists in Q18 + Q19													
35	Recidivists in Q20 + Q21													
36	Recidivists from Q22 on													

APPENDIX B

Alcohol Safety School and Group Therapy Questionnaire

QUESTIONS FOR ALCOHOL SAFETY SCHOOLS AND GROUP THERAPY

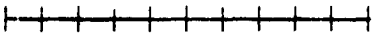
1. Participants are led by:

   a. ____ one individual

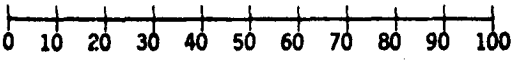
   b. ____ two co-leaders

   c. ____ three or more persons

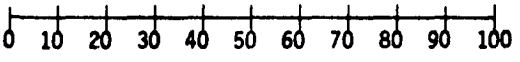
2. Rate on the 10-point scale below to what extent the leader's role is that of teacher-instructor versus therapist-counselor.

   Instructor  Counselor

3. The percentage of time utilized by the countermeasure to convey information (e.g., on drinking and driving) to participants is

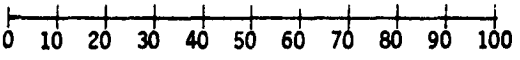
   

4. The percentage of time used to help participants with their social, emotional, and behavioral problems is

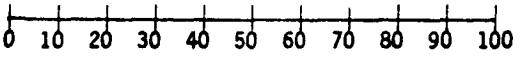
   

   (Note: The sum of #3 and #4 should not exceed 100%)

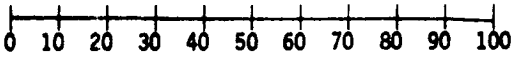
5. The percentage of time spent in didactic approaches such as providing lectures, films, guest speakers, etc., is

6. The percentage of time spent in discussion between participants and the leader(s) is

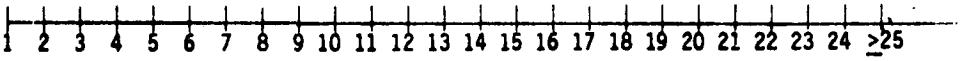
   

7. The percentage of time spent in discussion among the participants themselves is

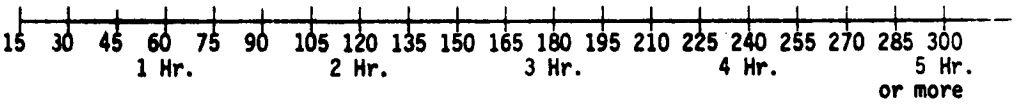


(Note: the sum of #5, #6, and #7 should not exceed 100%)

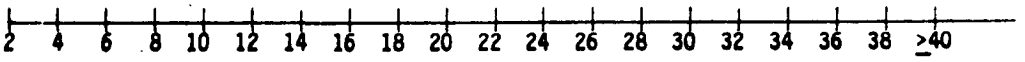
8. The prescribed (standard) or average number of sessions attended is



9. The prescribed length of each session is



10. The average number of participants attending the sessions is



APPENDIX C

A Listing of Modalities By Name and Factor Scores

A LISTING OF MODALITIES BY NAME AND FACTOR SCORES

Modality Code	Description	Factor Scores Root 1	Root 2
*VT01AS	Alcohol Impaired Drivers School	.3582	.7245
AZ01AS	Phoenix DWI School - four session version	-1.7765	2.3322
AZ02AS	Phoenix DWI School - one session version	-2.6183	1.2976
AR01AS	Attitude Formation Seminar	-.7928	4.5865
FL01AS	DWI Counterattack Inc.	-.4910	2.8358
GA01AS	Traffic Improvement Program	-.4035	2.9288
IN01AS	Offender Education Program	-.2707	2.4614
KS01AS	Phase II Instructional School - two week	.4414	2.6856
KS02AS	Phase I Instructional School - one week	-.0311	2.7210
KS03AS	ATC Group Level I, Educational, (NIAAA)	.2891	2.8954
LA01AS	Alcohol Safety School	-1.7857	1.6675
ME01AS	Alcohol Safety Action Drivers School	-.7021	2.2156
MD01AS	Combination Level I School and Level II Group Therapy, County	-.4895	3.3665
MA01AS	Alcohol Safety Re-education Program	.0990	2.3436
MN01AS	Alcohol Safety School/DWI Course	-.9123	2.3393
MN02AS	Chalk Talks	-1.4511	2.0524
MO01AS	School for Alcohol Safety, Large Groups	-.8004	1.6292
MO02AS	School for Alcohol Safety, Small Groups	.5634	2.3170
NB01AS	Drinking Drivers School/DWI Class	-1.2006	2.1915
NB02AS	High Risk Potential Class	-.0935	2.2312
NB03AS	Court Re-education Class	-.8506	2.3924
NB04AS	Youthful Offenders Class	-.1908	2.1722
NH01AS	Driver Retraining School	-.0063	2.0928
OH01AS	Driver Improvement School	-1.1328	1.7076
OH02AS	Group Education for Behavior Modification	-.0097	2.8246
OK01AS	Adult Behavior Modification School	-.9934	1.7816
SC01AS	Alcohol Traffic Safety School - 1972, 1973, Quarters 1, 2	-.4885	2.9351
**SC02AS	Alcohol Traffic Safety School - 1973, Quarters 3, 4	.1267	2.3451
SD01AS	Driver Improvement School	-1.2233	2.2150
SD02AS	Problem Drinker Driver Classes	-.2205	2.3015
TX01AS	Alcohol Information and Driver Education School	-.5462	2.4190
VA01AS	Driver Improvement School - eight week version	-.3443	2.0023
VA02AS	Driver Improvement School - weekend version	.1032	2.1986

* U. S. Post Office Department two-letter state abbreviations
** Major change in personnel

Modality Code	Description	Factor Scores Root 1	Root 2
VA03AS	Fairfax Alcohol Community Education	.1664	3.0952
CA01AS	Les Roberts DWI School, El Monte	-.8972	2.3530
CA02AS	ASAP Funded Alcohol Safety Schools, Downtown, Van Nuys	-1.0728	2.1803
CA03AS	Spanish Speaking DWI School, East L. A., Downtown	-.8472	2.5574
CA04AS	Alcohol Counseling Associates, Mini ASAP	.0570	2.4844
ID01AS	Court Alcohol School	.4700	1.2519
IA01AS	School for Drinking Drivers	-.7112	4.2732
IA02AS	Behavior Modification School	.5015	3.7065
IA03AS	Juvenile Alcohol School	-.3782	4.3871
PR01AS	DWI Driver Improvement School	-.2597	1.6684
UT01AS	Drinking Driver Education	-.4511	2.0859
VT01GT	ATAC (NIAAA)	1.5583	.6266
AZ01GT	Volunteer Probation Program	1.1128	1.9368
AZ02GT	Sobriety Group, St. Luke's Hospital	.7699	.4749
AZ03GT	Youth Group, Diversified Counseling Services	.7603	1.9087
AZ04GT	Corazon Group, for Mexican-Americans	.7461	2.2652
AR01GT	Court Program for Problem Drinker Drivers	.7106	2.1139
AR02GT	Services for Problem Drinker Drivers (NIAAA)	.9210	1.5548
FL01GT	Extended Group Therapy, BAR, 1972, non-ASAP	1.9310	1.4230
FL02GT	Extended Group Therapy, BAR, 1972, ASAP funded	2.1782	1.6388
FL03GT	Extended Group Therapy, NIAAA, 1973	1.7794	1.3022
FL04GT	Extended Group Therapy, Plant City, 1973, ASAP-funded	1.1117	4.1420
FL05GT	Tampa Area Council on Alcoholism, 1973	1.1468	3.9438
GA01GT	State Alcoholism Clinic, Garrard House (NIAAA)	1.2529	1.8259
GA02GT	Preventive Treatment, ASAP-funded	.9906	2.5046
IN01GT	CASA	1.1259	5.2614
KS01GT	Alcohol Treatment Center, Level II, Group Confrontation (NIAAA)	1.1246	2.9433
KS02GT	Alcohol Treatment Center, Level III, Treatment and AA Introduction, (NIAAA)	1.2607	1.8615
LA01GT	Problem Drinker Group, Southeastern Alcoholism Clinic	1.3411	2.2539

Modality Code	Description	Factor Scores Root 1	Root 2
LA02GT	Excessive Drinker Group, Tulane University	.3822	4.4617
ME01GT	Catholic Alcohol Services (NIAAA)	1.0272	3.6982
MO01GT	Probation Department Group Therapy	.5923	3.5812
MO02GT	CCTPA Group Therapy (NIAAA)	1.8849	2.5673
NB01GT	Intake and Referral Center Group Therapy	1.1978	2.1603
OK01GT	Intermediate Care Center, State Dept. of Mental Health	.8964	1.8572
OK03GT	Community Action Program	1.1933	2.6212
OK04GT	Special Services	1.2457	2.6029
SC01GT	Group Therapy, Mid-Carolina Council	.8457	1.7923
TX01GT	Alcohol Treatment Program (NIAAA)	.7905	2.6388
CA01GT	Pasadena, East L. A. Outpatient Clinics	1.6629	4.5816
CA02GT	Mental Health Services, Arcadia	1.2476	3.8740
DE01GT	Group Therapy, Community Alcoholism Clinic	1.1692	.3906
PR01GT	Group Therapy	1.1754	.1611