The Denver Community Mental Health Questionnaire: A Multivariate Approach with Alcoholic Outpatients

A Thesis

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The Faculty of Graduate Studies
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by

Barry Mallin

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THE DENVER COMMUNITY MENTAL HEALTH QUESTIONNAIRE: A MULTIVARIATE APPROACH WITH ALCOHOLIC OUTPATIENTS

BY

BARRY MALLIN

A dissertation submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

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ABSTRACT

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Study One was concerned with the effect of changing the administrative procedure of the Denver Community Mental Health Questicnaire from an interview procedure, as used in Denver, to a self-administration. Two groups of community norms; one an interview group (IG) the other a self-administration group (SAG), were collected and compared.

Study Two compared the Winnipeg norms collected in Study One (SAG) with an estimate of the interview community data collected in Denver.

Study three was based on the logic that an instrument like the Denver Community Mental Health Questionaire should be able to differentiate between a normal and a pathological group. The SAG data from Study One was compared with data collected from a group of self-defined alcoholic out-patients (ALC1). These findings are discussed with reference to what the literature tells us about the psychiatric concomitants of alcoholism and along what dimensions other self-report scales discriminate alcoholics from the norm.

While then first three studies were concerned with the restandardization of the Denver Community Mental Health

Questionaire on a sample of the Winnipeg community and the effect of changing the mode of administration Study Four was an initial attempt to use the instrument in a pre-post treatment evaluation study. This was not an evaluation study per se. As will be seen, the conditions of the study were less than ideal for drawing conclusions about the efficacy of treatment. Nevertheless, the results were interesting from the point of view of investigating the utility of an instrument like the Denver Community Mental Health Questionaire in such a setting.

The findings were essentially that the Denver Community Mental Health Questionaire could be reasonably used as a self-administered questionaire; that local norms are required for valid comparisons; that the scale was able to discriminate alcoholics from normals along dimensions consistant with those suggested in the literature; and that the changes in the alcoholic profiles observed during treatment suggest that the scale could provide useful outcome data when used in an appropriate design. Suggestions for further research and design modifications to provide less equivocal conclusions are presented.

ACKNOWLEGEMENTS

I am extremely pleased to be writing this section of the thesis. In part my pleasure comes from knowing that the ordeal is nearly complete, but also partly because it gives me an opportunity to write my thanks to those who "helped me through the night."

Jim Burdick and the A.F.M. commissioned and funded much of this work, and although our outlooks differ and neither of us knew just what we were getting into, I am indebted to them for the part they played.

Linda Trigg was instrumental in laying the groundwork for this project. Thus far all she has received is a few lines to add to her vita. She now has my formal forgiveness for sticking me with the presentation to the agency's board and my warmest thanks for her hard work and valuable ideas.

My committee has been incredibly good to me over the long haul. I have received different things from each of the members. Morgan Wright has given me support beyond all reason and is chiefly responsible for the fine organization of this report. Roy Gabriel has given me a fine example to emulate in the hope that I can treat others with the respect , courtesy, and patience that he has shown me while broadening my horizons and shoring up my self-esteem. Sidney Blumenthal has given me my health,

his unfaltering faith in me, a push or two in the right direction, and some conversations I shall always treasure. This wasn't much of an "academic experience" for you Sidney, but it pleases me no end to have your signature on the documents.

More than any of this the fact that I had not one single instance of difficulty caused by the arbitrary excercise of the tremendous power that these men had over me is a measure their integrity and self-esteem. All comments were well considered and relevant. All drafts were read speedily and carefully. Meetings were easily arranged and conscientiously attended. Trivial matters and arbitrary decisions were left for me to deal with. That is how things should be but often are not.

Christine Greaves had a hand (or two) in the preparation of this text and played a much more importatant role as the keeper of my sanity and perspective and as a source of support and direction.

There are many others whom I will remember in the context of this thesis. Gary Glavin, John Walker, Geoff Nelson, Philip Katz, Malcolm Shooter, And Tufon Simhai are some of those. Thank-you all for your information, your time, your advice, and mostly for caring.

Sadly, Averill Karlsruher is not with us today to see the fruition of a seed that he helped to plant. I hope that this is a worthy effort in his memory.

GENERAL INTRODUCTION

The age of "relevance" has come and gone and the age of "consumerism" is upon us. Hosts of manufacturers and retailers are reeling under the impact of new consumer awareness, sophistication, and legislation. Schools are required to publish data on the employment records of their graduates and even universities are being sued for breach of contract when disenchanted students feel that the "product" they received was misrepresented or of poor quality (Weider, 1976). Nader's Raiders continue to harass big business while expanding their scrutiny to include less profit motivated endeavours such as the Community Mental Health Program. Previously "untouchable" professions such as psychiatry and psychology are being asked to account for the outcome of their various endeavours. In particular they are being required to show a positive cost-benefit ratio.

Insistance on outcome data is not new in psychotherapy research, however, previously it has been a sort of in-house war between adherents of various approaches. With the advent of public accountability comes the sophistication of methodology and analysis in the area of evaluation.

Initially evaluations were primarily modelled on the laboratory procedure so familiar to investigators.

Essentially this amounted to taking pre and post measures on the treatment groups and creating or designating another group as the control group. Many workers in the field now feel that this approach is inappropriate to the field of program evaluation. (Guttentag, 1973; Weiss, 1975; Scriven, 1974).

Guttentag (1973) points out that the classical design assumes "that programs are designed to achieve ends and that the success of programs can be measured by the extent to which the ends are reached." She suggests that in many programs this is not the case since there are different goals for different individuals, and programs frequently have broad aims and unstandardized forms.

Campbell and Stanley (1966) give the criteria for validity in a classical experimental design as: "... the history - the specific events occurring between the first and second measurement, in addition to the experimental variable, are controlled: that the effect of taking a test upon the scores of the second testing are also controlled, and that there is a control for biases resulting in differential selection of respondents for the comparison groups." (p. 5). Guttentag (1973) and others (Scriven, 1974; and Kiresuk, 1973) point out that an evaluation study cannot hope to meet these criteria, and Weiss (1973) has described at length the causes and

effects of "organizational constraints on evaluation research." (p. 49)

As a result of the criticism of the use of the classical experimental design many new evaluative systems have been forthcoming. These include widely used systems such as Goal Attainment Scaling (Kiresuk, 1973), generally accepted but only occasionally used systems such as Edwards' Multi Attribute Utilities Method, (Guttentag, 1973), and esoteric, largely theoretical systems such as Goal Free Evaluation, (Scriven, 1974).

Nevertheless, the majority of "summative" evaluation studies tend to be of the random assignment, pre-post design. This impression is strengthened by Boruch (1974) who replied to Campbell's (1973) comment on the lack of randomized experimental program evaluations by publishing an exemplary bibliography of just this type of study in a variety of areas. It is this author's impression that classical design is the choice not only of the evaluators, because of their extensive education in the experimental tradition, but also of the program administrator, be. Program administrators however, seem to have a tendancy to view the tradition in its simplest form and to eschew often complex but always necessary control procedures in search of ease of implementation and clarity of interpretation.

When presented with a choice between the formative,

comprehensive, Goal Attainment Scaling (Kiresuk and Sherman, 1968) and the more summative Denver Community Mental Health Questionnaire (Ciarlo and Reihman, 1974) the administrators of the Winnipeg alcoholism treatment program, for whom this research was first commissioned, initially chose Goal Attainment Scaling. Later, faced with staff concerns about implementation, workload, and personal accountability the administrators chose to implement a pre-post administration of the Denver Community Mental Health Questionaire (D.C.M.H.Q.) along with other measures of agency functioning.

DESCRIPTION OF THE PRESENT STUDY

For the sake of clarity this research is presented as four seperate studies.

Study One was concerned with the effect of changing the administrative procedure of the D.C.M.H.Q. from an interview procedure, as used in Denver, to a self-administration. Two groups of community norms; one an interview group (IG) the other a self-administration group (SAG), were collected and compared.

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While then first three studies were concerned with the restandardization of the D.C.M.H.Q. on a sample of the Winnipeg community and the effect of changing the mode of administration Study Four was an initial attempt to use the instrument in a pre-post treatment evaluation study. This is not an evaluation study per se. As will be seen, the conditions of the study were less than ideal for drawing conclusions about the efficacy of treatment. Nevertheless, the results are interesting from the point of view of investigating the utility of an instrument like the D.C.M.H.Q. in such a setting.

Methodological considerations of all aspects of the research are presented in the General Discussion section following Study Four.

ALCOHOLISM- PSYCHOLOGICAL CONSIDERATIONS

Aside from physiological sequellae to alcohol abuse much work has been done on the psychological factors in alcoholism. This work is concerned with both the psychological causes and consequenses of prolonged heavy drinking.

As in other areas of psychology the field of alcoholism is replete with definitions. Barry(1970) finds that none of these is entirely satisfactory and points out that some of the confusion may be eliminated by noting that alcoholism necessarily involves both heavy drinking and psychopathy. Walgren and Barry (1970), in a review article, are somewhat more specific.They specify three necessary and sufficient criteria:

> 1) a large quantity of alcohol consumed over a period of years;
>
> 2) abnormal, chronic loss of control over drinking shown by inability to refrain, or inability to stop; and
>
> 3) the drinking causes damage to either physical health or social standing.(pp 716-718)

Clearly, this definition calls for many discretionary judgements concerning what constitutes " large quantities, abnormal loss of control, and damage to social standing." These criteria are likely to be influenced by cultural and socio-economic standards.

Alcoholism has also been described as a disease (Jellinek, 1960), and in disease terms as an "agent" attacking a "host" in a favourable "enviornment" (Mello, 1972). while the disease concept, as applied to alcoholism, has been useful in removing it from the world of moral weakness and wickedness and has helped to dramatize the seriousness of the disorder and the need for

treatment the concept also has certain drawbacks. Robinson (1972) feels that the labelling process coincident with the disease concept may have adverse effects on the individual's self-concept and relationship with others. Calahan (1972) has suggested using the term "problem drinking" which implies a mutiplicity of problems as opposed to a specific pathogenic agent.

This concept of problem drinking is especially compatible with the use of multiple criteria for the diagnosis of alcoholism as specified by the National Council on Alcoholism (1972). Calahan et al (1969) found that while the authors categorized 12% of their sample of users as heavy drinkers only about 2% of the sample classified themselves as such. In a later study Calahan (1970) produced a guideline for classifying subjects as problem drinkers. This required further criteria. Calahan designated several measures of loss of control over drinking (frequent intoxication, binge drinking) and several categories of problems due to drinking (with spouse or relatives; with friends or neighbors; with job; with law, police, or accidents; with health; with money; and with beligerence) (pp 28-23). Many currently used scales are modeled on this on and incorporate these dimensions.

Usually the subjects report on their own drinking behaviour in an interview or on a questionaire. Guze et

al (1963), with 18 questions grouped into 5 different criteria, reported that in a study of 90 criminals, 39% of whom were independantly diagnosed as being alcoholic, all but one gave information which enabled classification as alcoholic. Of particular note is that information gleaned from interviews with close relatives would not have detected the alcoholism in 16 cases. This study, in modified form, has been replicated (Guze and Goodwin, 1972) and is cited as indicating the trustworthiness of self reports (Barry, 1970).

Other criteria for problem drinking based on similar sets of questions to that of Guze (1963) have been reported by Auerback (1966); Selzer (1971) was further validated by Moore (1972); Steinhiller et al. (1967); and Shelton et al. (1967). Other scales have been developed for more specific purposes. Edwards et al. (1972) asks only two questions, Selzer (1967) asks five. Jackson (1967) formulated two scales each with five levels Jellinek (1946) reported on a very lengthy questionaire measuring age at onset of a large number of symptoms. An abbreviated form of this questionaire was published by Jellinek in 1952. McCusker et al. (1971) reported on the Zinberg scale of alcohol abuse, which makes use of detailed information on the person's history of physical, social, and occupational impairments due to drinking. Mumford and Miller (1960) asked about emotional responses

to drinking and motivations for using alcohol.

This multiplicity of scales reflects, in part, the lack of an ideal, generally accepted set of criteria defining alcoholism. It also reflects the varying emphasis on either brevity or comprehensivness as well as the various methods and groups used in validating the different scales.

As previously mentioned one validational system used is to have friends and relatives of the subject rate the subject as alcoholic or not. Another is to use classification by a trained observer (often the person administering the questionaire). By far the most commonly used and supposedly objective basis for specifying a person as alcoholic is inpatient or outpatient treatment for alcoholism. This procedure also has its problems. Studies by Blaine et al. (1964) and Wolf et al. (1965) indicate the cultural relativity of a physician's diagnosis of alcoholism. They maintain that this leads to an overrepresentation of the type of alcoholic characterized as the skid-row social deviate in hospital populations of alcoholics.

While we know a good deal about the psychological functioning of the alcoholic from the content of the items that comprise the criterion scales for diagnosing alcoholism we must also consider studies approaching the question from other viewpoints. One other approach is to

consider the psychological, or psychiatric, concomitants of alcoholism. Another is to administer the so-called broad-band psychological tests to groups identified as alcoholic by means of other criteria.

Among psychiatric illnesses the one most closely associated with alcoholism is depressive, or manic-depressive psychosis, also called affective disorder (Barry). Shuckit et al. (1969) found historic evidence for affective disorder among 27% of his alcoholic subjects. From the opposite tack Coleman (1968) found 20% alcoholics and 22% heavy drinkers, both high proportions, among a sample of 59 male manic-depressives. Looking at collaterals Winnokur et al. (1970; 1971) reported an elevated incidence of affective disorder among female relatives of alcoholics and of alcoholism among male relatives. In this light it is often suggested that both the mania and the alcoholism are a means of masking the symptoms of depressive illness.

Further evidence for a link between alcoholism and depressive illness is the association of alcoholism and suicide as reviewed by Walgren and Barry (1970) and Goodwin (1973). A link between suicide and each of affective discrder, alcoholism, and schizophrenia has been postulated by both Robins et al. (1968), in St. Louis, and Barraclough et al. (1970), in Sussex, England. Although certain methodolgical problems are common to

these studies (Mallin, 1976) they are still held to support a suicide, depressive, illness , alcoholism, schizophrenia relationship.

Sociopathy, or psychopathic personality, although itself a poorly defined category, is often linked with alcoholism. A high incidence of alcoholism has been found in populations of felons (Guze et al., 1962; Goodwin et al., 1971), male black delinquents (Robins et al., 1968), and white male delinquents (Barry et al. 1969). Violent behaviour including child abuse (Mainard et al., 1971) is also indicative of alcoholism.

The evidence concerning the relationship of alcoholism and schizophrenia is conflicting. The incidence rates of schizophrenic, schizoid, or paranoid individuals in samples of alcoholics varies from 54% (Zwerling, 1959), through 18% (Panepinto et al., 1970), to 9% (Sherfey, 1955). Selzer (1967) linked paranoia to alcoholic drivers involved in automobile accidents but failed to find similar tendancies in non-alcoholic drivers so involved. In a 1969 study Selzer expanded this finding to indicate that 50% of alcoholic drivers involved in fatal automobile accidents were paranoid. Others have found schizophrenia rates of less than 5% among samples of alcoholics (Watson et al., 1966; Ritson, 1971; Rosenberg et al. 1972). These conflicting findings are not entirely unexpected considering the uncertain nature of both the categories of

alcoholism and schizophrenia. One interesting reconciling hypothesis put forth is that of Bagley and Binitie (1970) who suggest that alcoholism masks the symptoms of schizophrenia in Irish-born but not in English-born residents of London.

The abuse of multiple drugs appears to be another characteristic of the alcoholic. LeDain (), and Dreher and Frazer (1968) have reported heavy use of tobacco by alcoholics. Others have reported concommittant abuse of barbiturates (Devenyi and Wilson, 1971) narcotics (Baden, 1972) and psychotropics (Cohen and Klein, 1972).

Investigators using psychological tests on groups classified as alcoholics on other criteria have also added to our knowlege of alcoholism. Self-report is the most common means of collecting data on personality inventories. As Barry () states;

> Descriptions of ones own sentiments and opinions are subject to a variety of possible errors including misrepresentation, self deception, and deliberate deception of others. The self reports by alcoholics might be especially suspect. However, under the proper circumstances most people, including alcoholics, generally tell the truth. It is informative to compare the self reports of alcoholics with those of other people and to compare this type of information with other measures. (p. 74)

The most frequently used of the self-report questionaires is the Minnesota Multiphasic Personality

Inventory (MMPI). Given the studies reviewed above it is not surprising that the most consistant finding is, that when compared to the norm, alcoholics show an elevation both the D (depression) and Pd (psychopathic deviance) scales (Fuller et al., 1966; Tomsovic, 1968).

Over the years researchers have taken MMPI items and added others in an attempt to produce scales that reliably discriminate alcoholics from other psychiatric patients. All suffer from methodological shortcomings (Gibbons et al., 1959). More recent scales have employed sophisticated factor analytic techniques. In an ambitious work Finney et al. (1971) investigated five scales and a composite through factor analysis on data from a sample of over 2000 subjects. Three main characteristics were isolated and summarized by Barry():

> 1) a need for emotional support indicated by craving for signs of affection which were sought by passive dependancy or aggressive demands;
>
> 2) impulsiveness, expressed by making decisions easily without worrying, yeilding to temptation, and feeling sorry; and
>
> 3) efforts at control, shown by repression faith and inspiration.

Several studies report evidence for the stability of these MMPI scale score elevations. Even when variables such as; type (outpatient vs inpatient) (Krisitanson 1970); duration (Jones 1971); and perceptual performance

(Fuller, 1966) are controlled for the Pd elevation remains remarkably similar across groups. The D scale shows a similar but weaker consistancy. Rohan et al. (1969), Rohan (1972), and Libb and Taubee (1971) found that after several weeks of treatment D scale scores were decreased but Pd scale scores were unchanged.

Findings from other tests are necessarily more tentative because of the dearth of such studies. Witman (1939) found that alcoholics expressed a strong interest in religion, a need for religious security and a sense of sin and guilt. Hampton (1953) reported that alcoholics described themselves as more assertive, quick tempered, original, witty, submissive, resourceful, easily discouraged, dependable, less driving themselves hard, and less inclined to be cynical. Markannen (1957) found high emotionality, autonomy, neuroticism, nurturance, and low calmness in alcoholics given the Personality Inventory Test. Force (1958), with the Kuder Preferrence Test, found that alcoholics preferred unspecialized, social, and glamorous occupations. Connor (1962), using the Adjective Check-List, found that alcoholics described themselves in terms of traits expressing sociability, kindliness, passivity, and low self-evaluation. Walton (1968), using the Catell PF Questionaire, found alcoholics scored thigh on anxiety, extroversion, neurotic symptomatology, and hostility. Barry () summarizes these findings;

> In general, the self description by alcoholics shows a complex but consistant mixture of traits, with qualities of assertion, socialbility, confidence, and social pathology. These qualities are consistant with the clinical profile of psychopathology and depression (p.41).

DENVER COMMUNITY MENTAL HEALTH QUESTIONAIRE- SCALES

The Denver Community Mental Health Questionnaire (D.C.M.H.Q.) is a multi-dimensional program evaluation instrument developed by the Northwest Denver Mental Health Center and the University of Denver (Ciarlo and Reihman, 1974).

The D.C.M.H.Q. consists of twelve scales or outcome dimensions. Of these original twelve four were excluded for use in this study. A brief description of the scales used is presented here.

PSYCHOLOGICAL DISTRESS (PSYCHDIS): This dimension involves a subjective sense of distress or discomfort experienced as a negative state, and frequently couched in somatic complaints. Questions like "In the last few days how often have you felt sad or depressed?" and "In the past few days have you had any problems with indigestion?" are representative of this. As in all these scales a high score is indicative of poor functioning.

INTERPERSONAL ISOLATION FAMILY (IPIFAMLY): This scale concerns the amount of personal involvment an individual has with his family upon his own initiative. "How much of

your free time do you spend with your family?" and "How often do you correspond with family not living with you?" are questions typifying this scale.

INTERPERSONAL ISOLATION FRIENDS (IPIFREND): This scale is constructed similarly to the scale tapping isolation with one's family, but is geared to measure the degree of involvment a person has with friends and acquaintances. Questions such as "How many close friends do you have?" or "How much of your free time do you spend with your friends?" are included here.

INTERPERSONAL AGRESSION WITH FRIENDS (IPIAGRFRD): This short two item scale emerged from the cluster analysis genesis of this entire instrument. It attempts to measure how frequently an individual is verbally and physically assaultive with friends.

PRODUCTIVITY (PRODUCTY): This scale is designed to measure the degree to which a person is engaged in socially valued, constructive, or self development activities. Questions like "Do you work at a job?" and "How much time do you spend in classes, job training etc.?" are included. This scale is admittedly biased toward those in the labour force. Some experimental questions relating to constructive activities taking place outside the traditional job situation or in the home are found in this version of the questionaire. They were not used in the data analysis because of uncertain factor

loadings. They do, however, indicate a need for future modification of the scale.

LEGAL DIFFICULTIES (LEGALDIF): This scale measures negatively sanctioned behaviours involving arrests and court actions. Questions involving arrests for vagrancy, intoxication, drug possession, and other reasons are included in this scale.

ALCOHOL ABUSE AND NEGATIVE CONSEQUENCES (ALCABNEG): One item of this scale is the frequency with which a person uses alcohol to become intoxicated. However, the major concerns of this scale are the negative consequences experienced as a result of alcohol abuse. Questions typical of this scale are "When you use alcohol does it cause any problems with your employer or your job?" and "When you use alcohol does it cause any problems with your spouse?"

DRUG ABUSE AND NEGATIVE CONSEQUENSES (DRGABNEG): Similar in content to the alcohol abuse scale, one item asks the frequency with which one consumes drugs or medication; the others cover the problems resulting from this consumption. Questions assessing problems include "When you use drugs does it cause problems with your friends?" and "When you use drugs does it cause problems with your physical health?".

The original scales Public System Dependancy and Client Satisfaction had to be so radically changed to conform to

the Winnipeg situation that they bore little resemblance to the Denver questions. The scales Hard and Soft drug abuse were felt to be superfluous to the purposes of this study since information of a more global sort was available from other scales and were also not included in the Dever group's Community norm study (below).

It should be noted that all scales except the Client Satisfaction scale were administered although the scale Public System Dependancy was highly modified. Omission consisted of excluding the data on the above scales from the analysis.

DENVER COMMUNITY MENTAL HEALTH QUESTIONAIRE- DEVELOPMENT

Initial attempts at measuring client functioning on the above dimensions was made through open ended interviews. This proved unsatisfactory due to the lack of any inter-rater reliability. Simple, concrete, questions with high face validity were then developed along with four graded responses to each question. These were administered to 101 adults (18 to 65 years old) who were currently, or had previously received some kind of service from the Denver Center. These scores were analyzed using the "Scale Scores Program" developed by William Scott of the University of Colorado. The results confirmed the existence and internal consistency of a number of the tentative dimensions and their independence from each other. An initial follow-up study of a random sample of

Center clients was attempted.

Primarily because of the growing data pool and the low internal consistency of two of the scales a factor analytic approach was adopted. The item scores of 538 clients and 90 persons selected randomly from the Denver community (see below) were subjected to the "BC-Try Cluster Analysis" program (Tryon and Bailey, 1970). Scores arising from interviewers' judgments made at the time of the interview, and scores derived from responses of clients' collaterals (usually spouses or other relatives either in person or by telephone at another time, with the prior consent of the client were collected from approximately 20% of the cases and cluster analyzsed.

This analysis resulted in a refinement of the scales through the dropping of some items, re-assignments of others, and the spliting of some scales. Tables depicts data from the analyses, showing items titles included in each cluster and the correlation of each item with the total cluster.

INSERT TABLE ABOUT HERE

TABLE 1 D.C.M.H.Q. ITEM CLUSTER ANALYSIS

CLUSTER INTERCORRELATIONS AND INTERNAL CONSISTENCY OF EACH SCALE (SUBJECT GROUP)
(N=628)

	Scales	DIS	FAM	FRI	AGG	PRO	LEG	SYS	ALC	DRU
1	Psychological DIStress	(.85)*								
2	Interpersonal Isolation-FAMily	.23	(.72)							
3	Interpersonal Isolation-FRIends	.18	.11	(.73)						
4	Interpersonal AGGression-Friends	.12	.05	-.13	(.58)					
5	PROductivity	-.03	.11	.30	-.08	(.84)				
6	LEGal Difficulties	.10	.08	.03	.11	-.05	(.56)			
	ALCohol Abuse	.32	.07	.11	.12	.03	.15	-.03	(.94)	
	DRUg Abuse	.28	.09	.15	.10	.06	.08	.17	.26	(.96)
	Number of Items in Each Cluster	9	4	4	2	5	5	5	7	7

*Cronbach's alpha in parentheses

adapted from Ciarlo and Reihman (1974)

Rater and Collateral data are also shown in table one and, although not available for all scales, the cluster formation parallels that of the subjects quite well.

Table shows the intercorrelations of the subject clusters, along with the Cronbach alpha coefficient of internal consistency (Cronbach,) for each cluster. Most of the clusters appear to be essentially orthogonal. Of note are the slightly positive correlations between the scale Alcohol Abuse and Negative Consequences and the scale Drug Abuse and Negative Consequences and of both these scales with the scale Psychological Distress suggesting a pattern of abuse of both alcohol and drug abuse associated with experiences of personal or somatic distress. The scale Psychological Distress also correlates slightly positively with the scales Interpersonal Isolation with Family and Friends suggesting that isolates are experiencing some degree of distress.

As Ciarlo and Reihman (1974) state "In general the psychometric properties of the scales appear acceptable for the program evaluation purposes for which they are intended." (p. 1).

Inter-rater reliability was also assessed by having pairs of raters sit in on the same interview and rate the responses independently . The correlations on the two sets of client scores calculated in 18 cases ranged

between .85 and 1.00 for the various scales.

The validity of the D.C.M.H.Q. scales was evaluated in numerous ways. Client responses were compared with the interviewers' judgements and those of collaterals. These correlations are depicted in table . Seventy-one client scores were compared with a global rating of the client by a clinician familiar with the client and/or his case records. These results are found in table . Community norms were collected and compared to the Centre's clients.

INSERT TABLE ABOUT HERE

TABLE 2 D.C.M.H.Q. COLLATERAL CLIENT INT CORRELATIONS

CORRELATIONS BETWEEN SUBJECT, RATER, AND COLLATERAL GROUPS ON DCMHQ SCALES

	Subject-Rater (N=349)	Subject-Collateral (N=91)	Rater-Collateral (N=91)
1 - Psychological DIStress	.94	.59	.64
2 - Interpersonal Isolation--FAMily	.97	.73	.73
3 - Interpersonal Isolation--FRIends	.95	.60[b]	.59[b]
4 - Interpersonal AGGression--Friends	.79	—[a]	—[a]
5 - PROductivity	.91	.60[b]	.59[b]
6 - LEGal Difficulties	.83	.52[b]	.52[b]
- ALCohol Abuse	.91	.58	.56
- DRUg Abuse	.94	.60	.53

[a] Scale scores for one of the two groups are not available

[b] This correlation is one between the Subject or Rater scale score and a single item Collaterals were asked regarding the same dimension.

adapted from Ciarlo and Reihman (1974)

INSERT TABLE ABOUT HERE

TABLE 3 D.C.M.H.Q. VS GLOBAL CLINICIAN RATINGS

AND
DCMHQ SCALE SCORES AT ADMISSION
(N=71)

Clinician Ratings	DCMHQ Scales DIS	FAM	FRI	AGG	PRO	LEG	SYS	ALC	DRU	HAR	SOF
1 - Psychological Distress	.35										
2 - Interpersonal Isolation--Family	.07	.63									
3 - Interpersonal Isolation--Friends	.07	.36	.25								
4 - Interpersonal Aggression--Friends	-.10	.18	-.13	.10							
5 - Productivity	.28	.26	.07	.19	.38						
6 - Legal Difficulties	-.12	.05	.06	-.15	.16	.33					
7 - Public System Dependency	.32	.31	.24	.02	.29	.17	.37				
8 - Alcohol Abuse	.09	.14	.03	-.03	-.07	-.02	-.26	.60			
9 - Drug Abuse	-.18	.03	-.30	.37	-.24	-.06	-.21	.16	.18		
10 - Hard Drug Use	.28	.00	.15	-.21	.19	.15	.16	-.01	-.13	.23	
11 - Soft Drug Use	-.01	-.07	.27	-.35	-.21	.44	.01	-.14	-.36	-.06	-.03

Correlations of .32 and above are significant at .01 level (two-tailed test)

INSERT TABLE ABOUT HERE

TABLE 4 D.C.M.H.Q. COMMUNITY VS CLIENT SCORES

	Community (N=90)		Clients (N=538)			
	Mean	S.D.	Mean	S.D.	Difference between Means	Significance (1-tailed z-test[c])
-Psychological DIStress	50.0	4.96	44.4	9.08	5.6	$p < .001$
-Interpersonal Isolation-FAMily	50.1	5.12	45.3	7.62	4.8	$p < .001$
-Interpersonal Isolation-FRIends	50.0	4.93	44.9	7.10	5.1	$p < .001$
-Interpersonal AGGression-Friends	50.2	4.55	50.0	6.87	.2	n.s.
-PROductivity	50.0	5.07	47.1	5.79	2.9	$p < .001$
-LEGal Difficulties	50.8	.75	50.3	2.54	.5	$p < .001$
-ALCohol Abuse	50.2	5.20	46.2	8.21	4.0	$p < .001$
-DRUg Abuse	49.9	4.72	45.8	7.17	4.1	$p < .001$

[c] See McNemar, Q. Psychological Statistics, 1962, pp. 82-83.

adapted from Ciarlo and Reihman (1974)

As can be seen in tables one through four the client scores are usually in agreement with those of independent interviewers and knowledgeable community informants. The correlations with the clinicians' global rating are considerably lower although generally significant. These results may, in part, be due to methodological considerations as follows.

Collaterals were only interviewed with the clients' prior consent and therefore may be selected as likely to agree with the client. In fact, the Collateral scores, on the whole, do appear slightly higher than those of the clients lending some evidence to the hypothesis that Collaterals may be reticent to elaborate on a client's difficulties.

The clinicians' ratings however, point to the difficulties involved in equating specific scores and a global rating. Also since most of the ratings were made by nurses and para-professionals with little clinical experience it may be the case that inexperience on the part of the clinicians accounts, in part, for the lower correlations . This is speculation on the part of Ciarlo and Reihman (1974) since no data is available to form the basis for such a conclusion. Nevertheless, the observed correlations do provide additional, if not definitive support, for the validity of most of the scales.

The purpose of collecting community norms was two-fold. One was to determine whether the clients' scores were, in fact, significantly lower than the community scores, thereby supporting the validity of the scales. The second was to provide a "community norm or baseline" against which client pathology and progress could be measured.

The findings here are presented in table 4 as standard scores with a mean of 50 and a standard deviation of 5. It can be seen that the community group differs in a positive direction from the client group on all scales administered to both groups except scale 4 (IPIAGFRD). Ciarlo and Reihman (1974) suggest that this is supportive of the validity of the instrument in as much as the direction of the differences is appropriate in all cases and the magnitude of the differences is in excess of one-half a standard deviation in all cases but two (IPIAGFRD and LEGALDIF). They also write "It is important to note that while the community sample scored well above the clients, they still admitted to a good deal of less-than-perfect functioning as assessed by our questions." (p. 16)

STUDY ONE

Introduction

As indicated above the intention of this study was to collect normative data on a sample of the Winnipeg

community and to ascertain the effect of changing the mode of administration from the interview format used in Denver to a self-administration format.

Method

Subjects

Approximately 400 individuals were chosen at random from the Henderson Directory (1975). The only restrictions on the selection procedure were that the person have a telephone and, that they live in either the Fort-Gary or East-Kildonan areas of Winnipeg. These areas were chosen because the majority of alcoholic clients to be compared to the general population data (in studies 3 and 4 below) were from these areas. This selection was then split into two groups of 100 and 300 individuals. The 100 person group was used to select subjects for the interview group (IG) and the 300 person list was used to select subjects for the self-administration group (SAG).

Procedure

Letters (see appendix A) were mailed to the first fifty persons on the interview list and the first 100 persons on the self-administration list. The SAG Ss received the D.C.M.H.Q. (see appendix B) at the same time as they received the covering letter. The letter indicated that they would receive a telephone call from one of the study personnel within three days of the receipt of the letter,

and that arrangements would then be made to collect the completed forms (SAG), or, to administer the questionaire (IG). They were also informed of a five dollar ($5.00) participation fee. Study personnel were then given a list of names for whom they were responsible. Three paid assisstants were responsible for collecting the SAG questionaires. All contact with the IG S's was carried out by the principal investigator.

Telephoning was initiated two working days after the letters were mailed and was terminated after a week with no response. A minimum of one morning and one evening call per day was attempted.

Responses were of three types:

- letters not yet received -in this case the material was described to the person and, depending on their response, they were treated as one of the cases below;
- refusals - study personnel were instructed not to pressure anyone into responding to the questionaire. Instructions were to be certain that the individual was aware that they would be paid and that their responses would be annonymous. If they still refused to participate they were to be thanked for their time and the call was to be terminated.
- acceptances - arrangements were made to pick up the forms and disperse payment (SAG) or, times of administration and payment were arranged (IG).

After the initial mailing, letters were sent out 10 at

a time until 120 SAG and 40 IG S's were acquired. A series of arbitrary letters, three per group, were used to identify the group to which a particular questionaire belonged. Questionaires were coded as to group in the upper right hand corner. The significance of these codings was known only to the principal investigator.

Scoring was done by a fourth employee who was blind to the design of the study. Scores were not recorded on the questionaires themseleves, but on seperate score sheets, so that individual questionaires could be surreptitiously re-inserted for re-scoring as a reliability measure. Forty such re-insertions were made and any discrepancies were noted by the principal investigator. Scoring was not begun until all data except the alcoholic post-treatment (study four below) data was collected. The same person was employed to score these data. Precautions were taken to insure that the scorer was still blind to the design of the study and ignorant of the preliminary findings.

Results and Discussion

The results of the data analyses are presented here in tabular form.

INSERT TABLE ABOUT HERE

TABLE 5 IG/SAG ERROR CORRELATION MATRIX

ERROR CORRELATION MATRIX

	1 PSYCHDIS	2 IPIFAMLY	3 IPIFREND	4 IPAGRFRD	5 PRODUCTY	6 LEGALDIF	7 ALCABNEG	8 DRGABNEG
PSYCHDIS	1.000000							
IPIFAMLY	-0.013137	1.000000						
IPIFREND	-0.107160	0.296050	1.000000					
IPAGRFRD	0.045177	0.165062	0.095840	1.000000				
PRODUCTY	-0.064709	0.194721	0.043132	-0.098796	1.000000			
LEGALDIF	0.033434	-0.132309	0.036087	0.048365	-0.114146	1.000000		
ALCABNEG	0.117330	0.069933	0.028595	0.107426	0.013160	0.070236	1.000000	
DRGABNEG	0.182119	0.093215	-0.219335	-0.008895	0.305719	0.008900	0.224060	1.000001

INSERT TABLE ABOUT HERE

TABLE 6 IG/SAG ANALYSIS OF VARIANCE

-RATIO FOR MULTIVARIATE TEST OF EQUALITY OF MEAN VECTORS= 0.3453
.F.= 8. AND 151.0000 P LESS THAN 0.9468

ARIABLE	HYPOTHESIS MEAN SQ	UNIVARIATE F	P LESS THAN
PSYCHDIS	8.5333	0.7973	0.3733
IPIFAMLY	0.0021	0.0008	0.9771
IPIFREND	0.4688	0.1007	0.7514
IPAGRFRD	0.0083	0.0274	0.8687
PRODUCTY	0.8333	0.1570	0.6925
LEGALDIF	0.3521	0.7595	0.3849
ALCABNEG	4.8000	1.2468	0.2659
DRGABNEG	0.6021	0.4297	0.5131

DEGREES OF FREEDOM FOR HYPOTHESIS= 1
DEGREES OF FREEDOM FOR ERROR= 158.

TABLE 6 IG/SAG ANALYSIS OF VARIANCE

INSERT TABLE ABOUT HERE

TABLE 7 IG/SAG DISCRIMINANT FUNCTION ANALYSIS

DISCRIMINANT FUNCTION COEFFICIENTS

VARIABLE	RAW COEFFICIENT	STANDARDIZED
1 PSYCHDIS	-0.134672	-0.4406
2 IPIFAMIY	-0.021832	-0.0346
3 IPIFREND	0.079509	0.1715
4 IPAGRFRD	0.298941	0.1647
5 PRODUCTY	-0.122930	-0.2832
6 LEGALDIF	-0.746149	-0.5080
7 ALCABNEG	-0.293633	-0.5761
8 DRGABNEG	-0.036104	-0.0427

TABLE 7 IG/SAG DISCRIMINANT FUNCTION ANALYSIS

The comparison of Winnipeg community interview and self-report data indicates that no statistically significant difference exists between these two sources of data (table 6). This is taken as an indication of the reasonableness of using the D.C.M.H.Q. as a self-report instrument and the logic of comparing self-report Winnipeg community data to the interview data of the Denver community sample With reference to Table 6 we observe that the multivariate F ratio of 0.3453 indicating an alpha level of $\leq$ 0.9468 supports the suppostion of the equivalence of the two administration procedures. The univariate F tests lend support to this finding. A further indication of the equivalence of using the D.C.M.H.Q. as a self-report instrument is found in the observed correlations among the dependant variables (Table 5).

Here we see that the highest observed inter-scale correlation is .305 between the variables of PRODUCTY and DRGABNEG. These low correlations indicate the degree of statistical independance of each dependant variable from each of the others. As mentioned above, in the original, interview administered, D.C.M.H.Q. scale independance was achieved by selecting scale items through factor-analytic techniques. That these low simple correlations have been maintained in spite of a change in administration

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procedure is further, albeit indirect, support for the equivalence of data collected through self-report on the D.C.M.H.Q.

STUDY TWO

Introduction

This study was a comparison of the SAG data collected in Winnpieg (Study One) and the community interview data collected in Denver. It was felt that despite certain methodolgical difficuties discussed below this comparison would provide useful data in assessing the degree of equivalence achieved in using the D.C.M.H.Q. as a self-report questionaire in Winnipeg.

Method

Means were approximated by having co-workers fill out the D.C.M.H.Q. so as to correspond to the lengthy written description of the average Denverite given in Ciarlo and Reihman (1974). This was done prior to scoring the Winnipeg data. Since there was no way to approximate the Denver variances the variances fom the Winnipeg data only were used in the calculations of the standard errors of the differences. scores attained by the average Denverite and the standardized tables provided in Ciarlo and Reihman, 1974. The estimated Denver means were compared to the Winnipeg SAG means by way of multiple T tests. This procedure was necessitated by the lack of any way of

estimating covariances in the Denver data, thereby ruling out the use of a more appropriate multivariate approach. The Bonferonni procedure was used to adjust the alpha level to provide a more realistic estimate of the probability of a type I error (Kirk, 1968).

Results and Discussion

The results of this analysis are presented here in tabular form.

INSERT TABLE ABOUT HERE

TABLE 8 T-TESTS OF WINNIPEG VS DENVER COMMUNITY SUBJECTS

ERROR CORRELATION MATRIX

	1 PSYCHDIS	2 IPIFAMLY	3 IPIFREND	4 IPAGRFRD	5 PRODUCTY	6 LEGALDIF	7 ALCABNEG	8 DRGABNEG
1 PSYCHDIS	1.000000							
2 IPIFAMLY	0.046807	1.000000						
3 IPIFREND	-0.058027	0.190232	1.000000					
4 IPAGRFRD	0.119144	0.333255	-0.067916	1.000001				
5 PRODUCTY	0.107854	0.149627	-0.125125	-0.111627	1.000000			
6 LEGALDIF	0.025842	0.132641	-0.096467	0.737757	-0.181746	1.000000		
7 ALCABNEG	0.229265	0.133438	0.068913	0.092947	0.172944	0.020189	1.000000	
8 DRGABNEG	0.305574	0.052768	0.043087	0.043108	0.214504	0.060918	0.455432	1.000000

The Bonferroni procedure used in this analysis is a very conservative test (Kirk, 1968). It should be recalled that the means and variances used here were necessarily extrapolated from the qualitative information given by Ciarlo and Reihman (1974). These "estimated data" are therefore subject to unknown and uncontrollable sources of error. Although the differences observed are technically non-significant the magnitude of the T scores are high enough to suggest that significance would be evidenced with a less conservative test than Bonferroni's procedure. The import of these findings is to point out the importance of developing and using norms from general populations that are relevant to the experimental group.

STUDY THREE

Introduction

To this point the research has been concerned with the effect of transferring the D.C.M.H.Q. to Winnipeg and changing the method of administration. The following sub-studies are a first attempt to use this revised scale as an evaluation tool with a specific pathological group, alcoholoics. These sub-studies represent validation studies by the same argument that Ciarlo and Reihman (1974) present above for contrasting community data with that of clients. Inasmuch as what is already known about

the psychological aspects of alcoholism defines the context in which we evaluated our results a survey of that literature was presented above. The interested reader will find a survey of the general, economic, and physiological aspects of alcoholism in the appendix.

Method

Subjects

In all cases the the community group data referred to are the SAG data of Study One above.

The alcoholic pretreatment data (ALC1) from persons presenting to an alcoholism treatment agency co-operating in this study. It had been previously determined that the majority of the agency's clients lived in either the Fort Garry or East Kildonan Areas of Winnipeg. This is why the SAG and IG data of Study One were collected from these areas.

Procedure

Questionaires were distributed to the ALC1 S's by agency personnel as part of the intake procedure. the completed, self-administered questionaires were identity coded by the agency personnel and were collected from them by the principal investigator.

Scoring was as in Study One.

Results and Discussion

INSERT TABLE ABOUT HERE

TABLE 9 SAG/ALC1 ERROR CORRELATION MATRIX

ERROR CORRELATION MATRIX

	1 PSYCHDIS	2 IPIFAMLY	3 IPIFREND	4 IPAGRFRD	5 PRODUCTY	6 LEGALDIF	7 ALCABNEG	8 DRGABNEG
1 PSYCHDIS	1.000000							
2 IPIFAMLY	0.040863	1.000000						
3 IPIFREND	-0.030061	0.261296	1.000000					
4 IPAGRFRD	0.224427	0.304559	0.114379	1.000000				
5 PRODUCTY	0.092408	0.129950	0.143982	0.061957	1.000000			
6 LEGALDIF	0.085932	0.005011	0.036246	0.191693	-0.020384	1.000000		
7 ALCABNEG	0.201626	-0.009927	0.051187	0.164234	0.161743	0.111454	1.000000	
8 DRGABNEG	0.274513	-0.007618	-0.022861	0.115183	0.331222	0.094403	0.288582	1.000000

INSERT TABLE ABOUT HERE

TABLE 10 SAG/ALC1 ANALYSIS OF VARIANCE

'-RATIO FOR MULTIVARIATE TEST OF EQUALITY OF MEAN VECTORS= 33.4041
).F.= 8. AND 147.0000 P LESS THAN 0.0001

'ARIABLE	HYPOTHESIS MEAN SQ	UNIVARIATE F	P LESS THAN
1 PSYCHDIS	2558.0342	178.8276	0.0001
2 IPIFAMLY	131.6720	40.8534	0.0001
3 IPIFREND	136.7521	29.9476	0.0001
4 IPAGRFRD	17.7231	15.5859	0.0002
5 PRODUCTY	40.8053	7.0989	0.0086
6 LEGALDIF	16.2769	10.9716	0.0012
7 ALCABNEG	941.4105	85.9474	0.0001
8 DRGABNEG	190.0105	41.6705	0.0001

DEGREES OF FREEDOM FOR HYPOTHESIS= 1
DEGREES OF FREEDOM FOR ERROR= 154.

TABLE 10 SAG/ALC1 ANALYSIS OF VARIANCE

INSERT TABLE ABOUT HERE

TABLE 11 SAG/ALC1 DISCRIMINANT FUNCTION ANALYSIS

DISCRIMINANT FUNCTION COEFFICIENTS

VARIABLE	RAW COEFFICIENT	STANDARDIZED
1 PSYCHDIS	-0.198313	-0.7500
2 IPIFAMLY	-0.145232	-0.2607
3 IPIFREND	-0.148418	-0.3172
4 IPAGRFRD	0.154351	0.1646
5 PRODUCTY	0.008189	0.0196
6 LEGALDIF	-0.236168	-0.2877
7 ALCABNEG	-0.107639	-0.3562
8 DRGABNEG	0.018392	0.0393

TABLE 11 SAG/ALC1 DISCRIMINANT FUNCTION ANALYSIS

The SAG/AIC1 tables present some interesting data. While, for the most part, the interscale correlations remain low, two of these are of interest.

ALCABNEG correlates .455 with DRGABNEG (Table 9). Although not astounding this is reasonable in light of some of the literature reviewed above which indicates that a fairly consistant finding is that of multiple drug abuse among alcoholics.

The highest correlation observed is that of LEGALDIF and IPAGRFRD (R=.738). It would appear that a tendancy to be agressive with one's friends is associated with difficulties with the law. This is, of course, entirely reasonable. However, given the factor analytic development of these scales this high a correlation should not be observed. This could be due to several aspects of these data. Reference to the raw data indicates that most Ss scored 0 on the scale LEGALDIF indicating a sort of cellar effect. Ciarlo and Reihman (1974) also report this experience with their community data. Since the original data which was factor analyzed came from current or previous center clients the factor structure of these data could differ in significant ways from the data used in the current comparison. The fact that the scale IPAGRFRND was not developed intuitively but through the factor analytic procedure would serve to support this interpretation of

the observed high corelation. This points out an area of further investigation with respect to the value of maintaining the two scales as seperate dimensions.

Table 10 indicates that a clear difference exists between the SAG and the ALC1 samples. The F ratio of 33.4 translates to an alpha of ≤ .0001. Because the multivariate approach was used here this indicates the experiment-wise error rate taking into account the observed relationship among the eight dependant variables. We can therefore be reasonably assured of having a valid estimate of the probability of error expressed as the P value for the eight associated univariate F ratios.

In this case the univariate F's provide us with little information allowing us to rank the variables as to relative importance in discriminating between the two groups. They do indicate that all significant differences are in the appropriate direction.

Reference to the "standardized" column of table 11 indicates that the variables rank 1,7,3,6,2,4,8,5, in order of discriminating ability. Apparently the variable which differentiates most readily between the ALC and SAG groups is the level of psychological distress reported, followed by alcohol abuse, interpersonal interaction with friends, productivity, interpersonal interaction with family, aggression with friends, drug abuse, and legal difficulties.

Given our understanding of the dynamics of alcoholism, as outlined in the introduction, it is reasonable that PSYCHDIS should have such a high coefficient. An analysis of the content of the items comprising this scale indicates that they refer mostly to symptoms of anxiety, sleep and appetite disturbance, and "down" feelings. This symptom constellation comprises the diagnostic category of depression which we have already seen as intimately linked with alcoholism.

An interesting sidelight is that this highly significant difference occurs in spite of what appeared to the author as surprisingly high PSYCHDIS mean (5.2) in the SAG respondants. This, coupled with an equally surprisingly high rate of response indicating the use of prescribed sedatives among SAG respondants indicates a high base rate of psychological difficulties in the general population. The degree of distress seen in the ALC1 group must be evaluated against this base rate. This qualitative impression of a high degree of general psychological distress is supported by reports that physicians in general practice spend up to 50% of their time treating hypochondriacal symptoms and that more diazepam (valium, vivol, a minor tranquillizer) is bought every year. Too, Cialo and Reihman (1974) report similar levels of "less than perfect behaviour" reported by their Community sample. More definitive work in this area would

be extremely interesting.

That ALCABNEG ranks next is not at all surprising. This serves to support the questionaires validity in as much as the two groups compared are essentially normals and self-defined alcoholics. It should be noted that the treatment agency involved makes no attempt to restrict its patient population to any definition of "alcoholics". In fact it is likely that some clients are less "alcoholic" and more "psychological" than vice-versa. It is therefore not of great concern that ALCABNEG ranks second as a discriminative variable.

Of great interest here is that IPIFRND ranks next. The Denver group created a series of Multiple Problem Categories (MPC) (Ciarlo and Reihman,1974) based on conglomerates of high scale scores. This process is similar to the MMPI "profile" or the practice of viewing a constellation of symptoms as a syndrome.

In the Denver groups analysis MPC1 (alcohol abuse) the three top rankings were psychological distress, interpersonal isolation, and alcohol abuse.

Taken as a whole the rankings of these variables is entirely consistant with what is known about the behaviour of alcoholics. As we have seen in the literature review above depression, and psychopathy are the two most frequently found personality constructs in the alcoholic. This is reflected in the discriminative function rankings

of the modified D.C.M.H.Q. data. That these same categories appear in the MPC1 of the original Ciarlo an Reihman (1974) study serves to reinforce the evidence that the modified, self-administered D.C.M.H.Q. maintains the validity of the original interview administered questionaire.

STUDY FOUR

Introduction

To this point the purpose of this study has been to determine the validity of a modified form of the D.C.M.H.Q. given as a self-report questionaire by comparing these results to those obtained by Ciarlo and Reihman (1974), to those obtained in an interview administration, and those obtained from a group of self-referred alcoholics. This purpose has been spoken to in the preceeding discussion. The data to be discussed below deals with the potential use of this modified D.C.M.H.Q. as a self-administered, summative tool in program evaluation. These data serve a second purpose in that they provide a further opportunity to check the validity of the modified questionaire.

As noted above certain design considerations severly limit the generalizability of these findings. In review, there is the concern expressed by Weiss (1968) and others, that using agency personnel as evaluators is imprudent

because of the obvious potential for experimental bias effects. Weighing against this was the desire by the agency to use the D.C.M.H.Q. as both a formative and summative instrument. In this study a delay in analyzing the data was employed as a means of avoiding this confounding. However, both the SAG scores and the ALC1 scores were analyzed prior to the collection of the ALC2 data. These finding were known fully only to the principal investigator who had no part in the collection or scoring of the ALC2 data. It was however transmitted qualitatively to the agency in the form of a telephone conversation wherein the agency director was informed that the data indicated that the agency was attracting clients who scored highly on the PSYCHDIS and ALCABNEG scales, as was the agency's intention.

While this is not an overwhelming concern a much more important factor is the absence of a second SAG administration to correspond with the ALC2 data. It has been pointed out in numerous studies that time of year or even just time since the last administration can exert an effect on questionaire responses. By the same token one expects that normative data of this sort should be relativly consistant with respect to time. Witness the use of MMPI or WAIS norms, both of which are based on a one time administration with no controls for the effects of time.

There is also an interpretive limitation imposed by the lack of a no treatment alcoholic control group. These considerations clearly preclude the attribution of any changes observed in the ALC2 data with respect to either the ALC1 or SAG data to only the treatment afforded them by the agency involved. In any case these data were available and do provide a basis for speculative ruminations.

Method

Data was collected in the same fashion as in Study Three above. Two comparisons were of interest here. The first was to contrast the SAG and ALC2 data. A one way MANOVA was employed to this end. The second was to contrast the ALC1 and ALC2 data. Here a repeated measures MANOVA was required to analyze the data . As mentioned above, scoring was done by the same person as in previous instances with precautions taken to insure naivete.

Results and Discussion

INSERT TABLE ABOUT HERE

TABLE 12 SAG/ALC2 ERROR CORRELATION MATRIX

X-ROX OF THE CORRELATION MATRIX GOES HERE (TEMPORARY LINE)

INSERT TABLE ABOUT HERE

TABLE 13 SAG/ALC2 ANALYSIS OF VARIANCE

'-RATIO FOR MULTIVARIATE TEST OF EQUALITY OF MEAN VECTORS= 12.3092
D.F.= 8. AND 147.0000 P LESS THAN 0.0001

'ARIABLE	HYPOTHESIS MEAN SQ	UNIVARIATE F	P LESS THAN
PSYCHDIS	1.7308	0.1543	0.6951
IPIFAMLY	91.6720	30.7059	0.0001
IPIFREND	173.0769	40.6309	0.0001
IPAGRFRD	0.0308	0.0706	0.7909
PRODUCTY	12.6173	2.4198	0.1219
LEGALDIF	0.1444	0.5325	0.4668
ALCABNEG	23.1284	4.8576	0.0291
DRGABNEG	33.0019	13.1754	0.0004

DEGREES OF FREEDOM FOR HYPOTHESIS= 1
DEGREES OF FREEDOM FOR ERROR= 154.

TABLE 13 SAG/ALC2 ANALYSIS OF VARIANCE

INSERT TABLE ABOUT HERE

TABLE 14 SAG/ALC2 DISCRIMINANT FUNCTION ANALYSIS

DISCRIMINANT FUNCTION COEFFICIENTS

VARIABLE	RAW COEFFICIENT	STANDARDIZED
1 PSYCHDIS	0.036086	0.1209
2 IPIFAMLY	-0.324481	-0.5607
3 IPIFREND	-0.283509	-0.5851
4 IPAGRFED	0.464251	0.3065
5 PRODUCTY	0.215161	0.4913
6 LEGALDIF	-0.066261	-0.0345
7 ALCABNEG	-0.084451	-0.1843
8 DRGABNEG	-0.347392	-0.5498

TABLE 14 SAG/ALC2 DISCRIMINANT FUNCTION ANALYSIS

INSERT TABLE ABOUT HERE

TABLE 15 ALC1/ALC2 CORRELATION MATRIX

SAMPLE CORRELATION MATRIX

		1 SCAL	2 SCAL	3 SCAL	4 SCAL	5 SCAL	6 SCAL	7 SCAL	8 SCAL
1	SCAL	1.000000							
2	SCAL	0.190237	1.000001						
3	SCAL	-0.250690	-0.076877	1.000000					
4	SCAL	0.035659	0.212916	-0.321079	1.000001				
5	SCAL	-0.047215	0.062428	0.014112	-0.506445	1.000000			
6	SCAL	0.040886	0.056838	-0.313899	0.915684	-0.495951	1.000000		
7	SCAL	0.107937	0.194324	0.171969	-0.117053	0.267662	-0.014776	1.000000	
8	SCAL	0.206642	0.425860	0.070539	0.038109	-0.018765	0.045859	0.377003	1.000000

INSERT TABLE ABOUT HERE

TABLE 16 ALC1/ALC2 ANALYSIS OF VARIANCE

F RATIO FOR MULTIVARIATE TEST OF EQUALITY OF MEAN VECTORS= 36.227
D.F.= 8. AND 28.00 P LESS THAN 0.0001

VARIABLE	HYPOTHESIS MEAN SQUARE	UNIVARIATE F	P LESS THAN
1 PSYCHDIS	1750.3452	239.1584	0.0001
2 IPIFAMLY	2.3472	1.5171	0.2263
3 IPIFREND	1.3889	1.1408	0.2928
4 AGRFREND	12.5000	6.7830	0.0135
5 PRODUCTY	64.2222	21.2492	0.0001
6 LEGALDIF	8.6805	3.3453	0.0760
7 ALCABNEG	435.1243	34.5045	0.0001
8 DRGABNEG	42.0138	14.4902	0.0006

INSERT TABLE ABOUT HERE

TABLE 17 ALC1/ALC2 DISCRIMINANT FUNCTION ANALYSIS

DISCRIMINANT FUNCTION COEFFICIENTS

VARIABLE	RAW COEFFICIENT	STANDARDIZED
1 PSYCHDIS	-0.342105	-0.9255
2IPIFAMLY	0.307624	0.3826
3 IPIFREND	-0.245028	-0.2704
4 IPAGFRND	-0.763303	-1.0362
5 PRODUCTY	-0.300862	-0.5230
6 LEGALDIF	0.326314	0.5256
7 ALCABNEG	-0.050669	-0.1799
8 DRGABNEG	-0.046372	-0.0790

Table 12 summarizies the SAG/ALC2 contrast. Again the inter-scale correlations are seen to be very low. As mentioned above this is taken as an indication of equivalence in as much as the scales each still provide relativly non-redundant information. There still exists an overall difference between the SAG and the alcoholic groups significant at the .0001 level (table 13). However the nature of this difference is considerably changed from what was observed in the SAG/ALC1 contrast.

The univariate F's indicate that only IPIFAMLY, IPIFREND, ALCABNEG,and DRGABNEG are significant at the .05 level whereas previously all variables showed significant differences. Furthermore table indicates that whereas PSYCHDIS, AICABNEG, and IPAGFRND had the highest discriminant function coefficients in the previous contrast they are displaced here by IPIFAMLY, IPIFREND, and DRGABNEG. These data clearly show the value of the multivariate analysis. Although ALCABNEG ranks high in significance on the univariate tests it ranks quite low as far as discriminant function coefficients are concerned. This indicates that when the correlation between ALABNEG and the other eight variables is taken into account some of the information provided by ALCABNEG is redundant. Viewing the discriminant function coefficients (table 14) overall it is observed that what were the three top ranked

scales previously (PSYCHDIS, ALCABNEG, and IPAGRFRND) are now ranked considerably lower (7,6, and5, respectivly).

One interpretation of these data is that in the relatively short period of two months the counsellors focused on the most obvious difficulties and that this resulted in a diminuation of the discriminative coefficients associated with these variables. This, in fact, is the interpretation that Ciarlo and Reihman (1974) place on similar data they collected on a 90 day follow up design. Unfortunately, due in part to design considerations discussed above, the data also admits of a number of alternative conclusions. Not the least of these is plain, old, often overlooked regression towards the mean which would account for some, but probably not all, of the effect observed. The appropriate control would have been a no treatment group.

Of interest is the pattern of change observed. It is reasonable that when acute problems are dealt with less pressing problems should move up the scale. That these areas should be IPIFAMLY and IPIFREND is interesting in the light of the previously cited findings in Denver of the importance of Interpersonal Isolation in the MPC1 (alcoholism). That DRGABNEG should now rank 3 is interesting in light of the literature indicating a positive association between alcoholism and multiple drug abuse.

When the treated alcoholics (ALC2) are compared with themselves two months previously (ALC1) the familliar pattern of low inter-scale corelations is again evidenced. The exception here is a surprisingly high (.91) corelation between LEGALDIF and IPAGRFRND. The association of these two variables is not surprising in that it makes intuitive sense, that they should correlate so highly is surprising. Probably the same explanation holds here as in Study Two, above, and these data further support the suggestion that a second look should be given to the possible redundancy of these two scales.

The multivariate F ratio (table 16) is significant at the .0001 level indicating highly significant difference over all the variables taken together. The univariate data indicates that the scales with the highest significance are PSYCHDIS, ALCABNEG, and PRODUCTY. This is all consistant with the ALC2/SAG data as compared to the ALC1/SAG data. The very interesting data here is that the highest ranked discriminating variable is IPAGFRND followed by PSYCHDIS and then not by any of previously highly ranked variables but by LEGALDIF.

It would appear that although the most significant score changes have occured on the expected variables these variables are changing as a group, due in part to their corelation with the others. The best indicators that these Ss belong to different groups is in their IPAGRFRND

score as well as the highly associated LEGALDIF score.

In any event it is clear that the alcoholic clients are scoring better than they did initially and are doing so on the expected variables. Admittedly the cause of this can only be speculated at using the data available. The alcoholic clients are also moving toward the norm in their responses, and again on the dimensions expected.

GENERAL DISCUSSION

Methodological considerations

With regard to the scoring reliability data there are numerous methods of summarizing these data. One might indicate that 4 inconsistantly scored questionaires of 40 sampled means a 10% discrepancy rate. However, when one notes that only 5 points of a possible 236 were discrepant and that this would have resulted in a non-systematic net error of only 3 points. This suggests that the reliability of the scoring procedure is acceptable.

Every effort was made to avoid the pitfalls of bias described by Rosenthal (1966), Greenspoon (1958) and others by using blind scoring techniques and reliability checks. The data reported above indicates that we were successful in this regard. The scoring differences observed reflected very minor ambiguities on the part of respondants which would have no effect on the findings regardless of which score was used. There was

considerably more difficulty involved in controlling for a Hawthorne (1939) effect in the alcoholic pre/post data. Carol Weiss (1968) has stipulated that personnel external to the agency be used in evaluation data collection. This was the intent in using the D.C.M.H.Q. as a self report instrument. While self-reporting only approximates Weiss' requirement it is much less costly than using outside researchers. A further complication was that the treatment agency involved wanted to use the same instrument for both formative and summative purposes.

In their view, a good instrument should allow for both the ongoing training of the individual therapist and the development of the agency as well as providing useful treatment outcome data. The use of a single pre/post instrument in this fashion is extremely difficult to accomplish. The concern is that knowlege of client pre-treatment scores will influence treatment so that post-treatment data will reflect training in the "correct" questionaire responses rather than valid treatment effects.

In an attempt to avoid this problem no client data was scored until all data was collected. If, in future research, no control for these concerns is provided and the D.C.M.H.Q. pre-treatment responses were used in planning treatment programs, assigning therapists, and collecting demographic data, its validity as an outcome

instrument would be highly questionable. It is noted that other research paradigms, notably Goal Attainment Sealing (Kiresuk and Sherman, 1968), could be profitably used as formative tcols with the D.C.M.H.Q. retained as cross-validating outcome measure.

Suggestions for further research

The empirical information discussed above is of value to future researchers insofar as it provides restricted communty norms for winnipeg and illustrates a system by which the D.C.M.H.Q. could be used as a pre-post measure in evaluation studies of alcoholism treatment programs. Future studies would do well to extend the base of the population norms to include a statistically represntative sample of the Winnipeg population. Of particular interest would be comparisons amoung the various geaographic and socio-economically distinct areas of the city. Suggestions for an appropriate control group including a non-treatment group have been made above. Some authors maintain that placebo or non-treatment groups are unethical in situations where there is some reasonable expectation that treatment will be beneficial. In the area of alcohclism one could reasonably maintain that as yet the efficacy of treatment is unkown. Minimally alternate treatment control groups should be employed with care to collecting demographic data and an insistance on random assignment of subjects to treatments. Non-random

assignment of subjects is a major pitfall in this area of research. While many authors (Campbell, 1968; Ellashoff, 1969; Kenny, 1974) have have spoken to the question of statistical control of pre-existant group differences (covariance, difference scores, quasi-experimental designs) all uphold the value of random assignment where possible.

Manitoba, through the auspices of the Alcoholism Foundation of Manitoba (AFM), has a unique opportunity to do this insofar as the AFM has either direct or ondirect input into the vast majority of alcoholism treatment research in the province. This situation also suggests reseach directed at developing valid reliable, and most importantly, useable research instruments, as well as research directed at matching client characteristics to appropriate treatments, the panacea of clinical resaerch. One would hope that either sufficient researchers would be available to work in conjunction with the treatment agencies or that the research program be conducted as an integrated part of the treatment process and not be viewed as a necessary evil that steals time from the important bussines of providing service. It is essential that the service agencies have input into the design of a the studies and be provided with comprehensive and relevant feedback in order the help them view the research program as a valuable adjunct to their efforts.

APPENDIX

ALCOHOL- WHAT IS IT

The scientific term "alcohol" refers to a family of aliphatic organic compounds of the general form ROH where R is any alkyl or substituted alkyl group. The OH group (or hydroxyl group) is the functional group and determines the properties characteritic of this family. Alcohols are named by three different systems. There are common names, the carbinol system, and the IUPAC system. Therefore the compound of Carbon, Hydrogen, and Oxygen of the form CH3 CH2OH is known as ethyl alcohol, ethylcarbinal, or ethanol depending on the system used.

Outside of scientific circles this particular member of the alcohol family is known by a plethora of names some of which are: booze, hootch, sprits, white lightning, moonshine, liquor, etc. There is also an everyday system of names derived from the source material from which the alcohol is produced and the particular process used during and after the fermentation process.

Ethyl alcohol is the alcohol of "alcoholic" beverages. For this purpose it is prepared by the fermentation of sugar from a truly amazing variety of vegetable sources. The particular beverage obtained depends upon what is fermented (rye or corn, grapes or elderberries, cactus pulp or dandelions) how it is fermented (whether carbon dioxide is bottled up or allowed to escape, for example),

and what is done after fermentation (whether or not it is distilled). The special flavour of beverage is not due to the ethyl alcohol but to other substances either characteristic of the particular source, or deliberately added. (M ., 1970)

These substances, known collectively as "congeners", are typically methanol, higher alcohols (fusel oil), acids, esters, aldehydes and other organic or inorganic compounds. There is some evidence to indicate that as well as being responsible for the aroma and taste of the beverage these congeners contribute to other effects including post-intoxication hangover. At equivalent doses of alcohol, after effects with low congener levels such as pure ethyl alcohol and water (alcool) or vodka are less severe than those produced by drinks with more congeners, such as brandy. (Chapman, L.F., 1970; Murphee, H.B., 1971). The presence of an excess of some of these congeners as sometimes occurs in illicitly produced beverage alcohols can be dangerous. Notably the presence of methanol (wood alcohol) in sufficient quantity can lead to blindness and death. (Morrison and Boyd, 1970). Other contaminants which have been identified in illicit alcohol include calcium and copper salts, hydrocarbon oils, vegetable debris, dead insects, animal feces and wine. Lead from old radiators used as condensors in stills is occasionally found in illicit alcohol. Deliberate

additives include sugar, soft drinks, various flavouring and colouring matter, and glycerol. Since illicit alcohol is often diluted with water its strength varies within the approximate limits of 30-160 proof. (Hughes, 1967; R.C.M.P. Gazette, 1970).

ALCOHOL- ECONOMIC CONSIDERATIONS

The notion of alcohol "proof" originated centuries ago from a crude but effective technique designed to assess the strength of spirits. If gun powder soaked with the beverage exploded on ignition, this was taken as "proof" that the liquor was more than half alcohol. "Proof spirit" in the United Kingdom and Canada contains about 57% alcohol while in the United States proof is calculated as twice the percentage of alcohol per unit volume of the beverage (e.g., 80 proof whiskey is 40% alcohol). (Fornez, and Harger, 1965).

The production, consumption, and taxation of alcoholic beverages is big business in Canada. More than 95 per cent of the ale and beer consumed by Canadians is brewed in Canada and, with the exception of scotch whiskey and a few other imported beverages, the distilled liquors consumed in Canada are produced here. (LeDain, et al., 1973). Surprisingly, to anyone who has tasted many Canadian wines, over half the wine sold in this country is domestically produced.

The Federal Government, through the Excise Act,

regulates the manufacture and importation of all beverage alcohol. The contents and quality of alcoholic beverages, including the permissable range of alcoholic concentrations, are regulated by the Food and Drug Regulations. As a matter of interest the excise tax on a gallon of procof spirit (57% alcohol) is $14,25. In order to calculate the federal tax on any particular beverage simply multiply the proof by $14.25 and multiply the number of ounces divided by 160 (the number of ounces in a Canadian gallon). Thus the Federal tax on a 25 oz. bottle of 120 proof vodka selling at $8.00 is $2.67 or 33% of the consumer's cost.

Add to this the fact that Provincial Governments and Territorial Governing Bodies have a monopoly on the sale of beverage alcohol in their jurisdiction and it is easy to see how in 1971 tax revenue for all governments from beverage alcohol neared a billion dollars. A comparison of tables ___ and ___ indicates that $983,903,000 in tax revenue was collected on total sales of $1,856,614,000. In other words,approximately 53% of the total cost of beverage alcohol in Canada is Federal or Provincial Tax. It should be noted that the 1.85 figure for total sales given in table ___ does not represent the final retail value of the beverages since retail mark-ups by licencees on the sale of alcoholic beverages to final consumers, are not included.

INSERT TABLE ABOUT HERE

TABLE 18

X-ROX OF THE IeDaine TABLE 1 REPLACES THIS PAGE

INSERT TABLE ABOUT HERE

TABLE 19

X-ROX OF THE LeDaine TABLE 2 REPLACES THIS PAGE

Consider also that in 1970 more than 16,000 persons were employed by distillers, breweries, and wineries in Canada, sharing a total payroll of more than $140 million. (Statistics Canada 1970a, 1970b, 1970c). On top of this consider the vast number of persons such as barkeepers, waiters, entertainers , grain farmers, who are directly or indirectly dependent on the sale of beverage alcohol for all or part of their livelihood, and one can get some grasp of the significant economic proportions of this industry in Canada.

ALCOHOLISM- GENERAL CONSIDERATIONS

Canadian surveys of local high schools record alcohol consumption that varies between 40 to 87 percent of the students despite the fact that such consumption is illegal for most of them. (Fyer and Smart, 1972; Rootman et al., 1972). The only national data available gives the much lower figure of 33%. This same survey indicates that 66% of all Canadian adults have had an alcoholic drink at some time and that 20% drink alcohol more than once a week. These estimates are felt to be conservative (Le Dain, 1973). It has been estimated that 5.31% of Canada's drinking population (that is about 617,000 persons) consumed a 'hazardous' amount of alcohol per day in 1969,and, on the basis of liver cirrhosis mortality data, that 2.8% of all alcohol drinkers (that is about 308,200

persons) were alcoholics in 1967. (Addiction Research Foundation, 1971). This can be translated into approximately 3.9 and 2.1% of the general population respectively.

This general use of alcohol (and consequent percentage of misuse) is partially because of its pharmacological proporties and partially because of consequences in some respects independent of direct drug effects. Depending on the type and quantity of beverage consumed, alcohol is often symbolically associated with the acknowledgement of birth, death, marriage, and other contracts, adulthood, friendship, and, to some, may imply virility or masculinity , affluence and cultural refinement (or the opposite). In many circles abstinance is frowned upon whereas alcohol intoxication is frequently tolerated , condoned and even expected and encouraged. Because its use is so ingrained in our culture many Canadians do not consider alcohol a drug. Yet it has also been observed that:

> The large role that the production and consumption of alcoholic beverages plays in the economic and social life in Western society should not permit us to minimize the fact that alcoholism is a more significant problem than all other forms of drug abuse combined. (Jaffe, 1965)

ALCOHOL- PHYSIOLOGY

Social attitudes aside alcohol is unquestionably a drug and, as such, has been extensively investigated with respect to physiological and psychological properties.

Alcohol is usually taken orally and is rapidly and nearly completely absorbed in the gastrointestinal tract. Some absorption takes place in the stomach although the most rapid diffusion into the blood stream takes place from the upper intestine (jejunum); consequently the quicker the alcohol passes through the stomach the shorter its latency of action and the higher the peak blood alcohol level achieved (Forney, and Harger, 1965). Alcohol in beer or sweet wine is absorbed more slowly than alcohol in dry wine or diluted or undiluted distilled spirit. Food eaten before or with alcohol slows stomach emptying and may reduce the peak blood alcohol level by up to one half compared to that attained by drinking on an empty stomach. Once absorbed alcohol is distributed uniformly in all body fluid easily crossing the blood-brain and placental barriers. (Wallgren, 1970)

Approximately 95% of the alcohol ingested is broken down by oxidation and the rest is excreted unchanged, primarily in the urine and breath although small amounts of alcohol can be detected in sweat, saliva, tears, milk, and other body secretions. (Ritchie, 1970). The fact that the amount of alcohol excreted in the breath bears a

direct relaticnship to the blood alcohol level is the principle utilized in the "Breathalyzer" test used to enforce driving laws.

Unlike many other drugs, alcohol is metabloized at a fairly constant rate on any given drinking occasion. The rate of alcohcl elimination is roughly proportional to body weight, with the average 150-pound man metabolizing about 9 ml (0.3 oz) of pure alcohol per hour (Forney, and Hargen, 1965). Substantial differences in metabolic rate between individuals is often observed with genetic factors thought to be significant. Ethnic and racial group responses to alcohol have been observed and linked to different rates of metabolism at various stages of the biotransformation of alcohol. (Fenora, et al., 1971; Wolff, 1972). Alcohol itself, is an efficient source of calories and is occasionally medically prescribed as such. However, it provides no vitamins, minerals, proteins or essential fatly acids necessary for adequate nutrition. Since, depedning on the mix used, an ordinary drink can contain between 90 and 150 calories and a 25-ounce bottle of whiskey (80 proof) can provide nearly half the needed calories of a 160-pound person, individuals who drink heavily often have a diet high in calories but almost totally lacking in other nutrients and resulting in severe malnutrition.

Contrary tc what some people still believe alcohol is a

central nervous system depressant the effects of which are not unlike substances used as general anesthetics. The behavioural and psychological stimulation observed is thought to be partially due to disinhibition of some brain functions as a result of alcohol's decompensating effect on the reticular formation. The specific physiological effect of alcohol ingestion is highly dosage dependent.

In small to moderate doses it has both beneficial and detrimental effects. Heart rate may both increase or decrease, blood vessels dilate (giving a temporary and false sense of warmth), body temperature decreases, appetite is stimulated, as is the secretion of saliva and gastric juices, urination increases, the EEG slows, complex reaction time increases and muscular co-ordination is usually reduced. (Forney and Harger, 1965; Ritchies, 1970).

Generally speaking alcohol reduces performance on tests of a wide variety of psychological functions. Tasks requiring a high degree of selective or divided attention being particularily sensitive (Moskowitz and Sharma, ;Jellinek, and McFarland, 1940). However at least one study (U.S. Department of Transportation, 1968) has shown that a small amount of alcohol can actually improve performance in some instances. It must be emphasized that many studies have clearly shown that personality and situational factors can drastically effect responses to

many drugs including alcohol. (Schacter and Singer,).

While both beneficial and detrimental effects are observed at low to moderate dosages, high dosages of alcohol invariably results in the familiar symptoms of drunkeness. Here the inebriate is confused and disoriented. As more, and lower brain functions are interfered with speech becomes slurred, vision is blurred, and muscular control is inadequate. Far from having the ameliorative effects on digestion that low alcohol doses have, high doses result in irritation of the stomach lining, mucous secretion and pyloric spasm experienced as nausea and vomiting. Even higher dosages result in respiratory depression, general anesthesia, unconsciousness and, in the extreme, death due to respiratory and circulatory failure. (Forney and Harger, 1965; Maling, 1970)

As with most other drugs, the long term, heavy, use of alcohol has detrimental effects, both physical, and psychological. There are a great many disorders associated with chronic alcoholism. Some of these are linked to the direct effects of alcohol and others are caused by associated factors such as; nutritional deficiencies, heavy use of other drugs (such as tobacco and aspirin), inadequate hygeine, accidents and other violent mishaps, over- crowding and other forms of stress.

As mentioned earlier, the high calorie content of

alcohol encourages the chronic user to diminish the intake of other nutrients required for a bal- anced diet. The abuse of alcohol and concurrent nutritional deficiencies is thought to contribute markedly to such disorders as; cirorhosis of the liver, (Jegeebhoy, et al., 1972), heart disease (Ferrans, 1970), and acute muscle disorders (Lynch, 1969), as well as disorders primarily due to nutritional deficiencies such as pellegra, scurvey, and anemia (U.S. Department of Health, 1971).

Alcohol directly effects the secretion and metabolism of various hormones and is thought to be directly related to disorders cf the pancreas (Mezey, etal, 1970) and fatty liver deposits (Leiber, et al, 1965) even when adequate nutrition is maintained. Numerous neurological problems such as Korsakoff's psychosis, Wernicki's syndrome, and Jolliffe's encephalopathy are closely associated with alcoholism. Other associated neuropsychiatric conditions are; hallucination, delerium tremens, and convulsive disorders.

LETTERS MAILED TO SUBJECTS

RESEARCH and EVALUATION

Department of Psychology
University of Manitoba
109 Fletcher Argue Bldg.
Winnipeg, Manitoba
R3T 2N2

Dear Sir or Madam:

The Provincial Government has asked people in the Psychology Department at the University of Manitoba to gather information to aid in health services planning in Winnipeg. Your name has been selected by chance from the telephone book to receive one of our questionnaires, which you will find enclosed. One of our researchers will be contacting you in a day or so to answer any questions and arrange to pick up the completed questionnaire. You will be paid five dollars ($5.00) when the completed form is picked up. All forms are to be anonymous, so please DO NOT sign or otherwise indicate your identity on the form.

Thanking you in advance for your co-operation in this important project I remain

sincerely

Barry Mallin
research director

MODIFIED D.C.M.H.Q.

QUESTIONNAIRE INSTRUCTIONS

Please read each question and circle the answer that applies to you, or fill in the blank. Some of the questions will not be appropriate to you. In these cases please just leave the question blank.

If, after filling out the form, you have any questions please feel free to ask the researchers when they call or come to pick up the form.

Please indicate:

Age: _____

Sex: Male _____

Female _____

The first 9 questions concern how you have been feeling in the past few days, so please think back and answer the next 9 questions in terms of just the past few days.

1. In the last little while how often have you felt fearful or afraid?

   Never Once or twice Often Almost always

2. In the last couple of days, how often have you felt sad or depressed?

   Never Once or twice Often Almost always

3. In the last couple of days, how often have you felt angry?

   Never Once or twice Often Almost always

4. In the last couple of days, how often have you felt mixed up or confused?

   Never Once or twice Often Almost always

5. In the last couple of days, how often have you felt tense?

   Never Once or twice Often Almost always

6. In the last couple of days, how often have you had trouble sleeping?

   Never Once or twice Often Almost always

8. In the last couple of days, have you had trouble with poor appetite?

   Never Once or twice Often Almost always

9. In the last couple of days, have you had trouble with indigestion?

   Never Once or twice Often Almost always

10. In the last couple of days, have you had trouble with fatigue?

    Never Once or twice Often Almost always

The next 11 questions deal with your relationships with your friends and your family. We would like to know something about the time you spend with your family and your friends.

11. How many family members live with you?

    Six or more Three to five One or two None

12. How much of your free time do you spend with your family?

    Almost all the time About half time Very Little Hardly Ever

13. How many times have you visited or spoken with family members not living with you?

Once a day Once/twice a week Several times a year Never

14. How much would your family be of help and support to you if you found yourself in trouble?

A great deal Quite a bit A little Not at all

15. How many close friends do you have?

Six or more Three to five One or two None

16. How much of your free time do you spend with your friends?

Almost all the time About half time Very little Hardly Ever

17. How many of your neighbors do you speak to?

Six or more Three to five One or two None

18. How much would your friends be of help and support to you if you found yourself in trouble?

A great deal Quite a bit A little Not at all

19. When you are with your friends how often do you argue with them?

Never Seldom Often Constantly

20. When you are with your friends how often do you physically fight?

Never Seldom Often Constantly

We would like to ask you some questions regarding your activities both in and out of your home.

21. How many times have you visited or spoken to friends who live away?

Once a day Once/twice week to once a month Several times a year Never

22. Do you work at a job?

Full-time Part-time Irregularly Not employed

23. Is your salary different now from what it was 3 months ago?

Much more Slightly more About the same Less than before

24. How many hours per week do you spend in volunteer-type activities?

More than 20 hours Between 8 and 20 Between 1 and 7 None

25. Do you take any night classes, job training, etc. and if so, how much time do you spend per week?

More than 20 hrs. Between 8 and 20 Between 1 and 7 None

26. How much of the housekeeping do you do?

Total Most Some None

27. Do you have any children? ____No How many of your children are in each age range? Pre-school ____
Grade School ____
High School ____

28. How much of the caring for children do you do?

Total Most Some None

29. How much of the discipline of the children are you responsible for?

All of it Most of it Some of it None of it

30. How much of the household money management do you do?

All of it Most of it Some of it None of it

31. How much of the shopping for the household do you do? (Grocery, Furnishings, Supplies, etc.)

All of it Most of it Some of it None of it

32. How many hours of TV do you usually watch each day--(24 hr. period)?

None 1-2 3-5 6 or more

What do you usually watch? (optional)

33. How much do you contribute to the family's money situation by working at home? (e.g., making clothes, making or selling craft objects, baby sitting for neighbors)

About equal to a full time job | About equal to a 1/2 time job | About equal to 1/4 time job | Less than a 1/4 time job

34. How many hours weekly do you spend in doing hobbies, crafts, or sports activities? (e.g., knitting, gardening, stamp collecting, etc.)

9 or more 5-8 2-4 0-1

35. How many hours do you generally sleep in a day, including naps?

8 or less 9 10 11 or more

36. How many hours daily do you spend in the preparation of meals?

3 or more hrs. about 2 hrs. about 1 hr. less than 1 hr.

Our next few questions concern any legal problems you may have had in the last 30 days.

37. How many times in the last month have you been arrested on intoxication related charges?

Never Once Two to five times More than six times

38. How many times in the last month have you been arrested for illegal possession of drugs?

Never Once or twice Two to five times More than six times

39. How many times in the last month have you been cited for moving traffic violations?

Never Once or twice Two to five times More than six times

40. How many times in the last month have you been arrested for loitering or vagrancy?

Never Once or twice Two to five times More than six times

41. How many times in the last month have you been arrested for anything else?

Never Once or twice Two to five times More than six times

We would like to know what kinds of agencies or services you are using.

Which of the following agencies do you see or receive services from:

42 _____ Neighborhood Health Clinic, Medical, Outpatient Clinic

43. _____ Child Welfare

44. _____ Public Assistance (visits, welfare checks)

45. _____ On Probation or Parole

46. What is your main source of income?

_____ Public Support _____ Employment

_____ Family Support _____ Other self-support

The next group of questions deal with your use of alcohol and drugs.

47. Do you ever drink alcoholic beverages? ____ Yes ____ No

48. If Yes to #47, how often do you get intoxicated?

Never Once/twice month Once/twice week Everyday

49. When you use alcohol, does it cause any problems with your spouse?

Never Sometimes Often Almost always

50. When you use alcohol, does it cause any problems with your children or parents?

Never Sometimes Often Almost always

51. When you use alcohol does it cause any problems with your friends?

Never Sometimes Often Almost always

52. When you use alcohol, does it cause any problems with your employer or job?

Never Sometimes Often Almost always

53. When you use alcohol, does it cause any problems with your self?

Never Sometimes Often Almost always

54. When you use alcohol, does it cause any problems with your physical health?

Never Sometimes Often Almost always

55. Do you use any drugs or medications of any kind other than alcohol?

_____ No What kind _____

_____ Yes For what _____

56. If yes to #55, how often do you use drugs?

Never Once/twice month Once/twice week Everday

57. When you use drugs, does it cause any problems with your spouse?

Never Sometimes Often Almost always

58. When you use drugs, does it cause any problems with your children or parents?

Never Sometimes Often Almost always

59. When you use drugs, does it cause any problems with your friends?

Never Sometimes Often Almost always

60. When you use drugs, does it cause any problems with your employer or job?

Never Sometimes Often Almost always

61. When you use drugs, does it cause any problems with your self?

Never Sometimes Often Almost always

62. When you use drugs, does it cause any problems with your physical health?

Never Sometimes Often Almost always

63. How often have you used tranquilizers?

Never Once/twice a year Once/twice a month Once/twice a week or more

64. How often have you used methadone?

Never Once/twice a year Once/twice a month Once/twice a week or more

Was it prescribed? ____ All of it ____ Some of it ____ None of it

65. How often have you used amphetamines. (diet pills, dexies, speed, uppers)?

Never Once/twice a year Once/twice a month Once/twice a week or more

Was it prescribed? ____ All of it ____ Some of it ____ None of it

66. How often have you used barbituates (sedatives, sleeping pills, downers)?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

Was it prescribed? ____ All of it ____ Some of it ____ None of it

67. How often have you used codeine (inc cough syrup)?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

Was it prescribed? ____ All of it ____ Some of it ____ None of it

68. How often have you used heroin, opium, morphine (snow)?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

Was it prescribed? ____ All of it ____ Some of it ____ None of it

69. How often have you used marijuana?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

70. How often have you used psychedelics (LSD, Mescaline, Acid, STP)?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

71. How often have you used cocaine?

Never | Once/twice a year | Once/twice a month | Once/twice a week or more

END. THANK YOU!

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