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DATA EVALUATION AND METHODS RESEARCH

Identifying Problem Drinkers

In a Household Health Survey

A description of field procedures and analytical techniques developed to measure the prevalence of alcoholism.

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CONTENTS

THIS IS A REPORT on a study to develop and evaluate interview survey techniques designed to identify problem drinkers by means of a household health survey.

It describes the construction, use, and effectiveness of various measurement scales devised by the principal investigator.

Included is a complete appraisal of a major field test which was conducted in Cedar Rapids, Iowa. This appraisal comprises the details of the collection procedures, analytical methods, and a summary and assessment of the validity of the findings.

Discussed are the implications of this study and suggestions for additional research required to improve these collection techniques prior to use in the Health Interview Survey.

SYMBOLS

Data not available	---
Category not applicable	...
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

IDENTIFYING PROBLEM DRINKERS IN A HOUSEHOLD HEALTH SURVEY

Harold A. Mulford, *Principal Investigator,* and Ronald W. Wilson, *Field Director*

INTRODUCTION

This study conducted in Cedar Rapids, Iowa, was mainly concerned with the development of a set of questions which the Division of Health Interview Statistics of the National Center for Health Statistics could use to identify problem drinkers or "alcoholics" with a reasonable degree of accuracy in its continuing household health interview survey. The study also concerned itself with the respondent's reaction to being asked questions about his own and other household members' use of beverage alcohol in a health interview.

Although alcoholism as a disease remains poorly understood and so ill-defined that medical diagnosis varies greatly,[1] the fact remains that there are "alcoholics" in our society. Although, as yet, their number can be only guessed, it is known that persons who abuse alcohol are so numerous and their drinking behavior so disruptive to the social organization that society does not ignore them. Most social agencies and professionals in their regular work encounter men and women whom they label "alcoholic" and treat accordingly. A means of identifying the persons who have been so labeled (as well as those who are likely candidates) in a sample of the general population would be valuable to researchers studying the epidemiology as well as the etiology of alcoholism and would aid administrators of action programs designed to alleviate the alcoholism problem.

Although alcoholism has not been defined medically in terms of etiological factors or in terms of identifying psychological or biological characteristics, still we may suppose that persons who are recognized, labeled, and treated as alcoholics possess certain characteristics in common. If the label is not applied haphazardly, if alcoholics do share common distinguishing characteristics, it should be possible to discover these characteristics. Most definitions of alcoholism suggest that the distinguishing mark of the alcoholic is deviant drinking and related behavior. Typical of such definitions is the World Health Organization definition:

> The general term "alcoholism" signifies any form of drinking which in its extent goes beyond the traditional and customary "dietary" use, or the ordinary compliance with the social drinking customs of the whole community concerned, irrespective of the etiological factors leading to such behavior and irrespective also of the extent to which such etiological factors are dependent upon heredity, constitution, or acquired physiopathological metabolic influences.[2]

Keller[3] and Marconi[4] after reviewing the history of conceptions of alcoholics and alcoholism also arrived at definitions which emphasize "deviant" drinking behavior. Indeed, so far, alcoholics cannot be identified without knowledge of their use of alcohol. Although current definitions suggest the feasibility of identifying

alcoholics through interviews which inquire about beverage alcohol use, none of them specifies the behaviors involved. Thus, there remains the fundamental research question to which this study is addressed: Is it possible, by asking the respondent in a household survey sample a few simple questions about his own and other related household members' drinking behavior, to distinguish those persons whose drinking and related behavior is a *sine qua non* of the "alcoholism" problem—i.e., persons who have been labeled "alcoholic" or who are likely candidates for the label—and to do so with reasonable accuracy?

More particularly, the study objectives are:

1. To test the validity of the Iowa Scale of Preoccupation With Alcohol and the Iowa Index of Trouble Due to Drinking.
2. If the above indicators are found wanting, to then search for other questionnaire items that will distinguish alcoholics.
3. To investigate respondent reaction to being asked about his drinking in a health interview survey.
4. To develop new hypotheses regarding interviewing and other procedures for identifying alcoholics in a household health survey.

REVIEW OF PREVIOUS RESEARCH

The task of identifying the alcoholics in a general population sample must begin with only the vaguest notion of the actual nature and size of the target population. The work must necessarily proceed without an independent, unambiguous definition of the alcoholic against which the measures being studied can be precisely validated. The following operational definition is taken as a point of departure:

> An alcoholic is anyone who repeatedly drinks beverage alcohol to the extent that it adversely affects his life—his health, domestic relations, job performance, or relations with the law.

The study also proceeds from the tentative assumption that the target population approximates 3 to 6 percent of the study population, i.e., Cedar Rapids adults, 21 years of age and over. This estimate is based on the Jellinek formula, the only means presently available for making prevalence estimates. It is an indirect measure based on deaths from cirrhosis of the liver. Critics have raised many questions about the formula and its validity remains problematic.[5,6] In response to the critics, Jellinek recommended the use of the formula be discontinued and urged further search for an alternative means of identifying and counting alcoholics.[7] Parenthetically, it should be noted that even if statistical formulas yielded valid prevalence estimates—and this would be very valuable—such formulas still would not be as useful as a procedure to identify individual alcoholics in a survey sample. This would permit the gathering of more detailed information regarding the characteristics of the alcoholic population and would open many more possibilities for future etiological and epidemiological studies.

When applied to 1963 deaths from cirrhosis of the liver in Iowa, the Jellinek formula estimates that 3.1 percent of the adults of Iowa are alcoholics. Since the formula estimates are probably conservative[7] (p. 265) and since Cedar Rapids is an urban area, we would expect the Cedar Rapids rate to be higher than 3.1 percent. Thus, for working purposes it will be assumed that the Cedar Rapids rate is approximately 3 to 6 percent.

Previous work[8-11] seeking to discover the kind of behavior characterizing persons which our society recognizes as alcoholics has yielded two indexes: the Iowa Scale of Preoccupation With Alcohol and the Iowa Index of Trouble Due to Drinking.

Iowa Scale of Preoccupation With Alcohol

The genesis of the Preoccupation Scale items listed in chart 1 can be traced to 1945 when 178 Alcoholics Anonymous (AA) members responded to a questionnaire asking them about their drinking and related behavior prior to their association with the Alcoholics Anonymous group and the age at first occurrence of such behavior. Jellinek analyzed these responses[12] and developed a re-

vised questionnaire containing some 100 drinking behavior items which was administered to an additional 2,000 Alcoholics Anonymous members. There were indications that certain drinking behaviors tended to follow others in a time order.[13] Later, Jackson[14,15] using Guttman's scaling procedures found that 10 of Jellinek's items possessed a cumulative quality.

Until this point, all of the work had been done on Alcoholics Anonymous members and persons who had been institutionalized—i.e., either hospitalized or jailed as alcoholics. In 1958, Mulford and Miller[8] tested the hypothesis that a portion of a sample of the general population of Iowa would report these kinds of drinking behavior and report them in a cumulative fashion. Pursuing the methods described below, the Iowa Scale of Preoccupation With Alcohol was developed.

Chart 1. The Iowa Scale of Preoccupation With Alcohol

Contrived item scale score		
I	†I stay intoxicated for several days at a time. I worry about not being able to get a drink when I need one. I sneak drinks when no one is looking.	Agree on any two
II	†Once I start drinking it is difficult for me to stop before I become completely intoxicated. I get intoxicated on work days. I take a drink the first thing when I get up in the morning.	Agree on any two
III	†I awaken next day not being able to remember some of the things I had done while I was drinking. I take a few quick ones before going to a party to make sure I have enough. †I neglect my regular meals when I am drinking.	Agree on any two
IV	†I don't nurse my drinks: I toss them down pretty fast. I drink for the effect of alcohol with little attention to type of beverage or brand name. †Liquor has less effect on me than it used to.	Agree on any two

†These six statements were used in the National Survey conducted by the National Opinion Research Center in 1963.

NOTE: Contrived item V includes those not "preoccupied."

In the 1958 Iowa survey, interviews were conducted with 1,185 persons chosen to represent the adult population of Iowa. A description of the early development of the Preoccupation Scale has been published previously.[8] The 706 respondents who reported that they were not total abstainers were each presented with the 12 statements given in chart 1. (Respondents were given a total of 16 items, including, with modified wording, all but 1 of the 10 items which Jackson found scalable. However, 4 of the 16 items were not scalable and were discarded.) The respondents were also given these instructions:

> Here is a list of statements concerning the use of alcoholic beverages (of all kinds). For each statement check whether or not *you personally* would make that statement about your own drinking. Choose the most appropriate response.

The response alternatives were "frequently," "sometimes," and "never." The number of "frequently" responses was so small that they were combined with "sometimes" and either was scored as positive.

Hypothesis of Scalability

It was not surprising that 394 (56 percent) of the 706 drinkers rejected all 12 of the statements, which, on their face, are quite extreme. Guttman scaling procedures (a technique of scoring a list of statements of increasing severity in which a person who responds positively to a given item is also expected to respond positively to all statements of a lesser degree of severity) were then applied to the responses of all drinkers to the 12 statements. (This and the following paragraph are a summary of a more detailed description of the scaling procedures reported in Appendix I.) To improve reliability and at the same time retain all the statements, the 12 statements were combined into four contrived items, each composed of three statements, as shown in chart 1. A response to each contrived item is considered positive if "yes" was answered to any two or all three of the single statements making up the contrived item. Altogether 158 (22 percent) of the 706 drinkers responded favorably to one or more of the contrived items. A respondent is assigned a scale score which is the same as the number of the "most difficult" contrived item to which he responded positively, provided that he responded to the other contrived items of "less difficulty" in a scale fashion.

In 1961 a replication study[11] was made to test the reliability of the Preoccupation Scale.

Another similar-sized sample (n=1,213) of the adult population of Iowa was interviewed. Based on the responses of the total *drinking* population (715 cases compared with 706 in the original survey), the proportion that responded favorably to each item was slightly lower in the replication (see table 2). Considering that many of the items had nearly identical marginal frequencies, the fact that the original rank order was substantially maintained is evidence strongly supporting the stability of the scale. It is not surprising, therefore, that the 12 items were again found to possess a high degree of cumulativeness. The contrived item response frequencies of the two studies also compare favorably (table 3).

Further evidence of the reliability of the scale has been found in the highly consistent results of subsequent surveys including the 1961 survey of 235 people in a small Iowa community, Belle Plaine,[16] and a national survey of 1,515 individuals in 1963.[17] In each of the surveys the marginal frequencies of the individual items were similar, and approximately the same proportions fell into the different scale types (tables 2 and 3).

Validity of the Scale

While, as yet, evidence of the validity of the scale is meager, still, previous research has yielded certain pertinent evidence. In the absence of an independent definition or other valid criteria, it is impossible to say what scale scores, if any, distinguish alcoholics. It will be seen later that it is most reasonable to consider scale types I and II, and probably III also, as alcoholics (chart 1).

The 1958 study revealed that cutting the scale at midpoint and considering scale types I and II alcoholics yielded the rate (3 percent) of alcoholics that would be expected from the Jellinek formula when applied to Iowa deaths from cirrhosis of the liver. (An additional 3 percent of the sample scored III.) Moreover, the sociocultural distribution of the I and II's (as well as the III's) was consistent with Jellinek formula estimates. In the 1961 replication study only 17 subjects, or one-half as many as in the original study, scored I or II, but the same proportion (3 percent) scored III. The sociocultural distribution of the 17 cases was consistent with the earlier findings except that in the original study one-half of the 35 alcoholics (scale types I and II) were Catholic compared with only 1 out of the 17 scale types I and II in the replication study. In short, the scale has repeatedly identified a small segment (approximately 3 to 6 percent, depending on the cutting point used) of the population with a similar sociocultural makeup.

In addition, it was demonstrated by both the original (1958) and the replication (1961) study that the Preoccupation Scale scores had the logically expected association with three other measures which may be considered part of a constellation of elements which mark the extreme deviant drinker. These are the Iowa Scale of Definitions of Alcohol, which is an attitudinal measure of the extent to which drinkers define alcohol for its personal effects (see Appendix I), the Quantity-Frequency Index (see Appendix I) of the extent of alcohol consumption, and the Iowa Index of Trouble Due to Drinking.

Finally, quite consistent with the Jellinek and Jackson work with institutionalized alcoholics and AA members, it has been demonstrated that the Iowa Scale of Preoccupation With Alcohol would identify medically diagnosed alcoholics. In a study of 435 alcoholics[18] who were hospitalized in one Minnesota and two Iowa State hospitals, it was found that 80 percent of these patients were scale types I or II, and an additional 10 percent received a score of III.

In summary, previous research has demonstrated that (1) the Preoccupation Scale repeatedly identifies a small (approximately 3 to 6 percent, depending on whether scale type III, as well as types I and II, is considered "alcoholic") segment of the population with similar sociocultural characteristics, (2) the scale has the logically expected association with other indicators of extreme deviant drinking, (3) the segment of the general population identified by the scale approximates Jellinek formula estimates in size and sociocultural distribution, and (4) up to 90 percent of hospitalized alcoholics met the scale criteria.

There is one final bit of indirect evidence bearing on the validity of the scale. Although there is empirical evidence that hospitalized alcoholics and AA members manifest the behavior in question, it has been merely assumed throughout the research reviewed above that the public agrees that the kind of behavior referred to in the

Preoccupation Scale is generally labeled "alcoholic." In a recent study,[19] this assumption survived empirical scrutiny. A study of 175 persons chosen to represent the adult population of a small Iowa community revealed that the public generally agrees that anyone whose drinking is described by the several scale items is an alcoholic and should do something about his drinking. The proportion agreeing that these several items mark the alcoholic varied from 75 to 97 percent—with higher agreement with the items toward the top of the scale.

Iowa Index of Trouble Due to Drinking

Although it has been shown that persons whom society has called alcoholic—institutionalized alcoholics and AA members—report the behavior described in the Preoccupation Scale and there is public agreement that such behavior deserves the label alcoholic, still conceivably, a significant number of drinkers can "get by" with this kind of behavior without being designated alcoholic. It may be that such extreme deviant drinking is often overlooked unless and until it affects significant areas of the drinker's life or affects his ability to perform his usual social role. Moreover, certain subpopulations may be more prone than others to overlook such behavior. Following this rationale, the Iowa Index of Trouble Due to Drinking was constructed as a supplement to, or perhaps an alternative for, the Preoccupation Scale.

Chart 2. The Iowa Index of Trouble Due to Drinking

1. Has an employer ever fired you or threatened to fire you if you did not cut down or quit drinking?	Yes	No
2. Has your husband (wife) ever left you or threatened to leave you if you did not do something about your drinking?	Yes	No
3. Has your husband (wife) or other family member ever complained that you spend too much money for alcoholic beverages?	Yes	No
4. Have you ever been picked up or arrested by the police for intoxication or other charges involving alcoholic beverages?	Yes	No
5. Has a physician ever told you that drinking was injuring your health?	Yes	No

This index has been given less study than the Preoccupation Scale. Although the original 1958 survey employed items similar to those listed above, the index in its present form was first used in the 1961 Iowa study where 7 percent of the drinkers (or 4 percent of all adults) reported one or more troubles. In a recent national survey[17] 10 percent of the respondents reported one or more of these troubles. The Trouble Index scores have been found highly associated with Preoccupation Scale scores in the two state surveys and in the national survey. Moreover, most of the 435 hospitalized alcoholics reported these kinds of troubles due to drinking. Finally, we have demonstrated[19] that there is even greater public agreement that these troubles mark the alcoholic than in the case of the preoccupation items. The validity of this index will also be examined in this study. It is suspected that it may suffer from too many "false-positive" cases.

STUDY DESIGN

Specifications

1. Wherever possible, National Health Survey (NHS) study procedures will be simulated.
2. A random sample of housing units in an urban area will be obtained.
3. The random sample will be "loaded" with addresses of households containing known alcoholics and this fact will be concealed from the interviewers.
4. The Iowa Scale of Preoccupation With Alcohol and the Iowa Index of Trouble Due to Drinking as well as other questions shown by previous studies to be indicative of extreme deviant drinking will be incorporated into a questionnaire containing many regular health survey questions.
5. At-home adult members of a household will be interviewed personally and any responsible adult family member may respond for members not at home.

Sampling Procedures

General household sample.—The statistical laboratory of Iowa State University at Ames, Iowa, drew a probability sample of housing units in Cedar Rapids, Iowa (population approximately 93,000). The city was stratified by its 25 voting

precincts. Within each precinct, city blocks were selected randomly in proportion to the number of housing units in the precinct. The number of blocks drawn per precinct ranged from 3 to 14. A total of 150 blocks was drawn. From each block was drawn a cluster of housing units. Although it was intended that the clusters would contain four adjacent housing units, the actual number of housing units drawn from each block varied from two to eight. This variation arose from the fact that the 1960 census of housing was used to estimate the number of housing units in a block, but the actual number had, in some cases, changed and the cluster size varied accordingly. For example, if the census indicated 10 housing units in a particular block but field observation discovered 5 new ones had been added, then 6 housing units rather than 4 were selected from that block.

After the sample blocks were drawn, field workers determined the actual number of housing units in the block and randomly selected a housing unit and the appropriate number of adjacent units. Addresses were recorded and the number of households at each address was checked. In the end, this general population sample consisted of 583 households. The general household sample was to serve a number of purposes:

1. To provide one more test of the stability of the measures under study.
2. To simulate NHS interviewing procedures and check public response to being asked about drinking behavior as part of a health survey.
3. To camouflage the known alcoholics from the interviewers.
4. To discover whether items that were common to known alcoholics also distinguished an "unreasonable" proportion of the general population which would be indicative of many false positives.

Known alcoholics.—In order to test the ability of the Preoccupation Scale, the Trouble Index, or other items to identify alcoholics, it was necessary to include in the sample a number of "known alcoholics," that is, persons previously identified as alcoholics by independent criteria. In the absence of an unambiguous definition, the criteria used to identify the "known alcoholic" population should approximate those by which society generally recognizes and labels alcoholics. Although alcoholism is now considered a medical disease and a major health problem, present knowledge still indicates that it would be futile to rely on medical diagnoses if the study target population is drinkers whose behavior constitutes the alcoholism problem. A recent study of Iowa physicians [20] shows that for every patient they diagnosed as alcoholic, they saw two other patients whose complaint was mainly attributable to excessive drinking, although alcoholism was not diagnosed. In another study [1] of admissions to a large general hospital, a research team headed by a physician reviewed the medical records of 3,000 patients and diagnosed more than twice as many of these patients to be alcoholic as did the chief admitting officer. Moreover, it has already been demonstrated that 80 to 90 percent of hospitalized, medically diagnosed alcoholics meet the Preoccupation Scale criteria, but the concern of this study is the *noninstitutionalized* alcoholics.

As a practical matter, the identification and labeling of a person as an alcoholic is a reaction to the subject's drinking behavior by some combination of his family, friends, employer, and various community agencies and professionals which may or may not include a physician. Therefore, the records of several community agencies and the judgment of several "resource" persons were relied on to obtain a group of known alcoholics. Sources included police files and police officers, court records, AA leaders, company personnel managers, clergymen, judges, and the county welfare office. In addition, two clinicians associated with a State hospital and who work with alcoholics in the area were consulted.

The resource persons contacted were given an explanation of the study aims and purposes, confidentiality was assured, and they were asked for names and addresses of persons in the community whom they considered alcoholics. They were given the earlier stated operational definition (see "Review of Previous Research") of the alcoholic as a guide and these instructions: "We are looking for cases that are currently active—within the past year." Although the resource person was told, "If you list a case which does not fit our definition but whom you consider to be an alcoholic nevertheless, please make a special

note of it," no such cases were reported. Efforts were also made to obtain the following information about these "known alcoholics": –age, sex, marital status, and occupation. It should be noted at this point that the Index of Trouble Due to Drinking is not entirely independent of this definition. This will receive further attention later.

A master list of 381 names was compiled from the several sources. The list was then submitted to those resource persons who seemed most knowledgeable about the city of Cedar Rapids and alcoholics for their confirmation. In addition, the master list was checked against the police files for the past 2 years for records of drinking related arrests. The list was also checked against past records of the alcoholic ward at a nearby State mental health institute, a Veterans Administration hospital, and the State Psychopathic Hospital, all of which serve the Cedar Rapids area. Only persons whose name was submitted or confirmed by two or more sources were considered as known alcoholics for the study.

About half of the original 381 names were lost for lack of confirmation by a second source. Usually, this was because the second source did not know the subject in question. Further losses occurred due to a variety of reasons—some lived outside the sampling area, some were removed from the list because one or more of the resource persons expressed the belief that the subject in question had been sober for some time, or that he was currently a member of Alcoholics Anonymous, or that he was deceased. Further losses occurred prior to the interview, when a check of the addresses of the known alcoholics revealed that for 33 of them no address could be obtained. Thus, the final list of known alcoholics added to the general sample contained 120 persons living in 116 housing units. (During the actual interviewing it was discovered that 27 of the known alcoholics no longer lived at the address given. Five of the addresses were vacant.) All of these 120 known alcoholics had been identified or confirmed by at least two sources and more than half of them were so designated by more than two.

Neighbors of alcoholics.—Since the general sample consisted of clusters of housing units, the "alcoholic addresses" would be conspicuous to the interviewers because they stood alone. To overcome this, it was decided to include the alcoholic's neighbor in the sample. Since one of the known alcoholics fell into the general sample and one lived adjacent to a general sample address, it was necessary to select only 114 neighbors to "camouflage" the 116 alcoholics (table 1). The right or left neighbor of the alcoholic was selected randomly. This brought the total number of housing units in the sample to 813. The known alcoholics are compared with their neighbors in tables 12 and 13.

Interviewer Selection and Training

A professional, experienced interviewer supervisor was employed to aid the principal investigator and field director in recruiting, training, and supervising the interviewers. Nineteen interviewers were recruited. They were all females, most of them housewives, ranging in age from 23 to 63 years. Except for two university students, they were residents of Cedar Rapids and vicinity. All but one was an experienced interviewer.

Three 2½-hour training sessions were held. At the first session, and before the nature of the study was revealed, each interviewer took the role of a respondent and completed one of the questionnaires she would be using in the study. This served to acquaint the interviewer with the questionnaire and to provide information about the interviewer for possible use in later analysis of the study methods. The interviewer manual was studied in detail at one of the sessions.

Between the second and third training sessions, interviewers were required to conduct three to five practice interviews. Their experience and any problems they had encountered were reviewed in the last training session. Also, during the last training session the interviewers who had encountered difficulty in their practice interviews were asked to interview each other as a demonstration for the group. Before the field work began, one interviewer withdrew (her husband had a drinking problem), and one was dropped because of incompetence. Thus, 17 interviewers did the field work.

The study was explained to the interviewers as a survey to investigate the connection between health and drinking habits of a sample of the Cedar

Rapids population. The interviewers were not told that the sample was "loaded" with known alcoholics. After the first day of interviewing, some of them voiced suspicions that they were encountering more than the usual number of very heavy drinkers. However, this was not particularly disturbing to them and they were told that regardless of such suspicions they should proceed as though they were dealing with an ordinary sample. After the field work was completed, they were told that the sample included a group of known alcoholics.

Assignments.—Since the interviewers were residents of Cedar Rapids, in the interest of confidentiality and to avoid possible embarrassment, assignments were so made as to minimize the likelihood that interviewers would be interviewing a personal acquaintance. No interviewer was given assignments in her own neighborhood. Moreover, the interviewers were instructed that if they arrived at an address of a friend or personal acquaintance, they were to leave that address for another interviewer. Otherwise, assignments were made as randomly as possible with special care taken to distribute the known alcoholics among all 17 interviewers. Thus, each interviewer had assignments in several parts of the city. Interviewing was done during all parts of the day, and interviewers made daily reports to the field director and interviewer supervisor, turning in the completed questionnaires. The field work was conducted during the first 2 weeks of January 1964.

Interviewing procedures.—Information was obtained either from or about all members of a household who were at least 21 years old or were married. Interviews were conducted in a group situation for all adults present at the time of the interview. Information on absent related household members was obtained from one of the members present (usually the spouse), hereafter referred to as a "proxy respondent." Interviewers returned later to interview unrelated absent household members.

The questionnaire was precoded except for several open-ended questions concerning illnesses. The interviewer recorded the responses to all questions except two series of scale questions. For these scale questions, self-respondents were handed questionnaire insert pages containing the Preoccupation Scale and the Definitions of Alcohol Scale and recorded their own responses. For absent related household members, the interviewer asked these scale items of the member being interviewed.

The interviews averaged about 40 minutes in length and ranged from 20 to 90 minutes. Interviewers were instructed to make as many callbacks as necessary. Where repeated refusals were encountered, a second, and in some cases a third, interviewer was sent. With few exceptions, all interview questions had been repeatedly used in previous studies and in addition the questionnaire was itself pretested. (See Appendix II for definitions of terms used in this report and Appendix III for a copy of the survey questionnaire.)

Each day at least one of each interviewer's questionnaires was validated by a phone call to the respondent who was again asked some of the key questions. In all, about 15 percent of the questionnaires were thus validated. Errors were few and there was no evidence of careless interviewing or falsification of answers.

REVIEW OF FIELD WORK

EXPERIENCE

Both the field director and interviewer supervisor worked closely with the interviewers and had personal contact with them at least once a day. The interviewers were quite interested and even enthusiastic about working on this particular survey. Some commented that it was the most interesting study they had worked on. Interviewers reported an impression that some persons welcomed an opportunity to discuss their drinking problems.

As in several previous surveys, prior apprehension regarding inquiries about respondent drinking habits proved ill-founded. All indications were that the interviewing proceeded smoothly and that the interviewers were well received by the respondents. No unusual difficulties were encountered in interviewing either abstaining or drinking respondents. Even heavy drinkers and alcoholics were cooperative. An indication of the rapport between interviewers and respondents is evidenced by the high return rate shown in table 1.

Interestingly enough, the refusal rate was actually lower among the known alcoholics.

Initially, there were 813 addresses or households which the interviewers were instructed to contact. However, despite previous checking at the time the sample was drawn, several of these addresses contained more than one household. Thus, when the interviewing was completed there was a total of 822 households at which an attempt was made to obtain an interview. Interviews were completed at 727 households, for an overall completion rate of 88.4 percent. However, in computing completion rates, 37 households should be omitted from the total, because no interview was attempted or even possible. The main reason was vacancies; 30 housing units were vacant. In addition, two units were occupied by single persons under the age of 21 years who were therefore outside the bounds of the sample criteria. One unit was occupied by persons who had a regular home elsewhere, and four addresses referred to nonexistent units. With these units removed, the completion rate was 92.6 percent. Table 1 presents the completion rates for the total sample and the three subsamples.

RESULTS

Preoccupation Scale

Tables 2 and 3 show that the responses to the Preoccupation Scale by the Cedar Rapids general population sample are highly consistent with those of previous general population samples. The marginal frequencies of the individual items (table 2) are similar; and table 3 shows that, comparable with previous results, 2 percent of the Cedar Rapids general population sample received a score of I or II and 3 percent scored III.

Considering that an earlier study had demonstrated that 90 percent of medically diagnosed hospitalized alcoholics scored high on the Preoccupation Scale and hazarding the assumption that such alcoholics represent all alcoholics, it was thought that, in this study likewise, some 80 percent of the known alcoholics would score I or II and another 10 percent would score III. However, this was not the case. Table 3 shows that only 39 percent of our known alcoholics scored I or II and 11 percent scored III, while another 9 percent scored IV. There is little hesitation to lower the cutting point employed in earlier Iowa surveys and consider scale type III's as well as I's and II's to be alcoholics because in the Cedar Rapids general sample as well as in previous studies this would isolate as alcoholics only 5 or 6 percent of the general population, which does not seem unreasonable. But to lower it still further and consider type IV's as alcoholics would mean that 10 to 13 percent of the general population would fall into the "alcoholic" category, and a strong likelihood of false positive cases arises. The failure of the known alcoholics to meet the scale criteria to the extent that institutionalized alcoholics do suggests that institutionalized alcoholics are highly selected or have redefined themselves and their drinking practices. Conceivably, a major selective factor is the amount of interpersonal trouble encountered. It is also likely that institutionalization itself has helped the person see his drinking habits as others do.

The stability of the scale across so many general population samples, its ability to identify hospitalized alcoholics, and the fact that it did distinguish one-half of the known alcoholics in the present study combine to justify further analysis seeking clues as to why the scale missed one-half of the known alcoholics. The basic question raised is, "How do those who scored high differ from those who did not?" The answer may lie in one or more of these possible sources of bias: (1) the procedure employed to identify the known alcoholics, (2) the interviewers and interviewing procedures, (3) the fact that in some instances a family member ("proxy") responded for absent alcoholics, (4) the scale may selectively identify only alcoholics with certain sociocultural, behavioral, or attitudinal characteristics. These possibilities are considered in order.

1. Little or no evidenc was found for indicting the sources used to identify the known alcoholics. It was found that three resource persons provided names of alcoholics most of whom did not meet the scale criteria. But, most of these names were of higher income persons. Presently it will be seen that this fact tends to relieve the three resource persons as a source of bias.

2. No evidence of interviewer bias was detected. The known alcoholics who failed to meet the Preoccupation Scale criteria were well distributed among the interviewers. Most interviewers had only from two to five known alcoholics in their assignment. Three were given between 10 and 12. The alcoholics who failed to scale were well distributed among the interviewers; therefore no bias is attributed to interviewer variation.

3. Analysis of self versus "proxy" responses among known alcoholics (shown in tables 4-6) revealed that in households containing known alcoholics, proxies were more likely than the alcoholic himself to report trouble in the household and were more inclined to rate the alcoholic higher on the Definitions of Alcohol Scale. There was a slight tendency for proxies to score the alcoholic higher on the Preoccupation Scale. In the general sample, proxies were more likely than self to report heavy drinking and trouble due to drinking. However, the difference between self and proxy responses is not great enough to account for the failure of half the known alcoholics to achieve high scale scores.

4. Tables 7 and 8 show that, as a group, subjects who scored high on the Preoccupation Scale (as well as on the Trouble Index and the two additional indicators of deviant drinking) differed on certain sociocultural measures from those who scored low. These differences suggest that the scale may more successfully identify alcoholics in certain subpopulations than in others.

The outstanding sociocultural differences between the known alcoholics who met the Preoccupation Scale criteria and those who did not are education and income (table 11). Thus, as we would expect, table 11 reveals that the scale more successfully identified (scale scores I-III) the known alcoholics with lower rather than higher education and income. It identified three out of four (74.3 percent) of the known alcoholics with an income less than $6,000, but only one in three (35.4 percent) of those with higher incomes (fig. 1). At the same time, the scale distinguished 4.0 percent of the general population with incomes under $6,000 and 5.1 percent of those with higher incomes. This seems reasonable in view of our original assumption that the target population constitutes about 3 to 6 percent of the general population. The scale also more successfully identifies alcoholics in the lower rather than the higher education categories.

However, it is interesting to note that in the general population it was the highest income category that had the highest rate of preoccupation scores I-III. This may be a chance variation but it deserves attention in future studies as does the variation in rates of presumed alcoholics in other social segments. Moreover, the rate of presumed alcoholics in the several social segments of the general population as measured by the Preoccupation Scale should be compared with the rates as measured by the Trouble Due to Drinking Index.

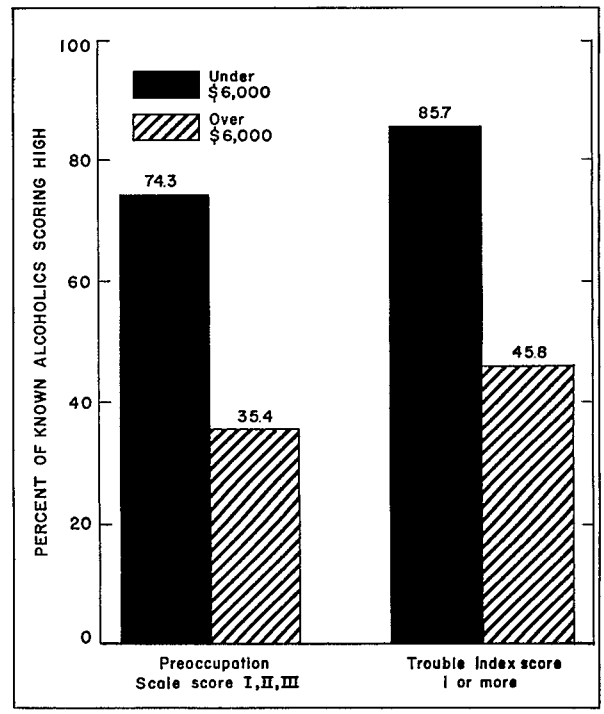

Figure 1. Percent of known alcoholics scoring high on Preoccupation With Alcohol Scale (I, II, III) and Trouble Due to Drinking Index (1 or more), by income.

Trouble Index

As in previous studies, the Preoccupation Scale scores again have the logically expected association with the Trouble Due to Drinking Index as well as with the other two indicators of extreme deviant drinking, the Quantity-Frequency Index and the Iowa Scale of Definitions of Alcohol. This is apparent from tables 9 and 10. Table 10 shows that 93.2 percent of the known alcoholics with high Preoccupation Scale scores reported one or more troubles due to drinking compared with 33.3 percent of the lower scale types. The lower rather than the higher income known alcoholics tended to report troubles as shown in table 11, where 85.7 percent of the known alcoholics with incomes under $6,000 (and 45.8 percent of those over $6,000) reported one or more troubles (fig. 1). By comparison, only 6.2 percent of the general population with less than $6,000 and 5.1 percent of those with higher incomes reported trouble. Moreover, the Trouble Index, as well as the Preoccupation Scale, more successfully identified the alcoholics in the lower rather than higher education categories. While 90.3 percent of the known alcoholics who were not high school graduates reported trouble, only 38.7 percent of those with any college education did so. By comparison, 7.9 and 3.3 percent of the general population in these two educational categories reported trouble (table 11).

Since neither the Preoccupation Scale nor the Index of Trouble Due to Drinking was entirely adequate to the task of distinguishing alcoholics, it was decided to employ a general regression analysis to examine responses to all drinking questions asked in the interview in order to learn which of them most successfully discriminate between the known alcoholics and the general sample. A split-half procedure was used, in which the sample was randomly divided into two groups. Findings from the analysis of the first half were then compared for consistency with the results for the remaining half of the sample. In view of the educational and income differences already revealed, these two factors were controlled. In essence, this regression analysis treated the general sample and the known alcoholics as one population and then sought to discover the smallest number of questions or items which would distinguish the largest proportion of the known alcoholics.

In all, 47 separate questionnaire items were used in the regression analysis. This included the Preoccupation Scale scores, total scores on the Trouble Index, Definition Scale scores, and Quantity-Frequency Index scores. Also included were the individual items that constitute the Preoccupation Scale, the Trouble Index, and the Definition Scale plus several other questions. Although the regression analysis failed to reveal any new set of items which was more discriminating than either the Preoccupation Scale scores or the Trouble Index scores, seven items were found to be especially discriminating. That is, these items consistently were most discriminating across the split-half groupings and the different education and income categories. Six of the seven items were from the Preoccupation Scale, while the seventh one, which seemed to have the highest discriminating power, was from the Trouble Index. This was the item asking about trouble with police. The other six most discriminating items were "I get intoxicated on work days," "I worry about not being able to get a drink when I need one," "I stay intoxicated for several days at a time," "Once I start drinking, it is difficult for me to stop before I become completely intoxicated," "I drink steadily for several days at a time," and "Without realizing what I am doing, I end up drinking more than I had planned to."

The main value derived from the regression analysis was that it tended to confirm the results of earlier analysis, showing first, the superior ability of the Preoccupation Scale and the Trouble Index to distinguish alcoholics, and secondly, that both of these measures more successfully identify alcoholics in the lower rather than higher educational and income categories.

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This investigation of the feasibility of asking respondents in a household health survey about their drinking behavior with the end in view that problem drinkers or alcoholics might be distinguished confirms several findings of earlier studies as follows. Members of the general

population will discuss their drinking behavior with interviewers and apparently they are not offended or even disturbed by inquiries about even the most extreme deviant drinking. Again, as in several previous surveys, virtually the same proportion of the general population sample received Preoccupation Scale scores of I, II, or III, and the marginal frequencies of individual items were very similar. And once more the Preoccupation Scale scores had essentially the same association with three other indexes of extreme deviant drinking—the Trouble Due to Drinking Index, the Quantity-Frequency Index, and the Definitions of Alcohol Scale.

The findings of the present study that both the Preoccupation Scale and the Trouble Index identify three out of four lower socioeconomic status known alcoholics and one out of three of those with more income and education is encouraging—especially in view of the findings that neither measure identifies an "unreasonable" proportion of the general population. Of course, the degree of precision to be demanded of a measure is a matter of judgment and ultimately turns upon the question of practical utility. Although much more work is needed to discover items that will identify upper socioeconomic status alcoholics and efforts should be made to find items that will identify an even higher proportion of those in the lower socioeconomic status category, still it is concluded that this study has approached a useful degree of accuracy in the identification of lower socioeconomic status alcoholics.

In short, while the identification of alcoholics by survey procedures appears feasible, more work is needed. Matters deserving attention in future studies include:

1. The concepts alcoholic and alcoholism remain ill-defined. Future research to develop procedures for identifying alcoholics should give careful attention to the character of the target population.
2. The problem of false negative and false positive cases deserves further attention.
3. Although this is not the preferred state of affairs, we should not overlook the possibility that the Preoccupation Scale (or another set of questions) might yield useful, accurate prevalence estimates yet be inadequate for identifying individual alcoholics. Conceivably, a set of questions might reliably identify a segment of the population which may or may not be composed of alcoholics but which would closely approximate the size of the alcoholic population and would therefore yield accurate estimates of the prevalence of alcoholics.
4. Finally, any measure that is developed in one local area should be tested in other areas of the country.

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DETAILED TABLES

Table 1. Number and percent distribution of households contacted by interview completion rate, according to type of subsample: Cedar Rapids Health Survey, 1964

Households contacted and interview completion rate	Total sample	General sample	Known alcoholics	Neighbors of alcoholics
	Number of households			
Total contacted[1]	785	567	111	107
Completed interviews	727	524	[2]106	97
Uncompleted interviews	58	43	5	10
Vacation	20	16	2	2
Refusal	30	23	2	5
Not home	6	3	-	3
Other	2	1	1	-
	Percent distribution			
Total contacted[1]	100.0	100.0	100.0	100.0
Completed interviews	92.6	92.4	[2]95.5	90.7
Uncompleted interviews	7.4	7.6	4.5	9.3
Vacation	2.5	2.8	1.8	1.9
Refusal	3.8	4.1	1.8	4.7
Not home	0.8	0.5	-	2.8
Other	0.3	0.2	0.9	-
Originally in sample, but removed after field work	Number of households			
Total	37	25	5	7
Vacant	30	19	5	6
Under 21 years (single)	2	2	-	-
Regular home elsewhere	1	-	-	1
Nonexistent unit	4	4	-	-

[1]Does not include 37 households drawn in original sample, but later excluded from the completion rates for various reasons. Had these 37 cases been included the total completion rate would have been 88.4 percent instead of 92.6 percent.

[2]This figure includes 22 households (19.8 percent) where interviews were conducted, but the known alcoholic was no longer a household member. This left 84 households containing a total of 88 known alcoholics.

Table 2. Percent of positive responses to Preoccupation With Alcohol Scale statements: a comparison of several samples

Preoccupation With Alcohol Scale (in scale order)	General population samples (drinkers only)				
	Iowa, 1958	Iowa, 1961	Belle Plaine, 1961	NORC National, 1963	Cedar Rapids, 1964
	Percent				
1. I stay intoxicated for several days at a time--	3	1	1	1	†
2. I worry about not being able to get a drink when I need one----------	3	2	2	...	1
3. I sneak drinks when no one is looking----------	3	2	1	...	2
4. Once I start drinking it is difficult for me to stop before I become completely intoxicated---	6	3	3	6	3
5. I get intoxicated on work days----------	6	2	1	...	3
6. I take a drink the first thing when I get up in the morning----------	7	3	3	...	2
7. I awaken next day not being able to remember some of the things I had done while I was drinking----------	10	8	5	10	6
8. I take a few quick ones before going to a party to make sure I have enough----------	11	8	10	...	7
9. I neglect my regular meals when I am drinking--	14	11	9	13	10
10. I don't nurse my drinks; I toss them down pretty fast----------	20	17	19	21	14
11. I drink for the effect of alcohol with little attention to type of beverage or brand name--	22	19	18	...	15
12. Liquor has less effect on me than it used to--	24	25	28	21	21
N=	706	715	116	1,068	753

†Less than 1 percent.

Table 2. Percent of positive responses to Preoccupation With Alcohol Scale statements: a comparison of several samples—Con.

Preoccupation With Alcohol Scale (in scale order)	Known alcoholics			Exdrinkers, Cedar Rapids	
	Drinkers only, Cedar Rapids	Cedar Rapids, 1964	Hospitalized, 1961	General sample, 1964	Known alcoholics, 1964
	Percent				
1. I stay intoxicated for several days at a time--	19	28	67	9	73
2. I worry about not being able to get a drink when I need one----------	19	26	64	13	60
3. I sneak drinks when no one is looking----------	21	26	64	11	53
4. Once I start drinking it is difficult for me to stop before I become completely intoxicated---	38	44	79	20	80
5. I get intoxicated on work days----------	34	39	72	13	60
6. I take a drink the first thing when I get up in the morning----------	22	28	74	9	60
7. I awaken next day not being able to remember some of the things I had done while I was drinking----------	44	50	79	22	80
8. I take a few quick ones before going to a party to make sure I have enough----------	29	34	68	20	60
9. I neglect my regular meals when I am drinking--	53	58	89	26	80
10. I don't nurse my drinks; I toss them down pretty fast----------	48	53	85	20	80
11. I drink for the effect of alcohol with little attention to type of beverage or brand name--	38	44	63	24	73
12. Liquor has less effect on me than it used to--	47	48	67	22	57
N=	73	88	435	46	15

Table 3. Percent receiving Preoccupation With Alcohol contrived-item scale scores: a comparison of several samples

Preoccupation With Alcohol Scale (in scale order)	Contrived-item scale score	General population samples				
		Iowa, 1958	Iowa, 1961	Belle Plaine, 1961	NORC National, 1963[1]	Cedar Rapids, 1964
		Percent				
1. I stay intoxicated for several days at a time.					1	
2. I worry about not being able to get a drink when I need one.	I-----	1	+	+		1
3. I sneak drinks when no one is looking.						
4. Once I start drinking it is difficult for me to stop before I become completely intoxicated.					3	
5. I get intoxicated on work days.	II----	2	1	+		1
6. I take a drink the first thing when I get up in the morning.						
7. I awaken next day not being able to remember some of the things I had done while I was drinking.					3	
8. I take a few quick ones before going to a party to make sure I have enough.	III---	3	3	2		3
9. I neglect my regular meals when I am drinking.					3	
10. I don't nurse my drinks; I toss them down pretty fast.					8	
11. I drink for the effect of alcohol with little attention to type of beverage or brand name.	IV----	7	8	7		7
12. Liquor has less effect on me than it used to.					8	
Not preoccupied	V-----	45	47	38	45	60
N =		1,185a	1,213a	235a	1,515a	1,029a

Table 3. Percent receiving Preoccupation With Alcohol contrived-item scale scores: a comparison of several samples—Con.

Preoccupation With Alcohol Scale (in scale order)	Contrived-item scale score	Known alcoholics		Drinkers versus exdrinkers			
		Cedar Rapids, 1964	Hospitalized, 1961	Cedar Rapids general sample		Cedar Rapids known alcoholics	
				Drinkers	Exdrinkers	Drinkers	Exdrinkers
		Percent					
1. I stay intoxicated for several days at a time. 2. I worry about not being able to get a drink when I need one. 3. I sneak drinks when no one is looking.	I----	30	64	1	11	21	73
4. Once I start drinking it is difficult for me to stop before I become completely intoxicated. 5. I get intoxicated on work days. 6. I take a drink the first thing when I get up in the morning.	II---	9	16	1	-	10	7
7. I awaken next day not being able to remember some of the things I had done while I was drinking. 8. I take a few quick ones before going to a party to make sure I have enough. 9. I neglect my regular meals when I am drinking.	III--	11	10	4	9	14	-
10. I don't nurse my drinks; I toss them down pretty fast. 11. I drink for the effect of alcohol with little attention to type of beverage or brand name. 12. Liquor has less effect on me than it used to.	IV---	9	5	10	2	11	-
Not preoccupied	V----	39	4	88	72	42	20
N=		88d	435d	735b	46c	73b	15c

[1]NORC 6 item scale.
[2]Less than 1 percent.

NOTE: a=total sample
b=drinkers
c=exdrinkers
d=drinkers and exdrinkers

Table 4. Number and percent distribution of general sample and of known alcoholic sample according to self and proxy respondents by the Gallup drinking question: Cedar Rapids, January 1964

Gallup question	General sample			Known alcoholics		
	Total	Self	Proxy	Total	Self	Proxy
	Number of persons					
Total	1,029	662	367	88	41	47
Drinker	753	483	270	73	33	40
Exdrinker	46	25	21	15	8	7
Abstainer	230	154	76	-	-	-
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Drinker	73.2	73.0	73.6	83.0	80.5	85.1
Exdrinker	4.5	3.8	5.7	17.0	19.5	14.9
Abstainer	22.4	23.3	20.7	-	-	-

Table 5. Number of general sample drinkers and known alcoholic self and proxy respondents, by selected drinking characteristics: Cedar Rapids, January 1964

Drinking characteristic	General sample drinkers			Known alcoholics		
	Total	Self	Proxy	Total	Self	Proxy
	Number of persons					
Total	753	483	270	88	41	47
Quantity-Frequency Index						
Low—0, 1, 3	557	380	177	33	18	15
High—2, 4, 5	190	102	88	49	23	26
Not ascertained, don't know, refused	6	1	5	6	-	6
Trouble Due to Drinking Index						
None	694	460	234	32	15	17
One or more	55	21	34	56	26	30
Not ascertained, don't know, refused	4	2	2	-	-	-
Preoccupation With Alcohol Scale						
Low—IV, V	698	454	244	42	22	20
High—I, II, III	46	24	22	44	19	25
Not ascertained, don't know, refused	9	5	4	2	-	2
Definitions of Alcohol Scale						
Low—III, IV, V	597	390	207	48	27	21
High—I, II	140	86	54	38	14	24
Not ascertained, don't know, refused	16	7	9	2	-	2
Household difficulties during past year						
No	740	477	263	61	34	27
Yes	13	6	7	27	7	20
Not ascertained, don't know, refused	-	-	-	-	-	-
Drink too much						
No	696	453	243	51	23	28
Yes	50	27	23	36	18	18
Not ascertained, don't know, refused	7	3	4	1	-	1
Alcoholism (from card A list)						
Yes	3	1	2	20	9	11

Table 6. Percent distribution of general sample drinkers and known alcoholic respondents, according to self and proxy response by selected drinking characteristics: Cedar Rapids, January 1964

Drinking characteristic	General sample drinkers			Known alcoholics		
	Total	Self	Proxy	Total	Self	Proxy
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Quantity-Frequency Index						
Low—0, 1, 3	74.0	78.7	65.6	37.5	43.9	31.9
High—2, 4, 5	25.2	21.1	32.6	55.7	56.1	55.3
Not ascertained, don't know, refused	0.8	0.2	1.9	6.8	-	12.8
Trouble Due to Drinking Index						
None	92.2	95.2	86.7	36.4	36.6	36.2
1 or more	7.3	4.3	12.6	63.6	63.4	63.8
Not ascertained, don't know, refused	0.5	0.4	0.7	-	-	-
Preoccupation With Alcohol Scale						
Low—IV, V	92.7	94.0	90.4	47.7	53.7	42.6
High—I, II, III	6.1	5.0	8.1	50.0	46.3	53.2
Not ascertained, don't know, refused	1.2	1.0	1.5	2.3	-	4.3
Definitions of Alcohol Scale						
Low—III, IV, V	79.3	80.7	76.7	54.5	65.9	44.7
High—I, II	18.6	17.8	20.0	43.2	34.1	51.1
Not ascertained, don't know, refused	2.1	1.4	3.3	2.3	-	4.3
Household difficulties during past year						
No	98.3	98.8	97.4	69.3	82.9	57.4
Yes	1.7	1.2	2.6	30.7	17.1	42.6
Not ascertained, don't know, refused	-	-	-	-	-	-
Drink too much						
No	92.4	93.8	90.0	58.0	56.1	59.6
Yes	6.6	5.6	8.5	40.9	43.9	38.3
Not ascertained, don't know, refused	0.9	0.6	1.5	1.1	-	2.1
Alcoholism (from card A list)						
Yes	0.4	0.2	0.7	22.7	22.0	23.4

Table 7. Number of general sample and known alcoholic respondents, by Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores, and selected sociocultural characteristics: Cedar Rapids, January 1964

	Sociocultural characteristic	Cedar Rapids Survey			Preoccupation With Alcohol Scale		
		General sample		Known alcoholics	General sample	Known alcoholics	
		Total	Drinkers only		High I, II, III	High I, II, III	Low IV, V
		Number of persons					
1	Total	1,029	753	88	46	44	42
	Sex						
2	Male	488	390	73	38	40	31
3	Female	541	363	15	8	4	11
	Age						
4	20-29 years	198	160	1	14	1	-
5	30-39 years	212	185	13	9	7	6
6	40-49 years	172	136	30	10	15	14
7	50-59 years	181	128	31	8	16	14
8	60 years and over	263	141	13	5	5	8
9	Not ascertained, don't know, refused	3	3	-	-	-	-
	Marital status						
10	Never married	84	60	4	7	2	2
11	Married	819	620	64	34	31	32
12	Other	126	73	20	5	11	8
	Education						
13	Less than high school	220	133	16	11	9	7
14	Some high school	146	109	15	12	9	5
15	High school graduate	414	323	26	17	15	10
16	Some college	118	92	14	3	7	7
17	College graduate, plus	123	93	17	3	4	13
18	Not ascertained, don't know, refused	8	3	-	-	-	-
	Income (household)						
19	Under $4,000	201	118	18	6	12	6
20	$4,000-$5,999	200	142	17	10	14	3
21	$6,000-$7,499	151	110	9	8	4	5
22	$7,500-$9,999	211	175	7	11	4	3
23	$10,000-$14,999	157	123	22	5	8	13
24	$15,000 and over	73	63	10	6	1	9
25	Not ascertained, don't know, refused	36	22	5	-	1	3
	Religion						
26	Catholic	232	187	21	15	11	9
27	Lutheran	126	104	9	7	7	2
28	Congregational, Episcopal, Presbyterian	224	173	22	6	4	18
29	Methodist	206	141	12	7	7	5
30	Baptist	53	27	9	2	7	2
31	Other Protestant(not specified)	28	17	2	-	1	1
32	Other	109	67	7	6	4	3
33	None	49	35	5	3	2	2
34	Not ascertained, don't know, refused	2	2	1	-	1	-

Table 7. Number of general sample and known alcoholic respondents, by Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores, and selected sociocultural characteristics: Cedar Rapids, January 1964—Con.

Trouble Due to Drinking Index			Quantity-Frequency Index			Definitions of Alcohol Scale			
General sample	Known alcoholics		General sample	Known alcoholics		General sample	Known alcoholics		
High 1 or more	High 1 or more	Low none	High 2, 4, 5	High 2, 4, 5	Low 0, 1, 3	High I, II	High I, II	Low III, IV, V	
Number of persons									
55	56	32	190	49	33	140	38	48	1
45	54	19	125	42	25	86	33	38	2
10	2	13	65	7	8	54	5	10	3
9	1	-	51	1	-	31	1	-	4
15	10	3	69	5	6	33	7	6	5
12	17	13	43	21	7	32	13	16	6
12	21	10	19	16	14	19	13	17	7
6	7	6	6	6	6	25	4	9	8
1	-	-	2	-	-	-	-	-	9
5	3	1	16	-	3	21	2	2	10
45	36	28	164	34	26	106	30	33	11
5	17	3	10	15	4	13	6	13	12
16	16	-	22	8	6	24	10	6	13
13	12	3	31	7	7	22	8	6	14
18	16	10	89	19	6	59	10	15	15
6	8	6	24	8	4	23	4	10	16
2	4	13	24	7	10	12	6	11	17
-	-	-	-	-	-	-	-	-	18
9	17	1	19	11	7	24	10	8	19
16	13	4	33	13	2	25	10	7	20
8	7	2	37	4	5	22	5	4	21
15	3	4	41	4	3	37	3	4	22
4	10	12	38	9	11	22	5	16	23
3	2	8	20	6	4	10	3	7	24
-	4	1	2	2	1	-	2	2	25
12	14	7	51	13	6	33	9	11	26
9	8	1	27	7	1	20	6	3	27
9	8	14	43	12	10	35	7	15	28
10	8	4	30	7	5	21	5	7	29
2	7	2	9	4	4	4	6	3	30
2	1	1	4	1	1	2	-	2	31
5	5	2	19	2	4	19	3	4	32
6	4	1	7	2	2	6	2	2	33
-	1	-	-	1	-	-	-	1	34

Table 8. Percent distribution of general sample and known alcoholic respondents, according to Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores by selected sociocultural characteristics, with the Bureau of the Census distribution of sociocultural characteristics: Cedar Rapids, January 1964

	Sociocultural characteristic	Cedar Rapids Census, 1960	Cedar Rapids Survey			Preoccupation With Alcohol Scale		
			General sample		Known alcoholics	General sample	Known alcoholics	
			Total	Drinkers only		High I, II, III	High I, II, III	Low IV, V
		Percent distribution						
1	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Sex							
2	Male	47.2	47.4	51.8	83.0	82.6	90.9	73.8
3	Female	52.8	52.6	48.2	17.0	17.4	9.1	26.2
	Age							
4	20-29 years	18.2	19.2	21.2	1.1	30.4	2.3	-
5	30-39 years	19.4	20.6	24.6	14.8	19.6	15.9	14.3
6	40-49 years	19.2	16.7	18.1	34.1	21.7	34.1	33.3
7	50-59 years	15.8	17.6	17.0	35.2	17.4	36.4	33.3
8	60 years and over	27.4	25.6	18.7	14.8	10.9	11.4	19.0
9	Not ascertained, don't know, refused	-	0.3	0.4	-	-	-	-
	Marital status							
10	Never married	7.3	8.2	8.0	4.5	15.2	4.5	4.8
11	Married	78.8	79.6	82.3	72.7	73.9	70.5	76.2
12	Other	14.9	12.2	9.7	22.7	10.9	25.0	19.0
	Education							
13	Less than high school	26.8	21.4	17.7	18.2	23.9	20.5	16.7
14	Some high school	18.3	14.2	14.5	17.0	26.1	20.5	11.9
15	High school graduate	32.4	40.2	42.9	29.5	37.0	34.1	23.8
16	Some college	11.8	11.5	12.2	15.9	6.5	15.9	16.7
17	College graduate, plus	10.4	12.0	12.4	19.3	6.5	9.1	31.0
18	Not ascertained, don't know, refused	-	0.8	0.4	-	-	-	-
	Income (household)							
19	Under $4,000	18.4	19.5	15.7	20.5	13.0	27.3	14.3
20	$4,000-$5,999	21.6	19.4	18.9	19.3	21.7	31.8	7.1
21	$6,000-$7,499	20.5	14.7	14.6	10.2	17.4	9.1	11.9
22	$7,500-$9,999	21.6	20.5	23.2	8.0	23.9	9.1	7.1
23	$10,000-$14,999	12.6	15.3	16.3	25.0	10.9	18.2	31.0
24	$15,000 and over	5.3	7.1	8.4	11.4	13.0	2.3	21.4
25	Not ascertained, don't know, refused	-	3.5	2.9	5.7	-	2.3	7.1
	Religion							
26	Catholic	...	22.5	24.8	23.9	32.6	25.0	21.4
27	Lutheran	...	12.2	13.8	10.2	15.2	15.9	4.8
28	Congregational, Episcopal, Presbyterian	...	21.8	23.0	25.0	13.0	9.1	42.9
29	Methodist	...	20.0	18.7	13.6	15.2	15.9	11.9
30	Baptist	...	5.2	3.6	10.2	4.3	15.9	4.8
31	Other Protestant (not specified)	...	2.7	2.3	2.3	-	2.3	2.4
32	Other	...	10.6	8.9	8.0	13.0	9.1	7.1
33	None	...	4.8	4.6	5.7	6.5	4.5	4.8
34	Not ascertained, don't know, refused	...	0.2	0.3	1.1	-	2.3	-

Table 8. Percent distribution of general sample and known alcoholic respondents, according to Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores by selected sociocultural characteristics, with the Bureau of the Census distribution of sociocultural characteristics: Cedar Rapids, January 1964—Con.

Trouble Due to Drinking Index			Quantity-Frequency Index			Definitions of Alcohol Scale			
General sample	Known alcoholics		General sample	Known alcoholics		General sample	Known alcoholics		
High 1 or more	High 1 or more	Low none	High 2, 4, 5	High 2, 4, 5	Low 0, 1, 3	High I, II	High I, II	Low III, IV, V	
Percent distribution									
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
81.8	96.4	59.4	65.8	85.7	75.8	61.4	86.8	79.2	2
18.2	3.6	40.6	34.2	14.3	24.2	38.6	13.2	20.8	3
16.4	1.8	-	26.8	2.0	-	22.1	2.6	-	4
27.3	17.9	9.4	36.3	10.2	18.2	23.6	18.4	12.5	5
21.8	30.4	40.6	22.6	42.9	21.2	22.9	34.2	33.3	6
21.8	37.5	31.3	10.0	32.7	42.4	13.6	34.2	35.4	7
10.9	12.5	18.8	3.2	12.2	18.2	17.9	10.5	18.7	8
1.8	-	-	1.1	-	-	-	-	-	9
9.1	5.4	3.1	8.4	-	9.1	15.0	5.3	4.2	10
81.8	64.3	87.5	86.3	69.4	78.8	75.7	78.9	68.7	11
9.1	30.4	9.4	5.3	30.6	12.1	9.3	15.8	27.1	12
29.1	28.6	-	11.6	16.3	18.2	17.1	26.3	12.5	13
23.6	21.4	9.4	16.3	14.3	21.2	15.7	21.1	12.5	14
32.7	28.6	31.3	46.8	38.8	18.2	42.1	26.3	31.2	15
10.9	14.3	18.8	12.6	16.3	12.1	16.4	10.5	20.8	16
3.6	7.1	40.6	12.6	14.3	30.3	8.6	15.8	22.9	17
-	-	-	-	-	-	-	-	-	18
16.4	30.4	3.1	10.0	22.4	21.2	17.1	26.3	16.7	19
29.1	23.2	12.5	17.4	26.5	6.1	17.9	26.3	14.6	20
14.5	12.5	6.3	19.5	8.2	15.2	15.7	13.2	8.3	21
27.3	5.4	12.5	21.6	8.2	9.1	26.4	7.9	8.3	22
7.3	17.9	37.5	20.0	18.4	33.3	15.7	13.2	33.3	23
5.5	3.6	25.0	10.5	12.2	12.1	7.1	7.9	14.6	24
-	7.1	3.1	1.1	4.1	3.0	-	5.3	4.2	25
21.8	25.0	21.9	26.8	26.5	18.2	23.6	23.7	22.9	26
16.4	14.3	3.1	14.2	14.3	3.0	14.3	15.8	6.2	27
16.4	14.3	43.8	22.6	24.5	30.3	25.0	18.4	31.2	28
18.2	14.3	12.5	15.8	14.3	15.2	15.0	13.2	14.6	29
3.6	12.5	6.3	4.7	8.2	12.1	2.9	15.8	6.2	30
3.6	1.8	3.1	2.1	2.0	3.0	1.4	-	4.2	31
9.1	8.9	6.3	10.0	4.1	12.1	13.6	7.9	8.3	32
10.9	7.1	3.1	3.7	4.1	6.1	4.3	5.3	4.2	33
-	1.8	-	-	2.0	-	-	-	2.1	34

Table 9. Number of general sample and known alcoholic respondents, by Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores, and selected drinking characteristics: Cedar Rapids, January 1964

	Drinking characteristic	Cedar Rapids Survey			Preoccupation With Alcohol Scale		
		General sample		Known alcoholics	General sample	Known alcoholics	
		Total	Drinkers only		High I, II, III	High I, II, III	Low IV, V
		Number of persons					
1	Total	1,029	753	88	46	44	42
	Gallup question						
2	Drinker	753	753	73	46	32	39
3	Exdrinker	46	-	15	-	12	3
4	Abstainer	230	-	-	-	-	-
	Preoccupation With Alcohol Scale						
5	I	6	6	26	6	26	-
6	II	8	8	8	8	8	-
7	III	32	32	10	32	10	-
8	IV	76	76	8	-	-	8
9	V	[1]898	622	34	-	-	34
10	Not ascertained, don't know, refused	9	9	2	-	-	-
	Trouble Due to Drinking Index						
11	0	[1]970	694	32	25	3	28
12	1	31	31	14	6	3	11
13	2	14	14	7	8	6	1
14	3	5	5	12	3	12	-
15	4	2	2	12	2	10	2
16	5	3	3	11	2	10	-
17	Not ascertained, don't know, refused	4	4	-	-	-	-
18	Household difficulties during past year	13	13	27	5	25	1
	Quantity-Frequency Index						
19	0 "Abstainer"	[1]285	9	2	-	2	-
20	1 Light-infrequent	304	304	3	1	2	1
21	2 Moderate or heavy-infrequent	52	52	5	2	3	2
22	3 Light-frequent	244	244	28	15	4	23
23	4 Moderate or heavy-frequent	66	66	7	7	4	3
24	5 Moderate or heavy-very frequent	72	72	37	18	25	12
25	Not ascertained, don't know, refused	6	6	6	3	4	1
	Heavy drinking						
26	3-4 drinks on one occasion	309	309	70	40	42	26
27	7-8 drinks on one occasion	56	56	40	22	31	8
	Definitions of Alcohol Scale						
28	I	58	58	27	15	21	6
29	II	82	82	11	11	6	5
30	III	172	172	24	14	8	16
31	IV	198	198	13	6	4	9
32	V	[1]503	227	11	-	5	6
33	Not ascertained, don't know, refused	16	16	2	-	-	-
34	Alcoholism (from card A list)	3	3	20	2	18	1
35	Drink too much	50	50	36	20	27	8

[1]This figure includes the 230 abstainers who were not asked this question and the 46 exdrinkers who were asked the question, but for purposes of this analysis were treated as abstainers.

Table 9. Number of general sample and known alcoholic respondents, by Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores, and selected drinking characteristics: Cedar Rapids, January 1964—Con.

Trouble Due to Drinking Index			Quantity-Frequency Index			Definitions of Alcohol Scale			
General sample	Known alcoholics		General sample	Known alcoholics		General sample	Known alcoholics		
High 1 or more	High 1 or more	Low none	High 2, 4, 5	High 2, 4, 5	Low 0, 1, 3	High I, II	High I, II	Low III, IV, V	
Number of persons									
55	56	32	190	49	33	140	38	48	1
55	44	29	190	38	30	140	29	42	2
-	12	3	-	11	3	-	9	6	3
-	-	-	-	-	-	-	-	-	4
6	24	2	5	21	3	4	19	7	5
6	8	-	6	5	2	6	2	6	6
9	9	1	16	6	3	16	6	4	7
10	5	3	38	4	4	25	3	5	8
24	9	25	124	13	20	89	8	26	9
-	1	1	1	-	1	-	-	-	10
-	-	32	161	15	16	118	7	24	11
31	14	-	15	4	10	9	5	9	12
14	7	-	9	5	1	8	2	5	13
5	12	-	2	9	2	1	9	3	14
2	12	-	2	8	3	1	9	3	15
3	11	-	1	8	1	3	6	4	16
-	-	-	-	-	-	-	-	-	17
8	27	-	8	20	3	7	18	8	18
1	2	-	-	-	2	-	-	2	19
6	3	-	-	-	3	32	3	-	20
5	4	1	52	5	-	9	3	2	21
16	12	16	-	-	28	51	7	20	22
7	5	2	66	7	-	23	4	3	23
17	25	12	72	37	-	23	18	19	24
3	5	1	-	-	-	2	3	2	25
43	51	19	156	45	21	85	33	35	26
17	33	7	46	31	6	27	20	19	27
16	24	3	22	19	5	58	27	-	28
6	7	4	33	6	5	82	11	-	29
19	12	12	72	13	11	-	-	24	30
10	6	7	41	9	3	-	-	13	31
4	6	5	20	2	8	-	-	11	32
-	1	1	2	-	1	-	-	-	33
3	20	-	-	13	4	3	11	8	34
23	31	5	28	28	5	21	18	17	35

Table 10. Percent distribution of general sample and known alcoholic respondents, according to Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores by selected drinking characteristics: Cedar Rapids, January 1964

	Drinking characteristic	Cedar Rapids Survey			Preoccupation With Alcohol Scale		
		General sample		Known alcoholics	General sample	Known alcoholics	
		Total	Drinkers only		High I, II, III	High I, II, III	Low IV, V
		Percent distribution					
1	Total	100.0	100.0	100.0	100.0	100.0	100.0
	Gallup question						
2	Drinker	73.2	100.0	83.0	100.0	72.7	92.9
3	Exdrinker	4.5	-	17.0	-	27.3	7.1
4	Abstainer	22.4	-	-	-	-	-
	Preoccupation With Alcohol Scale						
5	I	0.6	0.8	29.5	13.0	59.1	-
6	II	0.8	1.1	9.1	17.4	18.2	-
7	III	3.1	4.2	11.4	69.6	22.7	-
8	IV	7.4	10.1	9.1	-	-	19.0
9	V	[1]87.3	82.6	38.6	-	-	81.0
10	Not ascertained, don't know, refused	0.9	1.2	2.3	-	-	-
	Trouble Due to Drinking Index						
11	0	[1]94.3	92.2	36.4	54.3	6.8	66.7
12	1	3.0	4.1	15.9	13.0	6.8	26.2
13	2	1.4	1.9	8.0	17.4	13.6	2.4
14	3	0.5	0.7	13.6	6.5	27.3	-
15	4	0.2	0.3	13.6	4.3	22.7	4.8
16	5	0.3	0.4	12.5	4.3	22.7	-
17	Not ascertained, don't know, refused	0.4	0.5	-	-	-	-
18	Household difficulties during past year	1.3	1.7	30.7	10.9	56.8	2.4
	Quantity-Frequency Index						
19	0 "Abstainer"	[1]27.7	1.2	2.3	-	4.5	-
20	1 Light-infrequent	29.5	40.4	3.4	2.2	4.5	2.4
21	2 Moderate or heavy-infrequent	5.1	6.9	5.7	4.3	6.8	4.8
22	3 Light-frequent	23.7	32.4	31.8	32.6	9.1	54.8
23	4 Moderate or heavy-frequent	6.4	8.8	8.0	15.2	9.1	7.1
24	5 Moderate or heavy-very frequent	7.0	9.6	42.0	39.1	56.8	28.6
25	Not ascertained, don't know, refused	0.6	0.8	6.8	6.5	9.1	2.4
	Heavy drinking						
26	3-4 drinks on one occasion	30.0	41.0	79.5	87.0	95.5	61.9
27	7-8 drinks on one occasion	5.4	7.4	45.5	47.8	70.5	19.0
	Definitions of Alcohol Scale						
28	I	5.6	7.7	30.7	32.6	47.7	14.3
29	II	8.0	10.9	12.5	23.9	13.6	11.9
30	III	16.7	22.8	27.3	30.4	18.2	38.1
31	IV	19.2	26.3	14.8	13.0	9.1	21.4
32	V	[1]48.9	30.1	12.5	-	11.4	14.3
33	Not ascertained, don't know, refused	1.6	2.1	2.3	-	-	-
34	Alcoholism (from card A list)	0.3	0.4	22.7	4.3	40.9	2.4
35	Drink too much	4.9	6.6	40.9	43.5	61.4	19.0

[1]This figure includes the 230 abstainers who were not asked this question and the 46 exdrinkers who were asked the question, but for purposes of this analysis were treated as abstainers.

Table 10. Percent distribution of general sample and known alcoholic respondents, according to Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale scores by selected drinking characteristics: Cedar Rapids, January 1964—Con.

Trouble Due to Drinking Index			Quantity-Frequency Index			Definitions of Alcohol Scale			
General sample	Known alcoholics		General sample	Known alcoholics		General sample	Known alcoholics		
High 1 or more	High 1 or more	Low none	High 2, 4, 5	High 2, 4, 5	Low 0, 1, 3	High I, II	High I, II	Low III, IV, V	
Percent distribution									
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
100.0	78.6	90.6	100.0	77.6	90.9	100.0	76.3	87.5	2
-	21.4	9.4	-	22.4	9.1	-	23.7	12.5	3
-	-	-	-	-	-	-	-	-	4
10.9	42.9	6.3	2.6	42.9	9.1	2.9	50.0	14.6	5
10.9	14.3	-	3.2	10.2	6.1	4.3	5.3	12.5	6
16.4	16.1	3.1	8.4	12.2	9.1	11.4	15.8	8.3	7
18.2	8.9	9.4	20.0	8.2	12.1	17.9	7.9	10.4	8
43.6	16.1	78.1	65.3	26.5	60.6	63.6	21.1	54.2	9
-	1.8	3.1	0.5	-	3.0	-	-	-	10
-	-	100.0	84.7	30.6	48.5	84.3	18.4	50.0	11
56.4	25.0	-	7.9	8.2	30.3	6.4	13.2	18.7	12
25.5	12.5	-	4.7	10.2	3.0	5.7	5.3	10.4	13
9.1	21.4	-	1.1	18.4	6.1	0.7	23.7	6.2	14
3.6	21.4	-	1.1	16.3	9.1	0.7	23.7	6.2	15
5.5	19.6	-	0.5	16.3	3.0	2.1	15.8	8.3	16
-	-	-	-	-	-	-	-	-	17
14.5	48.2	-	4.2	40.8	9.1	5.0	47.4	16.7	18
1.8	3.6	-	-	-	6.1	-	-	4.2	19
10.9	5.4	-	-	-	9.1	22.9	7.9	-	20
9.1	7.1	3.1	27.4	10.2	-	6.4	7.9	4.2	21
29.1	21.4	50.0	-	-	84.8	36.4	18.4	41.7	22
12.7	8.9	6.3	34.7	14.3	-	16.4	10.5	6.2	23
30.9	44.6	37.5	37.9	75.5	-	16.4	47.4	39.6	24
5.5	8.9	3.1	-	-	-	1.4	7.9	4.2	25
78.2	91.1	59.4	82.1	91.8	63.6	60.7	86.8	72.9	26
30.9	58.9	21.9	24.2	63.3	18.2	19.3	52.6	39.6	27
29.1	42.9	9.4	11.6	38.8	15.2	41.4	71.1	-	28
10.9	12.5	12.5	17.4	12.2	15.2	58.6	28.9	-	29
34.5	21.4	37.5	37.9	26.5	33.3	-	-	50.0	30
18.2	10.7	21.9	21.6	18.4	9.1	-	-	27.1	31
7.3	10.7	15.6	10.5	4.1	24.2	-	-	22.9	32
-	1.8	3.1	1.1	-	3.0	-	-	-	33
5.5	35.7	-	-	26.5	12.1	2.1	28.9	16.7	34
41.8	55.4	15.6	14.7	57.1	15.2	15.0	47.4	35.4	35

Table 11. Percent distribution[1] of general sample and known alcoholic respondents according to scores on the Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale, by selected sociocultural characteristics: Cedar Rapids, January 1964

	Sociocultural characteristic	Total in general sample	Known alcoholics	Preoccupation With Alcohol Scale score I, II, III	
				General sample	Known alcoholics
		Percent distribution			
1	Total	100.0	100.0	4.5	50.0
	Sex				
2	Male	47.4	83.0	[2]7.8	54.8
3	Female	52.6	17.0	1.5	26.7
	Age				
4	20-29 years	19.2	1.1	7.1	100.0
5	30-39 years	20.6	14.8	4.2	53.8
6	40-49 years	16.7	34.1	5.8	50.0
7	50-59 years	17.6	35.2	4.4	51.6
8	60 years and over	25.6	14.8	1.9	38.5
9	Not ascertained, don't know, refused	0.3	-	-	-
	Marital status				
10	Never married	8.2	4.5	8.3	50.0
11	Married	79.6	72.7	4.2	48.4
12	Other	12.2	22.7	4.0	55.0
	Education				
13	Less than high school	21.4	18.2	5.0	56.3
14	Some high school	14.2	17.0	8.2	60.0
15	High school graduate	40.2	29.5	4.1	57.7
16	Some college	11.5	15.9	2.5	50.0
17	College graduate, plus	12.0	19.3	2.4	23.5
18	Not ascertained, don't know, refused	0.8	-	-	-
19	Not high school graduate	35.6	35.2	6.3	58.1
20	High school graduate	40.2	29.5	4.1	57.7
21	Beyond high school	23.4	35.2	2.5	35.5
	Income (household)				
22	Under $4,000	19.5	20.5	3.0	66.7
23	$4,000-$5,999	19.4	19.3	5.0	82.4
24	$6,000-$7,499	14.7	10.2	4.6	44.4
25	$7,500-$9,999	20.5	8.0	5.7	57.1
26	$10,000-$14,999	15.3	25.0	3.2	36.4
27	$15,000 and over	7.1	11.4	8.2	10.0
28	Not ascertained, don't know, refused	3.5	5.7	-	20.0
29	Under $6,000	39.0	39.8	4.0	74.3
30	$6,000 and over	57.5	54.5	5.1	35.4
31	Under $7,500	53.6	50.0	4.2	68.2
32	$7,500 and over	42.9	44.3	5.2	33.3
	Religion				
33	Catholic	22.5	23.9	6.5	52.4
34	Lutheran	12.2	10.2	5.6	77.8
35	Congregational, Episcopal, Presbyterian	21.8	25.0	2.7	18.2
36	Methodist	20.0	13.6	3.4	58.3
37	Baptist	5.2	10.2	3.8	77.8
38	Other Protestant (not specified)	2.7	2.3	-	50.0
39	Other	10.6	8.0	5.5	57.1
40	None	4.8	5.7	6.1	40.0
41	Not ascertained, don't know, refused	0.2	1.1	-	100.0

[1]These percents are derived from figures in table 7. [2]Example: 7.8 percent of the males

Table 11. Percent distribution[1] of general sample and known alcoholic respondents according to scores on the Preoccupation With Alcohol Scale, Trouble Due to Drinking Index, Quantity-Frequency Index, and Definitions of Alcohol Scale, by selected sociocultural characteristics: Cedar Rapids, January 1964—Con.

Trouble Due to Drinking Index 1 or more		Quantity—Frequency Index score 2,4,5		Definitions of Alcohol Scale score I,II		
General sample	Known alcoholics	General sample	Known alcoholics	General sample	Known alcoholics	
Percent distribution						
5.3	63.6	18.5	55.7	13.6	43.2	1
9.2	74.0	25.6	57.5	17.6	45.2	2
1.8	13.3	12.0	46.7	10.0	33.3	3
4.5	100.0	25.8	100.0	15.7	100.0	4
7.1	76.9	32.5	38.5	15.6	53.8	5
7.0	56.7	25.0	70.0	18.6	43.3	6
6.6	67.7	10.5	51.6	10.5	41.9	7
2.3	53.8	2.3	46.2	9.5	30.8	8
33.3	-	66.7	-	-	-	9
6.0	75.0	19.0	-	25.0	50.0	10
5.5	56.2	20.0	53.1	12.9	46.9	11
4.0	85.0	7.9	75.0	10.3	30.0	12
7.3	100.0	10.0	50.0	10.9	62.5	13
8.9	80.0	21.2	46.7	15.1	53.3	14
4.3	61.5	21.5	73.1	14.3	38.5	15
5.1	57.1	20.3	57.1	19.5	28.6	16
1.6	23.5	19.5	41.2	9.8	35.3	17
-	-	-	-	-	-	18
7.9	90.3	14.5	48.4	12.6	58.1	19
4.3	61.5	21.5	73.1	14.2	38.5	20
3.3	38.7	19.9	48.4	14.5	32.3	21
4.5	94.4	9.5	61.1	11.9	55.6	22
8.0	76.5	16.5	76.5	12.5	58.8	23
5.3	77.8	24.5	44.4	14.6	55.6	24
7.1	42.9	19.4	57.1	17.5	42.9	25
2.5	45.5	24.2	40.9	14.0	22.7	26
4.1	20.0	27.4	60.0	13.7	30.0	27
-	80.0	5.6	40.0	-	40.0	28
6.2	85.7	13.0	68.6	12.2	57.1	29
5.1	45.8	23.0	47.9	15.4	33.3	30
6.0	84.1	16.1	63.6	12.9	56.8	31
5.0	38.5	22.4	48.7	15.6	28.2	32
5.2	66.7	22.0	61.9	14.2	42.9	33
7.1	88.9	21.4	77.8	15.9	66.7	34
4.0	36.4	19.2	54.5	15.6	31.8	35
4.9	66.7	14.6	58.3	10.2	41.7	36
3.8	77.8	17.0	44.4	7.5	66.7	37
7.1	50.0	14.3	50.0	7.1	-	38
4.6	71.4	17.4	28.6	17.4	42.9	39
12.2	80.0	14.3	40.0	12.2	40.0	40
-	100.0	-	100.0	-	-	41

in the general sample (N=488) have Preoccupation Scale scores of I, II, or III.

Table 12. Number and percent distribution of matched known alcoholics and their neighbors (matched on sex and on age within 20 years) and the general sample by selected sociocultural characteristics: Cedar Rapids, January 1964

Sociocultural characteristic	Known alcoholics	Neighbors of alcoholics	General sample	Known alcoholics	Neighbors of alcoholics	General sample
	Number of persons			Percent distribution		
Total	55	[1]54	1,029	100.0	100.0	100.0
Sex						
Male	43	43	488	78.2	79.6	47.4
Female	12	11	541	21.8	20.4	52.6
Age						
20-29 years	1	4	198	1.8	7.4	19.2
30-39 years	8	11	212	14.5	20.4	20.6
40-49 years	17	16	172	30.9	29.6	16.7
50-59 years	21	16	181	38.2	29.6	17.6
60 years and over	8	7	263	14.5	13.0	25.6
Not ascertained, don't know, refused	-	-	3	-	-	0.3
Marital status						
Never married	3	1	84	5.5	1.9	8.2
Married	42	48	819	76.4	88.9	79.6
Other	10	5	126	18.2	9.3	12.2
Education						
Less than high school	7	6	220	12.7	11.1	21.4
Some high school	10	12	146	18.2	22.2	14.2
High school graduate	17	20	414	30.9	37.0	40.2
Some college	7	4	118	12.7	7.4	11.5
College graduate, plus	14	12	123	25.5	22.2	12.0
Not ascertained, don't know, refused	-	-	8	-	-	0.8
Income (household)						
Under $4,000	9	6	201	16.4	11.1	19.5
$4,000-$5,999	13	7	200	23.6	13.0	19.4
$6,000-$7,499	3	9	151	5.5	16.7	14.7
$7,500-$9,999	6	13	211	10.9	24.1	20.5
$10,000-$14,999	16	7	157	29.1	13.0	15.3
$15,000 and over	8	9	73	14.5	16.7	7.1
Not ascertained, don't know, refused	-	3	36	-	5.6	3.5
Religion						
Catholic	14	12	232	25.5	22.2	22.5
Lutheran	4	4	126	7.3	7.4	12.2
Congregational, Episcopal, Presbyterian	16	13	224	29.1	24.1	21.8
Methodist	5	14	206	9.1	25.9	20.0
Baptist	6	3	53	10.9	5.6	5.2
Other Protestant (not specified)	2	1	28	3.6	1.9	2.7
Other	4	6	109	7.3	11.1	10.6
None	4	1	49	7.3	1.9	4.8
Not ascertained, don't know, refused	-	-	2	-	-	0.2

[1]One neighbor was matched with an alcoholic living on both sides.

Table 13. Number and percent distribution of matched known alcoholics and their neighbors (matched on sex and on age within 20 years) and the general sample by selected drinking characteristics: Cedar Rapids, January 1964

Drinking characteristic	Known alcoholics	Neighbors of alcoholics	General sample	Known alcoholics	Neighbors of alcoholics	General sample
	Number of persons			Percent distribution		
Total	55	[1]54	1,029	100.0	100.0	100.0
Gallup question						
Drinker	47	45	753	85.5	83.3	73.2
Exdrinker	8	1	46	14.5	1.9	4.5
Abstainer	-	7	230	-	13.0	22.4
Not ascertained, don't know, refused	-	1	-	-	1.9	-
Quantity-Frequency Index						
0 "Abstainer"	-	-	9	-	-	0.9
1 Light-infrequent	2	16	304	3.6	29.6	29.5
2 Moderate or heavy-infrequent	3	2	52	5.5	3.7	5.1
3 Light-frequent	16	15	244	29.1	27.8	23.7
4 Moderate or heavy-frequent	6	4	66	10.9	7.4	6.4
5 Moderate or heavy-very frequent	26	8	72	47.3	14.8	7.0
Not ascertained, don't know, refused	2	1	6	3.6	1.9	0.6
Exdrinkers and abstainers	-	8	276	-	14.8	26.8
Heavy drinking						
3-4 drinks on one occasion	45	24	309	81.8	44.4	30.0
7-8 drinks on one occasion	21	5	56	38.2	9.3	5.4
Trouble Due to Drinking Index						
0	22	39	694	40.0	72.2	67.4
1	8	4	31	14.5	7.4	3.0
2	4	2	14	7.3	3.7	1.4
3	8	-	5	14.5	-	0.5
4	6	-	2	10.9	-	0.2
5	7	-	3	12.7	-	0.3
Not ascertained, don't know, refused	-	1	4	-	1.9	0.4
Exdrinkers and abstainers	-	8	276	-	14.8	26.8
Definitions of Alcohol Scale						
I	17	-	58	30.9	-	5.6
II	8	4	82	14.5	7.4	8.0
III	18	17	172	32.7	31.5	16.7
IV	9	13	198	16.4	24.1	19.2
V	3	11	227	5.5	20.4	22.1
Not ascertained, don't know, refused	-	1	16	-	1.9	1.6
Exdrinkers and abstainers	-	8	276	-	14.8	26.8

(Continued on next page)

Table 13. Number and percent distribution of matched known alcoholics and their neighbors (matched on sex and on age within 20 years) and the general sample by selected drinking characteristics: Cedar Rapids, January 1964—Con.

Drinking characteristic	Known alcoholics	Neighbors of alcoholics	General sample	Known alcoholics	Neighbors of alcoholics	General sample
Preoccupation With Alcohol Scale	Number of persons			Percent distribution		
I	15	-	6	27.3	-	0.6
II	6	-	8	10.9	-	0.8
III	7	1	32	12.7	1.9	3.1
IV	6	6	76	10.9	11.1	7.4
V	21	38	622	38.2	70.4	60.4
Not ascertained, don't know, refused	-	1	9	-	1.9	0.9
Exdrinkers and abstainers	-	8	276	-	14.8	26.8
Self or proxy respondent						
Self	27	29	643	49.1	53.7	62.5
Proxy	28	22	367	50.9	40.7	35.7
Both	-	3	19	-	5.6	1.8
Household difficulties in past year	17	1	13	30.9	1.9	1.3
Alcoholism (from card A list)	10	-	3	18.2	-	0.3
Drink too much	21	1	50	38.2	1.9	4.9

[1]One neighbor was matched with an alcoholic living on both sides.

APPENDIX I

QUANTITY-FREQUENCY INDEX, IOWA SCALE OF DEFINITIONS OF ALCOHOL, AND SCALABILITY OF THE PREOCCUPATION WITH ALCOHOL SCALE

Quantity-Frequency Index

The following description of the Quantity-Frequency Index is taken from one of the reports of the 1958 Iowa survey.[21] The index was originally developed by Straus and Bacon,[22] and Maxwell[23] adapted it for his study of drinking behavior in the State of Washington. It is a measure of the extent of a person's drinking.

The "frequency" question was worded as follows: "How often during the past year did you have one or more drinks?" Response alternatives ranged from once per year to daily. The "quantity" question was worded: "How much (kind of beverage) would you say you ordinarily consume at a sitting? That is, from the time you start drinking until you quit?" The response alternatives to this question, classified as "small," "medium," and "large," are as follows.

Small amount: 1-5 glasses of beer
1-3 bottles of beer
1-2 drinks of liquor
1-3 glasses of wine

Medium amount: 6-9 glasses of beer
4-6 bottles of beer
3-4 drinks of liquor
4-5 glasses of wine

Large amount: 10 or more glasses of beer
7 or more bottles of beer
5 or more drinks of liquor
6 or more glasses of wine

This trichotomy was arrived at after converting standard "bottles," "glasses," and "drinks" to amounts of absolute alcohol. It seems reasonable to assume that at least among drinkers there is considerable consensus concerning the meaning of a "bottle" or "glass" of beer, a "glass" of wine, and a "drink" of liquor. In short, the index is based on the respondent's report of the number of drinks (converted to absolute alcohol) which he ordinarily consumes at a sitting, combined with the reported frequency of such "sittings" in a given period of time. Various response combinations yield the five Q-F Index types shown below. However, Q-F Index types 1 and 2 may be combined and referred to as "light" drinkers, types 3 and 4 may be combined and called "moderate" drinkers, and type 5 drinkers may be labeled "heavy" drinkers.

The Quantity-Frequency (Q-F) Index

Type 1. Drinks infrequently (once a month at most) and consumes *small* amounts (not more than approximately 1.6 ounces of absolute alcohol).

Type 2. Drinks infrequently (once a month at most) and consumes *medium* (1.6 to 2.88 ounces of absolute alcohol) or *large* amounts (more than 2.88 ounces of absolute alcohol).

Type 3. Drinks more than once a month but consumes *small* amounts.

Type 4. Drinks two to four times a month and consumes *medium* or *large* amounts.

Type 5. Drinks more than once a week and consumes *medium* or *large* amounts.

A major shortcoming of the index is that it does not gather all alcoholics into one category. That is, one might suppose that all alcoholics would fall into the heavy drinking category. However, since types 2 and 4 as well as 5 have no upper limit on quantity (but frequency is limited) we are likely to find the infrequent binge drinker either a type 2 or type 4. For this reason, in the present study Q-F types 2, 4, and 5 are considered one category.

Although the validity and reliability of the Q-F Index have not been thoroughly investigated, it seems to be a convenient tool adequate for the task of ranking individuals as light, moderate, or heavy drinkers.

Iowa Scale of Definitions of Alcohol

The Definitions of Alcohol Scale is an attitudinal measure which is conceptualized as an explanatory variable intervening between drinking behavior and background sociocultural characteristics.[24,25] The measure was included in this study for two reasons. In the first place, it has been shown in previous studies to have the logically expected high association with other measures of extreme deviant drinking and was

used here as yet another reliability check. Secondly, there was the possibility that this scale or some of the individual items which constitute it might prove useful in the search for a set of items which would distinguish the alcoholic. The following description of the scale is for the most part taken from an earlier report.[25]

The original source of the statements to be scaled was an earlier study[26] which collected responses to the open-ended question: "What do alcoholic beverages mean to you? How do you define liquor? In answer to the question 'What is liquor?' make some statements to complete the sentence, 'Liquor is....'" From responses to this question a list of items was prepared and pretested in a college student population.[27] In 1958[25] the list of items shown below (but not in the order shown) was administered to each of the 1,185 persons chosen to represent the adult population of Iowa along with these instructions: "Here is a list of statements commonly made about liquor. Would you please indicate for *each* statement whether or not *you* personally would make that statement about liquor."

The Iowa Scale of Definitions of Alcohol

Contrived item	Statement number	Content of statement	Method of scoring
I	≠ 1	Liquor helps me forget I am not the kind of person I really want to be.	Agree on any two
	≠ 2	Liquor helps me get along better with other people.	
	≠ 3	Liquor helps me feel more satisfied with myself.	
II	≠ 4	Liquor gives me more confidence in myself.	Agree on any three
	5	Liquor helps me forget my problems.	
	6	Liquor makes me less concerned with what other people think of me.	
	≠ 7	Liquor helps me overcome shyness.	
	≠ 8	Liquor makes me less self-conscious.	
III	≠ 9	Liquor makes me more carefree.	Agree on any three
	10	Liquor peps me up.	
	≠ 11	Liquor gives me pleasure.	
	≠ 12	Liquor helps me enjoy a party.	
	13	Liquor helps me relax.	
IV	≠ 14	Liquor improves parties and celebrations.	Agree on any three
	≠ 15	Liquor makes a social gathering more enjoyable.	
	≠ 16	Liquor goes well with entertainment.	
	17	A drink sometimes helps me feel better.	
V	≠ 18	Liquor is customary on special occasions.	Agree
VI		Failure to respond affirmatively to the preceding items.	

≠These 13 items were asked in Cedar Rapids. Statement 18 was not used in scoring, thus "failure to respond affirmatively" became contrived item V.

The respondent was instructed orally to indicate his response to each item by checking "yes" or "no" in the appropriate column. The results of the 1958 Iowa survey[25] were essentially repeated in the 1961 replication study.[11]

Scalability of the Preoccupation With Alcohol Scale

Efforts to scale the responses of all drinkers to the 12 statements, using Guttman scaling procedures,[28] resulted in a Guttman coefficient of reproducibility (C.R.) of 0.958. In Guttman scaling the coefficient of reproducibility indicates the percent of accuracy with which responses to the different statements can be reproduced from the total scores. (A C.R. of 0.90 or above is usually considered acceptable.) For example, when the 12 statements are arranged in ascending order by their marginal frequencies, a person with a total score of 9 should have responded positively to all but the top three statements and a person with a total score of 2 should have responded positively to only the bottom two statements. Positive or negative responses which are out of order from this expected pattern are called "errors."

The minimum marginal reproducibility (M.M.R.)[29] indicates the minimum level which the C.R. can reach. This is obtained by summing the proportion of responses in the modal category for each statement and dividing by the number of statements. The difference between the M.M.R. and the C.R. is a measure of the improvement of predictability from knowledge of the total scores. The minimal marginal reproducibility is accordingly high, with a value of 0.892. This slight improvement over the minimal marginal reproducibility is little evidence of scalability, especially when it is considered that more than half of the drinkers rejected all the statements and therefore could make no errors. Moreover, a large proportion (79 percent) of those who responded positively to one or more of the 12 statements made at least one error.

A more rigorous test of scalability limits the population to be scaled to the 310 who responded positively to at least one statement. The increased proportion of positive responses results in a minimal marginal reproducibility of 0.758. Scaling the responses of these 310 respondents yields a Guttman C.R. of 0.90. However, since 79 percent of the respondents made at least one error, a high degree of test-retest reliability could not be expected. In an effort to improve reliability, and as a further test of scalability, the six statements marked with a symbol in chart 1 were scaled. The minimal marginal reproducibility of the responses to these six statements by the 260 persons who responded to one or more of them was 0.715; the Guttman C.R. was 0.904, and 53 percent of the respondents made one or more errors.

This C.R., a marked improvement over the minimal marginal reproducibility, is evidence that the behaviors in question possess a degree of cumulativeness. The reliability, however, as evidenced by the proportion of persons making errors, is less than might be desired. To improve reliability and at the same time retain all 12 statements, the H-technique was employed.[30] The 12

statements were combined in a fashion which yielded four contrived items, each composed of three single statements, as shown in chart 1.

A response to each contrived item is considered positive if "yes" was answered to any two or all three of the single statements making up the contrived item. Altogether 158 (22 percent) of the 706 drinkers responded favorably to one or more of the contrived items, and 22 of these each made one error. Five of these respondents failed to make scale pattern responses and were given a scale score of V. A respondent is assigned a scale score which is the same as the number of the "most difficult" contrived item to which he responded positively, provided that he responded to other contrived items in a scale fashion. When the 158 respondents are ranked in this manner, the resulting Guttman C.R. is 0.966. Generally speaking, this means that, for example, from knowledge that the respondent has a scale score of II we can predict with 96.6 percent accuracy that he responded positively to contrived items II, III, and IV, but not to contrived item I. In summary, about one-fifth of the drinkers in a sample of the adult population of Iowa responded to the four contrived items listed in chart 1 in a cumulative fashion.

In 1961 a replication study[11] was made to test the reliability of the Preoccupation Scale. Another similar-sized sample (n = 1,213) of the adult population of Iowa was interviewed. Based on the responses of the total *drinking* population (715 cases compared with 706 in the original survey), the proportion that responded favorably to each item was slightly lower in the replication (see table 2). The rank order of these 12 items, with the exception of number five, was repeated in the replication. Considering that many of the items had nearly identical marginal frequencies, the fact that the original rank order was substantially maintained is evidence strongly supporting the stability of the scale. It is not surprising, therefore, that the 12 items were again found to possess a high degree of cumulativeness. Scale analysis of the responses of only those 300 drinkers who responded positively to one or more of the 12 items yielded a C.R. of 0.91 and an M.M.R. of 0.81. This compares with a C.R. of 0.90 and an M.M.R. of 0.76 for the 1958 data, where 310 cases responded positively to at least one item.

The contrived item response frequencies of the two studies compare favorably (table 3). Scaling the responses of the 145 subjects who responded positively to one or more of the contrived items yielded a C.R. of 0.96 and an M.M.R. of 0.80. These values are very similar to those of the original study in which 158 subjects responded favorably to at least one of the contrived items; the C.R. was 0.97 and the M.M.R., 0.77. Thus, the replication reaffirms the scalability of the Preoccupation Scale items.

APPENDIX II

DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Terms Relating to Drinking Behavior

Alcoholic.—This study used the following as an operational definition of the term "alcoholic." An alcoholic is anyone who repeatedly drinks beverage alcohol to the extent that it adversely affects his life—his health, domestic relations, job performance, or relations with the law.

Alcoholic beverages.—Alcoholic beverages include such beverages as beer and ale, wine and champagne, and all forms of liquor, such as whisky, gin, vodka, etc.

"Sitting".—A "sitting" refers to a period of time during which a person has been drinking, delimited in the questionnaire as "...from when you start drinking until you quit."

Iowa Scale of Preoccupation With Alcohol.—The Preoccupation Scale is a cumulative scale which measures a person's deviant drinking behavior. See "Iowa Scale of Preoccupation With Alcohol" in the text for a detailed description of the scale (p. 2).

Iowa Index of Trouble Due to Drinking.—The Trouble Index measures the social consequences of a person's drinking behavior. See "Iowa Index of Trouble Due to Drinking" in text for a further description (p. 5).

Iowa Scale of Definitions of Alcohol.—The Definitions Scale is a cumulative attitudinal scale which measures the extent to which a person defines alcohol for its personal effects. For a more detailed description of the scale, see Appendix I.

Quantity-Frequency Index.—The Quantity-Frequency Index is a measure of the extent of a person's alcohol consumption and is further explained in Appendix I.

Self-respondent.—A self-respondent is a person who is interviewed directly by the interviewer and gives his own answers. All respondents were at least 21 years old or married.

Proxy respondent.—A proxy respondent is a household member who was not present at the time of the interview. A proxy's responses are obtained from a responsible related adult member of the household, who is in turn a self-respondent.

Known alcoholic.—A known alcoholic is a person whose behavior as an alcoholic (see operational definition) has been confirmed by at least two knowledgeables. Confirmation was obtained by a knowledgeable offering an alcoholic's name independently or by checking the name on a proffered list and by locating the names on official records such as arrests for intoxication or drunken driving, inebriate cases, and hospital records. A known alcoholic was to be a "practicing" alcoholic and not currently "on the wagon."

Knowledgeable.—Resource persons who assisted in establishing the known alcoholics are referred to as "knowledgeables." Knowledgeables included such persons as Alcoholics Anonymous members, personnel managers, psychiatrists, police officers, police files, county clerk records, and hospital records.

Drinking behavior.—Persons are classified as *drinkers*, *exdrinkers*, or *abstainers* according to their responses to a question developed for the Gallup Poll (Gallup Drinking Question): "Have you ever had occasion to use alcoholic beverages such as liquor, wine, or beer; or are you a total abstainer?" If abstainer, "Have you always been a total abstainer?"

> *Drinkers* include those persons who do have occasion to use alcoholic beverages and are not now total abstainers.
>
> *Exdrinkers* include those persons who are now abstainers, but who at one time were drinkers.
>
> *Abstainers* include those persons who are now, and have always been, abstainers.

Household difficulties.—The following question was used to determine household difficulties: "During the past year have there been any serious difficulties in your household due to excessive drinking?" This question was asked on a household basis and not of each member of the household; however, the response was recorded for each member. That is, the data give the number of *persons* living in households where difficulty was reported, not the number of *households* reporting difficulty.

Demographic, Social, and Economic Terms

Age.—The year of birth was recorded for each person and this was subsequently subtracted from 1964 to obtain the age. Age was recorded in single years and

later grouped in the distribution used in the tables.

Education.—Each person is classified by education in terms of the highest grade of school completed. Only grades completed in regular schools, where persons are given a formal education, are included. A "regular" school is one which advances a person toward an elementary or high school diploma, or a college, university, or professional school degree. Thus, education in vocational, trade, or business schools outside the regular school system is not counted in determining the highest grade of school completed.

Income (household).—Each member of a household is classified according to the total income of the household of which he is a member. The income recorded is the total of all income received by members of the household in the 12-month period prior to the interview. Income from all sources is included, e.g., wages, salaries, business profits, net farm income, pensions, rents, and any other income received by members of the household.

Marital status.—The marital status categories are as follows:

Married includes all married persons not separated from their spouses because of marital discord. Persons with common-law marriages are considered married.

Never married includes persons who were never married and persons whose only marriage was annulled.

Other includes persons who are widowed, divorced, or legally separated and persons separated because of marital discord.

Religion.—Each person's religious preference was recorded as given. If the preference was "Protestant," the respondent was asked to specify the denomination. If the preference was "Christian," it was determined whether this referred to the specific denomination of the Disciples of Christ. The religious preference was later classified into the categories reported in the tables.

APPENDIX III

LETTER AND QUESTIONNAIRE USED IN CEDAR RAPIDS HEALTH SURVEY

Letter sent to most respondents prior to the interview

STATE
UNIVERSITY OF IOWA
IOWA CITY, IOWA

Health Services Project #X607
500 Newton Road

December 10, 1963

Dear Friend:

The University of Iowa Medical Center is carrying out a research project to obtain information on subjects concerning the health of Cedar Rapids residents. Physicians, research workers, and other groups in the health field are much interested in the knowledge which will be gained from this project.

The address of your dwelling place was selected as a part of a random sample of the dwellings in Cedar Rapids. An interviewer from the University will contact you sometime during January. The interviewer will ask you a number of questions about your own health and the health of other members of your family, particularly about illnesses you have had in recent weeks as well as other questions closely related to health. The interview will take about thirty minutes to complete. Your cooperation will be very much appreciated.

The information you give will of course be held in confidence, and nothing will be published except statistical summaries in which no individuals can be identified. All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the project, and will not be disclosed or released to others for any other purposes.

Sincerely yours,

Harold A. Mulford

Harold A. Mulford, Ph.D.
Project Director

The questionnaire used in the drinking study follows. The actual questionnaires are designed for a household as a unit and include additional spaces for reports on more than one person. Several items on the questionnaire are not covered in this report, but are currently being analyzed by the Division of Alcohol Studies, State University of Iowa.

Budget Bureau No. 68-6370; Approval Expires August 31, 1964

CONFIDENTIAL - All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any other purposes. (42 CFR 1.101-1.108).

1964

UNIVERSITY OF IOWA MEDICAL CENTER
CEDAR RAPIDS HEALTH SURVEY

Health Services Project # X607

Name_____

Address_____

(I-1-2) Stratum #_____

(3-4) Block #_____

(5-6) House #_____

Assignment #_____

(7) HOUSE TYPE

1- Single family dwelling unit
2- Duplex
3- Rooming house
4- Apartment house
5- Hotel

Questionnaire _____ of _____ Questionnaires

RECORD OF CALLS AT HOUSEHOLD

Item		(8)	1	Com.	2	Com.	3	Com.	4	Com.	5	Com
Entire household (9)		Date										
		Time										
Record of return calls for individual respondents	Col. No.____	Date										
		Time										
	Col. No.____	Date										
		Time										
	Col. No.____	Date										
		Time										

REASON FOR NONINTERVIEW

TYPE	(10) A	B	C
Reason	1- Refusal (describe in footnotes) 2- No one at home - repeated calls 3- Temporarily absent 4- Other (specify)	1- Vacant - non-seasonal 2- Vacant - seasonal 3- Usual residence elsewhere 4- Armed Forces 5- Other (specify)	1- Demolished 2- In sample by mistake 3- Eliminated in subsample 4- Other (specify)

Interview not obtained for: Cols._____ _____ _____

Because:

Signature of Interviewer:

_____

(11-12)_____

office use only

(13) 1 2

(14)_____

. . . . . .

(15-23)

. . . . . .

(24-50)

FOOTNOTES AND COMMENTS

1

D XD

1. (a) What is the name of the head of this household?
ENTER IN 1ST COLUMN.
(b) What are the names of all other persons 21 and over who live here? ENTER
(c) I have listed (READ NAMES). Is there anyone else now staying here such as friends, relatives, or roomers? 1- Yes 2- No
(e) Do any of these people have a home elsewhere?
1- Yes APPLY HOUSEHOLD MEMBERSHIP RULES. IF NOT MEMBER, DELETE.
2- No LEAVE ON LIST. (52)
IF ANY ADULT MALES LISTED, ASK:
(f) Are any of the persons in this household now on full-time active duty with the Armed Forces?
1- Yes DELETE 2- No

1- Self
2- Proxy

2. How are you related to the head of this household? (Son, daughter, father, mother, mother-in-law, roomer, step-son, partner, etc.)
WRITE IN RELATIONSHIP (53-4)

HEAD

3. In what year were you born? (55-56)

4. RACE (CIRCLE CODE. IF ANY OTHER, WRITE IN) (57)

1- white
2- Negro
3- SPECIFY

5. SEX (CIRCLE CODE) (58)

1- male
2- female

6. Are you now married, widowed, divorced, separated, or never married? (59)

1- married*
2- widowed
3- divorced
3- separated
4- single

*IF "MARRIED" (1), ASK:
How long have you been married? (60-1)

DETERMINE WHICH ADULTS ARE AT HOME AND RECORD THIS INFORMATION. BEGINNING WITH #7, YOU ARE TO INTERVIEW FOR HIMSELF OR HERSELF EACH ADULT WHO IS AT HOME (EXCEPT WHEN OTHERWISE INDICATED). (62)

1- At home
2- Not home

7. Were you sick at any time last week or the week before? (That is, the 2-week period which ended this past Sunday night?) (63)

1- Yes
2- No

(a) What was the matter?

(b) Anything else? (64)

8. Last week or the week before, did you take any medicine or treatment for any condition (besides ... which you told me about)? (65)

1- Yes
2- No

(a) What was the condition?

(b) Anything else? (66)

9. Since this time last year, have you (your - - , etc) had any injuries from accidents that interfered with things you usually do, or which bothered you for more than a week? (67)

1- Yes
2- No

(a) What was the accident and injury?

(b) Anything else? (68)

10. Did you ever have an (any other) accident or injury that still bothers you or affects you in any way?

1- Yes
2- No

(a) In what way does it bother you? (69)
RECORD PRESENT EFFECTS

(b) Anything else? (70)

11. Has anyone in the family — you, your - - , etc. — had any of these conditions during the past 12 months? (II-1)

1- Yes
2- No

READ CARD "A," CONDITION BY CONDITION: RECORD IN HIS COLUMN ANY CONDITION (BY NUMBER) MENTIONED FOR THAT PERSON. (2-29)

(30)

12. Does anyone in the family have any of these conditions?

1- Yes
2- No

READ CARD "B," CONDITION BY CONDITION: RECORD IN HIS COLUMN ANY CONDITIONS (BY NUMBER) MENTIONED FOR THE PERSON. (32)

(33-41)

(42)

13. (a) Do you (Does your husband, wife, - -) ever have occasion to use alcoholic beverages such as liquor, wine, or beer; or are you (is he OR she) a total abstainer? IF "YES," CIRCLE THE "D" UNDER THE APPROPRIATE NAME ON BOTH SIDES (44)

1- Yes, use SKIP TO #14
*- No, abstain

(b) Have you (Has your - -) always been a total abstainer? IF "NO", CIRCLE THE "XD" UNDER THE APPROPRIATE NAME ON BOTH SIDES (44)

3- Yes SKIP TO #31
2- No

(c) How old were you when you quit drinking alcoholic beverages? RECORD AGE (45-6)

(d) Did you (your - -) find quitting difficult? (47)

3- No
2- Some
1- Very
4- Dont recall
5- Dont know

(e) Did you have any kind of help to quit drinking or did you just quit by yourself? (48)

2- None SKIP TO #14
1- Had help
3- Dont know

(f) Who helped? Was help received from any of these sources? SHOW CARD "C". RECORD CODE OF SOURCE(S) (49-56)

ASK QUESTIONS 14 - 17 OF ONLY ONE MEMBER PER HOUSEHOLD

14. During the past year have there been any serious difficulties in your household due to excessive drinking? (57)

2- No SKIP TO #18
1- Yes

15. About how many years ago did this difficulty first begin? RECORD NUMBER OF YEARS (58-9)

16. Whose drinking was involved? Was it your own, your husband's (wife's, - -) or whose? CIRCLE ALL THAT APPLY (60)

1- Own
2- Spouse
3- SPECIFY

17. Would you mind describing the difficulty?

(61)

QUESTIONS 18 - 30 ASK ONLY OF DRINKERS AND EX-DRINKERS; THAT IS, THOSE WITH "D" OR "XD" CIRCLED BY NAME.

18. How often during the past year (or during the year before you quit drinking) did you have one or more drinks?

RECORD CODE
0) None (Less than once a year)
1) 1-12 times a year
2) 2-3 times a month
3) Once a week
4) 2 or more times a week
5) Don't know (62)

19. (a) How much beer or ale would you say you ordinarily consume(d) at a sitting? That is, from when you start(ed) drinking until you quit?

RECORD CODE
0) No beer or ale
1) 1-5 glasses, 1-3 bottles or cans
2) 6+ glasses, 4+ bottles or cans
3) Don't know (63)

(b) How much wine or champagne at a sitting?

RECORD CODE
0) No wine or champagne
1) 1-3 glasses
2) 4 or more glasses
3) Don't know (64)

(c) How many drinks of liquor (whiskey, gin, vodka, etc.) do (did) you consume at a sitting, either mixed or straight?

0) None
1) 1-2 drinks — MIXED (65)
2) 3 or more drinks
3) Don't know — STRAIGHT (66)

IF "NONE" (0) ON ALL OR ABOVE THREE, (a-c); ASK:

(d) What do you drink? RECORD KIND AND AMOUNT

Anything else?

20. (a) During the past year (or year before you quit), did you have as many as 3-4 drinks of liquor or 6-8 bottles of beer on any one occasion? (67)
1- Yes*
2- No

*IF "YES," ASK:
(b) Did you have as many as 7-8 drinks of liquor or more than two six-packs of beer on any one occasion? (68)
1- Yes
2- No

21. During the past year, have you driven a car within two or three hours after you had consumed as many as 3 - 4 drinks of liquor or 6 - 8 bottles of beer? (69)
1- Yes
2- No

22. How do you think your drinking compares with the drinking of other people? Would you say you drink "More," the "Same," or "Less" than:

PROXY: Now suppose your - - were answering this; how does he (she) think his drinking compares with the drinking of other people? Would he (she) say that he (she) drinks "More," the "Same," or "Less" than:

ASK VERTICALLY

	MORE	SAME	LESS	DK
	1	2	3	4
a. The average person.....(111-1)	1	2	3	4
b. Most of your (his OR her) best friends.....(2)	1	2	3	4
c. Your husband (wife).....(3)	1	2	3	4
d. Your (his OR her) father.....(4)	1	2	3	4
e. Your (his OR her) mother.....(5)	1	2	3	4
f. Would you (- -) say that you (he OR she) drink(s) more now, less now, or about the same now as you (he OR she) did 5 years ago?... (6)	1	2	3	4

23. Do you feel you drink too much (or did at the time you quit)?

PROXY: Does - - feel he (she) drinks too much (or did before quitting)? (7)

1- Yes
2- No

24. Now, what do alcoholic beverages mean to you? Here is a list of statements commonly made about alcoholic beverages. TEAR OUT INSERT "X" AND HAND IT TO RESPONDENT. Would you please put a check mark in either the "Yes" column or the "No" column to indicate for each statement whether or not you personally would make that statement. There are no "right" or "wrong" answers. Just indicate whether you would or would not make each statement. Choose the most appropriate answer. RETRIEVE PAGE WHEN RESPONDENT IS FINISHED. GLANCE TO SEE THAT ALL ITEMS ARE ANSWERED AND PLACE ASIDE, FACE DOWN.

PROXY-RESPONDENT: Now suppose your husband (wife, - -) were answering the same statements about alcoholic beverages for us; would he (she) make each of these statements? ASK ACROSS

	YES	NO	DONT KNOW
	1	0	3
1. Alcoholic beverages make a social gathering more enjoyable.....(8)	1	0	3
2. Alcoholic beverages are customary on special occasions.	1	0	3
3. Alcoholic beverages help me forget I am not the kind of person I really want to be.....(10)	1	0	3
4. Alcoholic beverages improve parties and celebrations..	1	0	3
5. Alcoholic beverages help me feel more satisfied with myself.....(12)	1	0	3
6. Alcoholic beverages help me overcome shyness.....(13)	1	0	3
7. Alcoholic beverages help me get along better with other people.....(14)	1	0	3
8. Alcoholic beverages help me enjoy a party.....(15)	1	0	3
9. Alcoholic beverages make me less self-conscious.....(16)	1	0	3
10. Alcoholic beverages make me more carefree.....(17)	1	0	3
11. Alcoholic beverages give me more confidence in myself..	1	0	3
12. Alcoholic beverages give me pleasure.....(19)	1	0	3
13. Alcoholic beverages go well with entertainment.....(20)	1	0	3

25. Has an employer ever fired you (your husband OR wife OR - -) or threatened to fire you (him OR her) if you (he OR she) did not cut down or quit drinking? (23)
1-Yes*
2-No
3-Dont know

*IF "YES", ASK: Has this happened within the past year (year before you quit drinking)? (24)
1-Yes
2-No

26. Has your husband (wife, etc.) ever left you or threatened to leave you if you did not do something about your drinking?
PROXY: Have you ever left or threatened to leave your husband (wife) if he (she) did not do something about his (her) drinking? (25)
1-Yes*
2-No
3-Dont know
4-Never married

*IF "YES," ASK: has this happened within the past year (year before you quit drinking)? (26)
1-Yes
2-No

27. Has your husband (wife, etc) or other family member ever complained that you spend too much money for alcoholic beverages?
PROXY: Have you or any other family member ever complained that your husband (- -) spends too much money for alcoholic beverages? (27)
1-Yes*
2-No
3-Dont know

*IF "YES," ASK: Has this happened within the past year (year before you (he or she) quit drinking)? (28)
1-Yes
2-No

28. Have you (has your husband OR wife OR - -) ever been picked up or arrested by the police for intoxication or other charges involving alcoholic beverages? (29) — 1-Yes* 2-No 3-Dont know

*IF "YES," ASK: Has this happened within the past year (year before you quit drinking)? (30) — 1-Yes 2-No

29. Has a physician ever told you (your husband OR wife OR - -) that drinking was injuring your (his or her) health? (31) — 1-Yes* 2-No 3-Dont know

*IF "YES," ASK: Has this happened within the past year (year before you quit drinking)? (32) — 1-Yes 2-No

(SCORE) (33-4)

30. Now, would you look over this list of statements about the use of alcoholic beverages. HAND RESPONDENT PAGE "Y". For each statement check whether or not you personally would make that statement about your own drinking — or would have made it before you quit drinking. Choose the most appropriate response. AFTER R HAS COMPLETED PAGE "Y", RETRIEVE IT, NOTE WHETHER ALL ITEMS HAVE BEEN ANSWERED, ASK PART (b) AND (c) IF APPLICABLE, AND PUT IT WITH PAGE "X".

PROXY-RESPONDENT: Now, would you indicate which of these (same) statements describe your husband's (wife's, etc.) drinking behavior — or would have described it before he (she) quit drinking? Use the (same) responses: "Frequently," "Sometimes," or "Never."

	FREQUENTLY	SOMETIMES	NEVER	DON'T KNOW
1. I neglect my regular meals when I am drinking.....(35)	2	1	0	3
2. I drink for the effect of the alcohol with little attention to the type of beverage or brand name....(36)	2	1	0	3
3. Liquor has less affect on me than it used to.....(37)	2	1	0	3
4. I take a drink the first thing when I get up in the morning.....(38)	2	1	0	3
5. I get intoxicated on work days.....(39)	2	1	0	3
6. I awaken the next day not being able to remember some of the things I had done while I was drinking.....(40)	2	1	0	3
7. I take a few quick ones before going to a party to make sure I have enough.....(41)	2	1	0	3
8. I worry about not being able to get a drink when I need one.....(42)	2	1	0	3
9. I don't nurse my drinks; I toss them down pretty fast.	2	1	0	3
10. I stay intoxicated for several days at a time.....(44)	2	1	0	3
11. I sneak drinks when no one is looking.....(45)	2	1	0	3
12. Once I start drinking, it is difficult for me to stop before I become completely intoxicated.....(46)	2	1	0	3
13. I drink steadily for two or three days at a time...(47)	2	1	0	3
14. I try to keep other people from knowing that I am drinking or how much I am drinking.....(48)	2	1	0	3
15. When I am going to do something or go someplace, I have a few drinks first or else take some along.....(49)	2	1	0	3
16. Without realizing what I am doing, I end up drinking more than I had planned.....(50)	2	1	0	3

IF MOST STATEMENTS WERE ANSWERED "NEVER" (0) IN ANY COLUMN, ASK FOR THAT PERSON:
(b) Has there ever been a period in your (- -) life when most of the statements would have described your (his OR her) drinking? (53) — 1- Yes* ASK PART C 2- No 3- Dont know

(c) About how old were you (he OR she) at that time? RECORD AGE (54-5)

31. Now we have a few questions about automobile accidents.

(a) Do you own a driver's license? (56) — 1- Yes* 2- No 3- Suspended*

*IF "YES" OR "SUSPENDED", ASK:
(b) How many miles have you personally driven in the past year? RECORD CODE — 1) None 2) 1-99 3) 100-4,999 4) 5,000-9,999 5) 10,000-14,999 6) Over 15,000 7) Don't know (57)

(c) During the past three years - since January 1, 1961 - how many reportable (to the police) auto accidents were you involved in where you were the driver? RECORD NUMBER, IF "NONE", ENTER 0

IF ANY ACCIDENTS, COMPLETE TABLE A (58)

32. What is the highest grade (or year) of regular school you have completed? LEVEL — 1) never attended 2) kindergartan 3) elementary (1-8) 4) high school (9-12) 5) college (59)

ENTER BOTH LEVEL AND YEAR

ENTER YEAR COMPLETED AT LEVEL ENTERED ABOVE.
YEAR: 1 2 3 4 5 6 7 8 (60)

33. What was the approximate total income of this family during the past 12 months? This includes wages and salaries, business profits, net farm income, pensions, rents, and any other income received by members of this family. SHOW CARD "D". Give me the number and letter that appears next to the group into which your income falls.

ENTER IN ALL COLUMNS (61)

34. What is your religious preferance? RECORD RESPONSE.

IF "PROTESTANT," RECORD "PROTESTANT" (62)

IF "PROTESTANT" ON ABOVE, ASK:
(b) What denomination? (63)

35. Well, now that we are at the end of the interview, tell me:
Do you think I am a drinker or an abstainer? (64) — 1- Drinker 2- Abstainer

TIME ENDED (65) — A.M. P.M.

TABLE A

COLUMN NUMBER	a) How many of these accidents have occurred since the first of last year? _____ (IV-1)			
[ ]	FOR EACH ACCIDENT (in the last three years) ASK: (2)	ACCIDENT #1	ACCIDENT #2	ACCIDENT #3
	b) Was anyone hospitalized overnight as a result of this accident? (3)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No
	c) Were there any fatalities as a result of this accident? (4)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No
	d) Did the accident occur in town or on the highway? (5)	1-Town 2-Highway	1-Town 2-Highway	1-Town 2-Highway
	e) Was another vehicle involved in this accident? (6)	1-Yes* 2-No	1-Yes* 2-No	1-Yes* 2-No
	*IF "YES", ASK: Was the other vehicle moving at the time of the accident? (7)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No
	f) Approximately how much property damage resulted from the accident - to all vehicles involved? 1) less than $100 2) $100-499 3) $500-999 4) $1,000 - 1,999 5) $2,000 - 2,999 6) $3,000 or more (-8)	_____	_____	_____
	g) Was your car listed as a total loss? (-9)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No
	h) Would you say that the use of alcohol had anything to do with the accident? (-10)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No
	i) Did you have anything to drink within two or three hours prior to the accident? (-11)	1-Yes 2-No	1-Yes 2-No	1-Yes 2-No

CARD A

Has anyone in the family had any of these conditions DURING THE PAST TWELVE MONTHS?

2. Asthma
3. Tuberculosis
4. CHRONIC bronchitis
5. REPEATED attacks of sinus trouble
6. Rheumatic fever
7. Hardening of the arteries
8. High blood pressure
9. Heart trouble
10. Stroke
11. Hemorrhoids or piles
12. Hay fever
13. Tumor, cyst or growth
14. CHRONIC gall bladder trouble
15. CHRONIC liver trouble
16. Stomach ulcer
17. Any other CHRONIC stomach trouble
18. Kidney stones or CHRONIC kidney trouble
19. Mental illness
20. Arthritis or rheumatism
21. Diabetes
22. Alcoholism
23. Thyroid trouble or goiter
24. Any allergy
25. Epilepsy
26. CHRONIC nervous trouble
27. Cancer
28. CHRONIC skin trouble
29. Hernia or rupture

CARD B

Does anyone in the family have any of these conditions?

33. Deafness or SERIOUS trouble hearing with one or both ears
34. SERIOUS trouble seeing with one or both eyes even when wearing glasses
35. Any speech defect
36. Missing fingers, hand, or arm—toes, foot, or leg
37. Palsy
38. Paralysis of any kind
39. REPEATED trouble with back or spine
40. Club foot
41. PERMANENT stiffness or any deformity of the foot, leg, fingers, arm, or back

CARD C

Was help or advice sought from any of these sources?

49. Clergy
50. Psychiatrist
51. Physician
52. Social Worker
53. Member of family
54. Friend
55. Member of Alcoholics Anonymous
56. If some other source, who was it?

CARD D

Total Family Income FROM ALL SOURCES During Past Twelve Months

1a. Under $1,000
2b. $1,000-$1,999
3c. $2,000-$2,999
4d. $3,000-$3,999
5e. $4,000-$4,999
6f. $5,000-$5,999
7g. $6,000-$7,499
8h. $7,500-$9,999
9i. $10,000-$14,999
X. $15,000 and over

———O O O———

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OUTLINE OF REPORT SERIES FOR VITAL AND HEALTH STATISTICS

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