A STUDY OF THE ALCOHOL DRINKING HABITS OF PATIENTS ADMITTED TO THE WINNIPEG PSYCHOPATHIC HOSPITAL

A Thesis

Presented to

the Faculty of Graduate Studies and Research

The University of Manitoba

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Harry Prosen, M.D.

May 1957

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The purpose of the study was to assess the alcohol drinking habits of patients admitted to the Winnipeg Psychopathic Hospital. The study included both those patients admitted without apparent alcohol problems and those admitted either directly or indirectly because of alcohol problems. The patients were classified as "abstainer," "normal drinkers," "problem drinkers," and "alcohol addicts."

The subjects used in the study were two hundred consecutive individual patients admitted to the Winnipeg Psychopathic Hospital between January 18, 1956 and May 24, 1956. The author interviewed each patient as to his drinking habits and questioned an independent witness in nearly every case. The results were tabulated and discussed.

The essential findings were:

1. There were a total of 31 (15.5 per cent) abstainers, 124 (62 per cent) normal drinkers, 14 (7 per cent) problem drinkers and 31 (15.5 per cent) alcohol addicts.
2. Thirty-six per cent of the alcohol addicts were males in their first admission; 45 per cent were readmitted males; 16 per cent were females in their first admission; 3 per cent were readmitted females.
3. a. The ratio of male to female abstainers was of the order 1:3.

   b. The ratio of male to female alcohol addicts was of the order 4:1.

admitted because of a prolonged drinking bout uncomplicated by psychotic behaviour.

b. Thirteen per cent were admitted because of alcoholic psychoses (Delerium Tremens and Korsakoff's Psychosis).

c. In 19 per cent alcohol was not the direct cause of admission.

10. Fifty-two per cent of the alcohol addicts had a personality disorder as compared to 21 per cent of the problem drinkers, 6 per cent of the normal drinkers and 3 per cent (one patient) of the abstainers.

11. Twenty-three per cent of patients of Anglo-Saxon descent were alcohol addicts as compared to 11 per cent of the patients of other racial descent.

12. There was a family history (parents and siblings) of alcoholism in 45 per cent of the alcohol addicts, 21 per cent of the problem drinkers, 9 per cent of the normal drinkers and none of the abstainers.

13. a. Ninety-four per cent of the abstainers, 88 per cent of the normal drinkers, 90 per cent of the alcohol addicts and all of the problem drinkers achieved an education of grade twelve or less.

b. Seventy-one per cent of the alcohol addicts completed a grade between seven and twelve. Only 19 per cent achieved grade six or less.

14. a. Protestants formed 48.5 per cent and Roman Catholics 27.5 per cent of the total group.

b. Sixty-one per cent of the alcohol addicts were Protestant and 29 per cent were Roman Catholics.

c. There were no Jewish patients in the alcohol addict or problem drinker groups.

15. Forty-two per cent of the alcohol addicts were maritally separated as compared to 10 per cent of the abstainers, 9 per cent of the normal drinkers and none of the problem drinkers.

16. Eighty-four per cent of the alcohol addicts were discharged as improved, compared to 50 per cent of the problem drinkers, 53 per cent of the normal drinkers and 61 per cent of the abstainers. The alcohol addicts were improved from the physical effects of their drinking but not necessarily from their alcoholism.

17. Seventy-four per cent of the alcohol addicts were discharged to their own control as compared to 57 per cent of the problem drinkers, 15 per cent of the normal drinkers and 13 per cent of the abstainers.

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CHAPTER I

INTRODUCTION TO THE STUDY

I. PURPOSE OF THE STUDY

The present study was undertaken to assess the alcohol drinking habits of patients admitted to the Winnipeg Psychopathic Hospital. The study includes both those patients admitted without apparent alcohol problems and those admitted either directly or indirectly because of alcohol problems.

At the time that this study was undertaken a change was planned in Manitoba with regard to the marketing of alcoholic beverages through various outlets, and also in the treatment facilities available to alcoholics. It was believed that the changes might materially alter the number and characteristics of alcoholics admitted to the Winnipeg Psychopathic Hospital in future years. The present study would then serve as a comparative basis for a future study of the Winnipeg Psychopathic Hospital patients. No previous similar study is reported in the Canadian literature.

II. REVIEW OF THE LITERATURE

Psychiatric institutions as well as other hospitals vary greatly in the percentages of their total population

that are admitted because of alcohol problems. Many mental institutions have made no effort to determine what percentage of their case load is actually alcoholic.[1] Studies made in different institutions of their alcoholic population show greatly varying figures.

In an Australian series alcoholism was found responsible for 35 to 40 per cent of male admissions and 8 per cent of female admissions to a large receiving hospital.[2] Malzberg has conducted several large studies of first admissions with alcoholic psychoses to all mental institutions in New York State. During the year ended March 31, 1948, he established a rate of 7.4 patients admitted because of alcoholic psychoses per 100,000 of the general population.[3] In large receiving hospitals in Ohio during the period 1941 to 1946 alcohol addiction was found to be the reason for about 20 per cent of first admissions. However 40 per cent of first admissions to mental hospitals in Ohio had alcoholic psychoses.[4]

A review of the total Canadian figures reveals a steady increase in the rate of first admissions to mental hospitals because of alcoholism. In 1941 there were 198 first admissions because of alcoholism with and without psychosis; in 1951 there were 973 such admissions; in 1953 there were 2,174 admissions.[5] Gibbins in 1952 used the Jellinek formula[6] to estimate the number of alcoholics in

Canada as a whole and in each province. His estimated rates of alcoholism per 100,000 persons twenty years of age and older were 1,629 for Canada and 1,173 for Manitoba.[7] Applying these rates to the populations of Canada and Manitoba would give approximately 240,000 alcoholics in all of Canada and 9,700 alcoholics in Manitoba in 1952.[8]

The following is a survey of the number of persons admitted in the past because of illness due to alcohol to mental institutions in Manitoba.

1. In 1930 there were six patients with illness due to alcohol admitted to the Winnipeg Psychopathic Hospital out of a total number of 266 admissions giving a percentage of 2.2 alcoholic admissions.[9]
2. In 1945 there were seven patients with illness due to alcohol admitted to the Winnipeg Psychopathic Hospital out of a total of 482 admissions--an admission rate of nearly 1.5 per cent alcoholics.[10]
3. In 1953 there were sixty-eight such patients admitted to the Psychopathic Hospital--an admission rate of 12 per cent.[11]
4. In 1954 there were fifty-nine such patients admitted--a rate of 11 per cent.[12]
5. In 1955 sixty-four such patients were admitted--a rate of 12 per cent.[13]

Similarly the number of admissions of patients with illness

due to alcohol to all three mental institutions in Manitoba (Winnipeg Psychopathic Hospital, Selkirk Mental Hospital, Brandon Mental Hospital) has increased, there being forty-seven such admissions in 1950, fifty-two in 1951, eighty-six in 1952 and eighty-eight in 1953.[14] This increase, particularly from 1951 to 1952 is of greater proportion than the increase in total admissions to these hospitals.

III. DEFINITIONS OF TYPES OF DRINKERS

For the purpose of this study it was found necessary to classify the drinking habits of the patients admitted to the Winnipeg Psychopathic Hospital into several categories. The definitions of the term "alcoholism" offered by different authors vary considerably as do the types of drinking problems described in the literature. This variation causes great difficulty in comparing the findings of this study with those reported in the literature and even in comparing the findings described in the literature. Nearly all definitions require an interference with both physical and mental health before considering the drinker to be alcoholic.[6,15,16] An essential factor would seem to be an inability to stop drinking once started.[17]

The World Health Organization in 1951 defined alcoholism as any drinking beyond "the traditional and customary 'dietary' use, or the ordinary compliance with the

social drinking customs of the whole community concerned."[18] This definition was altered in 1952 and the definition of alcoholism found in the Encyclopedia Americana in 1954 is similar in many respects to this revision.[19]

The Encyclopedia Americana defines alcoholism as "a chronic illness, psychic or somatic or psychosomatic, which manifests itself as a disorder of behaviour. It is characterized by the repeated drinking of alcoholic beverages, to an extent that exceeds customary dietary use or compliance with the social customs of the community and that interferes with the drinker's health or his social or economic functioning."[20]

Alcoholics have been typed according to the stages through which they pass on the road to chronic alcoholism.[5] They have also been typed on the basis of their personality structure.[21] Alcoholics have been divided into "symptomatic drinkers," "addicts" and "essential alcoholics."[22,23] The dividing line between the symptomatic alcoholic and alcohol addict is rarely clear cut. It is often difficult according to some authors to decide the point at which an excessive drinker becomes an alcoholic.[24]

The definitions used in the present study were based, with some alterations, on those offered in the survey "Alcoholism in Ontario."[25] The classifications used were:

1. Abstainers

2. Normal Drinkers
3. Problem Drinkers
4. Alcohol Addicts

Abstainers are defined as those persons who have either never taken an alcoholic beverage or who have imbibed of alcohol no more than two times at widespread intervals in their lifetime.

The definition of a normal drinker is "a person who uses alcoholic beverages moderately, as a condiment, to satisfy thirst, for their milder sedative effects, or in their occasional social use. Alcohol constitutes neither a necessary nor a considerable item in his budget."[25]

A problem drinker is defined as "a person who habitually indulges in alcoholic beverages beyond the limits of the normal drinker. Though he still is in control of his drinking, it has reached such proportions that it is beginning to be a matter of concern to his family, friends, employers or associates. Alcoholic beverages constitute a regular and considerable item in his budget. In the later stages of problem drinking work and family relations usually begin to deteriorate."[25] The problem drinker has not reached the stage of alcohol addiction.

The alcohol addict is a person with "an uncontrollable craving for alcohol . . . who is unable to break with the drinking habit. Once his drinking begins it terminates

sooner or later in drunkenness and a prolonged bout of uncontrolled drinking. Adjustment is disturbed in all phases of his everyday activity, resulting in serious inefficiency and in deterioration of relations with family, friends, co-workers and employers."[25]

No difficulty was found in the present study in placing the patients admitted to the Winnipeg Psychopathic Hospital in the appropriate category.

CHAPTER II

SUBJECTS AND METHODS OF THE STUDY

The subjects used in this study were two hundred consecutive patients admitted to the Winnipeg Psychopathic Hospital.* Both first admissions and readmissions were included. The dates of admission were January 18, 1956 to May 24, 1956 inclusive. There were actually a total of 212 admissions to the hospital during this period but twelve of these patients had been admitted previously during the time of the study. As it was planned to review the drinking habits of two hundred different consecutive admissions these twelve patients were only considered on their first admission during the study.

Each patient was interviewed by the author. In nearly every case at least one independent witness was also interviewed, either a relative or acquaintance of the patient. In only two of the two hundred patients was the mental state such that it was found impossible to determine the drinking history. In these two cases sufficient information was available from the other witness to place the patient in the category of "Normal Drinker."

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*The Winnipeg Psychopathic Hospital is a provincial psychiatric hospital in Winnipeg. It has nineteen male beds and nineteen female beds. Patients are admitted for short term psychiatric treatment or assessment. Some are transferred to Brandon or Selkirk Mental Hospital for more prolonged treatment.

The following data was obtained and tabulated regarding each patient:

1. First admission or readmission.
2. Sex.
3. Age at time of admission.
4. Age at which the patient commenced drinking.
5. Length of time the patient had been drinking.
6. Source of referral.
7. The direct cause of admission.
8. Diagnosis.
9. Birthplace.
10. Racial background.
11. Family history of mental illness or alcohol problems.
12. Education.
13. Religion.
14. Marital Status.
15. Length of hospitalization.
16. Condition at time of discharge.
17. Disposal of patient following discharge.
18. Present or previous membership in the Alcoholics Anonymous Association.
19. Legal convictions due to alcohol.
20. General characteristics of drinking habits.

Finally, on the basis of this information each patient was assigned to one of the four groups--"abstainer," "normal

drinker," "problem drinker," or "alcohol addict."

CHAPTER III

RESULTS AND DISCUSSION OF THE RESULTS

I. FIRST ADMISSIONS AND READMISSION TO THIS HOSPITAL

In this series of two hundred patients, 121 (60.5 per cent) were first admissions and seventy-nine (39.5 per cent) were readmissions. There were sixty-four male and fifty-seven female first admissions, and forty male and thirty-nine female readmissions. The ratios of first admissions to readmissions were similar for males and females, approximately three to two.

Table I shows a total of thirty-one (15.5 per cent) abstainers, 124 (62 per cent) normal drinkers, fourteen (7 per cent) problem drinkers and thirty-one (15.5 per cent) alcohol addicts. In each of these four groups the total of first admissions outnumbered the total of readmissions. This trend was seen particularly in the male normal drinkers. Because of the chronicity of alcoholism more readmissions than first admissions might be expected in the alcohol addict group. In the group of alcohol addicts 36 per cent were males in their first admission; 45 per cent males in a readmission; 16 per cent females in their first admission; 3 per cent (one patient) readmitted females. The total figures for alcohol addicts of both sexes (31 patients)

TABLE I

TYPES OF ADMISSION

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First Admissions	3	14	17	43	35	78	7	3	10	11	5	16	64	57	121
Re-Admissions	5	9	14	18	28	46	3	1	4	14	1	15	40	39	79
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

indicate approximately equal numbers of first admissions (16) and readmissions (15).

In reviewing the reports of all Canadian mental hospitals for a recent year 1953, it is found that the readmission rates for illness produced by alcohol are generally equal (as in the present study) or slightly higher than the first admission rates.[14] The ratio however, varied from hospital to hospital. In all Manitoba during 1953 there were forty-six first admissions and forty-two readmissions to mental institutions due to illness produced by alcohol.[11] This was a slight reverse of the trend in Canada as a whole.

II. SEX DISTRIBUTION

There are greater numbers of male alcoholics than female alcoholics reported in the literature. In the present study there were eight male and twenty-three female abstainers, a ratio of nearly one male to three females. Approximately equal numbers of male and female normal drinkers were found--sixty-one and sixty-three respectively. In the problem drinking group the ratio that was noted in the abstaining group was almost reversed, there being ten males and four females. The alcohol addict group illustrated this trend to an even greater extent, there being twenty-five males and six females, a ratio of approximately four to one. These figures are seen in Table II.

TABLE II

SEX DISTRIBUTION

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

The larger number of male than female alcoholics admitted to hospital in Canada is not in keeping with the proportions of users of alcoholic beverages in Canada over the age of twenty-one as reported by the "Alcoholism Research Foundation" in 1954.[26] Male users of alcohol constitute 76 per cent of the adult population, female users 64 per cent of the adult population. An English review quotes the rate of male to female alcoholics as approximately 3.5 to one.[27] In Australia the rate is quoted as seven males to one female.[28] Varying proportions of male and female alcoholics have been found in the United States. In a study of five hundred alcoholics admitted to a general hospital, Texon found a ratio of three males to one female.[29] Jellinek and Keller report a ratio of six males to one female.[6] The rate has been found as high as seven males to one female in the United States.[30] In Canada, mental hospital statistics show that there are approximately five to six male alcoholics for each female alcoholic, as calculated from the mental health statistics for 1954.[31]

III. AGE AT TIME OF ADMISSION

There were no patients in this study who fell into the age group of 1 to 9 years. Persons in this age group however, are not customarily admitted to psychopathic hospitals. Table III illustrates that in the age group of

TABLE III

AGE AT TIME OF ADMISSION

Age Groups	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1 - 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - 19	2	1	3	3	1	4	1	0	1	0	0	0	6	2	8
20 - 39	0	4	4	29	28	57	5	4	9	10	4	14	44	40	84
40 - 69	5	12	17	22	32	54	3	0	3	15	2	17	45	46	91
70 up	1	6	7	7	2	9	1	0	1	0	0	0	9	8	17
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

10 to 19 years there was only one problem drinker and no alcohol addicts. There were three abstainers and four normal drinkers admitted in this age group. The majority of admissions in all categories occurred after the age of twenty. The largest number of abstainers (17 patients) fell into the 40 to 69 age category and the next largest number (7 patients) were over seventy years of age. The largest number of alcohol addicts (17 patients) fell into the 40 to 69 age group, closely followed by fourteen patients in the 20 to 39 age group. As a group the alcohol addicts were younger than the abstainers.

There were similar numbers of normal drinkers in both the 20 to 39 and 40 to 69 year age groups (57 and 54 patients respectively). Only one problem drinker and no alcohol addicts were admitted over the age of seventy. All alcohol addicts who were admitted were between the ages of 20 and 69; the majority were 35 to 45 years of age. The report of the "Alcoholism Research Foundation" previously quoted states that nearly 70 per cent of the Canadian population between the ages of 20 and 49, and approximately 60 per cent of the Canadian population over the age of fifty are users of alcoholic beverages.[26] In Canada the largest number of alcoholics are in their mid-thirties.[32]

It has been stated by Bowman that five out of six alcoholics in the United States are men aged 30 to 55.[33]

McCullough in a two-year survey of alcoholic patients in a California State Hospital (782 alcoholic patients) found the largest number of males in the 41 to 55 age group and the largest number of females in the 36 to 40 age group.[34] Other studies differ from these figures. In a Connecticut clinic study during 1950 of 783 alcoholic patients the majority were in the 30 to 49 age group with an average age of forty-one.[35] In Minneapolis a 1950 study found the average age of alcoholics to be slightly over forty-three years.[36] These differences in figures are not great and can be at least partly attributed to the nature of the studies, some occurring in large state institutions, others in smaller private clinics and general hospitals. The findings in the present study then, generally were similar to those reported previously.

IV. AGE OF COMMENCING DRINKING
LENGTH OF TIME DRINKING

The majority of the three types of actual drinking groups commenced drinking between the ages of sixteen and twenty. Nineteen per cent of the normal drinkers commenced drinking before the age of fifteen. A larger proportion of problem drinkers and alcohol addicts started drinking before the age of fifteen--29 per cent of both groups. The figures in Table IV give no indication of the age at which

TABLE IV

AGE OF COMMENCING DRINKING

	Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
Age Groups	M	F	T	M	F	T	M	F	T	M	F	T
Before age 15	15	8	23	4	0	4	6	3	9	25	11	36
Ages 16-20	33	35	68	5	3	8	16	2	18	54	40	94
21-30	9	19	28	1	1	2	3	1	4	13	21	34
31-40	3	0	3	0	0	0	0	0	0	3	0	3
Over age 41	0	0	0	0	0	0	0	0	0	0	0	0
Totals	60	62	122	10	4	14	25	6	31	95	72	167

Note: M, Male; F, Female; T, Total.

drinking first became a problem as the data on this point was not collected.

Eighty-six per cent of the problem drinkers and 87 per cent of the alcohol addicts were drinking before the age of twenty-one as compared to 75 per cent of the normal drinkers. Few normal drinkers (3 patients) and no patient with an alcohol problem commenced drinking after the age of thirty. The differences found are not large enough to suggest that persons who subsequently develop an alcohol problem commence drinking before those who remain normal drinkers.

In the present study 50 per cent of the normal drinkers had been drinking longer than twenty-one years as compared to 68 per cent of the alcohol addicts. It is of note that only 36 per cent of the problem drinkers had been drinking over twenty-one years. All of the alcohol addicts had been drinking a minimum of eleven years. See Table V.

V. SOURCE OF REFERRAL

The greatest proportion of all patients admitted to the Winnipeg Psychopathic Hospital were referred from a private physician, transferred from a general hospital or admitted through the outpatient department of the Psychopathic Hospital. See Table VI. Relatively small numbers of abstainers (6 per cent) and normal drinkers (5 per cent) were admitted voluntarily. It was found, however, that eight of the thirty-

TABLE V

LENGTH OF TIME DRINKING

	Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T
Less than 2 years	1	1	2	0	0	0	0	0	0	1	1	2
3-5 years	4	1	5	2	0	2	0	0	0	6	1	7
6-10 years	12	2	14	2	0	2	0	0	0	14	2	16
11-20 years	18	22	40	1	4	5	7	3	10	26	29	55
Over 21 yrs.	25	36	61	5	0	5	18	3	21	48	39	87
Totals	60	62	122	10	4	14	25	6	31	95	72	167

Note: M, Male; F, Female; T, Total.

TABLE VI

SOURCE OF REFERRAL

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Physician, Out-Patient Dept.* Other Hospital	6	22	28	48	60	108	7	4	11	16	5	21	77	91	168
Self (Voluntary)	2	0	2	4	2	6	3	0	3	8	0	8	17	2	19
Social Agency	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Jail	0	1	1	8	1	9	0	0	0	1	1	2	9	3	12
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female, T, Total.

*Out-Patient Dept.- Out-Patient Department of the Winnipeg Psychopathic Hospital.

one alcohol addicts (26 per cent) were admitted voluntarily. This is in keeping with the findings in most other studies.

A study of a large number of admissions to the Manteno State Hospital, Manteno, Illinois, suggested that more alcoholics were sent by others to hospital in their early admissions but that as the number of admissions increased so did the number of requests for voluntary admission.[1] This may be due partly to the increasing desperation of the alcoholic for help with fewer persons willing to aid him as his illness progresses. A recent study conducted by the Family Bureau of Winnipeg showed that well over half the persons with alcohol problems who requested their Bureau's aid did so voluntarily.[37]

VI. ALCOHOL AS THE DIRECT CAUSE OF ADMISSION

Alcohol was found to be the direct cause of admission in twenty-five of the thiry-one alcohol addicts but in only one of the fourteen problem drinkers. See Table VII. The remaining problem drinkers were admitted for some reason other than an alcohol problem, the drinking problem being discovered on interviewing the patients or other witnesses. The six alcohol addicts (19 per cent of all the addicts) in whom alcohol was not the direct cause of admission were diagnosed as "Manic Excitement" (one patient), Psychoneurosis (one patient), and Personality Disorder (four patients).

TABLE VII

DIRECT CAUSE OF ADMISSION

	Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T
Alcohol	1	0	1	19	6	25	20	6	26
Not alcohol	9	4	13	6	0	6	15	4	19
Totals	10	4	14	25	6	31	35	10	45

Note: M, Male, F, Female, T, Total.

Table VIII shows that twenty-two of the twenty-five alcohol addicts (68 per cent of all the addicts) in whom alcohol was the direct cause of admission required admission because of a prolonged drinking bout uncomplicated by psychotic behaviour. Four alcohol addicts (13 per cent of all the addicts) were admitted because of an alcoholic psychosis--Delerium Tremens and Korsakoff's Psychosis. Alcoholism secondary to psychosis was not found in any of the patients in this study.

Five of the alcohol addicts were members of Alcoholics Anonymous at the time of their admission and fifteen had been previous members. Three (21 per cent) of the problem drinkers and seven (23 per cent) of the alcohol addicts had a previous legal conviction due to alcohol. Most studies of hospitalized alcoholics have found that over 50 per cent of the patients had one or more arrests as the result of intoxication.[34,38] There were no such arrests in the abstaining or normal drinking groups of the present study.

VII. DIAGNOSIS

The majority of the abstainers (84 per cent) and normal drinkers (77 per cent) were psychotic. Twenty-six per cent of the abstainers and 39 per cent of the normal drinkers were schizophrenic, schizophrenia being the commonest form of psychosis in the two groups. Eight of the problem

TABLE VIII

ALCOHOL AS THE DIRECT CAUSE OF ADMISSION

	Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T
Alcoholism with acute episode	0	0	0	17	3	20	17	3	20
Alcoholism with Delerium Tremens	0	0	0	3	0	3	3	0	3
Alcoholism with psycho-neurosis	0	0	0	1	1	2	1	1	2
Acute alcoholism (one bout only)	1	0	1	0	0	0	1	0	1
Alcoholism secondary to psychosis	0	0	0	0	0	0	0	0	0
Totals	1	0	1	21	4	25	22	4	26

Note: One alcohol addict was also admitted with Korsakoff's Psychosis. She had not been drinking for several months. See Table IX, p. 28.

drinkers (57 per cent) pere psychotic, 14 per cent being schizophrenic. Thirteen per cent of the alcohol addicts had an alcoholic psychosis (4 patients) and one addict was admitted because of "Manic excitement."

Sixteen of the alcohol addicts (52 per cent) had a personality disorder as compared to 21 per cent of the problem drinkers, 6 per cent of the normal drinkers and one (3 per cent) of the abstainers. Only nine of the alcohol addicts (29 per cent) were diagnosed as "primary alcoholism without a personality disorder." See Table IX.

The number of alcohol addicts with psychosis as a complication of alcoholism (13 per cent) is at variance with the figures given for Canada generally. In 1953 slightly more than 20 per cent of alcoholics admitted to all Canadian mental institutions had alcoholic psychoses.[14] In 1954 the incidence of psychoses in alcoholics admitted to Canadian mental institutions was nearly 35 per cent.[31] The figures for all of Canada are difficult to evaluate because of the uncertainty as to whether they include problem drinkers in their classification of "Chronic Alcoholism." They do not define this term.

It has been suggested by several authors that most alcoholics are "Psychopathic Personalities."[39,40] The present findings do indicate a majority of personality disorders in the alcohol addict group. In opposition to this view

TABLE IX

DIAGNOSIS

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Schizophrenia	2	6	8	26	23	49	2	0	2	0	0	0	30	29	59
Schizo-affective	0	0	0	1	2	3	1	0	1	0	0	0	2	2	4
Manic Depressive															
-Manic	1	2	3	4	5	9	1	0	1	1	0	1	7	7	14
-Depressed	0	0	0	5	9	14	0	0	0	0	0	0	5	9	14
Involutional Depression	1	0	1	3	5	8	0	0	0	0	0	0	4	5	9
Paranoid State	0	5	5	6	0	6	1	1	2	0	0	0	7	6	13
Senile & Cerebral Arteriosclerosis	1	5	6	2	2	4	1	0	1	0	0	0	4	7	11
Other organic or toxic psychosis	1	2	3	1	2	3	1	0	1	0	1[k]	1	3	5	8
Psychoneurosis	0	1	1	0	7	7	0	3	3	3	0	3[1]	3	11	14
Personality Disorder	1	0	1	6	1	7	3	0	3	13	3	16[2]	23	4	27
Primary alcoholism(No personality disorder)	-	-	-	-	-	-	0	0	0	7	2	9	7	2	9
Idiopathic Epilepsy	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Epilepsy and Personality Disorder	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
Drug Addiction	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Mental Deficiency	0	0	0	1	1	2	0	0	0	1	0	1	2	1	3
Mental Deficiency with Psychotic episode	1	0	1	2	1	3	0	0	0	0	0	0	3	1	4
Mental Deficiency with Hysteria	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
Psychosis associated with somatic disease	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
Undiagnosed psychosis	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Undiagnosed	0	1	1	2	2	4	0	0	0	0	0	0	2	3	5
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: k - Korsakoff's Psychosis; 1 - including one patient where the Psychoneurosis was the primary cause of admission; 2 - including four patients where the Personality Disorder was the primary cause of admission.

Sutherland, Schroeder and Tordella have reviewed thirty-seven reports of research on the personality characteristics of alcoholics. They claim to have found no satisfactory evidence that any one type of personality is more prone to become alcoholic.[41] Part of the difficulty in determining the number of "Psychopathic Personalities" in a group of alcoholics would seem due to different opinions of the definition of this term.

The incidence of Schizophrenia has been found comparatively low in alcoholics.[42] Malzberg has found few persons with Involutional Psychoses who were excessive drinkers.[43] There are no alcohol addicts with Schizophrenia or Involutional Psychoses in the present study. Seldon Bacon indicates that the Psychoneurotic may become a chronic heavy drinker.[44] Approximately 10 per cent of the alcohol addicts in this study were Psychoneurotic. Malzberg has found few alcoholics among senile patients admitted to New York State mental hospitals.[45] There were no senile alcohol addicts in the present study.

VIII. BIRTHPLACE

Table X classifies the group into those patients who were born in Canada, immigrated to Canada before World War II or immigrated after World War II. Of the group of thirty-one alcohol addicts, six immigrated to Canada prior to World War II

TABLE X

BIRTHPLACE

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Canadian born	5	12	17	35	46	81	9	4	13	19	5	24	68	67	135
Immigrant before World War II	3	9	12	20	14	34	1	0	1	6	0	6	30	23	53
Immigrant since World War II	0	2	2	6	3	9	0	0	0	0	1	1	6	6	12
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

and one after the War. There were twelve post World War immigrants in the study and in only one was there an alcohol problem.

IX. RACIAL BACKGROUND

Patients of Anglo-Saxon descent formed the largest racial group in the study--eighty patients (40 per cent). Sixty patients (30 per cent) were of Slavic origin. Germans composed 9 per cent and French patients 8 per cent of the total group. See Table XI.

Twenty-three per cent of those patients of Anglo-Saxon descent were alcohol addicts as compared to 11 per cent of the patients of other racial descent. A study previously quoted by the Family Bureau of Winnipeg also found a large number of persons with alcohol problems who were of Anglo-Saxon descent. Contrary to the present study, however, the Family Bureau also found many alcohol problems in persons of Slavic origin.[37]

X. FAMILY HISTORY OF ALCOHOL PROBLEMS

There were thirty-one abstainers and thirty-one alcohol addicts in the present study. In Table XII it can be seen that the number of abstainers with a family history (comprising parents and siblings) of psychosis is seven whereas the number of alcohol addicts with a family history of

TABLE XI

RACIAL BACKGROUND

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Anglo-Saxon	3	12	15	18	25	43	3	1	4	17	1	18	41	39	80
French	0	2	2	3	7	10	0	1	1	2	1	3	5	11	16
German	0	3	3	10	2	12	2	0	2	1	0	1	13	5	18
Scandinavian	0	0	0	0	2	2	1	0	1	0	0	0	1	2	3
Slavic	4	6	10	24	21	45	1	0	1	4	0	4	33	27	60
Italian	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2
Indian	0	0	0	0	2	2	0	0	0	0	1	1	0	3	3
Anglo-Saxon -French	0	0	0	0	1	1	0	0	0	1	0	1	1	1	2
-German	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
-Slavic	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
-Indian	0	0	0	1	0	1	0	1	1	0	0	0	1	1	2
French-German	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
Slavic	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Indian	0	0	0	0	0	0	2	0	2	0	1	1	2	1	3
German-Slavic	0	0	0	1	1	2	1	0	1	0	1	1	2	2	4
Other	0	0	0	1	1	2	0	0	0	0	1	1	1	2	3
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Totals.

TABLE XII

FAMILY HISTORY*

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Psychosis	2	5	7	10	20	30	3	0	3	4	0	4	19	25	44
Neurosis	1	0	1	3	1	4	0	0	0	1	0	1	5	1	6
Psychosis & Neurosis	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2
Alcohol Problem	0	0	0	8	3	11	3	0	3	12	2	14	23	5	28
Psychosis & Alcohol Problem	0	0	0	0	4	4	1	0	1	1	0	1	2	4	6
Neurosis & Alcohol Problem	0	0	0	0	1	1	0	0	0	0	1	1	0	2	2
Total with abnormal Family History	3	5	8	22	30	52	7	0	7	18	3	21	50	38	88

* Family History - History in parents and siblings.

Note: M, Male; F, Female; T, Total.

psychosis is four patients. There is one patient in each group with a family history of neurosis.

The striking difference, however, between the abstainers and alcohol addicts is in the family history of alcoholism. There is no such history in any of the abstainers but approximately 45 per cent of the alcohol addicts have a family background containing such a problem. There is a history of such a problem in the families of 9 per cent of the normal drinkers and 21 per cent of the problem drinkers. Thus, as one progresses through the four groups from abstainers to addicts the incidence of a family history of alcoholism increases from nil to 45 per cent.

Alcoholics are frequently from broken homes and show a higher incidence of alcoholic relatives.[24] Diethelm was unable to find a greater incidence of psychiatric illness other than alcoholism in the family histories of alcoholics.[16] Jackson and Connor in discussing the attitudes of the parents of alcoholics said that nondrinkers usually come from homes where both parents disapproved of the use of alcohol. They also stated that alcoholics come from homes where at least one parent, usually the father, drank excessively.[46] The present finding of a family history of alcoholism in nearly half the alcohol addicts studied is reflected generally in the literature.[47] Apart from the presence or absence of a family history of alcoholism no data is available from the

present study regarding the use of alcohol by other family members.

XI. EDUCATION

The educational level achieved by the two hundred patients was generally found to be below grade twelve. Ninety-four per cent of the abstainers, 88 per cent of the normal drinkers and 90 per cent of the alcohol addicts achieved an education of grade twelve or less. The maximum grade reached by any problem drinker was twelve. Seventy-one per cent of the alcohol addicts completed a grade between seven and twelve. Only 19 per cent of the alcohol addicts achieved grade six or less. The patients in the remaining three groups were more evenly distributed in the two education categories of grades 1 to 6 and 7 to 12. There appear to be no other large differences between the various groups as regards education. See Table XIII.

Approximately 65 per cent of the Canadian population with less than a high school education and 73 per cent with a high school or higher education use alcoholic beverages.[26] In New York City the majority of a group of problem drinkers reviewed had only an elementary school education.[48] Mueller found the average education of 232 alcoholic clinic patients to be at the eighth grade level.[49] Murphy has concluded that the general intellectual ability of alcoholics in a mixed social group is above average.[50] Lemert has reviewed a number of studies on the educational achievements of

TABLE XIII

EDUCATION

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Grade 6 or less	6	10	16	23	21	44	5	0	5	4	2	6	38	33	71
Grades 7 to 12	2	11	13	26	39	65	5	4	9	18	4	22	51	58	109
Technical School	0	0	0	6	0	6	0	0	0	0	0	0	6	0	6
Business College	0	0	0	3	2	5	0	0	0	1	0	1	4	2	6
University	0	1	1	3	1	4	0	0	0	0	0	0	3	2	5
University Graduate	0	1	1	0	0	0	0	0	0	2	0	2	2	1	3
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

alcoholics and has concluded that "as yet no convincing evidence has been presented that alcoholics differ significantly from the general population in educational attainment."[51]

Manson has said that alcoholics tend to leave school at a younger age before reaching the conventional termination levels.[52] Many of the differing views on the educational levels of alcoholics may be due to differences in sampling, in comparing alcoholics admitted to large public institutions and small private hospitals. Few of the studies are standardized for age, occupation, and other factors with which education is correlated.[53,54]

XII. RELIGION

Table XIV shows that the majority of the group of two hundred patients were Protestant (ninety-seven patients). A large group was Roman Catholic (fifty-five patients), and the third sizable group (twenty-nine patients) were of the Greek Orthodox religion. This large portion of patients belonging to the Greek Orthodox Church seems peculiar to Winnipeg and is probably due to the large Slavic population of the city.

Although Protestants formed 48.5 per cent of the total group, 61 per cent of the alcohol addicts were Protestant. Sixty-four per cent of the problem drinkers and

TABLE XIV

RELIGION

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Protestant	5	12	17	24	28	52	6	3	9	16	3	19	51	46	97
Roman Catholic	2	3	5	16	23	39	1	1	2	6	3	9	25	30	55
Greek Orthodox	1	6	7	13	5	18	1	0	1	3	0	3	18	11	29
Mennonite	0	1	1	4	1	5	0	0	0	0	0	0	4	2	6
Hebrew	0	1	1	2	3	5	0	0	0	0	0	0	2	4	6
Radical	0	0	0	1	1	2	1	0	1	0	0	0	2	1	3
Other	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
None	0	0	0	0	2	2	1	0	1	0	0	0	1	2	3
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

41 per cent of the abstainers and normal drinkers were Protestant. Roman Catholics formed 27.5 per cent of the total group and 29 per cent of the alcohol addict group. Greek Orthodox patients formed 14.5 per cent of the total group and 10 per cent of the alcohol addicts.

Approximately 70 per cent of the Catholic and Protestant population of Canada uses alcoholic beverage.[26] In a study of 125 alcoholics in New York City, 48 per cent were Catholic, 41.5 per cent Protestant, 1.6 per cent Jewish and the remainder of unknown religion.[48] In a review of one hundred alcoholic patients at the New York Hospital, Wechester Division, seventy-two were Protestant, twenty-three Catholic, three Hebrew, one Quaker, one atheist and the remainder of unknown religion.[55] It would appear that no religion has a monopoly on alcoholism. There were no Jewish patients with alcohol problems in the present study. This is out of proportion with the Jewish population in this area. It is generally agreed that Hebrews do have a low rate of alcoholism.

XIII. MARITAL STATUS

There were seventy-one single patients and seventy-seven married patients in the total two hundred studied. There were few single patients in the alcohol addict group (13 per cent) as compared with the group of normal drinkers (40 per cent). See Table XV.

TABLE XV

MARITAL STATUS

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Single	3	7	10	32	17	49	8	0	8	4	0	4	47	24	71
Married	2	10	12	18	31	49	2	3	5	9	2	11	31	46	77
Widow	0	5	5	0	8	8	0	0	0	0	1	1	1	14	15
Widower	1	0	1	4	0	4	0	0	0	0	0	0	4	0	4
Divorced	0	0	0	2	0	2	0	0	0	0	0	0	2	0	2
Separated	2	1	3	4	7	11	0	0	0	10	3	13	16	11	27
Common law	0	0	0	1	0	1	0	1	1	2	0	2	3	1	4
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

In the total group, patients separated from their marital partner, but not divorced numbered twenty-seven. In the alcohol addict group (31 patients) thirteen were separated. Ten of these separated alcohol addicts were males. In the larger group of normal drinkers (124 patients) eleven were separated and seven of these patients were females. Thus, forty-two per cent of the alcohol addicts were separated as compared to 9 per cent of the normal drinkers, 10 per cent of the abstainers and none of the problem drinkers. This is indication of the expected high incidence of marital difficulties found in alcohol addicts. Of note is the fact that the two divorced patients were both normal drinkers.

As compared with American studies of a similar nature there was a smaller number of divorces in the present study.[56,57,58] In the previously-mentioned report of one hundred alcoholic patients admitted to the New York Hospital, Wechester Division forty-two of these one hundred patients were separated or divorced.[55] The percentages of separated and divorced alcoholic women in one series were similar to the percentages found in alcoholic men.[59] The greater number of divorced alcoholics found in the United States may possibly be due to the ease with which divorce is obtained in that country.

XIV. LENGTH OF HOSPITALIZATION

The lengths of stay in hospital were classified in three groups of 1-7 days, 8-30 days and over 30 days as a convenient means of separating the periods of hospitalization into "short," "medium" and "long." The usual length of stay in the Winnipeg Psychopathic Hospital is eight to thirty days. Few patients are discharged in less than eight days unless urgent transfer to mental hospital is required. Table XVI demonstrates that most problem drinkers and alcohol addicts remained in the hospital eight to thirty days. There were two problem drinkers and four alcohol addicts who remained in hospital less than seven days. Many alcohol addicts agitate for discharge in their first few days of hospitalization and some of them who cannot be persuaded otherwise are discharged. The length of hospitalization for alcohol addicts found in this study is similar to that reported elsewhere.

XV. CONDITION AT DISCHARGE

One patient in this study was discharged as "recovered." There were no great differences in the numbers of abstainers, normal drinkers and problem drinkers discharged as improved or unimproved. Nearly all those patients discharged as unimproved were transferred to a mental hospital for further

TABLE XVI

LENGTH OF HOSPITALIZATION

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1-7 days	0	1	1	3	9	12	1	1	2	4	0	4	8	11	19
8-30 days	4	18	22	46	38	84	8	3	11	19	6	25	77	65	142
Over 30 days	4	4	8	12	16	28	1	0	1	2	0	2	19	20	39
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

psychiatric treatment.

In the alcohol addict group, 84 per cent were discharged as improved as compared to 50 per cent of the problem drinkers, 53 per cent of the normal drinkers and 61 per cent of the abstainers. The use of the term "Improved" with alcohol addicts has a different connotation than in the other groups. The alcohol addicts were improved from the physical effects of their drinking but not necessarily improved in their alcoholism. A normal drinker died of carcinoma and an alcohol addict died of the combined effects of prolonged alcoholism and drug addiction. See Table XVII.

XVI. DISPOSAL FOLLOWING DISCHARGE

Patients discharged from the Winnipeg Psychopathic Hospital are usually referred for follow-up care. A large group return to see their referring doctor. Another group is followed up in the outpatient department of the Psychopathic Hospital. Some patients are discharged to their own control.

Seventy-four per cent of the patients in the alcohol addict group were discharged to their own control. Fifty-seven per cent of the problem drinkers, 15 per cent of the normal drinkers and only 13 per cent of the abstainers were discharged to their own control. See Table XVIII. This large percentage of alcohol addicts discharged to their own

TABLE XVII

CONDITION AT DISCHARGE

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Recovered	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
Improved	5	14	19	30	36	66	5	2	7	21	5	26	61	57	118
Unimproved	3	9	12	31	25	56	5	2	7	3	1	4	42	37	79
Died	0	0	0	0	1	1	0	0	0	1	0	1	1	1	2
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

Note: M, Male; F, Female; T, Total.

TABLE XVIII

DISPOSAL FOLLOWING DISCHARGE

	Abstainers			Normal Drinkers			Problem Drinkers			Alcohol Addicts			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Private Doctor	2	6	8	10	11	21	1	0	1	2	1	3	15	18	33
O.P.D.* (Psycho-pathic)	0	5	5	6	19	25	1	0	1	1	1	2	8	25	33
Jail	1	0	1	1	0	1	0	0	0	0	0	0	2	0	2
Mental Hospital	1	12	13	33	25	58	5	3	8	0	2	2	39	42	81
Own Control	4	0	4	11	7	18	3	1	4	21	2	23	39	10	49
Died	0	0	0	0	1	1	0	0	0	1	0	1	1	1	2
Totals	8	23	31	61	63	124	10	4	14	25	6	31	104	96	200

*O.P.D. - Out-patient Department

Note: M, Male; F, Female; T, Total.

control may be a reflection of the greater number requesting voluntary admission.

CHAPTER IV

SUMMARY AND CONCLUSIONS

A detailed, individual clinical study of two hundred consecutive, new and readmissions to the Winnipeg Psychopathic Hospital was made from January to May, 1956. The purpose was to obtain data regarding the alcohol drinking habits of these patients. The patients were classified as "abstainers," "normal drinkers," "problem drinkers" and "alcohol addicts," these terms being previously defined.

The findings in this study were:

1. There were a total of 31 (15.5 per cent) abstainers, 124 (62 per cent) normal drinkers, 14 (7 per cent) problem drinkers and 31 (15.5 per cent) alcohol addicts.
2. Thirty-six per cent of the alcohol addicts were males in their first admission; 45 per cent were readmitted males; 16 per cent were females in their first admission; 3 per cent were readmitted females.
3. a. The ratio of male to female abstainers was of the order 1:3.
   b. The ratio of male to female alcohol addicts was of the order 4:1.
4. As a group the alcohol addicts were younger than the abstainers.

5. a. Nineteen per cent of the normal drinkers and 29 per cent of the problem drinkers and alcohol addicts commenced drinking before the age of fifteen.

   b. Seventy-five per cent of the normal drinkers, 86 per cent of the problem drinkers and 87 per cent of the alcohol addicts were drinking before the age of twenty-one.

   c. Fifty per cent of the normal drinkers, 36 per cent of the problem drinkers and 68 per cent of the alcohol addicts had been drinking longer than twenty-one years.

6. Twenty-six per cent of the alcohol addicts were admitted voluntarily as compared to 21 per cent of the problem drinkers, only 5 per cent of the normal drinkers and 6 per cent of the abstainers.

7. Alcohol was the direct cause of admission in twenty-five of the thirty-one alcohol addicts but in only one of the fourteen problem drinkers.

8. The six alcohol addicts in whom alcohol was not the direct cause of admission were diagnosed as "Manic excitement" (one patient), Psychoneurosis (one patient), and Personality Disorder (four patients).

9. a. Sixty-eight per cent of the alcohol addicts were admitted because of a prolonged drinking bout uncomplicated by psychotic behaviour.

   b. Thirteen per cent were admitted because of alcoholic

psychoses (Delerium Tremens and Korsakoff's Psychosis).

c. In 19 per cent alcohol was not the direct cause of admission.

10. Fifty-two per cent of the alcohol addicts had a personality disorder as compared to 21 per cent of the problem drinkers, 6 per cent of the normal drinkers and 3 per cent (one patient) of the abstainers.

11. Twenty-three per cent of patients of Anglo-Saxon descent were alcohol addicts as compared to 11 per cent of the patients of other racial descent.

12. There was a family history (parents and siblings) of alcoholism in 45 per cent of the alcohol addicts, 21 per cent of the problem drinkers, 9 per cent of the normal drinkers and none of the abstainers.

13. a. Ninety-four per cent of the abstainers, 88 per cent of the normal drinkers, 90 per cent of the alcohol addicts and all of the problem drinkers achieved an education of grade twelve or less.

b. Seventy-one per cent of the alcohol addicts completed a grade between seven and twelve. Only 19 per cent achieved grade six or less.

14. a. Protestants formed 48.5 per cent and Roman Catholics 27.5 per cent of the total group.

b. Sixty-one per cent of the alcohol addicts were Protestant and 29 per cent were Roman Catholics.

c. There were no Jewish patients in the alcohol addict or problem drinker groups.

15. Forty-two per cent of the alcohol addicts were maritally separated as compared to 10 per cent of the abstainers, 9 per cent of the normal drinkers and none of the problem drinkers.

16. Eighty-four per cent of the alcohol addicts were discharged as improved, compared to 50 per cent of the problem drinkers, 53 per cent of the normal drinkers and 61 per cent of the abstainers. The alcohol addicts were improved from the physical effects of their drinking but not necessarily from their alcoholism.

17. Seventy-four per cent of the alcohol addicts were discharged to their own control as compared to 57 per cent of the problem drinkers, 15 per cent of the normal drinkers and 13 per cent of the abstainers.

The results found in this study were similar in many regards to those reported in the literature. There were some differences.

1. There was an unusually small percentage of alcoholics admitted with alcoholic psychoses.

2. A study by the Family Bureau of Winnipeg has found more alcohol problems in persons of Slavic descent than indicated by this study.

3. There was a smaller number of divorced alcoholics as compared to most American studies.

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