AN ABSTRACT OF THE THESIS OF

Bruce Thompson for the Master of Science

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Title: MEASURING THE POLICE OFFICER'S ACCEPTANCE OF THE

ALCOHOLIC AS A SICK PERSON

Abstract approved:

Despite the frequency with which the law enforcement officer must deal with the alcoholic, very little research has been done to measure whether the policeman views the alcoholic as ill or as a morally weak person. In the Oklahoma state training program the police officer is taught that alcoholism is an illness, but the law sees it in criminal terms. In measuring acceptance of the alcoholic as a sick person, a questionnaire incorporating questions from an earlier study by Mulford and Miller was administered to a random group of officers from a large metropolitan police department in a midwestern state. The questionnaire was designed to separate the sample into three groups: Group A, those who define the alcoholic as ill; Group B, those who define the alcoholic as weak or lacking in moral fiber; and Group C, those who view the alcoholic as both weak and ill.
The data obtained from the questionnaire were subjected to the chi-square test to determine if there was any significant background difference between the three groups. In regard to religious denomination, church attendance, age, number of years of police work, and reported personal drinking behavior the analysis indicated that there were no important difference among the three groups. Group B, however reported a slightly lower level of education than the other two groups. The three groups also significantly differed in their plans of action toward alcoholism. A higher percentage of Groups A and C than Group B indicated that they thought expert help is essential in aiding the alcoholic to stop drinking, and they expressed a greater willingness than officers of Group B to discuss a personal or family drinking problem with a friend. This study suggests several areas for further research into the policeman - alcoholic relationship.
ACKNOWLEDGEMENTS

This paper is being dedicated to the memory of my father, Walter W. Thompson, D.V.M., whose principles of life and dedication to his profession are the inspirations of my professional goals. Also, to my mother, who loves only as a mother can love, dreams only as a mother can dream, and gives only as a mother can give. To my wife, Sharon, and my sons, Bruce Junior and Brad, who have given a big part of their lives towards my education; I'll love them forever and ever.

Many people have been involved in the preparation of this paper. At this time, I extend my thanks to each of them, not in order of importance, but as follows: Dr. Dal Cass, Dr. Cooper Holmes, Dr. Harry Waters, Dr. Joseph Barto, Dr. Ray Heath, Carolyn Mitchell, Chief Heggie, Lt. McBeth Samples, Myrna Carney, Mel Shoemaker and the Board and Staff of Medso Clinic, Charles Thomas, Becky James, Debbie Martin, Marylin and Bill Thoms, Dr. William Leipold, and the staff of Valley Hope Alcoholism Treatment Center, and everyone suffering and/or recovering from the Disease of Alcoholism. May God, who has become real and alive in my life through Jesus Christ, bless and direct each of you. Thank you.
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Chapter 1

INTRODUCTION

This chapter contains sections on the theoretical formulation, the problem, definition of terms, and the limitations of the study. Through these sections the problem and hypotheses are stated along with the purpose and significance of the study. Basic terms that are critical to the study are defined in an effort to create a common ground of understanding. Limitations encountered in the course of this study are also explained.

THEORETICAL FORMULATION

After examining the literature, it is apparent that the police or law enforcement officer is a neglected population in alcoholism research. Considering the police officer's undisputed involvement in enforcement problems connected with alcohol abuse, why such limited research exists might suggest an area of investigation within itself.¹

In the early 1960's, Mulford and Miller conducted some rather extensive research in Iowa designed to establish that state's general population's understanding of alcoholism

¹Oklahoma City Police Dept., 1974., "1973 Annual Report".
and its acceptance of the alcoholic as a sick person. In their original works they found evidence that suggested the general population held a superficial understanding and acceptance of alcoholism. They stated:

Endorsement of the illness concept is often a qualified endorsement--although 51% of a sample of adult Iowans agreed that the alcoholic is sick. Many who did so were none the less inclined to conceal a personal drinking problem and would seek expert help only as a last resort.

These findings tend to be supportive of Jellinek's assumption that acceptance of the "sick" concept is probably very shallow.

As a result of their first attempt to measure public acceptance of the "sick" concept, Mulford and Miller found that a relatively high proportion of the professional groups, specifically physicians, police chiefs, and high school principals, defined the alcoholic as both sick and morally weak. Mulford and Miller's next effort was designed to distinguish between those who defined the alcoholic in both

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4 Mulford and Miller, ibid., 1964.


medical and moral terms from those who held only the medical view and those who held only the moral view. With this information they felt that they could better determine acceptance by examining how the three groups differed in terms of other definitions and plans of action towards the alcoholic. Mulford and Miller felt this would bring empirical evidence to bear on the assumption underlying alcoholism education efforts.

In their more recent works, Mulford and Miller employed an interview technique with predetermined questions, and encouraged further elaboration from the sample in an effort to further clarify that sample's understanding. Their basic assumption was that "as people think, so they act"; thus, people say one thing but their behavior or "actions" tell us they really believe something else. If a responding subject verbalizes the alcoholic is sick but then in his own family acts on the problem by a secretive "don't tell" or "keep it in the family" approach, it becomes apparent that his acceptance of alcoholism as a sickness is rather weak. On the other hand, if an individual endorses the sick concept and approaches it at a personal level by seeking professional help as he would any other major sickness, it becomes apparent that his behavior matches his verbalization and what he verbalizes is representative of his beliefs and acceptance.

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7Mulford and Miller, op. cit., 1964.
THE PROBLEM

In the state of Oklahoma alcoholism is legally viewed in criminal terms, yet in the state training program for police officers the disease or sick concept is taught. The question arises whether in this rather ambivalent situation, the sick concept will be accepted and, if so, to what extent. With a refined method of measuring acceptance, some insight can be gained into the effectiveness of the present training program's efforts.

The present study was specifically aimed at the police population and aided in determining what percent of that professional group endorsed and accepted the sick concept of alcoholism. The Mulford and Miller questions were utilized in a questionnaire form. Since the personal interview technique was not utilized, additional questions were added to the questionnaire to help clarify the respondent's answers. A detailed explanation of these questions is described under the Methods and Procedures section of this thesis.

This study also shed some light on the educational efforts of the past ten to fifteen years by looking for possible differences in the percent of those endorsing the sick concept from the percent of police chiefs endorsing it in the Mulford-Miller study of 1961.

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8Interview with Lt. MacBeth Samples, Oklahoma Highway Patrol State Training Center, 1975.
Statement of the Problem

The sample was divided into three groups: Group A, those who held only the "sick" concept; Group B, those who held only the "morally weak" concept; and Group C, those who held both "sick" and "weak" concepts, hereafter referred to only as Groups A, B, and C.

1. Is there a significant difference between Group A, Group B, and Group C and their reported plan of action toward the alcoholic?

2. Is there a significant difference between Groups A, B, and C and their religious background?

3. Is there a significant difference between Groups A, B, and C and their reported drinking behavior?

4. Is there a significant difference between Groups A, B, and C with respect to age?

5. Is there a significant difference between Groups A, B, and C with respect to number of years in law enforcement?

6. Is there a significant difference between Groups A, B, and C with respect to number of years of education.

7. Is there a significant difference between Groups A, B, and C regarding their responses to the following questions: (a) Do you view the alcoholic as one who, because of his weakness, overindulges, which in turn results in illness of one sort or another? or (b) Do you view the alcoholic as one who is suffering from the disease "alcoholism" which leads him to overindulge and, secondly, define him
as morally weak or weak willed?

8. Is there a significant difference between the present sample's acceptance of the sick concept and that of the police chief group of the Mulford and Miller study of 1961?

Statement of the Hypotheses

The sample was divided into three groups: Group A, those who held only the "sick" concept; Group B, those who held only the "morally weak" concept; and Group C, those who held both "sick" and "weak" concepts, hereafter referred to as Groups A, B, and C.

1. There is no significant difference between Groups A, B, and C with respect to their reported plan of action toward the alcoholic.

2. There is no significant difference between Groups A, B, and C with respect to their religious background.

3. There is no significant difference between Groups A, B, and C with respect to their own reported drinking behavior.

4. There is no significant difference between Groups A, B, and C with respect to age.

5. There is no significant difference between Groups A, B, and C with respect to number of years in law enforcement.

6. There is no significant difference between Groups A, B, and C with respect to number of years of education.
7. There is no significant difference between Groups A, B, and C with respect to response to the question: (a) Do you view the alcoholic as one who, because of his weakness, overindulges, which in turn results in illness of one sort or another? or (b) Do you view the alcoholic as one who is suffering from the disease "alcoholism" which leads him to overindulge and, secondly, define him as morally weak or weak willed?

8. There is no significant difference between the present sample's acceptance of the sick concept and that of the police chief group of the Mulford and Miller Study of 1961.

Purpose of the Study

It was the purpose of this investigation to determine if there was a significant difference in the degree of acceptance of the alcoholic as a sick person within the police officer population of a large metropolitan police department in the state of Oklahoma.

Significance of the Study

The study served as a means of evaluation for the police department's present training program's effort to define the alcoholic as a sick person. The results provide a more concise understanding of this police department's acceptance of the alcoholic being defined as sick rather than as a criminal or a morally weak individual. Also significant
light is shed on the success of educational efforts during the past decade to establish acceptance of the sick concept of alcoholism. This study will aid in the development of future educational efforts and better understanding of the police officer population.

DEFINITION OF TERMS

The meanings of the descriptive terminology relevant to this study are listed below.

Alcoholism

The definition of this term is taken from "Alcohol and Alcoholism," in A Police Handbook prepared by the Correctional Association and the International Association of Chiefs of Police:

Alcoholism is a disease. The definition of a disease is: "a disturbance in function or structure of any organ or part of the body, possessing certain recognizable symptoms." Alcoholism fits this perfectly. The victim drinks repeatedly to drunkenness despite the fact that it injures him physically or mentally or endangers his earning capacity, or adversely affects his or her social and family life.9

Sick Concept

The Alcoholic is physically and mentally sick, suffering from the disease of alcoholism over which he has lost control. Once drinking is started the alcoholic will drink to intoxication.

Weak Willed and/or Morally Weak

The Alcoholic is one who is lacking the power to stop or resists drinking alcohol because of deteriorating morals or weak character.

Problem Drinkers

This phrase is considered a less threatening phrase, which implies alcoholism or early phase alcoholism.

Educator's Model

Educator's model defines the alcoholic as one who is suffering from an illness called "alcoholism" and deserves expert attention, rather than a moral degenerate to be punished as a criminal or a religious failure. This definition, unlike the others, includes a plan of action that should be taken in terms of professional help.

LIMITATIONS OF THE STUDY

This study dealt only with whether or not police officers accept the alcoholic as a sick person, as reported on a rather limited questionnaire which did not permit further explanations or clarification of the officer's response or opinions. Arrangements could not be made to interview respondents as was done in the Mulford and Miller studies.

The selection of the sample was out of the researcher's control and did not permit standard procedures
for random sampling. Of the 100 questionnaires distributed, only 47 were completed as requested. Of these 47, three groups were generated, leaving the numbers in each small. Because much time was spent acquiring this sample and time was becoming a pressing factor, the above limitations had to be accepted to prevent losing the sample completely.
Chapter 2

REVIEW OF RELATED LITERATURE

In preparation for this study, a review of the literature related to the field of acceptance of the alcoholic as a sick person was made.

The major problem encountered in this review was the small number of studies in the general area of acceptance of the alcoholic as sick and, more specifically, any revealing work directed at the police populations.

Two areas were considered in reviewing the literature. The first area is discussed in limited form as its a premise, that is, the disease concept of alcoholism or that the alcoholic is considered sick. Second and more specifically related to the present study are those reported works dealing with acceptance of the alcoholic as a sick person.

THE DISEASE CONCEPT OF ALCOHOLISM

One does not have to look far before finding the disease concept of alcoholism questioned and/or defended, as the argument tends to be revisited annually in the literature. Jellinek's works, and more specifically his book *The Disease Concept of Alcoholism*, appear to be the most frequently quoted and discussed works in this area. Jellinek's
study in this area began in the mid-1940's when he presented a questionnaire to members of Alcoholics Anonymous and first formulated his concept of phases in the drinking history of alcoholics.\(^1\) From his original work a more detailed questionnaire evolved.

To attempt a discussion of the pros and cons of the disease concept in this paper is unnecessary. What is important is to point out that though different contributors to the literature argue for or against the disease concept, personally they all tend to accept the general concept that the alcoholic is sick or if nothing else is playing a "sick role."\(^2\)

The educator's model does tend to utilize the term disease; however, the emphasis is placed more on the idea that the alcoholic is sick and in need of help, both medical and mental:

There are many instances in the police officer's experience, however, where a citizen is not as yet violating any law governing public behavior but is frequently and obviously under the influence of alcohol.

In many such instances a little sound advice from the police officer as to where such a person might seek help, if he is having a problem with drinking, may save that person much trouble in the future...
By doing this, he's helping to preserve life, health and happiness. . . as well as law and order.³

More discussed the misuse and misunderstanding of terms, using for an example the term "mental":

"Mental" is equated with "psychiatric" and psychiatric is read as "psychological" or psychiatrists engage only in psychological treatments and the illnesses that interest them most must be psychological. This ignores the fact that psychiatry is a medical specialty; in truth psychiatrists primarily utilize non-psychological therapies and are more concerned with organic explanations of illness. Similarly, mental illnesses are the concern of medicine without influence to etiology.⁴

It was then pointed out in Moore's articles that

The psychosociobiological approach to alcoholism is compatible with the mental illness concept and allows free play of research without the preconception that one area must be more important.⁵

Moore went on to explain that many arguments about the term "disease" are grounded in the narrow terms of a bygone era, defining "disease" as a bodily disorder manifested by physical symptoms.⁶


⁵Moore, ibid., p. 1967.

⁶Moore, ibid., p. 1967.
The overall point that Moore made is that if alcoholism is considered as a mental sickness or illness, the alcoholic will secure the attention of all professional groups (medical, psychological, and social), resulting in more flexibility in treatment and less emphasis in seeking a unitary causation factor.

It becomes apparent in the literature that much disagreement exists in the field of alcoholism over definition. This factor has to be a problem for educators and most likely is highly correlated with the reluctance of many in the general population to fully accept a "sick" concept of alcoholism. This reluctance is what Jellinek referred to when he stated:

In spite of the high degree of acceptance by the public at large, it may be surmised that the belief is not deeply rooted as yet. Much of it may be lip service, repeating what has been heard on the radio or at a lecture given by someone who attended the Yale Summer School of Alcohol Studies, or read in a pamphlet, or heard from Alcoholics Anonymous friends. That the belief is of no particular depth may be attributed to the vagueness of the formulations of the disease conception that research the general public. The picture of alcoholism, behind the "acceptance" is perhaps that it is "sometimes mental" and perhaps that an allergy to alcohol is involved, although in medical and scientific circles the latter is the least accepted etiological theory.7

Thus is is seen that alcoholism defined as a disease is argued quite regularly; however, there is general agreement that the alcoholic is sick and can be helped by a

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combination of professionals, including medical doctors, psychiatrists, psychologists, social workers, and mental health counselors. With this general conclusion at hand, it becomes apparent that acceptance of a sick concept by the general public and specific professional groups that come into contact with the general public is an important factor in getting the alcoholic to the treatment teams for professional help.

ACCEPTANCE OF THE ALCOHOLIC AS A SICK PERSON

By the 1950's, educational efforts were in full swing and much money was being invested in an effort to redefine the alcoholic as "one who suffers from an illness called alcoholism" and who deserves expert attention, rather than a moral degenerate to be punished as a criminal.\(^8\) During this same decade McCarty and Fain, Maxwell, Roper, and Mulford and Miller in 1961, began work to determine the general attitudes, definitions and drinking behavior of specific states and general nationwide samples. Some of the earliest work done in this area was by Riley, who conducted a nationwide survey to determine the opinions of men and women about alcoholism.\(^9\) Mulford and Miller pointed out that little pertinent systematic investigation had been

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done to measure the effectiveness of public educational efforts and that this type evaluation was essential to educators if their efforts were to be effective.

It is interesting to review the surface results of the studies cited. For example, Riley found that 23 percent of his sample regarded the alcoholic as sick. Ten years later Roper reported that 58 percent of his sample defined the alcoholic as sick, and 35 percent as morally weak. Then McCarty and Fain reported that 90 percent of their Connecticut sample viewed the alcoholic as ill. Jellinek suggested in reference to the Riley and Roper studies that the increased acceptance is probably a very shallow kind of acceptance and simply reflects the verbalization of the educator's model. Mulford and Miller made the same conclusion as the McCarty and Fain studies, and included in their efforts methods designed to separate those holding a well grounded sick concept from those holding only a superficial acceptance of the sick concept.

Looking at questions utilized by the earlier researchers, Mulford and Miller set out to develop a questionnaire that would permit them to "bring empirical evidence to bear on the assumptions underlying alcoholism educational efforts." That is, what percent of the

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12 Mulford and Miller, ibid., 1964.
population being sampled accepts the disease or sick concept of alcoholism.\textsuperscript{13} Mulford and Miller stated of their earlier work and others':

The degree of public acceptance of the sickness view indicated by previous studies may be spuriously high due to the measurement procedures employed. The procedures usually followed have attempted simply to discover whether the respondent agrees that alcoholism is an illness or that the alcoholic is sick rather than morally weak. The subject is given no opportunity to qualify his response. We have reported (1961) that a relatively high proportion of certain professionals (physicians, police chiefs and school principals) define the alcoholic as both sick and morally weak. Investigation of the extent to which the general public likewise holds both views should lead to a more accurate measure of public acceptance.\textsuperscript{14}

It was their aim in their more recent work then to be more specific by dividing these populations into three groups: (A) Those who define the alcoholic as sick; (B) those who define the alcoholic as morally weak; and (C) those who define the alcoholic as both sick and morally weak. Taking these three groups and comparing them in terms of age, education, religion, background and plan of action they would take if they or a member of their family were to develop a drinking problem, would then yield a more accurate measure of this sample's acceptance of the alcoholic as sick. Mulford and Miller's findings revealed that only 24 percent of their population accepted the sickness concept without qualification and 39 percent defined the alcoholic

\textsuperscript{13}Mulford and Miller, ibid., p. 315, 1964.

\textsuperscript{14}Mulford and Miller, ibid., p. 315, 1964.
in purely moralistic terms. Mulford and Miller concluded, "This suggests that the public's acceptance of the illness concept, as measured in previous studies, is to a large extent only apparent."\textsuperscript{15}

As in the earlier studies, Mulford and Miller found age, education, religion, and residential setting all to be significantly correlated with acceptance of the sick concept.

Complete acceptance of the medical view was most common among urban dwellers, those with more than 8 years of formal education, those specifying a Catholic or Lutheran religious preference, those under the age of 50 and those who reported some use of alcoholic beverage.\textsuperscript{16}

\textsuperscript{15}Mulford and Miller, ibid., p. 322, 1964.

\textsuperscript{16}Mulford and Miller, ibid., p. 322, 1964.
Chapter 3

METHODS AND PROCEDURE

This chapter presents the procedures followed in this study. Included in the chapter are discussions on the population and sampling, materials and instrumentation, design of the study, data collection, and data analysis.

POPULATION AND SAMPLING

The subjects used in this study were uniformed police officers of a large metropolitan police department, in a midwestern state, which is presently employing 500 uniformed officers. It was felt that the large police department would give a sample of officers exposed to more training and to a wider range of practical experiences than would be given in a small department. By using the large department, a sample of significant size was more readily available.

Because of cost to the department in overtime for holding up officers and placing them into an ideal sampling environment, what would be considered ideal sampling techniques were hampered. The only arrangements that could be made were for the assistant chief of police to hand out the questionnaires, during a shift change, to those officers willing to take the time to fill them out and return them.
Since the department usually works its men on a rotating shift system, time of day or which day used was not of any significant importance. Complete instructions accompanied the questionnaire; therefore, no verbal explanation was needed at the time of distribution. Completion of the questionnaire required five to ten minutes.

MATERIALS AND INSTRUMENTATION

The questionnaire utilized in this study was developed with the questions reported in the Mulford-Miller study1 (see Appendix A, questions one through ten). Question number three (Appendix A) was suggested by Mulford and Miller in hindsight to their most recent study.2 It was their opinion that this question would shed further insight into the ambivalence of that portion of the population defining the alcoholic both as sick and morally weak.3 Though they suggested it be directed only at that one group, this study directed it to all three groups. This was justified on the basis that it kept instructions within the questionnaire less complicated and that it would further test the strength of the beliefs of those defining the alcoholic as strictly sick or strictly morally weak or weak willed.


2Mulford and Miller, ibid., 1964.

3Mulford and Miller, op.cit., 1964.
Additional questions were added by this researcher and were designed to be directed specifically at the police officer in an effort to determine the action he would take toward an alcoholic while performing duty.

Question nine (Appendix A) was added to see if there was personal acquaintance with alcoholism at less threatening levels, that is, removed from the officer himself and/or his immediate family. Question number ten (Appendix A) was also designed to make the question of alcohol less threatening; that is, having a "drinking problem" might be more easily looked at than saying one is an alcoholic. Questions eleven through fourteen are further action-taking questions but again were considered as less threatening than those utilized by Mulford and Miller.

DESIGN OF THE STUDY

A questionnaire was developed by the experimenter, replicating questions reported in the Mulford and Miller study of 1964. Along with additional questions developed by the researcher, the questionnaire was utilized in this study. Instructions accompanied each questionnaire so that the assistant chief of police would have to make no interpretations of any questions. The subjects were instructed to leave their names and/or identifying factors off of the questionnaire. This was done with hopes that more honest responses would be elicited.

4Mulford and Miller, op.cit., 1964.
The questionnaires were administered to all the subjects by the assistant chief of police of the department being sampled. He gave the following verbal instructions:

Read the instructions and complete the questionnaire. When you complete it return it to me. Do not put your name or identification number on it.

The time required to complete the questionnaire varied with each individual. Time for completion ranged from five to ten minutes.

DATA COLLECTION

One hundred questionnaires were handed out and returned. Of these one hundred, fifty-three were disqualified on the basis of not following instructions. The remaining forty-seven were divided into three groups: Group A, those who defined the alcoholic in terms of being sick; Group B, those who defined the alcoholic in terms of being morally weak or weak willed; and Group C, those who defined the alcoholic as both sick and morally weak or weak willed.

Once a subject completed the questionnaire, it was returned to the assistant chief of police. Questionnaires were then placed in an envelope and returned to the researcher the following day.

All questionnaires were checked, and those not completed as requested were eliminated. The remaining questionnaires were then separated and marked according
to the responses on questions one and two. If the respondent checked only sick on both questions, he was assigned to Group A and labeled with that letter and a number. If the respondent checked morally weak or weak willed, he was assigned to Group B and given a number. Those who answered question one by checking sick and then answered question two by checking other terms in addition to sick were assigned to Group C and given a number.

DATA ANALYSIS

The chi-square test was utilized to determine if there was a significant relationship between the three groups (independent variable) to the items on the questionnaire associated with the hypothesis. This analysis was performed with a Conversational Statistical Package which makes available computer programs through a remotely located terminal. This procedure asks the user to enter the problem parameters and to make decisions at certain key points in analysis. The programs in this package are in part modeled after the Rax Conversational Statistical Package and the IBM Scientific Subroutine Package.
The formula utilized by this program to find the value of chi-square is:

(a) for a 2 x 2 table:
\[ \chi^2 = \frac{GT(A_{11}A_{22} - A_{12}A_{21} - \text{GT}/2)^2}{(A_{11} + A_{12})(A_{21} + A_{22})(A_{11} + A_{21})(A_{12} + A_{22})} \]

(b) for other contingency tables:
\[ \chi^2 = \sum_{i=1}^{n} \sum_{j=1}^{m} \frac{(A_{ij} - E_{ij})^2}{E_{ij}} \]

where \( E_{ij} = \frac{T_i T_j}{\text{GT}} \)

\[ T_i \quad m \quad A_{ij} \]
\[ T_j \quad n \quad A_{ij} \]
\[ \text{GT} \quad i=1 \quad T_i \]

\( i=1,2...n \) (row totals)
\( j=1,2...m \) (grand total)

The number of degrees of freedom is obtained by:
\[ \text{d.f.} = (n-1)(m-1) \]

The subroutine for chi-square is:
CSP @CS @PP
The chi-square frequencies are determined by the number of observed frequencies with respect to the independent variable and the manner in which participants respond to the various items.

The data are arranged in contingency tables. For example: The following table illustrates a typical 2 x 2 table in a chi-square test generated from hypothetical data with groups of unequal size:

<table>
<thead>
<tr>
<th>Groups</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>12</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(10.95)*</td>
<td>(9.05)</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(5.48)</td>
<td>(4.52)</td>
<td></td>
</tr>
<tr>
<td>Group C</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(6.57)</td>
<td>(5.43)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>19</td>
<td>42</td>
</tr>
</tbody>
</table>

*Expected frequencies in parentheses

When data are arranged in contingency tables, the null hypothesis is that there is no relationship between the variables. In other words the variables are independent in the population being studied. In cases like this chi-square is referred to as a test of independence.  

The expected frequencies for each cell are determined by multiplying the row sum by the column sum and dividing this product by the total sample size (N). As in the first cell of the above contingency table, the expected frequency of 10.95 was calculated by taking 20 (row sum) and multiplying it by 23 (column sum) and dividing that product by 42 (N).

To interpret chi-square the degrees of freedom (df) were computed with the following formula:

\[
\text{df} = (r-1)(c-1)
\]

Where \( r \) = the numbers of rows in the contingency table
\( c \) = the number of columns in the contingency table

One row and one column in a diagram or analysis table are dictated by the number of responses. They are not free to vary but are fixed by the total. If there were four rows and three columns, the numbers that are free to vary could be shown; \( \text{df} = (4-1)(3-1) = (3)(2) = 6 \).

---

6 Downie and Heath, ibid., 1970.
Chapter 4

ANALYSIS OF DATA

This chapter includes a discussion of the observed responses followed by the chi-square tables and a discussion of the data and chi-square values.

STATISTICAL ANALYSIS

In this section, the responses of the subjects have all been analyzed statistically. The chi-square test was selected to determine if deviations between the responses of the groups (Group A, sick, those who defined the alcoholic as sick; Group B, weak, those who defined the alcoholic as criminal, morally weak, weak willed or other; and Group C, mixed, those who defined the alcoholic as both sick and weak (the independent variable) were significantly different from the expected (dependent variable). From this point on the groups will be referred to as: Group A, sick; Group B, weak; and Group C, mixed. The formulas and computation of chi-square have been discussed in the Data Analysis section of Chapter 3 (page 24.) A chi-square table was used to obtain the critical region at both the .05 and .01 levels of significance, with respect to degrees of freedom.

The null hypotheses examined in this chapter were as follows:
1. There is no significant difference between the present sample's acceptance of the sick concept and that of the police chief group of the Mulford-Miller study of 1961.

2. There is no significant difference between Group A, Group B, and Group C, with respect to religious background.

3. There is no significant difference between Group A, Group B, and Group C, with respect to age.

4. There is no significant difference between Group A, Group B, and Group C with respect to number of years in law enforcement.

5. There is no significant difference between Group A, Group B, and Group C, with respect to self-reported drinking behavior.

6. There is no significant difference between Group A, Group B, and Group C, with respect to number of years of education.

7. There is no significant difference within Group A, Group B, and Group C with respect to responses to the question: (a) Do you view the alcoholic as one who, because of his weakness, overindulges, which in turn results in illness of one sort or another? or (b) Do you view the alcoholic as one who is suffering from the disease "alcoholism" which leads him to overindulge and, secondly, define him as morally weak or weak willed?
8. There is no significant difference between Group A, Group B, and Group C with respect to reported plan of action toward the alcoholic.

The data for the study were divided into two sections: first, to show how the three groups were generated; and second, to test each of the null hypotheses.

SELECTION OF GROUPS

The three groups, (A-sick, B-weak, C-mixed) were generated from the total sample on the basis of each individual's response to Items one and two of the questionnaire. The following table (Table 1) illustrates that percent of the sample which responded in each of the possible directions. A discussion follows explaining how the three groups were chosen.

Item 1.
Item 1 reads: "What are your personal views of the alcoholic?"

Since only 2.13 percent of the group responded to "criminal" and only 2.13 percent to the term "other," as was the case in the Mulford and Miller study, these groups were classified under the heading weak along with those responding to morally weak and weak willed. This was done in an effort to maintain similarity with the Mulford and Miller study.
Table 1

Percent of Sample Responding to Each Choice in Question 1

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sick</td>
<td>24</td>
<td>51.07</td>
</tr>
<tr>
<td>Criminal</td>
<td>1</td>
<td>2.13</td>
</tr>
<tr>
<td>Morally Weak</td>
<td>9</td>
<td>19.14</td>
</tr>
<tr>
<td>Weak Willed</td>
<td>12</td>
<td>25.52</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2.14</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100.00</td>
</tr>
</tbody>
</table>
**Item 2.**

Item 2 reads: "Which of these terms, according to your views apply to the alcoholic? Check as many as apply: sick, criminal, morally weak, weak willed, other."

In this question the respondent had the opportunity to select as many terms as he felt applied. The groups were determined in relationship to what was added by their response to Item 2, and compared to their response to Item 1. If in Item 2 they stuck with their initial response in Item 1, they were assigned to that group. If they checked more than one response, thus adding to their selection in Item 1, they were assigned to the "mixed" group.

The following information (Table 2) produced the data needed to test the null hypothesis: "There is no significant difference between this police population and the Police Chief population of the Mulford and Miller study of 1961." The chi-square table of these responses follows (Table 3).

A chi-square value greater than or equal to 5.991 was needed to reject the null hypothesis at the .05 level of significance. Since the chi-square value of 3.91 was less than 5.991, the null hypothesis was accepted. It is concluded with reference to the two groups that there is no significant difference in how they define the alcoholic.
### Table 2

Percent of Sample Responding to Choices in Question 2, with the Term Criminal, Morally Weak, Weak Willed, and Other, Grouped Under the Term "Weak."

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent of Group</th>
<th>Mulford &amp; Miller 1964* in Percents</th>
<th>Mulford &amp; Miller 1961** in Percents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sick</td>
<td>23.41</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Weak</td>
<td>48.94</td>
<td>34</td>
<td>60</td>
</tr>
<tr>
<td>Mixed</td>
<td>27.65</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

*1964 general state population.
**1961 Police Chief population.

### Table 3

Chi-Square Values of Present Police Previous Police Chief Groups' Definitions of the Alcoholic

<table>
<thead>
<tr>
<th>Groups</th>
<th>Sick</th>
<th>Mixed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Police</td>
<td>23.41</td>
<td>48.94</td>
<td>27.65</td>
</tr>
<tr>
<td></td>
<td>(18.00)*</td>
<td>(54.500)</td>
<td>(27.5000)</td>
</tr>
<tr>
<td>1961 Police</td>
<td>13</td>
<td>60</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>(18.00)</td>
<td>(54.500)</td>
<td>(27.5000)</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis.  
$\chi^2 = 3.91$  
$df = 2$
TESTS OF THE NULL HYPOTHESIS

The questionnaire was designed in two sections: to gather general background; and to establish by numbered items, definition of the alcoholic and plan of action toward the alcoholic respondents. The following four contingency tables (Tables 4 through 7) present the observed and the expected frequencies for each of the three groups in this study and their chi-square value. A discussion of the effects on the stated null hypothesis accompanies each table.

One hundred percent (100%) of the sample reported a religious affiliation. Due to the small size of the sample and the large number of specific religious denominations represented, the data are presented in reference to Protestant or Catholic (Table 4); and in terms of attendance during childhood, teenage years, and present adult life, as reported on a regular, occasional or nil basis (Table 5). No one reported being Jewish, atheist or agnostic.

Referring to Table 4, a chi-square value greater than or equal to 5.991 was needed to be significant at the .05 level. Since the chi-square value of 1.23 is less than 5.991 the null hypothesis was accepted. It was concluded with reference to religious denominations that there are no significant differences between the three groups.

Table 5 illustrates the rate of church attendance within each of the three groups when they were children, as teenagers, and presently as adults.
Table 4

Contingency Table Showing the Observed Frequencies, Expected Frequencies, and Chi-Square Value of Three Groups and Their Reported Religious Affiliation

<table>
<thead>
<tr>
<th>Groups</th>
<th>Catholic</th>
<th>Protestant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>1</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(0.702)*</td>
<td>(10.2979)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td>2</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(1.4681)</td>
<td>(21.5319)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td>0</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(0.8298)</td>
<td>(12.1702)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>44</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis. \( \chi^2 = 1.23 \)  
\( \text{df} = 2 \)
Table 5

Combined Contingency Table Showing Observed Frequencies, Expected Frequencies and Chi-Square Value of the Three Groups and Their Church Attendance Rate

<table>
<thead>
<tr>
<th>Groups</th>
<th>Regular Attendance</th>
<th>Occasional Attendance</th>
<th>Nil Attendance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-Sick</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(9.8701)*</td>
<td>(1.4118)</td>
<td>(0.1538)</td>
<td></td>
</tr>
<tr>
<td>Teenager</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(6.9091)</td>
<td>(4.000)</td>
<td>(0.3077)</td>
<td></td>
</tr>
<tr>
<td>Adulthood</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(2.2208)</td>
<td>(6.5882)</td>
<td>(1.5385)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(18.1818)</td>
<td>(2.0412)</td>
<td>(0.6923)</td>
<td></td>
</tr>
<tr>
<td>Teenager</td>
<td>12</td>
<td>10</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(12.7273)</td>
<td>(8.333)</td>
<td>(1.3846)</td>
<td></td>
</tr>
<tr>
<td>Adulthood</td>
<td>4</td>
<td>11</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(4.0903)</td>
<td>(13.7255)</td>
<td>(6.9231)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(11.9481)</td>
<td>(1.6471)</td>
<td>(0.1538)</td>
<td></td>
</tr>
<tr>
<td>Teenager</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(8.3636)</td>
<td>(4.6667)</td>
<td>(0.3077)</td>
<td></td>
</tr>
<tr>
<td>Adulthood</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(2.6883)</td>
<td>(7.6863)</td>
<td>(1.5385)</td>
<td></td>
</tr>
</tbody>
</table>

Chi-Square

\[ \chi^2 = 1.17 \quad \chi^2 = 4.22 \quad \chi^2 = 8.02 \]

*Expected frequencies in parenthesis
In reference to Table 5, in all three areas, a chi-square value greater than or equal to 9.488 was needed for significance at the .05 level. Since the chi-square values were: "regular," 1.17; "occasional," 4.22; and "nil," 8.02; the data indicate that there was no significance in relationship to church attendance among the groups.

To answer the questions of age and its influence on how the police sample defined the alcoholic, five age groups within each of the three groups were studied. This analysis is presented in Table 6.

As shown in Table 6, a chi-square value equal to or greater than 15.807 was needed to reject null hypothesis at the .05 level. Since the chi-square value of 10.27 is less than 15.807 acceptance of the null hypothesis is warranted. It was concluded, with respect to age groups, that there was no significant difference between the three groups being studied.

To answer the question of number of years of service and its significance, five groups of years served were generated. The following contingency table, Table 7, illustrates the number found in each of the five groups within each of the three groups being studied.

Table 7 shows that a chi-square value greater than or equal to 15.507 was needed to reject the null hypothesis at the .05 level of significance. Since 6.53 is less than 15.507, acceptance of the null hypothesis was warranted.
Table 6
Observed Frequencies, Expected Frequencies and Chi-Square Value of the Three Groups and Their Reported Age

<table>
<thead>
<tr>
<th>Groups</th>
<th>Ages 20-25</th>
<th>Ages 26-30</th>
<th>Ages 31-35</th>
<th>Ages 36-40</th>
<th>Ages Over 40</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(2.8085)</td>
<td>(3.9787)</td>
<td>(2.3404)</td>
<td>(0.9362)</td>
<td>(0.9362)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(5.8723)</td>
<td>(8.3191)</td>
<td>(4.8936)</td>
<td>(1.9574)</td>
<td>(1.9574)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td>5</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(3.3191)</td>
<td>(4.7021)</td>
<td>(2.7660)</td>
<td>(1.0164)</td>
<td>(1.1064)</td>
<td></td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis

$\chi^2 = 10.27$

$df = 8$
Table 7

Observed Frequencies, Expected Frequencies, and Chi-Square Value of the Three Groups and Their Reported Number of Years Served on Police Department

<table>
<thead>
<tr>
<th>Year Groups</th>
<th>Group A-Sick</th>
<th>Group B-Weak</th>
<th>Group C-Mixed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than 1 year</td>
<td>2 (1.1702)</td>
<td>2 (2.4468)</td>
<td>1 (1.3830)</td>
<td>5</td>
</tr>
<tr>
<td>1-2 Years</td>
<td>1 (0.9362)</td>
<td>2 (1.9574)</td>
<td>1 (1.1064)</td>
<td>4</td>
</tr>
<tr>
<td>3-5 Years</td>
<td>5 (5.1489)</td>
<td>8 (10.7660)</td>
<td>9 (6.0851)</td>
<td>22</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>1 (2.1069)</td>
<td>7 (4.4043)</td>
<td>1 (2.4894)</td>
<td>9</td>
</tr>
<tr>
<td>Over 11 Years</td>
<td>2 (1.6383)</td>
<td>4 (3.4255)</td>
<td>1 (1.9362)</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>23</td>
<td>13</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis

\[ \chi^2 = 6.53 \]

\[ df = 8 \]
It was concluded that there is no significant difference between the three groups being studied and their number of years of service with the police department being sampled.

Item number eight of the questionnaire (Appendix A) dealt with the question of the respondent's own drinking behavior. Eighty-seven percent of the total population reported the use of alcohol or having an occasion to drink liquor, wine, or beer. Thirteen percent reported being total abstainers. One hundred percent of those who define the alcoholic as sick (Group A) report the use of alcohol, ninety-two percent of group C, the mixed group, also report alcohol use, whereas only seventy-eight percent of the group who define the alcoholic as weak (Group B) report the use of alcohol. Table 8 illustrates the observed and expected frequencies and the chi-square value generated for their reported use of alcohol.

Referring to Table 8, a chi-square value greater than or equal to 5.991 was needed to reject the null hypothesis. Since the chi-square value of 3.57 is less than 5.991, acceptance of the null hypothesis is warranted. It was concluded with respect to Item 8 that there was no significant difference between the three groups and their reported drinking behavior.

To answer the question of the influence of years of education, four levels of education were established. The minimum educational level acceptable for employment on the
Table 8

Observed Frequencies, Expected Frequencies and Chi-Square Value of the Three Groups and Their Reported Use of Alcohol

<table>
<thead>
<tr>
<th>Group</th>
<th>User</th>
<th>Abstainer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(9.5957)*</td>
<td>(1.4043)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td>18</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(20.0638)</td>
<td>(2.9362)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td>12</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(11.3403)</td>
<td>(1.6596)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>6</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis

$\chi^2 = 3.57$

$df = 2$
police department was 12 years, so this group was examined separately. Category two included those with thirteen to fourteen years of education. The third category included those with fifteen to sixteen years of education. The fourth category represented those with fourteen or more years of education. Of interest is that seventy-eight percent of Group B (weak) were found to have from twelve to fourteen years of education as compared to sixty-three percent of Group A (sick), and sixty-two percent of Group C (mixed) were found to have the same number of years of education.

A contingency table showing the observed frequencies and the expected frequencies for each educational category and the chi-square is presented on the following page.

As shown in Table 9, a chi-square value greater than or equal to 12.592 was needed to reject the null hypothesis at the .05 level of significance. The chi-square value 14.20 is greater than 12.592; the null hypothesis was, therefore, rejected. It was concluded with respect to educational background that there was a significant difference between Group B (weak) and the other two groups, Group B having a lesser amount of education.

Item three (3) on the questionnaire (Appendix A) was suggested in the 1964 Mulford and Miller study as a question for future research. It was their opinion that it might help present a more clear picture of how the different
Table 9

Observed Frequencies, Expected Frequencies and Chi-Square Value for the Three Groups and Their Years of Education

<table>
<thead>
<tr>
<th>Years of Education</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sick</td>
<td>Weak</td>
<td>Mixed</td>
<td></td>
</tr>
<tr>
<td>12 Years</td>
<td>3 (2.3404)*</td>
<td>7 (4.8936)</td>
<td>0 (2.7660)</td>
<td>10</td>
</tr>
<tr>
<td>13-14 Years</td>
<td>1 (3.9787)</td>
<td>11 (8.3191)</td>
<td>5 (4.7021)</td>
<td>17</td>
</tr>
<tr>
<td>15-16 Years</td>
<td>4 (3.2766)</td>
<td>3 (6.8511)</td>
<td>7 (3.8723)</td>
<td>14</td>
</tr>
<tr>
<td>Over 16 Years</td>
<td>3 (1.4043)</td>
<td>2 (2.9362)</td>
<td>1 (1.6596)</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>23</td>
<td>13</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis
**Significant at the .05 level 
\[ \chi^2 = 14.20 \]
\[ df = 6 \]
groups define the alcoholic. It was suggested by them that it be directed at the group expressing mixed views so as to help clear up or pin point the ambivalence in their definition. In an effort to keep the questionnaire as simple as possible, the question was directed at the entire sample being studied. In this item the respondents select one of two responses, hereafter referred to as "Response 1" and "Response 2," stated as follows:

Response 1. Do you view the alcoholic as one who, because of his weakness, overindulges, which in turn results in an illness of one sort or another?

Response 2. Do you view the alcoholic as one who is suffering from the disease "alcoholism" which leads him to overindulge and, secondly, define him as morally weak?

(It is assumed that those grounded in the weak concept will select Response 1.)

The following contingency table illustrates how the three different groups in this study responded to this item and the chi-square value that resulted.

Referring to Table 10, a chi-square value greater than or equal to 5.991 was needed to reject the null hypothesis at the .05 level of significance. Since the chi-square value of 6.47 is greater than 5.991, rejection of the null hypothesis was warranted. It would be concluded that, with respect to Item 3, there is a significant difference between the responses of the three groups and their understanding of alcoholism as a sickness.
Table 10

Observed Frequencies, Expected Frequencies, and Chi-Square Value of the Three Groups and Their Response to Item 3

<table>
<thead>
<tr>
<th>Groups</th>
<th>Response #1</th>
<th>Response #2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>3</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(5.6170)*</td>
<td>(5.3830)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td>16</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(11.7447)</td>
<td>(11.2553)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(6.6385)</td>
<td>(6.3617)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>23</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis
**Significant at the .05 level
\( \chi^2 = 6.47 ** \\
\( df = 2 \)
To determine the respondent's plan of action toward alcoholism, the combination of items 4 through 7, and 11 through 18 was considered pertinent to the question. The items which were found to have a significant difference are reported here.

**Item 4.**

Item 4 was: "Do you think most alcoholics could quit by themselves or do they need help?"

One hundred percent of the sick-concept group, Group A, reported that the alcoholic would need help; ninety-three percent of Group C, the mixed group, agreed with Group A; only seventy percent of Group B, the weak concept group, felt the alcoholic would need help. The contingency table showing the observed and expected frequencies and the chi-square values follows on page 46.

Table 11 shows a chi-square value greater than or equal to 5.991 was needed to reject the null hypothesis. Since 5.99 is equal to 5.99, rejection of the null hypothesis was warranted. It would be concluded that in regard to Item 4 there is a significant difference between the weak concept group and the other two groups.

**Item 5.**

Item 5 reads: "If you or a member of your family were to develop a serious drinking problem, do you think you would discuss this matter with a friend?"
### Table 11

Observed Frequencies, Expected Frequencies, and Chi-Square Value of the Three Groups' Responses to Item 4 of the Questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>By Themselves</th>
<th>Need Help</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>0 (1.8723)*</td>
<td>11 (9.1277)</td>
<td>11</td>
</tr>
<tr>
<td>B-Weak</td>
<td>7 (3.9149)</td>
<td>16 (19.0851)</td>
<td>23</td>
</tr>
<tr>
<td>C-Mixed</td>
<td>1 (2.2128)</td>
<td>12 (19.7872)</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>39</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis
**Significant at the .05 level
\[ \chi^2 = 5.99 \]
\[ \text{df} = 2 \]

### Table 12

Observed Frequencies, Expected Frequencies and Chi-Square Value of Item 5 on the Acceptance Questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-Sick</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(9.3617)*</td>
<td>(1.6383)</td>
<td></td>
</tr>
<tr>
<td>B-Weak</td>
<td>16</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(19.5745)</td>
<td>(3.4255)</td>
<td></td>
</tr>
<tr>
<td>C-Mixed</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>(11.0638)</td>
<td>(1.9363)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>7</td>
<td>47</td>
</tr>
</tbody>
</table>

*Expected frequencies in parenthesis
**Significant at the .02 level
\[ \chi^2 = 8.58 \]
\[ \text{df} = 2 \]
With the question Item 5 poses, it is assumed that those individuals who accept the idea that alcoholism is a sickness will be more open with it and less inclined to not discuss it with friends as they would most any other illness. All respondents in both Groups A, sick concept; and C, mixed concept, indicated that they would discuss it with a friend. Of the weak concept group (Group B), however, only seventy percent indicated a willingness to discuss alcoholism, within their family, or with a friend. Thirty percent of Group B stated they would not discuss it, indicating a preference to keep a problem of this nature hidden. Table 12 illustrates the observed frequencies, expected frequencies, and chi-square value for this analysis.

As shown in Table 12, a chi-square value greater than or equal to 7.824 was required to reject the null hypothesis at the .02 level of significance. Since the chi-square value of 8.58 was greater than 7.824, the null hypothesis was rejected. It would be concluded, with reference to Item 5, there was a significant difference between Group B (weak concept group) and their reported plan of action on Item 5, when compared to the other two groups.
Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the organization and findings of the present study are discussed. The conclusions drawn from the findings are presented to place the study in perspective. Some of the recommendations listed are intended for police departments of the type in which the study was conducted and others for suggested further research.

SUMMARY

With the increasing recognition of the extent of alcoholism in our nation and its impact on our society, need for public and professional attention directed at understanding and acceptance of the dynamics involved becomes quite apparent. For many years now it has been the goal of educational efforts to attempt to shift public and professional understanding towards accepting the alcoholic as a sick person suffering from the disease "alcoholism" rather than a weak willed moral degenerate who is possessed by some evil force which leads him to compulsive drinking and criminal behavior. Although endless numbers of articles fill the literature debating the fine lines of whether or not alcoholism can be truly defined as a disease, they all tend to agree that the alcoholic or "problem drinker" is sick.
The literature devotes much of its effort attempting to determine if the general public accepts these notions, and specifically looks at professional populations such as physicians, psychiatrists, psychologists, nurses, lawyers, and social workers. The literature tends to ignore the police officer as a specific professional population, even in the light of significant police involvement with the problem drinker or alcoholic. It was the object of this study to at least open the doors and scratch the surface of the police population.

Specifically this study was designed to measure the police officer's acceptance of the alcoholic as a sick person. It was felt that the findings would shed some light on the effectiveness of educational efforts over the past ten to fifteen years and pinpoint some significant area that should be considered in future efforts. In order to make this measurement, a questionnaire was developed utilizing questions from an earlier study conducted by Mulford and Miller in 1964 with a statewide general population. Items were added by this researcher in order to direct questions at the police officer specifically. The questionnaires were administered randomly to a group of police officers during a shift change by the Assistant Chief of Police of the department being sampled. Three groups were generated from the returned questionnaires: Group A, those who defined the alcoholic as sick; Group B, those who defined the
alcoholic as weak willed or morally weak; and Group C, those who defined the alcoholic as both sick and weak. The responses in the questionnaire were analyzed to determine if there were any significant differences between the three groups.

The statistical tool utilized to analyze the data was the chi-square test. The Chi-square technique was used primarily to determine if there were any significant relationships between the three groups (independent variable) and the way in which they responded to the items on the questionnaire (dependent variable).

CONCLUSIONS

The results of this study indicated that in the police sample being studied those most likely to accept the sick concept were under thirty years of age, had less than five years of police experience, had over fourteen years of education, were Protestant, and were more regular in their attendance at church than those holding a weak or mixed concept. On the surface there did not appear to be any change over a fifteen year period toward acceptance of the sick concept. That is, this police sample did not fully accept the sick concept of alcoholism; however, implications from near correlations, a restrictively small sample, and limited data in the study compared, suggested a more detailed analysis may shed light on some changes that did appear to
be taking place. These changes should be highly correlated with number of years of education, years of service in police work, and age. Age thirty years and five years of service appear to be crucial points at which the officer shifts to a weak concept or holds fast to a mixed concept. This would suggest that additional educational efforts would best be spent on those holding mixed concept and approaching thirty years of age and five years of service.

RECOMMENDATIONS

It is recommended that this study be undertaken with the group described as mixed being exposed to additional educational material on the sick concept of alcoholism and re-evaluated after such additional training. Additional research with this same group, using, a pretraining questionnaire and a post-training questionnaire similar to the one utilized in this study should be done. Specifically the study should look at age, education, and years of service, to determine what portion of the thirty year old group, one year later, shift and hold to a sick concept of the alcoholic.

It is recommended that the questionnaire of this study be shortened to items numbered 1-8, 11, 15, and 18. Items 1-8 were developed by Mulford and Miller and felt to imperically measure the acceptance of the alcoholic as sick. Item 11 was developed for this study as an additional
indicator of attitude. Items 15 and 18 are aimed specifically at the police population.

It is also recommended that a study similar to this study be conducted with smaller police departments in an effort to determine the differences that exist between departments with less organized and less mandatory training.

Additional research designed to yield some indication of possible alcoholism or problem drinking within the police population and its significance in relationship to acceptance of the sick concept would be quite beneficial in helping to understand both the police officer and alcoholism.
REFERENCES


Lt. MacBeth Samples, Oklahoma Highway Patrol State Training Center, 1975.
YOUR OPINIONS AND FEELINGS ARE IMPORTANT

Your cooperation in this survey type research is greatly appreciated. It is our hope that the results will shed some light on our present educational efforts and help us in planning more effective future approaches. It is important that you answer ALL questions.

Please -----

-- Be completely open and honest.

-- Follow instructions closely.

-- Do not compare or discuss your responses with others; we want your uninfluenced opinions and feelings.

-- Double check to see that you followed the instructions on each question.

-- Do not put your name on the questionnaire as we are not interested in identifying you personally, and hope that this will encourage your complete honesty.

-- Turn questionnaire in to supervisor at end of the shift.

Thank You
<table>
<thead>
<tr>
<th>NUMBER</th>
<th>AGE</th>
<th>RACE</th>
<th>SEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCCUPATION</td>
<td></td>
<td>HOW MANY YEARS</td>
<td></td>
</tr>
<tr>
<td>POSITION OR TITLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROPRIATE POPULATION OF COMMUNITY YOU ARE WORKING IN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WERE YOU RAISED IN A (CIRCLE):

1. LARGE CITY (OVER 100,000)
2. SMALL CITY (50,000)
3. LARGE TOWN (10,000 - 50,000)
4. SMALL TOWN (LESS THAN 10,000)
5. RURAL COMMUNITY (LESS THAN 4,000)
6. ON A FARM

NUMBER OF YEARS OF EDUCATION COMPLETED (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

MARITAL STATUS (CIRCLE): 1. MARRIED, 2. SINGLE
3. DIVORCED, 4. SEPARATED

HOW MANY TIMES MARRIED?___ HOW MANY TIMES DIVORCED?___

INDICATE YOUR RELIGIOUS BACKGROUND WHEN (IF YOU ARE PROTESTANT, STATE WHICH DENOMINATION)

YOU WERE A CHILD GROWING UP (CHURCH)

ATTENDANCE - REG.____ OCC.____ NIL____

YOU WERE A TEENAGER (CHURCH)

ATTENDANCE - REG.____ OCC.____ NIL____

NOW AS AN ADULT (CHURCH)

ATTENDENCE - REG.____ OCC.____ NIL____

1. WHAT ARE YOUR PERSONAL VIEWS OF THE ALCOHOLIC? WHICH ONE OF THESE TERMS, ACCORDING TO YOUR VIEW, APPLIES TO THE ALCOHOLIC? (CIRCLE ONE ONLY): 1. SICK PERSON,
2. CRIMINAL, 3. MORALLY WEAK, 4. WEAK WILLED,
5. OTHER (EXPLAIN)

2. WHICH OF THESE TERMS ACCORDING TO YOUR VIEW APPLIES TO THE ALCOHOLIC? (CHECK AS MANY AS APPLY) 1. SICK PERSON
2. CRIMINAL____ 3. MORALLY WEAK____
4. WEAK WILLED____ 5. OTHER (EXPLAIN)____
3. CHECK ONE ONLY:

1. ________ DO YOU VIEW THE ALCOHOLIC AS ONE WHO, BECAUSE OF HIS WEAKNESS, OVERINDULGES, WHICH IN TURN RESULTS IN ILLNESS OF ONE SORT OR ANOTHER:

   OR

2. ________ DO YOU VIEW THE ALCOHOLIC AS ONE WHO IS SUFFERING FROM THE DISEASE "ALCOHOLISM" WHICH LEADS HIM TO OVERINDULGE AND, SECONDLY, DEFINE HIM AS MORALLY WEAK OR WEAK WILLED?

4. DO YOU THINK MOST ALCOHOLICS COULD QUIT DRINKING BY THEMSELVES OR DO THEY NEED HELP? (CHECK ONE): BY THEMSELVES ________ WOULD NEED HELP ________

5. IF YOU OR A MEMBER OF YOUR FAMILY WERE TO DEVELOP A SERIOUS DRINKING PROBLEM, DO YOU THINK YOU WOULD DISCUSS THIS MATTER WITH A FRIEND? YES ________ NO ________

6. DO YOU THINK YOU WOULD TRY TO SOLVE THE DRINKING PROBLEM WITHIN THE FAMILY OR WOULD YOU SEEK OUTSIDE HELP OR ADVICE? CHECK ONE: WITHIN THE FAMILY ________ SEEK OUTSIDE HELP ________

7. LET US SAY THAT YOU DECIDED TO SEEK HELP OUTSIDE THE FAMILY, WHERE WOULD YOU GO FIRST? (NUMBER IN ORDER OF PREFERENCE): FAMILY DOCTOR ________ OUTSIDE HELP ________ PSYCHIATRIST ________ CLERGY ________ MENTAL HEALTH CENTER ________ ALCOHOLICS ANONYMOUS ________ OTHER (INDICATE) ________

8. CHECK ONE:

   ________ DO YOU EVER HAVE AN OCCASION TO USE ALCOHOLIC BEVERAGES SUCH AS LIQUOR, WINE OR BEER?

   OR

   ________ ARE YOU A TOTAL ABSTAINER?

9. DO YOU HAVE ANY FRIENDS OR RELATIVES WHO YOU WOULD SAY ARE HAVING TROUBLE WITH THEIR DRINKING? (CHECK ONE) YES ________ NO ________

10. DO YOU FEEL A PERSON COULD HAVE A DRINKING PROBLEM BUT NOT BE AN ALCOHOLIC? YES ________ NO ________

11. DO YOU FEEL A PERSON WHO MAY HAVE A DRINKING PROBLEM BUT MAY NOT BE CONSIDERED ALCOHOLIC SHOULD HAVE OR BE DIRECTED TOWARD PROFESSIONAL HELP? YES ________ NO ________
12. IF A FRIEND APPROACHED YOU ABOUT HIMSELF OR SOMEONE CLOSE TO HIM HAVING A DRINKING PROBLEM, WOULD YOU ADVISE HIM TO GET HELP? YES _____ NO _____

IF YES TO ABOVE, WHERE WOULD YOU SEND HIM?
FAMILY DOCTOR ___ PSYCHIATRIST ___ CLERGY ___ MENTAL HEALTH CENTER ___ ALCOHOLICS ANONYMOUS ___ OTHER ___

13. DO YOU FEEL IF A HEAVY DRinker OR PROBLEM DRinker STOPS DRINKING FOR ONE OR TWO MONTHS THAT THIS IS PROOF ENOUGH THAT HE IS NOT AN ALCOHOLIC? YES _____ NO _____

14. FROM AN EMPLOYER'S POINT OF VIEW DO YOU FEEL THE ALCOHOLIC OR PROBLEM DRinker SHOULD BE (CHECK ONE):
FIRED ___ GIVEN A LEAVE OF ABSENCE TO GET HELP ___ JUST TOLD TO STOP OR HE WILL BE FIRED ___ TOLD HE CAN STAY ON THE JOB AS LONG AS HE ATTENDS A.A. AND STOPS DRINKING ___

15. DO YOU FEEL THAT THE POLICE OFFICER WHEN INVOLVED WITH THE PUBLIC INEBRIATE OR DRINKING DRIVER SHOULD POINT OUT THE OFFENDER'S INAPPROPRIATE BEHAVIOR AND ENCOURAGE HIM TO SEEK PROFESSIONAL HELP? YES _____ NO _____

16. DO YOU FEEL THE POLICE OFFICER SHOULD INDICATE TO THE OFFENDER THAT HE MAY BE SICK AND SHOULD SEEK HELP TO DETERMINE THE EXTENT OF HIS POSSIBLE ALCOHOLISM? YES _____ NO _____

17. DO YOU FEEL THE POLICE OFFICER SHOULD STICK TO ENFORCING THE LAW ONLY AND NOT ATTEMPT TO ENCOURAGE THE PUBLIC INEBRIATE TO SEEK HELP? YES _____ NO _____

18. AS A POLICE OFFICER, DO YOU ATTEMPT TO ENCOURAGE THE ALCOHOL OFFENDER TO SEEK HELP? YES _____ NO _____

19. WOULD ENCOURAGING AN OFFENDER TO SEEK HELP BE AGAINST YOUR POLICE DEPARTMENT POLICIES? YES _____ NO _____